



# **Peace Airshed Zone Association**

## **Ambient Air Monitoring Network Summary**

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

**Operations and Reporting**



May 27<sup>th</sup>, 2014

**Alberta Environment**  
11<sup>th</sup> Floor, Oxbridge Place  
9820-106 Street  
Edmonton Alberta T5K 2J6

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

Enclosed is the PAZA Ambient Monitoring Network Report for the month of **April 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.<br>(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       |

| <b>Company</b>                           | <b>Facility</b>                | <b>LSD</b>      | <b>EPEA Approval Number</b> |
|------------------------------------------|--------------------------------|-----------------|-----------------------------|
| 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-Reno.**

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

**Henry Pirker Station:**

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

**Evergreen Park Station:**

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

**Smoky Heights Station:**

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

**Beaverlodge Station:**

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

**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 April.

**Reno Station:**

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

**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 April.

### **Passive Monitoring - 46 Stations throughout the PAZA zone:**

There were five duplicate sites sampled in the month of April: Bay Tree, Webber Creek, Shaftesbury, and Girouxville 4. The passive sample analyses were performed by MAXXAM Analytics Inc.

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

- Monthly average concentrations for SO<sub>2</sub> passives ranged from 0.1 ppb to 0.6 ppb, with a mean of 0.2 ppb.
- Monthly average concentrations for NO<sub>2</sub> passives ranged from 0.1 ppb to 3.2 ppb, with a mean of 0.5 ppb.
- Monthly average concentrations for O<sub>3</sub> passives ranged from 27.4 ppb to 52.2 ppb, with a mean of 40.6 ppb.
- Monthly average concentrations for H<sub>2</sub>S were 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



Shelly Pruden, C. Tech  
Environmental Advisor  
Veresen Inc.

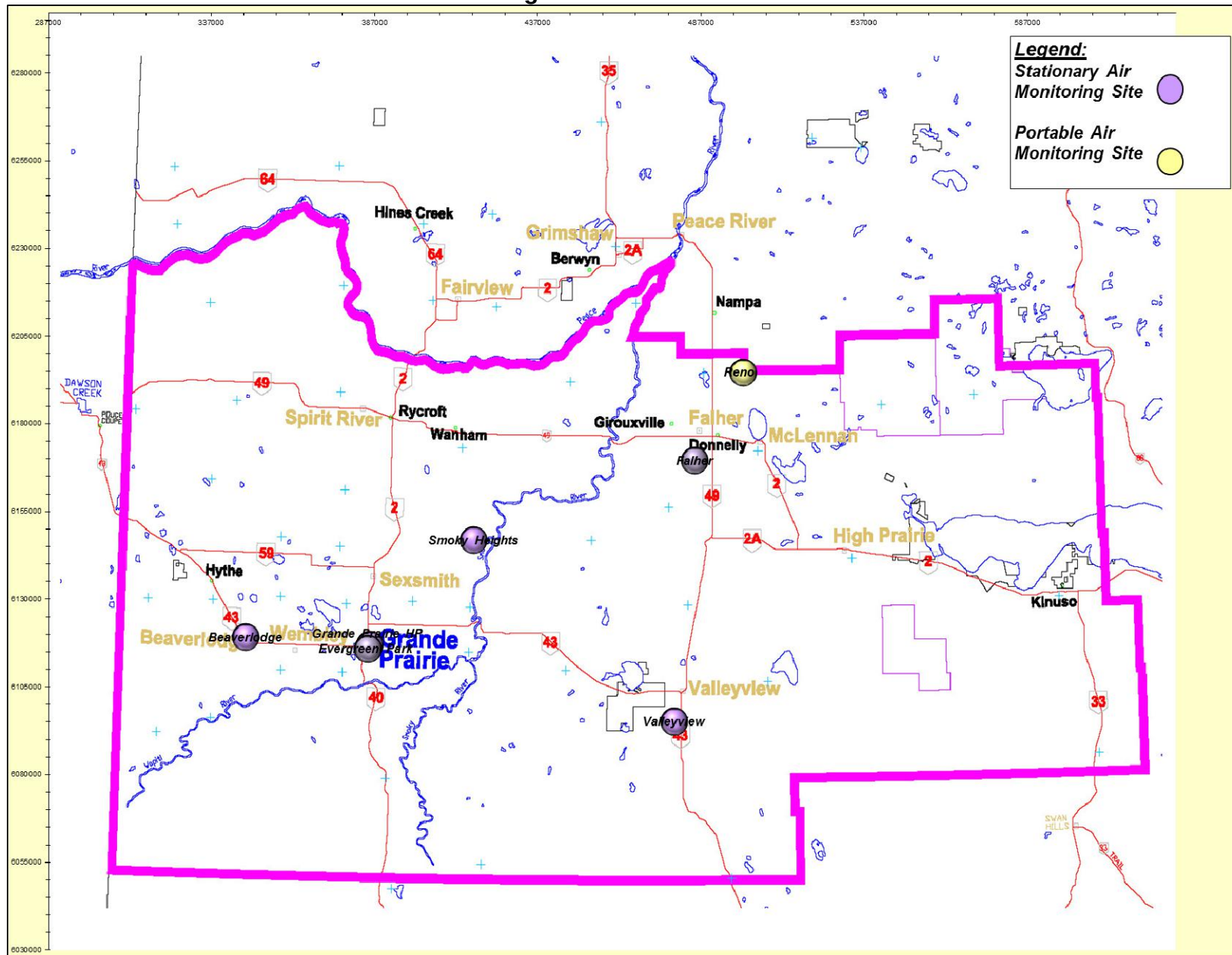


Greg Pippus, MSc., EP.  
Environmental Leader  
Weyerhaeuser - Grande Prairie Operations



Jeff Cooper, C.Tech.  
AQM Operations Manager

# Location of PAZA Continuous Monitoring Stations



## PAZA Monthly Continuous Data Summary

| Apr-2014<br>Peace Airshed Zone Association |            |       |                |                    |            |       | Maximum Recorded Values |              |              |        |                         |
|--------------------------------------------|------------|-------|----------------|--------------------|------------|-------|-------------------------|--------------|--------------|--------|-------------------------|
|                                            |            |       |                |                    |            |       | 1-hr                    |              | 24-hr / 8-hr |        |                         |
| Pollutant<br>(units)                       | Objectives |       | Station        | Monthly<br>Average | Exceedence |       | Conc                    | Day          | Conc         | Day    | Operational<br>Time (%) |
|                                            | 1-hr       | 24-hr |                |                    | 1-hr       | 24-hr |                         |              |              |        |                         |
| SO <sub>2</sub> (ppb)                      | 172        | 48    | Henry Pirker   | 0.3                | 0          | 0     | 5.7                     | Apr-04 11:00 | 1.0          | Apr-29 | 100%                    |
| SO <sub>2</sub> (ppb)                      | 172        | 48    | Evergreen Park | 0.2                | 0          | 0     | 4.5                     | Apr-30 23:00 | 0.8          | Apr-30 | 100%                    |
| SO <sub>2</sub> (ppb)                      | 172        | 48    | Smoky Heights  | 0.5                | 0          | 0     | 5.7                     | Apr-09 03:00 | 1.2          | Apr-06 | 100%                    |
| SO <sub>2</sub> (ppb)                      | 172        | 48    | Beaverlodge    | 0.3                | 0          | 0     | 2.5                     | Apr-01 13:00 | 1.1          | Apr-01 | 100%                    |
| SO <sub>2</sub> (ppb)                      | 172        | 48    | Valleyview     | 0.5                | 0          | 0     | 15.7                    | Apr-30 18:00 | 2.4          | Apr-09 | 100%                    |
| SO <sub>2</sub> (ppb)                      | 172        | 48    | Reno           | 0.2                | 0          | 0     | 4.8                     | Apr-03 18:00 | 1.0          | Apr-03 | 100%                    |
| SO <sub>2</sub> (ppb)                      | 172        | 48    | Falher         | 0.2                | 0          | 0     | 3.6                     | Apr-19 19:00 | 0.7          | Apr-03 | 93%                     |
| NO (ppb)                                   |            |       | Henry Pirker   | 1.5                | 0          | 0     | 57.7                    | Apr-14 09:00 | 9.5          | Apr-30 | 100%                    |
| NO <sub>2</sub> (ppb)                      | 159        | 106   | Henry Pirker   | 7.3                | 0          | 0     | 40.2                    | Apr-07 21:00 | 17.5         | Apr-07 | 100%                    |
| NO <sub>x</sub> (ppb)                      |            |       | Henry Pirker   | 8.9                | 0          | 0     | 95.7                    | Apr-14 09:00 | 23.2         | Apr-30 | 100%                    |
| NO (ppb)                                   |            |       | Beaverlodge    | 0.3                | 0          | 0     | 15.8                    | Apr-01 10:00 | 2.5          | Apr-01 | 100%                    |
| NO <sub>2</sub> (ppb)                      | 159        | 106   | Beaverlodge    | 2.2                | 0          | 0     | 17.4                    | Apr-01 07:00 | 6.4          | Apr-01 | 100%                    |
| NO <sub>x</sub> (ppb)                      |            |       | Beaverlodge    | 2.5                | 0          | 0     | 28.5                    | Apr-01 10:00 | 8.8          | Apr-01 | 100%                    |
| NO (ppb)                                   |            |       | Reno           | 0.2                | 0          | 0     | 3.4                     | Apr-01 10:00 | 0.7          | Apr-14 | 100%                    |
| NO <sub>2</sub> (ppb)                      | 159        | 106   | Reno           | 1.4                | 0          | 0     | 10.7                    | Apr-20 02:00 | 3.4          | Apr-01 | 100%                    |
| NO <sub>x</sub> (ppb)                      |            |       | Reno           | 1.6                | 0          | 0     | 10.9                    | Apr-20 02:00 | 4.1          | Apr-01 | 100%                    |
| O <sub>3</sub> (ppb)                       | 82         |       | Henry Pirker   | 29.0               | 0          | -     | 52.9                    | Apr-20 17:00 | 41.4         | Apr-19 | 98%                     |
| O <sub>3</sub> (ppb) - 8-hr                |            |       | Henry Pirker   |                    | 0          |       |                         |              | 49.1         | Apr-20 |                         |
| O <sub>3</sub> (ppb)                       | 82         |       | Beaverlodge    | 39.6               | 0          | -     | 56.4                    | Apr-21 17:00 | 47.5         | Apr-22 | 100%                    |
| O <sub>3</sub> (ppb) - 8-hr                |            |       | Beaverlodge    |                    | 0          |       |                         |              | 53.5         | Apr-20 |                         |
| O <sub>3</sub> (ppb)                       | 82         |       | Reno           | 38.3               | 0          | -     | 54.3                    | Apr-22 20:00 | 47.2         | Apr-22 | 100%                    |
| O <sub>3</sub> (ppb) - 8-hr                |            |       | Reno           |                    | 0          |       |                         |              | 52.3         | Apr-01 |                         |
| CO (ppm)                                   | 13         |       | Henry Pirker   | 0.21               | 0          | -     | 0.7                     | Apr-07 22:00 | 0.3          | Apr-07 | 100%                    |
| CO (ppm) - 8-hr                            | 5          |       | Henry Pirker   |                    | 0          |       |                         |              | 0.5          | Apr-30 |                         |



## PAZA Monthly Continuous Data Summary – continued

| Apr-2014Peace Airshed Zone Association |    |    |                |       |   |   | Maximum Recorded Values |              |              |        |      |
|----------------------------------------|----|----|----------------|-------|---|---|-------------------------|--------------|--------------|--------|------|
|                                        |    |    |                |       |   |   | 1-hr                    |              | 24-hr / 8-hr |        |      |
| THC (ppm)                              |    |    | Henry Pirker   | 2.1   | - | - | 4.9                     | Apr-21 04:00 | 2.4          | Apr-21 | 100% |
| CH <sub>4</sub> (ppm)                  |    |    | Henry Pirker   | 2.1   | - | - | 4.9                     | Apr-21 04:00 | 2.4          | Apr-21 | 100% |
| NMHC (ppm)                             |    |    | Henry Pirker   | 0.0   | - | - | 0.0                     | Apr-10 11:00 | 0.0          | Apr-29 | 100% |
| THC (ppm)                              |    |    | Reno           | 2.13  | - | - | 2.7                     | Apr-14 19:00 | 2.4          | Apr-14 | 100% |
| TRS (ppb)                              |    |    | Henry Pirker   | 0.5   | - | - | 1.4                     | Apr-30 10:00 | 0.8          | Apr-30 | 100% |
| TRS (ppb)                              |    |    | Evergreen Park | 0.3   | - | - | 1.6                     | Apr-23 10:00 | 0.7          | Apr-23 | 100% |
| TRS (ppb)                              |    |    | Smoky Heights  | 0.1   | - | - | 0.8                     | Apr-04 09:00 | 0.1          | Apr-05 | 100% |
| TRS (ppb)                              |    |    | Reno           | 0.3   | - | - | 0.6                     | Apr-01 05:00 | 0.4          | Apr-01 | 100% |
| H <sub>2</sub> S (ppb)                 | 10 | 3  | Valleyview     | 0.2   | 0 | 0 | 1.7                     | Apr-22 04:00 | 0.4          | Apr-30 | 100% |
| H <sub>2</sub> S (ppb)                 | 10 | 3  | Falher         | 0.1   | 0 | 0 | 1.0                     | Apr-10 22:00 | 0.2          | Apr-27 | 93%  |
| PM <sub>2.5</sub> (µg/m3)              | 80 | 30 | Henry Pirker   | 4.6   | 0 | 0 | 41.2                    | Apr-14 22:00 | 10.8         | Apr-30 | 100% |
| PM <sub>2.5</sub> (µg/m3)              | 80 | 30 | Evergreen Park | 2.8   | 0 | 0 | 25.0                    | Apr-01 08:00 | 12.0         | Apr-01 | 100% |
| PM <sub>2.5</sub> (µg/m3)              | 80 | 30 | Smoky Heights  | 2.7   | 0 | 0 | 33.0                    | Apr-02 16:00 | 7.4          | Apr-02 | 100% |
| PM <sub>2.5</sub> (µg/m3)              | 80 | 30 | Beaverlodge    | 7.7   | 0 | 0 | 36.5                    | Apr-12 13:00 | 14.7         | Apr-03 | 93%  |
| PM <sub>2.5</sub> (µg/m3)              | 80 | 30 | Reno           | 1.5   | 0 | 0 | 11.1                    | Apr-01 11:00 | 4.7          | Apr-01 | 100% |
| RH (%)                                 |    |    | Henry Pirker   | 57.6  | - | - | 87.8                    | Apr-22 23:00 | 81.6         | Apr-23 | 100% |
| RH (%)                                 |    |    | Evergreen Park | 58.3  | - | - | 95.3                    | Apr-22 23:00 | 87.8         | Apr-23 | 100% |
| RH (%)                                 |    |    | Beaverlodge    | 65.7  | - | - | 100.0                   | Apr-04 04:00 | 93.9         | Apr-23 | 100% |
| RH (%)                                 |    |    | Valleyview     | 57.8  | - | - | 97.7                    | Apr-11 07:00 | 90.5         | Apr-23 | 100% |
| SR (W/m <sup>2</sup> )                 |    |    | Henry Pirker   | 176.4 | - | - | 752.4                   | Apr-28 13:00 | 253.7        | Apr-28 | 100% |
| Temp (°C)                              |    |    | Henry Pirker   | 3.5   | - | - | 21.4                    | Apr-30 16:00 | 13.1         | Apr-30 | 100% |
| Temp (°C)                              |    |    | Evergreen Park | 3.6   | - | - | 21.5                    | Apr-30 17:00 | 12.8         | Apr-30 | 100% |
| Temp (°C)                              |    |    | Smoky Heights  | 2.6   | - | - | 21.1                    | Apr-30 17:00 | 12.6         | Apr-30 | 100% |
| Temp (°C)                              |    |    | Beaverlodge    | 3.2   | - | - | 20.5                    | Apr-30 16:00 | 13.8         | Apr-30 | 100% |
| Temp (°C)                              |    |    | Valleyview     | 4.0   | - | - | 22.7                    | Apr-30 16:00 | 14.9         | Apr-30 | 100% |
| Temp (°C)                              |    |    | Reno           | 1.9   | - | - | 20.9                    | Apr-30 16:00 | 13.9         | Apr-30 | 100% |
| Temp (°C)                              |    |    | Falher         | 2.0   | - | - | 21.7                    | Apr-30 16:00 | 13.5         | Apr-30 | 96%  |

## PAZA Monthly Continuous Data Summary – continued

| Apr-2014 Peace Airshed Zone Association |  |  |                |      |   |   | Maximum Recorded Values |              |              |        |      |
|-----------------------------------------|--|--|----------------|------|---|---|-------------------------|--------------|--------------|--------|------|
|                                         |  |  |                |      |   |   | 1-hr                    |              | 24-hr / 8-hr |        |      |
| WSPD s (km/hr)                          |  |  | Henry Pirker   | 10.1 | - | - | 34.0                    | Apr-09 14:00 | 23.3         | Apr-09 | 100% |
| WSPD s (km/hr)                          |  |  | Evergreen Park | 14.0 | - | - | 58.0                    | Apr-08 13:00 | 38.5         | Apr-09 | 100% |
| WSPD s (km/hr)                          |  |  | Smoky Heights  | 12.7 | - | - | 38.0                    | Apr-28 13:00 | 26.6         | Apr-09 | 100% |
| WSPD s (km/hr)                          |  |  | Beaverlodge    | 13.0 | - | - | 48.0                    | Apr-09 16:00 | 31.4         | Apr-09 | 100% |
| WSPD s (km/hr)                          |  |  | Valleyview     | 6.2  | - | - | 23.0                    | Apr-09 11:00 | 14.2         | Apr-09 | 100% |
| WSPD s (km/hr)                          |  |  | Reno           | 14.0 | - | - | 43.0                    | Apr-23 00:00 | 29.1         | Apr-22 | 100% |
| WSPD s (km/hr)                          |  |  | Falher         | 14.5 | - | - | 39.0                    | Apr-09 11:00 | 27.7         | Apr-22 | 96%  |
| WSPD v (km/hr)                          |  |  | Henry Pirker   | 2.9  | - | - | 33.0                    | Apr-09 14:00 | 22.9         | Apr-09 | 100% |
| WSPD v (km/hr)                          |  |  | Evergreen Park | 5.6  | - | - | 57.0                    | Apr-08 13:00 | 37.6         | Apr-09 | 100% |
| WSPD v (km/hr)                          |  |  | Smoky Heights  | 4.1  | - | - | 38.0                    | Apr-09 13:00 | 26.3         | Apr-09 | 100% |
| WSPD v (km/hr)                          |  |  | Beaverlodge    | 2.5  | - | - | 48.0                    | Apr-09 16:00 | 31.0         | Apr-09 | 100% |
| WSPD v (km/hr)                          |  |  | Valleyview     | 2.0  | - | - | 22.0                    | Apr-09 11:00 | 13.4         | Apr-09 | 100% |
| WSPD v (km/hr)                          |  |  | Reno           | 3.6  | - | - | 43.0                    | Apr-23 00:00 | 28.6         | Apr-22 | 100% |
| WSPD v (km/hr)                          |  |  | Falher         | 0.8  | - | - | 39.0                    | Apr-09 11:00 | 27.2         | Apr-22 | 96%  |
| WDIR                                    |  |  | Henry Pirker   | WNW  | - | - | -                       | -            | -            | -      | 100% |
| WDIR                                    |  |  | Evergreen Park | WNW  | - | - | -                       | -            | -            | -      | 100% |
| WDIR                                    |  |  | Smoky Heights  | W    | - | - | -                       | -            | -            | -      | 100% |
| WDIR                                    |  |  | Beaverlodge    | W    | - | - | -                       | -            | -            | -      | 100% |
| WDIR                                    |  |  | Valleyview     | NW   | - | - | -                       | -            | -            | -      | 100% |
| WDIR                                    |  |  | Reno           | SSE  | - | - | -                       | -            | -            | -      | 100% |
| WDIR                                    |  |  | Falher         | S    | - | - | -                       | -            | -            | -      | 96%  |

# Continuous Network Equipment Summary

## PAZA – Henry Pirker Station

### General Station Issues

Routine monthly calibrations were performed on April 9<sup>th</sup> (SO<sub>2</sub>, NO<sub>x</sub>), 10<sup>th</sup> (CO, TRS, THC), and 17<sup>th</sup> (O<sub>3</sub>).

| Parameter                           | Make    | Model     | Notes                                                                                                                                                                                                                                                         |
|-------------------------------------|---------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SO <sub>2</sub>                     | TEI     | 43C       | No operational issues observed.                                                                                                                                                                                                                               |
| NO <sub>x</sub> /NO/NO <sub>2</sub> | TEI     | 42C       | No operational issues observed.                                                                                                                                                                                                                               |
| O <sub>3</sub>                      | TEI     | 49C       | Span solenoid found to be faulty during calibration attempt on April 10 <sup>th</sup> . Calibration on April 17 <sup>th</sup> and analyzer replaced with ministry spare on April 30 <sup>th</sup> , allowed to stabilize and calibrated May 1 <sup>st</sup> . |
| CO                                  | TEI     | 48C       | Analyzer tested on April 16 <sup>th</sup> .                                                                                                                                                                                                                   |
| THC/CH <sub>4</sub> /NMHC           | TEI     | 55I       | No operational issues observed.                                                                                                                                                                                                                               |
| TRS                                 | TEI     | 45C/43C   | No operational issues observed.                                                                                                                                                                                                                               |
| PM <sub>2.5</sub>                   | Sharp   | 5030      | No operational issues observed.                                                                                                                                                                                                                               |
| RH                                  | Met One | 083D      | No operational issues observed.                                                                                                                                                                                                                               |
| ET                                  | Met One | 083D      | No operational issues observed.                                                                                                                                                                                                                               |
| SR                                  | Met One | 096-1     | No operational issues observed.                                                                                                                                                                                                                               |
| WS / WD                             | Met One | 010C/020C | No operational issues observed.                                                                                                                                                                                                                               |

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**PAZA – Evergreen Park Station**

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**General Station Issues**

Routine monthly calibration performed on April 1<sup>st</sup> (SO<sub>2</sub>, TRS).

| Parameter         | Make          | Model  | Notes                                        |
|-------------------|---------------|--------|----------------------------------------------|
| SO <sub>2</sub>   | TEI           | 43i    | No operational issues observed.              |
| TRS               | TEI           | 43C    | No operational issues observed.              |
| PM <sub>2.5</sub> | R&P           | 1400AB | Glassware cleaned during calibration period. |
| 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.              |

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**PAZA – Smoky Heights Station**

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**General Station Issues**

Routine monthly calibration performed on April 2<sup>nd</sup> (SO<sub>2</sub>, TRS).

| Parameter         | Make    | Model     | Notes                                                                                                          |
|-------------------|---------|-----------|----------------------------------------------------------------------------------------------------------------|
| SO <sub>2</sub>   | TEI     | 43C       | No operational issues observed.                                                                                |
| TRS               | TEI     | 43C       | Low spans due to unstable station temperature, resolved when heating unit repaired.                            |
| PM <sub>2.5</sub> | R&P     | 1400AB    | Glassware cleaned during calibration period. Analyzer failed to capture 1 hour of data April 4 <sup>th</sup> . |
| ET                | Met One | 083D      | No operational issues observed.                                                                                |
| WS / WD           | Met One | 010C/020C | No operational issues observed.                                                                                |

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**PAZA – Beaverlodge Station**

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**General Station Issues**

Routine monthly calibrations performed on April 8<sup>th</sup> (SO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>).

| Parameter              | Make     | Model  | Notes                                                                                            |
|------------------------|----------|--------|--------------------------------------------------------------------------------------------------|
| SO <sub>2</sub>        | TEI      | 43CTL  | No operational issues observed.                                                                  |
| NOx/NO/NO <sub>2</sub> | TEI      | 42C    | No operational issues observed.                                                                  |
| O <sub>3</sub>         | TEI      | 49C    | No operational issues observed.                                                                  |
| PM <sub>2.5</sub>      | R&P      | 1400AB | Fifty (50) hours flagged invalid due to negative swings. Analyzer undergoing maintenance in May. |
| 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.                                                                  |

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**PAZA – Valleyview Station**

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**General Station Issues**

Routine monthly calibrations were performed on April 14<sup>th</sup> (SO<sub>2</sub> & H<sub>2</sub>S).

| Parameter        | Make | Model     | Notes                           |
|------------------|------|-----------|---------------------------------|
| SO <sub>2</sub>  | TEI  | 43i       | No operational issues observed. |
| H <sub>2</sub> 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. |

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### PAZA – Portable-Reno

#### General Station Issues

Routine monthly calibrations were performed on April 22<sup>nd</sup> (TRS, THC) and 23<sup>rd</sup> (SO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>).

| Parameter         | Make | Model     | Notes                                                                                              |
|-------------------|------|-----------|----------------------------------------------------------------------------------------------------|
| SO <sub>2</sub>   | TEI  | 43i       | No operational issues observed.                                                                    |
| NO <sub>x</sub>   | TEI  | 42i       | No operational issues observed.                                                                    |
| O <sub>3</sub>    | TEI  | 49C       | HVAC malfunction caused shelter temperature variation, affecting span performance from April 5-10. |
| TRS               | TEI  | 39C       | Span tank emptied April 15 <sup>th</sup> , replaced April 19 <sup>th</sup> .                       |
| THC               | TEI  | 51C       | No operational issues observed.                                                                    |
| PM <sub>2.5</sub> | R&P  | 1400AB    | No operational issues observed.                                                                    |
| ET                | Gill | Met Pak 3 | No operational issues observed.                                                                    |
| WS / WD           | Gill | Met Pak 3 | No operational issues observed.                                                                    |



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**PAZA – Falher Station**

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**General Station Issues**

Routine monthly calibrations were performed on April 22<sup>nd</sup> (SO<sub>2</sub> & H<sub>2</sub>S). Power outage April 17<sup>th</sup> damaged transformer feeding the trailer, leaving the station unable to capture SO<sub>2</sub> or H<sub>2</sub>S data until repaired April 19<sup>th</sup> and trailer returned to service.

| Parameter        | Make   | Model            | Notes                           |
|------------------|--------|------------------|---------------------------------|
| SO <sub>2</sub>  | TEI    | 43i              | No operational issues observed. |
| H <sub>2</sub> S | Thermo | 450i             | No operational issues observed. |
| ET               | Gill   | RM Young<br>5103 | No operational issues observed. |
| WS / WD          | Gill   | RM Young<br>5103 | No operational issues observed. |

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PAZA  
Henry Pirker Station  
Monthly Summary Tables, Graphs and  
Roses

## Hourly Averages

Sulphur Dioxide (SO<sub>2</sub>) - ppb

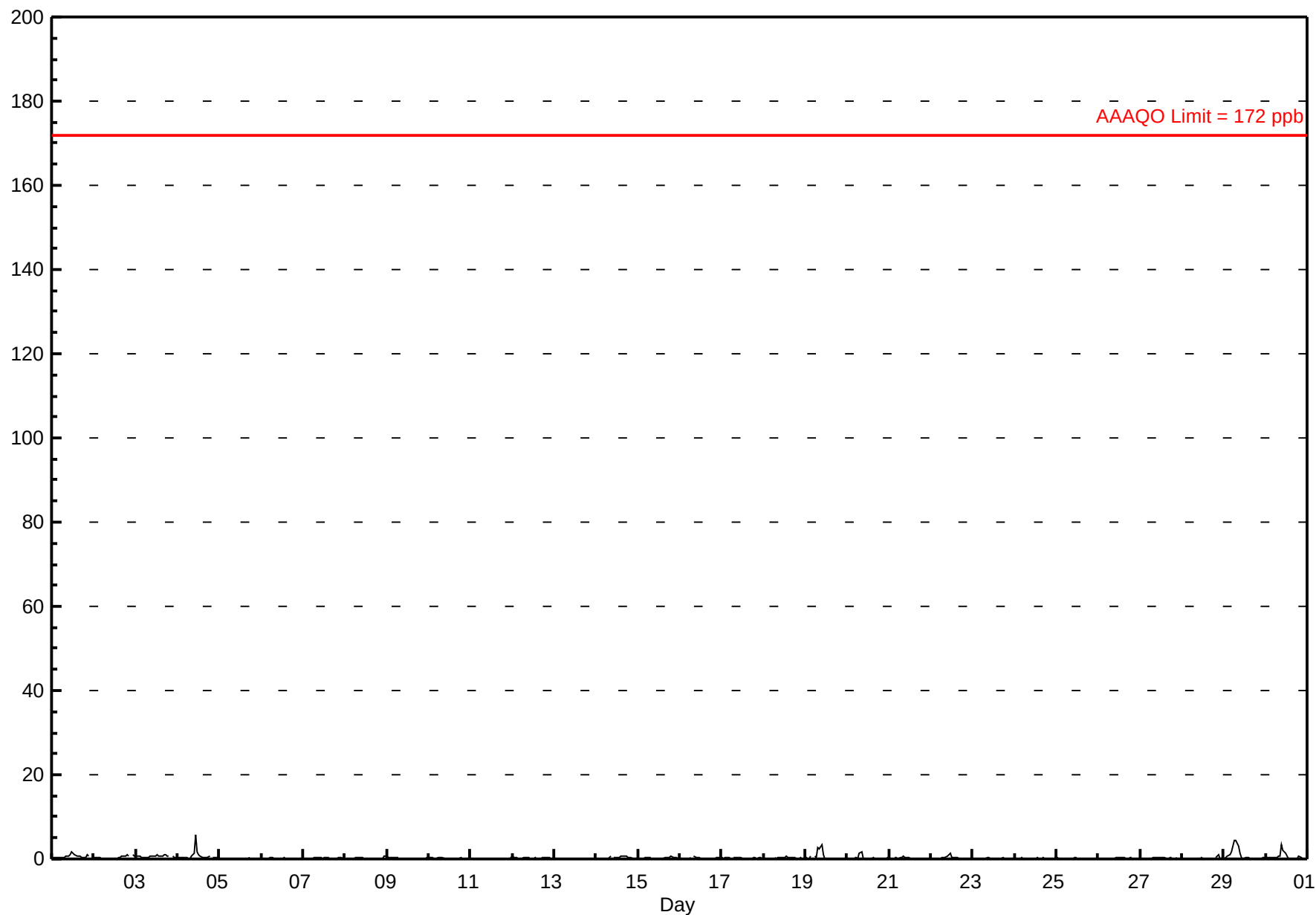
Henry Pirker - April 2014

|                                                                                                                                                                                                                                                                                                                                                                |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |    |                 |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|-----------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-----------------|---------------|
| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 5.7 ppb on Apr 4 11:00 Maximum Daily Average: 1.0 ppb on Apr 29                                                                                                                                                                                                                              |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 684<br>Hours of Missing Data: 36<br>Hours of Calibration: 36<br>Percent Operational Time: 100.0 |    |    |    |    |                 |               |
| Minimum Value: 0 ppb on Apr 5 13:00 Minimum Daily Average: 0.0 ppb on Apr 13<br>Maximum Diurnal Average: 0.6 ppb at hour 11 Minimum Diurnal Average: 0.2 ppb at hour 2<br>Monthly Average: 0.27 ppb Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.1 Q <sub>3</sub> = 0.3 P <sub>90</sub> = 0.6 P <sub>99</sub> = 3.0 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |    |                 |               |
| 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-Apr                                                                                                                                                                                                                                                                                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1  | 1  | 2  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0                                                                                                                                       | 1  | 1  | A  | 0  | 0.6             | 1.7           |
| 2-Apr                                                                                                                                                                                                                                                                                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | A  | 1  | 1  | 0.3             | 0.9           |
| 3-Apr                                                                                                                                                                                                                                                                                                                                                          | 1                             | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | A  | 1  | 0  | 0  | 0.6             | 0.9           |
| 4-Apr                                                                                                                                                                                                                                                                                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1  | 6  | 2  | 1  | 1  | 0  | 0  | 0  | 0  | 1  | A                                                                                                                                       | 0  | 0  | 0  | 0  | 0.7             | 5.7           |
| 5-Apr                                                                                                                                                                                                                                                                                                                                                          | 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           |
| 6-Apr                                                                                                                                                                                                                                                                                                                                                          | 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           |
| 7-Apr                                                                                                                                                                                                                                                                                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.2             | 0.5           |
| 8-Apr                                                                                                                                                                                                                                                                                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 1  | 1  | 0.2             | 0.7           |
| 9-Apr                                                                                                                                                                                                                                                                                                                                                          | 1                             | 0 | 0 | 0 | 0 | 0 | 0 | C | C | C  | C  | C  | 0  | 0  | 0  | A  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.2             | 0.7           |
| 10-Apr                                                                                                                                                                                                                                                                                                                                                         | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.2             | 0.5           |
| 11-Apr                                                                                                                                                                                                                                                                                                                                                         | 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           |
| 12-Apr                                                                                                                                                                                                                                                                                                                                                         | 1                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.2             | 0.5           |
| 13-Apr                                                                                                                                                                                                                                                                                                                                                         | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.0             | 0.1           |
| 14-Apr                                                                                                                                                                                                                                                                                                                                                         | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | A  | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.3             | 0.7           |
| 15-Apr                                                                                                                                                                                                                                                                                                                                                         | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1                                                                                                                                       | 0  | 0  | 0  | 0  | 0.2             | 0.5           |
| 16-Apr                                                                                                                                                                                                                                                                                                                                                         | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | A | 1 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.1             | 0.6           |
| 17-Apr                                                                                                                                                                                                                                                                                                                                                         | 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           |
| 18-Apr                                                                                                                                                                                                                                                                                                                                                         | 0                             | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.3             | 0.6           |
| 19-Apr                                                                                                                                                                                                                                                                                                                                                         | 0                             | 0 | 0 | 1 | A | 1 | 0 | 3 | 2 | 4  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.5             | 3.5           |
| 20-Apr                                                                                                                                                                                                                                                                                                                                                         | 0                             | 0 | 0 | A | 0 | 0 | 0 | 1 | 2 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.2             | 1.7           |
| 21-Apr                                                                                                                                                                                                                                                                                                                                                         | 0                             | 0 | A | 0 | 0 | 0 | 0 | 0 | 1 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.2             | 0.5           |
| 22-Apr                                                                                                                                                                                                                                                                                                                                                         | 0                             | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.3             | 1.4           |
| 23-Apr                                                                                                                                                                                                                                                                                                                                                         | 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           |
| 24-Apr                                                                                                                                                                                                                                                                                                                                                         | 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           |
| 25-Apr                                                                                                                                                                                                                                                                                                                                                         | 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             | 0.5           |
| 26-Apr                                                                                                                                                                                                                                                                                                                                                         | 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             | 0.5           |
| 27-Apr                                                                                                                                                                                                                                                                                                                                                         | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A                                                                                                                                       | 0  | 0  | 0  | 0  | 0.2             | 0.5           |
| 28-Apr                                                                                                                                                                                                                                                                                                                                                         | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0                                                                                                                                       | 1  | 1  | 0  | 0  | 0.2             | 1.0           |
| 29-Apr                                                                                                                                                                                                                                                                                                                                                         | 0                             | 0 | 1 | 1 | 2 | 3 | 5 | 4 | 3 | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 1.0             | 4.5           |
| 30-Apr                                                                                                                                                                                                                                                                                                                                                         | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3  | 2  | 1  | 1  | 0  | 0  | 0  | A  | 0  | 0  | 1                                                                                                                                       | 0  | 0  | 0  | 0  | 0.5             | 3.3           |
| 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.5 0.5 0.5 0.6 0.4 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                                                                                                                                                                                                                                                            |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |    | Diurnal Average |               |
| 0.7 0.5 0.7 1.0 1.6 3.0 4.5 4.4 3.0 3.5 5.7 1.7 1.5 1.2 0.8 0.8 0.9 0.9 0.8 0.9 1.0 1.0 0.9 0.6                                                                                                                                                                                                                                                                |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |    | 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 (SO<sub>2</sub>) - ppb

Henry Pirker - April 2014



## Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb

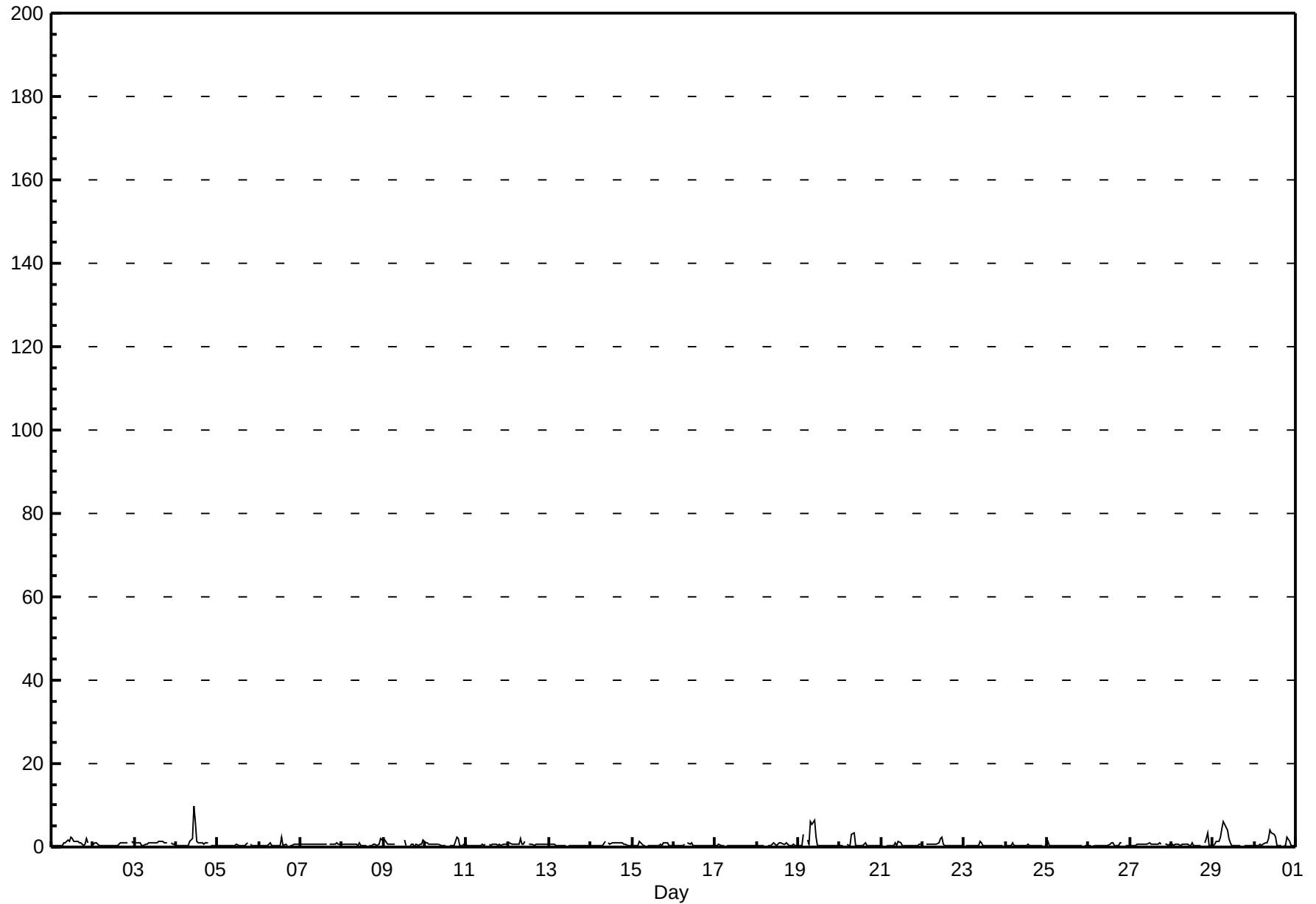
Henry Pirker - April 2014

| Maximum Value: 10.0 ppb on Apr 4 11:00                                                           |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 1.5 ppb on Apr 29                                                                                                                   |    |    |    |    |                               |               |  |  |  | Hours in Service: 720     |  |  |  |  |  |  |  |  |  |
|--------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-------------------------------|---------------|--|--|--|---------------------------|--|--|--|--|--|--|--|--|--|
| Minimum Value: 0 ppb on Apr 9 19:00                                                              |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.5 ppb on Apr 13                                                                                                                   |    |    |    |    |                               |               |  |  |  | Hours of Data: 684        |  |  |  |  |  |  |  |  |  |
| Maximum Diurnal Average: 1.3 ppb at hour 11                                                      |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 0.6 ppb at hour 3                                                                                                                 |    |    |    |    |                               |               |  |  |  | Hours of Missing Data: 36 |  |  |  |  |  |  |  |  |  |
| Monthly Average: 0.72 ppb                                                                        |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.5 Median = 0.5 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 1.0 P <sub>99</sub> = 5.2 |    |    |    |    |                               |               |  |  |  | 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-Apr                                                                                            | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2  | 1  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 0  | 1                                                                                                                                                          | 2  | 1  | A  | 1  | 1.0                           | 2.5           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 2-Apr                                                                                            | 1                             | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | A  | 1  | 1  | 0.7                           | 1.5           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 3-Apr                                                                                            | 1                             | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | A  | 1  | 1  | 1  | 0.9                           | 1.5           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 4-Apr                                                                                            | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2  | 10 | 6  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A                                                                                                                                                          | 0  | 0  | 0  | 0  | 1.4                           | 10.0          |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 5-Apr                                                                                            | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 1  | A  | 1                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.5                           | 1.0           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 6-Apr                                                                                            | 0                             | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0  | 1  | 0  | 0  | 3  | 0  | 1  | 0  | A  | 0  | 0                                                                                                                                                          | 1  | 1  | 1  | 1  | 0.6                           | 2.5           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 7-Apr                                                                                            | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 0.6                           | 1.1           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 8-Apr                                                                                            | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 0  | 0  | 0  | 0  | A  | 1  | 0  | 1  | 1                                                                                                                                                          | 0  | 1  | 2  | 2  | 0.6                           | 2.1           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 9-Apr                                                                                            | 2                             | 2 | 1 | 1 | 1 | 1 | 1 | C | C | C  | C  | C  | 2  | 0  | A  | 0  | 1  | 1  | 0  | 1                                                                                                                                                          | 0  | 1  | 1  | 2  | 0.8                           | 2.2           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 10-Apr                                                                                           | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 0  | 0  | 0  | A  | 0  | 0  | 0  | 0  | 2  | 2                                                                                                                                                          | 0  | 1  | 1  | 1  | 0.7                           | 2.5           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 11-Apr                                                                                           | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1  | 0  | 1  | A  | 1  | 0  | 1  | 1  | 1  | 0  | 1                                                                                                                                                          | 0  | 1  | 1  | 1  | 0.5                           | 0.5           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 12-Apr                                                                                           | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1  | 1  | A  | 1  | 1  | 1  | 0  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 0.7                           | 2.0           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 13-Apr                                                                                           | 1                             | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.5                           | 0.5           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 14-Apr                                                                                           | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | A  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 0  | 0  | 0  | 0.6                           | 1.2           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 15-Apr                                                                                           | 0                             | 0 | 0 | 0 | 1 | 1 | 0 | 0 | A | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 1  | 1                                                                                                                                                          | 1  | 0  | 0  | 0  | 0.6                           | 1.2           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 16-Apr                                                                                           | 0                             | 0 | 0 | 0 | 0 | 0 | 1 | A | 1 | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.5                           | 1.0           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 17-Apr                                                                                           | 0                             | 0 | 1 | 0 | 0 | 0 | A | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.5                           | 0.8           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 18-Apr                                                                                           | 0                             | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 1  | 1  | 0  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0                                                                                                                                                          | 0  | 1  | 0  | 0  | 0.6                           | 1.0           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 19-Apr                                                                                           | 0                             | 0 | 0 | 3 | A | 2 | 1 | 6 | 5 | 6  | 2  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 1.4                           | 6.4           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 20-Apr                                                                                           | 0                             | 0 | 0 | A | 1 | 0 | 0 | 3 | 3 | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.7                           | 3.4           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 21-Apr                                                                                           | 0                             | 0 | A | 0 | 0 | 0 | 0 | 0 | 1 | 0  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 1  | 1  | 1  | 0.5                           | 1.4           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 22-Apr                                                                                           | 1                             | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 2  | 2  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.7                           | 2.4           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 23-Apr                                                                                           | A                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | A  | 0.5                           | 1.5           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 24-Apr                                                                                           | 0                             | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | A  | 0  | 0.5                           | 0.9           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 25-Apr                                                                                           | 1                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | A  | 0  | 0  | 0.5                           | 1.5           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 26-Apr                                                                                           | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 1  | 1  | 1  | 0  | 0  | 0  | 1  | 1                                                                                                                                                          | A  | 0  | 0  | 0  | 0.5                           | 1.0           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 27-Apr                                                                                           | 0                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A                                                                                                                                                          | 1  | 1  | 0  | 1  | 0.6                           | 1.1           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 28-Apr                                                                                           | 1                             | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | A  | 1                                                                                                                                                          | 2  | 3  | 0  | 0  | 0.7                           | 3.4           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 29-Apr                                                                                           | 0                             | 1 | 1 | 1 | 2 | 4 | 6 | 5 | 4 | 2  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 1.5                           | 6.0           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 30-Apr                                                                                           | 0                             | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 2 | 4  | 3  | 3  | 2  | 0  | 0  | 0  | A  | 0  | 0  | 2                                                                                                                                                          | 1  | 0  | 0  | 0  | 1.2                           | 3.9           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 0.6 0.6 0.6 0.6 0.6 0.7 0.7 1.0 1.1 1.1 1.3 0.9 0.7 0.7 0.6 0.6 0.6 0.6 0.7 0.7 0.6 0.7 0.6 0.6  |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    | Diurnal Average               |               |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 2.2 1.7 1.4 2.9 2.5 4.4 6.0 5.9 5.3 6.4 10.0 6.0 2.4 2.5 1.3 1.4 1.5 1.1 2.5 2.4 2.0 3.4 2.1 1.8 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    | Diurnal Maximum               |               |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| C - Calibration                                                                                  |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    | A - Automated Daily Zero Span |               |  |  |  |                           |  |  |  |  |  |  |  |  |  |

## Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb

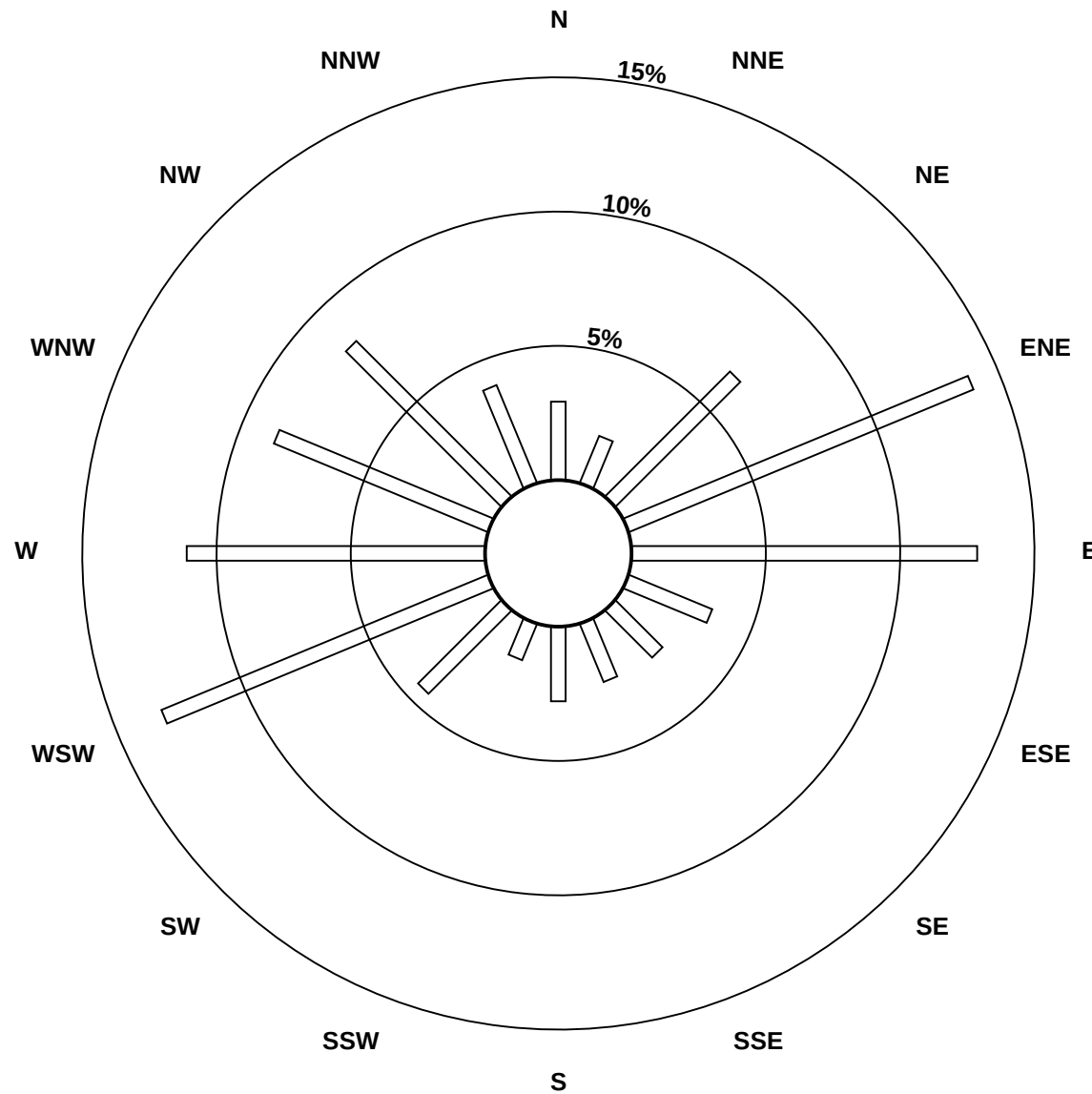
Henry Pirker - April 2014



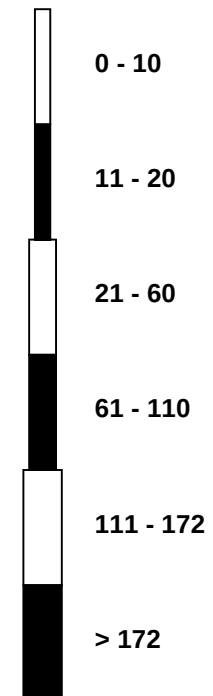
## Pollutant Rose

Sulphur Dioxide (SO<sub>2</sub>) - ppb

Henry Pirker - April 2014

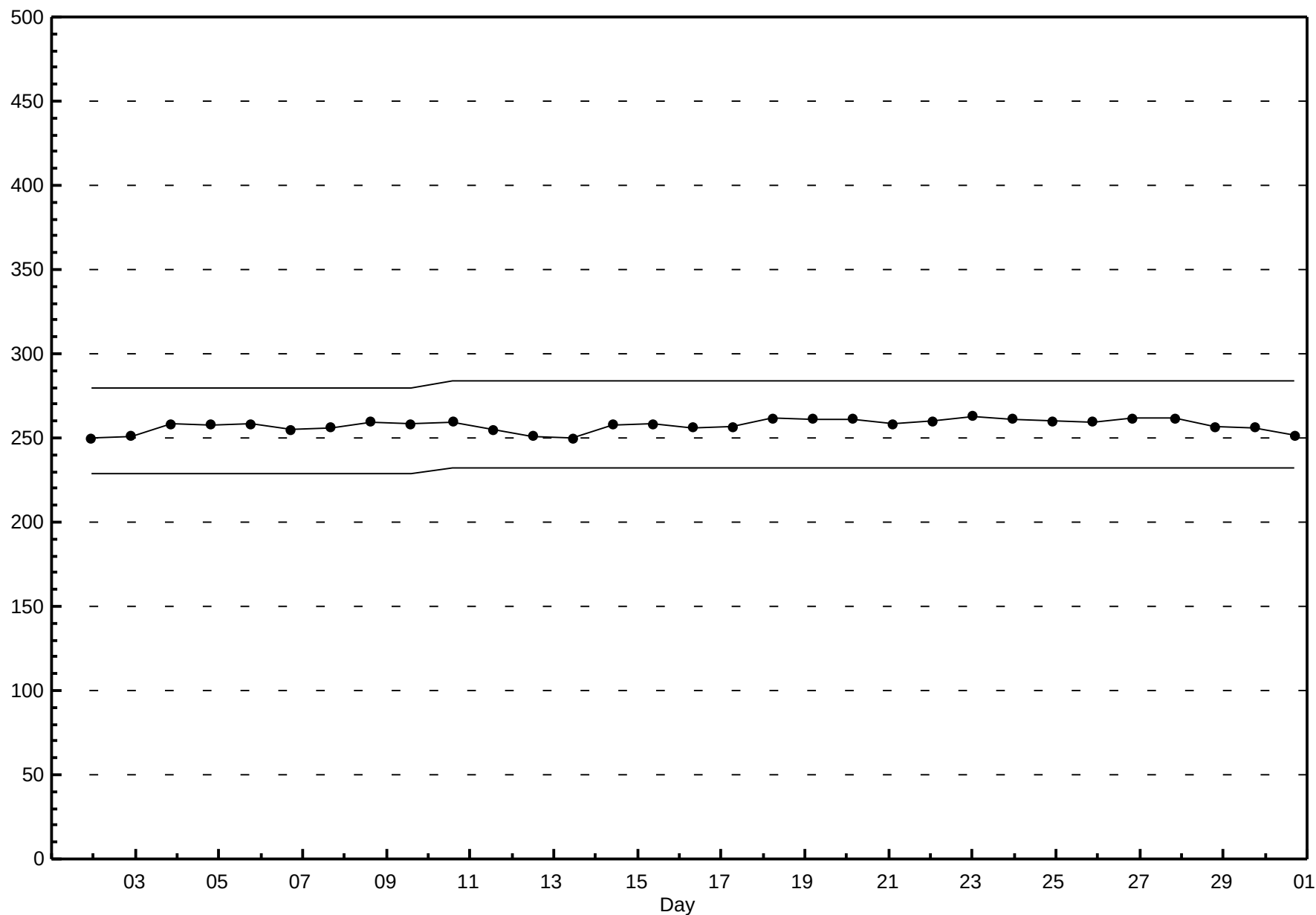


## Pollutant Classes (ppb)



## Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Henry Pirker - April 2014





## Hourly Averages

Total Reduced Sulphur (TRS) - ppb

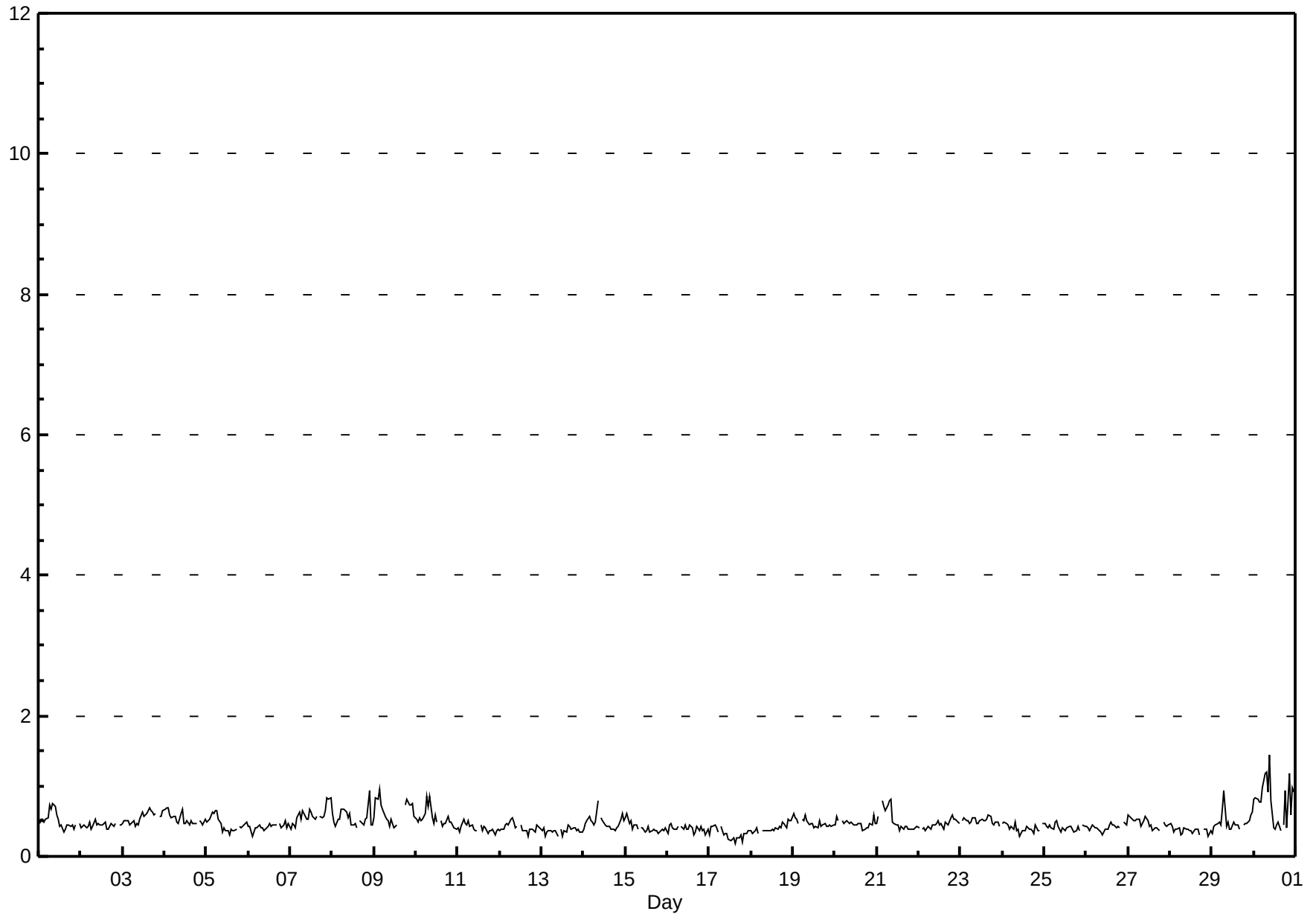
Henry Pirker - April 2014

|                                                                                                 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |                                 |    |                 |               |               |
|-------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------|----|---------------------------------|----|-----------------|---------------|---------------|
| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0                                                 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720                                                                                                                                      |    |                                 |    |                 |               |               |
| Maximum Value: 1.4 ppb on Apr 30 10:00                                                          |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 0.8 ppb on Apr 30                                                                                                                   |    | Hours of Data: 686              |    |                 |               |               |
| Minimum Value: 0 ppb on Apr 17 16:00                                                            |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.3 ppb on Apr 17                                                                                                                   |    | Hours of Missing Data: 34       |    |                 |               |               |
| Maximum Diurnal Average: 0.5 ppb at hour 8                                                      |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 0.4 ppb at hour 17                                                                                                                |    | Hours of Calibration: 34        |    |                 |               |               |
| Monthly Average: 0.47 ppb                                                                       |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.4 Median = 0.4 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 0.6 P <sub>99</sub> = 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-Apr                                                                                           | 0                             | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | A  | 0               | 0.5           | 0.8           |
| 2-Apr                                                                                           | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | A                               | 0  | 0               | 0.4           | 0.5           |
| 3-Apr                                                                                           | 0                             | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | A  | 1                               | 1  | 1               | 0.6           | 0.7           |
| 4-Apr                                                                                           | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1  | 1  | 0  | 0  | 1  | 0  | 1  | 0  | 0  | 0  | A                                                                                                                                                          | 1  | 0                               | 0  | 1               | 0.5           | 0.7           |
| 5-Apr                                                                                           | 0                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0.5           | 0.7           |
| 6-Apr                                                                                           | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0.4           | 0.5           |
| 7-Apr                                                                                           | 0                             | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1  | 1  | 1                                                                                                                                                          | 1  | 1                               | 1  | 1               | 0.6           | 0.8           |
| 8-Apr                                                                                           | 1                             | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 0  | 0  | 0  | 0  | A  | 1  | 0  | 0  | 1                                                                                                                                                          | 1  | 1                               | 0  | 0               | 0.5           | 0.9           |
| 9-Apr                                                                                           | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0  | 1  | 0  | 0  | 0  | C  | C  | C  | C  | 1  | 1                                                                                                                                                          | 1  | 1                               | 1  | 1               | 0.6           | 1.0           |
| 10-Apr                                                                                          | 1                             | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 0  | 1  | 0  | A  | 1  | 0  | 0  | 0  | 1  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0.5           | 0.8           |
| 11-Apr                                                                                          | 0                             | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0  | 0  | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0.4           | 0.5           |
| 12-Apr                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0  | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0.4           | 0.6           |
| 13-Apr                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0.4           | 0.4           |
| 14-Apr                                                                                          | 0                             | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | A  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 1                               | 1  | 0               | 0.5           | 0.8           |
| 15-Apr                                                                                          | 1                             | 1 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0.4           | 0.6           |
| 16-Apr                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0.4           | 0.5           |
| 17-Apr                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0.3           | 0.5           |
| 18-Apr                                                                                          | 0                             | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 1                               | 1  | 0               | 0.4           | 0.5           |
| 19-Apr                                                                                          | 1                             | 1 | 1 | 0 | A | 1 | 1 | 1 | 1 | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0.5           | 0.6           |
| 20-Apr                                                                                          | 0                             | 1 | 1 | A | 1 | 0 | 0 | 1 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 1  | 0               | 0.5           | 0.6           |
| 21-Apr                                                                                          | 0                             | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0.5           | 0.8           |
| 22-Apr                                                                                          | 0                             | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 1                                                                                                                                                          | 1  | 1                               | 1  | 0               | 0.5           | 0.6           |
| 23-Apr                                                                                          | A                             | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0  | 0  | 1  | 1  | 1  | 0  | 1  | 1  | 1  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | A               | 0.5           | 0.6           |
| 24-Apr                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | A  | 0               | 0.4           | 0.5           |
| 25-Apr                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | A                               | 0  | 0               | 0.4           | 0.5           |
| 26-Apr                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | A  | 0                               | 0  | 0               | 0.4           | 0.5           |
| 27-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0.5           | 0.6           |
| 28-Apr                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0.4           | 0.5           |
| 29-Apr                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0                                                                                                                                                          | 0  | 1                               | 1  | 1               | 0.5           | 0.9           |
| 30-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 1  | 0                                                                                                                                                          | 1  | 1                               | 1  | 1               | 0.8           | 1.4           |
| 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.5 0.4 0.5 0.5 0.5 0.5 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |                                 |    | Diurnal Average |               |               |
| 0.8 0.8 0.8 1.0 0.8 1.0 1.2 1.2 0.9 1.4 0.8 0.7 0.6 0.6 0.6 0.7 0.7 0.6 0.9 0.8 1.2 0.9 1.0 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

Henry Pirker - April 2014



## Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

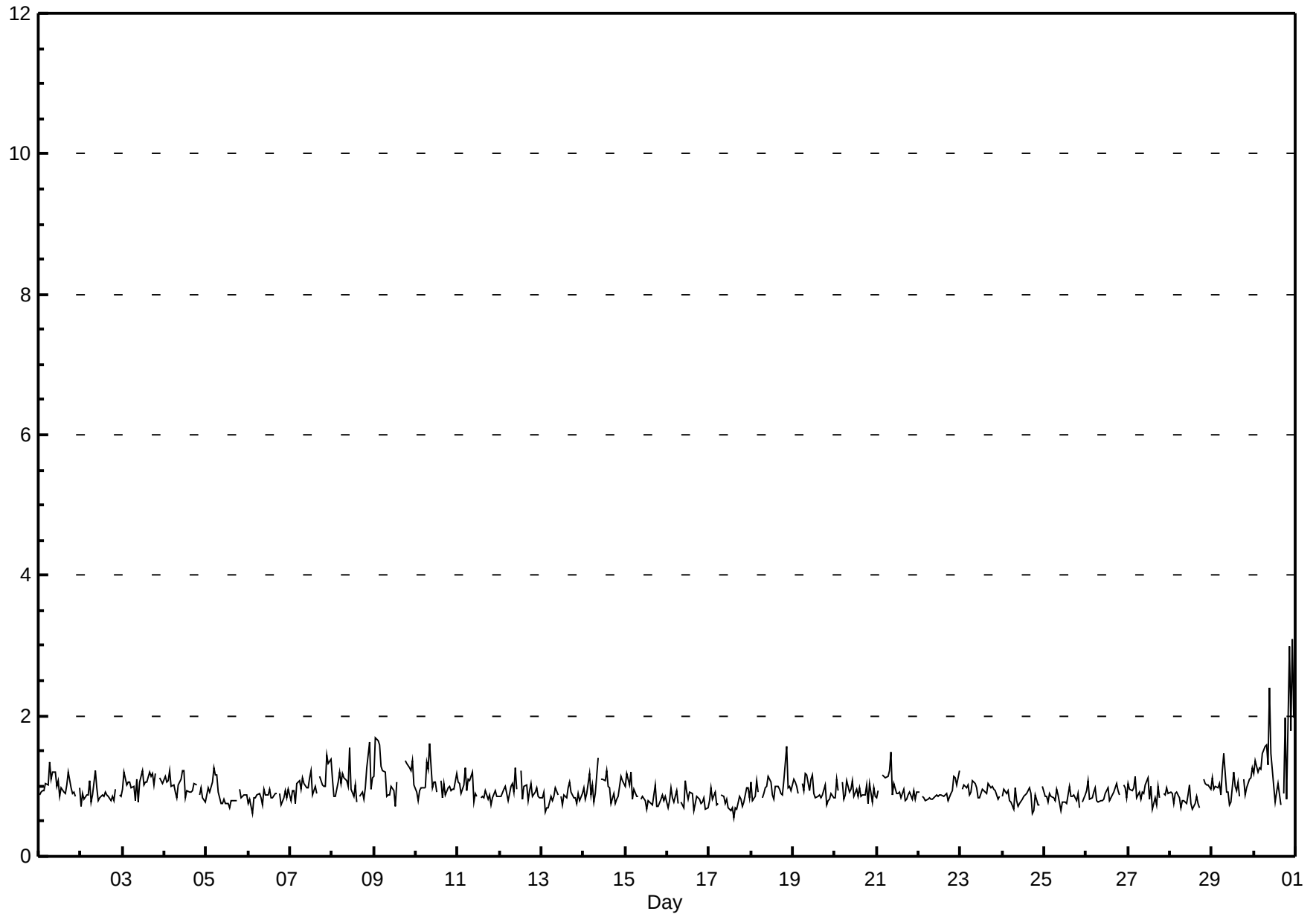
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| Maximum Value: 3.1 ppb on Apr 30 23:00      |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 1.5 ppb on Apr 30                                                                                                                   |    |    |    |                               |               |               |  |  |  | Hours in Service: 720     |  |  |  |  |  |  |  |  |  |
|---------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|-------------------------------|---------------|---------------|--|--|--|---------------------------|--|--|--|--|--|--|--|--|--|
| Minimum Value: 1 ppb on Apr 17 15:00        |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.8 ppb on Apr 17                                                                                                                   |    |    |    |                               |               |               |  |  |  | Hours of Data: 686        |  |  |  |  |  |  |  |  |  |
| Maximum Diurnal Average: 1.0 ppb at hour 23 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 0.9 ppb at hour 17                                                                                                                |    |    |    |                               |               |               |  |  |  | Hours of Missing Data: 34 |  |  |  |  |  |  |  |  |  |
| Monthly Average: 0.95 ppb                   |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.6 P <sub>10</sub> = 0.8 Q <sub>1</sub> = 0.8 Median = 0.9 Q <sub>3</sub> = 1.0 P <sub>90</sub> = 1.2 P <sub>99</sub> = 1.6 |    |    |    |                               |               |               |  |  |  | Hours of Calibration: 34  |  |  |  |  |  |  |  |  |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Percent Operational Time: 100.0                                                                                                                            |    |    |    |                               |               |               |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| Day                                         | Hourly Period Ending At (MST) |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |                               | Daily Average | Daily Maximum |  |  |  |                           |  |  |  |  |  |  |  |  |  |
|                                             | 1                             | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20                                                                                                                                                         | 21 | 22 | 23 | 24                            |               |               |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 1-Apr                                       | 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           | 1.3           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 2-Apr                                       | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | A  | 1  | 1                             | 0.9           | 1.2           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 3-Apr                                       | 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           | 1.2           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 4-Apr                                       | 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           | 1.2           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 5-Apr                                       | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 0.9           | 1.3           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 6-Apr                                       | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 0.8           | 1.0           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 7-Apr                                       | 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           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 8-Apr                                       | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 2  | 1  | 1  | 1  | 1  | A  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 2  | 1  | 1                             | 1.1           | 1.6           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 9-Apr                                       | 1                             | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | C  | C  | C  | C  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 1.2           | 1.7           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 10-Apr                                      | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1  | 1  | 1  | 1  | A  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 1.0           | 1.6           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 11-Apr                                      | 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           | 1.3           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 12-Apr                                      | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | A  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 0.9           | 1.3           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 13-Apr                                      | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | A  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 0.8           | 1.1           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 14-Apr                                      | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 1.0           | 1.4           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 15-Apr                                      | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 0.9           | 1.2           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 16-Apr                                      | 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           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 17-Apr                                      | 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           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 18-Apr                                      | 1                             | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 2  | 1  | 1  | 1                             | 1.0           | 1.6           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 19-Apr                                      | 1                             | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 0.9           | 1.2           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 20-Apr                                      | 1                             | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 0.9           | 1.1           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 21-Apr                                      | 1                             | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 1.0           | 1.5           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 22-Apr                                      | 1                             | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 0.9           | 1.2           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 23-Apr                                      | A                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | A                             | 0.9           | 1.1           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 24-Apr                                      | 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           | 1.0           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 25-Apr                                      | 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           | 1.0           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 26-Apr                                      | 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           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 27-Apr                                      | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A                                                                                                                                                          | 1  | 1  | 1  | 1                             | 0.9           | 1.1           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 28-Apr                                      | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 0.9           | 1.1           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 29-Apr                                      | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 1.0           | 1.5           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 30-Apr                                      | 1                             | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 2  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1  | 2  | 1                                                                                                                                                          | 3  | 2  | 3  | 2                             | 1.5           | 3.1           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | Diurnal Average               |               |               |  |  |  |                           |  |  |  |  |  |  |  |  |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | Diurnal Maximum               |               |               |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| C - Calibration                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | A - Automated Daily Zero Span |               |               |  |  |  |                           |  |  |  |  |  |  |  |  |  |

## Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

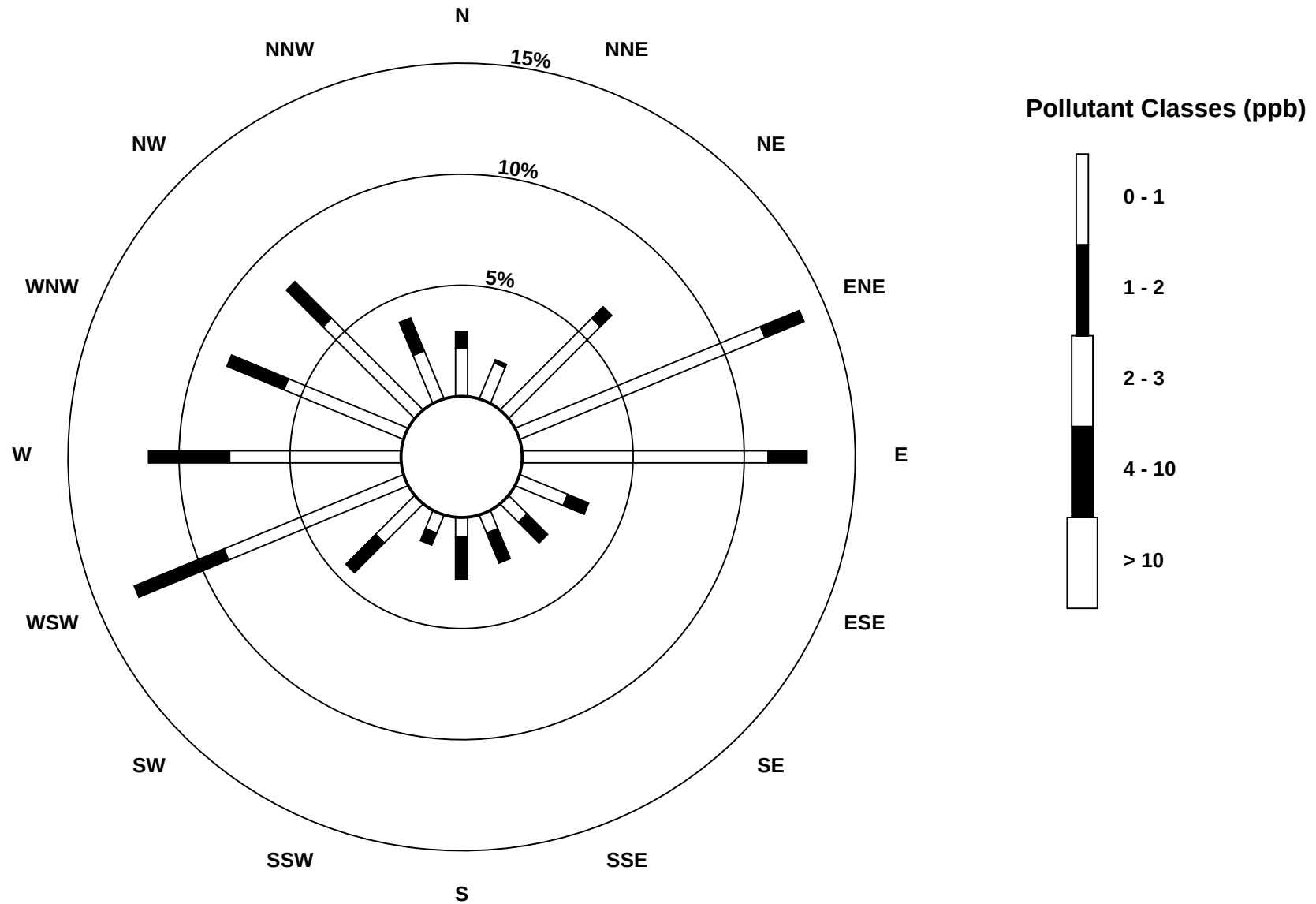
Henry Pirker - April 2014

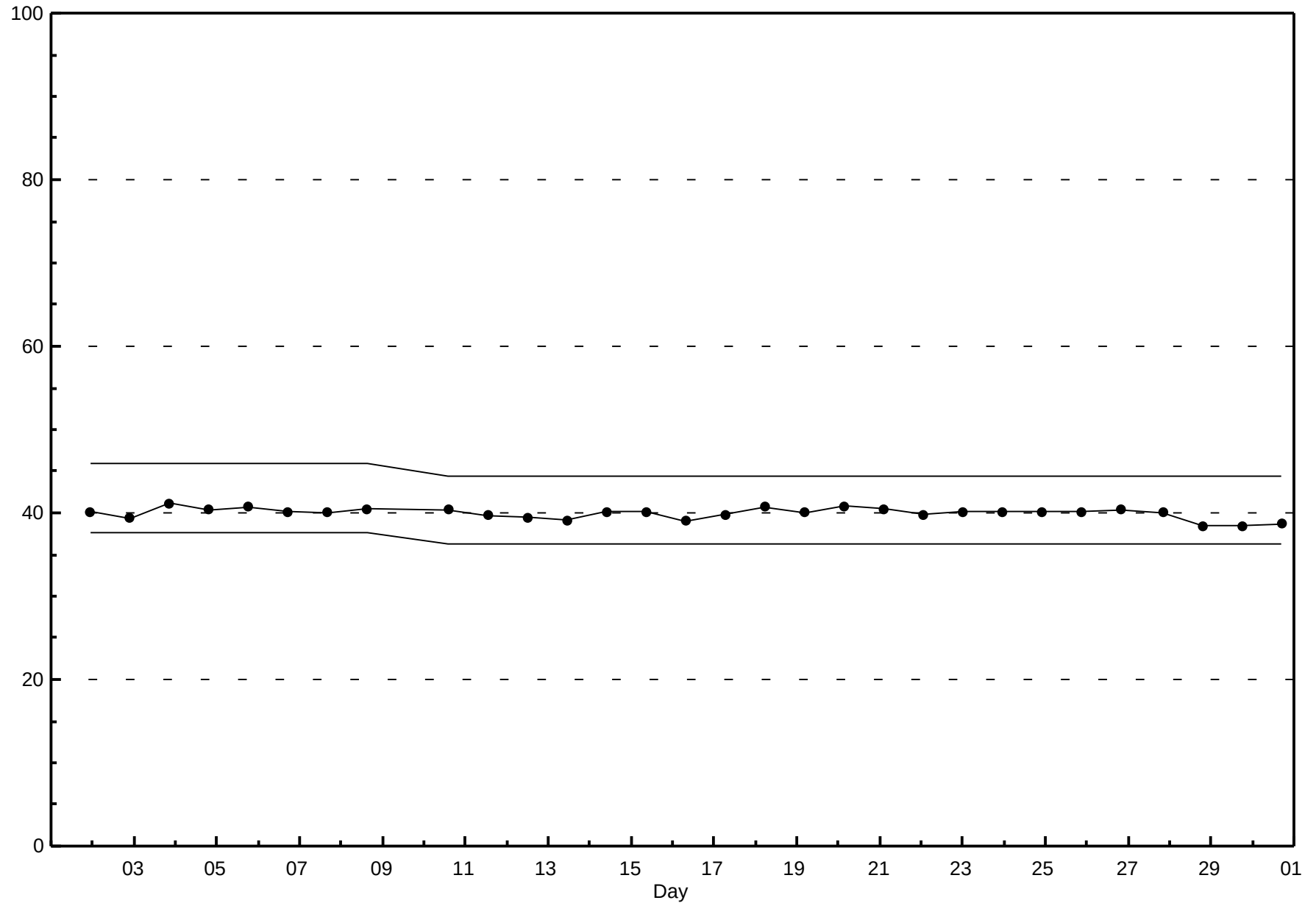


# Pollutant Rose

Total Reduced Sulphur (TRS) - ppb

Henry Pirker - April 2014





## Hourly Averages

Nitrogen Dioxide (NO<sub>2</sub>) - ppb

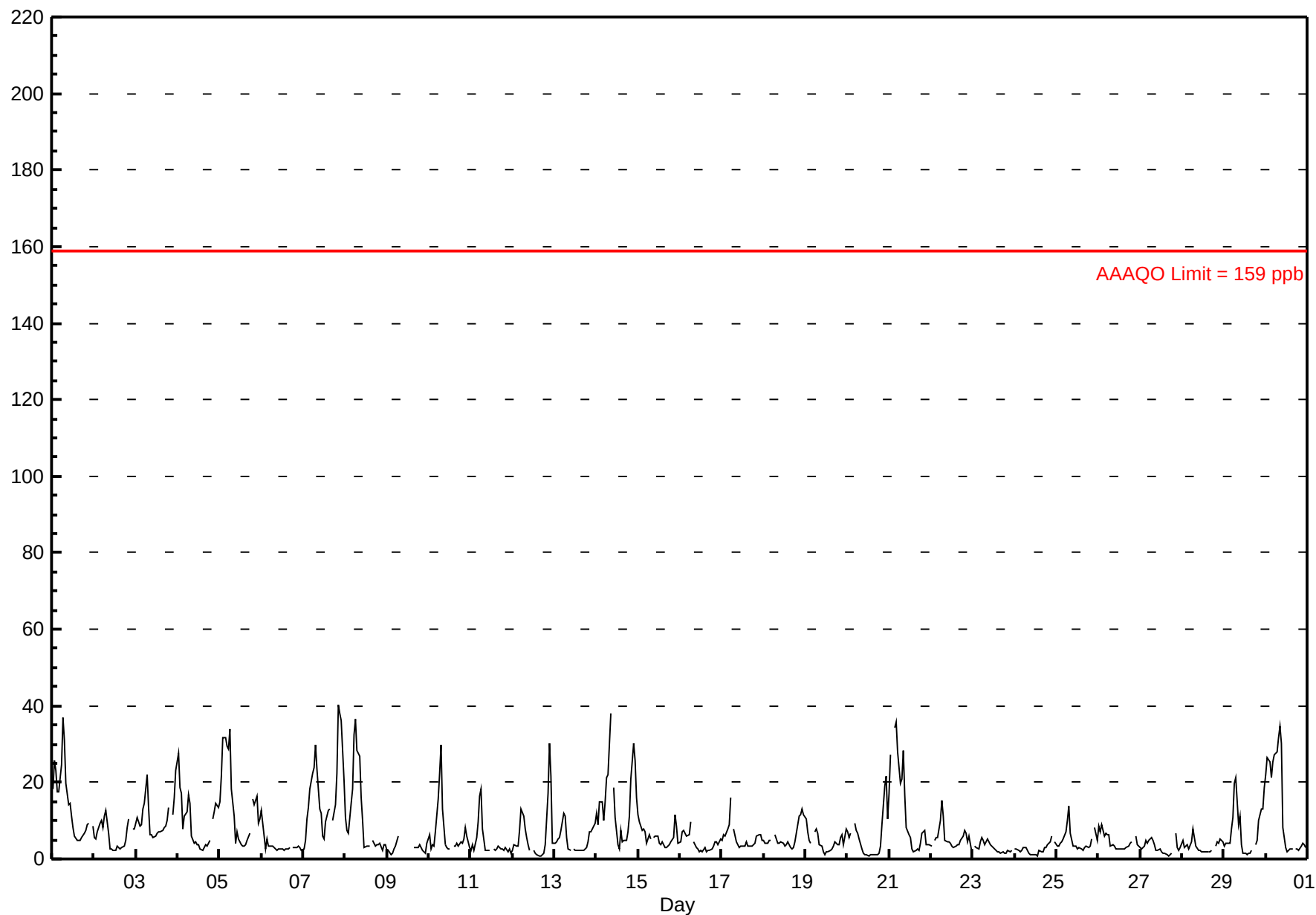
Henry Pirker - April 2014

|                                                                                                                                                                                                                                                                                                                                                                    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |                 |               |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----------------------------------------------------------------------------------------------------------------------------------------|----|----|-----------------|---------------|---------------|
| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 40.2 ppb on Apr 7 21:00 Maximum Daily Average: 17.5 ppb on Apr 7                                                                                                                                                                                                                                 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 682<br>Hours of Missing Data: 38<br>Hours of Calibration: 38<br>Percent Operational Time: 100.0 |    |    |                 |               |               |
| Minimum Value: 1 ppb on Apr 27 17:00 Minimum Daily Average: 2.5 ppb on Apr 24<br>Maximum Diurnal Average: 14.9 ppb at hour 7 Minimum Diurnal Average: 2.9 ppb at hour 14<br>Monthly Average: 7.33 ppb Percentiles: P <sub>1</sub> = 1.0 P <sub>10</sub> = 2.1 Q <sub>1</sub> = 2.9 Median = 4.4 Q <sub>3</sub> = 8.7 P <sub>90</sub> = 16.8 P <sub>99</sub> = 35.6 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |                 |               |               |
| 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-Apr                                                                                                                                                                                                                                                                                                                                                              | 18                            | 26 | 23 | 17 | 17 | 25 | 37 | 31 | 20 | 14 | 14 | 11 | 8  | 6  | 5  | 5  | 5  | 6  | 7  | 8  | 9                                                                                                                                       | 9  | A  | 9               | 14.3          | 37.0          |
| 2-Apr                                                                                                                                                                                                                                                                                                                                                              | 6                             | 5  | 7  | 9  | 10 | 8  | 11 | 13 | 7  | 2  | 2  | 2  | 2  | 3  | 3  | 3  | 3  | 3  | 5  | 8  | 10                                                                                                                                      | A  | 8  | 8               | 6.1           | 12.8          |
| 3-Apr                                                                                                                                                                                                                                                                                                                                                              | 9                             | 11 | 9  | 9  | 13 | 14 | 22 | 13 | 6  | 6  | 5  | 6  | 7  | 7  | 7  | 7  | 8  | 9  | 10 | 13 | A                                                                                                                                       | 12 | 16 | 23              | 10.6          | 23.0          |
| 4-Apr                                                                                                                                                                                                                                                                                                                                                              | 27                            | 19 | 17 | 8  | 11 | 12 | 17 | 14 | 6  | 4  | 5  | 4  | 4  | 3  | 2  | 3  | 4  | 3  | 5  | A  | 10                                                                                                                                      | 12 | 15 | 13              | 9.5           | 27.4          |
| 5-Apr                                                                                                                                                                                                                                                                                                                                                              | 15                            | 21 | 32 | 32 | 30 | 29 | 34 | 18 | 11 | 4  | 7  | 5  | 4  | 3  | 3  | 4  | 5  | 7  | A  | 15 | 14                                                                                                                                      | 16 | 9  | 11              | 14.3          | 34.0          |
| 6-Apr                                                                                                                                                                                                                                                                                                                                                              | 13                            | 9  | 3  | 5  | 3  | 3  | 3  | 3  | 3  | 2  | 3  | 3  | 3  | 2  | 2  | 3  | 3  | A  | 3  | 3  | 3                                                                                                                                       | 3  | 3  | 2               | 3.6           | 12.7          |
| 7-Apr                                                                                                                                                                                                                                                                                                                                                              | 2                             | 5  | 11 | 13 | 18 | 22 | 24 | 30 | 24 | 13 | 12 | 6  | 5  | 10 | 13 | 13 | A  | 10 | 14 | 22 | 40                                                                                                                                      | 38 | 36 | 20              | 17.5          | 40.2          |
| 8-Apr                                                                                                                                                                                                                                                                                                                                                              | 11                            | 8  | 7  | 15 | 18 | 33 | 37 | 28 | 27 | 16 | 10 | 3  | 3  | 3  | 3  | A  | 5  | 4  | 4  | 4  | 4                                                                                                                                       | 2  | 4  | 4               | 10.9          | 36.7          |
| 9-Apr                                                                                                                                                                                                                                                                                                                                                              | 2                             | 2  | 1  | 2  | 3  | 3  | 6  | C  | C  | C  | C  | C  | C  | C  | A  | 3  | 3  | 3  | 3  | 4  | 2                                                                                                                                       | 2  | 2  | 4               | --            | 5.9           |
| 10-Apr                                                                                                                                                                                                                                                                                                                                                             | 6                             | 3  | 4  | 3  | 7  | 15 | 22 | 30 | 13 | 4  | 3  | 3  | 3  | A  | 3  | 3  | 4  | 3  | 4  | 4  | 5                                                                                                                                       | 8  | 6  | 3               | 7.0           | 29.8          |
| 11-Apr                                                                                                                                                                                                                                                                                                                                                             | 2                             | 4  | 2  | 5  | 10 | 16 | 18 | 8  | 2  | 2  | 2  | 2  | A  | 2  | 2  | 3  | 3  | 3  | 3  | 2  | 3                                                                                                                                       | 2  | 2  | 2               | 4.4           | 18.2          |
| 12-Apr                                                                                                                                                                                                                                                                                                                                                             | 2                             | 4  | 3  | 3  | 7  | 13 | 11 | 8  | 6  | 4  | 2  | A  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 4  | 17                                                                                                                                      | 30 | 22 | 4               | 6.5           | 30.3          |
| 13-Apr                                                                                                                                                                                                                                                                                                                                                             | 4                             | 5  | 5  | 6  | 8  | 12 | 11 | 6  | 3  | 2  | A  | 3  | 2  | 2  | 2  | 2  | 2  | 2  | 3  | 4  | 7                                                                                                                                       | 7  | 8  | 9               | 5.0           | 11.9          |
| 14-Apr                                                                                                                                                                                                                                                                                                                                                             | 12                            | 9  | 15 | 15 | 10 | 15 | 21 | 22 | 38 | A  | 19 | 11 | 4  | 3  | 8  | 4  | 5  | 5  | 7  | 11 | 21                                                                                                                                      | 30 | 26 | 16              | 14.2          | 38.0          |
| 15-Apr                                                                                                                                                                                                                                                                                                                                                             | 11                            | 10 | 7  | 8  | 7  | 4  | 6  | 5  | A  | 5  | 6  | 6  | 4  | 4  | 5  | 3  | 3  | 3  | 4  | 4  | 5                                                                                                                                       | 12 | 9  | 4               | 5.9           | 11.6          |
| 16-Apr                                                                                                                                                                                                                                                                                                                                                             | 4                             | 7  | 8  | 7  | 6  | 7  | 10 | A  | 4  | 3  | 3  | 2  | 2  | 2  | 3  | 2  | 2  | 2  | 3  | 3  | 4                                                                                                                                       | 4  | 4  | 5               | 4.2           | 9.8           |
| 17-Apr                                                                                                                                                                                                                                                                                                                                                             | 5                             | 6  | 6  | 8  | 9  | 16 | A  | 8  | 4  | 4  | 3  | 4  | 3  | 3  | 4  | 3  | 3  | 3  | 4  | 4  | 6                                                                                                                                       | 6  | 6  | 5               | 5.4           | 16.0          |
| 18-Apr                                                                                                                                                                                                                                                                                                                                                             | 5                             | 4  | 4  | 5  | 5  | A  | 6  | 5  | 4  | 4  | 5  | 4  | 3  | 4  | 4  | 3  | 3  | 3  | 4  | 7  | 11                                                                                                                                      | 12 | 13 | 12              | 5.6           | 12.9          |
| 19-Apr                                                                                                                                                                                                                                                                                                                                                             | 10                            | 7  | 5  | 4  | A  | 7  | 8  | 7  | 4  | 3  | 2  | 1  | 2  | 2  | 2  | 2  | 3  | 4  | 4  | 4  | 5                                                                                                                                       | 6  | 4  | 8               | 4.6           | 10.3          |
| 20-Apr                                                                                                                                                                                                                                                                                                                                                             | 7                             | 6  | 7  | A  | 9  | 8  | 7  | 5  | 3  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 3  | 9                                                                                                                                       | 19 | 22 | 10              | 5.4           | 21.7          |
| 21-Apr                                                                                                                                                                                                                                                                                                                                                             | 17                            | 27 | A  | 34 | 36 | 28 | 20 | 21 | 28 | 17 | 8  | 6  | 6  | 3  | 2  | 2  | 2  | 2  | 4  | 7  | 8                                                                                                                                       | 4  | 4  | 4               | 12.6          | 35.7          |
| 22-Apr                                                                                                                                                                                                                                                                                                                                                             | 3                             | A  | 5  | 5  | 6  | 10 | 15 | 11 | 5  | 4  | 4  | 4  | 3  | 3  | 3  | 4  | 4  | 5  | 6  | 7  | 7                                                                                                                                       | 5  | 6  | 2               | 5.6           | 15.2          |
| 23-Apr                                                                                                                                                                                                                                                                                                                                                             | A                             | 3  | 3  | 3  | 5  | 6  | 5  | 4  | 5  | 4  | 4  | 3  | 3  | 2  | 2  | 2  | 1  | 2  | 2  | 1  | 2                                                                                                                                       | 2  | 2  | A               | 3.0           | 5.7           |
| 24-Apr                                                                                                                                                                                                                                                                                                                                                             | 2                             | 3  | 2  | 2  | 2  | 3  | 3  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 2  | 3  | 3  | 4  | 4                                                                                                                                       | 6  | A  | 5               | 2.5           | 6.0           |
| 25-Apr                                                                                                                                                                                                                                                                                                                                                             | 3                             | 3  | 4  | 5  | 5  | 7  | 10 | 14 | 7  | 3  | 3  | 3  | 3  | 3  | 3  | 2  | 3  | 3  | 3  | 3  | 5                                                                                                                                       | A  | 8  | 5               | 4.8           | 13.9          |
| 26-Apr                                                                                                                                                                                                                                                                                                                                                             | 9                             | 7  | 9  | 6  | 7  | 6  | 6  | 3  | 4  | 3  | 3  | 3  | 3  | 2  | 3  | 2  | 3  | 3  | 4  | 4  | A                                                                                                                                       | 6  | 4  | 3               | 4.5           | 8.9           |
| 27-Apr                                                                                                                                                                                                                                                                                                                                                             | 3                             | 3  | 3  | 5  | 4  | 5  | 5  | 5  | 4  | 2  | 2  | 3  | 2  | 2  | 1  | 1  | 1  | 1  | 2  | A  | 7                                                                                                                                       | 3  | 2  | 3               | 3.0           | 6.6           |
| 28-Apr                                                                                                                                                                                                                                                                                                                                                             | 5                             | 3  | 3  | 4  | 3  | 5  | 8  | 6  | 3  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | A  | 3  | 4                                                                                                                                       | 4  | 5  | 4               | 3.4           | 7.7           |
| 29-Apr                                                                                                                                                                                                                                                                                                                                                             | 3                             | 4  | 4  | 4  | 8  | 11 | 20 | 21 | 9  | 11 | 4  | 1  | 1  | 1  | 1  | 1  | 2  | A  | 4  | 5  | 10                                                                                                                                      | 13 | 13 | 19              | 7.5           | 21.4          |
| 30-Apr                                                                                                                                                                                                                                                                                                                                                             | 22                            | 26 | 25 | 21 | 26 | 27 | 28 | 32 | 35 | 30 | 8  | 3  | 2  | 2  | 3  | 3  | A  | 3  | 3  | 2  | 3                                                                                                                                       | 4  | 4  | 3               | 13.7          | 34.6          |
| 8.3 8.6 8.1 9.1 10.4 12.8 14.9 13.3 10.2 6.2 5.1 3.8 3.2 2.9 3.3 3.1 3.1 3.6 4.2 5.9 8.5 9.9 9.3 7.6                                                                                                                                                                                                                                                               |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    | Diurnal Average |               |               |
| 27.4 27.3 31.6 34.5 35.7 32.5 37.0 31.8 38.0 30.3 18.7 11.3 8.2 9.6 12.6 13.1 8.3 10.0 14.2 22.5 40.2 38.0 36.3 23.0                                                                                                                                                                                                                                               |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    | 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 (NO<sub>2</sub>) - ppb

Henry Pirker - April 2014





# Hourly Maximums

Nitrogen Dioxide (NO<sub>2</sub>) - ppb

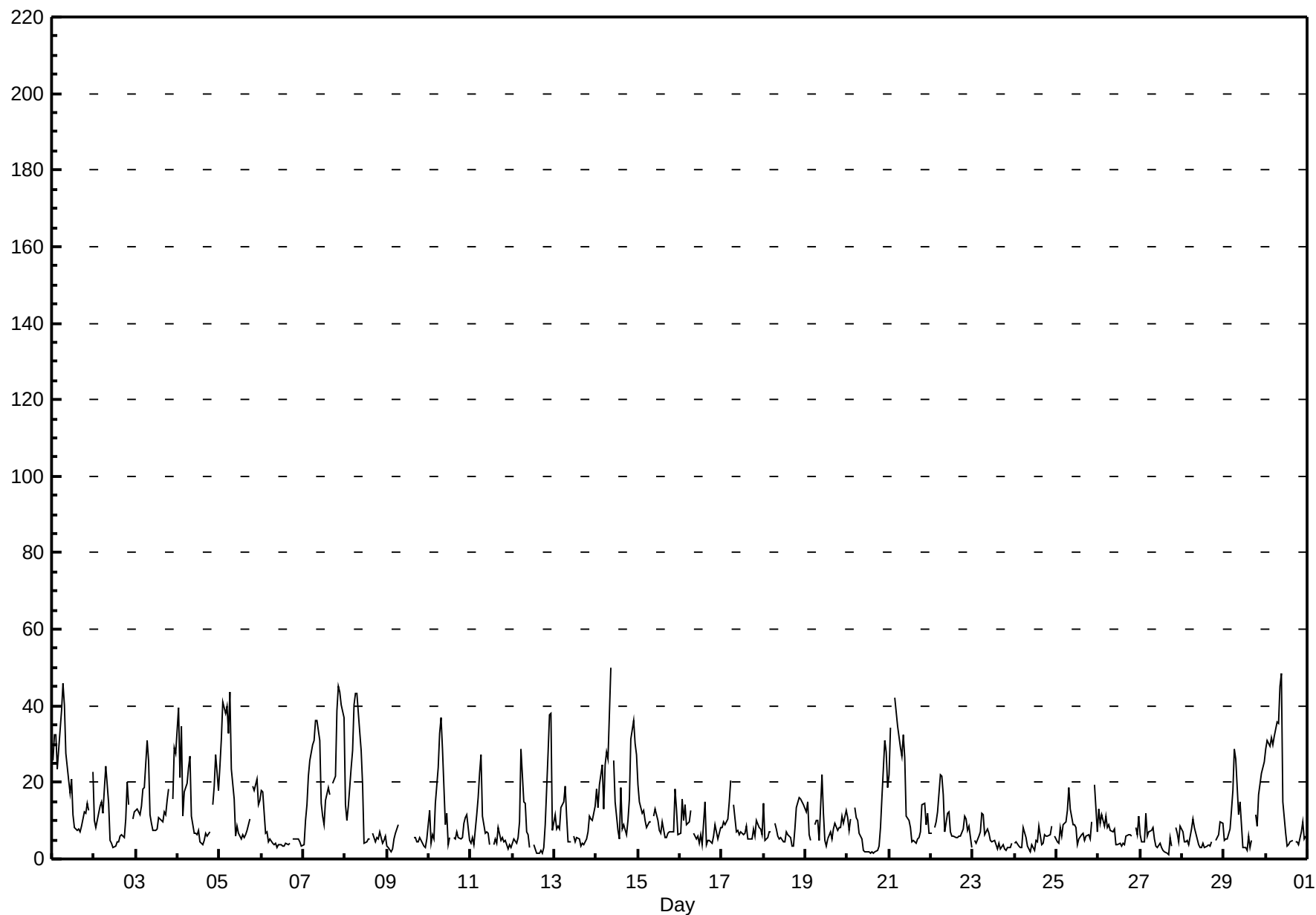
Henry Pirker - April 2014

| Maximum Value: 49.9 ppb on Apr 14 09:00                                                                                 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 24.8 ppb on Apr 7                                                                                                                      |    |    |    |    | Hours in Service: 720     |               |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|---------------------------|---------------|
| Minimum Value: 1 ppb on Apr 27 17:00                                                                                    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 4.8 ppb on Apr 24                                                                                                                      |    |    |    |    | Hours of Data: 682        |               |
| Maximum Diurnal Average: 20.5 ppb at hour 7                                                                             |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 5.2 ppb at hour 14                                                                                                                   |    |    |    |    | Hours of Missing Data: 38 |               |
| Monthly Average: 11.25 ppb                                                                                              |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 1.9 P <sub>10</sub> = 3.5 Q <sub>1</sub> = 5.0 Median = 7.5 Q <sub>3</sub> = 13.9 P <sub>90</sub> = 27.2 P <sub>99</sub> = 43.5 |    |    |    |    | 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-Apr                                                                                                                   | 26                            | 32 | 32 | 24 | 29 | 39 | 46 | 40 | 28 | 20 | 17 | 21 | 12 | 8  | 7  | 8  | 7  | 9  | 12 | 12                                                                                                                                                            | 15 | 13 | A  | 23 | 20.8                      | 46.0          |
| 2-Apr                                                                                                                   | 10                            | 8  | 10 | 14 | 15 | 12 | 18 | 24 | 14 | 5  | 4  | 3  | 4  | 4  | 5  | 6  | 6  | 6  | 10 | 20                                                                                                                                                            | 14 | A  | 11 | 12 | 10.3                      | 24.2          |
| 3-Apr                                                                                                                   | 13                            | 13 | 12 | 14 | 18 | 19 | 31 | 26 | 11 | 9  | 8  | 8  | 8  | 11 | 10 | 10 | 12 | 12 | 15 | 18                                                                                                                                                            | A  | 16 | 29 | 28 | 15.1                      | 30.9          |
| 4-Apr                                                                                                                   | 39                            | 21 | 35 | 11 | 18 | 20 | 24 | 27 | 11 | 7  | 7  | 6  | 8  | 5  | 4  | 5  | 7  | 6  | 7  | A                                                                                                                                                             | 14 | 19 | 27 | 18 | 15.0                      | 39.4          |
| 5-Apr                                                                                                                   | 24                            | 31 | 41 | 38 | 40 | 33 | 43 | 23 | 16 | 6  | 9  | 7  | 5  | 6  | 6  | 6  | 8  | 11 | A  | 19                                                                                                                                                            | 18 | 21 | 14 | 15 | 19.1                      | 43.5          |
| 6-Apr                                                                                                                   | 18                            | 18 | 7  | 7  | 5  | 5  | 4  | 4  | 4  | 3  | 4  | 4  | 3  | 3  | 4  | 4  | 4  | A  | 5  | 5                                                                                                                                                             | 5  | 5  | 4  | 4  | 5.6                       | 17.7          |
| 7-Apr                                                                                                                   | 4                             | 10 | 14 | 22 | 26 | 30 | 31 | 36 | 36 | 31 | 15 | 11 | 9  | 15 | 19 | 17 | A  | 20 | 22 | 39                                                                                                                                                            | 45 | 43 | 40 | 37 | 24.8                      | 45.2          |
| 8-Apr                                                                                                                   | 14                            | 10 | 14 | 24 | 28 | 40 | 43 | 43 | 33 | 28 | 19 | 4  | 5  | 5  | 5  | A  | 7  | 5  | 6  | 5                                                                                                                                                             | 7  | 4  | 5  | 6  | 15.7                      | 43.3          |
| 9-Apr                                                                                                                   | 4                             | 3  | 2  | 2  | 5  | 7  | 9  | C  | C  | C  | C  | C  | C  | C  | A  | 6  | 5  | 5  | 5  | 6                                                                                                                                                             | 4  | 3  | 3  | 5  | --                        | 9.0           |
| 10-Apr                                                                                                                  | 13                            | 4  | 6  | 5  | 15 | 24 | 33 | 37 | 29 | 9  | 12 | 4  | 5  | A  | 5  | 5  | 7  | 6  | 5  | 6                                                                                                                                                             | 9  | 11 | 12 | 5  | 11.6                      | 37.0          |
| 11-Apr                                                                                                                  | 4                             | 6  | 4  | 12 | 16 | 23 | 27 | 11 | 7  | 7  | 7  | 4  | A  | 4  | 5  | 4  | 8  | 5  | 6  | 4                                                                                                                                                             | 5  | 3  | 4  | 3  | 7.7                       | 27.2          |
| 12-Apr                                                                                                                  | 4                             | 5  | 4  | 5  | 10 | 29 | 15 | 14 | 7  | 6  | 3  | A  | 4  | 3  | 2  | 2  | 2  | 2  | 3  | 9                                                                                                                                                             | 28 | 38 | 38 | 7  | 10.4                      | 38.1          |
| 13-Apr                                                                                                                  | 12                            | 8  | 8  | 8  | 13 | 15 | 19 | 11 | 4  | 5  | A  | 6  | 5  | 6  | 5  | 3  | 4  | 4  | 5  | 7                                                                                                                                                             | 11 | 10 | 10 | 14 | 8.4                       | 18.9          |
| 14-Apr                                                                                                                  | 18                            | 14 | 20 | 25 | 13 | 24 | 28 | 26 | 50 | A  | 26 | 15 | 8  | 5  | 19 | 8  | 9  | 7  | 10 | 16                                                                                                                                                            | 31 | 36 | 30 | 27 | 20.2                      | 49.9          |
| 15-Apr                                                                                                                  | 20                            | 15 | 12 | 13 | 10 | 8  | 10 | 10 | A  | 11 | 13 | 10 | 8  | 7  | 10 | 6  | 6  | 7  | 7  | 7                                                                                                                                                             | 7  | 18 | 13 | 6  | 10.1                      | 19.5          |
| 16-Apr                                                                                                                  | 7                             | 16 | 10 | 14 | 9  | 10 | 13 | A  | 7  | 5  | 6  | 4  | 6  | 4  | 15 | 4  | 5  | 5  | 4  | 6                                                                                                                                                             | 9  | 7  | 5  | 8  | 7.8                       | 15.7          |
| 17-Apr                                                                                                                  | 8                             | 10 | 9  | 10 | 15 | 21 | A  | 14 | 7  | 7  | 6  | 7  | 7  | 7  | 9  | 5  | 5  | 5  | 8  | 6                                                                                                                                                             | 10 | 8  | 8  | 6  | 8.6                       | 20.6          |
| 18-Apr                                                                                                                  | 14                            | 5  | 5  | 7  | 7  | A  | 9  | 8  | 6  | 5  | 5  | 5  | 4  | 7  | 7  | 6  | 3  | 4  | 8  | 13                                                                                                                                                            | 16 | 15 | 15 | 14 | 8.2                       | 16.1          |
| 19-Apr                                                                                                                  | 12                            | 15 | 7  | 5  | A  | 9  | 10 | 10 | 5  | 22 | 12 | 5  | 3  | 5  | 7  | 5  | 8  | 9  | 7  | 8                                                                                                                                                             | 8  | 11 | 9  | 13 | 9.0                       | 21.9          |
| 20-Apr                                                                                                                  | 11                            | 8  | 10 | A  | 14 | 11 | 10 | 7  | 5  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 3  | 8                                                                                                                                                             | 16 | 31 | 28 | 19 | 8.6                       | 30.8          |
| 21-Apr                                                                                                                  | 22                            | 34 | A  | 42 | 39 | 35 | 29 | 27 | 33 | 27 | 11 | 10 | 8  | 5  | 5  | 4  | 5  | 6  | 7  | 14                                                                                                                                                            | 14 | 9  | 12 | 7  | 17.5                      | 42.0          |
| 22-Apr                                                                                                                  | 7                             | A  | 8  | 10 | 12 | 22 | 21 | 17 | 7  | 12 | 12 | 7  | 6  | 6  | 6  | 6  | 6  | 6  | 8  | 11                                                                                                                                                            | 10 | 7  | 8  | 3  | 9.5                       | 22.0          |
| 23-Apr                                                                                                                  | A                             | 5  | 4  | 6  | 7  | 12 | 11 | 6  | 8  | 7  | 5  | 5  | 5  | 4  | 2  | 4  | 2  | 4  | 2  | 2                                                                                                                                                             | 3  | 3  | 4  | A  | 5.1                       | 11.8          |
| 24-Apr                                                                                                                  | 4                             | 4  | 4  | 3  | 3  | 8  | 5  | 3  | 3  | 2  | 4  | 2  | 5  | 4  | 9  | 4  | 4  | 6  | 6  | 6                                                                                                                                                             | 6  | 8  | A  | 6  | 4.8                       | 8.8           |
| 25-Apr                                                                                                                  | 5                             | 4  | 8  | 6  | 9  | 10 | 13 | 19 | 13 | 9  | 9  | 8  | 4  | 5  | 6  | 7  | 5  | 6  | 6  | 5                                                                                                                                                             | 10 | A  | 19 | 7  | 8.4                       | 19.3          |
| 26-Apr                                                                                                                  | 13                            | 9  | 12 | 9  | 11 | 8  | 9  | 7  | 7  | 8  | 4  | 4  | 4  | 3  | 4  | 4  | 6  | 6  | 6  | 6                                                                                                                                                             | A  | 8  | 6  | 11 | 7.2                       | 13.1          |
| 27-Apr                                                                                                                  | 6                             | 4  | 5  | 12 | 6  | 7  | 8  | 8  | 5  | 4  | 3  | 4  | 3  | 2  | 2  | 2  | 1  | 6  | 4  | A                                                                                                                                                             | 8  | 7  | 5  | 8  | 5.2                       | 12.0          |
| 28-Apr                                                                                                                  | 7                             | 5  | 5  | 5  | 4  | 8  | 11 | 8  | 7  | 4  | 3  | 3  | 4  | 3  | 3  | 4  | 4  | 5  | A  | 5                                                                                                                                                             | 6  | 6  | 10 | 9  | 5.5                       | 10.6          |
| 29-Apr                                                                                                                  | 5                             | 5  | 5  | 8  | 13 | 18 | 29 | 26 | 12 | 15 | 9  | 3  | 3  | 2  | 6  | 3  | 5  | A  | 12 | 9                                                                                                                                                             | 17 | 23 | 24 | 25 | 11.9                      | 28.8          |
| 30-Apr                                                                                                                  | 29                            | 31 | 30 | 32 | 30 | 32 | 36 | 35 | 45 | 48 | 15 | 7  | 3  | 4  | 5  | 5  | A  | 5  | 5  | 4                                                                                                                                                             | 7  | 10 | 5  | 6  | 18.5                      | 48.4          |
| 12.8 12.2 11.8 13.5 15.1 18.5 20.5 18.9 15.0 11.6 8.9 6.3 5.3 5.2 6.7 5.2 5.5 6.2 7.3 9.9 12.7 14.0 14.3 12.2           |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                               |    |    |    |    | Diurnal Average           |               |
| 39.4 34.2 40.9 42.0 39.9 40.3 46.0 43.3 49.9 48.4 25.7 20.7 11.6 15.2 18.8 16.7 12.2 19.7 21.6 38.8 45.2 43.5 40.2 36.9 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                               |    |    |    |    | Diurnal Maximum           |               |
| C - Calibration A - Automated Daily Zero Span                                                                           |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                               |    |    |    |    |                           |               |

## Hourly Maximums

Nitrogen Dioxide (NO<sub>2</sub>) - ppb

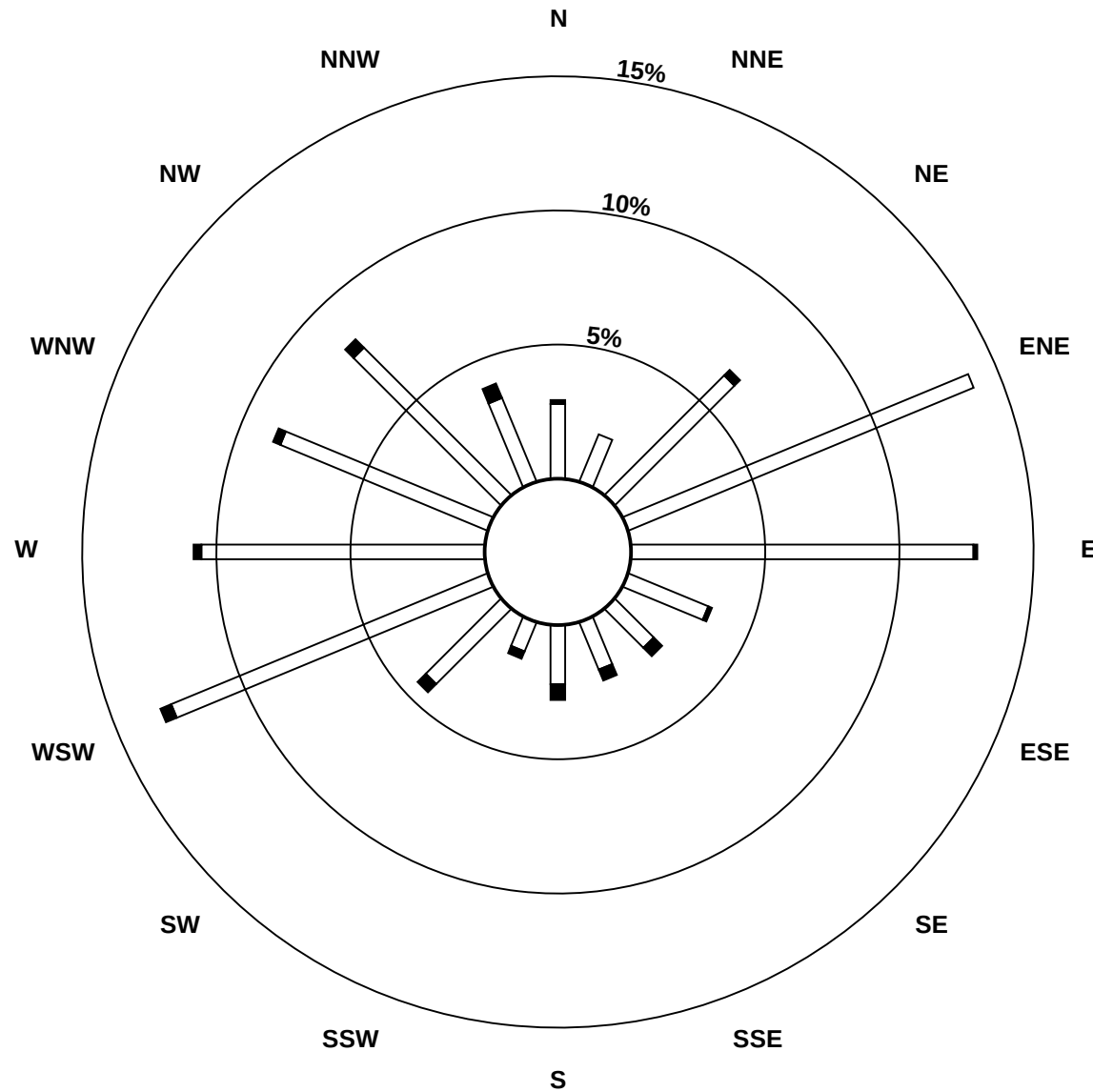
Henry Pirker - April 2014



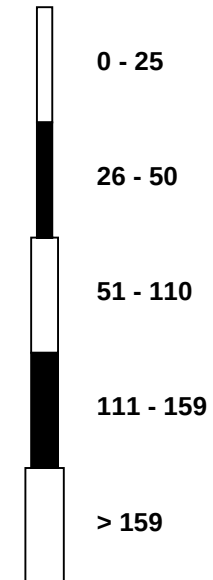
## Pollutant Rose

Nitrogen Dioxide (NO<sub>2</sub>) - ppb

Henry Pirker - April 2014

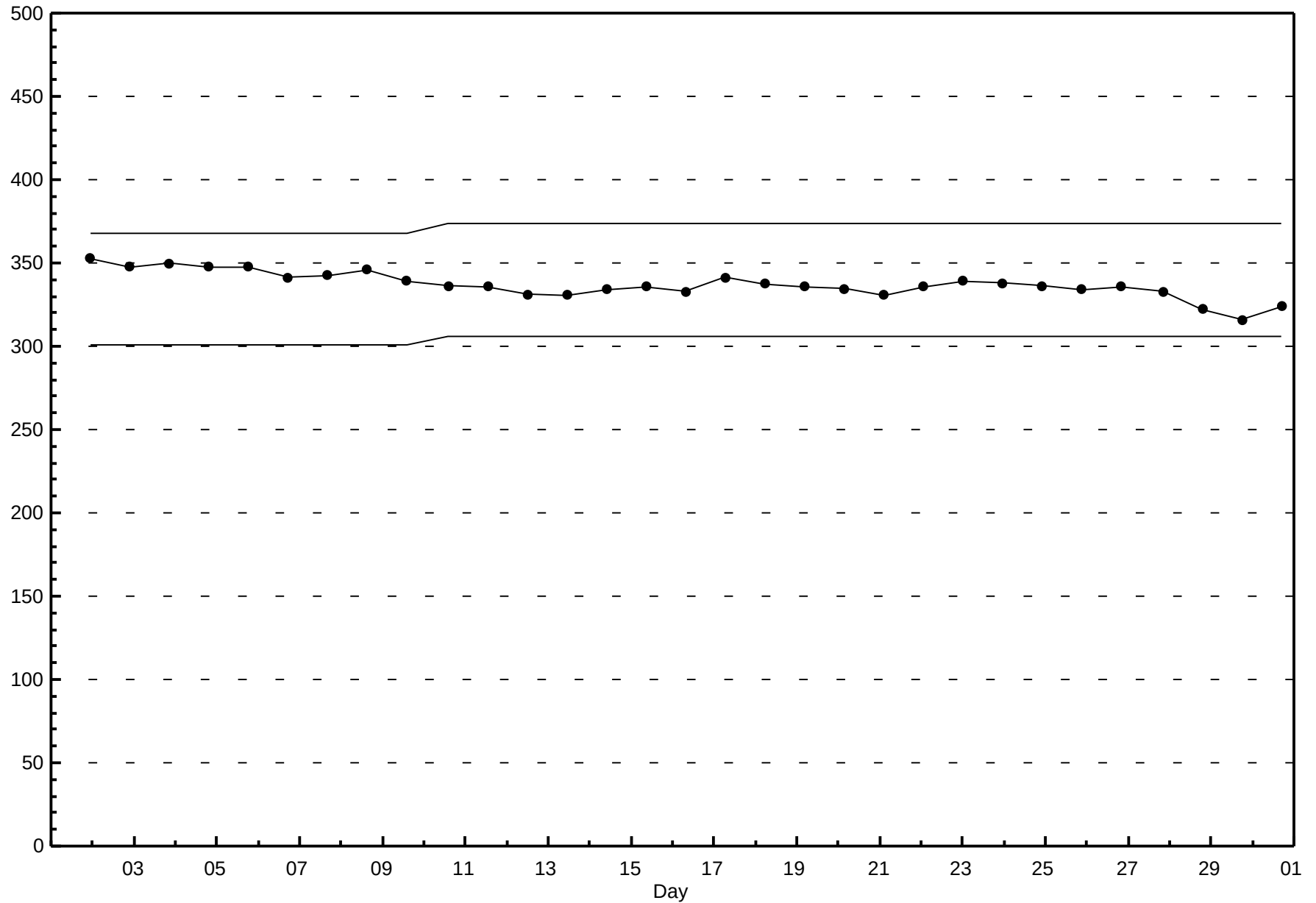


## Pollutant Classes (ppb)



## Span Responses

Nitrogen Dioxide (NO<sub>2</sub>)  
Henry Pirker - April 2014



## Hourly Averages

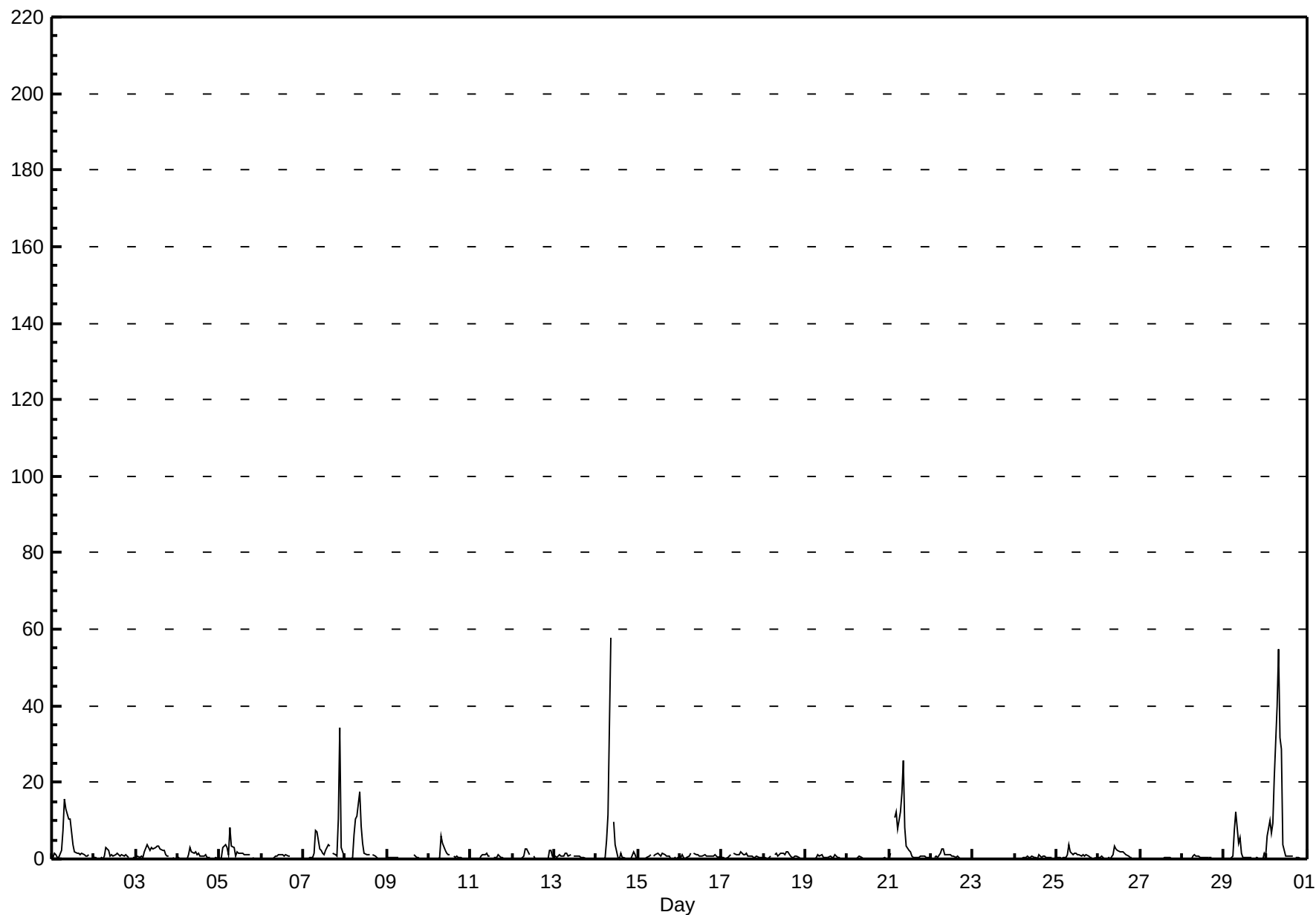
Nitrogen Oxide (NO) - ppb

Henry Pirker - April 2014

|                                                                                                                                     |                               |   |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |                 |               |               |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---|----|----|----|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|----|----|----|----|-----------------------------------------------------------------------------------------------------------------------------------------|----|----|----|-----------------|---------------|---------------|
| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 57.7 ppb on Apr 14 09:00 Maximum Daily Average: 9.5 ppb on Apr 30 |                               |   |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 682<br>Hours of Missing Data: 38<br>Hours of Calibration: 38<br>Percent Operational Time: 100.0 |    |    |    |                 |               |               |
| Minimum Value: 0 ppb on Apr 5 01:00<br>Maximum Diurnal Average: 6.6 ppb at hour 9<br>Monthly Average: 1.51 ppb                      |                               |   |    |    |    |    |    |    |    | Minimum Daily Average: 0.0 ppb on Apr 23<br>Minimum Diurnal Average: 0.2 ppb at hour 1<br>Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.5 Q <sub>3</sub> = 1.1 P <sub>90</sub> = 2.5 P <sub>99</sub> = 24.9 |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |                 |               |               |
| 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-Apr                                                                                                                               | 0                             | 1 | 1  | 0  | 0  | 2  | 7  | 16 | 13 | 10                                                                                                                                                                                                                                                    | 10 | 7  | 4  | 2  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | 1  | A  | 1               | 3.7           | 15.5          |
| 2-Apr                                                                                                                               | 0                             | 0 | 0  | 0  | 0  | 0  | 1  | 3  | 2  | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 2  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 0  | A  | 0  | 1               | 0.9           | 2.9           |
| 3-Apr                                                                                                                               | 0                             | 1 | 0  | 1  | 0  | 2  | 4  | 3  | 2  | 3                                                                                                                                                                                                                                                     | 3  | 3  | 3  | 3  | 3  | 2  | 2  | 1  | 1  | 1                                                                                                                                       | A  | 0  | 0  | 0               | 1.7           | 3.7           |
| 4-Apr                                                                                                                               | 0                             | 0 | 0  | 0  | 0  | 0  | 1  | 3  | 2  | 2                                                                                                                                                                                                                                                     | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | A                                                                                                                                       | 0  | 0  | 0  | 0               | 0.7           | 3.1           |
| 5-Apr                                                                                                                               | 0                             | 0 | 3  | 4  | 3  | 1  | 8  | 3  | 3  | 1                                                                                                                                                                                                                                                     | 2  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | A  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 1.7           | 8.2           |
| 6-Apr                                                                                                                               | 0                             | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | A  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.4           | 1.1           |
| 7-Apr                                                                                                                               | 0                             | 0 | 0  | 0  | 0  | 0  | 1  | 8  | 7  | 2                                                                                                                                                                                                                                                     | 2  | 1  | 1  | 2  | 4  | 4  | A  | 2  | 1  | 1                                                                                                                                       | 10 | 34 | 3  | 1               | 3.7           | 34.3          |
| 8-Apr                                                                                                                               | 0                             | 0 | 0  | 0  | 0  | 7  | 10 | 11 | 17 | 9                                                                                                                                                                                                                                                     | 4  | 1  | 1  | 1  | 1  | A  | 1  | 1  | 1  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 2.9           | 17.4          |
| 9-Apr                                                                                                                               | 0                             | 0 | 0  | 0  | 0  | 0  | 1  | C  | C  | C                                                                                                                                                                                                                                                     | C  | C  | C  | C  | A  | 1  | 1  | 1  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | --            | 0.9           |
| 10-Apr                                                                                                                              | 0                             | 0 | 0  | 0  | 0  | 0  | 0  | 6  | 4  | 2                                                                                                                                                                                                                                                     | 2  | 1  | 1  | A  | 1  | 1  | 1  | 1  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.8           | 5.9           |
| 11-Apr                                                                                                                              | 0                             | 0 | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 2                                                                                                                                                                                                                                                     | 1  | 1  | A  | 1  | 0  | 1  | 1  | 1  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.4           | 1.5           |
| 12-Apr                                                                                                                              | 0                             | 0 | 0  | 0  | 0  | 0  | 1  | 3  | 3  | 2                                                                                                                                                                                                                                                     | 1  | A  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 2  | 2  | 1               | 0.6           | 2.6           |
| 13-Apr                                                                                                                              | 1                             | 0 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                                                                                                                     | A  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.5           | 1.4           |
| 14-Apr                                                                                                                              | 0                             | 0 | 0  | 0  | 0  | 0  | 5  | 12 | 58 | A                                                                                                                                                                                                                                                     | 10 | 4  | 0  | 0  | 2  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 2  | 1  | 0               | 4.1           | 57.7          |
| 15-Apr                                                                                                                              | 0                             | 0 | 0  | 0  | 0  | 0  | 1  | 1  | A  | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 2  | 1  | 1  | 1  | 1  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.6           | 1.6           |
| 16-Apr                                                                                                                              | 0                             | 1 | 0  | 0  | 0  | 1  | 1  | A  | 1  | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | 1  | 0  | 1               | 0.7           | 1.4           |
| 17-Apr                                                                                                                              | 0                             | 0 | 0  | 0  | 1  | 1  | A  | 2  | 1  | 1                                                                                                                                                                                                                                                     | 1  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 0                                                                                                                                       | 1  | 1  | 0  | 0               | 0.8           | 1.7           |
| 18-Apr                                                                                                                              | 0                             | 0 | 0  | 0  | 1  | A  | 1  | 1  | 1  | 1                                                                                                                                                                                                                                                     | 2  | 1  | 1  | 2  | 2  | 1  | 0  | 0  | 1  | 1                                                                                                                                       | 0  | 0  | 0  | 0               | 0.8           | 1.8           |
| 19-Apr                                                                                                                              | 0                             | 0 | 0  | 0  | A  | 0  | 0  | 1  | 1  | 1                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 1  | 1  | 0  | 1  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.4           | 1.2           |
| 20-Apr                                                                                                                              | 0                             | 0 | 0  | A  | 0  | 0  | 0  | 1  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.1           | 0.6           |
| 21-Apr                                                                                                                              | 0                             | 1 | A  | 11 | 12 | 8  | 12 | 17 | 26 | 8                                                                                                                                                                                                                                                     | 3  | 2  | 2  | 1  | 0  | 0  | 0  | 0  | 1  | 1                                                                                                                                       | 1  | 0  | 0  | 0               | 4.8           | 25.9          |
| 22-Apr                                                                                                                              | 0                             | A | 1  | 1  | 0  | 1  | 3  | 3  | 1  | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.7           | 2.6           |
| 23-Apr                                                                                                                              | 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           |
| 24-Apr                                                                                                                              | 0                             | 0 | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 0                                                                                                                                                                                                                                                     | 1  | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 0  | 0                                                                                                                                       | 0  | 0  | A  | 0               | 0.4           | 1.2           |
| 25-Apr                                                                                                                              | 0                             | 0 | 0  | 0  | 0  | 0  | 1  | 4  | 2  | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0                                                                                                                                       | 0  | A  | 0  | 0               | 0.9           | 3.7           |
| 26-Apr                                                                                                                              | 0                             | 0 | 1  | 0  | 0  | 0  | 0  | 0  | 1  | 3                                                                                                                                                                                                                                                     | 3  | 2  | 2  | 2  | 2  | 1  | 1  | 1  | 0  | 0                                                                                                                                       | A  | 0  | 0  | 0               | 0.9           | 3.3           |
| 27-Apr                                                                                                                              | 0                             | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | A                                                                                                                                       | 0  | 0  | 0  | 0               | 0.1           | 0.5           |
| 28-Apr                                                                                                                              | 0                             | 0 | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 1                                                                                                                                                                                                                                                     | 1  | 0  | 1  | 1  | 0  | 0  | 0  | 0  | A  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.3           | 1.2           |
| 29-Apr                                                                                                                              | 0                             | 0 | 0  | 0  | 0  | 1  | 7  | 12 | 4  | 6                                                                                                                                                                                                                                                     | 2  | 0  | 0  | 0  | 1  | 0  | 0  | A  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 1               | 1.6           | 12.5          |
| 30-Apr                                                                                                                              | 1                             | 6 | 10 | 7  | 9  | 21 | 40 | 55 | 32 | 29                                                                                                                                                                                                                                                    | 4  | 1  | 1  | 1  | 1  | 1  | A  | 1  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 9.5           | 54.9          |
| 0.2 0.4 0.6 0.9 1.0 1.6 3.8 6.0 6.6 3.2 2.1 1.4 1.1 0.9 1.0 0.8 0.7 0.6 0.4 0.3 0.6 1.5 0.3 0.2                                     |                               |   |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    | Diurnal Average |               |               |
| 0.9 5.9 10.1 10.8 12.2 21.3 40.1 54.9 57.7 28.8 10.5 7.1 3.8 3.5 3.7 3.5 2.2 1.5 1.1 0.9 10.4 34.3 3.0 1.3                          |                               |   |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    | Diurnal Maximum |               |               |
| C - Calibration A - Automated Daily Zero Span                                                                                       |                               |   |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |                 |               |               |

## Hourly Averages

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



# Hourly Maximums

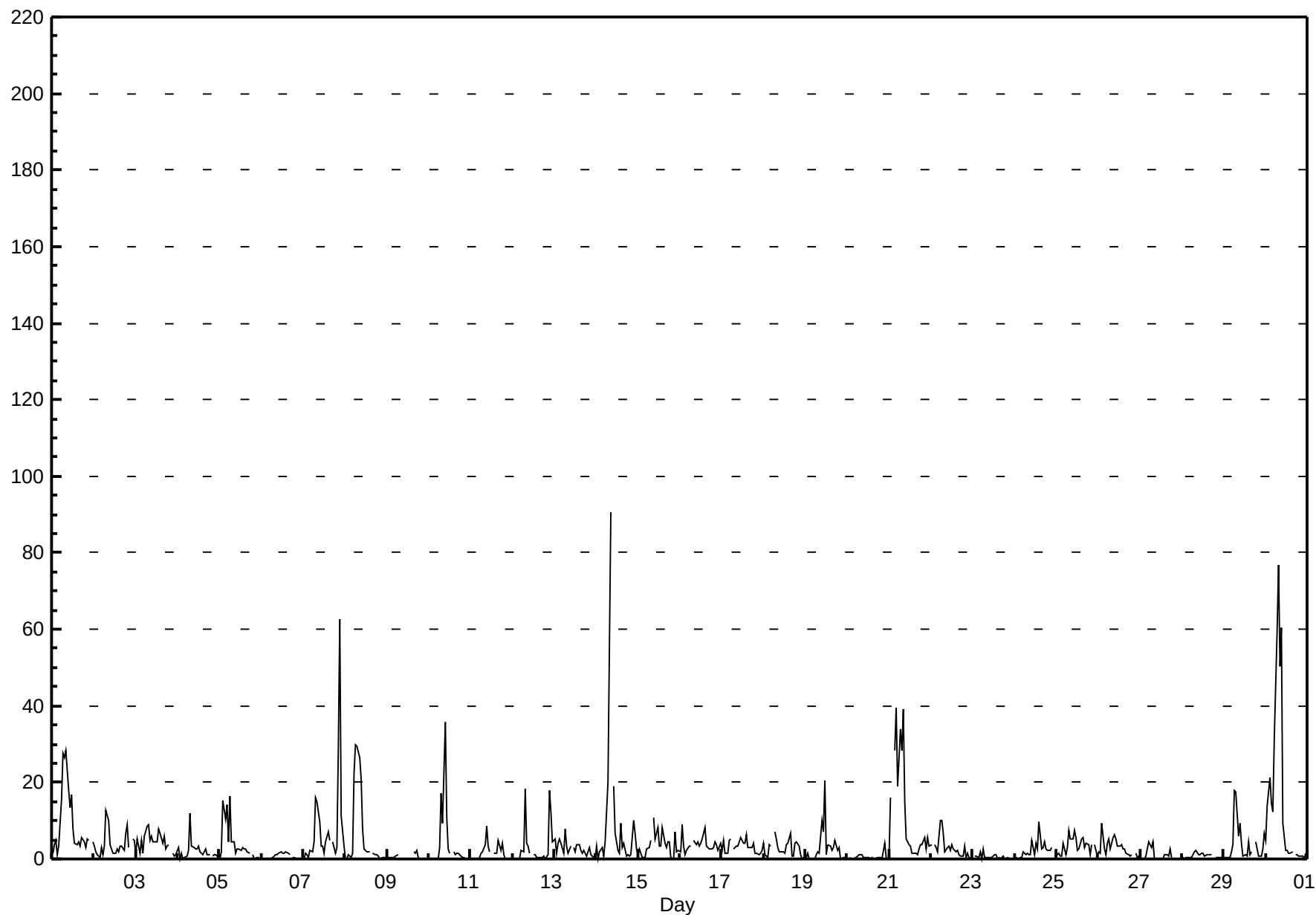
Nitrogen Oxide (NO) - ppb

Henry Pirker - April 2014

| Maximum Value: 90.6 ppb on Apr 14 09:00                                                                       |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 16.1 ppb on Apr 30                                                                                                                   |    |    |    |    | Hours in Service: 720     |               |
|---------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|---------------------------|---------------|
| Minimum Value: 0 ppb on Apr 20 21:00                                                                          |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.5 ppb on Apr 20                                                                                                                    |    |    |    |    | Hours of Data: 682        |               |
| Maximum Diurnal Average: 12.0 ppb at hour 8                                                                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 1.5 ppb at hour 1                                                                                                                  |    |    |    |    | Hours of Missing Data: 38 |               |
| Monthly Average: 4.13 ppb                                                                                     |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.6 Median = 2.0 Q <sub>3</sub> = 4.0 P <sub>90</sub> = 9.0 P <sub>99</sub> = 36.0 |    |    |    |    | 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-Apr                                                                                                         | 1                             | 4  | 5  | 1  | 3  | 16 | 28 | 26 | 28 | 18 | 13 | 17 | 8  | 4  | 4  | 5  | 3  | 5  | 5  | 3                                                                                                                                                           | 5  | 5  | A  | 4  | 9.2                       | 28.5          |
| 2-Apr                                                                                                         | 3                             | 2  | 1  | 1  | 3  | 1  | 3  | 13 | 10 | 4  | 3  | 1  | 2  | 2  | 2  | 3  | 3  | 2  | 7  | 9                                                                                                                                                           | 3  | A  | 5  | 5  | 3.8                       | 12.7          |
| 3-Apr                                                                                                         | 1                             | 5  | 2  | 5  | 2  | 6  | 9  | 9  | 5  | 6  | 5  | 5  | 4  | 8  | 7  | 4  | 6  | 2  | 3  | 4                                                                                                                                                           | A  | 1  | 1  | 1  | 4.4                       | 9.0           |
| 4-Apr                                                                                                         | 3                             | 0  | 2  | 0  | 0  | 1  | 2  | 12 | 3  | 3  | 3  | 2  | 3  | 2  | 1  | 2  | 2  | 1  | 1  | A                                                                                                                                                           | 1  | 1  | 1  | 1  | 2.1                       | 11.8          |
| 5-Apr                                                                                                         | 0                             | 2  | 15 | 10 | 14 | 4  | 16 | 5  | 5  | 2  | 3  | 3  | 2  | 3  | 2  | 3  | 2  | 2  | A  | 1                                                                                                                                                           | 0  | 1  | 1  | 0  | 4.1                       | 16.4          |
| 6-Apr                                                                                                         | 0                             | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 2  | 2  | 2  | 1  | 2  | 2  | 1  | A  | 1  | 0                                                                                                                                                           | 0  | 0  | 0  | 0  | 0.7                       | 2.0           |
| 7-Apr                                                                                                         | 0                             | 1  | 1  | 1  | 2  | 2  | 4  | 16 | 15 | 10 | 4  | 4  | 1  | 5  | 7  | 5  | A  | 4  | 2  | 3                                                                                                                                                           | 29 | 63 | 11 | 3  | 8.4                       | 62.6          |
| 8-Apr                                                                                                         | 0                             | 0  | 1  | 1  | 1  | 22 | 30 | 30 | 27 | 21 | 8  | 2  | 2  | 2  | 2  | A  | 2  | 1  | 1  | 1                                                                                                                                                           | 0  | 0  | 0  | 0  | 6.7                       | 29.8          |
| 9-Apr                                                                                                         | 0                             | 0  | 0  | 0  | 0  | 1  | 1  | C  | C  | C  | C  | C  | C  | C  | A  | 2  | 1  | 2  | 1  | 0                                                                                                                                                           | 0  | 0  | 0  | 0  | --                        | 2.3           |
| 10-Apr                                                                                                        | 0                             | 0  | 0  | 0  | 0  | 0  | 3  | 17 | 9  | 36 | 11 | 3  | 2  | A  | 2  | 1  | 1  | 1  | 1  | 0                                                                                                                                                           | 0  | 0  | 0  | 0  | 3.9                       | 35.9          |
| 11-Apr                                                                                                        | 0                             | 0  | 0  | 0  | 0  | 1  | 1  | 2  | 4  | 8  | 3  | 2  | A  | 1  | 1  | 1  | 5  | 2  | 4  | 1                                                                                                                                                           | 0  | 0  | 0  | 0  | 1.7                       | 8.5           |
| 12-Apr                                                                                                        | 0                             | 0  | 0  | 0  | 0  | 2  | 2  | 18 | 4  | 3  | 2  | A  | 1  | 1  | 1  | 1  | 0  | 0  | 1  | 0                                                                                                                                                           | 1  | 18 | 12 | 5  | 3.2                       | 18.1          |
| 13-Apr                                                                                                        | 5                             | 1  | 4  | 5  | 4  | 1  | 8  | 3  | 2  | 3  | A  | 3  | 2  | 4  | 4  | 2  | 1  | 2  | 1  | 2                                                                                                                                                           | 3  | 1  | 1  | 0  | 2.8                       | 7.9           |
| 14-Apr                                                                                                        | 3                             | 0  | 2  | 3  | 1  | 5  | 12 | 20 | 91 | A  | 19 | 7  | 2  | 1  | 9  | 3  | 4  | 1  | 1  | 1                                                                                                                                                           | 1  | 10 | 7  | 3  | 8.9                       | 90.6          |
| 15-Apr                                                                                                        | 1                             | 2  | 0  | 0  | 0  | 2  | 3  | 5  | A  | 11 | 5  | 8  | 3  | 3  | 8  | 4  | 3  | 4  | 4  | 1                                                                                                                                                           | 0  | 7  | 2  | 2  | 3.6                       | 10.6          |
| 16-Apr                                                                                                        | 2                             | 9  | 3  | 1  | 2  | 3  | 3  | A  | 5  | 4  | 4  | 3  | 4  | 5  | 8  | 3  | 3  | 3  | 2  | 3                                                                                                                                                           | 5  | 4  | 2  | 4  | 3.8                       | 9.0           |
| 17-Apr                                                                                                        | 2                             | 5  | 2  | 1  | 5  | 5  | A  | 3  | 3  | 3  | 5  | 6  | 4  | 4  | 6  | 3  | 3  | 3  | 4  | 1                                                                                                                                                           | 2  | 1  | 1  | 2  | 3.2                       | 6.4           |
| 18-Apr                                                                                                        | 4                             | 1  | 1  | 4  | 3  | A  | 7  | 5  | 3  | 2  | 2  | 2  | 4  | 4  | 7  | 1  | 1  | 4  | 5  | 3                                                                                                                                                           | 1  | 0  | 1  | 1  | 2.8                       | 7.2           |
| 19-Apr                                                                                                        | 0                             | 2  | 0  | 0  | A  | 0  | 1  | 2  | 1  | 10 | 7  | 21 | 1  | 4  | 3  | 2  | 3  | 5  | 2  | 3                                                                                                                                                           | 0  | 0  | 1  | 1  | 3.0                       | 20.5          |
| 20-Apr                                                                                                        | 0                             | 0  | 0  | A  | 0  | 0  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0                                                                                                                                                           | 0  | 4  | 0  | 0  | 0.5                       | 4.2           |
| 21-Apr                                                                                                        | 0                             | 16 | A  | 28 | 40 | 19 | 34 | 28 | 39 | 15 | 5  | 4  | 3  | 1  | 2  | 2  | 1  | 3  | 4  | 4                                                                                                                                                           | 6  | 3  | 6  | 3  | 11.5                      | 39.5          |
| 22-Apr                                                                                                        | 4                             | A  | 4  | 3  | 2  | 10 | 10 | 7  | 2  | 3  | 3  | 2  | 4  | 3  | 2  | 2  | 1  | 1  | 1  | 3                                                                                                                                                           | 0  | 2  | 0  | 0  | 3.0                       | 10.2          |
| 23-Apr                                                                                                        | A                             | 1  | 1  | 0  | 2  | 0  | 3  | 0  | 1  | 0  | 0  | 0  | 1  | 1  | 0  | 0  | 0  | 1  | 0  | 0                                                                                                                                                           | 0  | 0  | 0  | A  | 0.5                       | 2.5           |
| 24-Apr                                                                                                        | 0                             | 0  | 0  | 1  | 1  | 2  | 1  | 1  | 1  | 1  | 5  | 1  | 4  | 2  | 10 | 3  | 3  | 4  | 3  | 2                                                                                                                                                           | 2  | 3  | A  | 1  | 2.2                       | 9.5           |
| 25-Apr                                                                                                        | 1                             | 1  | 1  | 1  | 4  | 1  | 3  | 7  | 5  | 5  | 7  | 5  | 2  | 3  | 5  | 6  | 3  | 4  | 4  | 1                                                                                                                                                           | 4  | A  | 4  | 1  | 3.4                       | 7.5           |
| 26-Apr                                                                                                        | 2                             | 2  | 9  | 3  | 1  | 4  | 5  | 3  | 6  | 6  | 5  | 3  | 3  | 4  | 3  | 3  | 2  | 1  | 1  | 1                                                                                                                                                           | A  | 1  | 0  | 1  | 3.0                       | 9.3           |
| 27-Apr                                                                                                        | 0                             | 0  | 0  | 1  | 3  | 5  | 3  | 4  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 3  | 0  | A                                                                                                                                                           | 0  | 0  | 0  | 0  | 0.9                       | 4.5           |
| 28-Apr                                                                                                        | 0                             | 0  | 0  | 0  | 0  | 0  | 1  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 0                                                                                                                                                           | 0  | 0  | 0  | 0  | 0.8                       | 2.3           |
| 29-Apr                                                                                                        | 0                             | 0  | 0  | 0  | 2  | 4  | 18 | 17 | 6  | 9  | 4  | 1  | 1  | 1  | 4  | 1  | 2  | A  | 5  | 2                                                                                                                                                           | 1  | 1  | 3  | 7  | 3.9                       | 17.9          |
| 30-Apr                                                                                                        | 5                             | 14 | 21 | 14 | 12 | 31 | 60 | 77 | 51 | 60 | 9  | 2  | 2  | 1  | 1  | 2  | A  | 1  | 1  | 1                                                                                                                                                           | 1  | 1  | 0  | 1  | 16.1                      | 76.9          |
| 1.5 2.4 2.6 2.9 3.7 5.2 9.4 12.0 11.7 8.8 5.0 4.0 2.4 2.6 3.6 2.5 2.1 2.2 2.2 1.9 2.4 4.6 2.1 1.6             |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    |                           |               |
| 5.2 16.1 21.4 28.2 39.5 31.4 59.6 76.9 90.6 60.4 18.9 20.5 7.8 7.8 9.5 6.8 5.9 5.5 6.7 8.8 29.2 62.6 12.3 6.6 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    |                           |               |
| Diurnal Average                                                                                               |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    |                           |               |
| Diurnal Maximum                                                                                               |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    |                           |               |
| C - Calibration A - Automated Daily Zero Span                                                                 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    |                           |               |

## Hourly Maximums

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





## Hourly Averages

Oxides of Nitrogen (NO<sub>x</sub>) - ppb

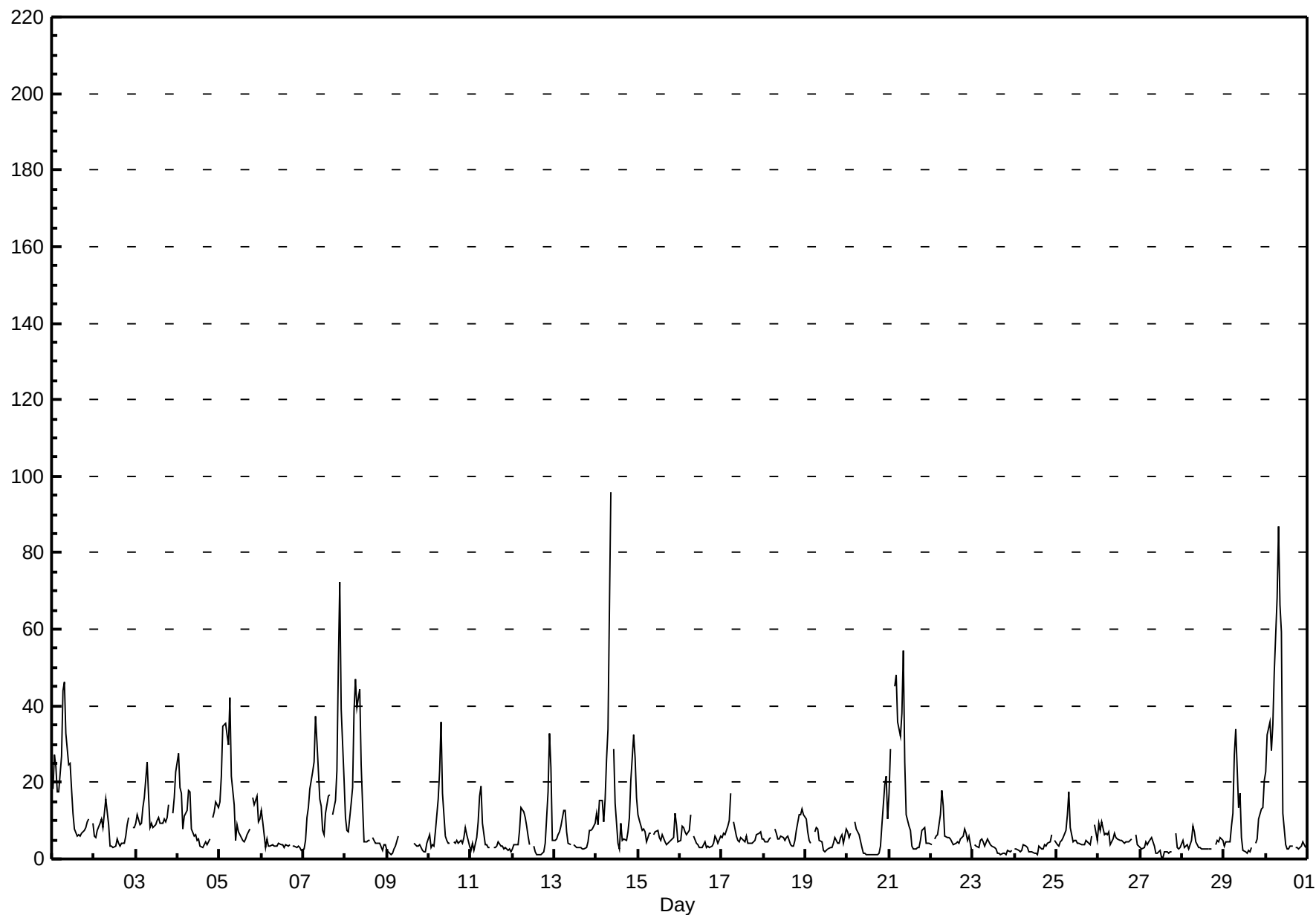
Henry Pirker - April 2014

| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 95.7 ppb on Apr 14 09:00 Maximum Daily Average: 23.2 ppb on Apr 30                                                                                                                                                                                                                               |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Hours in Service: 720<br>Hours of Data: 682<br>Hours of Missing Data: 38<br>Hours of Calibration: 38<br>Percent Operational Time: 100.0 |      |      |      |      |                 |               |      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|-----------------|---------------|------|
| Minimum Value: 0 ppb on Apr 27 14:00 Minimum Daily Average: 2.8 ppb on Apr 27<br>Maximum Diurnal Average: 19.4 ppb at hour 8 Minimum Diurnal Average: 3.9 ppb at hour 17<br>Monthly Average: 8.91 ppb Percentiles: P <sub>1</sub> = 1.0 P <sub>10</sub> = 2.4 Q <sub>1</sub> = 3.5 Median = 5.1 Q <sub>3</sub> = 9.5 P <sub>90</sub> = 18.1 P <sub>99</sub> = 52.8 |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                                                                                                                                         |      |      |      |      |                 |               |      |
| Day                                                                                                                                                                                                                                                                                                                                                                | Hourly Period Ending At (MST) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                                                                                                                                         |      |      |      |      | Daily Average   | Daily Maximum |      |
|                                                                                                                                                                                                                                                                                                                                                                    | 1                             | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20                                                                                                                                      | 21   | 22   | 23   | 24   |                 |               |      |
| 1-Apr                                                                                                                                                                                                                                                                                                                                                              | 18                            | 27   | 24   | 17   | 18   | 27   | 44   | 46   | 33   | 25   | 25   | 18   | 12   | 8    | 6    | 6    | 6    | 7    | 8    | 8                                                                                                                                       | 10   | 10   | A    | 9    | 18.0            | 46.3          |      |
| 2-Apr                                                                                                                                                                                                                                                                                                                                                              | 6                             | 6    | 7    | 9    | 10   | 8    | 12   | 16   | 9    | 3    | 3    | 3    | 3    | 5    | 4    | 3    | 4    | 4    | 6    | 9                                                                                                                                       | 11   | A    | 8    | 8    | 6.9             | 15.6          |      |
| 3-Apr                                                                                                                                                                                                                                                                                                                                                              | 9                             | 12   | 9    | 9    | 13   | 16   | 26   | 16   | 8    | 9    | 8    | 9    | 10   | 11   | 9    | 9    | 10   | 10   | 11   | 14                                                                                                                                      | A    | 12   | 16   | 23   | 12.2            | 25.5          |      |
| 4-Apr                                                                                                                                                                                                                                                                                                                                                              | 28                            | 19   | 17   | 8    | 11   | 13   | 18   | 18   | 8    | 6    | 6    | 5    | 5    | 3    | 3    | 4    | 5    | 4    | 5    | A                                                                                                                                       | 11   | 12   | 15   | 13   | 10.2            | 27.7          |      |
| 5-Apr                                                                                                                                                                                                                                                                                                                                                              | 15                            | 22   | 35   | 35   | 32   | 30   | 42   | 22   | 14   | 5    | 9    | 7    | 5    | 5    | 5    | 5    | 6    | 8    | A    | 16                                                                                                                                      | 14   | 16   | 10   | 11   | 16.0            | 42.1          |      |
| 6-Apr                                                                                                                                                                                                                                                                                                                                                              | 13                            | 10   | 3    | 5    | 3    | 3    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 3    | 4    | 3    | 4    | A    | 3    | 3                                                                                                                                       | 3    | 3    | 3    | 2    | 4.1             | 12.8          |      |
| 7-Apr                                                                                                                                                                                                                                                                                                                                                              | 2                             | 5    | 11   | 13   | 18   | 23   | 25   | 37   | 31   | 16   | 14   | 7    | 6    | 12   | 16   | 17   | A    | 12   | 15   | 23                                                                                                                                      | 50   | 72   | 39   | 21   | 21.2            | 72.2          |      |
| 8-Apr                                                                                                                                                                                                                                                                                                                                                              | 11                            | 8    | 7    | 15   | 19   | 39   | 47   | 40   | 44   | 25   | 14   | 4    | 4    | 5    | 5    | A    | 6    | 4    | 4    | 4                                                                                                                                       | 4    | 2    | 4    | 4    | 13.8            | 46.8          |      |
| 9-Apr                                                                                                                                                                                                                                                                                                                                                              | 2                             | 2    | 1    | 2    | 3    | 3    | 6    | C    | C    | C    | C    | C    | C    | C    | A    | 4    | 4    | 3    | 3    | 4                                                                                                                                       | 2    | 2    | 2    | 4    | --              | 6.0           |      |
| 10-Apr                                                                                                                                                                                                                                                                                                                                                             | 6                             | 3    | 4    | 3    | 7    | 16   | 23   | 36   | 17   | 6    | 5    | 4    | 4    | A    | 5    | 4    | 4    | 5    | 4    | 5                                                                                                                                       | 4    | 6    | 8    | 6    | 3               | 8.0           | 35.9 |
| 11-Apr                                                                                                                                                                                                                                                                                                                                                             | 2                             | 4    | 2    | 6    | 10   | 17   | 19   | 9    | 4    | 4    | 3    | 3    | A    | 3    | 3    | 3    | 4    | 3    | 3    | 3                                                                                                                                       | 3    | 2    | 3    | 2    | 5.0             | 19.1          |      |
| 12-Apr                                                                                                                                                                                                                                                                                                                                                             | 2                             | 4    | 4    | 4    | 8    | 13   | 12   | 11   | 9    | 6    | 4    | A    | 3    | 2    | 1    | 1    | 1    | 1    | 2    | 4                                                                                                                                       | 18   | 33   | 24   | 5    | 7.4             | 32.7          |      |
| 13-Apr                                                                                                                                                                                                                                                                                                                                                             | 5                             | 5    | 6    | 7    | 9    | 13   | 13   | 7    | 4    | 4    | A    | 4    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 5                                                                                                                                       | 7    | 7    | 8    | 9    | 5.8             | 12.8          |      |
| 14-Apr                                                                                                                                                                                                                                                                                                                                                             | 12                            | 9    | 15   | 15   | 10   | 16   | 26   | 34   | 96   | A    | 29   | 15   | 4    | 3    | 9    | 5    | 5    | 5    | 7    | 11                                                                                                                                      | 21   | 32   | 27   | 16   | 18.2            | 95.7          |      |
| 15-Apr                                                                                                                                                                                                                                                                                                                                                             | 12                            | 10   | 7    | 8    | 7    | 4    | 7    | 7    | A    | 6    | 7    | 8    | 6    | 5    | 6    | 4    | 4    | 4    | 4    | 5                                                                                                                                       | 5    | 12   | 9    | 4    | 6.6             | 12.0          |      |
| 16-Apr                                                                                                                                                                                                                                                                                                                                                             | 5                             | 8    | 8    | 7    | 6    | 7    | 11   | A    | 6    | 4    | 4    | 3    | 3    | 3    | 5    | 3    | 3    | 3    | 3    | 4                                                                                                                                       | 6    | 5    | 4    | 6    | 5.2             | 11.4          |      |
| 17-Apr                                                                                                                                                                                                                                                                                                                                                             | 6                             | 7    | 6    | 9    | 10   | 17   | A    | 10   | 6    | 5    | 4    | 5    | 5    | 5    | 6    | 4    | 4    | 4    | 4    | 5                                                                                                                                       | 6    | 7    | 7    | 5    | 6.4             | 17.1          |      |
| 18-Apr                                                                                                                                                                                                                                                                                                                                                             | 5                             | 4    | 5    | 5    | 6    | A    | 8    | 7    | 5    | 5    | 6    | 5    | 5    | 6    | 6    | 4    | 3    | 3    | 5    | 8                                                                                                                                       | 12   | 12   | 13   | 12   | 6.4             | 12.9          |      |
| 19-Apr                                                                                                                                                                                                                                                                                                                                                             | 10                            | 7    | 5    | 4    | A    | 7    | 8    | 8    | 5    | 4    | 2    | 2    | 2    | 3    | 3    | 3    | 4    | 5    | 4    | 4                                                                                                                                       | 6    | 6    | 4    | 8    | 5.0             | 10.4          |      |
| 20-Apr                                                                                                                                                                                                                                                                                                                                                             | 7                             | 6    | 7    | A    | 10   | 8    | 7    | 6    | 3    | 2    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 3                                                                                                                                       | 9    | 19   | 22   | 10   | 5.6             | 21.7          |      |
| 21-Apr                                                                                                                                                                                                                                                                                                                                                             | 17                            | 29   | A    | 45   | 48   | 36   | 32   | 38   | 54   | 25   | 11   | 8    | 7    | 3    | 2    | 3    | 3    | 3    | 5    | 7                                                                                                                                       | 8    | 4    | 4    | 4    | 17.3            | 54.3          |      |
| 22-Apr                                                                                                                                                                                                                                                                                                                                                             | 4                             | A    | 5    | 6    | 6    | 12   | 18   | 14   | 6    | 6    | 6    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 6    | 8                                                                                                                                       | 7    | 5    | 6    | 2    | 6.4             | 17.9          |      |
| 23-Apr                                                                                                                                                                                                                                                                                                                                                             | A                             | 4    | 3    | 3    | 5    | 5    | 4    | 3    | 5    | 4    | 4    | 3    | 3    | 3    | 2    | 1    | 1    | 1    | 1    | 1                                                                                                                                       | 2    | 2    | 2    | A    | 2.9             | 5.3           |      |
| 24-Apr                                                                                                                                                                                                                                                                                                                                                             | 3                             | 3    | 2    | 2    | 2    | 4    | 4    | 3    | 2    | 2    | 2    | 2    | 2    | 1    | 3    | 2    | 3    | 4    | 3    | 4                                                                                                                                       | 5    | 6    | A    | 5    | 2.9             | 6.2           |      |
| 25-Apr                                                                                                                                                                                                                                                                                                                                                             | 4                             | 4    | 4    | 5    | 5    | 8    | 11   | 18   | 8    | 4    | 5    | 5    | 4    | 4    | 4    | 4    | 4    | 5    | 4    | 4                                                                                                                                       | 6    | A    | 9    | 5    | 5.7             | 17.6          |      |
| 26-Apr                                                                                                                                                                                                                                                                                                                                                             | 9                             | 8    | 10   | 6    | 7    | 6    | 7    | 4    | 5    | 7    | 6    | 5    | 5    | 5    | 5    | 4    | 4    | 4    | 5    | 5                                                                                                                                       | A    | 6    | 4    | 3    | 5.6             | 9.7           |      |
| 27-Apr                                                                                                                                                                                                                                                                                                                                                             | 3                             | 2    | 3    | 4    | 4    | 4    | 5    | 4    | 3    | 2    | 2    | 2    | 1    | 0    | 2    | 2    | 1    | 2    | 2    | A                                                                                                                                       | 7    | 3    | 2    | 3    | 2.8             | 6.7           |      |
| 28-Apr                                                                                                                                                                                                                                                                                                                                                             | 5                             | 3    | 4    | 4    | 3    | 5    | 9    | 7    | 5    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 2    | 3    | A    | 4                                                                                                                                       | 5    | 4    | 5    | 5    | 3.9             | 8.7           |      |
| 29-Apr                                                                                                                                                                                                                                                                                                                                                             | 4                             | 4    | 4    | 4    | 9    | 12   | 27   | 34   | 14   | 17   | 6    | 2    | 2    | 2    | 2    | 2    | 3    | A    | 4    | 5                                                                                                                                       | 10   | 13   | 13   | 20   | 9.3             | 34.1          |      |
| 30-Apr                                                                                                                                                                                                                                                                                                                                                             | 23                            | 33   | 36   | 28   | 35   | 49   | 68   | 87   | 66   | 59   | 12   | 4    | 3    | 3    | 3    | 3    | A    | 3    | 3    | 3                                                                                                                                       | 3    | 4    | 4    | 3    | 23.2            | 86.8          |      |
|                                                                                                                                                                                                                                                                                                                                                                    | 8.6                           | 9.1  | 8.8  | 10.0 | 11.5 | 14.5 | 18.7 | 19.4 | 16.9 | 9.5  | 7.3  | 5.2  | 4.3  | 3.9  | 4.5  | 4.0  | 3.9  | 4.2  | 4.7  | 6.3                                                                                                                                     | 9.2  | 11.5 | 9.7  | 7.8  | Diurnal Average |               |      |
|                                                                                                                                                                                                                                                                                                                                                                    | 27.7                          | 32.6 | 35.7 | 45.2 | 48.0 | 48.8 | 68.1 | 86.8 | 95.7 | 59.2 | 28.6 | 18.4 | 12.0 | 11.9 | 16.3 | 16.6 | 10.4 | 11.6 | 15.3 | 23.3                                                                                                                                    | 50.4 | 72.2 | 39.1 | 22.9 | Diurnal Maximum |               |      |
| C - Calibration A - Automated Daily Zero Span                                                                                                                                                                                                                                                                                                                      |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                                                                                                                                         |      |      |      |      |                 |               |      |

## Hourly Averages

Oxides of Nitrogen (NO<sub>x</sub>) - ppb

Henry Pirker - April 2014



# Hourly Maximums

Oxides of Nitrogen (NO<sub>x</sub>) - ppb

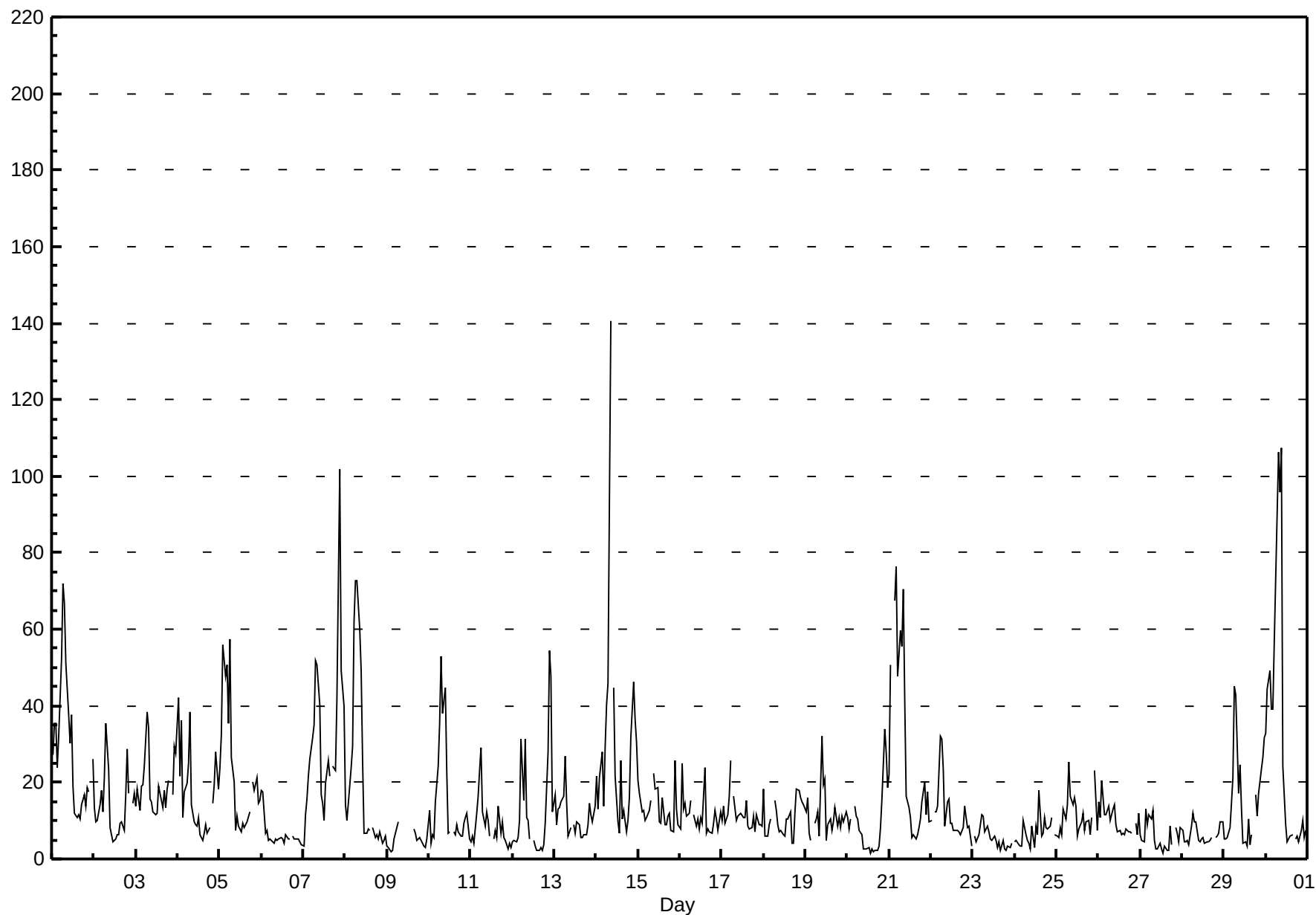
Henry Pirker - April 2014

| Maximum Value: 140.5 ppb on Apr 14 09:00    |                               |    |    |    |    |    |    |     |     |     |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 33.1 ppb on Apr 30                                                                                                                      |     |    |    |                               |               |  |  |  |  | Hours in Service: 720     |  |
|---------------------------------------------|-------------------------------|----|----|----|----|----|----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|----|-------------------------------|---------------|--|--|--|--|---------------------------|--|
| Minimum Value: 1 ppb on Apr 27 14:00        |                               |    |    |    |    |    |    |     |     |     |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 5.5 ppb on Apr 23                                                                                                                       |     |    |    |                               |               |  |  |  |  | Hours of Data: 682        |  |
| Maximum Diurnal Average: 30.3 ppb at hour 8 |                               |    |    |    |    |    |    |     |     |     |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 7.5 ppb at hour 17                                                                                                                    |     |    |    |                               |               |  |  |  |  | Hours of Missing Data: 38 |  |
| Monthly Average: 15.08 ppb                  |                               |    |    |    |    |    |    |     |     |     |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 2.3 P <sub>10</sub> = 4.4 Q <sub>1</sub> = 6.4 Median = 10.1 Q <sub>3</sub> = 16.9 P <sub>90</sub> = 31.8 P <sub>99</sub> = 72.0 |     |    |    |                               |               |  |  |  |  | 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-Apr                                       | 27                            | 36 | 36 | 24 | 32 | 52 | 72 | 67  | 51  | 38  | 30 | 38 | 19 | 12 | 11 | 12 | 10 | 14 | 17 | 14 | 19                                                                                                                                                             | 17  | A  | 26 | 29.2                          | 72.1          |  |  |  |  |                           |  |
| 2-Apr                                       | 14                            | 10 | 10 | 14 | 18 | 12 | 21 | 35  | 23  | 8   | 6  | 4  | 5  | 6  | 7  | 9  | 10 | 7  | 17 | 29 | 17                                                                                                                                                             | A   | 15 | 17 | 13.7                          | 35.3          |  |  |  |  |                           |  |
| 3-Apr                                       | 14                            | 18 | 13 | 19 | 20 | 24 | 38 | 34  | 16  | 15  | 12 | 12 | 12 | 19 | 17 | 13 | 18 | 13 | 18 | 21 | A                                                                                                                                                              | 17  | 29 | 28 | 19.1                          | 38.2          |  |  |  |  |                           |  |
| 4-Apr                                       | 42                            | 22 | 36 | 11 | 18 | 20 | 25 | 38  | 14  | 10  | 9  | 9  | 11 | 6  | 5  | 7  | 9  | 7  | 8  | A  | 15                                                                                                                                                             | 19  | 28 | 18 | 16.8                          | 42.1          |  |  |  |  |                           |  |
| 5-Apr                                       | 24                            | 33 | 56 | 48 | 51 | 36 | 57 | 26  | 20  | 8   | 11 | 9  | 7  | 9  | 8  | 9  | 10 | 12 | A  | 20 | 18                                                                                                                                                             | 21  | 15 | 15 | 22.7                          | 57.5          |  |  |  |  |                           |  |
| 6-Apr                                       | 18                            | 18 | 7  | 7  | 5  | 5  | 4  | 4   | 5   | 5   | 5  | 6  | 5  | 4  | 6  | 5  | 5  | A  | 6  | 5  | 5                                                                                                                                                              | 5   | 5  | 4  | 6.3                           | 17.8          |  |  |  |  |                           |  |
| 7-Apr                                       | 4                             | 11 | 16 | 22 | 26 | 32 | 35 | 52  | 51  | 40  | 17 | 14 | 10 | 20 | 26 | 22 | A  | 24 | 23 | 42 | 72                                                                                                                                                             | 102 | 49 | 40 | 32.6                          | 101.9         |  |  |  |  |                           |  |
| 8-Apr                                       | 14                            | 10 | 14 | 24 | 29 | 62 | 73 | 73  | 60  | 49  | 26 | 7  | 7  | 8  | 7  | A  | 8  | 6  | 6  | 5  | 7                                                                                                                                                              | 4   | 5  | 6  | 22.2                          | 72.8          |  |  |  |  |                           |  |
| 9-Apr                                       | 3                             | 3  | 2  | 2  | 5  | 7  | 10 | C   | C   | C   | C  | C  | C  | C  | A  | 8  | 7  | 5  | 5  | 6  | 4                                                                                                                                                              | 3   | 3  | 5  | --                            | 9.8           |  |  |  |  |                           |  |
| 10-Apr                                      | 13                            | 4  | 6  | 5  | 15 | 24 | 36 | 53  | 38  | 45  | 23 | 7  | 7  | A  | 7  | 6  | 9  | 7  | 6  | 6  | 9                                                                                                                                                              | 11  | 12 | 5  | 15.4                          | 53.1          |  |  |  |  |                           |  |
| 11-Apr                                      | 4                             | 6  | 4  | 12 | 16 | 23 | 29 | 12  | 8   | 12  | 10 | 6  | A  | 5  | 7  | 5  | 14 | 7  | 10 | 5  | 5                                                                                                                                                              | 2   | 4  | 3  | 9.2                           | 28.9          |  |  |  |  |                           |  |
| 12-Apr                                      | 4                             | 5  | 4  | 6  | 10 | 31 | 15 | 31  | 11  | 10  | 5  | A  | 5  | 3  | 2  | 2  | 3  | 2  | 4  | 9  | 28                                                                                                                                                             | 55  | 48 | 12 | 13.4                          | 54.6          |  |  |  |  |                           |  |
| 13-Apr                                      | 17                            | 9  | 13 | 13 | 15 | 16 | 27 | 15  | 6   | 8   | A  | 9  | 7  | 10 | 9  | 6  | 6  | 6  | 6  | 9  | 15                                                                                                                                                             | 11  | 10 | 14 | 11.2                          | 26.8          |  |  |  |  |                           |  |
| 14-Apr                                      | 22                            | 13 | 21 | 28 | 14 | 29 | 40 | 46  | 141 | A   | 45 | 22 | 10 | 7  | 26 | 10 | 13 | 7  | 10 | 16 | 32                                                                                                                                                             | 46  | 36 | 30 | 28.8                          | 140.5         |  |  |  |  |                           |  |
| 15-Apr                                      | 20                            | 17 | 12 | 13 | 10 | 11 | 13 | 15  | A   | 22  | 18 | 19 | 10 | 9  | 16 | 9  | 9  | 11 | 12 | 8  | 7                                                                                                                                                              | 26  | 13 | 9  | 13.4                          | 25.7          |  |  |  |  |                           |  |
| 16-Apr                                      | 8                             | 25 | 13 | 15 | 11 | 12 | 15 | A   | 12  | 8   | 11 | 8  | 11 | 9  | 24 | 7  | 8  | 7  | 7  | 9  | 13                                                                                                                                                             | 10  | 7  | 12 | 11.4                          | 24.8          |  |  |  |  |                           |  |
| 17-Apr                                      | 10                            | 14 | 9  | 12 | 16 | 26 | A  | 17  | 10  | 11  | 12 | 12 | 11 | 11 | 15 | 8  | 8  | 8  | 11 | 7  | 12                                                                                                                                                             | 9   | 9  | 9  | 11.6                          | 25.9          |  |  |  |  |                           |  |
| 18-Apr                                      | 18                            | 6  | 6  | 9  | 10 | A  | 15 | 13  | 9   | 7   | 8  | 7  | 6  | 10 | 11 | 12 | 4  | 4  | 12 | 18 | 18                                                                                                                                                             | 16  | 15 | 14 | 10.8                          | 18.4          |  |  |  |  |                           |  |
| 19-Apr                                      | 12                            | 16 | 7  | 5  | A  | 9  | 11 | 12  | 6   | 32  | 19 | 21 | 5  | 9  | 10 | 7  | 10 | 13 | 9  | 11 | 8                                                                                                                                                              | 11  | 10 | 12 | 11.6                          | 32.1          |  |  |  |  |                           |  |
| 20-Apr                                      | 11                            | 8  | 11 | A  | 14 | 11 | 10 | 7   | 6   | 3   | 3  | 3  | 3  | 2  | 3  | 2  | 2  | 2  | 3  | 8  | 16                                                                                                                                                             | 34  | 28 | 19 | 9.0                           | 33.9          |  |  |  |  |                           |  |
| 21-Apr                                      | 22                            | 51 | A  | 67 | 76 | 48 | 60 | 55  | 71  | 41  | 16 | 13 | 11 | 5  | 6  | 5  | 6  | 8  | 10 | 15 | 20                                                                                                                                                             | 12  | 18 | 10 | 28.1                          | 76.4          |  |  |  |  |                           |  |
| 22-Apr                                      | 10                            | A  | 12 | 12 | 14 | 32 | 31 | 24  | 8   | 15  | 16 | 9  | 9  | 7  | 7  | 8  | 7  | 6  | 8  | 14 | 11                                                                                                                                                             | 8   | 9  | 3  | 12.2                          | 32.1          |  |  |  |  |                           |  |
| 23-Apr                                      | A                             | 6  | 5  | 6  | 9  | 12 | 11 | 7   | 9   | 7   | 5  | 5  | 6  | 5  | 3  | 4  | 2  | 5  | 3  | 2  | 3                                                                                                                                                              | 3   | 4  | A  | 5.5                           | 11.6          |  |  |  |  |                           |  |
| 24-Apr                                      | 4                             | 5  | 4  | 4  | 4  | 10 | 6  | 5   | 4   | 3   | 9  | 3  | 9  | 6  | 18 | 6  | 7  | 11 | 8  | 8  | 9                                                                                                                                                              | 11  | A  | 7  | 6.9                           | 18.0          |  |  |  |  |                           |  |
| 25-Apr                                      | 6                             | 5  | 8  | 6  | 13 | 10 | 14 | 25  | 16  | 14  | 16 | 14 | 6  | 8  | 10 | 12 | 8  | 10 | 10 | 6  | 11                                                                                                                                                             | A   | 23 | 8  | 11.3                          | 25.2          |  |  |  |  |                           |  |
| 26-Apr                                      | 15                            | 11 | 21 | 12 | 12 | 13 | 14 | 10  | 13  | 14  | 9  | 7  | 7  | 6  | 7  | 6  | 8  | 7  | 7  | 7  | A                                                                                                                                                              | 9   | 6  | 12 | 10.1                          | 20.6          |  |  |  |  |                           |  |
| 27-Apr                                      | 6                             | 5  | 5  | 13 | 9  | 11 | 10 | 13  | 5   | 3   | 2  | 4  | 3  | 1  | 3  | 2  | 2  | 8  | 4  | A  | 8                                                                                                                                                              | 7   | 5  | 8  | 6.0                           | 12.9          |  |  |  |  |                           |  |
| 28-Apr                                      | 7                             | 5  | 4  | 5  | 4  | 8  | 12 | 10  | 10  | 5   | 5  | 5  | 6  | 4  | 4  | 5  | 5  | 6  | A  | 5  | 6                                                                                                                                                              | 7   | 10 | 10 | 6.4                           | 12.0          |  |  |  |  |                           |  |
| 29-Apr                                      | 5                             | 5  | 6  | 8  | 15 | 21 | 45 | 43  | 17  | 24  | 14 | 4  | 4  | 3  | 11 | 4  | 6  | A  | 17 | 11 | 17                                                                                                                                                             | 24  | 26 | 32 | 15.8                          | 45.2          |  |  |  |  |                           |  |
| 30-Apr                                      | 33                            | 44 | 49 | 39 | 39 | 57 | 90 | 106 | 96  | 107 | 24 | 9  | 4  | 5  | 6  | 6  | A  | 5  | 6  | 4  | 7                                                                                                                                                              | 10  | 5  | 7  | 33.1                          | 107.5         |  |  |  |  |                           |  |
|                                             |                               |    |    |    |    |    |    |     |     |     |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                |     |    |    | Diurnal Average               |               |  |  |  |  |                           |  |
|                                             |                               |    |    |    |    |    |    |     |     |     |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                |     |    |    | Diurnal Maximum               |               |  |  |  |  |                           |  |
| C - Calibration                             |                               |    |    |    |    |    |    |     |     |     |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                |     |    |    | A - Automated Daily Zero Span |               |  |  |  |  |                           |  |

## Hourly Maximums

Oxides of Nitrogen ( $\text{NO}_x$ ) - ppb

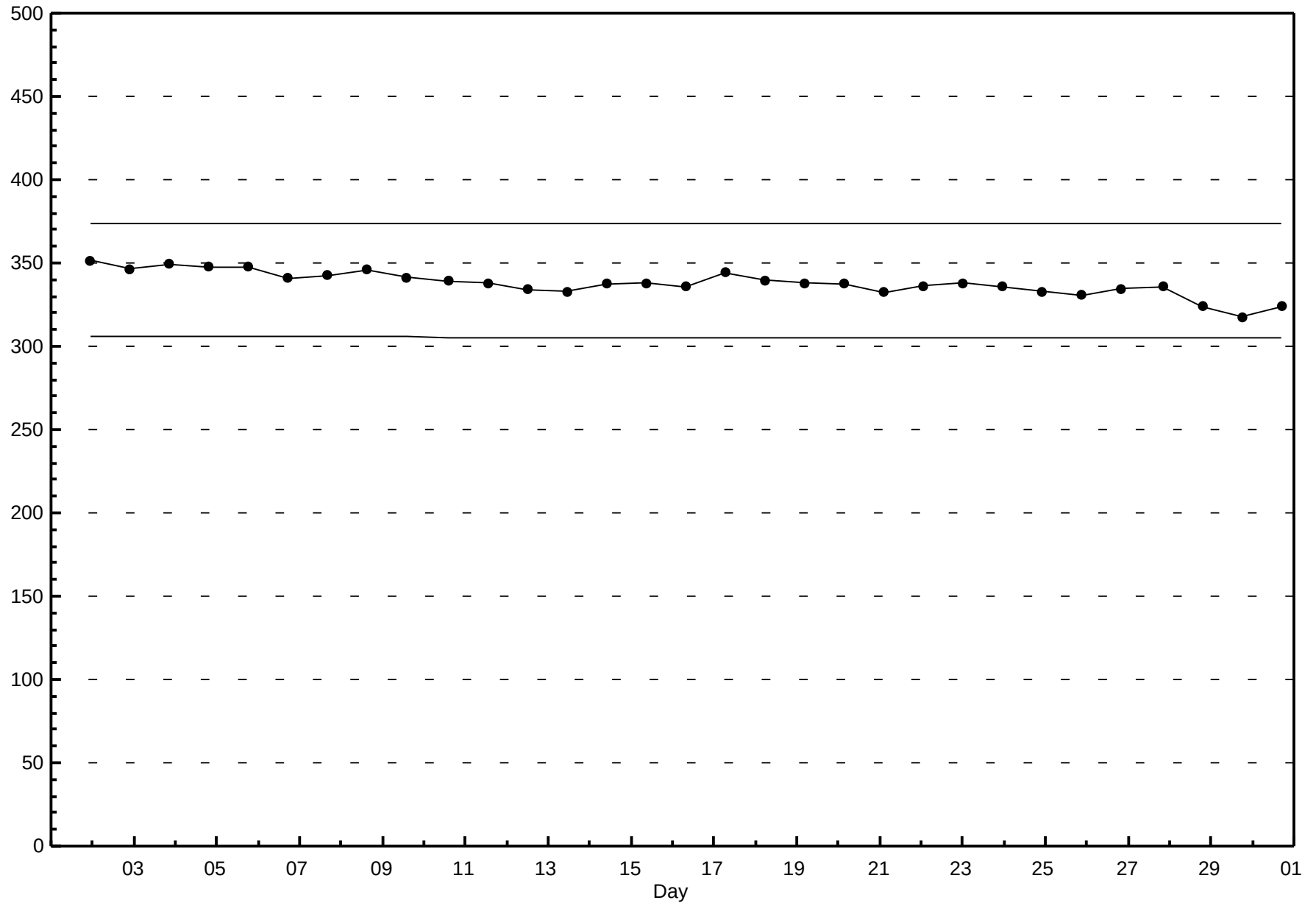
Henry Pirker - April 2014



## Span Responses

Oxides of Nitrogen ( $\text{NO}_x$ )

Henry Pirker - April 2014



## Hourly Averages

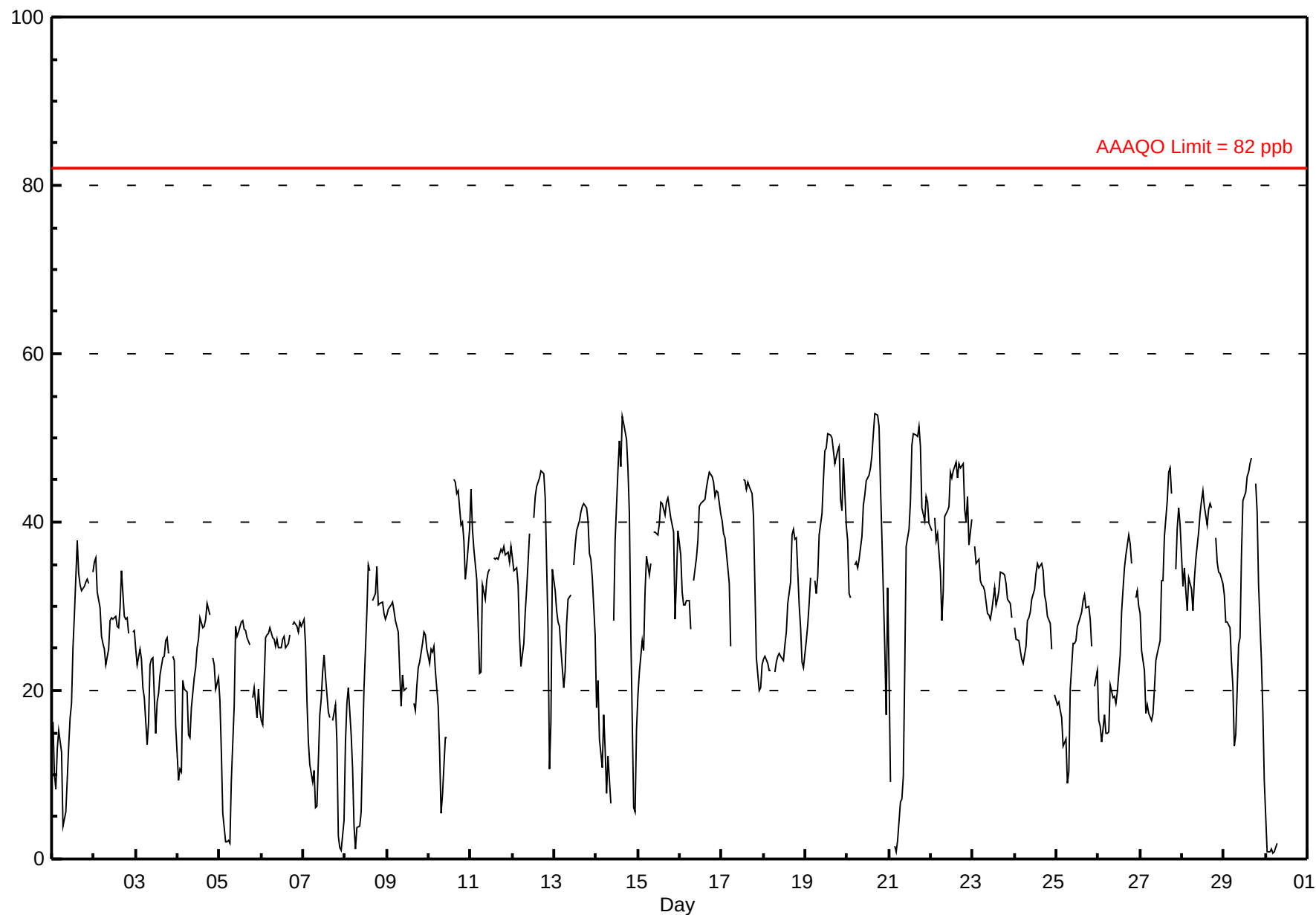
Ozone (O<sub>3</sub>) - ppb

Henry Pirker - April 2014

| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 52.9 ppb on Apr 20 17:00<br>Maximum Daily Average: 41.4 ppb on Apr 19 |                               |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                             |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 665<br>Hours of Missing Data: 55<br>Hours of Calibration: 37<br>Percent Operational Time: 97.5 |    |    |                 |               |               |
|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|----|----|----|----|----|----------------------------------------------------------------------------------------------------------------------------------------|----|----|-----------------|---------------|---------------|
| Minimum Value: 1 ppb on Apr 30 05:00<br>Maximum Diurnal Average: 38.5 ppb at hour 17<br>Monthly Average: 28.96 ppb                      |                               |    |    |    |    |    |    |    |    | Minimum Daily Average: 14.2 ppb on Apr 7<br>Minimum Diurnal Average: 18.7 ppb at hour 7<br>Percentiles: P <sub>1</sub> = 1.1 P <sub>10</sub> = 13.9 Q <sub>1</sub> = 22.3 Median = 29.0 Q <sub>3</sub> = 37.7 P <sub>90</sub> = 43.8 P <sub>99</sub> = 50.5 |    |    |    |    |    |    |    |    |    |    |                                                                                                                                        |    |    |                 |               |               |
| 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-Apr                                                                                                                                   | 16                            | 10 | 8  | 13 | 15 | 13 | 4  | 5  | 6  | 13                                                                                                                                                                                                                                                          | 17 | 18 | 25 | 29 | 38 | 34 | 33 | 32 | 32 | 33 | 33                                                                                                                                     | 33 | A  | 34              | 21.5          | 37.8          |
| 2-Apr                                                                                                                                   | 35                            | 36 | 32 | 30 | 26 | 26 | 25 | 23 | 25 | 28                                                                                                                                                                                                                                                          | 29 | 28 | 29 | 28 | 27 | 30 | 34 | 29 | 29 | 29 | 27                                                                                                                                     | A  | 27 | 28.6            | 35.8          |               |
| 3-Apr                                                                                                                                   | 25                            | 23 | 25 | 24 | 20 | 19 | 14 | 16 | 23 | 24                                                                                                                                                                                                                                                          | 24 | 15 | 19 | 20 | 22 | 24 | 24 | 26 | 26 | 24 | A                                                                                                                                      | 24 | 24 | 21.7            | 26.3          |               |
| 4-Apr                                                                                                                                   | 9                             | 11 | 10 | 21 | 20 | 20 | 15 | 14 | 18 | 22                                                                                                                                                                                                                                                          | 23 | 25 | 26 | 29 | 27 | 28 | 28 | 30 | 29 | A  | 24                                                                                                                                     | 23 | 20 | 21.5            | 30.3          |               |
| 5-Apr                                                                                                                                   | 19                            | 13 | 5  | 2  | 2  | 2  | 2  | 9  | 18 | 28                                                                                                                                                                                                                                                          | 26 | 27 | 28 | 28 | 27 | 27 | 26 | 25 | A  | 19 | 20                                                                                                                                     | 17 | 20 | 17.8            | 28.3          |               |
| 6-Apr                                                                                                                                   | 16                            | 16 | 26 | 27 | 27 | 27 | 26 | 26 | 25 | 26                                                                                                                                                                                                                                                          | 25 | 25 | 26 | 26 | 25 | 26 | 27 | A  | 28 | 28 | 28                                                                                                                                     | 27 | 28 | 25.6            | 28.2          |               |
| 7-Apr                                                                                                                                   | 28                            | 25 | 19 | 14 | 11 | 9  | 11 | 6  | 6  | 17                                                                                                                                                                                                                                                          | 19 | 22 | 24 | 22 | 17 | 17 | A  | 16 | 18 | 14 | 3                                                                                                                                      | 1  | 1  | 14.2            | 28.5          |               |
| 8-Apr                                                                                                                                   | 14                            | 18 | 20 | 15 | 11 | 4  | 1  | 4  | 4  | 6                                                                                                                                                                                                                                                           | 13 | 20 | 29 | 35 | 34 | A  | 31 | 32 | 35 | 30 | 30                                                                                                                                     | 31 | 29 | 20.6            | 35.0          |               |
| 9-Apr                                                                                                                                   | 29                            | 30 | 30 | 30 | 30 | 28 | 27 | 22 | 18 | 22                                                                                                                                                                                                                                                          | 20 | 20 | M  | M  | A  | 19 | 18 | 20 | 23 | 23 | 26                                                                                                                                     | 27 | 27 | 24.5            | 30.5          |               |
| 10-Apr                                                                                                                                  | 23                            | 25 | 25 | 25 | 22 | 18 | 13 | 5  | 8  | 14                                                                                                                                                                                                                                                          | 14 | C  | C  | C  | 45 | 45 | 43 | 44 | 40 | 40 | 38                                                                                                                                     | 33 | 35 | 28.3            | 45.0          |               |
| 11-Apr                                                                                                                                  | 44                            | 39 | 37 | 33 | 28 | 22 | 22 | 33 | 31 | 33                                                                                                                                                                                                                                                          | 34 | 34 | A  | 36 | 36 | 36 | 36 | 37 | 37 | 37 | 36                                                                                                                                     | 36 | 35 | 34.3            | 43.9          |               |
| 12-Apr                                                                                                                                  | 36                            | 34 | 35 | 32 | 26 | 23 | 26 | 29 | 32 | 35                                                                                                                                                                                                                                                          | 39 | A  | 41 | 43 | 44 | 45 | 46 | 46 | 46 | 43 | 27                                                                                                                                     | 11 | 16 | 34.3            | 46.0          |               |
| 13-Apr                                                                                                                                  | 32                            | 29 | 28 | 28 | 25 | 20 | 22 | 28 | 31 | 31                                                                                                                                                                                                                                                          | A  | 35 | 37 | 39 | 40 | 41 | 42 | 42 | 42 | 40 | 36                                                                                                                                     | 36 | 33 | 33.3            | 42.1          |               |
| 14-Apr                                                                                                                                  | 18                            | 21 | 14 | 11 | 17 | 13 | 8  | 12 | 7  | A                                                                                                                                                                                                                                                           | 28 | 38 | 46 | 50 | 47 | 53 | 52 | 50 | 46 | 41 | 27                                                                                                                                     | 6  | 6  | 27.2            | 52.6          |               |
| 15-Apr                                                                                                                                  | 19                            | 22 | 26 | 25 | 32 | 36 | 34 | 35 | A  | 39                                                                                                                                                                                                                                                          | 39 | 38 | 40 | 42 | 42 | 41 | 42 | 43 | 42 | 40 | 39                                                                                                                                     | 28 | 33 | 35.5            | 42.8          |               |
| 16-Apr                                                                                                                                  | 36                            | 32 | 30 | 30 | 31 | 31 | 27 | A  | 33 | 36                                                                                                                                                                                                                                                          | 38 | 42 | 42 | 42 | 43 | 44 | 45 | 46 | 45 | 45 | 43                                                                                                                                     | 44 | 44 | 38.7            | 46.0          |               |
| 17-Apr                                                                                                                                  | 40                            | 39 | 38 | 35 | 33 | 25 | A  | 34 | C  | C                                                                                                                                                                                                                                                           | C  | C  | 45 | 45 | 44 | 45 | 44 | 43 | 41 | 32 | 24                                                                                                                                     | 20 | 20 | 35.3            | 45.0          |               |
| 18-Apr                                                                                                                                  | 24                            | 24 | 23 | 22 | 22 | A  | 22 | 23 | 24 | 24                                                                                                                                                                                                                                                          | 24 | 24 | 25 | 27 | 30 | 33 | 39 | 39 | 38 | 38 | 30                                                                                                                                     | 27 | 23 | 27.4            | 39.1          |               |
| 19-Apr                                                                                                                                  | 26                            | 28 | 30 | 33 | A  | 33 | 32 | 34 | 38 | 41                                                                                                                                                                                                                                                          | 45 | 48 | 49 | 51 | 50 | 50 | 48 | 47 | 48 | 49 | 43                                                                                                                                     | 41 | 48 | 41.4            | 50.6          |               |
| 20-Apr                                                                                                                                  | 38                            | 32 | 31 | A  | 35 | 35 | 35 | 36 | 38 | 42                                                                                                                                                                                                                                                          | 43 | 45 | 46 | 47 | 48 | 51 | 53 | 53 | 51 | 44 | 38                                                                                                                                     | 25 | 17 | 39.7            | 52.9          |               |
| 21-Apr                                                                                                                                  | 22                            | 9  | A  | 2  | 1  | 2  | 7  | 7  | 10 | 22                                                                                                                                                                                                                                                          | 37 | 39 | 43 | 49 | 51 | 50 | 50 | 51 | 49 | 42 | 40                                                                                                                                     | 43 | 42 | 30.8            | 51.4          |               |
| 22-Apr                                                                                                                                  | 39                            | A  | 40 | 38 | 39 | 34 | 28 | 32 | 41 | 41                                                                                                                                                                                                                                                          | 42 | 46 | 45 | 46 | 47 | 45 | 47 | 46 | 47 | 41 | 40                                                                                                                                     | 43 | 37 | 41.1            | 47.2          |               |
| 23-Apr                                                                                                                                  | A                             | 37 | 35 | 36 | 33 | 32 | 32 | 32 | 29 | 29                                                                                                                                                                                                                                                          | 28 | 30 | 32 | 30 | 31 | 32 | 34 | 34 | 34 | 33 | 31                                                                                                                                     | 30 | 29 | A               | 32.0          | 37.1          |
| 24-Apr                                                                                                                                  | 28                            | 26 | 26 | 25 | 24 | 23 | 25 | 28 | 29 | 29                                                                                                                                                                                                                                                          | 31 | 32 | 34 | 35 | 34 | 35 | 34 | 31 | 30 | 29 | 28                                                                                                                                     | 25 | A  | 19              | 28.7          | 35.1          |
| 25-Apr                                                                                                                                  | 18                            | 19 | 18 | 17 | 13 | 14 | 9  | 10 | 20 | 26                                                                                                                                                                                                                                                          | 26 | 26 | 28 | 28 | 29 | 31 | 31 | 30 | 30 | 29 | 25                                                                                                                                     | A  | 21 | 22              | 22.6          | 31.4          |
| 26-Apr                                                                                                                                  | 16                            | 16 | 14 | 17 | 15 | 15 | 15 | 21 | 19 | 19                                                                                                                                                                                                                                                          | 18 | 20 | 24 | 29 | 32 | 35 | 36 | 38 | 38 | 35 | A                                                                                                                                      | 31 | 32 | 24.6            | 38.5          |               |
| 27-Apr                                                                                                                                  | 29                            | 25 | 22 | 17 | 18 | 17 | 16 | 17 | 20 | 24                                                                                                                                                                                                                                                          | 24 | 26 | 33 | 33 | 38 | 43 | 46 | 47 | 43 | A  | 34                                                                                                                                     | 39 | 42 | 30.2            | 46.5          |               |
| 28-Apr                                                                                                                                  | 32                            | 35 | 32 | 30 | 33 | 32 | 29 | 33 | 36 | 39                                                                                                                                                                                                                                                          | 41 | 43 | 44 | 42 | 40 | 41 | 42 | 42 | A  | 38 | 35                                                                                                                                     | 34 | 34 | 33              | 36.5          | 43.7          |
| 29-Apr                                                                                                                                  | 31                            | 28 | 28 | 27 | 23 | 20 | 13 | 15 | 25 | 26                                                                                                                                                                                                                                                          | 36 | 43 | 43 | 45 | 46 | 47 | 48 | A  | 45 | 41 | 32                                                                                                                                     | 24 | 18 | 31.1            | 47.5          |               |
| 30-Apr                                                                                                                                  | 5                             | 1  | 1  | 1  | 1  | 1  | 2  | M  | M  | M                                                                                                                                                                                                                                                           | M  | M  | M  | M  | M  | M  | M  | R  | M  | M  | M                                                                                                                                      | M  | M  | --              | 5.1           |               |
| 25.8 24.2 24.5 22.7 21.9 20.6 18.7 21.1 22.7 27.3 29.0 31.1 34.7 36.1 37.0 37.3 38.5 37.8 37.4 34.8 31.0 28.1 27.4 28.1                 |                               |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                             |    |    |    |    |    |    |    |    |    |    |                                                                                                                                        |    |    | Diurnal Average |               |               |
| 43.9 39.2 40.5 37.8 38.6 36.0 34.5 35.6 40.6 42.0 45.1 48.4 48.8 50.6 50.5 52.6 52.9 52.7 51.4 49.0 43.1 43.7 47.6 41.0                 |                               |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                             |    |    |    |    |    |    |    |    |    |    |                                                                                                                                        |    |    | Diurnal Maximum |               |               |
| C - Calibration R - Recovery M - Maintenance A - Automated Daily Zero Span                                                              |                               |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                             |    |    |    |    |    |    |    |    |    |    |                                                                                                                                        |    |    |                 |               |               |
| Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na                                                                    |                               |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                             |    |    |    |    |    |    |    |    |    |    |                                                                                                                                        |    |    |                 |               |               |

## Hourly Averages

Ozone (O<sub>3</sub>) - ppb  
Henry Pirker - April 2014



## Hourly Maximums

Ozone (O<sub>3</sub>) - ppb

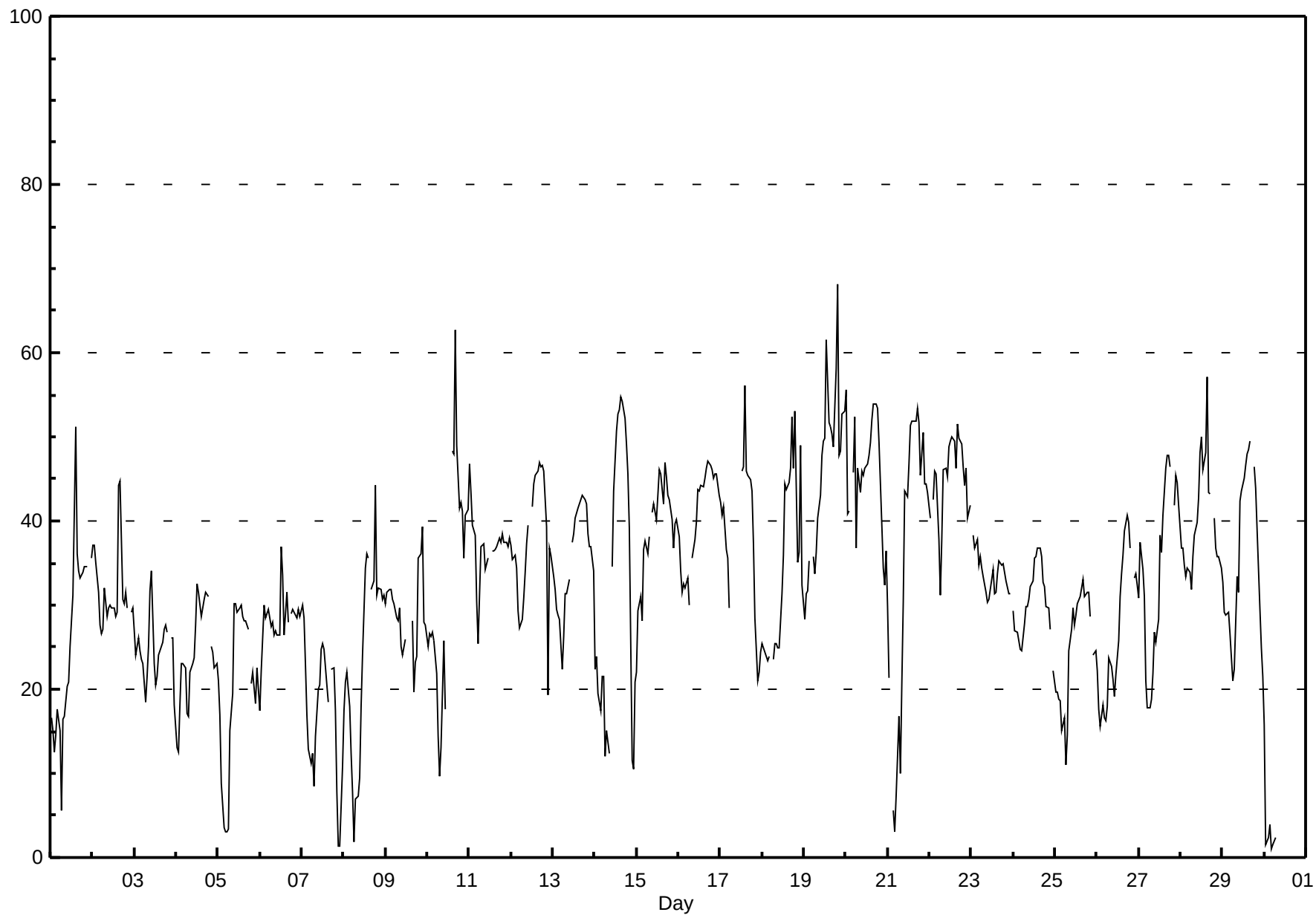
Henry Pirker - April 2014

| Maximum Value: 68.2 ppb on Apr 19 20:00                                                                                 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 45.9 ppb on Apr 19                                                                                                                        |    |    |      |                 |               |  |  |  |  | Hours in Service: 720     |  |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|------|-----------------|---------------|--|--|--|--|---------------------------|--|
| Minimum Value: 1 ppb on Apr 30 05:00                                                                                    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 17.2 ppb on Apr 7                                                                                                                         |    |    |      |                 |               |  |  |  |  | Hours of Data: 665        |  |
| Maximum Diurnal Average: 41.5 ppb at hour 17                                                                            |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 21.6 ppb at hour 7                                                                                                                      |    |    |      |                 |               |  |  |  |  | Hours of Missing Data: 55 |  |
| Monthly Average: 32.33 ppb                                                                                              |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 2.0 P <sub>10</sub> = 17.6 Q <sub>1</sub> = 24.9 Median = 31.9 Q <sub>3</sub> = 41.1 P <sub>90</sub> = 46.8 P <sub>99</sub> = 55.5 |    |    |      |                 |               |  |  |  |  | Hours of Calibration: 37  |  |
|                                                                                                                         |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percent Operational Time: 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-Apr                                                                                                                   | 17                            | 15 | 13 | 15 | 18 | 15 | 6  | 16 | 17 | 20 | 21 | 25 | 28 | 31 | 51 | 36 | 34 | 33 | 34 | 35 | 35                                                                                                                                                               | 35 | A  | 36   | 25.4            | 51.2          |  |  |  |  |                           |  |
| 2-Apr                                                                                                                   | 37                            | 37 | 35 | 32 | 28 | 27 | 27 | 32 | 29 | 30 | 30 | 30 | 30 | 29 | 29 | 44 | 45 | 31 | 30 | 32 | 30                                                                                                                                                               | A  | 29 | 30   | 31.7            | 44.7          |  |  |  |  |                           |  |
| 3-Apr                                                                                                                   | 27                            | 24 | 26 | 25 | 24 | 23 | 19 | 22 | 25 | 32 | 34 | 23 | 21 | 22 | 24 | 25 | 26 | 27 | 28 | 27 | A                                                                                                                                                                | 26 | 26 | 18   | 24.8            | 34.1          |  |  |  |  |                           |  |
| 4-Apr                                                                                                                   | 13                            | 13 | 18 | 23 | 23 | 23 | 17 | 17 | 22 | 23 | 24 | 28 | 33 | 32 | 29 | 30 | 31 | 32 | 31 | A  | 25                                                                                                                                                               | 24 | 23 | 23   | 24.1            | 32.6          |  |  |  |  |                           |  |
| 5-Apr                                                                                                                   | 21                            | 17 | 9  | 3  | 3  | 3  | 3  | 15 | 20 | 30 | 30 | 29 | 30 | 30 | 29 | 28 | 28 | 27 | A  | 21 | 22                                                                                                                                                               | 18 | 23 | 20   | 19.9            | 30.2          |  |  |  |  |                           |  |
| 6-Apr                                                                                                                   | 18                            | 22 | 30 | 29 | 29 | 30 | 28 | 28 | 27 | 27 | 26 | 26 | 37 | 34 | 26 | 31 | 28 | A  | 29 | 29 | 29                                                                                                                                                               | 28 | 29 | 29   | 28.2            | 37.0          |  |  |  |  |                           |  |
| 7-Apr                                                                                                                   | 30                            | 28 | 23 | 17 | 13 | 11 | 12 | 8  | 14 | 20 | 20 | 25 | 25 | 25 | 20 | 18 | A  | 22 | 23 | 17 | 8                                                                                                                                                                | 1  | 1  | 11   | 17.2            | 30.0          |  |  |  |  |                           |  |
| 8-Apr                                                                                                                   | 17                            | 21 | 22 | 18 | 12 | 8  | 2  | 7  | 7  | 9  | 18 | 24 | 34 | 36 | 36 | A  | 32 | 33 | 44 | 31 | 32                                                                                                                                                               | 32 | 31 | 31   | 23.4            | 44.3          |  |  |  |  |                           |  |
| 9-Apr                                                                                                                   | 30                            | 31 | 32 | 32 | 31 | 30 | 28 | 28 | 30 | 25 | 24 | 26 | M  | M  | A  | 28 | 20 | 23 | 24 | 36 | 36                                                                                                                                                               | 39 | 28 | 28   | 29.0            | 39.4          |  |  |  |  |                           |  |
| 10-Apr                                                                                                                  | 25                            | 27 | 26 | 27 | 26 | 22 | 14 | 10 | 13 | 26 | 18 | C  | C  | C  | 48 | 48 | 63 | 49 | 42 | 42 | 41                                                                                                                                                               | 36 | 41 | 41   | 32.5            | 62.7          |  |  |  |  |                           |  |
| 11-Apr                                                                                                                  | 47                            | 43 | 39 | 38 | 31 | 25 | 31 | 37 | 37 | 34 | 35 | 36 | A  | 36 | 36 | 37 | 37 | 38 | 37 | 38 | 37                                                                                                                                                               | 37 | 37 | 38   | 36.7            | 46.8          |  |  |  |  |                           |  |
| 12-Apr                                                                                                                  | 37                            | 35 | 36 | 34 | 29 | 27 | 28 | 31 | 34 | 37 | 40 | A  | 42 | 44 | 45 | 46 | 47 | 46 | 47 | 46 | 39                                                                                                                                                               | 19 | 37 | 36   | 37.5            | 46.9          |  |  |  |  |                           |  |
| 13-Apr                                                                                                                  | 33                            | 32 | 30 | 29 | 28 | 22 | 26 | 31 | 31 | 33 | A  | 37 | 38 | 40 | 41 | 42 | 43 | 43 | 43 | 42 | 39                                                                                                                                                               | 37 | 37 | 34   | 35.3            | 43.0          |  |  |  |  |                           |  |
| 14-Apr                                                                                                                  | 22                            | 24 | 19 | 17 | 22 | 22 | 12 | 15 | 12 | A  | 35 | 44 | 51 | 53 | 53 | 55 | 54 | 52 | 49 | 46 | 39                                                                                                                                                               | 12 | 10 | 21   | 32.1            | 54.7          |  |  |  |  |                           |  |
| 15-Apr                                                                                                                  | 22                            | 29 | 31 | 28 | 37 | 38 | 36 | 38 | A  | 41 | 42 | 40 | 43 | 46 | 46 | 42 | 47 | 45 | 43 | 43 | 40                                                                                                                                                               | 37 | 40 | 40   | 38.8            | 47.0          |  |  |  |  |                           |  |
| 16-Apr                                                                                                                  | 38                            | 34 | 32 | 33 | 32 | 33 | 30 | A  | 36 | 38 | 40 | 44 | 44 | 44 | 44 | 45 | 46 | 47 | 47 | 46 | 45                                                                                                                                                               | 46 | 46 | 43   | 40.5            | 47.1          |  |  |  |  |                           |  |
| 17-Apr                                                                                                                  | 42                            | 41 | 42 | 37 | 36 | 30 | A  | 39 | C  | C  | C  | C  | 46 | 46 | 56 | 46 | 45 | 45 | 44 | 37 | 28                                                                                                                                                               | 21 | 22 | 24   | 38.3            | 56.1          |  |  |  |  |                           |  |
| 18-Apr                                                                                                                  | 25                            | 25 | 24 | 23 | 24 | A  | 24 | 25 | 25 | 25 | 31 | 36 | 44 | 44 | 45 | 46 | 52 | 46 | 53 | 35 | 36                                                                                                                                                               | 49 | 32 | 34.6 | 53.0            |               |  |  |  |  |                           |  |
| 19-Apr                                                                                                                  | 28                            | 31 | 32 | 35 | A  | 36 | 34 | 36 | 40 | 43 | 48 | 49 | 50 | 62 | 52 | 51 | 50 | 49 | 58 | 68 | 48                                                                                                                                                               | 48 | 53 | 53   | 45.9            | 68.2          |  |  |  |  |                           |  |
| 20-Apr                                                                                                                  | 56                            | 41 | 41 | A  | 46 | 52 | 37 | 46 | 43 | 46 | 45 | 46 | 47 | 48 | 49 | 52 | 54 | 54 | 53 | 49 | 44                                                                                                                                                               | 34 | 32 | 36   | 45.8            | 55.6          |  |  |  |  |                           |  |
| 21-Apr                                                                                                                  | 30                            | 21 | A  | 6  | 3  | 7  | 17 | 10 | 21 | 30 | 44 | 43 | 47 | 51 | 52 | 52 | 52 | 53 | 52 | 45 | 50                                                                                                                                                               | 44 | 44 | 43   | 35.6            | 53.3          |  |  |  |  |                           |  |
| 22-Apr                                                                                                                  | 40                            | A  | 43 | 46 | 46 | 38 | 31 | 38 | 46 | 46 | 45 | 49 | 49 | 50 | 50 | 46 | 51 | 50 | 49 | 46 | 44                                                                                                                                                               | 46 | 40 | 42   | 44.9            | 51.4          |  |  |  |  |                           |  |
| 23-Apr                                                                                                                  | A                             | 38 | 37 | 38 | 35 | 36 | 34 | 33 | 32 | 30 | 31 | 32 | 34 | 31 | 32 | 34 | 35 | 35 | 35 | 34 | 33                                                                                                                                                               | 31 | 31 | A    | 33.7            | 38.3          |  |  |  |  |                           |  |
| 24-Apr                                                                                                                  | 29                            | 27 | 27 | 26 | 25 | 25 | 28 | 30 | 30 | 31 | 32 | 33 | 36 | 36 | 37 | 37 | 36 | 33 | 32 | 30 | 30                                                                                                                                                               | 27 | A  | 22   | 30.2            | 36.7          |  |  |  |  |                           |  |
| 25-Apr                                                                                                                  | 20                            | 20 | 19 | 19 | 15 | 17 | 11 | 15 | 25 | 27 | 30 | 28 | 29 | 30 | 31 | 32 | 33 | 31 | 32 | 32 | 29                                                                                                                                                               | A  | 24 | 25   | 24.8            | 33.1          |  |  |  |  |                           |  |
| 26-Apr                                                                                                                  | 22                            | 18 | 16 | 18 | 17 | 16 | 18 | 24 | 23 | 21 | 19 | 22 | 26 | 31 | 34 | 36 | 39 | 41 | 40 | 37 | A                                                                                                                                                                | 33 | 34 | 32   | 26.7            | 40.7          |  |  |  |  |                           |  |
| 27-Apr                                                                                                                  | 31                            | 37 | 34 | 31 | 21 | 18 | 18 | 19 | 22 | 27 | 26 | 28 | 38 | 36 | 41 | 46 | 48 | 48 | 46 | A  | 42                                                                                                                                                               | 45 | 45 | 42   | 34.3            | 47.8          |  |  |  |  |                           |  |
| 28-Apr                                                                                                                  | 37                            | 37 | 35 | 33 | 34 | 34 | 32 | 36 | 38 | 40 | 43 | 48 | 50 | 46 | 48 | 57 | 43 | 43 | A  | 40 | 37                                                                                                                                                               | 36 | 36 | 34   | 39.9            | 57.1          |  |  |  |  |                           |  |
| 29-Apr                                                                                                                  | 33                            | 29 | 29 | 29 | 27 | 24 | 21 | 22 | 33 | 32 | 42 | 44 | 45 | 47 | 48 | 48 | 49 | A  | 46 | 44 | 39                                                                                                                                                               | 29 | 25 | 21   | 35.1            | 49.5          |  |  |  |  |                           |  |
| 30-Apr                                                                                                                  | 16                            | 2  | 2  | 4  | 1  | 1  | 2  | M  | M  | M  | M  | M  | M  | M  | M  | M  | M  | R  | M  | M  | M                                                                                                                                                                | M  | M  | M    | --              | 15.8          |  |  |  |  |                           |  |
| 29.1 27.6 27.6 25.6 24.6 23.8 21.6 25.3 27.1 30.5 32.1 34.2 38.0 39.3 40.4 40.6 41.5 40.1 40.1 38.8 35.4 31.9 32.3 31.7 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                  |    |    |      | Diurnal Average |               |  |  |  |  |                           |  |
| 55.6 43.4 42.6 45.9 45.8 52.3 36.8 46.3 46.1 46.3 47.8 49.4 50.7 61.6 56.1 57.1 62.7 53.8 58.1 68.2 50.5 48.3 52.8 53.1 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                  |    |    |      | Diurnal Maximum |               |  |  |  |  |                           |  |
| C - Calibration R - Recovery M - Maintenance A - Automated Daily Zero Span                                              |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                  |    |    |      |                 |               |  |  |  |  |                           |  |



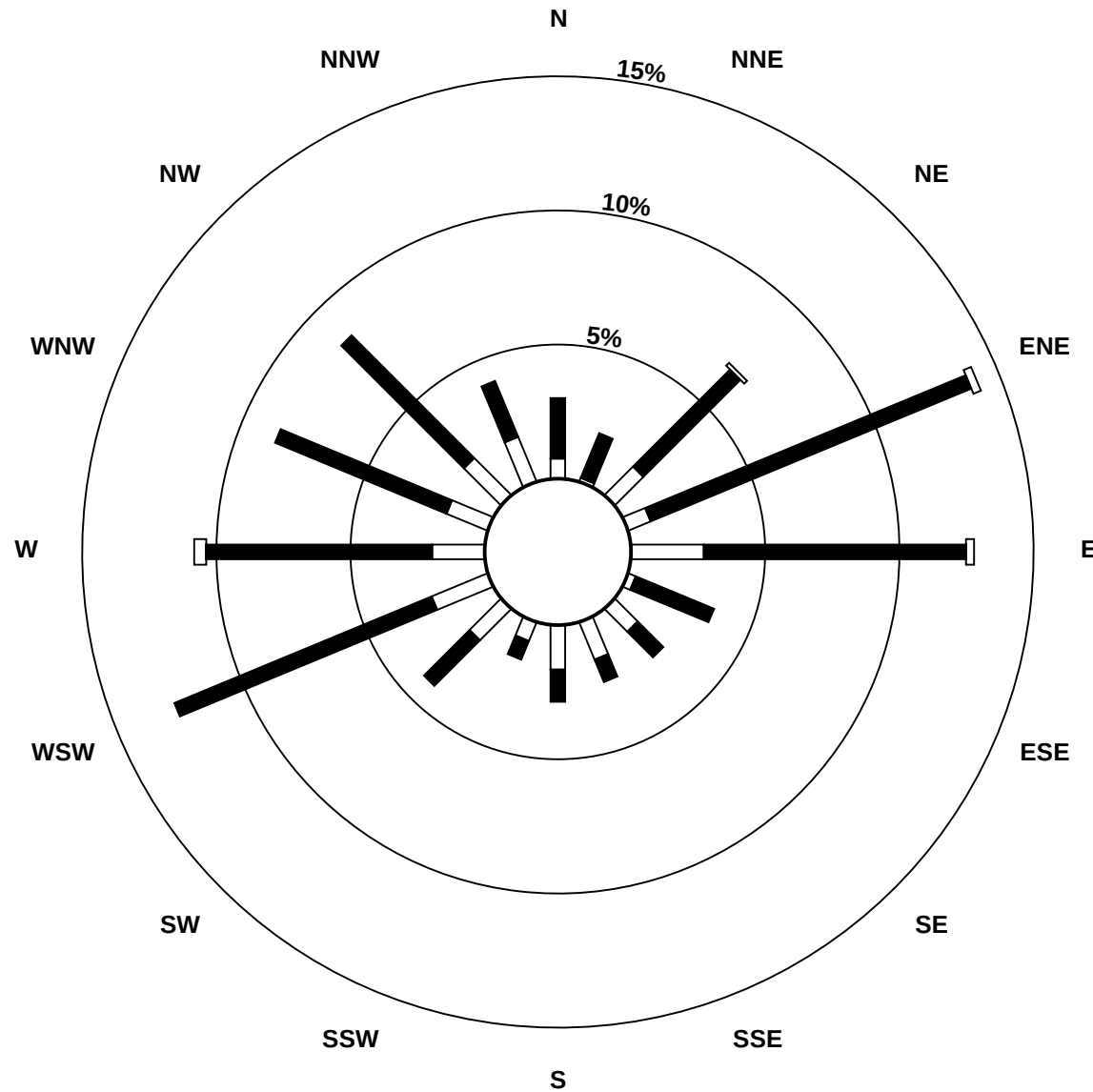
## Hourly Maximums

Ozone (O<sub>3</sub>) - ppb  
Henry Pirker - April 2014

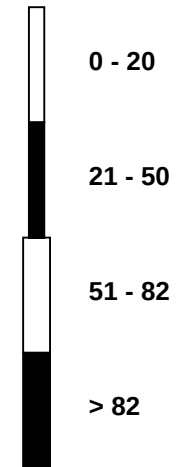


## Pollutant Rose

Ozone (O<sub>3</sub>) - ppb  
Henry Pirker - April 2014



## Pollutant Classes (ppb)



# Eight Hour Running Averages

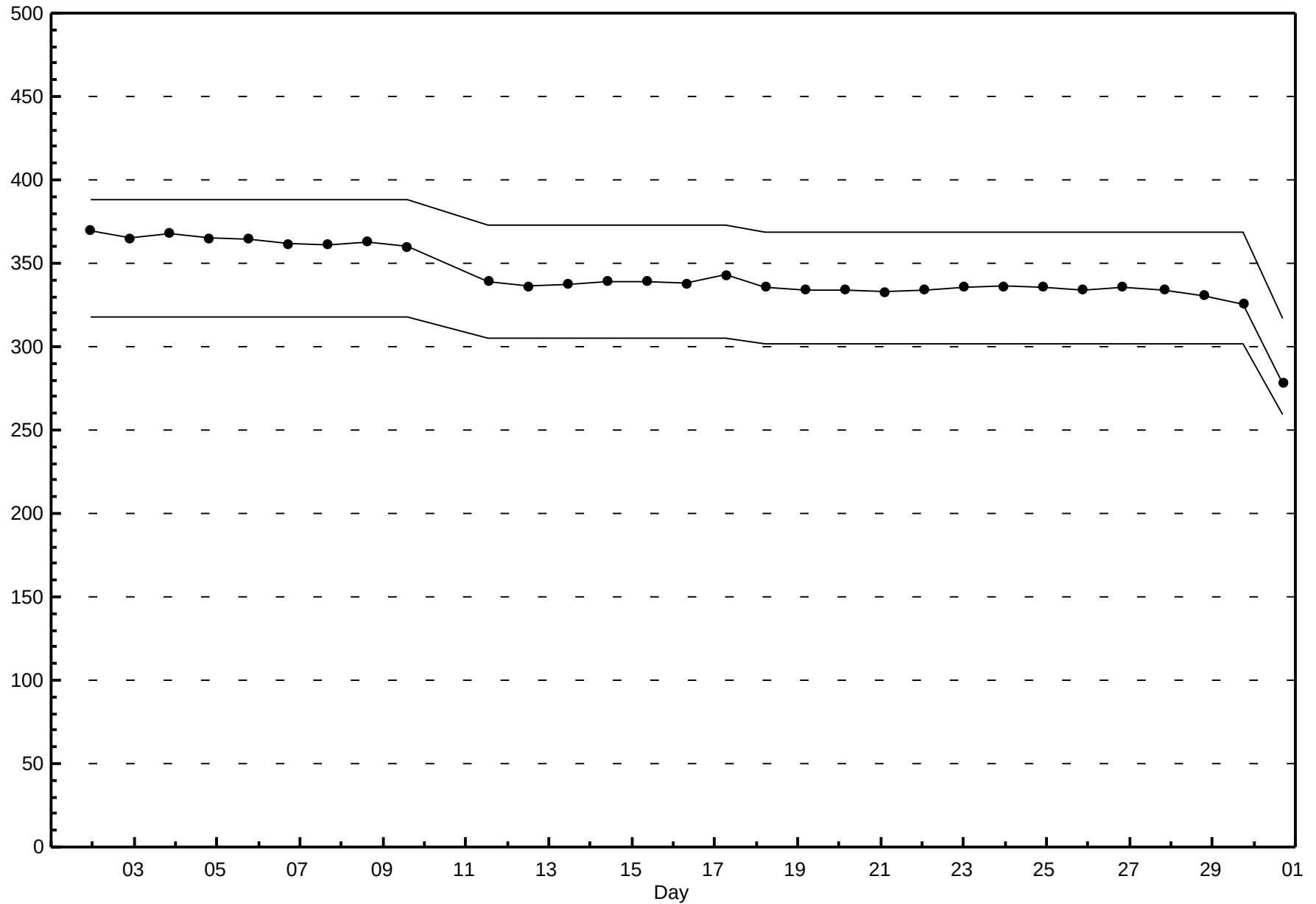
Ozone (O<sub>3</sub>) - ppb

Henry Pirker - April 2014

| Maximum Value: 49.1 ppb on Apr 20 19:00                                                                                                                          |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720          |               |      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------------------------------|---------------|------|
| Minimum Value: 1.0 ppb on Apr 30 09:00                                                                                                                           |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Data: 685             |               |      |
|                                                                                                                                                                  |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Missing Data: 35      |               |      |
| Percentiles: P <sub>1</sub> = 7.0 P <sub>10</sub> = 15.4 Q <sub>1</sub> = 22.5 Median = 29.2 Q <sub>3</sub> = 36.2 P <sub>90</sub> = 42.0 P <sub>99</sub> = 48.0 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Calibration: 14       |               |      |
|                                                                                                                                                                  |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percent Operational Time: 97.1 |               |      |
| 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-Apr                                                                                                                                                            | 15                            | 15 | 14 | 14 | 14 | 13 | 11 | 11 | 9  | 10 | 11 | 11 | 13 | 15 | 19 | 22 | 26 | 28 | 30 | 32 | 33 | 33 | 33 | 33                             | 33            | 33.4 |
| 2-Apr                                                                                                                                                            | 33                            | 34 | 34 | 33 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 26 | 27 | 27 | 27 | 28 | 29 | 29 | 29 | 29 | 29 | 29 | 29 | 29                             | 29            | 33.7 |
| 3-Apr                                                                                                                                                            | 27                            | 27 | 26 | 25 | 24 | 24 | 22 | 21 | 21 | 21 | 20 | 19 | 19 | 19 | 20 | 21 | 21 | 22 | 22 | 23 | 24 | 24 | 25 | 23                             | 27.4          |      |
| 4-Apr                                                                                                                                                            | 21                            | 19 | 17 | 16 | 17 | 16 | 15 | 15 | 16 | 18 | 19 | 20 | 20 | 21 | 23 | 25 | 26 | 27 | 28 | 28 | 28 | 27 | 26 | 25                             | 28.2          |      |
| 5-Apr                                                                                                                                                            | 24                            | 21 | 18 | 16 | 13 | 11 | 8  | 7  | 7  | 9  | 11 | 14 | 18 | 21 | 24 | 26 | 27 | 27 | 27 | 26 | 25 | 23 | 22 | 21                             | 27.3          |      |
| 6-Apr                                                                                                                                                            | 19                            | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 27 | 27 | 27 | 27 | 28                             | 27.5          |      |
| 7-Apr                                                                                                                                                            | 28                            | 28 | 26 | 25 | 23 | 20 | 18 | 15 | 13 | 12 | 12 | 13 | 14 | 16 | 17 | 18 | 20 | 20 | 20 | 18 | 15 | 12 | 10 | 8                              | 27.8          |      |
| 8-Apr                                                                                                                                                            | 9                             | 9  | 9  | 10 | 11 | 11 | 11 | 11 | 10 | 8  | 7  | 8  | 10 | 14 | 18 | 20 | 24 | 28 | 31 | 32 | 32 | 32 | 31 | 31                             | 32.4          |      |
| 9-Apr                                                                                                                                                            | 30                            | 30 | 30 | 30 | 30 | 29 | 29 | 28 | 27 | 26 | 25 | 23 | 23 | 22 | N  | N  | N  | N  | N  | N  | 21 | 22 | 23 | 24                             | 30.5          |      |
| 10-Apr                                                                                                                                                           | 24                            | 25 | 25 | 25 | 25 | 24 | 22 | 20 | 18 | 16 | 15 | 14 | 12 | N  | N  | N  | N  | N  | N  | 43 | 42 | 41 | 40 | 39                             | 42.8          |      |
| 11-Apr                                                                                                                                                           | 39                            | 38 | 38 | 37 | 36 | 35 | 33 | 32 | 31 | 30 | 30 | 30 | 30 | 32 | 34 | 34 | 35 | 35 | 36 | 36 | 36 | 36 | 36 | 36                             | 39.0          |      |
| 12-Apr                                                                                                                                                           | 36                            | 36 | 36 | 35 | 34 | 32 | 31 | 30 | 30 | 30 | 30 | 30 | 32 | 35 | 38 | 40 | 42 | 43 | 44 | 44 | 43 | 38 | 35 | 34                             | 44.4          |      |
| 13-Apr                                                                                                                                                           | 32                            | 30 | 28 | 26 | 25 | 27 | 27 | 27 | 26 | 27 | 26 | 27 | 29 | 32 | 34 | 36 | 38 | 40 | 40 | 40 | 40 | 40 | 39 | 37                             | 40.4          |      |
| 14-Apr                                                                                                                                                           | 34                            | 32 | 28 | 25 | 22 | 19 | 16 | 14 | 13 | 12 | 14 | 18 | 22 | 27 | 33 | 38 | 45 | 45 | 48 | 48 | 46 | 40 | 35 | 30                             | 48.0          |      |
| 15-Apr                                                                                                                                                           | 26                            | 23 | 20 | 18 | 19 | 23 | 26 | 29 | 30 | 32 | 34 | 36 | 37 | 38 | 39 | 40 | 40 | 41 | 41 | 42 | 41 | 40 | 39 | 38                             | 41.6          |      |
| 16-Apr                                                                                                                                                           | 38                            | 36 | 35 | 33 | 32 | 33 | 32 | 31 | 31 | 31 | 32 | 34 | 36 | 37 | 39 | 40 | 41 | 43 | 44 | 44 | 44 | 44 | 44 | 44                             | 44.5          |      |
| 17-Apr                                                                                                                                                           | 43                            | 43 | 42 | 40 | 39 | 37 | 36 | 35 | 34 | N  | N  | N  | N  | N  | N  | N  | N  | 44 | 44 | 42 | 40 | 37 | 34 | 31                             | 44.4          |      |
| 18-Apr                                                                                                                                                           | 28                            | 26 | 24 | 23 | 22 | 23 | 23 | 23 | 23 | 23 | 23 | 24 | 24 | 25 | 26 | 28 | 30 | 32 | 34 | 34 | 34 | 34 | 33 | 32                             | 34.3          |      |
| 19-Apr                                                                                                                                                           | 31                            | 29 | 28 | 28 | 27 | 28 | 29 | 31 | 33 | 34 | 37 | 39 | 40 | 42 | 45 | 47 | 48 | 49 | 49 | 49 | 48 | 47 | 47 | 46                             | 49.0          |      |
| 20-Apr                                                                                                                                                           | 44                            | 42 | 40 | 39 | 38 | 37 | 35 | 34 | 34 | 36 | 38 | 39 | 40 | 41 | 43 | 45 | 47 | 48 | 49 | 49 | 48 | 45 | 42 | 39                             | 49.1          |      |
| 21-Apr                                                                                                                                                           | 35                            | 30 | 27 | 21 | 15 | 12 | 11 | 7  | 5  | 7  | 11 | 16 | 21 | 27 | 32 | 38 | 43 | 46 | 48 | 48 | 48 | 47 | 46 | 45                             | 48.1          |      |
| 22-Apr                                                                                                                                                           | 43                            | 42 | 41 | 40 | 40 | 39 | 37 | 36 | 36 | 37 | 37 | 38 | 39 | 40 | 43 | 44 | 45 | 46 | 46 | 46 | 45 | 45 | 43 | 43                             | 46.2          |      |
| 23-Apr                                                                                                                                                           | 42                            | 41 | 39 | 38 | 37 | 36 | 35 | 34 | 33 | 32 | 31 | 31 | 31 | 30 | 30 | 30 | 31 | 31 | 32 | 32 | 32 | 32 | 32 | 32                             | 42.2          |      |
| 24-Apr                                                                                                                                                           | 31                            | 30 | 29 | 28 | 27 | 26 | 25 | 26 | 26 | 26 | 27 | 28 | 29 | 30 | 32 | 32 | 33 | 33 | 33 | 33 | 32 | 31 | 30 | 28                             | 33.4          |      |
| 25-Apr                                                                                                                                                           | 26                            | 24 | 22 | 21 | 18 | 17 | 16 | 15 | 15 | 16 | 17 | 18 | 20 | 22 | 24 | 27 | 28 | 29 | 29 | 29 | 29 | 29 | 28 | 27                             | 29.4          |      |
| 26-Apr                                                                                                                                                           | 25                            | 23 | 20 | 19 | 17 | 17 | 16 | 16 | 16 | 17 | 17 | 18 | 19 | 21 | 23 | 25 | 27 | 29 | 32 | 33 | 35 | 35 | 35 | 34                             | 35.0          |      |
| 27-Apr                                                                                                                                                           | 33                            | 31 | 29 | 27 | 26 | 24 | 22 | 20 | 19 | 19 | 19 | 20 | 22 | 24 | 27 | 30 | 33 | 36 | 39 | 40 | 41 | 41 | 42 | 42                             | 41.9          |      |
| 28-Apr                                                                                                                                                           | 40                            | 38 | 36 | 35 | 35 | 34 | 33 | 32 | 32 | 33 | 34 | 36 | 37 | 38 | 40 | 41 | 41 | 42 | 42 | 41 | 40 | 39 | 38 | 37                             | 41.9          |      |
| 29-Apr                                                                                                                                                           | 35                            | 33 | 33 | 31 | 30 | 28 | 26 | 23 | 23 | 22 | 23 | 25 | 28 | 31 | 35 | 39 | 42 | 44 | 45 | 45 | 43 | 40 | 36 | 31                             | 45.2          |      |
| 30-Apr                                                                                                                                                           | 25                            | 22 | 16 | 11 | 7  | 5  | 3  | 2  | 1  | N  | N  | N  | N  | N  | N  | N  | N  | N  | N  | N  | N  | N  | N  | N                              | 24.8          |      |
| 44.2 42.5 41.6 40.4 40.1 38.9 36.8 35.7 36.0 36.6 37.7 38.7 40.0 42.2 44.5 46.6 47.8 48.5 49.1 49.0 48.3 47.1 46.8 45.5                                          |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                |               |      |
| Diurnal Maximums                                                                                                                                                 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                |               |      |
| N - Not Valid                                                                                                                                                    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                |               |      |

## Span Responses

Ozone (O<sub>3</sub>)  
Henry Pirker - April 2014



# Hourly Averages

Carbon Monoxide (CO) - ppm

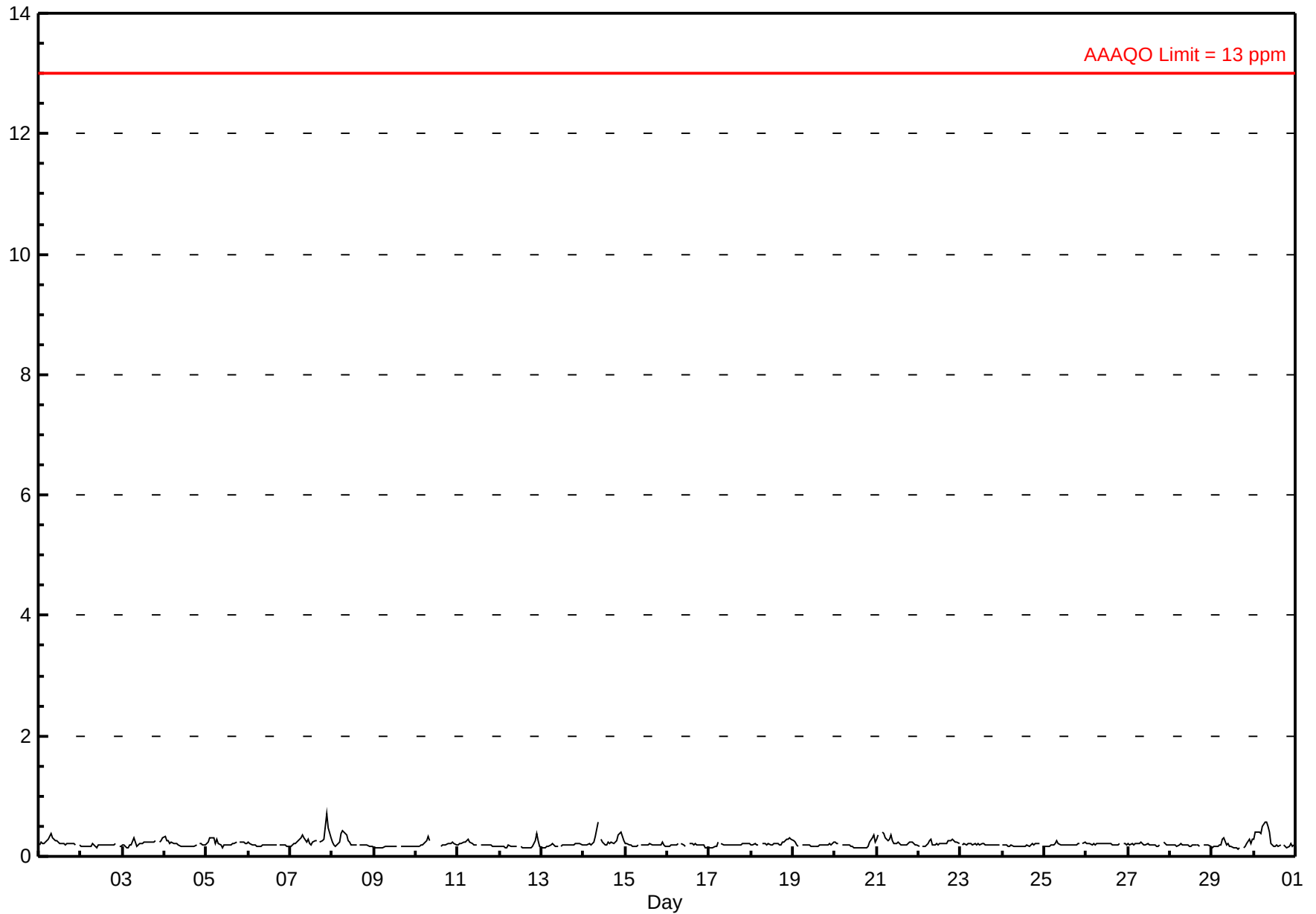
Henry Pirker - April 2014

|                                                                                                                                    |                               |     |     |     |     |     |     |     |     |                                                                                                                                                                                                                                                               |     |     |     |     |     |     |     |     |     |     |                                                                                                                                        |     |     |                 |               |               |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----------------|---------------|---------------|
| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 0.71 ppm on Apr 7 22:00 Maximum Daily Average: 0.29 ppm on Apr 7 |                               |     |     |     |     |     |     |     |     |                                                                                                                                                                                                                                                               |     |     |     |     |     |     |     |     |     |     | Hours in Service: 720<br>Hours of Data: 683<br>Hours of Missing Data: 37<br>Hours of Calibration: 35<br>Percent Operational Time: 99.7 |     |     |                 |               |               |
| Minimum Value: 0.1 ppm on Apr 29 16:00<br>Maximum Diurnal Average: 0.25 ppm at hour 8<br>Monthly Average: 0.209 ppm                |                               |     |     |     |     |     |     |     |     | Minimum Daily Average: 0.16 ppm on Apr 9<br>Minimum Diurnal Average: 0.19 ppm at hour 13<br>Percentiles: P <sub>1</sub> = 0.15 P <sub>10</sub> = 0.16 Q <sub>1</sub> = 0.18 Median = 0.20 Q <sub>3</sub> = 0.22 P <sub>90</sub> = 0.27 P <sub>99</sub> = 0.49 |     |     |     |     |     |     |     |     |     |     |                                                                                                                                        |     |     |                 |               |               |
| 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-Apr                                                                                                                              | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 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 | A   | 0.2             | 0.24          | 0.39          |
| 2-Apr                                                                                                                              | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                    | A   | 0.2 | 0.2             | 0.18          | 0.21          |
| 3-Apr                                                                                                                              | 0.2                           | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | A                                                                                                                                      | 0.2 | 0.3 | 0.3             | 0.22          | 0.31          |
| 4-Apr                                                                                                                              | 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 | 0.2 | A   | 0.2                                                                                                                                    | 0.2 | 0.2 | 0.2             | 0.20          | 0.33          |
| 5-Apr                                                                                                                              | 0.2                           | 0.2 | 0.3 | 0.3 | 0.3 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A   | 0.2 | 0.2                                                                                                                                    | 0.2 | 0.2 | 0.2             | 0.23          | 0.32          |
| 6-Apr                                                                                                                              | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A   | 0.2 | 0.2 | 0.2                                                                                                                                    | 0.2 | 0.2 | 0.2             | 0.19          | 0.24          |
| 7-Apr                                                                                                                              | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.3 | 0.2                                                                                                                                                                                                                                                           | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | A   | 0.2 | 0.3 | 0.3 | 0.5                                                                                                                                    | 0.7 | 0.5 | 0.3             | 0.29          | 0.71          |
| 8-Apr                                                                                                                              | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A   | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                    | 0.2 | 0.2 | 0.2             | 0.23          | 0.42          |
| 9-Apr                                                                                                                              | 0.1                           | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | A   | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                    | 0.2 | 0.2 | 0.2             | 0.16          | 0.17          |
| 10-Apr                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | C                                                                                                                                                                                                                                                             | C   | C   | C   | A   | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                    | 0.2 | 0.2 | 0.2             | 0.21          | 0.33          |
| 11-Apr                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | A   | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                    | 0.2 | 0.2 | 0.2             | 0.20          | 0.29          |
| 12-Apr                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | A   | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3                                                                                                                                    | 0.4 | 0.3 | 0.2             | 0.18          | 0.39          |
| 13-Apr                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                                                                                                                                           | A   | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                    | 0.2 | 0.2 | 0.2             | 0.18          | 0.22          |
| 14-Apr                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.6 | A                                                                                                                                                                                                                                                             | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3                                                                                                                                    | 0.4 | 0.3 | 0.3             | 0.26          | 0.57          |
| 15-Apr                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A   | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                    | 0.2 | 0.2 | 0.2             | 0.19          | 0.23          |
| 16-Apr                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A   | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | M   | M   | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                    | 0.2 | 0.2 | 0.2             | 0.19          | 0.22          |
| 17-Apr                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A   | 0.2 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                    | 0.2 | 0.2 | 0.2             | 0.19          | 0.24          |
| 18-Apr                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | A   | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3                                                                                                                                    | 0.3 | 0.3 | 0.3             | 0.22          | 0.30          |
| 19-Apr                                                                                                                             | 0.3                           | 0.2 | 0.2 | 0.2 | A   | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                    | 0.2 | 0.2 | 0.2             | 0.19          | 0.27          |
| 20-Apr                                                                                                                             | 0.2                           | 0.2 | 0.2 | A   | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                    | 0.3 | 0.4 | 0.2             | 0.19          | 0.35          |
| 21-Apr                                                                                                                             | 0.3                           | 0.3 | A   | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.4 | 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             | 0.25          | 0.40          |
| 22-Apr                                                                                                                             | 0.2                           | A   | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3                                                                                                                                    | 0.2 | 0.2 | 0.2             | 0.22          | 0.28          |
| 23-Apr                                                                                                                             | A                             | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                    | 0.2 | 0.2 | A               | 0.20          | 0.22          |
| 24-Apr                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 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          |
| 25-Apr                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                    | A   | 0.2 | 0.2             | 0.20          | 0.26          |
| 26-Apr                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A                                                                                                                                      | 0.2 | 0.2 | 0.2             | 0.21          | 0.22          |
| 27-Apr                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A   | 0.2                                                                                                                                    | 0.2 | 0.2 | 0.2             | 0.20          | 0.24          |
| 28-Apr                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A   | 0.2 | 0.2                                                                                                                                    | 0.2 | 0.2 | 0.2             | 0.19          | 0.20          |
| 29-Apr                                                                                                                             | 0.1                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 | 0.2                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | A   | 0.2 | 0.2 | 0.2                                                                                                                                    | 0.3 | 0.2 | 0.3             | 0.19          | 0.30          |
| 30-Apr                                                                                                                             | 0.3                           | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.6 | 0.6 | 0.5 | 0.4                                                                                                                                                                                                                                                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A   | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                    | 0.2 | 0.2 | 0.2             | 0.29          | 0.57          |
| 0.20 0.21 0.20 0.20 0.21 0.22 0.25 0.25 0.23 0.20 0.20 0.19 0.19 0.19 0.19 0.19 0.19 0.19 0.20 0.21 0.23 0.25 0.22 0.21            |                               |     |     |     |     |     |     |     |     |                                                                                                                                                                                                                                                               |     |     |     |     |     |     |     |     |     |     |                                                                                                                                        |     |     | Diurnal Average |               |               |
| 0.33 0.41 0.40 0.40 0.39 0.49 0.57 0.57 0.57 0.41 0.29 0.25 0.23 0.24 0.26 0.26 0.24 0.26 0.27 0.28 0.51 0.71 0.48 0.31            |                               |     |     |     |     |     |     |     |     |                                                                                                                                                                                                                                                               |     |     |     |     |     |     |     |     |     |     |                                                                                                                                        |     |     | Diurnal Maximum |               |               |
| C - Calibration M - Maintenance 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 - April 2014



## Hourly Maximums

Carbon Monoxide (CO) - ppm

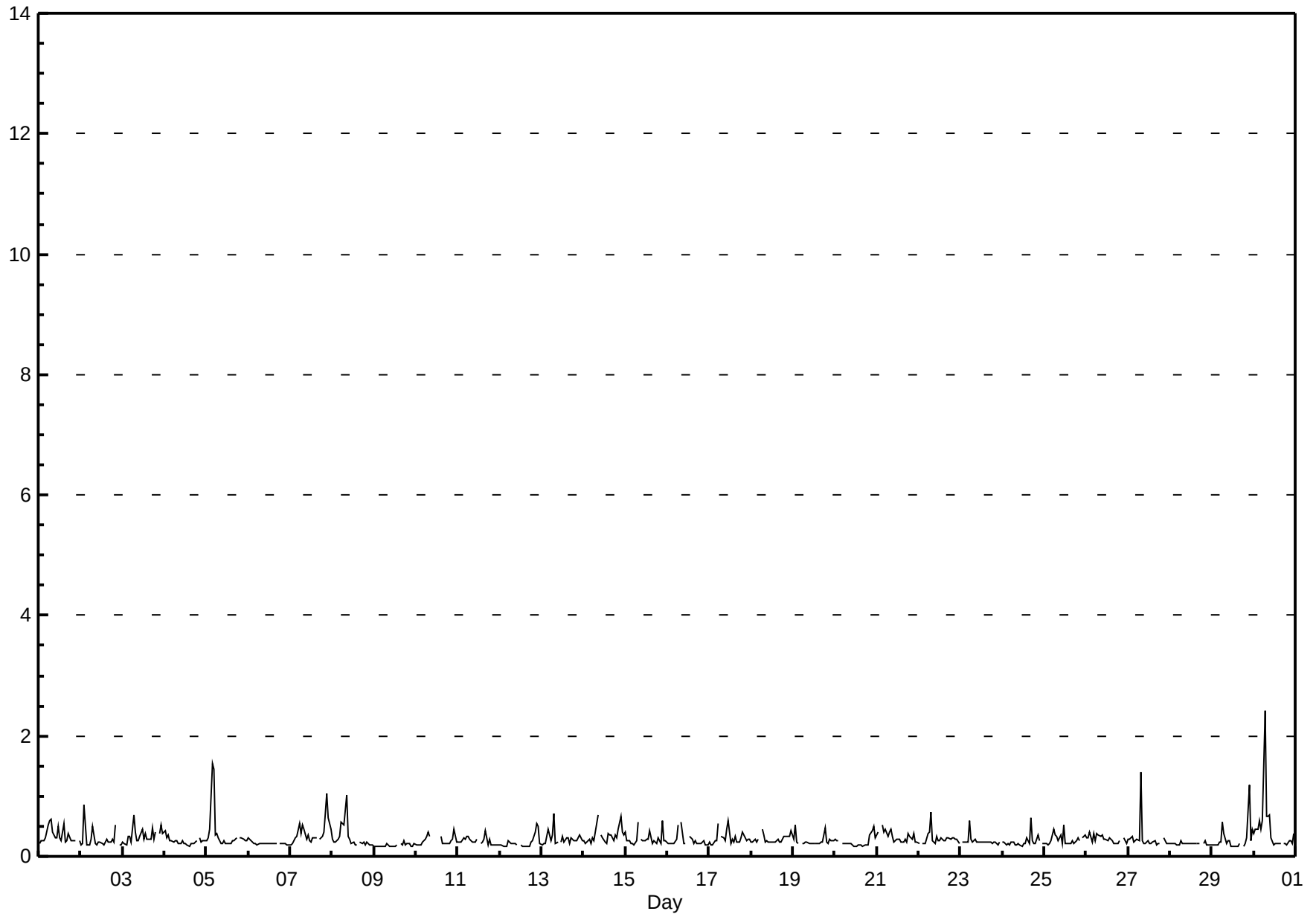
Henry Pirker - April 2014

| Maximum Value: 2.43 ppm on Apr 30 07:00                                                                                 |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Maximum Daily Average: 0.45 ppm on Apr 30                                                                                                                         |     |     |                 | Hours in Service: 720     |               |      |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----------------|---------------------------|---------------|------|
| Minimum Value: 0.2 ppm on Apr 29 19:00                                                                                  |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Minimum Daily Average: 0.19 ppm on Apr 9                                                                                                                          |     |     |                 | Hours of Data: 683        |               |      |
| Maximum Diurnal Average: 0.42 ppm at hour 8                                                                             |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Minimum Diurnal Average: 0.23 ppm at hour 13                                                                                                                      |     |     |                 | Hours of Missing Data: 37 |               |      |
| Monthly Average: 0.288 ppm                                                                                              |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Percentiles: P <sub>1</sub> = 0.16 P <sub>10</sub> = 0.19 Q <sub>1</sub> = 0.21 Median = 0.25 Q <sub>3</sub> = 0.30 P <sub>90</sub> = 0.43 P <sub>99</sub> = 1.03 |     |     |                 | Hours of Calibration: 35  |               |      |
|                                                                                                                         |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 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-Apr                                                                                                                   | 0.2                           | 0.3 | 0.3 | 0.3 | 0.3 | 0.5 | 0.6 | 0.6 | 0.4 | 0.3 | 0.3 | 0.5 | 0.3 | 0.3 | 0.5 | 0.2 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3                                                                                                                                                               | 0.3 | A   | 0.2             | 0.34                      | 0.62          |      |
| 2-Apr                                                                                                                   | 0.2                           | 0.2 | 0.9 | 0.2 | 0.2 | 0.2 | 0.3 | 0.5 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.3 | 0.2 | 0.5                                                                                                                                                               | A   | 0.2 | 0.2             | 0.28                      | 0.86          |      |
| 3-Apr                                                                                                                   | 0.2                           | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 | 0.7 | 0.4 | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.5 | 0.3 | 0.4 | A                                                                                                                                                                 | 0.4 | 0.5 | 0.4             | 0.34                      | 0.69          |      |
| 4-Apr                                                                                                                   | 0.4                           | 0.3 | 0.4 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | A   | 0.3                                                                                                                                                               | 0.2 | 0.3 | 0.3             | 0.25                      | 0.42          |      |
| 5-Apr                                                                                                                   | 0.3                           | 0.3 | 0.5 | 1.5 | 1.4 | 0.3 | 0.4 | 0.3 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | A   | 0.3 | 0.3                                                                                                                                                               | 0.3 | 0.3 | 0.3             | 0.38                      | 1.53          |      |
| 6-Apr                                                                                                                   | 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 | A   | 0.2 | 0.2 | 0.2                                                                                                                                                               | 0.2 | 0.2 | 0.2             | 0.21                      | 0.30          |      |
| 7-Apr                                                                                                                   | 0.2                           | 0.2 | 0.3 | 0.3 | 0.3 | 0.5 | 0.4 | 0.5 | 0.4 | 0.3 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 | A   | 0.3 | 0.3 | 0.4 | 0.7                                                                                                                                                               | 1.0 | 0.6 | 0.5             | 0.40                      | 1.04          |      |
| 8-Apr                                                                                                                   | 0.3                           | 0.2 | 0.2 | 0.3 | 0.3 | 0.6 | 0.5 | 0.5 | 1.0 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | A   | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                                               | 0.2 | 0.2 | 0.2             | 0.31                      | 1.03          |      |
| 9-Apr                                                                                                                   | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A   | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2                                                                                                                                                               | 0.2 | 0.2 | 0.2             | 0.19                      | 0.27          |      |
| 10-Apr                                                                                                                  | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.3 | C   | C   | C   | C   | A   | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3                                                                                                                                                               | 0.3 | 0.4 | 0.2             | 0.26                      | 0.44          |      |
| 11-Apr                                                                                                                  | 0.2                           | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | A   | 0.2 | 0.2 | 0.3 | 0.4 | 0.2 | 0.3 | 0.2 | 0.2                                                                                                                                                               | 0.2 | 0.2 | 0.2             | 0.25                      | 0.42          |      |
| 12-Apr                                                                                                                  | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A   | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.4                                                                                                                                                               | 0.5 | 0.5 | 0.2             | 0.23                      | 0.54          |      |
| 13-Apr                                                                                                                  | 0.2                           | 0.2 | 0.2 | 0.3 | 0.5 | 0.3 | 0.4 | 0.7 | 0.2 | 0.2 | A   | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3                                                                                                                                                               | 0.3 | 0.3 | 0.2             | 0.29                      | 0.70          |      |
| 14-Apr                                                                                                                  | 0.2                           | 0.2 | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 | 0.4 | 0.7 | A   | 0.4 | 0.3 | 0.2 | 0.2 | 0.4 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.5                                                                                                                                                               | 0.7 | 0.4 | 0.3             | 0.34                      | 0.70          |      |
| 15-Apr                                                                                                                  | 0.4                           | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.6 | A   | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 | 0.4 | 0.2 | 0.3 | 0.2 | 0.2 | 0.3 | 0.2                                                                                                                                                               | 0.6 | 0.3 | 0.3             | 0.29                      | 0.58          |      |
| 16-Apr                                                                                                                  | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.5 | A   | 0.6 | 0.2 | 0.2 | M   | M   | 0.3 | 0.3 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                                               | 0.2 | 0.2 | 0.2             | 0.26                      | 0.57          |      |
| 17-Apr                                                                                                                  | 0.2                           | 0.2 | 0.2 | 0.2 | 0.3 | 0.6 | A   | 0.3 | 0.3 | 0.3 | 0.5 | 0.6 | 0.2 | 0.3 | 0.2 | 0.3 | 0.2 | 0.2 | 0.3 | 0.4 | 0.4                                                                                                                                                               | 0.3 | 0.3 | 0.3             | 0.31                      | 0.60          |      |
| 18-Apr                                                                                                                  | 0.2                           | 0.2 | 0.3 | 0.2 | 0.3 | A   | 0.4 | 0.4 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3                                                                                                                                                               | 0.3 | 0.4 | 0.29            | 0.44                      |               |      |
| 19-Apr                                                                                                                  | 0.3                           | 0.5 | 0.2 | 0.2 | A   | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.5 | 0.2 | 0.2                                                                                                                                                               | 0.3 | 0.3 | 0.3             | 0.26                      | 0.53          |      |
| 20-Apr                                                                                                                  | 0.3                           | 0.3 | 0.3 | 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 | 0.3                                                                                                                                                               | 0.4 | 0.5 | 0.3             | 0.24                      | 0.50          |      |
| 21-Apr                                                                                                                  | 0.3                           | 0.4 | A   | 0.5 | 0.4 | 0.4 | 0.3 | 0.4 | 0.4 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.2 | 0.4 | 0.3 | 0.3                                                                                                                                                               | 0.4 | 0.2 | 0.2             | 0.33                      | 0.52          |      |
| 22-Apr                                                                                                                  | 0.2                           | A   | 0.2 | 0.2 | 0.2 | 0.4 | 0.4 | 0.7 | 0.3 | 0.2 | 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 | 0.2             | 0.30                      | 0.74          |      |
| 23-Apr                                                                                                                  | A                             | 0.2 | 0.2 | 0.2 | 0.2 | 0.6 | 0.3 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                                               | 0.2 | 0.2 | A               | 0.25                      | 0.59          |      |
| 24-Apr                                                                                                                  | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.6 | 0.3 | 0.2 | 0.2 | 0.4                                                                                                                                                               | 0.3 | A   | 0.2             | 0.24                      | 0.63          |      |
| 25-Apr                                                                                                                  | 0.2                           | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 | 0.4 | 0.3 | 0.3 | 0.4 | 0.2 | 0.5 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3                                                                                                                                                               | A   | 0.3 | 0.3             | 0.27                      | 0.52          |      |
| 26-Apr                                                                                                                  | 0.3                           | 0.3 | 0.4 | 0.2 | 0.4 | 0.3 | 0.4 | 0.4 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | A                                                                                                                                                                 | 0.3 | 0.3 | 0.2             | 0.29                      | 0.40          |      |
| 27-Apr                                                                                                                  | 0.3                           | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 | 1.4 | 0.3 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | A   | 0.3                                                                                                                                                               | 0.3 | 0.2 | 0.2             | 0.29                      | 1.40          |      |
| 28-Apr                                                                                                                  | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A   | 0.2                                                                                                                                                               | 0.2 | 0.2 | 0.2             | 0.21                      | 0.25          |      |
| 29-Apr                                                                                                                  | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.6 | 0.4 | 0.2 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A   | 0.2 | 0.2                                                                                                                                                               | 0.3 | 1.2 | 0.3             | 0.5                       | 0.28          | 1.17 |
| 30-Apr                                                                                                                  | 0.4                           | 0.5 | 0.5 | 0.6 | 0.5 | 0.6 | 2.4 | 0.7 | 0.7 | 0.7 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A   | 0.2 | 0.2 | 0.2                                                                                                                                                               | 0.3 | 0.2 | 0.4             | 0.45                      | 2.43          |      |
| 0.25 0.26 0.27 0.30 0.31 0.33 0.42 0.42 0.33 0.26 0.26 0.27 0.23 0.24 0.26 0.24 0.26 0.25 0.26 0.26 0.31 0.36 0.30 0.27 |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                   |     |     | Diurnal Average |                           |               |      |
| 0.42 0.53 0.86 1.53 1.45 0.60 2.43 1.40 1.03 0.70 0.46 0.60 0.32 0.38 0.54 0.35 0.63 0.48 0.48 0.41 0.71 1.17 0.65 0.46 |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                   |     |     | Diurnal Maximum |                           |               |      |
| C - Calibration M - Maintenance A - Automated Daily Zero Span                                                           |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                   |     |     |                 |                           |               |      |

## Hourly Maximums

Carbon Monoxide (CO) - ppm

Henry Pirker - April 2014

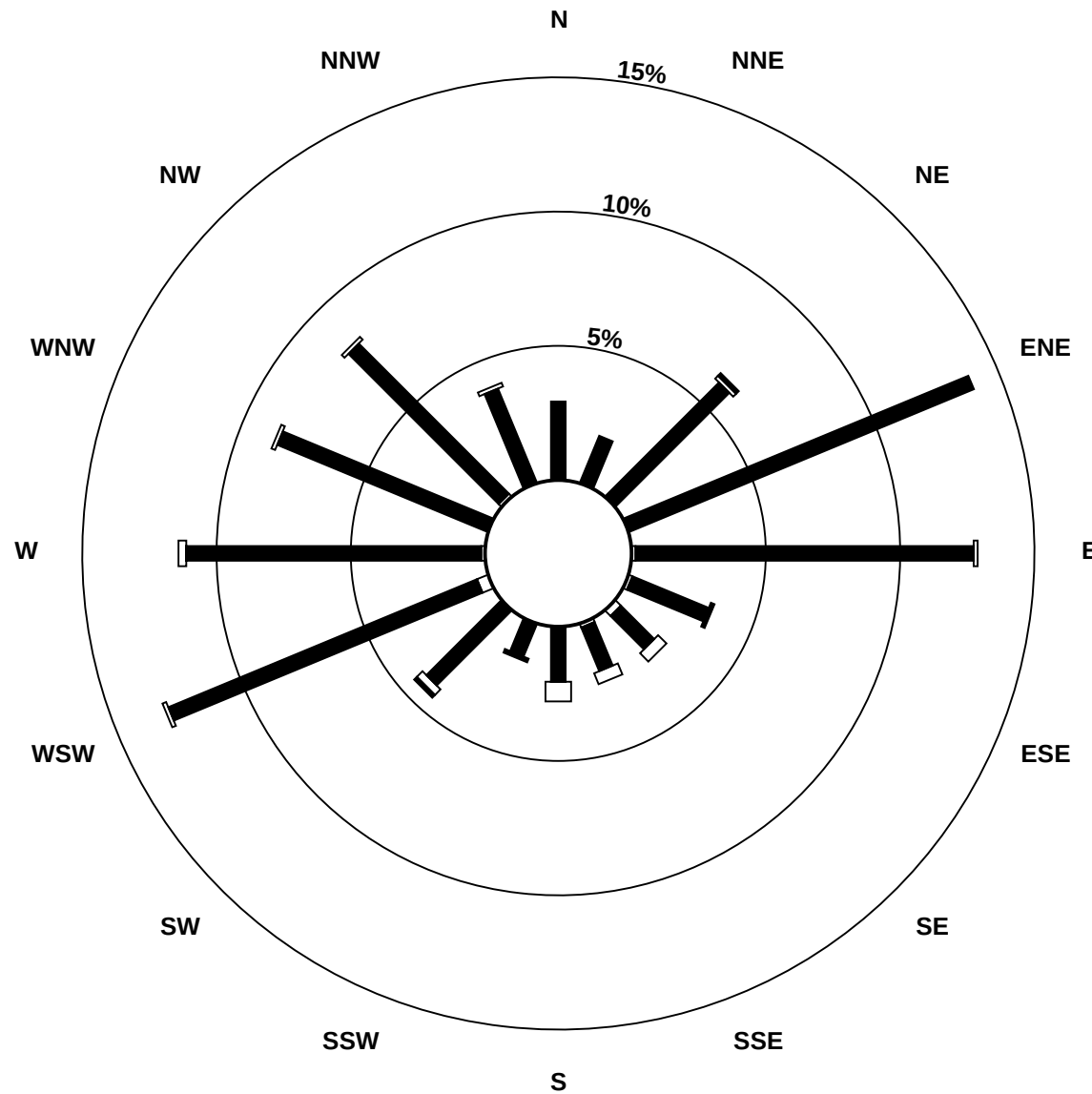




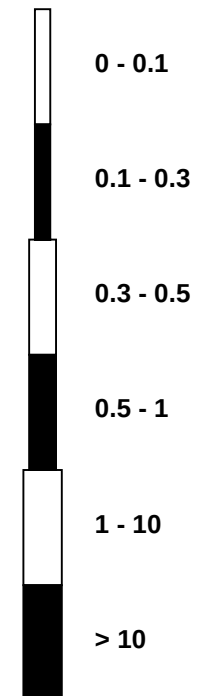
## Pollutant Rose

Carbon Monoxide (CO) - ppm

Henry Pirker - April 2014



## Pollutant Classes (ppm)



## Eight Hour Running Averages

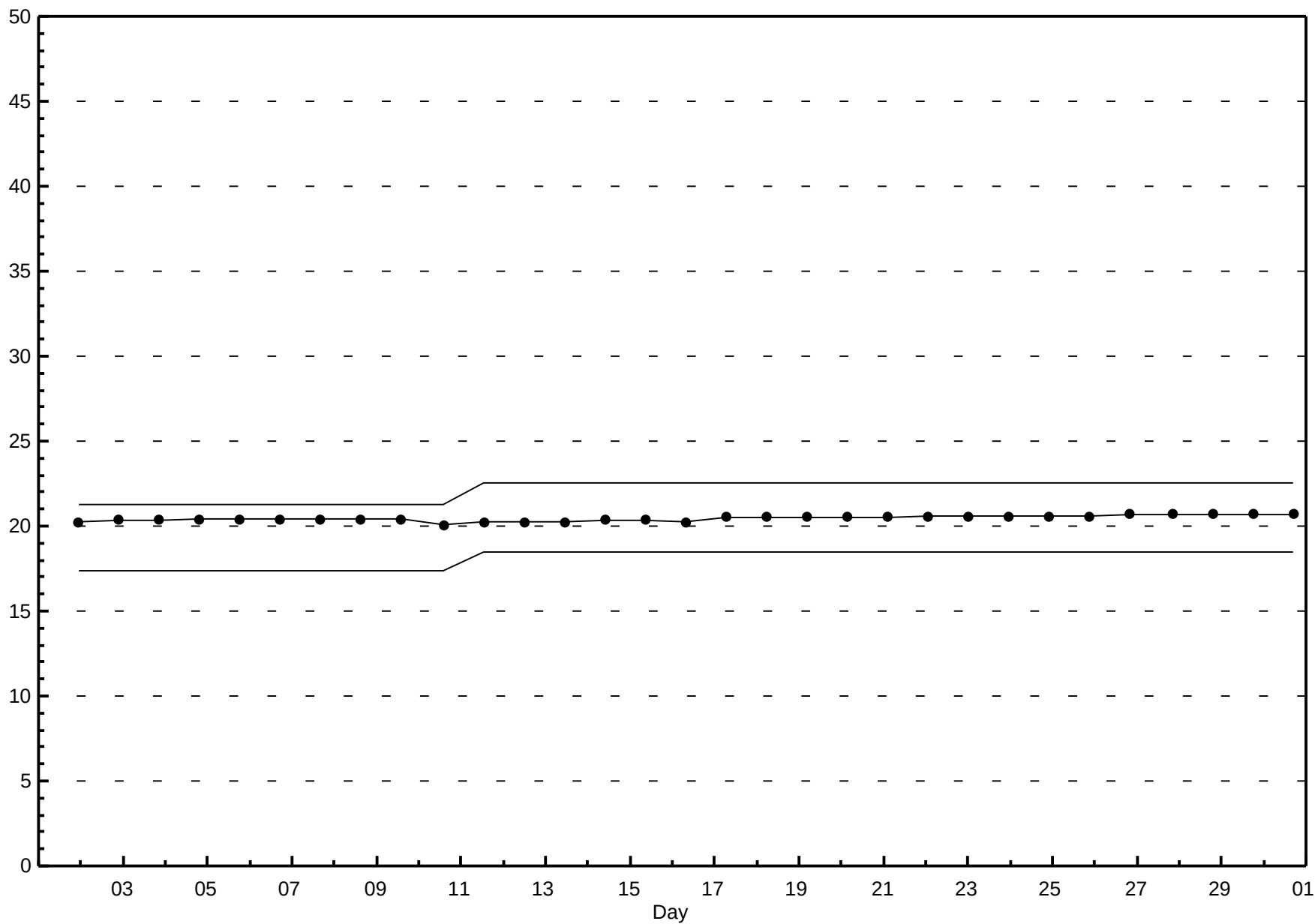
Carbon Monoxide (CO) - ppm

Henry Pirker - April 2014

| Number of Exceedences (AAAQO): 8-hr: 0<br>Maximum Value: 0.46 ppm on Apr 30 09:00                                                                                 |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Hours in Service: 720<br>Hours of Data: 709<br>Hours of Missing Data: 11<br>Hours of Calibration: 11<br>Percent Operational Time: 100.0 |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Minimum Value: 0.14 ppm on Apr 29 19:00                                                                                                                           |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                         |               |
| Percentiles: P <sub>1</sub> = 0.15 P <sub>10</sub> = 0.17 Q <sub>1</sub> = 0.18 Median = 0.20 Q <sub>3</sub> = 0.22 P <sub>90</sub> = 0.27 P <sub>99</sub> = 0.39 |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                         |               |
| 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-Apr                                                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.29          |
| 2-Apr                                                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 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-Apr                                                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3                                                                                                                                     | 0.26          |
| 4-Apr                                                                                                                                                             | 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 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.28          |
| 5-Apr                                                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.26          |
| 6-Apr                                                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.23          |
| 7-Apr                                                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 | 0.4 | 0.4                                                                                                                                     | 0.40          |
| 8-Apr                                                                                                                                                             | 0.4                           | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.38          |
| 9-Apr                                                                                                                                                             | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.17          |
| 10-Apr                                                                                                                                                            | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | N   | N   | N   | N   | N   | N   | N   | N   | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.24          |
| 11-Apr                                                                                                                                                            | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.24          |
| 12-Apr                                                                                                                                                            | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.21          |
| 13-Apr                                                                                                                                                            | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.21          |
| 14-Apr                                                                                                                                                            | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3                                                                                                                                     | 0.30          |
| 15-Apr                                                                                                                                                            | 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 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.29          |
| 16-Apr                                                                                                                                                            | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | N   | N   | N   | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.20          |
| 17-Apr                                                                                                                                                            | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.21          |
| 18-Apr                                                                                                                                                            | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3                                                                                                                                     | 0.26          |
| 19-Apr                                                                                                                                                            | 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 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.27          |
| 20-Apr                                                                                                                                                            | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.22          |
| 21-Apr                                                                                                                                                            | 0.2                           | 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 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.33          |
| 22-Apr                                                                                                                                                            | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.25          |
| 23-Apr                                                                                                                                                            | 0.3                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.25          |
| 24-Apr                                                                                                                                                            | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.20          |
| 25-Apr                                                                                                                                                            | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.21          |
| 26-Apr                                                                                                                                                            | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.22          |
| 27-Apr                                                                                                                                                            | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.21          |
| 28-Apr                                                                                                                                                            | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.20          |
| 29-Apr                                                                                                                                                            | 0.2                           | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 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 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.21          |
| 30-Apr                                                                                                                                                            | 0.2                           | 0.2 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2                                                                                                                                     | 0.46          |
| 0.38 0.37 0.36 0.35 0.33 0.36 0.40 0.44 0.46 0.46 0.44 0.41 0.38 0.35 0.30 0.28 0.24 0.24 0.24 0.24 0.25 0.29 0.36 0.39 0.40                                      |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                         |               |
| Diurnal Maximums                                                                                                                                                  |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                         |               |
| N - Not Valid                                                                                                                                                     |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                         |               |
| Alberta Ambient Air Quality Objectives (AAAQO): 8-hr 5 ppm                                                                                                        |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                         |               |

## Span Responses

Carbon Monoxide (CO)  
Henry Pirker - April 2014



# Hourly Averages

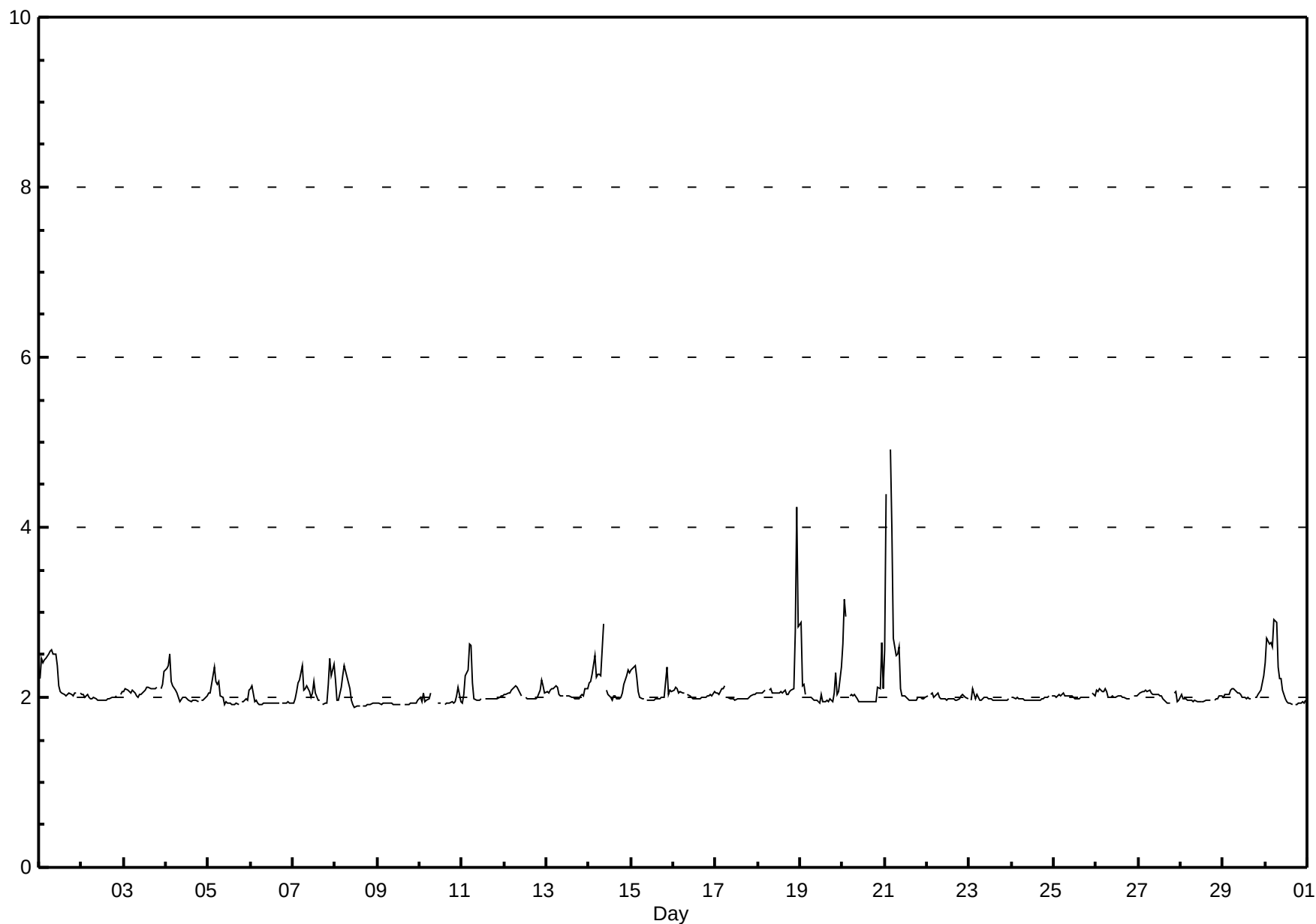
Total Hydrocarbons (THC) - ppm

Henry Pirker - April 2014

| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 4.91 ppm on Apr 21 04:00 Maximum Daily Average: 2.44 ppm on Apr 21                                                                                                                                                                                                                                       |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Hours in Service: 720           |     |     |     |                 |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------------------------|-----|-----|-----|-----------------|---------------|
| Minimum Value: 1.9 ppm on Apr 8 12:00 Minimum Daily Average: 1.93 ppm on Apr 9<br>Maximum Diurnal Average: 2.22 ppm at hour 4 Minimum Diurnal Average: 1.97 ppm at hour 18<br>Monthly Average: 2.066 ppm Percentiles: P <sub>1</sub> = 1.91 P <sub>10</sub> = 1.93 Q <sub>1</sub> = 1.97 Median = 2.00 Q <sub>3</sub> = 2.07 P <sub>90</sub> = 2.23 P <sub>99</sub> = 2.89 |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Hours of Data: 686              |     |     |     |                 |               |
|                                                                                                                                                                                                                                                                                                                                                                            |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Hours of Missing Data: 34       |     |     |     |                 |               |
|                                                                                                                                                                                                                                                                                                                                                                            |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Hours of Calibration: 34        |     |     |     |                 |               |
|                                                                                                                                                                                                                                                                                                                                                                            |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Percent Operational Time: 100.0 |     |     |     |                 |               |
| Day                                                                                                                                                                                                                                                                                                                                                                        | Hourly Period Ending At (MST) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                 |     |     |     | Daily Average   | Daily Maximum |
|                                                                                                                                                                                                                                                                                                                                                                            | 1                             | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21                              | 22  | 23  | 24  |                 |               |
| 1-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.2                           | 2.5 | 2.4 | 2.4 | 2.5 | 2.5 | 2.5 | 2.6 | 2.5 | 2.5 | 2.4 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1                             | 2.1 | A   | 2.1 | 2.24            | 2.56          |
| 2-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.0                           | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 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 | 2.00            | 2.06          |
| 3-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.1                           | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | A                               | 2.1 | 2.2 | 2.3 | 2.09            | 2.30          |
| 4-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.3                           | 2.4 | 2.5 | 2.2 | 2.1 | 2.1 | 2.1 | 2.0 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | A   | 2.0                             | 2.0 | 2.0 | 2.0 | 2.06            | 2.50          |
| 5-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.1                           | 2.1 | 2.2 | 2.3 | 2.2 | 2.1 | 2.2 | 2.0 | 2.0 | 1.9 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 2.0                             | 2.0 | 2.0 | 2.1 | 2.02            | 2.35          |
| 6-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.1                           | 2.1 | 1.9 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9                             | 1.9 | 1.9 | 1.9 | 1.95            | 2.14          |
| 7-Apr                                                                                                                                                                                                                                                                                                                                                                      | 1.9                           | 2.0 | 2.1 | 2.2 | 2.2 | 2.4 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.1 | 2.2 | 2.1 | 2.0 | 2.0 | A   | 1.9 | 1.9 | 1.9 | 2.2                             | 2.5 | 2.2 | 2.4 | 2.10            | 2.46          |
| 8-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.2                           | 2.0 | 2.0 | 2.1 | 2.3 | 2.4 | 2.3 | 2.2 | 2.1 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9 | 1.9 | 1.9                             | 1.9 | 1.9 | 1.9 | 2.01            | 2.37          |
| 9-Apr                                                                                                                                                                                                                                                                                                                                                                      | 1.9                           | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9                             | 1.9 | 1.9 | 2.0 | 1.93            | 1.96          |
| 10-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | C   | C   | C   | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9                             | 2.0 | 2.1 | 2.0 | 1.97            | 2.12          |
| 11-Apr                                                                                                                                                                                                                                                                                                                                                                     | 1.9                           | 2.0 | 2.3 | 2.3 | 2.6 | 2.6 | 2.2 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | 2.0 | 2.0 | 2.0 | 2.08            | 2.63          |
| 12-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1                             | 2.2 | 2.1 | 2.1 | 2.05            | 2.20          |
| 13-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | 2.0 | 2.1 | 2.1 | 2.04            | 2.14          |
| 14-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.2                           | 2.2 | 2.3 | 2.5 | 2.2 | 2.3 | 2.3 | 2.3 | 2.9 | A   | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.1                             | 2.3 | 2.3 | 2.3 | 2.18            | 2.87          |
| 15-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.3                           | 2.3 | 2.4 | 2.2 | 2.1 | 2.0 | 2.0 | 2.0 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.4                             | 2.0 | 2.1 | 2.1 | 2.07            | 2.37          |
| 16-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | 2.0 | 2.0 | 2.1 | 2.03            | 2.12          |
| 17-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 2.1 | 2.0 | 2.1 | 2.1 | 2.1 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | 2.0 | 2.0 | 2.1 | 2.02            | 2.13          |
| 18-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1                             | 2.8 | 4.2 | 2.8 | 2.22            | 4.23          |
| 19-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.9                           | 2.1 | 2.2 | 2.0 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 | 1.9 | 2.0 | 1.9 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.3                             | 2.0 | 2.1 | 2.3 | 2.07            | 2.88          |
| 20-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.6                           | 3.1 | 3.0 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 | 1.9 | 2.0 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1                             | 2.1 | 2.6 | 2.1 | 2.14            | 3.15          |
| 21-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.6                           | 4.4 | A   | 4.9 | 4.0 | 2.7 | 2.5 | 2.5 | 2.6 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | 2.0 | 2.0 | 2.0 | 2.44            | 4.91          |
| 22-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | 2.0 | 2.0 | 2.0 | 2.00            | 2.05          |
| 23-Apr                                                                                                                                                                                                                                                                                                                                                                     | A                             | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | 2.0 | 2.0 | A   | 1.98            | 2.11          |
| 24-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | 2.0 | A   | 2.0 | 1.98            | 2.01          |
| 25-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | A   | 2.0 | 2.0 | 2.01            | 2.05          |
| 26-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 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 | 2.0 | 2.0 | A                               | 2.0 | 2.0 | 2.0 | 2.03            | 2.11          |
| 27-Apr                                                                                                                                                                                                                                                                                                                                                                     | 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 | 1.9 | 1.9 | 1.9 | A   | 2.1 | 2.1                             | 2.0 | 2.0 | 2.0 | 2.02            | 2.09          |
| 28-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | A   | 2.0 | 2.0                             | 2.0 | 2.0 | 2.0 | 1.97            | 2.03          |
| 29-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 2.0 | 2.0 | 2.0 | 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 | A   | 2.0 | 2.0 | 2.0                             | 2.1 | 2.2 | 2.2 | 2.05            | 2.25          |
| 30-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.4                           | 2.7 | 2.6 | 2.6 | 2.6 | 2.9 | 2.9 | 2.4 | 2.2 | 2.2 | 2.1 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9 | 1.9                             | 2.0 | 1.9 | 2.0 | 2.21            | 2.91          |
| 2.15 2.22 2.15 2.22 2.18 2.16 2.12 2.08 2.08 2.02 2.00 1.99 1.99 1.98 1.98 1.98 1.97 1.97 1.98 1.99 2.04 2.07 2.15 2.10                                                                                                                                                                                                                                                    |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                 |     |     |     | Diurnal Average |               |
| 2.88 4.39 2.96 4.91 3.98 2.91 2.87 2.56 2.87 2.51 2.37 2.13 2.19 2.11 2.11 2.10 2.10 2.10 2.10 2.10 2.36 2.78 4.23 2.83                                                                                                                                                                                                                                                    |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                 |     |     |     | Diurnal Maximum |               |
| C - Calibration A - Automated Daily Zero Span                                                                                                                                                                                                                                                                                                                              |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                 |     |     |     |                 |               |

## Hourly Averages

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



## Hourly Maximums

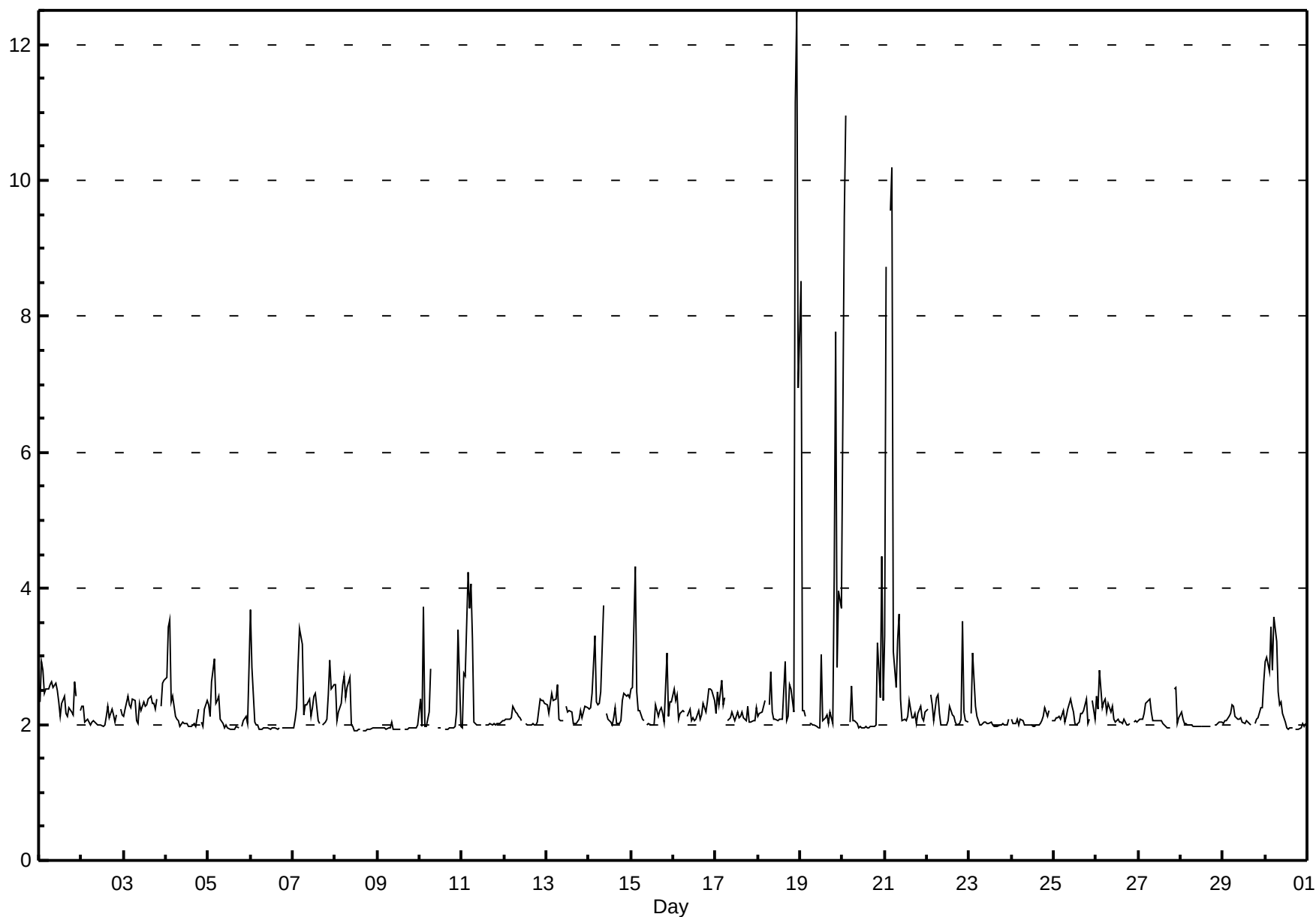
Total Hydrocarbons (THC) - ppm

Henry Pirker - April 2014

| Maximum Value: 12.49 ppm on Apr 18 23:00    |                               |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      | Maximum Daily Average: 3.32 ppm on Apr 21                                                                                                                         |               |               |      |  |  |  |  |  |  |  |  | Hours in Service: 720     |  |
|---------------------------------------------|-------------------------------|-----|------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|------|--|--|--|--|--|--|--|--|---------------------------|--|
| Minimum Value: 1.9 ppm on Apr 8 12:00       |                               |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      | Minimum Daily Average: 1.94 ppm on Apr 9                                                                                                                          |               |               |      |  |  |  |  |  |  |  |  | Hours of Data: 686        |  |
| Maximum Diurnal Average: 2.79 ppm at hour 3 |                               |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      | Minimum Diurnal Average: 2.04 ppm at hour 17                                                                                                                      |               |               |      |  |  |  |  |  |  |  |  | Hours of Missing Data: 34 |  |
| Monthly Average: 2.322 ppm                  |                               |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      | Percentiles: P <sub>1</sub> = 1.92 P <sub>10</sub> = 1.94 Q <sub>1</sub> = 2.00 Median = 2.08 Q <sub>3</sub> = 2.30 P <sub>90</sub> = 2.61 P <sub>99</sub> = 8.46 |               |               |      |  |  |  |  |  |  |  |  | Hours of Calibration: 34  |  |
|                                             |                               |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      | Percent Operational Time: 100.0                                                                                                                                   |               |               |      |  |  |  |  |  |  |  |  |                           |  |
| Day                                         | Hourly Period Ending At (MST) |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |                                                                                                                                                                   | Daily Average | Daily Maximum |      |  |  |  |  |  |  |  |  |                           |  |
|                                             | 1                             | 2   | 3    | 4   | 5    | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22   | 23   | 24                                                                                                                                                                |               |               |      |  |  |  |  |  |  |  |  |                           |  |
| 1-Apr                                       | 2.3                           | 2.9 | 2.8  | 2.5 | 2.5  | 2.5 | 2.6 | 2.6 | 2.6 | 2.6 | 2.5 | 2.3 | 2.1 | 2.3 | 2.4 | 2.2 | 2.1 | 2.3 | 2.2 | 2.1 | 2.6 | 2.4  | A    | 2.2                                                                                                                                                               | 2.42          | 2.93          |      |  |  |  |  |  |  |  |  |                           |  |
| 2-Apr                                       | 2.3                           | 2.3 | 2.0  | 2.1 | 2.0  | 2.0 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.3 | 2.1 | 2.2 | 2.1 | 2.0 | 2.1 | A    | 2.2  | 2.1                                                                                                                                                               | 2.09          | 2.28          |      |  |  |  |  |  |  |  |  |                           |  |
| 3-Apr                                       | 2.1                           | 2.2 | 2.4  | 2.3 | 2.2  | 2.4 | 2.3 | 2.1 | 2.0 | 2.3 | 2.2 | 2.3 | 2.3 | 2.3 | 2.4 | 2.4 | 2.3 | 2.3 | 2.2 | 2.4 | A   | 2.3  | 2.6  | 2.7                                                                                                                                                               | 2.30          | 2.66          |      |  |  |  |  |  |  |  |  |                           |  |
| 4-Apr                                       | 2.7                           | 3.4 | 3.5  | 2.3 | 2.4  | 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 | 2.2 | A   | 2.0 | 2.0  | 2.2  | 2.4                                                                                                                                                               | 2.24          | 3.54          |      |  |  |  |  |  |  |  |  |                           |  |
| 5-Apr                                       | 2.3                           | 2.1 | 2.6  | 3.0 | 2.3  | 2.4 | 2.4 | 2.1 | 2.0 | 1.9 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 2.0 | 1.9 | A   | 2.0 | 2.1 | 2.1  | 2.0  | 2.8                                                                                                                                                               | 2.16          | 2.97          |      |  |  |  |  |  |  |  |  |                           |  |
| 6-Apr                                       | 3.7                           | 2.8 | 2.0  | 2.0 | 2.0  | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9 | 2.0  | 2.0  | 2.0                                                                                                                                                               | 2.07          | 3.69          |      |  |  |  |  |  |  |  |  |                           |  |
| 7-Apr                                       | 2.0                           | 2.1 | 2.2  | 2.9 | 3.4  | 3.2 | 2.1 | 2.3 | 2.3 | 2.4 | 2.1 | 2.2 | 2.4 | 2.5 | 2.1 | 2.0 | A   | 2.0 | 2.0 | 2.1 | 2.4 | 2.9  | 2.5  | 2.6                                                                                                                                                               | 2.38          | 3.40          |      |  |  |  |  |  |  |  |  |                           |  |
| 8-Apr                                       | 2.6                           | 2.1 | 2.2  | 2.3 | 2.6  | 2.7 | 2.4 | 2.6 | 2.7 | 2.0 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9  | 2.0  | 1.9                                                                                                                                                               | 2.14          | 2.72          |      |  |  |  |  |  |  |  |  |                           |  |
| 9-Apr                                       | 1.9                           | 1.9 | 1.9  | 1.9 | 1.9  | 1.9 | 1.9 | 1.9 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9  | 2.0  | 2.0                                                                                                                                                               | 1.94          | 2.04          |      |  |  |  |  |  |  |  |  |                           |  |
| 10-Apr                                      | 2.4                           | 2.0 | 3.7  | 2.0 | 2.0  | 2.2 | 2.8 | C   | C   | C   | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9 | 1.9 | 2.0 | 1.9 | 2.0 | 2.2  | 3.4  | 2.0                                                                                                                                                               | 2.20          | 3.72          |      |  |  |  |  |  |  |  |  |                           |  |
| 11-Apr                                      | 2.0                           | 2.8 | 2.7  | 4.2 | 3.7  | 4.1 | 3.3 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0  | 2.0  | 2.0                                                                                                                                                               | 2.38          | 4.23          |      |  |  |  |  |  |  |  |  |                           |  |
| 12-Apr                                      | 2.1                           | 2.1 | 2.1  | 2.1 | 2.1  | 2.3 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.4 | 2.4  | 2.3  | 2.3                                                                                                                                                               | 2.12          | 2.37          |      |  |  |  |  |  |  |  |  |                           |  |
| 13-Apr                                      | 2.3                           | 2.2 | 2.3  | 2.5 | 2.3  | 2.4 | 2.6 | 2.1 | 2.0 | 2.0 | A   | 2.3 | 2.2 | 2.2 | 2.2 | 2.0 | 2.0 | 2.0 | 2.1 | 2.2 | 2.1 | 2.2  | 2.3  | 2.2                                                                                                                                                               | 2.20          | 2.59          |      |  |  |  |  |  |  |  |  |                           |  |
| 14-Apr                                      | 2.2                           | 2.2 | 2.5  | 3.3 | 2.3  | 2.3 | 2.3 | 2.5 | 3.8 | A   | 2.2 | 2.1 | 2.0 | 2.0 | 2.1 | 2.2 | 2.0 | 2.0 | 2.1 | 2.3 | 2.5 | 2.4  | 2.4  | 2.4                                                                                                                                                               | 2.35          | 3.75          |      |  |  |  |  |  |  |  |  |                           |  |
| 15-Apr                                      | 2.5                           | 2.6 | 4.3  | 2.5 | 2.2  | 2.2 | 2.1 | 2.1 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.3 | 2.1 | 2.2 | 2.2 | 2.2 | 2.0 | 3.1 | 2.1  | 2.3  | 2.3                                                                                                                                                               | 2.32          | 4.33          |      |  |  |  |  |  |  |  |  |                           |  |
| 16-Apr                                      | 2.5                           | 2.4 | 2.4  | 2.1 | 2.2  | 2.2 | 2.2 | A   | 2.1 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.1 | 2.1 | 2.3 | 2.2 | 2.3 | 2.5 | 2.5  | 2.5  | 2.4                                                                                                                                                               | 2.25          | 2.53          |      |  |  |  |  |  |  |  |  |                           |  |
| 17-Apr                                      | 2.2                           | 2.5 | 2.3  | 2.7 | 2.3  | 2.4 | A   | 2.0 | 2.1 | 2.2 | 2.1 | 2.1 | 2.2 | 2.1 | 2.1 | 2.2 | 2.1 | 2.0 | 2.3 | 2.0 | 2.0 | 2.0  | 2.1  | 2.2                                                                                                                                                               | 2.18          | 2.66          |      |  |  |  |  |  |  |  |  |                           |  |
| 18-Apr                                      | 2.1                           | 2.2 | 2.2  | 2.3 | 2.3  | A   | 2.3 | 2.8 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.9 | 2.1 | 2.1 | 2.6 | 2.5 | 2.2 | 11.2 | 12.5 | 7.0                                                                                                                                                               | 3.29          | 12.49         |      |  |  |  |  |  |  |  |  |                           |  |
| 19-Apr                                      | 8.5                           | 2.2 | 2.2  | 2.1 | A    | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.0 | 2.2 | 2.0 | 4.2 | 7.8  | 2.8  | 4.0                                                                                                                                                               | 3.7           | 2.91          | 8.53 |  |  |  |  |  |  |  |  |                           |  |
| 20-Apr                                      | 6.6                           | 9.5 | 11.0 | A   | 2.0  | 2.6 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 3.2 | 2.4  | 4.5  | 2.3                                                                                                                                                               | 3.12          | 10.96         |      |  |  |  |  |  |  |  |  |                           |  |
| 21-Apr                                      | 3.3                           | 8.7 | A    | 9.6 | 10.2 | 3.1 | 2.5 | 3.2 | 3.6 | 2.4 | 2.1 | 2.1 | 2.1 | 2.1 | 2.3 | 2.1 | 2.1 | 2.2 | 2.0 | 2.2 | 2.3 | 2.1  | 2.1  | 2.2                                                                                                                                                               | 3.32          | 10.20         |      |  |  |  |  |  |  |  |  |                           |  |
| 22-Apr                                      | 2.2                           | A   | 2.4  | 2.3 | 2.1  | 2.4 | 2.4 | 2.2 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.3 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 2.1 | 3.5 | 2.2  | 2.1  | 2.0                                                                                                                                                               | 2.19          | 3.53          |      |  |  |  |  |  |  |  |  |                           |  |
| 23-Apr                                      | A                             | 2.2 | 3.0  | 2.3 | 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 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0  | 2.1  | A                                                                                                                                                                 | 2.08          | 3.05          |      |  |  |  |  |  |  |  |  |                           |  |
| 24-Apr                                      | 2.1                           | 2.0 | 2.0  | 2.1 | 2.0  | 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 | 2.1 | 2.3 | 2.1 | 2.2  | A    | 2.0                                                                                                                                                               | 2.04          | 2.25          |      |  |  |  |  |  |  |  |  |                           |  |
| 25-Apr                                      | 2.0                           | 2.1 | 2.1  | 2.1 | 2.1  | 2.2 | 2.0 | 2.1 | 2.2 | 2.4 | 2.3 | 2.2 | 2.0 | 2.0 | 2.0 | 2.2 | 2.2 | 2.2 | 2.4 | 2.0 | 2.1 | A    | 2.4  | 2.1                                                                                                                                                               | 2.14          | 2.37          |      |  |  |  |  |  |  |  |  |                           |  |
| 26-Apr                                      | 2.4                           | 2.2 | 2.8  | 2.2 | 2.3  | 2.4 | 2.2 | 2.3 | 2.2 | 2.3 | 2.1 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 | A   | 2.0  | 2.1  | 2.0                                                                                                                                                               | 2.16          | 2.80          |      |  |  |  |  |  |  |  |  |                           |  |
| 27-Apr                                      | 2.0                           | 2.1 | 2.1  | 2.2 | 2.3  | 2.3 | 2.4 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 | 1.9 | 2.0 | A   | 2.5 | 2.5  | 2.0  | 2.1                                                                                                                                                               | 2.13          | 2.55          |      |  |  |  |  |  |  |  |  |                           |  |
| 28-Apr                                      | 2.2                           | 2.1 | 2.0  | 2.0 | 2.0  | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | A   | 2.0 | 2.0  | 2.0  | 2.0                                                                                                                                                               | 2.00          | 2.19          |      |  |  |  |  |  |  |  |  |                           |  |
| 29-Apr                                      | 2.0                           | 2.0 | 2.0  | 2.1 | 2.2  | 2.3 | 2.3 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | A   | 2.0 | 2.1 | 2.1 | 2.2  | 2.2  | 2.6                                                                                                                                                               | 2.12          | 2.62          |      |  |  |  |  |  |  |  |  |                           |  |
| 30-Apr                                      | 2.9                           | 3.0 | 2.8  | 3.4 | 2.8  | 3.6 | 3.2 | 2.5 | 2.3 | 2.3 | 2.2 | 2.0 | 2.0 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9 | 1.9 | 2.0  | 2.0  | 2.0                                                                                                                                                               | 2.37          | 3.57          |      |  |  |  |  |  |  |  |  |                           |  |
|                                             |                               |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      | Diurnal Average                                                                                                                                                   |               |               |      |  |  |  |  |  |  |  |  |                           |  |
|                                             |                               |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      | Diurnal Maximum                                                                                                                                                   |               |               |      |  |  |  |  |  |  |  |  |                           |  |
| C - Calibration                             |                               |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      | A - Automated Daily Zero Span                                                                                                                                     |               |               |      |  |  |  |  |  |  |  |  |                           |  |

## Hourly Maximums

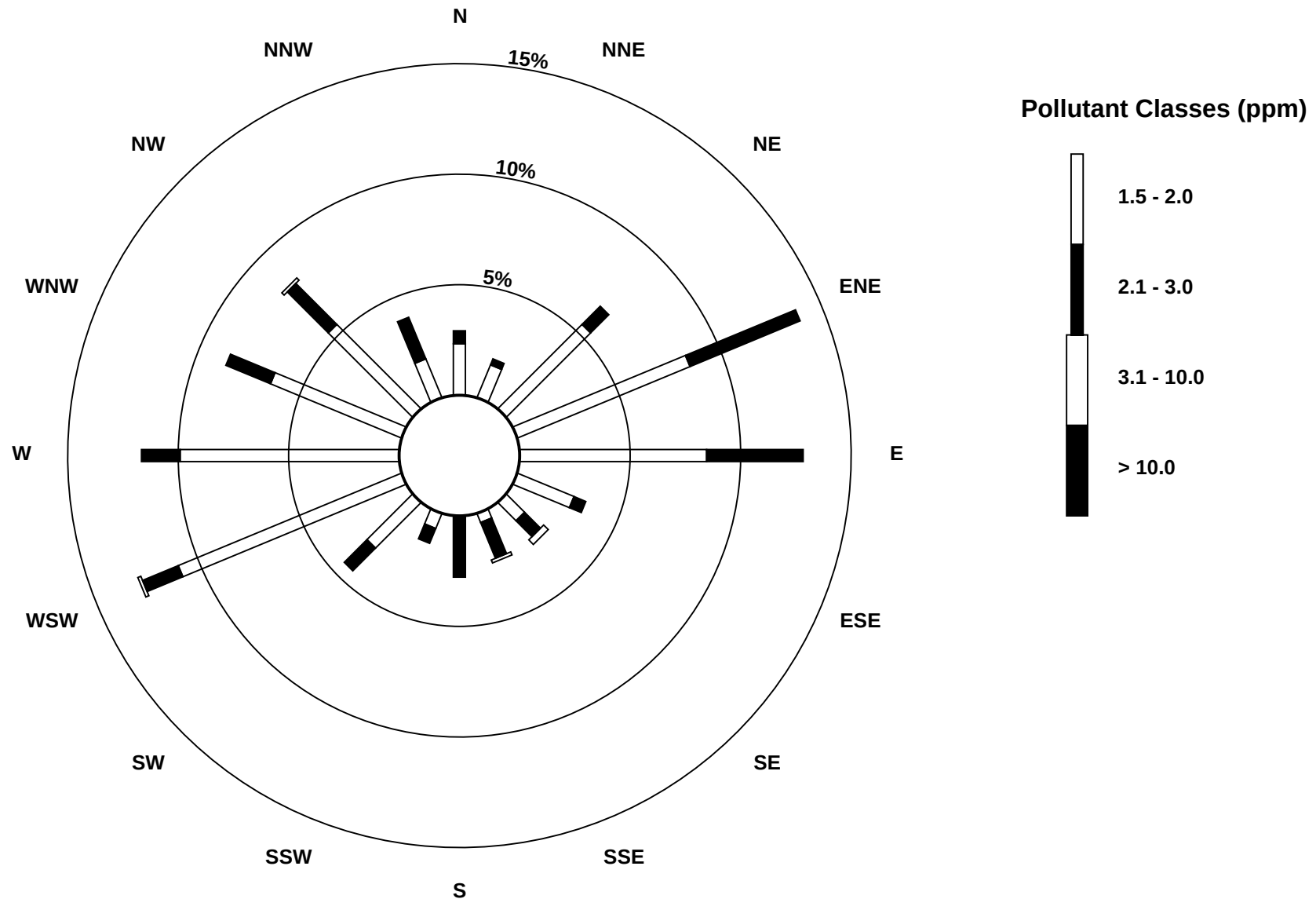
Total Hydrocarbons (THC) - ppm  
Henry Pirker - April 2014



## Pollutant Rose

Total Hydrocarbons (THC) - ppm

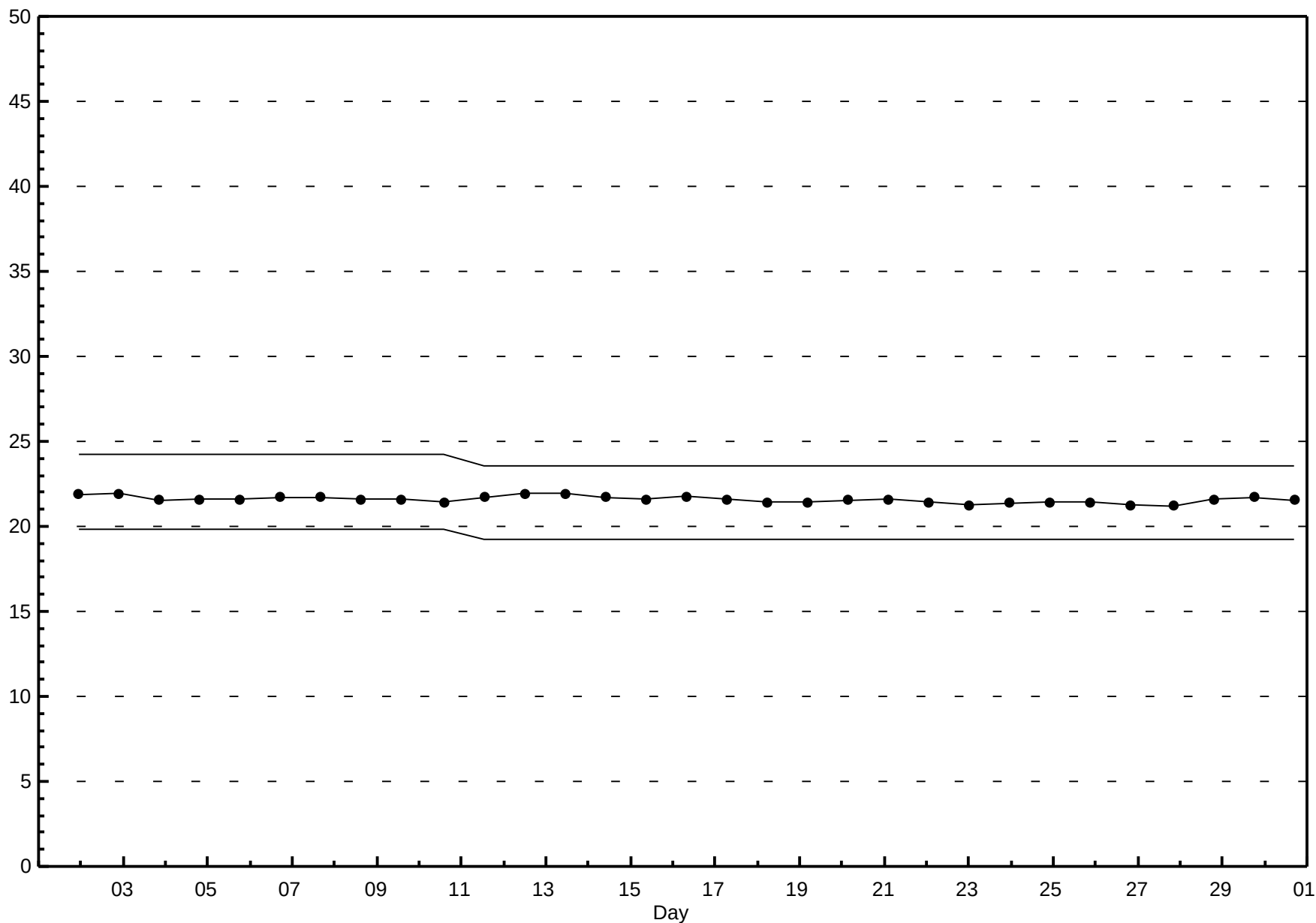
Henry Pirker - April 2014





## Span Responses

Total Hydrocarbons (THC)  
Henry Pirker - April 2014



# Hourly Averages

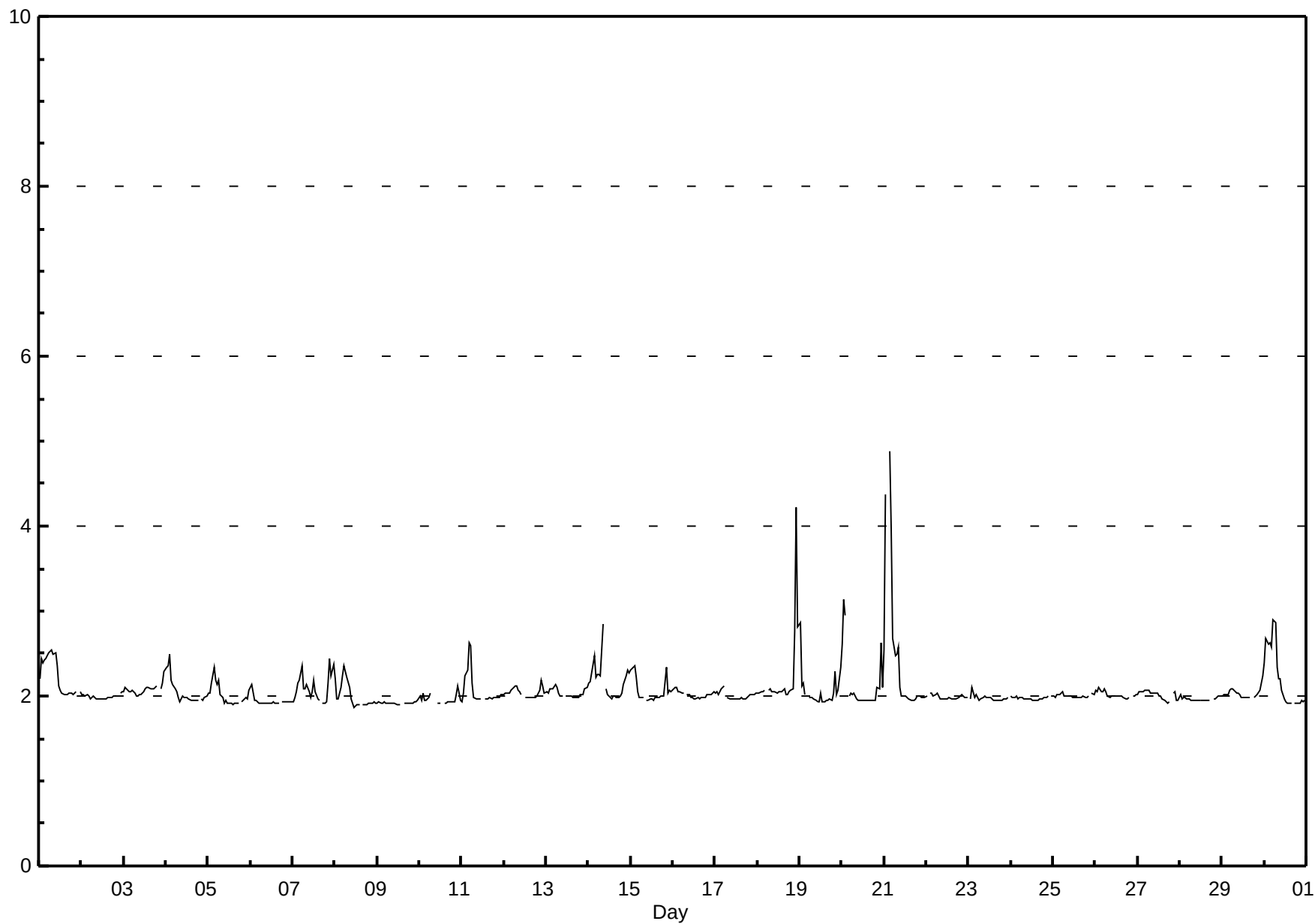
Methane (CH<sub>4</sub>) - ppm

Henry Pirker - April 2014

| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 4.89 ppm on Apr 21 04:00 Maximum Daily Average: 2.43 ppm on Apr 21                                                                                                                                                                                                                                       |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Hours in Service: 720           |     |     |     |                 |               |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------------------------|-----|-----|-----|-----------------|---------------|------|
| Minimum Value: 1.9 ppm on Apr 8 12:00 Minimum Daily Average: 1.92 ppm on Apr 9<br>Maximum Diurnal Average: 2.21 ppm at hour 4 Minimum Diurnal Average: 1.96 ppm at hour 18<br>Monthly Average: 2.056 ppm Percentiles: P <sub>1</sub> = 1.90 P <sub>10</sub> = 1.93 Q <sub>1</sub> = 1.96 Median = 1.99 Q <sub>3</sub> = 2.06 P <sub>90</sub> = 2.22 P <sub>99</sub> = 2.87 |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Hours of Data: 686              |     |     |     |                 |               |      |
|                                                                                                                                                                                                                                                                                                                                                                            |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Hours of Missing Data: 34       |     |     |     |                 |               |      |
|                                                                                                                                                                                                                                                                                                                                                                            |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Hours of Calibration: 34        |     |     |     |                 |               |      |
|                                                                                                                                                                                                                                                                                                                                                                            |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Percent Operational Time: 100.0 |     |     |     |                 |               |      |
| Day                                                                                                                                                                                                                                                                                                                                                                        | Hourly Period Ending At (MST) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                 |     |     |     | Daily Average   | Daily Maximum |      |
|                                                                                                                                                                                                                                                                                                                                                                            | 1                             | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21                              | 22  | 23  | 24  |                 |               |      |
| 1-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.2                           | 2.4 | 2.4 | 2.4 | 2.4 | 2.5 | 2.5 | 2.6 | 2.5 | 2.5 | 2.4 | 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             | 2.23          | 2.55 |
| 2-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.0                           | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 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 | 1.99            | 2.05          |      |
| 3-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.1                           | 2.1 | 2.1 | 2.1 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | A                               | 2.1 | 2.1 | 2.3 | 2.08            | 2.29          |      |
| 4-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.3                           | 2.4 | 2.5 | 2.2 | 2.1 | 2.1 | 2.0 | 2.0 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 | 2.0 | 2.0 | 2.0 | 1.9 | A   | 2.0                             | 2.0 | 2.0 | 2.0 | 2.05            | 2.49          |      |
| 5-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.0                           | 2.0 | 2.2 | 2.3 | 2.2 | 2.1 | 2.2 | 2.0 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9                             | 2.0 | 2.0 | 2.1 | 2.01            | 2.34          |      |
| 6-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.1                           | 2.1 | 1.9 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9                             | 1.9 | 1.9 | 1.9 | 1.94            | 2.13          |      |
| 7-Apr                                                                                                                                                                                                                                                                                                                                                                      | 1.9                           | 2.0 | 2.1 | 2.2 | 2.2 | 2.4 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 2.2 | 2.0 | 2.0 | 2.0 | A   | 1.9 | 1.9 | 1.9 | 1.9                             | 2.1 | 2.4 | 2.2 | 2.09            | 2.44          |      |
| 8-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.2                           | 2.0 | 2.0 | 2.1 | 2.2 | 2.4 | 2.3 | 2.2 | 2.1 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9 | 1.9 | 1.9                             | 1.9 | 1.9 | 1.9 | 2.01            | 2.36          |      |
| 9-Apr                                                                                                                                                                                                                                                                                                                                                                      | 1.9                           | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9                             | 1.9 | 1.9 | 2.0 | 1.92            | 1.95          |      |
| 10-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 1.9 | 2.0 | 1.9 | 1.9 | 2.0 | 2.0 | C   | C   | C   | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9                             | 2.0 | 2.1 | 1.9 | 1.96            | 2.11          |      |
| 11-Apr                                                                                                                                                                                                                                                                                                                                                                     | 1.9                           | 2.0 | 2.2 | 2.3 | 2.6 | 2.6 | 2.2 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | 2.0 | 2.0 | 2.0 | 2.07            | 2.62          |      |
| 12-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | 2.1 | 2.2 | 2.1 | 2.04            | 2.19          |      |
| 13-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | 2.0 | 2.1 | 2.1 | 2.03            | 2.13          |      |
| 14-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 2.2 | 2.3 | 2.5 | 2.2 | 2.3 | 2.3 | 2.2 | 2.9 | A   | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1                             | 2.2 | 2.3 | 2.3 | 2.17            | 2.85          |      |
| 15-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.3                           | 2.3 | 2.4 | 2.2 | 2.1 | 2.0 | 2.0 | 2.0 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.3                             | 2.0 | 2.1 | 2.1 | 2.06            | 2.35          |      |
| 16-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 2.1 | 2.1 | 2.0 | 2.1 | 2.0 | 2.0 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | 2.0 | 2.0 | 2.1 | 2.02            | 2.10          |      |
| 17-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | 2.0 | 2.0 | 2.0 | 2.01            | 2.12          |      |
| 18-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 2.0 | 2.0 | 2.1 | 2.1 | A   | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1                             | 2.8 | 4.2 | 2.8 | 2.21            | 4.21          |      |
| 19-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.9                           | 2.1 | 2.1 | 2.0 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 | 1.9 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 2.0 | 1.9 | 2.0                             | 2.3 | 2.0 | 2.1 | 2.06            | 2.87          |      |
| 20-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.6                           | 3.1 | 2.9 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 2.1                             | 2.1 | 2.6 | 2.1 | 2.13            | 3.13          |      |
| 21-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.5                           | 4.4 | A   | 4.9 | 4.0 | 2.7 | 2.5 | 2.5 | 2.6 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | 2.0 | 2.0 | 2.0 | 2.43            | 4.89          |      |
| 22-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | 2.0 | 2.0 | 2.0 | 1.99            | 2.04          |      |
| 23-Apr                                                                                                                                                                                                                                                                                                                                                                     | A                             | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | 2.0 | 2.0 | A   | 1.98            | 2.10          |      |
| 24-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | 2.0 | A   | 2.0 | 1.97            | 2.00          |      |
| 25-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                             | A   | 2.0 | 2.0 | 2.00            | 2.04          |      |
| 26-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 2.1 | 2.1 | 2.1 | 2.0 | 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 | 2.0 | 2.0 | A                               | 2.0 | 2.0 | 2.0 | 2.02            | 2.10          |      |
| 27-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 2.0 | 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 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 2.0                             | 2.1 | 1.9 | 2.0 | 2.01            | 2.08          |      |
| 28-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | A   | 2.0 | 2.0                             | 2.0 | 2.0 | 2.0 | 1.96            | 2.02          |      |
| 29-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 2.0 | 2.0 | 2.0 | 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 | A   | 2.0 | 2.0 | 2.0                             | 2.1 | 2.2 | 2.2 | 2.04            | 2.24          |      |
| 30-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.4                           | 2.7 | 2.6 | 2.6 | 2.6 | 2.9 | 2.9 | 2.3 | 2.2 | 2.2 | 2.1 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9 | 1.9                             | 1.9 | 1.9 | 2.0 | 2.20            | 2.89          |      |
| 2.14 2.21 2.14 2.21 2.17 2.15 2.11 2.07 2.07 2.01 1.99 1.98 1.98 1.97 1.97 1.97 1.97 1.96 1.97 1.98 2.03 2.06 2.14 2.09                                                                                                                                                                                                                                                    |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                 |     |     |     | Diurnal Average |               |      |
| 2.87 4.37 2.94 4.89 3.96 2.89 2.86 2.55 2.85 2.50 2.36 2.12 2.18 2.10 2.10 2.09 2.09 2.09 2.09 2.11 2.34 2.77 4.21 2.82                                                                                                                                                                                                                                                    |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                 |     |     |     | Diurnal Maximum |               |      |
| C - Calibration A - Automated Daily Zero Span                                                                                                                                                                                                                                                                                                                              |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                 |     |     |     |                 |               |      |

## Hourly Averages

Methane (CH<sub>4</sub>) - ppm  
Henry Pirker - April 2014



# Hourly Maximums

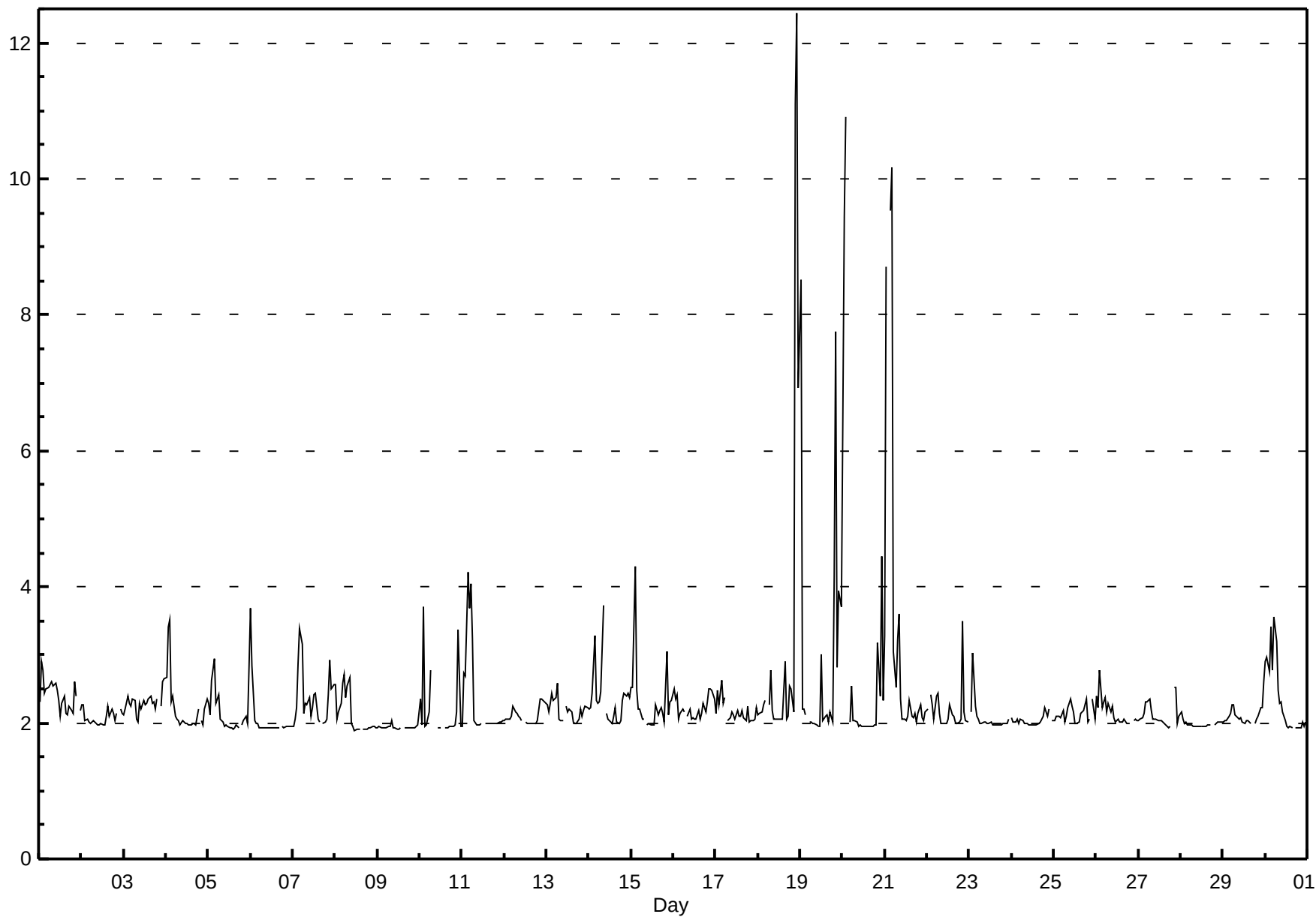
Methane (CH<sub>4</sub>) - ppm

Henry Pirker - April 2014

| Maximum Value: 12.43 ppm on Apr 18 23:00                                                                                    |                               |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Maximum Daily Average: 3.30 ppm on Apr 21                                                                                                                         |      |      |                               |               |               |      |  |  |  | Hours in Service: 720     |  |
|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|-------------------------------|---------------|---------------|------|--|--|--|---------------------------|--|
| Minimum Value: 1.9 ppm on Apr 8 12:00                                                                                       |                               |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Minimum Daily Average: 1.94 ppm on Apr 9                                                                                                                          |      |      |                               |               |               |      |  |  |  | Hours of Data: 686        |  |
| Maximum Diurnal Average: 2.77 ppm at hour 3                                                                                 |                               |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Minimum Diurnal Average: 2.03 ppm at hour 17                                                                                                                      |      |      |                               |               |               |      |  |  |  | Hours of Missing Data: 34 |  |
| Monthly Average: 2.310 ppm                                                                                                  |                               |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Percentiles: P <sub>1</sub> = 1.92 P <sub>10</sub> = 1.94 Q <sub>1</sub> = 1.99 Median = 2.06 Q <sub>3</sub> = 2.29 P <sub>90</sub> = 2.60 P <sub>99</sub> = 8.43 |      |      |                               |               |               |      |  |  |  | Hours of Calibration: 34  |  |
|                                                                                                                             |                               |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Percent Operational Time: 100.0                                                                                                                                   |      |      |                               |               |               |      |  |  |  |                           |  |
| Day                                                                                                                         | Hourly Period Ending At (MST) |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                   |      |      |                               | Daily Average | Daily Maximum |      |  |  |  |                           |  |
|                                                                                                                             | 1                             | 2   | 3    | 4   | 5    | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21                                                                                                                                                                | 22   | 23   | 24                            |               |               |      |  |  |  |                           |  |
| 1-Apr                                                                                                                       | 2.3                           | 2.9 | 2.8  | 2.4 | 2.5  | 2.5 | 2.6 | 2.6 | 2.5 | 2.6 | 2.5 | 2.3 | 2.1 | 2.3 | 2.4 | 2.1 | 2.1 | 2.3 | 2.2 | 2.1 | 2.6                                                                                                                                                               | 2.4  | A    | A                             | 2.2           | 2.41          | 2.91 |  |  |  |                           |  |
| 2-Apr                                                                                                                       | 2.3                           | 2.3 | 2.0  | 2.1 | 2.0  | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.3 | 2.1 | 2.2 | 2.1 | 2.0 | 2.1                                                                                                                                                               | A    | A    | 2.2                           | 2.1           | 2.08          | 2.27 |  |  |  |                           |  |
| 3-Apr                                                                                                                       | 2.1                           | 2.2 | 2.4  | 2.3 | 2.2  | 2.4 | 2.3 | 2.0 | 2.0 | 2.3 | 2.2 | 2.3 | 2.3 | 2.3 | 2.4 | 2.4 | 2.3 | 2.3 | 2.2 | 2.4 | A                                                                                                                                                                 | A    | 2.2  | 2.6                           | 2.6           | 2.29          | 2.65 |  |  |  |                           |  |
| 4-Apr                                                                                                                       | 2.7                           | 3.4 | 3.5  | 2.3 | 2.4  | 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 | 2.2 | A   | 2.0                                                                                                                                                               | 2.0  | 2.2  | 2.4                           | 2.23          | 3.53          |      |  |  |  |                           |  |
| 5-Apr                                                                                                                       | 2.3                           | 2.1 | 2.6  | 3.0 | 2.3  | 2.3 | 2.4 | 2.1 | 2.0 | 1.9 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 2.0 | 1.9 | A   | 2.0 | 2.0                                                                                                                                                               | 2.1  | 2.0  | 2.8                           | 2.15          | 2.95          |      |  |  |  |                           |  |
| 6-Apr                                                                                                                       | 3.7                           | 2.8 | 2.0  | 2.0 | 2.0  | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9                                                                                                                                                               | 1.9  | 1.9  | 2.0                           | 2.06          | 3.68          |      |  |  |  |                           |  |
| 7-Apr                                                                                                                       | 2.0                           | 2.1 | 2.2  | 2.9 | 3.4  | 3.2 | 2.1 | 2.3 | 2.3 | 2.4 | 2.1 | 2.2 | 2.4 | 2.4 | 2.1 | 2.0 | A   | 2.0 | 2.0 | 2.1 | 2.4                                                                                                                                                               | 2.9  | 2.5  | 2.6                           | 2.37          | 3.38          |      |  |  |  |                           |  |
| 8-Apr                                                                                                                       | 2.6                           | 2.0 | 2.2  | 2.3 | 2.6  | 2.7 | 2.4 | 2.5 | 2.7 | 2.0 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9 | 1.9 | 1.9                                                                                                                                                               | 1.9  | 2.0  | 1.9                           | 2.13          | 2.70          |      |  |  |  |                           |  |
| 9-Apr                                                                                                                       | 1.9                           | 1.9 | 1.9  | 1.9 | 1.9  | 1.9 | 1.9 | 1.9 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9                                                                                                                                                               | 1.9  | 1.9  | 2.0                           | 1.94          | 2.03          |      |  |  |  |                           |  |
| 10-Apr                                                                                                                      | 2.4                           | 2.0 | 3.7  | 2.0 | 2.0  | 2.2 | 2.8 | C   | C   | C   | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 2.0                                                                                                                                                               | 2.2  | 3.4  | 2.0                           | 2.19          | 3.70          |      |  |  |  |                           |  |
| 11-Apr                                                                                                                      | 1.9                           | 2.7 | 2.7  | 4.2 | 3.7  | 4.1 | 3.2 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                                                                                                                                                               | 2.0  | 2.0  | 2.0                           | 2.37          | 4.21          |      |  |  |  |                           |  |
| 12-Apr                                                                                                                      | 2.0                           | 2.1 | 2.1  | 2.1 | 2.1  | 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 | 2.0 | 2.0 | 2.4                                                                                                                                                               | 2.3  | 2.3  | 2.3                           | 2.10          | 2.36          |      |  |  |  |                           |  |
| 13-Apr                                                                                                                      | 2.3                           | 2.2 | 2.3  | 2.4 | 2.3  | 2.4 | 2.6 | 2.1 | 2.0 | 2.0 | A   | 2.3 | 2.2 | 2.2 | 2.2 | 2.0 | 2.0 | 2.0 | 2.1 | 2.2 | 2.1                                                                                                                                                               | 2.2  | 2.3  | 2.2                           | 2.19          | 2.58          |      |  |  |  |                           |  |
| 14-Apr                                                                                                                      | 2.2                           | 2.2 | 2.4  | 3.3 | 2.3  | 2.3 | 2.3 | 2.5 | 3.7 | A   | 2.1 | 2.1 | 2.0 | 2.0 | 2.1 | 2.2 | 2.0 | 2.0 | 2.0 | 2.3 | 2.4                                                                                                                                                               | 2.4  | 2.4  | 2.4                           | 2.34          | 3.73          |      |  |  |  |                           |  |
| 15-Apr                                                                                                                      | 2.5                           | 2.5 | 4.3  | 2.5 | 2.2  | 2.2 | 2.1 | 2.1 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.3 | 2.1 | 2.2 | 2.2 | 2.1 | 2.0 | 3.0                                                                                                                                                               | 2.1  | 2.3  | 2.3                           | 2.30          | 4.31          |      |  |  |  |                           |  |
| 16-Apr                                                                                                                      | 2.5                           | 2.3 | 2.4  | 2.1 | 2.1  | 2.2 | 2.2 | A   | 2.1 | 2.2 | 2.0 | 2.1 | 2.0 | 2.1 | 2.2 | 2.1 | 2.1 | 2.3 | 2.2 | 2.3 | 2.5                                                                                                                                                               | 2.5  | 2.5  | 2.3                           | 2.23          | 2.50          |      |  |  |  |                           |  |
| 17-Apr                                                                                                                      | 2.1                           | 2.5 | 2.3  | 2.6 | 2.3  | 2.4 | A   | 2.0 | 2.1 | 2.2 | 2.1 | 2.0 | 2.2 | 2.1 | 2.1 | 2.2 | 2.1 | 2.0 | 2.2 | 2.0 | 2.0                                                                                                                                                               | 2.0  | 2.2  | 2.2                           | 2.17          | 2.64          |      |  |  |  |                           |  |
| 18-Apr                                                                                                                      | 2.1                           | 2.1 | 2.2  | 2.3 | 2.3  | A   | 2.3 | 2.8 | 2.2 | 2.1 | 2.1 | 2.0 | 2.1 | 2.1 | 2.1 | 2.9 | 2.0 | 2.1 | 2.6 | 2.5 | 2.2                                                                                                                                                               | 11.1 | 12.4 | 6.9                           | 3.28          | 12.43         |      |  |  |  |                           |  |
| 19-Apr                                                                                                                      | 8.5                           | 2.2 | 2.2  | 2.1 | A    | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 | 3.0 | 2.0 | 2.1 | 2.1 | 2.0 | 2.2 | 2.0 | 4.2 | 7.7                                                                                                                                                               | 2.8  | 3.9  | 3.7                           | 2.90          | 8.51          |      |  |  |  |                           |  |
| 20-Apr                                                                                                                      | 6.5                           | 9.4 | 10.9 | A   | 2.0  | 2.5 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 3.2                                                                                                                                                               | 2.4  | 4.4  | 2.3                           | 3.11          | 10.92         |      |  |  |  |                           |  |
| 21-Apr                                                                                                                      | 3.3                           | 8.7 | A    | 9.5 | 10.2 | 3.1 | 2.5 | 3.2 | 3.6 | 2.4 | 2.0 | 2.1 | 2.0 | 2.1 | 2.3 | 2.1 | 2.1 | 2.1 | 2.0 | 2.1 | 2.3                                                                                                                                                               | 2.1  | 2.0  | 2.2                           | 3.30          | 10.16         |      |  |  |  |                           |  |
| 22-Apr                                                                                                                      | 2.2                           | A   | 2.4  | 2.3 | 2.0  | 2.4 | 2.4 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.3 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 2.1 | 3.5                                                                                                                                                               | 2.2  | 2.0  | 2.0                           | 2.18          | 3.50          |      |  |  |  |                           |  |
| 23-Apr                                                                                                                      | A                             | 2.2 | 3.0  | 2.3 | 2.1  | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                                                                                                                                                               | 2.0  | 2.1  | A                             | 2.07          | 3.04          |      |  |  |  |                           |  |
| 24-Apr                                                                                                                      | 2.1                           | 2.0 | 2.0  | 2.1 | 2.0  | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.2 | 2.1                                                                                                                                                               | 2.2  | A    | 2.0                           | 2.03          | 2.23          |      |  |  |  |                           |  |
| 25-Apr                                                                                                                      | 2.0                           | 2.1 | 2.1  | 2.1 | 2.1  | 2.2 | 2.0 | 2.1 | 2.2 | 2.4 | 2.3 | 2.2 | 2.0 | 2.0 | 2.0 | 2.1 | 2.2 | 2.2 | 2.3 | 2.0 | 2.1                                                                                                                                                               | A    | 2.3  | 2.1                           | 2.13          | 2.36          |      |  |  |  |                           |  |
| 26-Apr                                                                                                                      | 2.4                           | 2.2 | 2.8  | 2.2 | 2.3  | 2.4 | 2.2 | 2.3 | 2.2 | 2.2 | 2.1 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 | A                                                                                                                                                                 | 2.0  | 2.0  | 2.0                           | 2.15          | 2.78          |      |  |  |  |                           |  |
| 27-Apr                                                                                                                      | 2.0                           | 2.1 | 2.1  | 2.1 | 2.3  | 2.3 | 2.3 | 2.2 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 | 1.9 | 2.0 | A   | 2.5                                                                                                                                                               | 2.5  | 2.0  | 2.1                           | 2.12          | 2.53          |      |  |  |  |                           |  |
| 28-Apr                                                                                                                      | 2.2                           | 2.1 | 2.0  | 2.0 | 2.0  | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | A   | 2.0                                                                                                                                                               | 2.0  | 2.0  | 2.0                           | 1.99          | 2.17          |      |  |  |  |                           |  |
| 29-Apr                                                                                                                      | 2.0                           | 2.0 | 2.0  | 2.1 | 2.1  | 2.3 | 2.3 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | A   | 2.0 | 2.1 | 2.1                                                                                                                                                               | 2.2  | 2.2  | 2.6                           | 2.11          | 2.60          |      |  |  |  |                           |  |
| 30-Apr                                                                                                                      | 2.9                           | 3.0 | 2.8  | 3.4 | 2.8  | 3.6 | 3.2 | 2.5 | 2.3 | 2.3 | 2.2 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | A   | 1.9 | 1.9 | 1.9 | 1.9                                                                                                                                                               | 2.0  | 2.0  | 2.0                           | 2.36          | 3.56          |      |  |  |  |                           |  |
| 2.69 2.77 2.77 2.65 2.57 2.40 2.29 2.20 2.21 2.10 2.05 2.04 2.06 2.04 2.06 2.08 2.03 2.05 2.07 2.15 2.46 2.53 2.72 2.43     |                               |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                   |      |      | Diurnal Average               |               |               |      |  |  |  |                           |  |
| 8.51 9.45 10.92 9.53 10.16 4.06 3.24 3.23 3.73 2.58 2.47 2.33 3.01 2.44 2.39 2.90 2.29 2.31 2.55 4.17 7.75 11.11 12.43 6.92 |                               |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                   |      |      | Diurnal Maximum               |               |               |      |  |  |  |                           |  |
| C - Calibration                                                                                                             |                               |     |      |     |      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                   |      |      | A - Automated Daily Zero Span |               |               |      |  |  |  |                           |  |

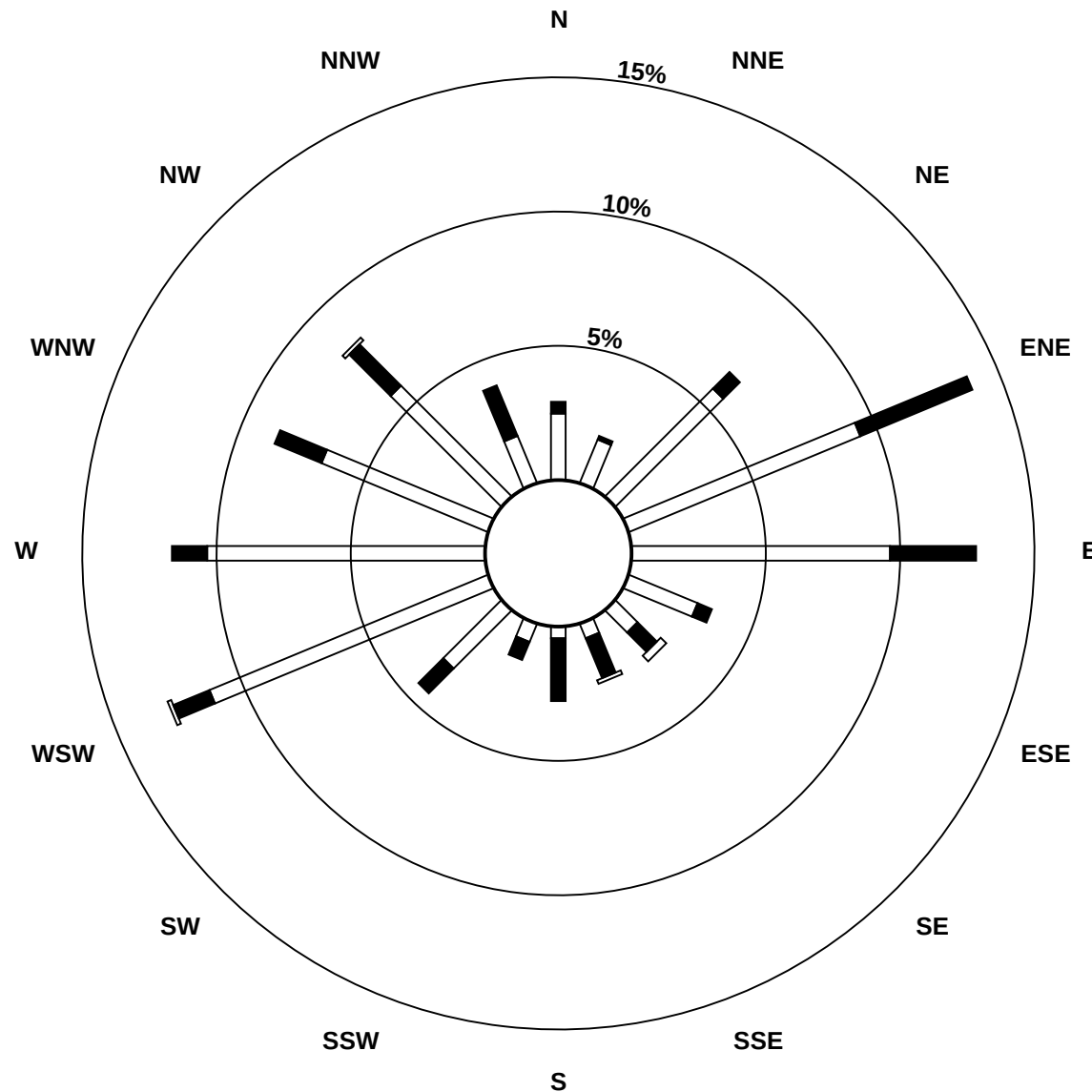
## Hourly Maximums

Methane (CH<sub>4</sub>) - ppm  
Henry Pirker - April 2014

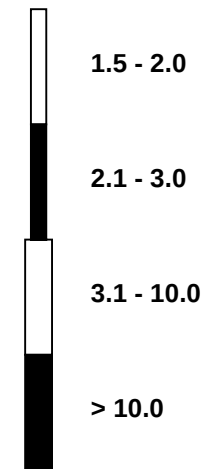


# Pollutant Rose

Methane (CH<sub>4</sub>) - ppm  
Henry Pirker - April 2014

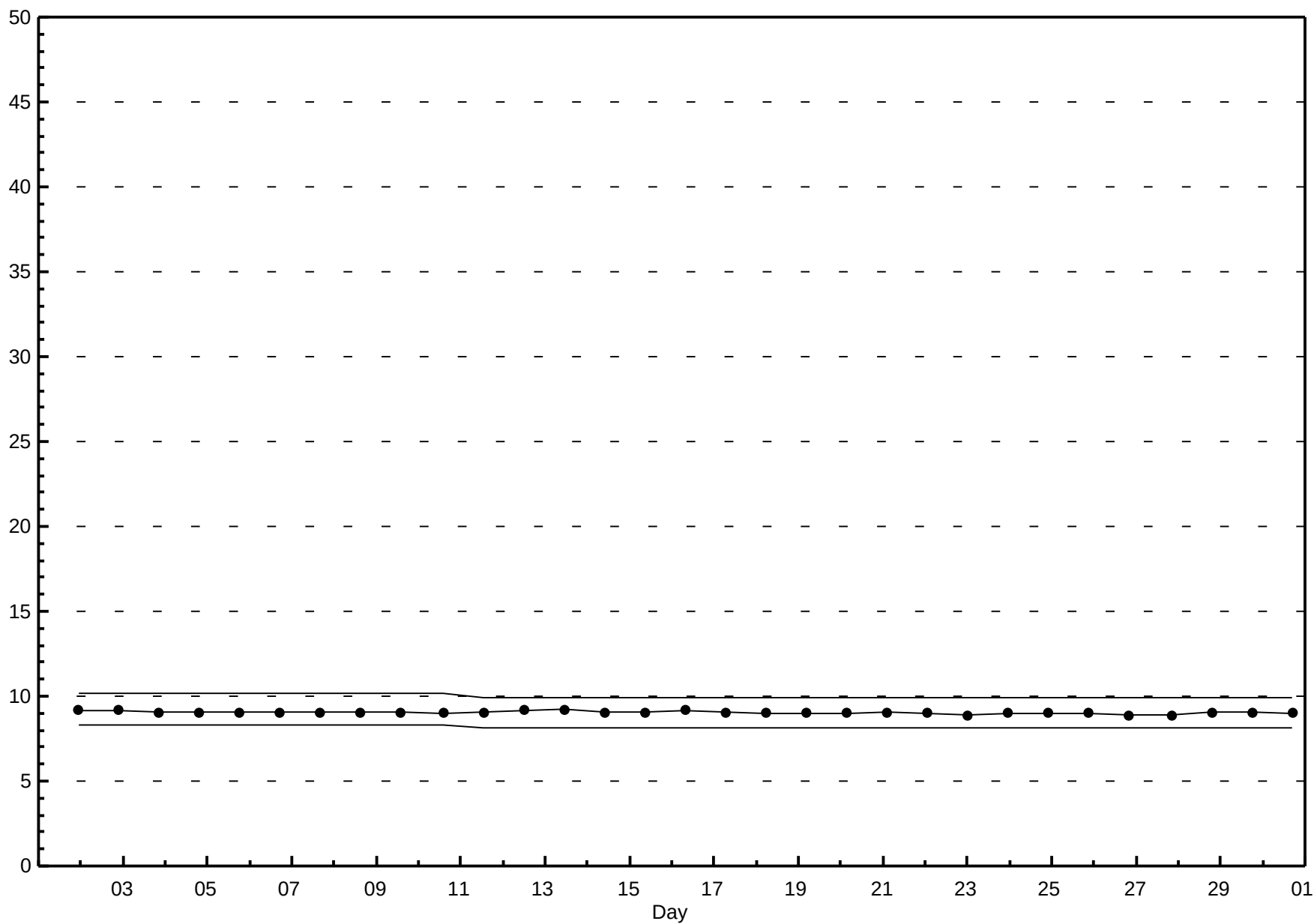


## Pollutant Classes (ppm)



## Span Responses

Methane (CH<sub>4</sub>)  
Henry Pirker - April 2014



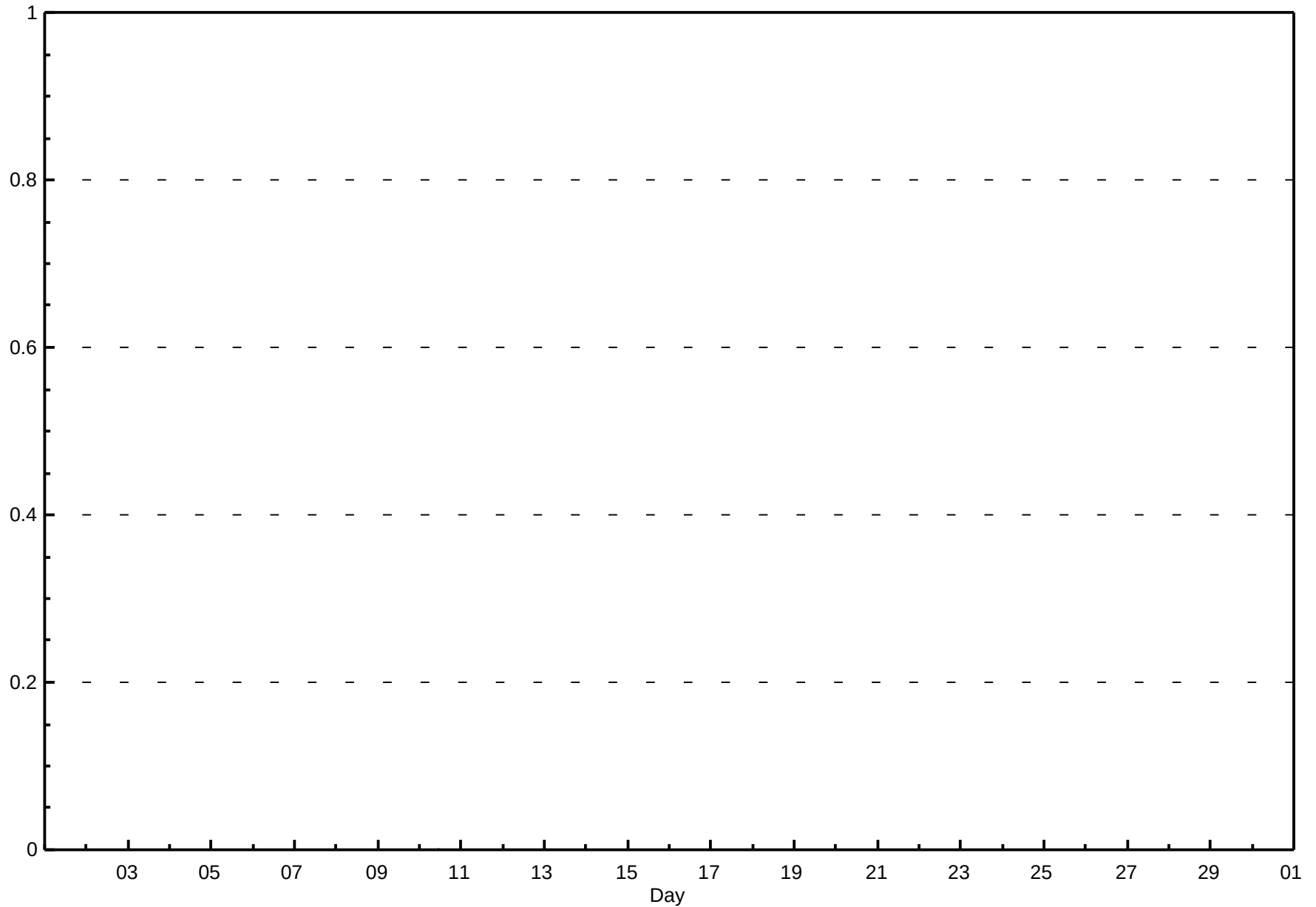
# Hourly Averages

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - April 2014

|                                                                                                                                      |                               |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                                                                                                               |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                         |               |               |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|
| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 0.00 ppm on Apr 10 11:00 Maximum Daily Average: 0.00 ppm on Apr 29 |                               |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                                                                                                               |     |     |     |     |     |     |     |     |     |     |     | Hours in Service: 720<br>Hours of Data: 686<br>Hours of Missing Data: 34<br>Hours of Calibration: 34<br>Percent Operational Time: 100.0 |               |               |
| Minimum Value: 0.0 ppm on Apr 1 01:00<br>Maximum Diurnal Average: 0.00 ppm at hour 11<br>Monthly Average: 0.000 ppm                  |                               |     |     |     |     |     |     |     |     |     |     | Minimum Daily Average: 0.00 ppm on Apr 4<br>Minimum Diurnal Average: 0.00 ppm at hour 15<br>Percentiles: P <sub>1</sub> = 0.00 P <sub>10</sub> = 0.00 Q <sub>1</sub> = 0.00 Median = 0.00 Q <sub>3</sub> = 0.00 P <sub>90</sub> = 0.00 P <sub>99</sub> = 0.00 |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                         |               |               |
| Day                                                                                                                                  | Hourly Period Ending At (MST) |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                                                                                                               |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                         | Daily Average | Daily Maximum |
|                                                                                                                                      | 1                             | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12                                                                                                                                                                                                                                                            | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 24                                                                                                                                      |               |               |
| 1-Apr                                                                                                                                | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 2-Apr                                                                                                                                | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 3-Apr                                                                                                                                | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 4-Apr                                                                                                                                | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 5-Apr                                                                                                                                | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 6-Apr                                                                                                                                | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 7-Apr                                                                                                                                | 0.0                           | 0.0 | 0.0 | 0.0 | 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          |
| 8-Apr                                                                                                                                | 0.0                           | 0.0 | 0.0 | 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          |
| 9-Apr                                                                                                                                | 0.0                           | 0.0 | 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          |
| 10-Apr                                                                                                                               | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | C   | C   | C   | 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          |
| 11-Apr                                                                                                                               | 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-Apr                                                                                                                               | 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          |
| 13-Apr                                                                                                                               | 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          |
| 14-Apr                                                                                                                               | 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          |
| 15-Apr                                                                                                                               | 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          |
| 16-Apr                                                                                                                               | 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          |
| 17-Apr                                                                                                                               | 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          |
| 18-Apr                                                                                                                               | 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          |
| 19-Apr                                                                                                                               | 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          |
| 20-Apr                                                                                                                               | 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          |
| 21-Apr                                                                                                                               | 0.0                           | 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          |
| 22-Apr                                                                                                                               | 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          |
| 23-Apr                                                                                                                               | 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          |
| 24-Apr                                                                                                                               | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 25-Apr                                                                                                                               | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 26-Apr                                                                                                                               | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 27-Apr                                                                                                                               | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 28-Apr                                                                                                                               | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 29-Apr                                                                                                                               | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 30-Apr                                                                                                                               | 0.0                           | 0.0 | 0.0 | 0.0 | 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 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00              |                               |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                                                                                                               |     |     |     |     |     |     |     |     |     |     |     | Diurnal Average                                                                                                                         |               |               |
| 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00              |                               |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                                                                                                               |     |     |     |     |     |     |     |     |     |     |     | Diurnal Maximum                                                                                                                         |               |               |
| C - Calibration A - Automated Daily Zero Span                                                                                        |                               |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                                                                                                               |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                         |               |               |



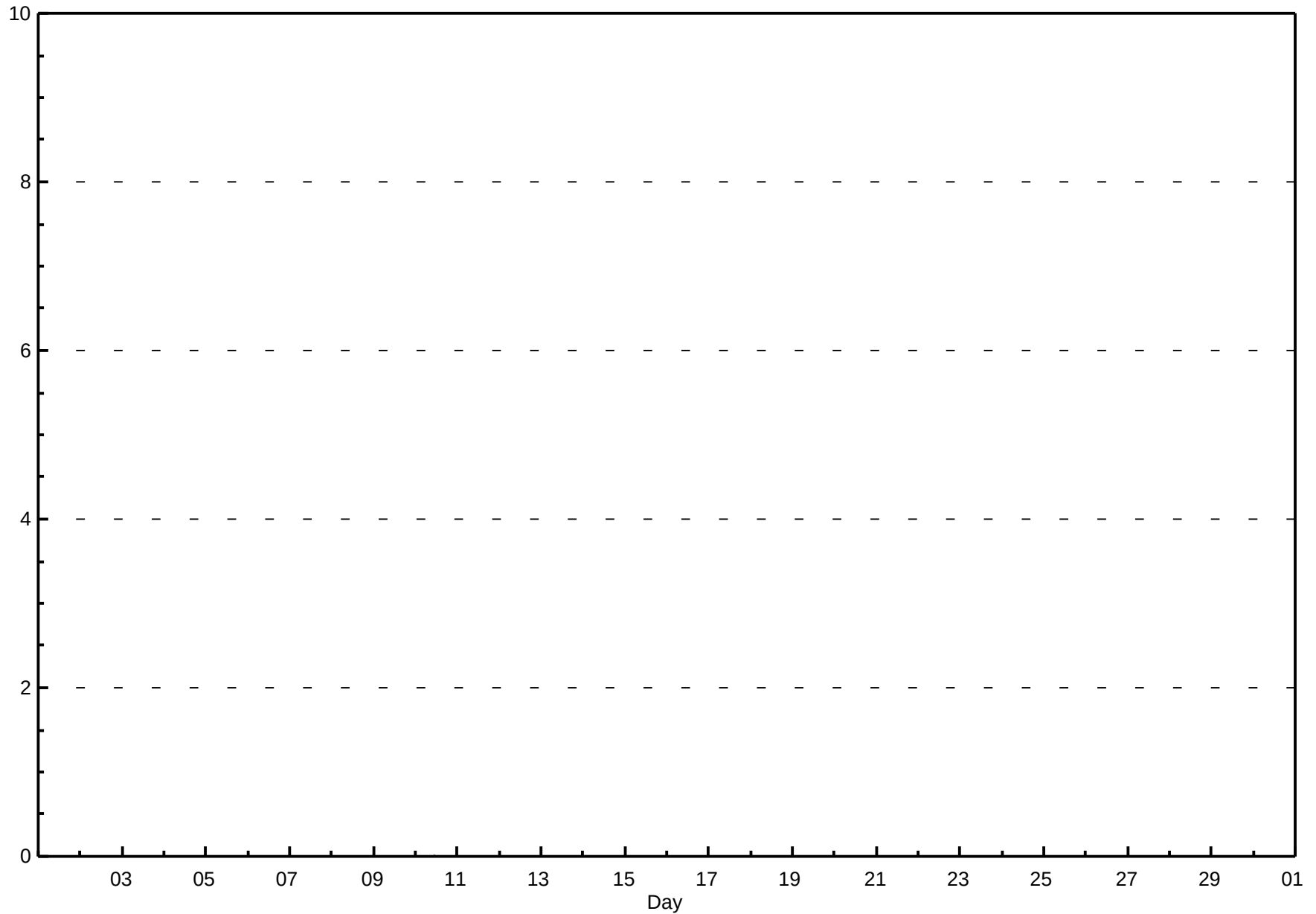


# Hourly Maximums

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - April 2014

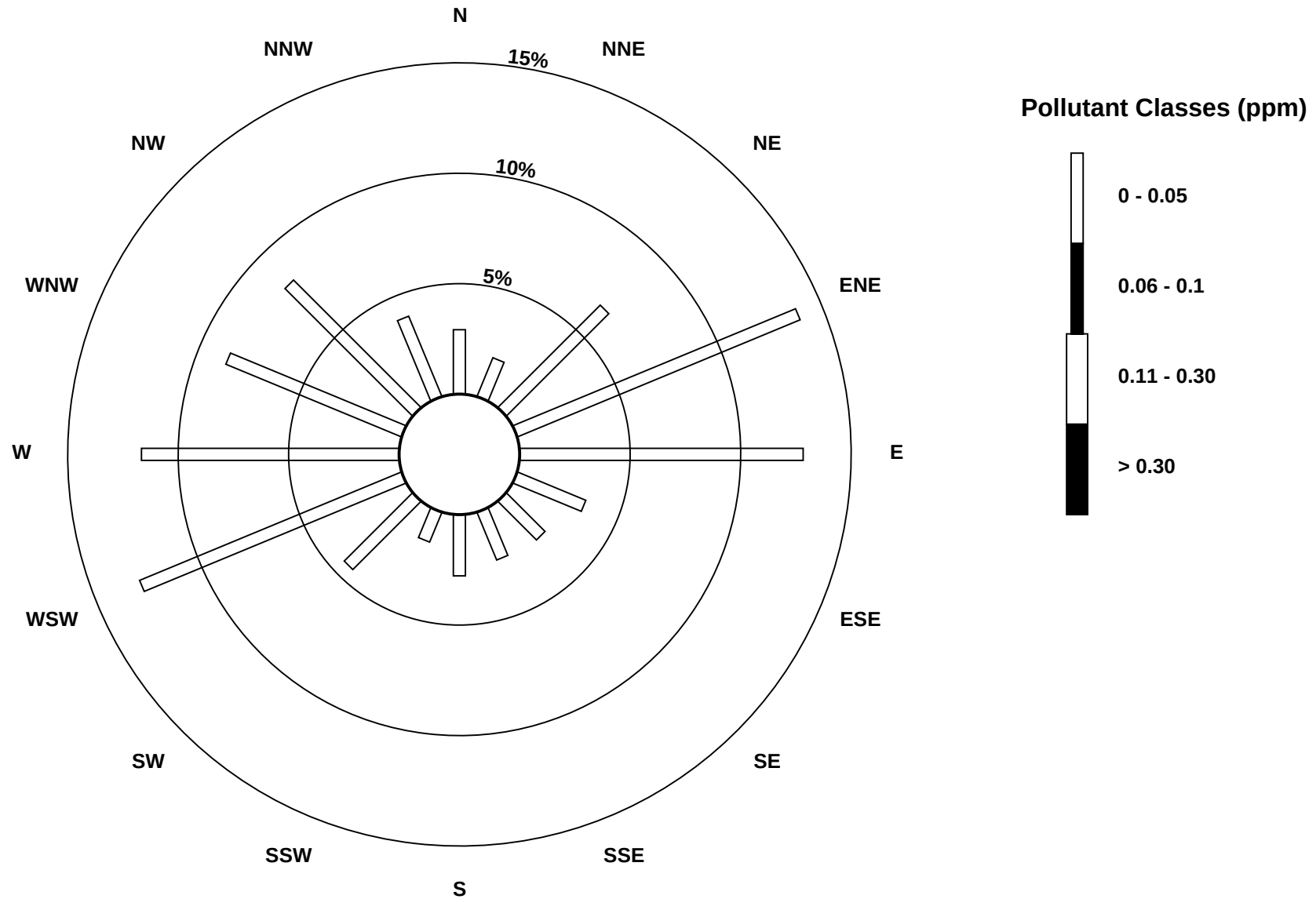
| Maximum Value: 0.01 ppm on Apr 10 11:00                                                                                 |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Maximum Daily Average: 0.00 ppm on Apr 10                                                                                                                         |     |     |                 | Hours in Service: 720     |               |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----------------|---------------------------|---------------|
| Minimum Value: 0.0 ppm on Apr 23 23:00                                                                                  |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Minimum Daily Average: 0.00 ppm on Apr 23                                                                                                                         |     |     |                 | Hours of Data: 686        |               |
| Maximum Diurnal Average: 0.00 ppm at hour 11                                                                            |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Minimum Diurnal Average: 0.00 ppm at hour 22                                                                                                                      |     |     |                 | Hours of Missing Data: 34 |               |
| Monthly Average: 0.001 ppm                                                                                              |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Percentiles: P <sub>1</sub> = 0.00 P <sub>10</sub> = 0.00 Q <sub>1</sub> = 0.00 Median = 0.00 Q <sub>3</sub> = 0.00 P <sub>90</sub> = 0.00 P <sub>99</sub> = 0.00 |     |     |                 | Hours of Calibration: 34  |               |
|                                                                                                                         |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Percent Operational Time: 100.0                                                                                                                                   |     |     |                 |                           |               |
| Day                                                                                                                     | Hourly Period Ending At (MST) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                   |     |     |                 | Daily Average             | Daily Maximum |
|                                                                                                                         | 1                             | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21                                                                                                                                                                | 22  | 23  | 24              |                           |               |
| 1-Apr                                                                                                                   | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 2-Apr                                                                                                                   | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 3-Apr                                                                                                                   | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 4-Apr                                                                                                                   | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 5-Apr                                                                                                                   | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 6-Apr                                                                                                                   | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 7-Apr                                                                                                                   | 0.0                           | 0.0 | 0.0 | 0.0 | 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          |
| 8-Apr                                                                                                                   | 0.0                           | 0.0 | 0.0 | 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          |
| 9-Apr                                                                                                                   | 0.0                           | 0.0 | 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          |
| 10-Apr                                                                                                                  | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | C   | C   | C   | 0.0 | 0.0 | 0.0 | A   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0                                                                                                                                                               | 0.0 | 0.0 | 0.0             | 0.00                      | 0.01          |
| 11-Apr                                                                                                                  | 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-Apr                                                                                                                  | 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          |
| 13-Apr                                                                                                                  | 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          |
| 14-Apr                                                                                                                  | 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          |
| 15-Apr                                                                                                                  | 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          |
| 16-Apr                                                                                                                  | 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          |
| 17-Apr                                                                                                                  | 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          |
| 18-Apr                                                                                                                  | 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          |
| 19-Apr                                                                                                                  | 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          |
| 20-Apr                                                                                                                  | 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          |
| 21-Apr                                                                                                                  | 0.0                           | 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          |
| 22-Apr                                                                                                                  | 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          |
| 23-Apr                                                                                                                  | 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          |
| 24-Apr                                                                                                                  | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 25-Apr                                                                                                                  | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 26-Apr                                                                                                                  | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 27-Apr                                                                                                                  | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 28-Apr                                                                                                                  | 0.0                           | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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          |
| 29-Apr                                                                                                                  | 0.0                           | 0.0 | 0.0 | 0.0 | 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          |
| 30-Apr                                                                                                                  | 0.0                           | 0.0 | 0.0 | 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          |
| 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                   |     |     | Diurnal Average |                           |               |
| 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.01 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                   |     |     | Diurnal Maximum |                           |               |
| C - Calibration A - Automated Daily Zero Span                                                                           |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                   |     |     |                 |                           |               |

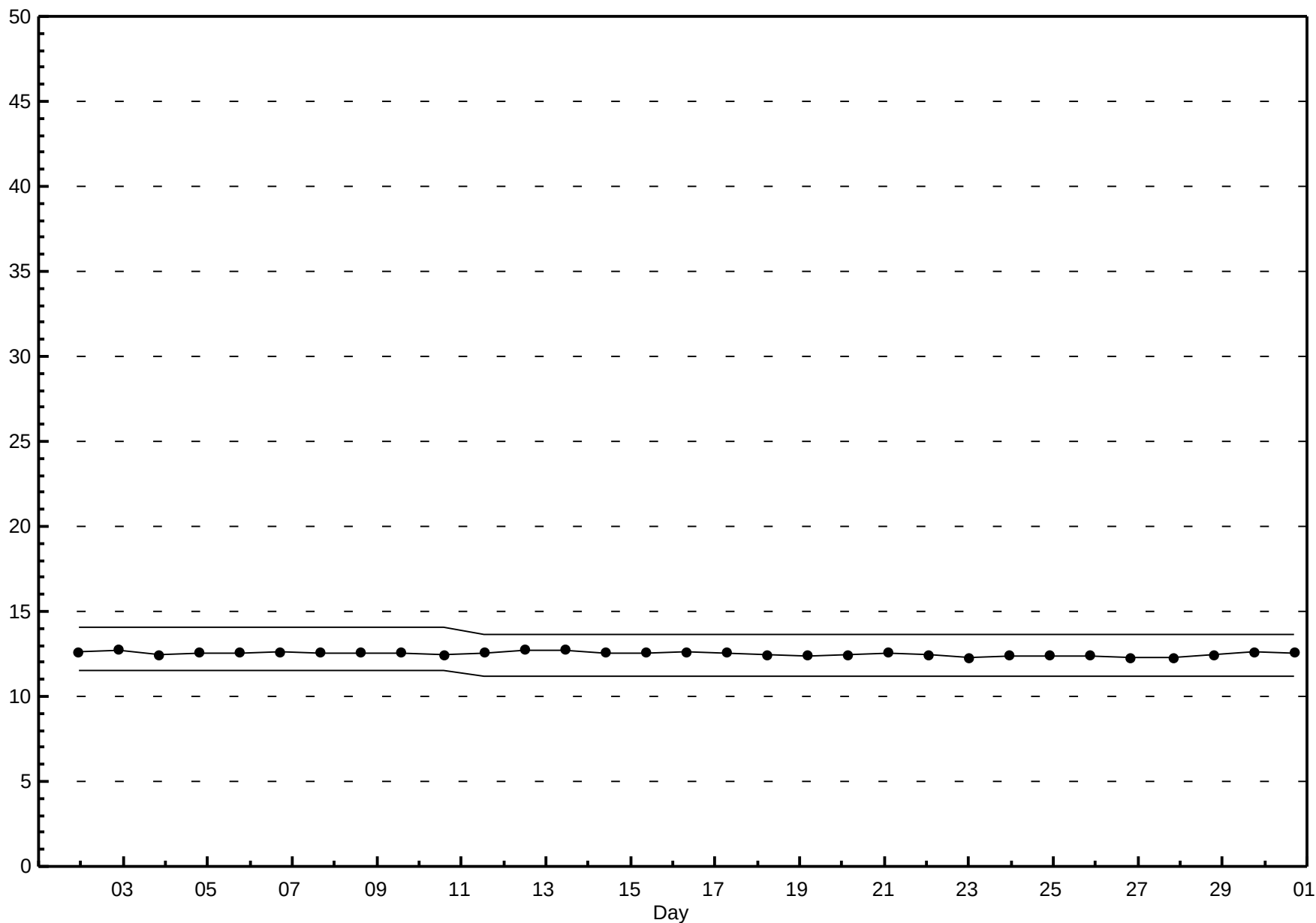


# Pollutant Rose

Non Methane Hydrocarbon (NMHC) - ppm

Henry Pirker - April 2014



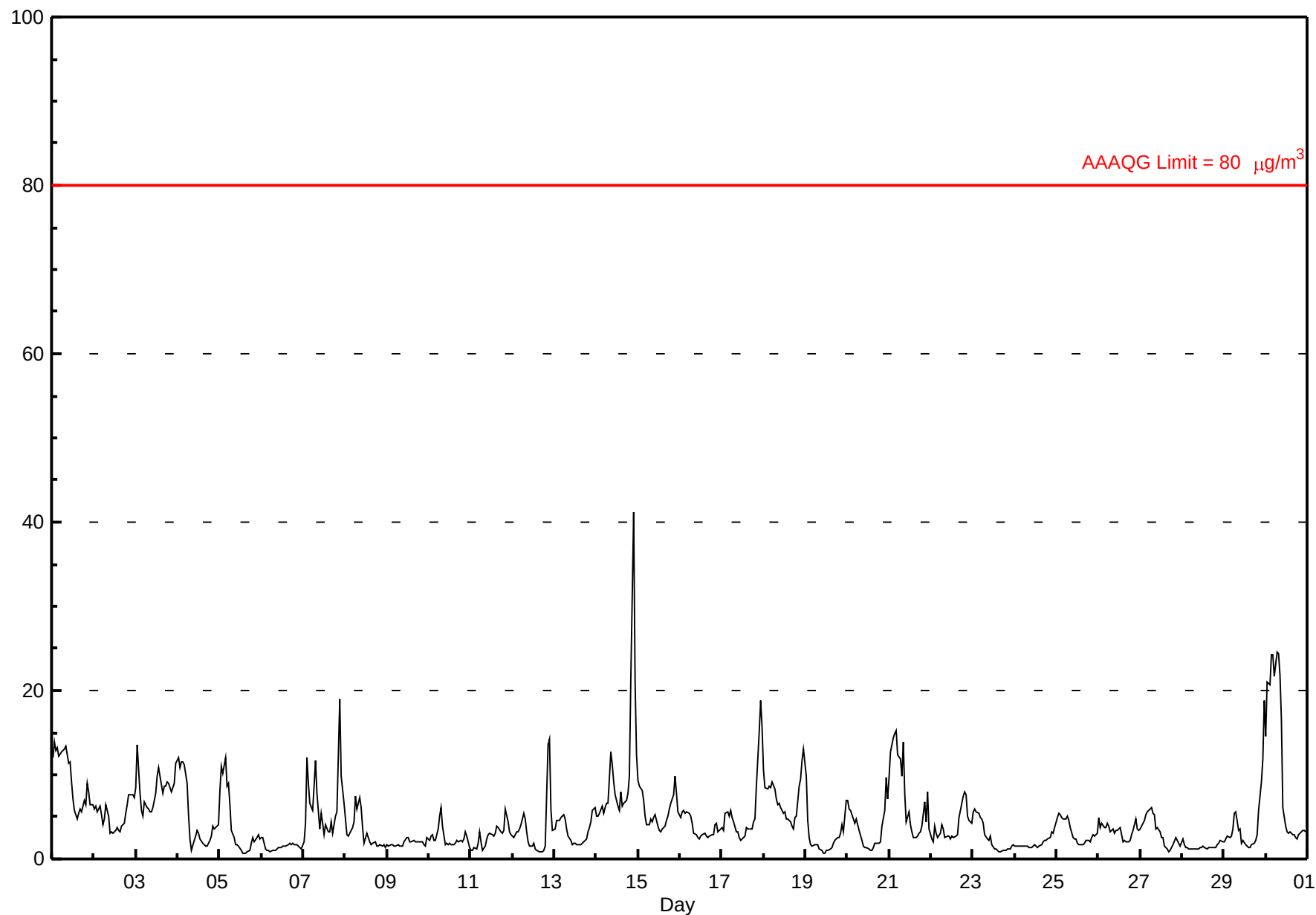


# Hourly Averages

Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

Henry Pirker - April 2014

|                                                                                                                                     |                               |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                           |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                       |               |               |      |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|----|----|----|----|----|----|---------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|------|
| Number of Exceedences: 1-hr: 0 24-hr: 0<br>Maximum Value: 41.2 µg/m³ on Apr 14 22:00<br>Maximum Daily Average: 10.8 µg/m³ on Apr 30 |                               |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                           |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 720<br>Hours of Missing Data: 0<br>Hours of Calibration: 0<br>Percent Operational Time: 100.0 |               |               |      |
| Minimum Value: 1 µg/m³ on Apr 5 15:00<br>Maximum Diurnal Average: 6.9 µg/m³ at hour 22<br>Monthly Average: 4.58 µg/m³               |                               |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 1.5 µg/m³ on Apr 6<br>Minimum Diurnal Average: 2.6 µg/m³ at hour 16<br>Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 1.4 Q <sub>1</sub> = 1.9 Median = 3.3 Q <sub>3</sub> = 5.7 P <sub>90</sub> = 9.2 P <sub>99</sub> = 21.5 |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                       |               |               |      |
| 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-Apr                                                                                                                               | 12                            | 14 | 13 | 13 | 12 | 13 | 13 | 13 | 13 | 11 | 12 | 9                                                                                                                                                                                                                                                         | 7  | 6  | 5  | 5  | 6  | 6  | 7  | 6  | 9  | 8  | 6  | 6                                                                                                                                     | 9.4           | 13.9          |      |
| 2-Apr                                                                                                                               | 6                             | 6  | 6  | 6  | 5  | 4  | 5  | 7  | 5  | 3  | 3  | 3                                                                                                                                                                                                                                                         | 3  | 4  | 3  | 3  | 4  | 4  | 5  | 6  | 8  | 8  | 8  | 7                                                                                                                                     | 5.1           | 7.7           |      |
| 3-Apr                                                                                                                               | 8                             | 14 | 8  | 6  | 5  | 7  | 6  | 6  | 6  | 6  | 6  | 8                                                                                                                                                                                                                                                         | 10 | 11 | 10 | 8  | 9  | 9  | 9  | 9  | 8  | 8  | 9  | 11                                                                                                                                    | 8.1           | 13.5          |      |
| 4-Apr                                                                                                                               | 12                            | 11 | 12 | 12 | 11 | 9  | 5  | 2  | 1  | 2  | 3  | 3                                                                                                                                                                                                                                                         | 3  | 2  | 2  | 2  | 2  | 2  | 2  | 3  | 4  | 4  | 4  | 4                                                                                                                                     | 4.8           | 12.1          |      |
| 5-Apr                                                                                                                               | 8                             | 11 | 10 | 12 | 9  | 9  | 6  | 3  | 2  | 2  | 2  | 2                                                                                                                                                                                                                                                         | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 3  | 2  | 3  | 3  | 2                                                                                                                                     | 4.0           | 12.0          |      |
| 6-Apr                                                                                                                               | 2                             | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                                                                                                                         | 2  | 1  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 1  | 1                                                                                                                                     | 1.5           | 2.5           |      |
| 7-Apr                                                                                                                               | 2                             | 4  | 12 | 9  | 7  | 6  | 9  | 12 | 8  | 4  | 5  | 4                                                                                                                                                                                                                                                         | 3  | 4  | 3  | 3  | 4  | 3  | 5  | 6  | 12 | 19 | 10 | 7                                                                                                                                     | 6.7           | 18.9          |      |
| 8-Apr                                                                                                                               | 5                             | 3  | 3  | 3  | 4  | 4  | 8  | 6  | 7  | 6  | 4  | 2                                                                                                                                                                                                                                                         | 3  | 3  | 2  | 2  | 2  | 2  | 2  | 1  | 2  | 2  | 2  | 1                                                                                                                                     | 3.2           | 7.5           |      |
| 9-Apr                                                                                                                               | 2                             | 1  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 3                                                                                                                                                                                                                                                         | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 1  | 2                                                                                                                                     | 1.9           | 2.6           |      |
| 10-Apr                                                                                                                              | 2                             | 3  | 3  | 2  | 2  | 4  | 5  | 6  | 4  | 2  | 2  | 2                                                                                                                                                                                                                                                         | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 3  | 3  | 1                                                                                                                                     | 2.6           | 6.0           |      |
| 11-Apr                                                                                                                              | 1                             | 1  | 1  | 1  | 2  | 3  | 2  | 1  | 1  | 2  | 3  | 3                                                                                                                                                                                                                                                         | 3  | 3  | 3  | 4  | 4  | 3  | 3  | 3  | 6  | 4  | 3  | 3                                                                                                                                     | 2.7           | 5.9           |      |
| 12-Apr                                                                                                                              | 3                             | 3  | 3  | 3  | 4  | 4  | 5  | 5  | 3  | 2  | 2  | 2                                                                                                                                                                                                                                                         | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 14 | 14 | 6  | 3                                                                                                                                     | 3.5           | 14.2          |      |
| 13-Apr                                                                                                                              | 4                             | 5  | 5  | 5  | 5  | 5  | 5  | 4  | 3  | 2  | 2  | 2                                                                                                                                                                                                                                                         | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 3  | 4  | 4  | 6  | 6                                                                                                                                     | 3.4           | 6.1           |      |
| 14-Apr                                                                                                                              | 5                             | 5  | 5  | 6  | 6  | 6  | 7  | 7  | 13 | 11 | 9  | 8                                                                                                                                                                                                                                                         | 6  | 6  | 8  | 6  | 7  | 7  | 8  | 10 | 21 | 41 | 21 | 12                                                                                                                                    | 10.0          | 41.2          |      |
| 15-Apr                                                                                                                              | 9                             | 9  | 8  | 7  | 5  | 4  | 4  | 5  | 4  | 5  | 5  | 4                                                                                                                                                                                                                                                         | 3  | 3  | 4  | 4  | 5  | 5  | 6  | 7  | 8  | 10 | 8  | 6                                                                                                                                     | 5.7           | 9.8           |      |
| 16-Apr                                                                                                                              | 5                             | 6  | 6  | 6  | 6  | 5  | 5  | 4  | 3  | 3  | 3  | 2                                                                                                                                                                                                                                                         | 3  | 3  | 3  | 3  | 3  | 3  | 3  | 3  | 4  | 4  | 3  | 4                                                                                                                                     | 3.8           | 5.7           |      |
| 17-Apr                                                                                                                              | 4                             | 3  | 5  | 6  | 5  | 6  | 5  | 4  | 3  | 3  | 3  | 2                                                                                                                                                                                                                                                         | 2  | 3  | 4  | 4  | 3  | 4  | 4  | 5  | 9  | 15 | 19 | 16                                                                                                                                    | 5.7           | 18.7          |      |
| 18-Apr                                                                                                                              | 10                            | 9  | 8  | 9  | 9  | 9  | 8  | 7  | 6  | 7  | 6  | 5                                                                                                                                                                                                                                                         | 6  | 5  | 5  | 4  | 4  | 4  | 5  | 5  | 9  | 9  | 12 | 13                                                                                                                                    | 7.2           | 13.1          |      |
| 19-Apr                                                                                                                              | 10                            | 4  | 2  | 2  | 2  | 2  | 2  | 2  | 1  | 1  | 1  | 1                                                                                                                                                                                                                                                         | 1  | 1  | 1  | 1  | 2  | 2  | 3  | 3  | 3  | 4  | 3  | 7                                                                                                                                     | 2.5           | 9.9           |      |
| 20-Apr                                                                                                                              | 7                             | 6  | 6  | 5  | 4  | 5  | 4  | 3  | 2  | 2  | 1  | 1                                                                                                                                                                                                                                                         | 1  | 1  | 1  | 1  | 2  | 2  | 2  | 2  | 4  | 6  | 10 | 7                                                                                                                                     | 3.5           | 9.6           |      |
| 21-Apr                                                                                                                              | 10                            | 13 | 14 | 15 | 15 | 12 | 12 | 10 | 14 | 8  | 4  | 6                                                                                                                                                                                                                                                         | 4  | 3  | 3  | 2  | 3  | 3  | 3  | 4  | 7  | 4  | 8  | 4                                                                                                                                     | 7.5           | 15.2          |      |
| 22-Apr                                                                                                                              | 2                             | 2  | 4  | 3  | 3  | 3  | 4  | 4  | 3  | 3  | 3  | 2                                                                                                                                                                                                                                                         | 3  | 3  | 3  | 3  | 5  | 6  | 7  | 8  | 8  | 5  | 5  | 4                                                                                                                                     | 3.9           | 8.0           |      |
| 23-Apr                                                                                                                              | 6                             | 6  | 6  | 5  | 5  | 5  | 4  | 3  | 2  | 2  | 3  | 2                                                                                                                                                                                                                                                         | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2                                                                                                                                     | 2.6           | 6.0           |      |
| 24-Apr                                                                                                                              | 1                             | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2                                                                                                                                                                                                                                                         | 2  | 1  | 2  | 2  | 2  | 2  | 2  | 2  | 3  | 3  | 3  | 4                                                                                                                                     | 1.9           | 3.6           |      |
| 25-Apr                                                                                                                              | 5                             | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 4  | 3  | 2  | 2                                                                                                                                                                                                                                                         | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 3  | 3  | 3  | 3                                                                                                                                     | 3.2           | 5.4           |      |
| 26-Apr                                                                                                                              | 5                             | 4  | 4  | 4  | 4  | 4  | 4  | 3  | 4  | 3  | 3  | 3                                                                                                                                                                                                                                                         | 4  | 3  | 2  | 2  | 2  | 2  | 2  | 3  | 3  | 5  | 4  | 3                                                                                                                                     | 3.4           | 5.0           |      |
| 27-Apr                                                                                                                              | 4                             | 4  | 5  | 5  | 6  | 6  | 6  | 5  | 5  | 4  | 4  | 3                                                                                                                                                                                                                                                         | 2  | 2  | 2  | 1  | 1  | 1  | 1  | 2  | 2  | 2  | 2  | 2                                                                                                                                     | 3.2           | 6.0           |      |
| 28-Apr                                                                                                                              | 2                             | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                                                                                                                         | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 2  | 2                                                                                                                                     | 1.5           | 2.4           |      |
| 29-Apr                                                                                                                              | 2                             | 2  | 3  | 3  | 3  | 3  | 5  | 6  | 3  | 4  | 2  | 2                                                                                                                                                                                                                                                         | 2  | 1  | 1  | 1  | 2  | 2  | 2  | 3  | 6  | 9  | 12 | 19                                                                                                                                    | 4.1           | 18.8          |      |
| 30-Apr                                                                                                                              | 15                            | 21 | 21 | 24 | 24 | 22 | 25 | 24 | 22 | 17 | 6  | 4                                                                                                                                                                                                                                                         | 3  | 3  | 3  | 3  | 3  | 3  | 2  | 3  | 3  | 3  | 3  | 3                                                                                                                                     | 3             | 10.8          | 24.5 |
| 5.6 6.0 6.1 6.0 5.7 5.7 5.8 5.4 5.0 4.0 3.5 3.2 3.0 2.8 2.7 2.6 2.8 2.9 3.4 3.7 5.6 6.9 6.0 5.5                                     |                               |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                           |    |    |    |    |    |    |    |    |    |    |    | Diurnal Average                                                                                                                       |               |               |      |
| 14.6 21.0 20.6 24.3 24.2 21.7 24.5 24.3 21.9 16.5 11.6 9.2 9.8 10.8 9.8 7.8 8.6 8.7 9.1 9.8 21.4 41.2 21.1 18.8                     |                               |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                           |    |    |    |    |    |    |    |    |    |    |    | Diurnal Maximum                                                                                                                       |               |               |      |
| Alberta Ambient Air Quality Guideline (AAAQG): 1-hr 80 µg/m³                                                                        |                               |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                           |    |    |    |    |    |    |    |    |    |    |    | Alberta Ambient Air Quality Objective (AAAQO): 24-hr 30 µg/m³                                                                         |               |               |      |



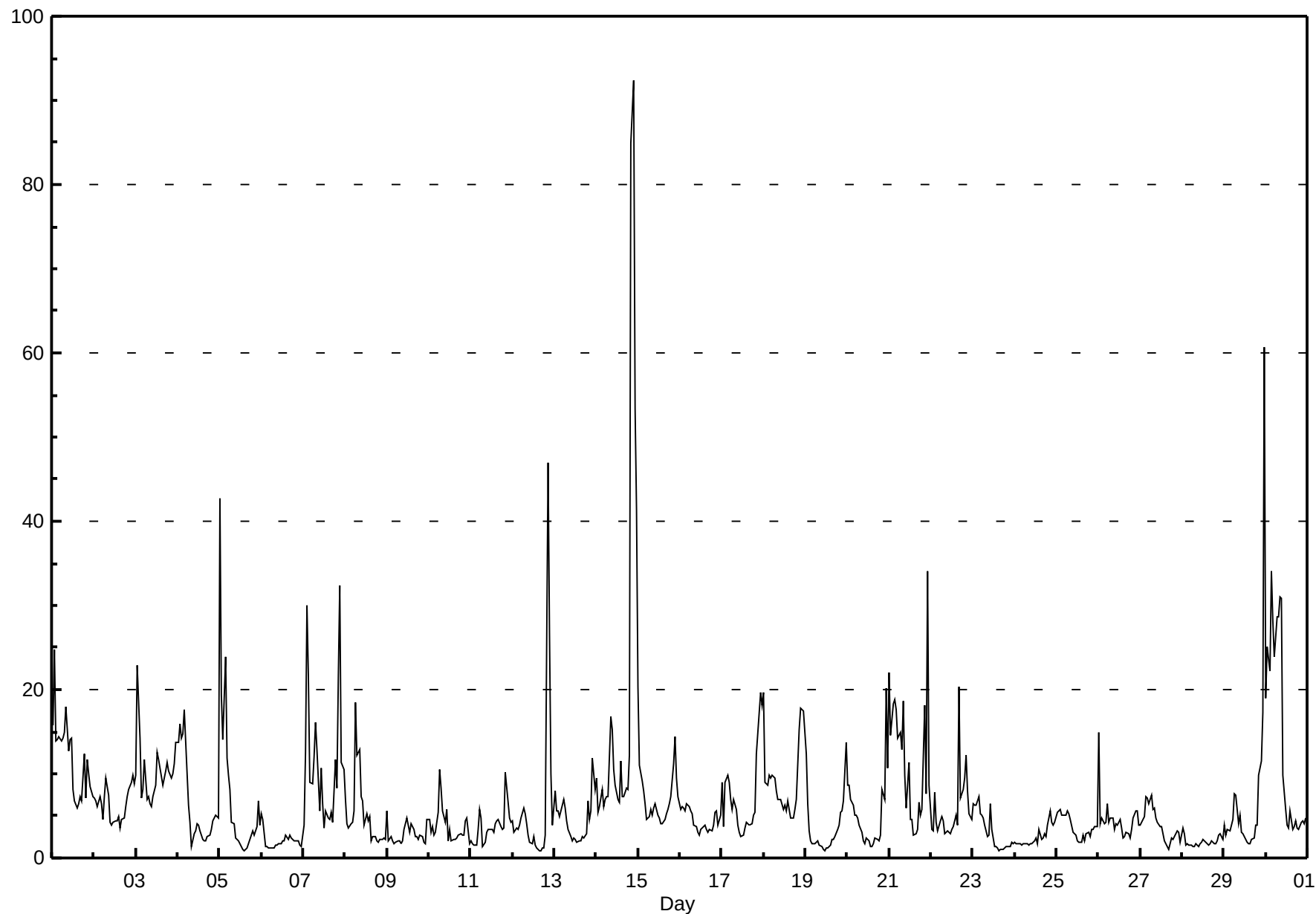
## Hourly Maximums

Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

Henry Pirker - April 2014

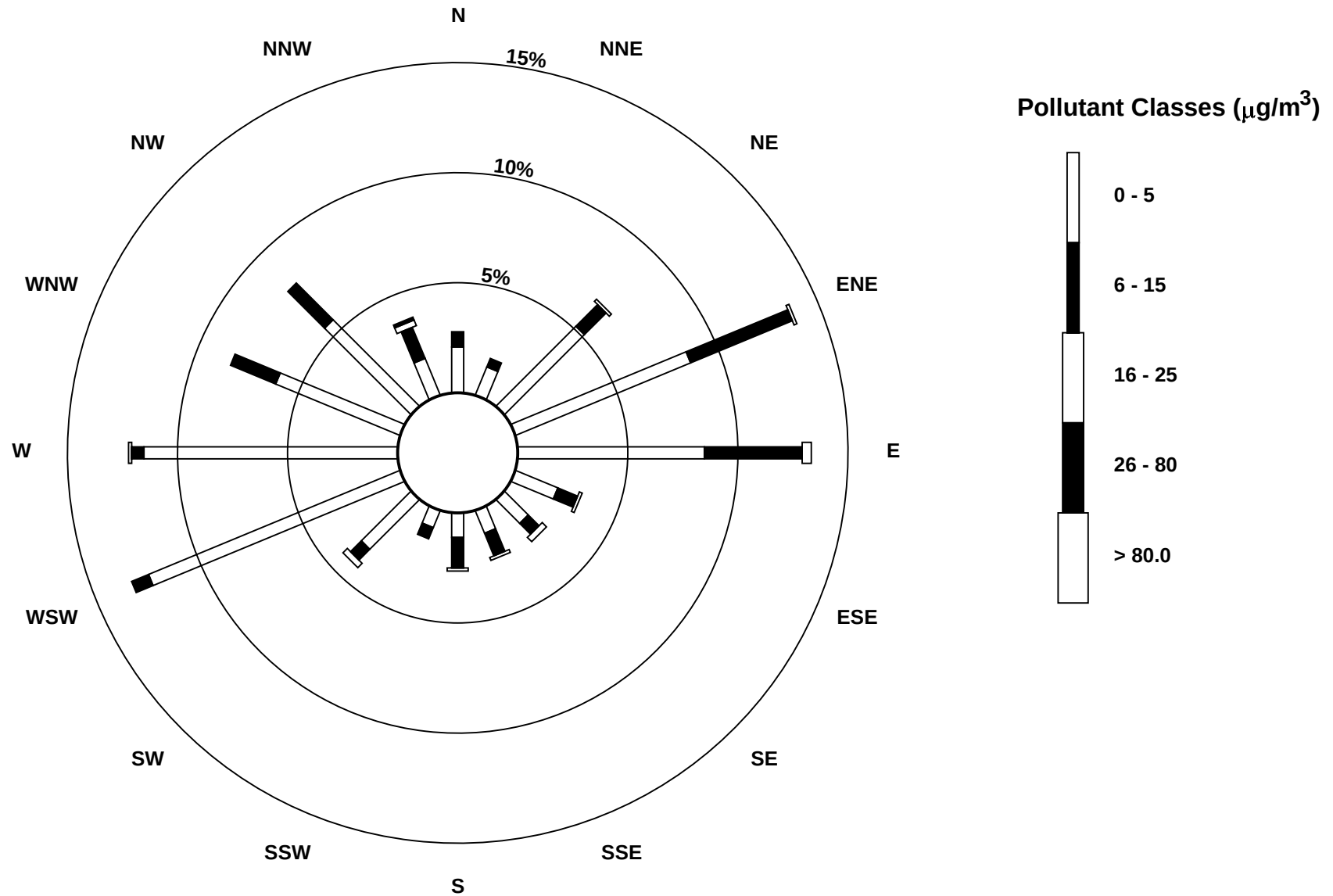
| Maximum Value: 92.4 μg/m <sup>3</sup> on Apr 14 22:00                                                                  |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 18.7 μg/m <sup>3</sup> on Apr 14                                                                                                      |    |    |    |                 | Hours in Service: 720           |               |
|------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|-----------------|---------------------------------|---------------|
| Minimum Value: 1 μg/m <sup>3</sup> on Apr 5 15:00                                                                      |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 1.9 μg/m <sup>3</sup> on Apr 28                                                                                                       |    |    |    |                 | Hours of Data: 720              |               |
| Maximum Diurnal Average: 11.2 μg/m <sup>3</sup> at hour 21                                                             |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 3.1 μg/m <sup>3</sup> at hour 16                                                                                                    |    |    |    |                 | Hours of Missing Data: 0        |               |
| Monthly Average: 6.53 μg/m <sup>3</sup>                                                                                |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 1.0 P <sub>10</sub> = 1.8 Q <sub>1</sub> = 2.6 Median = 4.4 Q <sub>3</sub> = 7.2 P <sub>90</sub> = 13.8 P <sub>99</sub> = 40.6 |    |    |    |                 | Hours of Calibration: 0         |               |
|                                                                                                                        |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                              |    |    |    |                 | Percent Operational Time: 100.0 |               |
| Day                                                                                                                    | Hourly Period Ending At (MST) |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                              |    |    |    |                 | Daily Average                   | Daily Maximum |
|                                                                                                                        | 1                             | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20                                                                                                                                                           | 21 | 22 | 23 | 24              |                                 |               |
| 1-Apr                                                                                                                  | 16                            | 25 | 14 | 14 | 14 | 14 | 14 | 15 | 18 | 13 | 14 | 14 | 8  | 7  | 6  | 6  | 7  | 7  | 12 | 7                                                                                                                                                            | 12 | 10 | 8  | 7               | 11.8                            | 24.7          |
| 2-Apr                                                                                                                  | 7                             | 7  | 6  | 7  | 6  | 5  | 7  | 10 | 7  | 4  | 4  | 4  | 4  | 4  | 5  | 4  | 5  | 5  | 6  | 7                                                                                                                                                            | 8  | 9  | 10 | 9               | 6.3                             | 9.8           |
| 3-Apr                                                                                                                  | 10                            | 23 | 14 | 7  | 8  | 12 | 7  | 7  | 7  | 6  | 7  | 9  | 12 | 12 | 11 | 9  | 10 | 10 | 11 | 10                                                                                                                                                           | 9  | 10 | 11 | 14              | 10.3                            | 22.9          |
| 4-Apr                                                                                                                  | 14                            | 16 | 14 | 15 | 18 | 10 | 6  | 4  | 1  | 3  | 3  | 4  | 4  | 3  | 2  | 2  | 2  | 2  | 3  | 3                                                                                                                                                            | 4  | 5  | 5  | 5               | 6.2                             | 17.6          |
| 5-Apr                                                                                                                  | 43                            | 19 | 14 | 24 | 12 | 10 | 8  | 4  | 4  | 2  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 2  | 3  | 3                                                                                                                                                            | 3  | 4  | 7  | 4               | 7.3                             | 42.7          |
| 6-Apr                                                                                                                  | 5                             | 5  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 2  | 2  | 2  | 2  | 3  | 2  | 3  | 2  | 2  | 2                                                                                                                                                            | 2  | 2  | 2  | 1               | 2.0                             | 5.3           |
| 7-Apr                                                                                                                  | 4                             | 12 | 30 | 21 | 9  | 9  | 12 | 16 | 13 | 6  | 11 | 6  | 4  | 6  | 5  | 5  | 5  | 4  | 12 | 8                                                                                                                                                            | 22 | 32 | 11 | 11              | 11.4                            | 32.4          |
| 8-Apr                                                                                                                  | 7                             | 4  | 4  | 4  | 4  | 6  | 18 | 12 | 13 | 7  | 7  | 4  | 5  | 4  | 5  | 2  | 2  | 3  | 2  | 2                                                                                                                                                            | 2  | 2  | 2  | 2               | 5.2                             | 18.4          |
| 9-Apr                                                                                                                  | 6                             | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 3  | 5  | 4  | 3  | 4  | 3  | 3  | 3  | 2  | 3                                                                                                                                                            | 3  | 2  | 2  | 5               | 2.8                             | 5.5           |
| 10-Apr                                                                                                                 | 5                             | 3  | 4  | 3  | 3  | 5  | 11 | 8  | 6  | 4  | 6  | 2  | 3  | 2  | 2  | 2  | 2  | 3  | 3  | 3                                                                                                                                                            | 3  | 4  | 5  | 2               | 3.9                             | 10.5          |
| 11-Apr                                                                                                                 | 2                             | 2  | 2  | 2  | 3  | 6  | 5  | 1  | 2  | 3  | 3  | 3  | 3  | 3  | 4  | 4  | 5  | 4  | 3  | 4                                                                                                                                                            | 10 | 7  | 5  | 4               | 3.7                             | 10.1          |
| 12-Apr                                                                                                                 | 4                             | 3  | 4  | 3  | 4  | 5  | 6  | 5  | 4  | 3  | 2  | 2  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 3                                                                                                                                                            | 47 | 27 | 10 | 4               | 6.0                             | 46.9          |
| 13-Apr                                                                                                                 | 8                             | 6  | 6  | 5  | 6  | 7  | 6  | 4  | 3  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 3  | 2  | 3  | 7                                                                                                                                                            | 5  | 6  | 12 | 8               | 4.6                             | 11.9          |
| 14-Apr                                                                                                                 | 10                            | 5  | 6  | 8  | 6  | 7  | 7  | 7  | 17 | 15 | 11 | 9  | 7  | 7  | 12 | 7  | 7  | 8  | 8  | 12                                                                                                                                                           | 85 | 92 | 53 | 41              | 18.7                            | 92.4          |
| 15-Apr                                                                                                                 | 20                            | 11 | 9  | 8  | 6  | 5  | 5  | 6  | 5  | 6  | 6  | 5  | 5  | 4  | 4  | 5  | 5  | 6  | 7  | 7                                                                                                                                                            | 11 | 14 | 10 | 7               | 7.4                             | 20.3          |
| 16-Apr                                                                                                                 | 6                             | 6  | 6  | 6  | 6  | 6  | 6  | 5  | 4  | 4  | 3  | 3  | 3  | 4  | 4  | 3  | 3  | 3  | 3  | 4                                                                                                                                                            | 5  | 6  | 4  | 5               | 4.5                             | 6.5           |
| 17-Apr                                                                                                                 | 9                             | 4  | 9  | 10 | 9  | 7  | 6  | 7  | 6  | 4  | 3  | 2  | 3  | 4  | 4  | 4  | 4  | 4  | 5  | 5                                                                                                                                                            | 12 | 17 | 20 | 18              | 7.3                             | 19.7          |
| 18-Apr                                                                                                                 | 20                            | 9  | 9  | 10 | 10 | 10 | 9  | 8  | 7  | 7  | 7  | 6  | 6  | 6  | 7  | 5  | 5  | 5  | 6  | 7                                                                                                                                                            | 15 | 18 | 18 | 17              | 9.3                             | 19.7          |
| 19-Apr                                                                                                                 | 12                            | 6  | 3  | 2  | 2  | 2  | 2  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 2  | 3  | 3  | 4                                                                                                                                                            | 5  | 6  | 7  | 14              | 3.6                             | 13.7          |
| 20-Apr                                                                                                                 | 9                             | 9  | 7  | 6  | 5  | 5  | 5  | 4  | 3  | 2  | 2  | 2  | 2  | 1  | 1  | 2  | 2  | 2  | 2  | 3                                                                                                                                                            | 8  | 7  | 20 | 11              | 5.0                             | 20.3          |
| 21-Apr                                                                                                                 | 22                            | 15 | 18 | 19 | 18 | 14 | 15 | 13 | 19 | 10 | 6  | 11 | 5  | 5  | 3  | 3  | 3  | 7  | 5  | 6                                                                                                                                                            | 18 | 8  | 34 | 9               | 11.8                            | 34.0          |
| 22-Apr                                                                                                                 | 3                             | 3  | 8  | 4  | 3  | 4  | 5  | 4  | 3  | 3  | 3  | 3  | 3  | 4  | 5  | 4  | 20 | 7  | 8  | 10                                                                                                                                                           | 12 | 8  | 5  | 5               | 5.8                             | 20.4          |
| 23-Apr                                                                                                                 | 6                             | 6  | 6  | 7  | 5  | 5  | 5  | 4  | 3  | 3  | 6  | 3  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                            | 1  | 1  | 2  | 2               | 3.2                             | 7.3           |
| 24-Apr                                                                                                                 | 2                             | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 3  | 2  | 2  | 3  | 2  | 4                                                                                                                                                            | 6  | 4  | 4  | 4               | 2.5                             | 5.5           |
| 25-Apr                                                                                                                 | 5                             | 6  | 6  | 5  | 5  | 5  | 6  | 5  | 5  | 3  | 3  | 3  | 2  | 2  | 2  | 3  | 2  | 3  | 3  | 2                                                                                                                                                            | 3  | 3  | 4  | 4               | 3.7                             | 5.8           |
| 26-Apr                                                                                                                 | 15                            | 4  | 5  | 4  | 4  | 6  | 4  | 5  | 5  | 3  | 4  | 4  | 5  | 4  | 2  | 2  | 3  | 3  | 2  | 3                                                                                                                                                            | 5  | 6  | 6  | 4               | 4.5                             | 14.9          |
| 27-Apr                                                                                                                 | 4                             | 4  | 5  | 7  | 7  | 7  | 7  | 6  | 6  | 5  | 4  | 4  | 4  | 3  | 2  | 1  | 1  | 2  | 2  | 2                                                                                                                                                            | 3  | 3  | 3  | 2               | 3.9                             | 7.5           |
| 28-Apr                                                                                                                 | 4                             | 3  | 2  | 2  | 2  | 2  | 1  | 1  | 2  | 1  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2                                                                                                                                                            | 2  | 3  | 3  | 2               | 1.9                             | 3.6           |
| 29-Apr                                                                                                                 | 4                             | 3  | 3  | 3  | 4  | 5  | 8  | 7  | 4  | 5  | 3  | 3  | 2  | 2  | 2  | 2  | 2  | 2  | 4  | 4                                                                                                                                                            | 10 | 12 | 17 | 61              | 7.1                             | 60.7          |
| 30-Apr                                                                                                                 | 19                            | 25 | 22 | 34 | 28 | 24 | 29 | 29 | 31 | 31 | 10 | 6  | 4  | 4  | 6  | 3  | 4  | 4  | 4  | 3                                                                                                                                                            | 4  | 4  | 4  | 5               | 14.0                            | 34.2          |
| 10.0 8.2 8.0 8.2 7.1 6.8 7.5 6.9 6.7 5.4 4.7 4.3 3.8 3.5 3.7 3.1 3.9 3.8 4.4 4.7 11.2 11.0 10.1 9.5                    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                              |    |    |    | Diurnal Average |                                 |               |
| 42.7 25.0 30.0 34.2 28.2 23.9 28.7 28.7 31.1 30.9 14.0 14.3 12.5 11.7 11.6 8.7 20.4 10.4 12.3 12.2 84.9 92.4 53.4 60.7 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                              |    |    |    | Diurnal Maximum |                                 |               |





# Pollutant Rose

Particulate Matter 2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$   
Henry Pirker - April 2014



# Hourly Averages

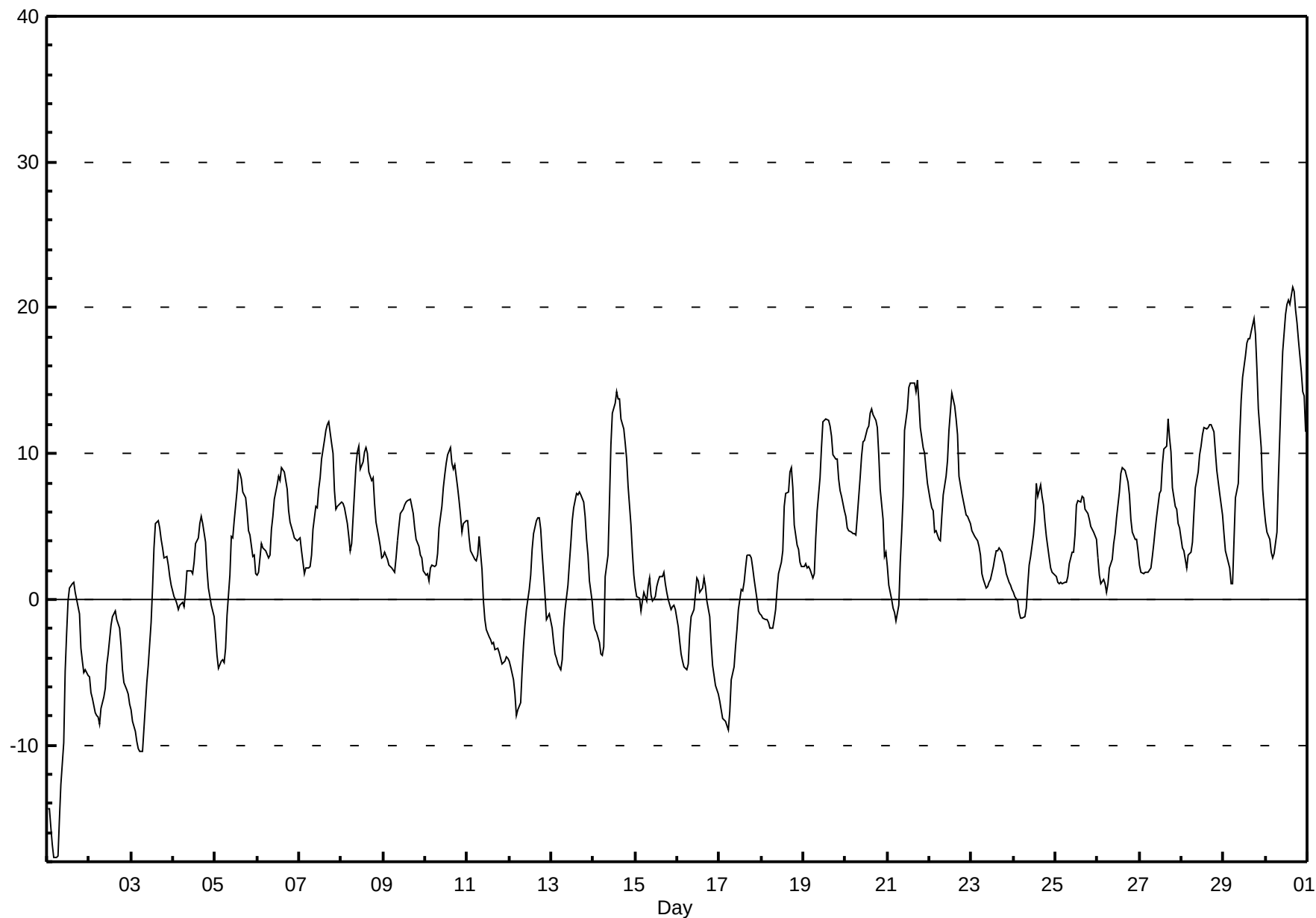
External Temperature (ET) - °C

Henry Pirker - April 2014

| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 21.4 °C on Apr 30 16:00 Maximum Daily Average: 13.1 °C on Apr 30 |                               |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 720                                                                                                                                                                                                              |    |                                                                                        |    |                 |               |      |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------|----|-----------------|---------------|------|
| Minimum Value: -18 °C on Apr 1 05:00<br>Maximum Diurnal Average: 8.1 °C at hour 16<br>Monthly Average: 3.46 °C                     |                               |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: -7.5 °C on Apr 1<br>Minimum Diurnal Average: -1.2 °C at hour 6<br>Percentiles: P <sub>1</sub> = -14.9 P <sub>10</sub> = -4.3 Q <sub>1</sub> = 0.1 Median = 3.2 Q <sub>3</sub> = 7.1 P <sub>90</sub> = 11.3 P <sub>99</sub> = 19.4 |    | Hours of Missing Data: 0<br>Hours of Calibration: 0<br>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-Apr                                                                                                                              | -14                           | -14 | -16 | -17 | -18 | -18 | -18 | -15 | -13 | -10 | -5 | -2 | 0  | 1  | 1  | 1  | 0  | 0  | -1 | -3 | -4                                                                                                                                                                                                                                                       | -5 | -5                                                                                     | -5 | -7.5            | 1.1           |      |
| 2-Apr                                                                                                                              | -5                            | -6  | -7  | -8  | -8  | -8  | -9  | -7  | -7  | -6  | -5 | -4 | -2 | -1 | -1 | -1 | -1 | -2 | -3 | -5 | -6                                                                                                                                                                                                                                                       | -6 | -6                                                                                     | -7 | -5.0            | -0.8          |      |
| 3-Apr                                                                                                                              | -8                            | -8  | -9  | -10 | -10 | -10 | -10 | -9  | -7  | -6  | -5 | -2 | 1  | 4  | 5  | 5  | 5  | 4  | 4  | 3  | 3                                                                                                                                                                                                                                                        | 2  | 2                                                                                      | 1  | -2.3            | 5.4           |      |
| 4-Apr                                                                                                                              | 0                             | 0   | 0   | -1  | 0   | 0   | 0   | 0   | 2   | 2   | 2  | 2  | 3  | 4  | 4  | 5  | 6  | 5  | 4  | 2  | 1                                                                                                                                                                                                                                                        | 0  | 0                                                                                      | -1 | 1.6             | 5.7           |      |
| 5-Apr                                                                                                                              | -2                            | -4  | -5  | -4  | -4  | -4  | -3  | -1  | 2   | 4   | 4  | 5  | 7  | 9  | 9  | 8  | 7  | 7  | 6  | 5  | 4                                                                                                                                                                                                                                                        | 3  | 3                                                                                      | 2  | 2.4             | 8.8           |      |
| 6-Apr                                                                                                                              | 2                             | 2   | 4   | 4   | 3   | 3   | 3   | 3   | 5   | 6   | 7  | 8  | 8  | 8  | 9  | 9  | 8  | 8  | 6  | 5  | 5                                                                                                                                                                                                                                                        | 4  | 4                                                                                      | 4  | 5.3             | 9.1           |      |
| 7-Apr                                                                                                                              | 4                             | 3   | 3   | 2   | 2   | 2   | 2   | 3   | 5   | 6   | 6  | 8  | 8  | 10 | 11 | 12 | 12 | 12 | 11 | 10 | 7                                                                                                                                                                                                                                                        | 6  | 6                                                                                      | 7  | 6.6             | 12.1          |      |
| 8-Apr                                                                                                                              | 7                             | 7   | 6   | 5   | 4   | 3   | 4   | 6   | 9   | 10  | 11 | 9  | 9  | 10 | 10 | 10 | 9  | 8  | 8  | 7  | 5                                                                                                                                                                                                                                                        | 4  | 4                                                                                      | 3  | 7.0             | 10.5          |      |
| 9-Apr                                                                                                                              | 3                             | 3   | 3   | 2   | 2   | 2   | 2   | 3   | 4   | 5   | 6  | 6  | 7  | 7  | 7  | 7  | 6  | 6  | 5  | 4  | 4                                                                                                                                                                                                                                                        | 3  | 3                                                                                      | 2  | 4.2             | 6.9           |      |
| 10-Apr                                                                                                                             | 2                             | 2   | 1   | 2   | 2   | 2   | 2   | 3   | 5   | 6   | 8  | 9  | 9  | 10 | 10 | 9  | 9  | 9  | 8  | 7  | 6                                                                                                                                                                                                                                                        | 5  | 5                                                                                      | 5  | 5.7             | 10.5          |      |
| 11-Apr                                                                                                                             | 5                             | 4   | 3   | 3   | 3   | 3   | 3   | 4   | 2   | 0   | -1 | -2 | -3 | -3 | -3 | -3 | -3 | -3 | -4 | -4 | -4                                                                                                                                                                                                                                                       | -4 | -4                                                                                     | -4 | -0.6            | 5.4           |      |
| 12-Apr                                                                                                                             | -4                            | -5  | -6  | -6  | -8  | -8  | -7  | -5  | -3  | -2  | -1 | 1  | 2  | 3  | 5  | 5  | 6  | 6  | 5  | 3  | 0                                                                                                                                                                                                                                                        | -1 | -1                                                                                     | -1 | -0.9            | 5.6           |      |
| 13-Apr                                                                                                                             | -2                            | -3  | -4  | -4  | -4  | -5  | -4  | -2  | -1  | 1   | 2  | 4  | 5  | 6  | 7  | 7  | 7  | 7  | 7  | 6  | 4                                                                                                                                                                                                                                                        | 3  | 1                                                                                      | 0  | 1.6             | 7.3           |      |
| 14-Apr                                                                                                                             | -2                            | -2  | -2  | -3  | -4  | -4  | -3  | 2   | 3   | 7   | 11 | 13 | 13 | 14 | 14 | 14 | 12 | 12 | 11 | 10 | 8                                                                                                                                                                                                                                                        | 5  | 3                                                                                      | 2  | 5.5             | 14.3          |      |
| 15-Apr                                                                                                                             | 1                             | 0   | 0   | -1  | 0   | 0   | 0   | 1   | 2   | 0   | 0  | 0  | 1  | 1  | 2  | 2  | 2  | 1  | 0  | 0  | -1                                                                                                                                                                                                                                                       | -1 | 0                                                                                      | -1 | 0.4             | 1.9           |      |
| 16-Apr                                                                                                                             | -2                            | -3  | -4  | -4  | -5  | -5  | -4  | -2  | -1  | -1  | 0  | 1  | 1  | 0  | 1  | 1  | 1  | 0  | -1 | -3 | -5                                                                                                                                                                                                                                                       | -5 | -6                                                                                     | -7 | -2.1            | 1.4           |      |
| 17-Apr                                                                                                                             | -7                            | -8  | -8  | -8  | -9  | -9  | -8  | -6  | -5  | -3  | -2 | -1 | 1  | 1  | 1  | 2  | 3  | 3  | 3  | 2  | 1                                                                                                                                                                                                                                                        | 0  | -1                                                                                     | -1 | -2.4            | 3.1           |      |
| 18-Apr                                                                                                                             | -1                            | -1  | -1  | -1  | -2  | -2  | -2  | -1  | -1  | 1   | 2  | 3  | 3  | 6  | 7  | 7  | 9  | 9  | 8  | 5  | 4                                                                                                                                                                                                                                                        | 3  | 3                                                                                      | 2  | 2.5             | 9.1           |      |
| 19-Apr                                                                                                                             | 2                             | 2   | 2   | 2   | 2   | 1   | 2   | 4   | 6   | 8   | 10 | 12 | 12 | 12 | 12 | 12 | 11 | 10 | 10 | 10 | 8                                                                                                                                                                                                                                                        | 8  | 7                                                                                      | 6  | 7.2             | 12.3          |      |
| 20-Apr                                                                                                                             | 6                             | 5   | 5   | 5   | 4   | 4   | 4   | 6   | 8   | 10  | 11 | 11 | 12 | 12 | 13 | 13 | 13 | 12 | 12 | 10 | 8                                                                                                                                                                                                                                                        | 6  | 3                                                                                      | 3  | 8.1             | 13.1          |      |
| 21-Apr                                                                                                                             | 2                             | 1   | 0   | -1  | -1  | -2  | 0   | 3   | 5   | 7   | 12 | 13 | 15 | 15 | 15 | 15 | 14 | 15 | 14 | 12 | 10                                                                                                                                                                                                                                                       | 10 | 9                                                                                      | 8  | 7.9             | 15.0          |      |
| 22-Apr                                                                                                                             | 7                             | 6   | 6   | 5   | 5   | 4   | 4   | 6   | 7   | 8   | 9  | 12 | 13 | 14 | 13 | 12 | 11 | 8  | 7  | 7  | 6                                                                                                                                                                                                                                                        | 6  | 6                                                                                      | 5  | 7.8             | 14.2          |      |
| 23-Apr                                                                                                                             | 5                             | 5   | 4   | 4   | 4   | 3   | 2   | 1   | 1   | 1   | 1  | 1  | 2  | 3  | 3  | 3  | 4  | 3  | 3  | 2  | 2                                                                                                                                                                                                                                                        | 1  | 1                                                                                      | 1  | 2.5             | 4.7           |      |
| 24-Apr                                                                                                                             | 0                             | 0   | 0   | -1  | -1  | -1  | -1  | -1  | 1   | 2   | 3  | 4  | 6  | 8  | 7  | 8  | 7  | 6  | 5  | 4  | 3                                                                                                                                                                                                                                                        | 2  | 2                                                                                      | 2  | 2.8             | 8.0           |      |
| 25-Apr                                                                                                                             | 2                             | 1   | 1   | 1   | 1   | 1   | 1   | 2   | 2   | 3   | 3  | 4  | 6  | 7  | 7  | 7  | 7  | 6  | 6  | 5  | 5                                                                                                                                                                                                                                                        | 5  | 5                                                                                      | 4  | 3.9             | 7.0           |      |
| 26-Apr                                                                                                                             | 3                             | 2   | 1   | 1   | 1   | 0   | 1   | 2   | 3   | 4   | 5  | 6  | 7  | 9  | 9  | 9  | 9  | 8  | 7  | 5  | 5                                                                                                                                                                                                                                                        | 4  | 4                                                                                      | 3  | 4.5             | 9.1           |      |
| 27-Apr                                                                                                                             | 2                             | 2   | 2   | 2   | 2   | 2   | 2   | 3   | 4   | 5   | 6  | 7  | 7  | 9  | 10 | 11 | 12 | 11 | 10 | 8  | 6                                                                                                                                                                                                                                                        | 6  | 5                                                                                      | 5  | 5.8             | 12.3          |      |
| 28-Apr                                                                                                                             | 3                             | 3   | 3   | 2   | 3   | 3   | 4   | 6   | 8   | 9   | 10 | 10 | 11 | 12 | 12 | 12 | 12 | 12 | 12 | 10 | 9                                                                                                                                                                                                                                                        | 8  | 7                                                                                      | 6  | 7.8             | 12.0          |      |
| 29-Apr                                                                                                                             | 4                             | 3   | 3   | 2   | 1   | 1   | 4   | 7   | 8   | 11  | 14 | 15 | 17 | 18 | 18 | 18 | 18 | 18 | 19 | 18 | 16                                                                                                                                                                                                                                                       | 13 | 10                                                                                     | 8  | 6               | 10.5          | 19.2 |
| 30-Apr                                                                                                                             | 5                             | 5   | 4   | 3   | 3   | 3   | 5   | 8   | 11  | 14  | 17 | 20 | 20 | 21 | 20 | 21 | 21 | 20 | 19 | 18 | 16                                                                                                                                                                                                                                                       | 14 | 14                                                                                     | 11 | 13.1            | 21.4          |      |
|                                                                                                                                    |                               |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                          |    |                                                                                        |    | Diurnal Average |               |      |
|                                                                                                                                    |                               |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                          |    |                                                                                        |    | Diurnal Maximum |               |      |

## Hourly Averages

External Temperature (ET) - °C  
Henry Pirker - April 2014



## Hourly Averages

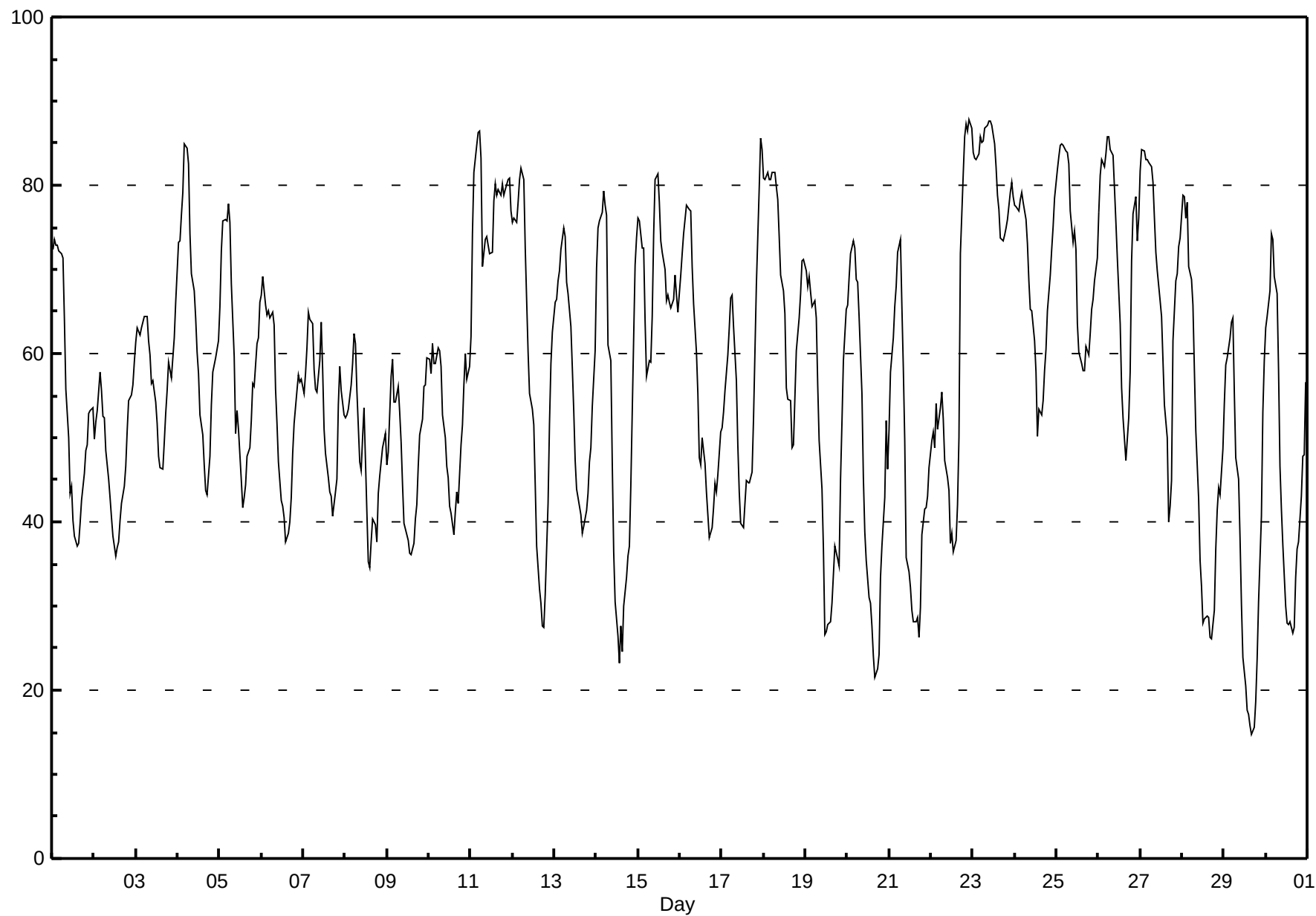
Relative Humidity (RH) - %

Henry Pirker - April 2014

|                                                                                                                         |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                   |               |               |  |                                 |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|--|---------------------------------|--|--|--|
| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0                                                                         |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720                                                                                                                                             |               |               |  |                                 |  |  |  |
| Maximum Value: 87.8 % on Apr 22 23:00                                                                                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 81.6 % on Apr 23                                                                                                                           |               |               |  | Hours of Data: 720              |  |  |  |
| Minimum Value: 15 % on Apr 29 17:00                                                                                     |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 38.7 % on Apr 29                                                                                                                           |               |               |  | Hours of Missing Data: 0        |  |  |  |
| Maximum Diurnal Average: 71.3 % at hour 6                                                                               |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 42.8 % at hour 17                                                                                                                        |               |               |  | Hours of Calibration: 0         |  |  |  |
| Monthly Average: 57.55 %                                                                                                |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 21.2 P <sub>10</sub> = 36.4 Q <sub>1</sub> = 44.8 Median = 57.9 Q <sub>3</sub> = 71.8 P <sub>90</sub> = 79.7 P <sub>99</sub> = 86.6 |               |               |  | 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-Apr                                                                                                                   | 72                            | 73 | 73 | 73 | 72 | 72 | 71 | 64 | 56 | 50 | 43 | 44 | 40 | 38 | 37 | 38 | 40 | 43 | 46 | 48 | 49 | 53 | 53 | 54                                                                                                                                                                | 54.3          | 73.5          |  |                                 |  |  |  |
| 2-Apr                                                                                                                   | 50                            | 52 | 53 | 58 | 56 | 53 | 52 | 49 | 45 | 43 | 41 | 38 | 36 | 37 | 38 | 40 | 42 | 44 | 47 | 51 | 54 | 55 | 56 | 59                                                                                                                                                                | 47.8          | 59.0          |  |                                 |  |  |  |
| 3-Apr                                                                                                                   | 61                            | 63 | 62 | 63 | 64 | 64 | 64 | 62 | 60 | 56 | 57 | 54 | 52 | 48 | 46 | 46 | 49 | 53 | 56 | 59 | 57 | 60 | 62 | 66                                                                                                                                                                | 57.7          | 66.1          |  |                                 |  |  |  |
| 4-Apr                                                                                                                   | 73                            | 73 | 76 | 79 | 85 | 84 | 83 | 74 | 70 | 68 | 64 | 60 | 58 | 53 | 50 | 47 | 44 | 43 | 48 | 54 | 58 | 59 | 60 | 62                                                                                                                                                                | 63.5          | 85.0          |  |                                 |  |  |  |
| 5-Apr                                                                                                                   | 66                            | 72 | 76 | 76 | 76 | 78 | 76 | 68 | 60 | 51 | 53 | 51 | 45 | 42 | 43 | 44 | 48 | 49 | 52 | 56 | 56 | 61 | 62 | 66                                                                                                                                                                | 59.4          | 77.7          |  |                                 |  |  |  |
| 6-Apr                                                                                                                   | 67                            | 69 | 66 | 65 | 65 | 64 | 65 | 63 | 56 | 52 | 47 | 43 | 42 | 41 | 38 | 39 | 40 | 43 | 48 | 52 | 56 | 57 | 57 | 57                                                                                                                                                                | 53.7          | 69.1          |  |                                 |  |  |  |
| 7-Apr                                                                                                                   | 55                            | 58 | 61 | 65 | 64 | 64 | 58 | 56 | 55 | 59 | 64 | 58 | 51 | 48 | 45 | 43 | 43 | 41 | 44 | 45 | 54 | 58 | 56 | 53                                                                                                                                                                | 54.1          | 64.9          |  |                                 |  |  |  |
| 8-Apr                                                                                                                   | 52                            | 53 | 53 | 56 | 59 | 62 | 61 | 56 | 47 | 46 | 50 | 54 | 41 | 35 | 35 | 38 | 40 | 40 | 38 | 43 | 45 | 49 | 50 | 51                                                                                                                                                                | 48.1          | 62.5          |  |                                 |  |  |  |
| 9-Apr                                                                                                                   | 47                            | 48 | 57 | 59 | 54 | 54 | 56 | 53 | 50 | 44 | 40 | 38 | 38 | 36 | 36 | 37 | 40 | 42 | 47 | 50 | 52 | 56 | 56 | 59                                                                                                                                                                | 48.0          | 59.5          |  |                                 |  |  |  |
| 10-Apr                                                                                                                  | 59                            | 58 | 61 | 59 | 59 | 61 | 60 | 58 | 53 | 50 | 47 | 45 | 42 | 41 | 38 | 41 | 44 | 42 | 49 | 51 | 56 | 60 | 57 | 59                                                                                                                                                                | 52.1          | 61.2          |  |                                 |  |  |  |
| 11-Apr                                                                                                                  | 62                            | 74 | 82 | 85 | 86 | 87 | 83 | 70 | 74 | 74 | 73 | 72 | 72 | 78 | 80 | 79 | 80 | 79 | 80 | 79 | 79 | 81 | 81 | 77                                                                                                                                                                | 77.8          | 86.5          |  |                                 |  |  |  |
| 12-Apr                                                                                                                  | 76                            | 76 | 76 | 78 | 81 | 82 | 81 | 73 | 66 | 60 | 55 | 53 | 51 | 44 | 37 | 32 | 30 | 28 | 27 | 31 | 42 | 52 | 59 | 63                                                                                                                                                                | 56.4          | 82.1          |  |                                 |  |  |  |
| 13-Apr                                                                                                                  | 66                            | 67 | 69 | 70 | 72 | 75 | 74 | 68 | 67 | 63 | 58 | 53 | 47 | 44 | 42 | 41 | 39 | 39 | 41 | 43 | 47 | 49 | 54 | 60                                                                                                                                                                | 56.2          | 75.0          |  |                                 |  |  |  |
| 14-Apr                                                                                                                  | 70                            | 75 | 76 | 77 | 79 | 78 | 76 | 61 | 59 | 47 | 36 | 31 | 27 | 23 | 28 | 25 | 30 | 33 | 36 | 37 | 44 | 62 | 70 | 74                                                                                                                                                                | 52.2          | 79.3          |  |                                 |  |  |  |
| 15-Apr                                                                                                                  | 76                            | 76 | 73 | 72 | 64 | 57 | 59 | 59 | 64 | 74 | 81 | 81 | 78 | 73 | 72 | 70 | 66 | 67 | 66 | 65 | 66 | 69 | 67 | 65                                                                                                                                                                | 69.3          | 81.3          |  |                                 |  |  |  |
| 16-Apr                                                                                                                  | 69                            | 72 | 74 | 76 | 78 | 77 | 77 | 70 | 66 | 60 | 55 | 48 | 47 | 50 | 47 | 44 | 41 | 38 | 39 | 42 | 45 | 43 | 46 | 51                                                                                                                                                                | 56.4          | 77.6          |  |                                 |  |  |  |
| 17-Apr                                                                                                                  | 51                            | 53 | 56 | 60 | 63 | 67 | 67 | 63 | 57 | 49 | 44 | 40 | 39 | 42 | 45 | 45 | 45 | 46 | 52 | 60 | 68 | 80 | 86 | 84                                                                                                                                                                | 56.7          | 85.7          |  |                                 |  |  |  |
| 18-Apr                                                                                                                  | 81                            | 81 | 82 | 81 | 81 | 82 | 82 | 80 | 78 | 74 | 69 | 67 | 65 | 56 | 55 | 54 | 49 | 49 | 55 | 60 | 64 | 67 | 71 | 71                                                                                                                                                                | 68.9          | 81.6          |  |                                 |  |  |  |
| 19-Apr                                                                                                                  | 70                            | 68 | 69 | 67 | 66 | 66 | 64 | 56 | 50 | 44 | 37 | 27 | 27 | 28 | 28 | 30 | 34 | 37 | 36 | 35 | 45 | 52 | 59 | 65                                                                                                                                                                | 48.3          | 69.8          |  |                                 |  |  |  |
| 20-Apr                                                                                                                  | 66                            | 69 | 72 | 73 | 73 | 69 | 68 | 64 | 55 | 45 | 39 | 35 | 31 | 30 | 28 | 24 | 22 | 23 | 24 | 33 | 37 | 43 | 52 | 46                                                                                                                                                                | 46.7          | 73.4          |  |                                 |  |  |  |
| 21-Apr                                                                                                                  | 51                            | 58 | 62 | 66 | 68 | 72 | 74 | 66 | 58 | 50 | 36 | 34 | 32 | 29 | 28 | 28 | 29 | 26 | 30 | 38 | 42 | 42 | 43 | 46                                                                                                                                                                | 46.1          | 73.5          |  |                                 |  |  |  |
| 22-Apr                                                                                                                  | 50                            | 51 | 49 | 54 | 51 | 54 | 55 | 52 | 47 | 45 | 44 | 37 | 39 | 36 | 38 | 42 | 50 | 72 | 81 | 86 | 87 | 86 | 88 | 87                                                                                                                                                                | 57.6          | 87.8          |  |                                 |  |  |  |
| 23-Apr                                                                                                                  | 84                            | 83 | 83 | 84 | 86 | 85 | 85 | 87 | 87 | 88 | 88 | 87 | 85 | 82 | 79 | 77 | 74 | 73 | 74 | 75 | 76 | 79 | 80 | 79                                                                                                                                                                | 81.6          | 87.7          |  |                                 |  |  |  |
| 24-Apr                                                                                                                  | 78                            | 77 | 77 | 78 | 79 | 78 | 76 | 73 | 69 | 65 | 65 | 62 | 58 | 50 | 53 | 53 | 54 | 58 | 61 | 65 | 69 | 72 | 75 | 78                                                                                                                                                                | 67.7          | 79.1          |  |                                 |  |  |  |
| 25-Apr                                                                                                                  | 82                            | 83 | 85 | 85 | 85 | 84 | 84 | 83 | 77 | 73 | 74 | 72 | 64 | 60 | 59 | 58 | 58 | 61 | 60 | 62 | 65 | 66 | 69 | 71                                                                                                                                                                | 71.7          | 84.9          |  |                                 |  |  |  |
| 26-Apr                                                                                                                  | 77                            | 81 | 83 | 82 | 84 | 86 | 86 | 84 | 84 | 80 | 76 | 71 | 64 | 56 | 52 | 50 | 47 | 52 | 58 | 71 | 77 | 79 | 73 | 76                                                                                                                                                                | 72.0          | 85.7          |  |                                 |  |  |  |
| 27-Apr                                                                                                                  | 82                            | 84 | 84 | 83 | 83 | 83 | 82 | 80 | 76 | 72 | 70 | 66 | 64 | 59 | 54 | 50 | 40 | 42 | 45 | 62 | 69 | 69 | 73 | 74                                                                                                                                                                | 68.6          | 84.3          |  |                                 |  |  |  |
| 28-Apr                                                                                                                  | 79                            | 79 | 76 | 78 | 70 | 69 | 66 | 58 | 51 | 43 | 35 | 32 | 28 | 29 | 29 | 26 | 26 | 29 | 37 | 41 | 44 | 43 | 49 | 47.7                                                                                                                                                              | 78.8          |               |  |                                 |  |  |  |
| 29-Apr                                                                                                                  | 54                            | 59 | 59 | 62 | 64 | 64 | 55 | 48 | 45 | 38 | 30 | 24 | 21 | 18 | 17 | 16 | 15 | 16 | 19 | 24 | 30 | 41 | 53 | 59                                                                                                                                                                | 38.7          | 64.2          |  |                                 |  |  |  |
| 30-Apr                                                                                                                  | 63                            | 64 | 67 | 74 | 74 | 69 | 67 | 58 | 47 | 42 | 37 | 30 | 28 | 28 | 28 | 27 | 27 | 33 | 37 | 38 | 43 | 48 | 48 | 57                                                                                                                                                                | 47.2          | 74.3          |  |                                 |  |  |  |
| 66.3 68.3 69.7 71.2 71.3 71.3 70.3 65.2 60.9 56.8 53.6 50.3 47.0 44.5 43.5 42.9 42.8 44.6 47.4 51.8 55.9 59.7 61.9 63.9 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Diurnal Average                                                                                                                                                   |               |               |  |                                 |  |  |  |
| 84.0 84.3 84.7 84.9 86.3 86.5 85.7 86.8 87.2 87.6 87.7 87.2 84.8 82.1 80.2 78.9 79.6 78.9 81.4 85.8 87.3 86.4 87.8 86.8 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Diurnal Maximum                                                                                                                                                   |               |               |  |                                 |  |  |  |

## Hourly Averages

Relative Humidity (RH) - %  
Henry Pirker - April 2014



## Hourly Averages

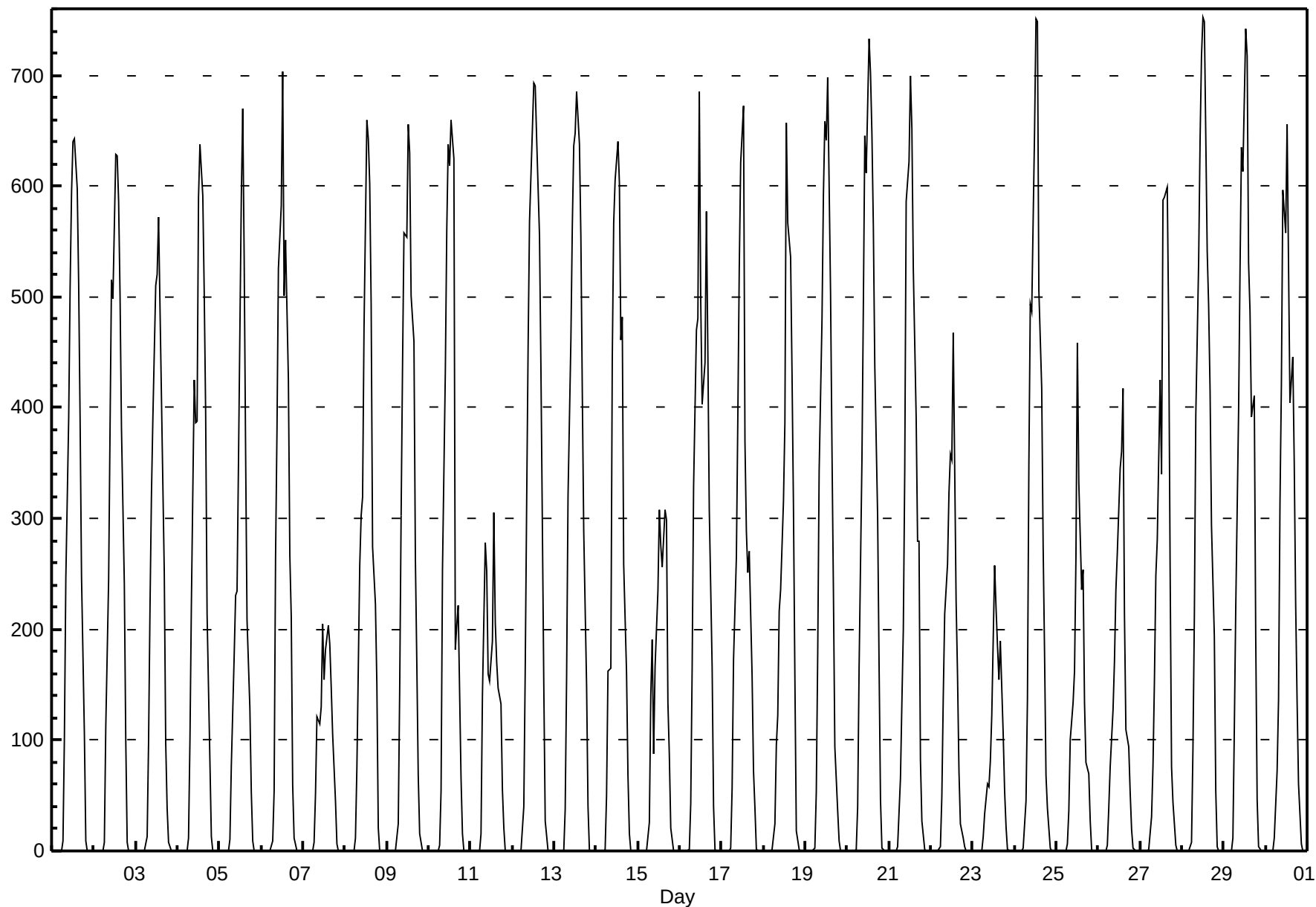
Solar Radiation (SR) - W/m<sup>2</sup>

Henry Pirker - April 2014

| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 752.4 W/m <sup>2</sup> on Apr 28 13:00<br>Maximum Daily Average: 253.7 W/m <sup>2</sup> on Apr 28 |                               |   |   |   |   |    |     |     |     |     |     |     |     |     |     |     |     |     |     |    |   |   |   | Hours in Service: 720<br>Hours of Data: 720<br>Hours of Missing Data: 0<br>Hours of Calibration: 0<br>Percent Operational Time: 100.0                                                                                                                                                  |               |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|---|---|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|
| Minimum Value: 0 W/m <sup>2</sup> on Apr 1 01:00<br>Maximum Diurnal Average: 550.7 W/m <sup>2</sup> at hour 13<br>Monthly Average: 176.43 W/m <sup>2</sup>          |                               |   |   |   |   |    |     |     |     |     |     |     |     |     |     |     |     |     |     |    |   |   |   | Minimum Daily Average: 64.8 W/m <sup>2</sup> on Apr 23<br>Minimum Diurnal Average: 0.0 W/m <sup>2</sup> at hour 1<br>Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 52.4 Q <sub>3</sub> = 313.0 P <sub>90</sub> = 566.7 P <sub>99</sub> = 706.5 |               |               |
| Day                                                                                                                                                                 | Hourly Period Ending At (MST) |   |   |   |   |    |     |     |     |     |     |     |     |     |     |     |     |     |     |    |   |   |   |                                                                                                                                                                                                                                                                                        | Daily Average | Daily Maximum |
| 1-Apr                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0  | 9   | 103 | 246 | 391 | 509 | 594 | 640 | 642 | 598 | 511 | 389 | 247 | 106 | 9  | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 208.1         | 642.2         |
| 2-Apr                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0  | 8   | 113 | 245 | 382 | 515 | 499 | 628 | 628 | 586 | 501 | 382 | 241 | 101 | 8  | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 201.5         | 628.3         |
| 3-Apr                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0  | 13  | 100 | 220 | 321 | 390 | 511 | 520 | 571 | 490 | 331 | 251 | 98  | 38  | 8  | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 160.9         | 571.4         |
| 4-Apr                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0  | 12  | 100 | 222 | 425 | 387 | 388 | 589 | 637 | 591 | 503 | 396 | 214 | 80  | 13 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 189.9         | 637.1         |
| 5-Apr                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0  | 10  | 78  | 176 | 231 | 235 | 349 | 590 | 670 | 535 | 362 | 208 | 128 | 53  | 9  | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 151.5         | 669.6         |
| 6-Apr                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0  | 9   | 54  | 265 | 380 | 525 | 582 | 703 | 501 | 551 | 425 | 266 | 211 | 59  | 12 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 189.3         | 702.8         |
| 7-Apr                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0  | 7   | 52  | 122 | 114 | 131 | 205 | 154 | 182 | 204 | 187 | 148 | 106 | 45  | 6  | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 69.3          | 204.9         |
| 8-Apr                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0  | 12  | 75  | 258 | 302 | 320 | 472 | 660 | 642 | 602 | 493 | 274 | 222 | 150 | 20 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 187.6         | 659.7         |
| 9-Apr                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0  | 25  | 145 | 303 | 438 | 558 | 554 | 656 | 630 | 501 | 460 | 264 | 170 | 68  | 16 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 199.5         | 655.8         |
| 10-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0  | 5   | 54  | 254 | 432 | 560 | 637 | 619 | 659 | 625 | 182 | 203 | 222 | 65  | 16 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 189.0         | 659.3         |
| 11-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0  | 16  | 141 | 278 | 252 | 159 | 153 | 190 | 305 | 207 | 170 | 147 | 133 | 56  | 21 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 92.7          | 305.1         |
| 12-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0  | 40  | 164 | 314 | 453 | 569 | 651 | 692 | 691 | 642 | 555 | 436 | 295 | 151 | 27 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 236.7         | 692.4         |
| 13-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 1  | 37  | 157 | 320 | 461 | 564 | 636 | 648 | 685 | 637 | 554 | 413 | 288 | 149 | 40 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 232.9         | 684.7         |
| 14-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 1  | 51  | 162 | 165 | 443 | 567 | 606 | 640 | 603 | 461 | 482 | 258 | 162 | 68  | 15 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 195.1         | 639.7         |
| 15-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 1  | 26  | 140 | 191 | 88  | 166 | 235 | 308 | 276 | 257 | 308 | 299 | 134 | 87  | 21 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 105.6         | 308.3         |
| 16-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 1  | 42  | 166 | 328 | 470 | 481 | 685 | 497 | 404 | 441 | 577 | 449 | 308 | 166 | 39 | 1 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 210.7         | 685.1         |
| 17-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 3  | 57  | 173 | 265 | 390 | 524 | 620 | 672 | 369 | 288 | 251 | 270 | 158 | 72  | 39 | 1 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 173.0         | 672.4         |
| 18-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 1  | 25  | 95  | 123 | 216 | 236 | 315 | 386 | 656 | 567 | 536 | 431 | 310 | 156 | 18 | 1 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 169.7         | 656.3         |
| 19-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 3  | 53  | 178 | 343 | 479 | 592 | 658 | 641 | 698 | 503 | 361 | 236 | 94  | 36  | 9  | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 203.5         | 697.7         |
| 20-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 2  | 40  | 165 | 353 | 493 | 645 | 611 | 733 | 702 | 647 | 563 | 437 | 301 | 169 | 46 | 2 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 246.3         | 733.3         |
| 21-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 4  | 66  | 134 | 200 | 343 | 587 | 622 | 699 | 652 | 525 | 391 | 280 | 279 | 82  | 28 | 2 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 203.9         | 699.1         |
| 22-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 4  | 49  | 140 | 213 | 259 | 323 | 358 | 353 | 467 | 225 | 159 | 73  | 24  | 11  | 3  | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 110.9         | 467.2         |
| 23-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0  | 12  | 33  | 60  | 58  | 81  | 122 | 258 | 219 | 186 | 154 | 189 | 105 | 54  | 22 | 2 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 64.8          | 258.2         |
| 24-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 3  | 45  | 136 | 347 | 494 | 487 | 650 | 751 | 748 | 506 | 417 | 275 | 178 | 68  | 39 | 3 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 214.5         | 751.0         |
| 25-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0  | 6   | 36  | 100 | 134 | 163 | 266 | 459 | 333 | 236 | 254 | 134 | 80  | 70  | 27 | 2 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 95.8          | 458.7         |
| 26-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 5  | 39  | 75  | 128 | 171 | 236 | 269 | 345 | 361 | 417 | 213 | 109 | 95  | 53  | 19 | 3 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 105.8         | 417.0         |
| 27-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 1  | 31  | 77  | 153 | 249 | 281 | 425 | 340 | 588 | 590 | 599 | 473 | 257 | 75  | 44 | 6 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 174.6         | 599.2         |
| 28-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 8  | 92  | 212 | 393 | 531 | 642 | 718 | 752 | 749 | 540 | 492 | 416 | 294 | 193 | 54 | 4 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 253.7         | 752.4         |
| 29-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 11 | 110 | 219 | 396 | 525 | 634 | 613 | 742 | 717 | 530 | 487 | 391 | 411 | 195 | 46 | 4 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 251.3         | 741.7         |
| 30-Apr                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 11 | 72  | 136 | 313 | 421 | 597 | 558 | 655 | 530 | 404 | 446 | 350 | 223 | 135 | 60 | 7 | 0 | 0 | 0                                                                                                                                                                                                                                                                                      | 205.0         | 655.2         |
| 0.0 0.0 0.0 0.0 0.0 2.0 33.9 120.4 243.1 344.9 422.1 485.3 550.7 550.5 469.8 397.5 295.0 199.6 93.8 24.5 1.2 0.0 0.0 0.0                                            |                               |   |   |   |   |    |     |     |     |     |     |     |     |     |     |     |     |     |     |    |   |   |   | Diurnal Average                                                                                                                                                                                                                                                                        |               |               |
| 0.0 0.0 0.0 0.0 0.0 11.4 110.0 218.7 396.1 531.5 645.0 717.5 752.4 748.5 646.7 599.2 473.1 411.0 194.5 60.3 6.9 0.0 0.0 0.0                                         |                               |   |   |   |   |    |     |     |     |     |     |     |     |     |     |     |     |     |     |    |   |   |   | Diurnal Maximum                                                                                                                                                                                                                                                                        |               |               |

## Hourly Averages

Solar Radiation (SR) - W/m<sup>2</sup>  
Henry Pirker - April 2014





# Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Henry Pirker - April 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                             | 4   | 4   | 4   | 5   | 3   | 2   | 4   | 5   | 5   | 4   | 3   | 5   | 6   | 7   | 8   | 10  | 11  | 8   | 8   | 7   | 7   | 8   | 7   | 4.0           | 10.9          |
| Dir    | 335                           | 354 | 339 | 322 | 304 | 331 | 339 | 326 | 316 | 306 | 299 | 52  | 64  | 57  | 60  | 64  | 62  | 72  | 64  | 53  | 58  | 60  | 71  | 63  | 38.0          | 72.3          |
| 2 Spd  | 8                             | 8   | 8   | 6   | 8   | 7   | 7   | 5   | 8   | 9   | 8   | 6   | 6   | 5   | 6   | 7   | 8   | 8   | 8   | 9   | 6   | 5   | 5   | 4   | 5.1           | 9.3           |
| Dir    | 57                            | 54  | 23  | 356 | 17  | 349 | 6   | 333 | 341 | 343 | 348 | 351 | 325 | 342 | 29  | 76  | 68  | 84  | 86  | 89  | 90  | 74  | 77  | 71  | 31.5          | 343.1         |
| 3 Spd  | 4                             | 4   | 5   | 4   | 3   | 5   | 5   | 8   | 9   | 5   | 9   | 8   | 8   | 7   | 9   | 11  | 11  | 11  | 8   | 6   | 6   | 6   | 4   | 3   | 6.5           | 11.1          |
| Dir    | 78                            | 66  | 79  | 71  | 84  | 70  | 81  | 94  | 110 | 85  | 85  | 87  | 80  | 76  | 75  | 72  | 75  | 80  | 73  | 76  | 89  | 91  | 121 | 149 | 83.1          | 80.0          |
| 4 Spd  | 1                             | 0   | 5   | 7   | 9   | 10  | 12  | 12  | 16  | 15  | 15  | 15  | 16  | 14  | 14  | 9   | 7   | 6   | 9   | 8   | 7   | 7   | 6   | 4   | 5.0           | 16.2          |
| Dir    | 303                           | 137 | 296 | 295 | 228 | 245 | 244 | 252 | 297 | 303 | 307 | 315 | 323 | 319 | 317 | 291 | 285 | 287 | 98  | 96  | 115 | 126 | 138 | 124 | 292.5         | 297.4         |
| 5 Spd  | 2                             | 2   | 1   | 1   | 2   | 1   | 3   | 7   | 11  | 22  | 13  | 12  | 14  | 16  | 15  | 15  | 11  | 12  | 9   | 5   | 6   | 5   | 6   | 1   | 7.4           | 22.4          |
| Dir    | 159                           | 297 | 211 | 311 | 320 | 188 | 237 | 234 | 246 | 264 | 255 | 260 | 245 | 264 | 284 | 286 | 287 | 279 | 274 | 239 | 249 | 234 | 277 | 169 | 263.4         | 264.1         |
| 6 Spd  | 2                             | 7   | 13  | 13  | 17  | 19  | 21  | 21  | 21  | 25  | 21  | 21  | 22  | 24  | 19  | 22  | 22  | 24  | 26  | 24  | 19  | 15  | 12  | 12  | 18.2          | 26.0          |
| Dir    | 236                           | 232 | 269 | 238 | 245 | 245 | 250 | 256 | 256 | 259 | 265 | 263 | 255 | 258 | 272 | 271 | 252 | 255 | 257 | 259 | 256 | 250 | 246 | 241 | 255.7         | 257.2         |
| 7 Spd  | 11                            | 3   | 1   | 2   | 2   | 4   | 4   | 3   | 5   | 5   | 7   | 8   | 7   | 5   | 9   | 4   | 5   | 7   | 3   | 6   | 1   | 3   | 3   | 4   | 3.8           | 11.4          |
| Dir    | 231                           | 196 | 97  | 219 | 174 | 157 | 159 | 171 | 186 | 150 | 151 | 175 | 175 | 183 | 232 | 233 | 255 | 221 | 241 | 234 | 46  | 108 | 153 | 170 | 193.5         | 231.0         |
| 8 Spd  | 7                             | 8   | 6   | 5   | 5   | 6   | 5   | 6   | 2   | 3   | 15  | 30  | 30  | 31  | 30  | 28  | 26  | 27  | 20  | 22  | 22  | 20  | 17  | 13  | 14.4          | 31.1          |
| Dir    | 202                           | 211 | 203 | 141 | 157 | 147 | 189 | 177 | 299 | 302 | 265 | 276 | 253 | 248 | 249 | 252 | 246 | 250 | 247 | 257 | 256 | 257 | 249 | 239 | 247.3         | 248.2         |
| 9 Spd  | 15                            | 22  | 23  | 23  | 23  | 23  | 20  | 18  | 24  | 24  | 27  | 32  | 32  | 33  | 32  | 31  | 27  | 23  | 22  | 18  | 24  | 18  | 16  | 6   | 22.9          | 33.3          |
| Dir    | 254                           | 262 | 259 | 255 | 256 | 259 | 260 | 271 | 269 | 267 | 270 | 273 | 263 | 272 | 274 | 277 | 268 | 266 | 271 | 265 | 260 | 264 | 257 | 228 | 265.4         | 272.3         |
| 10 Spd | 6                             | 10  | 8   | 10  | 6   | 4   | 4   | 3   | 9   | 23  | 29  | 28  | 29  | 29  | 27  | 27  | 23  | 23  | 19  | 18  | 12  | 2   | 8   | 11  | 15.0          | 29.4          |
| Dir    | 231                           | 241 | 242 | 239 | 242 | 254 | 262 | 244 | 254 | 261 | 256 | 260 | 267 | 262 | 257 | 274 | 272 | 266 | 260 | 262 | 256 | 204 | 220 | 238 | 258.2         | 262.3         |
| 11 Spd | 16                            | 6   | 5   | 3   | 4   | 4   | 8   | 15  | 28  | 28  | 28  | 26  | 26  | 24  | 21  | 15  | 15  | 11  | 10  | 8   | 6   | 7   | 7   | 9   | 11.1          | 28.4          |
| Dir    | 243                           | 237 | 176 | 133 | 147 | 172 | 252 | 263 | 314 | 314 | 320 | 313 | 314 | 313 | 317 | 338 | 354 | 351 | 350 | 335 | 312 | 304 | 309 | 315 | 310.9         | 313.9         |
| 12 Spd | 10                            | 8   | 9   | 5   | 3   | 4   | 6   | 10  | 11  | 12  | 12  | 10  | 9   | 8   | 8   | 8   | 8   | 7   | 6   | 4   | 2   | 2   | 4   | 7   | 5.8           | 12.3          |
| Dir    | 306                           | 313 | 308 | 320 | 312 | 256 | 262 | 247 | 245 | 247 | 251 | 280 | 289 | 291 | 289 | 285 | 282 | 305 | 332 | 319 | 325 | 262 | 8   | 63  | 286.3         | 250.6         |
| 13 Spd | 7                             | 5   | 6   | 7   | 5   | 4   | 5   | 7   | 8   | 6   | 7   | 9   | 9   | 11  | 12  | 14  | 13  | 13  | 10  | 8   | 8   | 6   | 1   | 1   | 7.5           | 13.7          |
| Dir    | 71                            | 82  | 70  | 73  | 79  | 84  | 90  | 95  | 108 | 95  | 86  | 91  | 83  | 81  | 81  | 87  | 87  | 85  | 84  | 79  | 91  | 99  | 88  | 317 | 85.3          | 87.0          |
| 14 Spd | 2                             | 4   | 4   | 3   | 3   | 3   | 2   | 1   | 1   | 3   | 3   | 4   | 6   | 7   | 6   | 7   | 10  | 9   | 6   | 4   | 1   | 2   | 2   | 4   | 1.5           | 9.7           |
| Dir    | 312                           | 307 | 328 | 328 | 316 | 321 | 290 | 259 | 197 | 284 | 286 | 282 | 310 | 313 | 30  | 69  | 91  | 98  | 93  | 89  | 61  | 333 | 340 | 291 | 1.0           | 91.1          |
| 15 Spd | 4                             | 5   | 5   | 5   | 4   | 7   | 8   | 12  | 12  | 12  | 10  | 11  | 12  | 10  | 8   | 9   | 8   | 8   | 8   | 4   | 0   | 3   | 3   | 7   | 6.5           | 12.2          |
| Dir    | 335                           | 1   | 335 | 332 | 12  | 49  | 43  | 48  | 39  | 33  | 39  | 22  | 26  | 32  | 49  | 60  | 63  | 68  | 77  | 93  | 267 | 343 | 45  | 72  | 38.6          | 33.4          |
| 16 Spd | 6                             | 5   | 4   | 5   | 6   | 6   | 5   | 8   | 10  | 10  | 9   | 9   | 8   | 10  | 8   | 8   | 9   | 11  | 11  | 11  | 9   | 9   | 7   | 6   | 7.8           | 11.3          |
| Dir    | 74                            | 63  | 57  | 49  | 51  | 52  | 50  | 59  | 66  | 67  | 47  | 42  | 36  | 38  | 60  | 36  | 72  | 68  | 63  | 62  | 63  | 69  | 81  | 73  | 58.5          | 61.8          |
| 17 Spd | 5                             | 3   | 4   | 4   | 4   | 3   | 5   | 8   | 11  | 11  | 11  | 11  | 12  | 12  | 12  | 11  | 12  | 13  | 11  | 12  | 12  | 13  | 11  | 9   | 9.0           | 13.0          |
| Dir    | 67                            | 59  | 59  | 72  | 72  | 66  | 80  | 99  | 94  | 94  | 86  | 79  | 71  | 71  | 73  | 69  | 82  | 84  | 87  | 91  | 100 | 106 | 96  | 89  | 83.9          | 84.4          |
| 18 Spd | 9                             | 9   | 8   | 6   | 7   | 7   | 7   | 7   | 5   | 1   | 3   | 4   | 5   | 4   | 5   | 2   | 4   | 3   | 5   | 6   | 4   | 3   | 4   | 1   | 2.4           | 9.0           |
| Dir    | 91                            | 89  | 91  | 84  | 74  | 80  | 81  | 85  | 93  | 29  | 261 | 294 | 321 | 259 | 312 | 277 | 266 | 271 | 62  | 64  | 84  | 109 | 164 | 159 | 75.7          | 91.2          |
| 19 Spd | 2                             | 5   | 8   | 8   | 10  | 11  | 9   | 6   | 9   | 8   | 8   | 5   | 1   | 8   | 10  | 10  | 6   | 10  | 9   | 3   | 4   | 4   | 2   | 1   | 1.9           | 11.3          |
| Dir    | 207                           | 276 | 253 | 247 | 249 | 241 | 243 | 279 | 266 | 266 | 277 | 294 | 4   | 42  | 61  | 56  | 50  | 65  | 38  | 77  | 275 | 347 | 142 | 117 | 294.5         | 241.4         |
| 20 Spd | 2                             | 1   | 2   | 5   | 6   | 6   | 9   | 9   | 16  | 25  | 28  | 28  | 32  | 31  | 23  | 25  | 30  | 27  | 20  | 10  | 5   | 2   | 3   | 2   | 13.8          | 31.8          |
| Dir    | 183                           | 319 | 296 | 262 | 233 | 226 | 229 | 237 | 251 | 259 | 259 | 267 | 268 | 271 | 270 | 276 | 277 | 278 | 280 | 288 | 266 | 287 | 174 | 203 | 265.7         | 267.7         |
| 21 Spd | 3                             | 3   | 3   | 3   | 1   | 2   | 2   | 1   | 1   | 4   | 3   | 4   | 6   | 6   | 7   | 10  | 9   | 9   | 9   | 8   | 6   | 8   | 7   | 6   | 3.4           | 9.7           |
| Dir    | 158                           | 142 | 142 | 137 | 254 | 327 | 289 | 263 | 222 | 241 | 288 | 10  | 49  | 77  | 83  | 72  | 84  | 70  | 72  | 60  | 57  | 70  | 88  | 55  | 72.2          | 71.7          |
| 22 Spd | 7                             | 6   | 6   | 5   | 6   | 6   | 6   | 9   | 13  | 13  | 14  | 15  | 11  | 13  | 19  | 17  | 19  | 11  | 8   | 3   | 3   | 5   | 7   | 9   | 8.6           | 18.9          |
| Dir    | 68                            | 79  | 72  | 67  | 81  | 77  | 69  | 88  | 94  | 104 | 102 | 103 | 66  | 66  | 87  | 81  | 87  | 108 | 110 | 80  | 60  | 67  | 351 | 356 | 81.7          | 86.9          |

## Hourly Averages

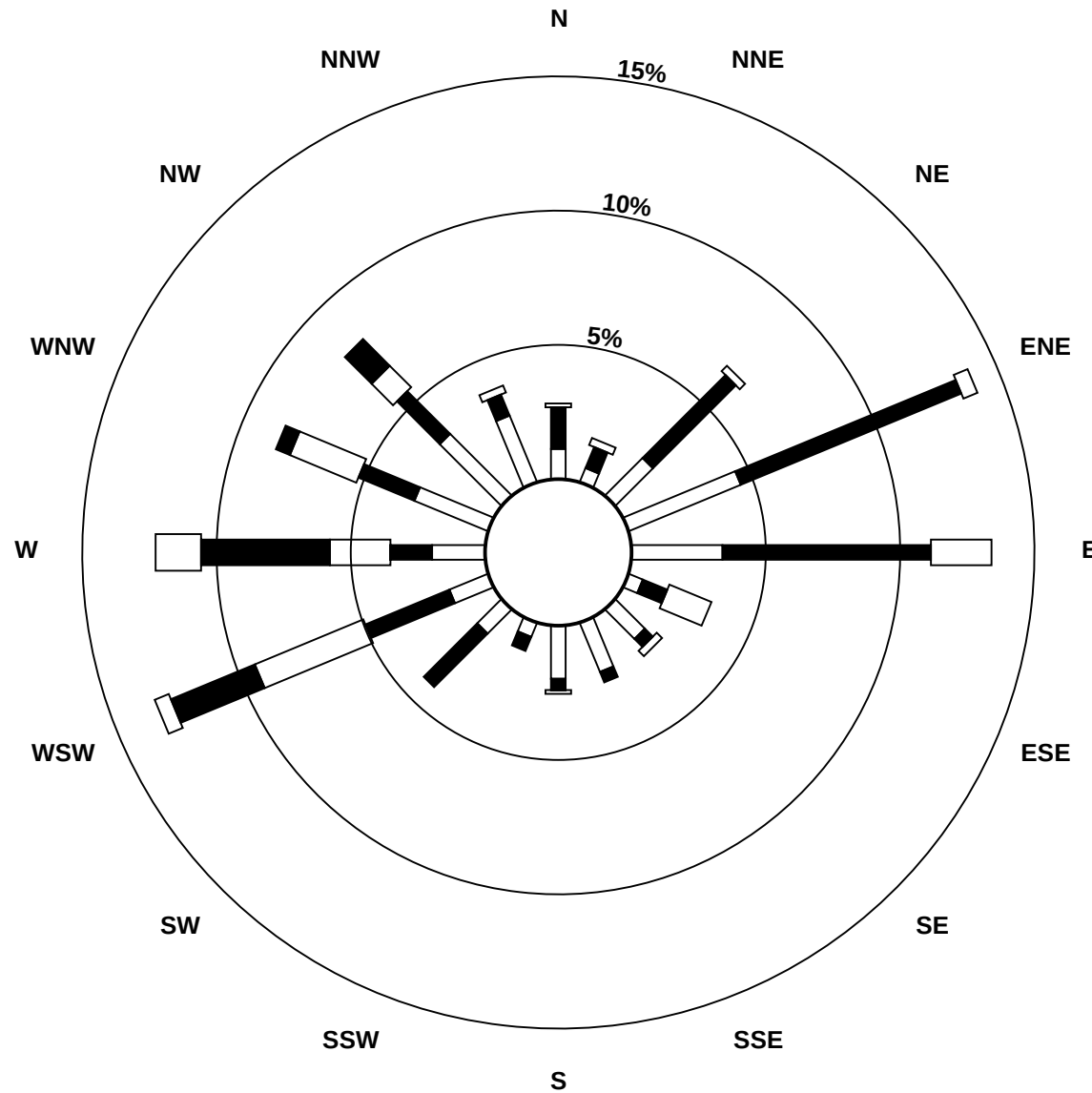
Wind Speed (km/h)  
Wind Direction (deg)  
Henry Pirker - April 2014

| 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                                                                             | 5                             | 7     | 3       | 4     | 6        | 6     | 9        | 10    | 10       | 13    | 16    | 19    | 27    | 26    | 26    | 22    | 22    | 20                                                                                                                                                                  | 17    | 15    | 12    | 11    | 9     | 11    | 12.2            | 27.3          |  |  |  |  |  |  |  |
| Dir                                                                                | 40                            | 51    | 61      | 29    | 0        | 352   | 336      | 309   | 304      | 295   | 294   | 291   | 291   | 294   | 294   | 307   | 305   | 308                                                                                                                                                                 | 306   | 302   | 307   | 302   | 281   | 278   | 304.8           | 291.2         |  |  |  |  |  |  |  |
| 24 Spd                                                                             | 12                            | 14    | 15      | 14    | 13       | 15    | 15       | 17    | 14       | 13    | 13    | 11    | 9     | 5     | 7     | 5     | 8     | 10                                                                                                                                                                  | 9     | 10    | 8     | 6     | 5     | 5     | 6.9             | 16.7          |  |  |  |  |  |  |  |
| Dir                                                                                | 283                           | 280   | 280     | 290   | 289      | 283   | 289      | 294   | 292      | 293   | 299   | 301   | 321   | 315   | 3     | 60    | 55    | 42                                                                                                                                                                  | 37    | 50    | 49    | 48    | 50    | 45    | 315.4           | 294.1         |  |  |  |  |  |  |  |
| 25 Spd                                                                             | 6                             | 5     | 4       | 4     | 3        | 4     | 4        | 3     | 4        | 4     | 4     | 3     | 3     | 3     | 3     | 5     | 5     | 7                                                                                                                                                                   | 6     | 8     | 4     | 4     | 5     | 6     | 3.6             | 7.6           |  |  |  |  |  |  |  |
| Dir                                                                                | 40                            | 46    | 22      | 350   | 333      | 357   | 324      | 11    | 55       | 65    | 79    | 73    | 37    | 16    | 49    | 57    | 67    | 67                                                                                                                                                                  | 72    | 99    | 98    | 85    | 91    | 108   | 55.8            | 99.0          |  |  |  |  |  |  |  |
| 26 Spd                                                                             | 5                             | 6     | 4       | 4     | 6        | 4     | 4        | 8     | 6        | 8     | 12    | 13    | 13    | 15    | 17    | 16    | 16    | 19                                                                                                                                                                  | 18    | 14    | 10    | 8     | 14    | 13    | 9.9             | 18.6          |  |  |  |  |  |  |  |
| Dir                                                                                | 84                            | 95    | 80      | 54    | 40       | 73    | 88       | 90    | 54       | 60    | 89    | 90    | 94    | 105   | 103   | 106   | 118   | 126                                                                                                                                                                 | 126   | 117   | 101   | 97    | 113   | 105   | 100.3           | 125.6         |  |  |  |  |  |  |  |
| 27 Spd                                                                             | 14                            | 13    | 11      | 6     | 5        | 5     | 4        | 3     | 4        | 7     | 7     | 6     | 12    | 10    | 14    | 14    | 7     | 10                                                                                                                                                                  | 7     | 4     | 5     | 17    | 3     | 4     | 1.2             | 16.6          |  |  |  |  |  |  |  |
| Dir                                                                                | 104                           | 98    | 100     | 98    | 75       | 79    | 68       | 97    | 304      | 284   | 242   | 261   | 288   | 296   | 315   | 328   | 309   | 325                                                                                                                                                                 | 294   | 167   | 176   | 180   | 299   | 296   | 310.0           | 180.4         |  |  |  |  |  |  |  |
| 28 Spd                                                                             | 7                             | 9     | 9       | 9     | 14       | 14    | 12       | 14    | 14       | 19    | 25    | 28    | 29    | 27    | 26    | 26    | 23    | 20                                                                                                                                                                  | 21    | 22    | 16    | 10    | 10    | 11    | 16.8            | 29.4          |  |  |  |  |  |  |  |
| Dir                                                                                | 198                           | 226   | 232     | 246   | 255      | 249   | 240      | 248   | 249      | 254   | 258   | 268   | 266   | 256   | 269   | 267   | 264   | 256                                                                                                                                                                 | 254   | 250   | 253   | 236   | 218   | 232   | 253.5           | 265.8         |  |  |  |  |  |  |  |
| 29 Spd                                                                             | 11                            | 9     | 10      | 4     | 2        | 3     | 1        | 2     | 5        | 4     | 6     | 6     | 5     | 5     | 5     | 8     | 9     | 9                                                                                                                                                                   | 8     | 6     | 2     | 4     | 3     | 3     | 1.2             | 10.8          |  |  |  |  |  |  |  |
| Dir                                                                                | 236                           | 234   | 235     | 259   | 341      | 304   | 242      | 176   | 225      | 222   | 163   | 143   | 136   | 159   | 139   | 105   | 87    | 61                                                                                                                                                                  | 54    | 50    | 35    | 298   | 311   | 334   | 169.2           | 236.5         |  |  |  |  |  |  |  |
| 30 Spd                                                                             | 1                             | 1     | 2       | 1     | 2        | 1     | 0        | 1     | 2        | 3     | 5     | 6     | 12    | 14    | 17    | 13    | 17    | 26                                                                                                                                                                  | 25    | 21    | 15    | 15    | 10    | 3     | 8.0             | 25.6          |  |  |  |  |  |  |  |
| Dir                                                                                | 129                           | 132   | 170     | 124   | 167      | 80    | 44       | 228   | 224      | 266   | 229   | 238   | 248   | 256   | 244   | 250   | 272   | 283                                                                                                                                                                 | 277   | 268   | 282   | 275   | 254   | 281   | 263.2           | 283.3         |  |  |  |  |  |  |  |
| Spd                                                                                | 0.7                           | 0.7   | 1.5     | 1.8   | 1.9      | 1.9   | 2.4      | 2.4   | 3.9      | 6.0   | 6.0   | 6.7   | 7.3   | 6.8   | 5.4   | 4.3   | 3.0   | 2.9                                                                                                                                                                 | 2.1   | 1.5   | 1.5   | 0.7   | 0.9   | 0.2   | Diurnal Average |               |  |  |  |  |  |  |  |
| Dir                                                                                | 219.3                         | 264.8 | 276.6   | 283.6 | 276.3    | 269.5 | 268.0    | 264.5 | 282.0    | 281.2 | 277.1 | 285.2 | 285.9 | 285.6 | 294.7 | 307.2 | 301.3 | 297.8                                                                                                                                                               | 307.2 | 286.8 | 270.2 | 237.9 | 221.0 | 201.0 | Diurnal Maximum |               |  |  |  |  |  |  |  |
| Spd                                                                                | 16.1                          | 21.7  | 22.7    | 23.4  | 22.6     | 23.5  | 20.8     | 20.7  | 27.7     | 28.4  | 29.3  | 31.8  | 31.8  | 33.3  | 31.8  | 30.9  | 29.6  | 26.8                                                                                                                                                                | 26.0  | 24.1  | 23.6  | 20.0  | 16.6  | 12.8  |                 |               |  |  |  |  |  |  |  |
| Dir                                                                                | 242.9                         | 262.0 | 258.8   | 255.0 | 256.3    | 258.6 | 249.7    | 256.2 | 314.4    | 313.9 | 255.8 | 273.1 | 267.7 | 272.3 | 274.0 | 277.1 | 277.2 | 277.5                                                                                                                                                               | 257.2 | 258.8 | 260.4 | 257.2 | 249.1 | 105.2 |                 |               |  |  |  |  |  |  |  |
| Maximum Speed Value: 33 km/h on Apr 9 14:00                                        |                               |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       | Minimum Speed Value: 0 km/h on Apr 4 02:00                                                                                                                          |       |       |       |       |       |       |                 |               |  |  |  |  |  |  |  |
| Maximum Daily Speed Average: 22.9 km/h on Apr 9                                    |                               |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       | Minimum Daily Speed Average: 1.2 km/h on Apr 14                                                                                                                     |       |       |       |       |       |       |                 |               |  |  |  |  |  |  |  |
| Maximum Diurnal Speed Average: 7.3 km/h at hour 13                                 |                               |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       | Minimum Diurnal Speed Average: 0.2 km/h at hour 24                                                                                                                  |       |       |       |       |       |       |                 |               |  |  |  |  |  |  |  |
| Monthly Average Velocity: 2.91 km/h 283.49 deg                                     |                               |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       | Speed Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 2.8 Q <sub>1</sub> = 4.6 Median = 7.7 Q <sub>3</sub> = 12.4 P <sub>90</sub> = 21.8 P <sub>99</sub> = 30.8 |       |       |       |       |       |       |                 |               |  |  |  |  |  |  |  |
| 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                                                                              | 17                            |       | 17      |       | 2        |       | 0        |       | 0        |       | 0     |       | 36    |       |       |       |       |                                                                                                                                                                     |       |       |       |       |       |       |                 |               |  |  |  |  |  |  |  |
| NorthEast                                                                          | 26                            |       | 70      |       | 7        |       | 0        |       | 0        |       | 0     |       | 103   |       |       |       |       |                                                                                                                                                                     |       |       |       |       |       |       |                 |               |  |  |  |  |  |  |  |
| East                                                                               | 34                            |       | 95      |       | 36       |       | 0        |       | 0        |       | 0     |       | 165   |       |       |       |       |                                                                                                                                                                     |       |       |       |       |       |       |                 |               |  |  |  |  |  |  |  |
| SouthEast                                                                          | 18                            |       | 9       |       | 5        |       | 0        |       | 0        |       | 0     |       | 32    |       |       |       |       |                                                                                                                                                                     |       |       |       |       |       |       |                 |               |  |  |  |  |  |  |  |
| South                                                                              | 24                            |       | 7       |       | 1        |       | 0        |       | 0        |       | 0     |       | 32    |       |       |       |       |                                                                                                                                                                     |       |       |       |       |       |       |                 |               |  |  |  |  |  |  |  |
| SouthWest                                                                          | 18                            |       | 36      |       | 18       |       | 2        |       | 0        |       | 0     |       | 74    |       |       |       |       |                                                                                                                                                                     |       |       |       |       |       |       |                 |               |  |  |  |  |  |  |  |
| West                                                                               | 28                            |       | 28      |       | 45       |       | 58       |       | 18       |       | 0     |       | 177   |       |       |       |       |                                                                                                                                                                     |       |       |       |       |       |       |                 |               |  |  |  |  |  |  |  |
| NorthWest                                                                          | 42                            |       | 28      |       | 19       |       | 10       |       | 2        |       | 0     |       | 101   |       |       |       |       |                                                                                                                                                                     |       |       |       |       |       |       |                 |               |  |  |  |  |  |  |  |
| Total                                                                              | 207                           |       | 290     |       | 133      |       | 70       |       | 20       |       | 0     |       | 720   |       |       |       |       |                                                                                                                                                                     |       |       |       |       |       |       |                 |               |  |  |  |  |  |  |  |

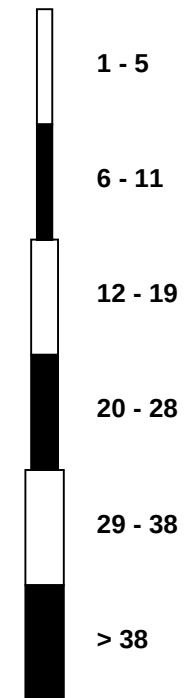
## Wind Rose

Wind Speed (WS) (km/h)

Henry Pirker - April 2014



## Wind Speed Classes (km/h)



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Henry Pirker - April 2014

| Maximum Speed: 34 km/h on Apr 9 14:00                                                                                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Speed Average: 23.3 km/h on Apr 9                                                                                                               |    |    |    |                 |               |               |  |  |  | Hours in Service: 720           |  |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|-----------------|---------------|---------------|--|--|--|---------------------------------|--|
| Minimum Speed: 1 km/h on Apr 5 06:00                                                                                    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Speed Average: 4.4 km/h on Apr 14                                                                                                               |    |    |    |                 |               |               |  |  |  | Hours of Data: 720              |  |
| Maximum Diurnal Speed Average: 14.8 km/h at hour 15                                                                     |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Speed Average: 6.3 km/h at hour 4                                                                                                             |    |    |    |                 |               |               |  |  |  | Hours of Missing Data: 0        |  |
| Monthly Average Speed: 10.10 km/h                                                                                       |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 1.3 P <sub>10</sub> = 3.3 Q <sub>1</sub> = 5.1 Median = 8.1 Q <sub>3</sub> = 12.8 P <sub>90</sub> = 22.0 P <sub>99</sub> = 31.3 |    |    |    |                 |               |               |  |  |  | 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-Apr                                                                                                                   | 3                             | 5  | 4  | 4  | 5  | 3  | 2  | 4  | 5  | 5  | 4  | 6  | 5  | 6  | 7  | 8  | 10 | 11 | 8  | 8                                                                                                                                                             | 7  | 7  | 8  | 7               | 6.0           | 11.2          |  |  |  |                                 |  |
| 2-Apr                                                                                                                   | 8                             | 9  | 8  | 7  | 8  | 7  | 7  | 6  | 9  | 10 | 9  | 7  | 6  | 6  | 7  | 7  | 9  | 8  | 8  | 9                                                                                                                                                             | 7  | 5  | 5  | 4               | 7.3           | 9.7           |  |  |  |                                 |  |
| 3-Apr                                                                                                                   | 4                             | 4  | 5  | 5  | 4  | 5  | 5  | 8  | 9  | 6  | 10 | 8  | 8  | 8  | 9  | 11 | 11 | 11 | 8  | 6                                                                                                                                                             | 6  | 6  | 4  | 4               | 6.9           | 11.3          |  |  |  |                                 |  |
| 4-Apr                                                                                                                   | 2                             | 1  | 7  | 7  | 9  | 10 | 12 | 12 | 17 | 16 | 15 | 15 | 16 | 15 | 14 | 9  | 7  | 6  | 9  | 8                                                                                                                                                             | 7  | 7  | 6  | 5               | 9.7           | 16.9          |  |  |  |                                 |  |
| 5-Apr                                                                                                                   | 2                             | 2  | 1  | 2  | 2  | 1  | 3  | 7  | 12 | 23 | 14 | 12 | 15 | 17 | 15 | 15 | 11 | 12 | 9  | 6                                                                                                                                                             | 6  | 5  | 6  | 2               | 8.3           | 22.6          |  |  |  |                                 |  |
| 6-Apr                                                                                                                   | 3                             | 7  | 14 | 13 | 17 | 19 | 21 | 21 | 21 | 25 | 21 | 22 | 23 | 24 | 19 | 22 | 22 | 24 | 26 | 24                                                                                                                                                            | 19 | 16 | 13 | 12              | 18.7          | 26.1          |  |  |  |                                 |  |
| 7-Apr                                                                                                                   | 12                            | 5  | 2  | 3  | 3  | 4  | 4  | 4  | 6  | 5  | 8  | 8  | 7  | 5  | 9  | 5  | 6  | 7  | 6  | 7                                                                                                                                                             | 2  | 3  | 3  | 5               | 5.4           | 11.5          |  |  |  |                                 |  |
| 8-Apr                                                                                                                   | 7                             | 8  | 7  | 5  | 5  | 6  | 5  | 6  | 3  | 4  | 15 | 30 | 31 | 31 | 31 | 28 | 26 | 27 | 21 | 22                                                                                                                                                            | 22 | 20 | 17 | 13              | 16.3          | 31.4          |  |  |  |                                 |  |
| 9-Apr                                                                                                                   | 15                            | 22 | 23 | 23 | 23 | 24 | 20 | 18 | 24 | 24 | 27 | 32 | 32 | 34 | 32 | 31 | 27 | 23 | 22 | 18                                                                                                                                                            | 24 | 18 | 16 | 6               | 23.3          | 33.6          |  |  |  |                                 |  |
| 10-Apr                                                                                                                  | 6                             | 10 | 8  | 10 | 6  | 4  | 4  | 3  | 9  | 23 | 30 | 28 | 29 | 30 | 27 | 27 | 23 | 24 | 19 | 18                                                                                                                                                            | 13 | 3  | 9  | 11              | 15.6          | 29.8          |  |  |  |                                 |  |
| 11-Apr                                                                                                                  | 17                            | 7  | 5  | 3  | 4  | 4  | 8  | 16 | 28 | 29 | 28 | 26 | 26 | 24 | 21 | 15 | 15 | 11 | 10 | 8                                                                                                                                                             | 6  | 7  | 7  | 9               | 14.0          | 28.6          |  |  |  |                                 |  |
| 12-Apr                                                                                                                  | 10                            | 8  | 9  | 6  | 3  | 4  | 6  | 10 | 11 | 12 | 13 | 11 | 10 | 8  | 9  | 8  | 8  | 8  | 6  | 4                                                                                                                                                             | 2  | 2  | 6  | 8               | 7.6           | 12.7          |  |  |  |                                 |  |
| 13-Apr                                                                                                                  | 7                             | 5  | 6  | 7  | 5  | 5  | 5  | 7  | 9  | 7  | 8  | 9  | 10 | 11 | 12 | 14 | 14 | 13 | 11 | 9                                                                                                                                                             | 8  | 7  | 2  | 3               | 8.0           | 13.9          |  |  |  |                                 |  |
| 14-Apr                                                                                                                  | 2                             | 4  | 4  | 3  | 3  | 3  | 2  | 1  | 1  | 3  | 3  | 4  | 7  | 8  | 8  | 7  | 10 | 9  | 6  | 4                                                                                                                                                             | 2  | 2  | 3  | 4               | 4.4           | 9.9           |  |  |  |                                 |  |
| 15-Apr                                                                                                                  | 4                             | 5  | 5  | 6  | 5  | 8  | 8  | 12 | 12 | 12 | 10 | 11 | 12 | 10 | 8  | 10 | 8  | 8  | 8  | 4                                                                                                                                                             | 1  | 3  | 4  | 7               | 7.6           | 12.5          |  |  |  |                                 |  |
| 16-Apr                                                                                                                  | 6                             | 5  | 4  | 5  | 6  | 6  | 6  | 8  | 10 | 11 | 10 | 9  | 9  | 10 | 9  | 10 | 9  | 11 | 11 | 12                                                                                                                                                            | 9  | 9  | 7  | 6               | 8.3           | 11.5          |  |  |  |                                 |  |
| 17-Apr                                                                                                                  | 5                             | 4  | 4  | 4  | 4  | 3  | 5  | 8  | 11 | 11 | 12 | 12 | 12 | 13 | 13 | 12 | 12 | 13 | 11 | 12                                                                                                                                                            | 12 | 13 | 11 | 9               | 9.4           | 13.2          |  |  |  |                                 |  |
| 18-Apr                                                                                                                  | 9                             | 9  | 8  | 7  | 7  | 7  | 7  | 7  | 5  | 3  | 4  | 5  | 7  | 4  | 6  | 6  | 4  | 4  | 6  | 6                                                                                                                                                             | 4  | 4  | 4  | 2               | 5.6           | 9.1           |  |  |  |                                 |  |
| 19-Apr                                                                                                                  | 3                             | 5  | 8  | 8  | 10 | 11 | 9  | 7  | 9  | 8  | 8  | 6  | 5  | 9  | 10 | 10 | 7  | 10 | 10 | 9                                                                                                                                                             | 6  | 5  | 5  | 3               | 7.5           | 11.3          |  |  |  |                                 |  |
| 20-Apr                                                                                                                  | 2                             | 3  | 3  | 6  | 6  | 6  | 9  | 9  | 17 | 26 | 28 | 29 | 32 | 31 | 24 | 26 | 30 | 27 | 20 | 10                                                                                                                                                            | 5  | 3  | 3  | 3               | 14.9          | 32.3          |  |  |  |                                 |  |
| 21-Apr                                                                                                                  | 3                             | 3  | 3  | 3  | 2  | 3  | 2  | 2  | 2  | 4  | 4  | 6  | 7  | 8  | 8  | 11 | 10 | 9  | 9  | 8                                                                                                                                                             | 6  | 9  | 7  | 6               | 5.6           | 10.5          |  |  |  |                                 |  |
| 22-Apr                                                                                                                  | 7                             | 6  | 6  | 5  | 6  | 6  | 6  | 9  | 13 | 13 | 14 | 15 | 12 | 14 | 19 | 17 | 19 | 11 | 8  | 4                                                                                                                                                             | 3  | 6  | 8  | 9               | 9.8           | 19.2          |  |  |  |                                 |  |
| 23-Apr                                                                                                                  | 6                             | 7  | 5  | 4  | 6  | 7  | 9  | 10 | 10 | 13 | 17 | 19 | 27 | 26 | 26 | 22 | 22 | 20 | 17 | 15                                                                                                                                                            | 12 | 11 | 9  | 11              | 13.8          | 27.5          |  |  |  |                                 |  |
| 24-Apr                                                                                                                  | 13                            | 14 | 15 | 14 | 13 | 15 | 16 | 17 | 14 | 14 | 14 | 12 | 10 | 7  | 8  | 7  | 9  | 10 | 10 | 11                                                                                                                                                            | 8  | 6  | 5  | 6               | 11.1          | 16.9          |  |  |  |                                 |  |
| 25-Apr                                                                                                                  | 6                             | 5  | 5  | 4  | 3  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 5  | 6  | 6  | 7  | 7  | 8                                                                                                                                                             | 4  | 4  | 5  | 6               | 4.9           | 7.8           |  |  |  |                                 |  |
| 26-Apr                                                                                                                  | 5                             | 6  | 4  | 4  | 6  | 4  | 4  | 9  | 7  | 8  | 12 | 14 | 14 | 15 | 17 | 16 | 16 | 19 | 18 | 14                                                                                                                                                            | 11 | 8  | 14 | 13              | 10.8          | 19.1          |  |  |  |                                 |  |
| 27-Apr                                                                                                                  | 14                            | 13 | 12 | 6  | 5  | 5  | 4  | 4  | 5  | 8  | 7  | 7  | 13 | 10 | 15 | 14 | 8  | 10 | 7  | 6                                                                                                                                                             | 5  | 17 | 6  | 7               | 8.7           | 16.8          |  |  |  |                                 |  |
| 28-Apr                                                                                                                  | 7                             | 10 | 9  | 9  | 14 | 14 | 12 | 14 | 15 | 20 | 25 | 29 | 30 | 28 | 27 | 27 | 24 | 21 | 22 | 22                                                                                                                                                            | 17 | 10 | 10 | 11              | 17.7          | 30.1          |  |  |  |                                 |  |
| 29-Apr                                                                                                                  | 11                            | 9  | 10 | 5  | 3  | 4  | 2  | 3  | 6  | 5  | 7  | 7  | 7  | 7  | 8  | 10 | 10 | 10 | 8  | 6                                                                                                                                                             | 2  | 4  | 3  | 3               | 6.2           | 10.9          |  |  |  |                                 |  |
| 30-Apr                                                                                                                  | 2                             | 2  | 2  | 2  | 2  | 2  | 1  | 1  | 2  | 4  | 6  | 7  | 13 | 15 | 17 | 14 | 18 | 26 | 25 | 21                                                                                                                                                            | 15 | 15 | 10 | 3               | 9.4           | 25.8          |  |  |  |                                 |  |
| 6.7 6.8 6.9 6.3 6.6 6.8 7.1 8.2 10.2 11.8 12.9 13.7 14.7 14.6 14.8 14.1 13.7 13.7 12.3 10.6 8.4 7.9 7.2 6.6             |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                               |    |    |    | Diurnal Average |               |               |  |  |  |                                 |  |
| 16.6 21.9 22.9 23.5 22.7 23.6 20.9 20.8 28.0 28.6 29.5 32.2 32.3 33.6 32.0 31.3 30.0 27.1 26.1 24.2 23.8 20.1 16.7 12.9 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                               |    |    |    | Diurnal Maximum |               |               |  |  |  |                                 |  |
| All monthly, daily, and diurnal averages have been calculated using scalar methods                                      |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                               |    |    |    |                 |               |               |  |  |  |                                 |  |

## Hourly Standard Deviations

Wind Direction (WD) - deg

Henry Pirker - April 2014

|                                                                                                                                                                |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                                 |      |      |      |      |      |      |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------------------------------|------|------|------|------|------|------|---------------|
| Maximum Value: 90.1 deg on Apr 19 13:00                                                                                                                        |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Hours in Service: 720           |      |      |      |      |      |      |               |
| Minimum Value: 4.9 deg on Apr 5 16:00                                                                                                                          |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Hours of Data: 720              |      |      |      |      |      |      |               |
|                                                                                                                                                                |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Hours of Missing Data: 0        |      |      |      |      |      |      |               |
| Percentiles: P <sub>1</sub> = 5.3 P <sub>10</sub> = 7.1 Q <sub>1</sub> = 9.6 Median = 14.0 Q <sub>3</sub> = 23.2 P <sub>90</sub> = 44.5 P <sub>99</sub> = 80.6 |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 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-Apr                                                                                                                                                          | 63                            | 28   | 27   | 13   | 23   | 37   | 36   | 15   | 15   | 13   | 13   | 61   | 27   | 19   | 21   | 18   | 14   | 13                              | 13   | 13   | 14   | 14   | 13   | 14   | 62.9          |
| 2-Apr                                                                                                                                                          | 15                            | 13   | 15   | 15   | 22   | 27   | 17   | 32   | 17   | 17   | 25   | 30   | 21   | 39   | 37   | 26   | 22   | 20                              | 12   | 8    | 10   | 13   | 17   | 14   | 38.7          |
| 3-Apr                                                                                                                                                          | 20                            | 16   | 11   | 18   | 21   | 10   | 11   | 9    | 11   | 23   | 12   | 19   | 17   | 23   | 14   | 11   | 10   | 9                               | 15   | 10   | 11   | 44   | 25   | 27   | 43.6          |
| 4-Apr                                                                                                                                                          | 74                            | 86   | 63   | 31   | 21   | 7    | 8    | 9    | 17   | 15   | 8    | 7    | 7    | 8    | 8    | 14   | 10   | 9                               | 32   | 8    | 6    | 9    | 21   | 54   | 85.6          |
| 5-Apr                                                                                                                                                          | 44                            | 55   | 59   | 48   | 22   | 53   | 56   | 6    | 10   | 9    | 11   | 9    | 8    | 16   | 6    | 5    | 9    | 7                               | 8    | 15   | 20   | 21   | 18   | 69   | 68.5          |
| 6-Apr                                                                                                                                                          | 36                            | 14   | 22   | 7    | 6    | 6    | 5    | 5    | 6    | 7    | 9    | 7    | 8    | 8    | 10   | 10   | 7    | 8                               | 5    | 6    | 5    | 7    | 12   | 9    | 35.7          |
| 7-Apr                                                                                                                                                          | 11                            | 55   | 62   | 46   | 45   | 21   | 9    | 37   | 34   | 11   | 16   | 11   | 10   | 12   | 14   | 32   | 28   | 14                              | 63   | 37   | 51   | 16   | 20   | 20   | 63.2          |
| 8-Apr                                                                                                                                                          | 13                            | 9    | 47   | 14   | 24   | 11   | 14   | 7    | 45   | 27   | 17   | 5    | 7    | 7    | 7    | 8    | 7    | 7                               | 8    | 7    | 6    | 6    | 7    | 7    | 46.5          |
| 9-Apr                                                                                                                                                          | 11                            | 8    | 7    | 5    | 6    | 6    | 6    | 7    | 9    | 9    | 9    | 8    | 7    | 8    | 8    | 9    | 8    | 8                               | 7    | 8    | 7    | 7    | 11   | 15   | 15.1          |
| 10-Apr                                                                                                                                                         | 18                            | 13   | 15   | 7    | 16   | 20   | 27   | 18   | 12   | 8    | 7    | 7    | 12   | 9    | 9    | 7    | 8    | 9                               | 7    | 10   | 17   | 55   | 34   | 9    | 54.8          |
| 11-Apr                                                                                                                                                         | 15                            | 30   | 11   | 22   | 15   | 26   | 19   | 8    | 8    | 6    | 7    | 6    | 6    | 7    | 9    | 12   | 10   | 14                              | 11   | 9    | 12   | 10   | 9    | 7    | 29.9          |
| 12-Apr                                                                                                                                                         | 7                             | 16   | 10   | 10   | 15   | 22   | 10   | 9    | 9    | 11   | 14   | 17   | 17   | 15   | 18   | 20   | 12   | 22                              | 16   | 13   | 72   | 44   | 43   | 16   | 72.4          |
| 13-Apr                                                                                                                                                         | 12                            | 16   | 14   | 10   | 10   | 9    | 14   | 10   | 13   | 22   | 19   | 20   | 20   | 13   | 15   | 10   | 10   | 8                               | 8    | 11   | 7    | 44   | 79   | 81   | 81.1          |
| 14-Apr                                                                                                                                                         | 37                            | 10   | 14   | 21   | 9    | 10   | 24   | 43   | 56   | 17   | 31   | 33   | 30   | 33   | 37   | 16   | 13   | 10                              | 13   | 16   | 49   | 86   | 41   | 27   | 86.4          |
| 15-Apr                                                                                                                                                         | 28                            | 23   | 35   | 23   | 30   | 25   | 17   | 12   | 15   | 14   | 14   | 13   | 12   | 17   | 20   | 18   | 23   | 16                              | 14   | 19   | 71   | 17   | 29   | 11   | 71.5          |
| 16-Apr                                                                                                                                                         | 9                             | 13   | 14   | 15   | 13   | 16   | 21   | 13   | 14   | 15   | 20   | 22   | 30   | 21   | 30   | 30   | 25   | 18                              | 11   | 12   | 13   | 12   | 11   | 9    | 29.9          |
| 17-Apr                                                                                                                                                         | 14                            | 24   | 18   | 13   | 12   | 12   | 16   | 12   | 13   | 15   | 13   | 17   | 16   | 15   | 15   | 16   | 15   | 11                              | 10   | 8    | 10   | 8    | 9    | 8    | 24.1          |
| 18-Apr                                                                                                                                                         | 10                            | 9    | 8    | 11   | 12   | 9    | 12   | 14   | 25   | 76   | 30   | 39   | 38   | 39   | 38   | 71   | 38   | 51                              | 25   | 13   | 19   | 28   | 35   | 55   | 75.7          |
| 19-Apr                                                                                                                                                         | 57                            | 17   | 8    | 8    | 6    | 7    | 10   | 19   | 14   | 16   | 20   | 47   | 90   | 36   | 20   | 17   | 22   | 18                              | 27   | 75   | 72   | 39   | 73   | 63   | 90.1          |
| 20-Apr                                                                                                                                                         | 50                            | 82   | 56   | 18   | 6    | 10   | 7    | 7    | 14   | 12   | 11   | 13   | 10   | 10   | 14   | 10   | 9    | 8                               | 6    | 6    | 28   | 65   | 38   | 42   | 81.9          |
| 21-Apr                                                                                                                                                         | 41                            | 18   | 20   | 27   | 65   | 28   | 12   | 55   | 51   | 22   | 31   | 51   | 33   | 48   | 29   | 23   | 18   | 20                              | 13   | 11   | 14   | 17   | 21   | 13   | 65.2          |
| 22-Apr                                                                                                                                                         | 13                            | 11   | 12   | 11   | 11   | 12   | 10   | 9    | 7    | 11   | 12   | 12   | 22   | 20   | 11   | 10   | 7    | 12                              | 10   | 35   | 32   | 29   | 16   | 18   | 34.7          |
| 23-Apr                                                                                                                                                         | 34                            | 18   | 77   | 38   | 12   | 14   | 11   | 7    | 9    | 6    | 6    | 6    | 7    | 6    | 6    | 9    | 6    | 7                               | 8    | 7    | 6    | 6    | 10   | 12   | 77.1          |
| 24-Apr                                                                                                                                                         | 7                             | 6    | 6    | 6    | 6    | 6    | 13   | 9    | 12   | 12   | 13   | 16   | 26   | 44   | 42   | 52   | 26   | 17                              | 14   | 14   | 14   | 21   | 16   | 17   | 52.2          |
| 25-Apr                                                                                                                                                         | 14                            | 14   | 23   | 13   | 14   | 19   | 11   | 34   | 31   | 30   | 20   | 39   | 61   | 68   | 55   | 42   | 31   | 16                              | 13   | 12   | 15   | 9    | 16   | 13   | 68.3          |
| 26-Apr                                                                                                                                                         | 12                            | 8    | 11   | 12   | 18   | 22   | 21   | 16   | 26   | 16   | 13   | 9    | 11   | 14   | 11   | 11   | 11   | 13                              | 12   | 9    | 11   | 11   | 8    | 8    | 25.6          |
| 27-Apr                                                                                                                                                         | 8                             | 7    | 7    | 16   | 13   | 13   | 15   | 59   | 40   | 13   | 19   | 23   | 19   | 18   | 21   | 18   | 25   | 17                              | 25   | 44   | 18   | 9    | 83   | 66   | 82.6          |
| 28-Apr                                                                                                                                                         | 12                            | 18   | 8    | 12   | 7    | 9    | 9    | 10   | 16   | 14   | 13   | 10   | 12   | 14   | 13   | 13   | 16   | 12                              | 11   | 7    | 7    | 12   | 10   | 7    | 17.7          |
| 29-Apr                                                                                                                                                         | 5                             | 5    | 7    | 47   | 47   | 47   | 87   | 70   | 23   | 22   | 34   | 45   | 52   | 62   | 66   | 36   | 18   | 18                              | 15   | 32   | 54   | 35   | 27   | 21   | 86.6          |
| 30-Apr                                                                                                                                                         | 66                            | 34   | 30   | 64   | 29   | 55   | 78   | 57   | 35   | 25   | 36   | 47   | 22   | 19   | 18   | 18   | 18   | 7                               | 6    | 10   | 8    | 6    | 12   | 35   | 77.6          |
|                                                                                                                                                                | 74.1                          | 85.6 | 77.1 | 63.8 | 65.2 | 54.6 | 86.6 | 69.9 | 56.1 | 75.7 | 35.9 | 60.8 | 90.1 | 68.3 | 66.0 | 70.6 | 37.7 | 50.8                            | 63.2 | 74.9 | 72.4 | 86.4 | 82.6 | 81.1 |               |

PAZA

Evergreen Park Station

Monthly Summary Tables, Graphs and  
Roses

# Hourly Averages

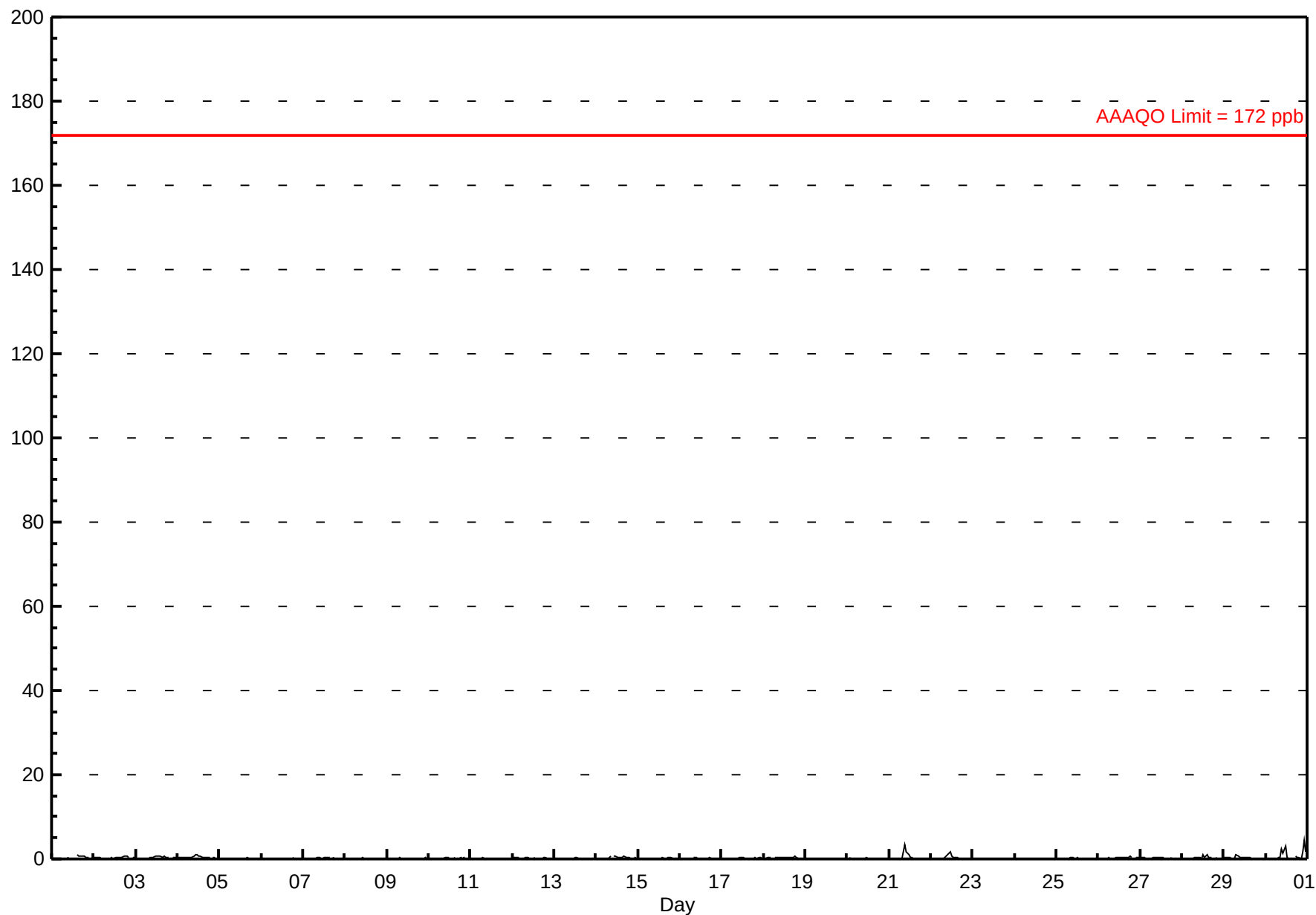
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Evergreen Park - April 2014

|                                                                                                                                                                                         |                               |   |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                      |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |    |                                    |               |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|----|----|----|----|-----------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|------------------------------------|---------------|-----|
| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 4.5 ppb on Apr 30 23:00 Maximum Daily Average: 0.8 ppb on Apr 30                                                      |                               |   |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                      |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 685<br>Hours of Missing Data: 35<br>Hours of Calibration: 35<br>Percent Operational Time: 100.0 |    |    |    |    |                                    |               |     |
| Minimum Value: 0 ppb on Apr 1 02:00<br>Maximum Diurnal Average: 0.4 ppb at hour 12<br>Monthly Average: 0.19 ppb                                                                         |                               |   |   |   |   |   |   |   |   | Minimum Daily Average: 0.0 ppb on Apr 23<br>Minimum Diurnal Average: 0.1 ppb at hour 6<br>Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.1 Q <sub>3</sub> = 0.2 P <sub>90</sub> = 0.4 P <sub>99</sub> = 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-Apr                                                                                                                                                                                   | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | C  | C  | C  | C  | 1  | 1  | 1  | 1  | 1  | 0                                                                                                                                       | 0  | 0  | A  | 0  | 0.3                                | 1.0           |     |
| 2-Apr                                                                                                                                                                                   | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 1                                                                                                                                       | 0  | A  | A  | 0  | 0                                  | 0.3           | 0.8 |
| 3-Apr                                                                                                                                                                                   | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 1  | 1  | 1  | 1  | 0  | 1  | 1  | 0  | 0                                                                                                                                       | A  | 0  | 0  | 0  | 0                                  | 0.3           | 0.7 |
| 4-Apr                                                                                                                                                                                   | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1                                                                                                                                                                                                                                                    | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | A                                                                                                                                       | 0  | 0  | 0  | 0  | 0                                  | 0.4           | 1.1 |
| 5-Apr                                                                                                                                                                                   | 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           | 0.2 |
| 6-Apr                                                                                                                                                                                   | 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           | 0.2 |
| 7-Apr                                                                                                                                                                                   | 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           | 0.3 |
| 8-Apr                                                                                                                                                                                   | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0                                  | 0.1           | 0.2 |
| 9-Apr                                                                                                                                                                                   | 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           | 0.3 |
| 10-Apr                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | A  | A  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0                                  | 0.1           | 0.4 |
| 11-Apr                                                                                                                                                                                  | 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           | 0.2 |
| 12-Apr                                                                                                                                                                                  | 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           | 0.5 |
| 13-Apr                                                                                                                                                                                  | 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           | 0.2 |
| 14-Apr                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | A                                                                                                                                                                                                                                                    | 1  | 1  | 0  | 1  | 0  | 1  | 1  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0                                  | 0.3           | 0.8 |
| 15-Apr                                                                                                                                                                                  | 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           | 0.3 |
| 16-Apr                                                                                                                                                                                  | 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 |
| 17-Apr                                                                                                                                                                                  | 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           | 0.2 |
| 18-Apr                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0                                  | 0.3           | 0.5 |
| 19-Apr                                                                                                                                                                                  | 0                             | 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 |
| 20-Apr                                                                                                                                                                                  | 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           | 0.2 |
| 21-Apr                                                                                                                                                                                  | 0                             | 0 | A | 0 | 0 | 0 | 0 | 0 | 2 | 3                                                                                                                                                                                                                                                    | 2  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0                                  | 0.4           | 3.4 |
| 22-Apr                                                                                                                                                                                  | 0                             | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1                                                                                                                                                                                                                                                    | 1  | 2  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0                                  | 0.3           | 1.6 |
| 23-Apr                                                                                                                                                                                  | A                             | 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           | 0.1 |
| 24-Apr                                                                                                                                                                                  | 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           | 0.1 |
| 25-Apr                                                                                                                                                                                  | 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           | 0.3 |
| 26-Apr                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0                                                                                                                                       | A  | 0  | 0  | 0  | 0                                  | 0.2           | 0.5 |
| 27-Apr                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A                                                                                                                                       | 0  | 0  | 0  | 0  | 0                                  | 0.2           | 0.3 |
| 28-Apr                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 0  | 1  | 0  | 1  | 0  | 0  | 0  | A  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0                                  | 0.2           | 1.1 |
| 29-Apr                                                                                                                                                                                  | 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           | 1.0 |
| 30-Apr                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2                                                                                                                                                                                                                                                    | 2  | 3  | 0  | 0  | 0  | 0  | A  | 1  | 0  | 0                                                                                                                                       | 0  | 2  | 5  | 2  | 0                                  | 0.8           | 4.5 |
| 0.1 0.3 0.1 0.2 0.1 0.5 0.1 0.3 0.1 0.2 0.1 0.2 0.1 1.0 0.2 1.7 0.4 3.4 0.4 1.7 0.4 3.2 0.3 1.1 0.2 0.6 0.2 1.0 0.2 0.8 0.2 0.7 0.2 0.6 0.2 0.8 0.2 0.5 0.1 0.4 0.2 1.6 0.3 4.5 0.2 1.8 |                               |   |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                      |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |    | Diurnal Average<br>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 (SO<sub>2</sub>) - ppb  
Evergreen Park - April 2014





# Hourly Maximums

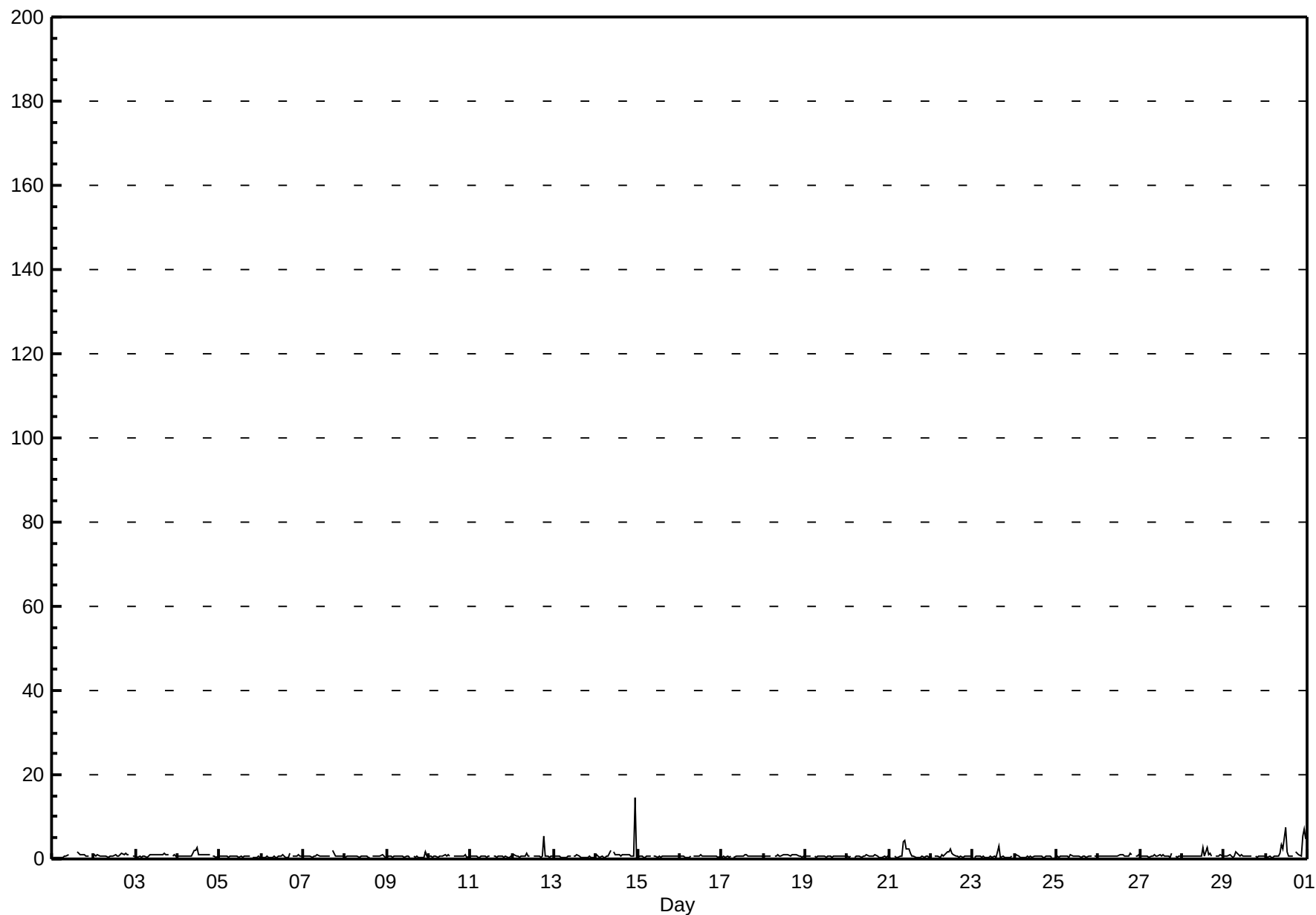
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Evergreen Park - April 2014

| Maximum Value: 14.5 ppb on Apr 14 23:00     |                               |   |   |   |   |   |   |   |   | Maximum Daily Average: 2.0 ppb on Apr 30                                                                                                                   |    |    |    |    |    |    |    |    |    | Hours in Service: 720           |    |    |    |    |                 |                 |
|---------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|----|----|----|----|---------------------------------|----|----|----|----|-----------------|-----------------|
| Minimum Value: 0 ppb on Apr 17 05:00        |                               |   |   |   |   |   |   |   |   | Minimum Daily Average: 0.5 ppb on Apr 24                                                                                                                   |    |    |    |    |    |    |    |    |    | Hours of Data: 685              |    |    |    |    |                 |                 |
| Maximum Diurnal Average: 1.4 ppb at hour 23 |                               |   |   |   |   |   |   |   |   | Minimum Diurnal Average: 0.5 ppb at hour 5                                                                                                                 |    |    |    |    |    |    |    |    |    | Hours of Missing Data: 35       |    |    |    |    |                 |                 |
| Monthly Average: 0.77 ppb                   |                               |   |   |   |   |   |   |   |   | Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.5 Median = 0.6 Q <sub>3</sub> = 0.8 P <sub>90</sub> = 1.0 P <sub>99</sub> = 4.5 |    |    |    |    |    |    |    |    |    | 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-Apr                                       | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1                                                                                                                                                          | C  | C  | C  | C  | 2  | 1  | 1  | 1  | 1  | 1                               | 1  | 1  | A  | 1  | 0.8             | 1.6             |
| 2-Apr                                       | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                               | 1  | A  | 1  | 1  | 0.8             | 1.3             |
| 3-Apr                                       | 1                             | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                               | A  | 1  | 1  | 1  | 0.8             | 1.4             |
| 4-Apr                                       | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2                                                                                                                                                          | 2  | 3  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A                               | 1  | 1  | 0  | 1  | 1.0             | 2.8             |
| 5-Apr                                       | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1                                                                                                                                                          | 1  | 0  | 1  | 0  | 1  | 1  | 1  | 1  | A  | 0                               | 0  | 0  | 1  | 0  | 0.5             | 0.7             |
| 6-Apr                                       | 0                             | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0                                                                                                                                                          | 1  | 1  | 1  | 1  | 0  | 0  | 1  | A  | 1  | 1                               | 1  | 1  | 1  | 1  | 0.6             | 1.3             |
| 7-Apr                                       | 1                             | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1  | A  | 2  | 1  | 1                               | 1  | 1  | 1  | 1  | 0.7             | 2.1             |
| 8-Apr                                       | 0                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 0  | A  | 1  | 1  | 1  | 1                               | 1  | 1  | 1  | 0  | 0.6             | 1.0             |
| 9-Apr                                       | 0                             | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1                                                                                                                                                          | 1  | 1  | 1  | 0  | A  | 1  | 0  | 1  | 0  | 0                               | 0  | 0  | 2  | 1  | 0.6             | 1.6             |
| 10-Apr                                      | 1                             | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1                                                                                                                                                          | 1  | 1  | 1  | A  | 1  | 1  | 1  | 1  | 1  | 1                               | 1  | 1  | 0  | 1  | 0.7             | 0.9             |
| 11-Apr                                      | 1                             | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0                                                                                                                                                          | 1  | 1  | A  | 1  | 1  | 0  | 1  | 1  | 1  | 0                               | 1  | 0  | 0  | 1  | 0.6             | 0.8             |
| 12-Apr                                      | 1                             | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1                                                                                                                                                          | 1  | A  | 1  | 1  | 1  | 1  | 1  | 1  | 5  | 1                               | 1  | 0  | 1  | 1  | 0.9             | 5.3             |
| 13-Apr                                      | 1                             | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1                                                                                                                                                          | A  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0                               | 1  | 0  | 0  | 0  | 0.5             | 0.9             |
| 14-Apr                                      | 1                             | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 2 | A                                                                                                                                                          | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                               | 1  | 1  | 15 | 0  | 1.5             | 14.5            |
| 15-Apr                                      | 0                             | 1 | 1 | 0 | 0 | 1 | 1 | 1 | A | 1                                                                                                                                                          | 1  | 0  | 1  | 0  | 1  | 1  | 1  | 1  | 1  | 1                               | 1  | 1  | 1  | 1  | 0.6             | 0.8             |
| 16-Apr                                      | 1                             | 1 | 1 | 0 | 0 | 0 | 1 | A | 1 | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                               | 1  | 1  | 1  | 1  | 0.6             | 0.9             |
| 17-Apr                                      | 0                             | 1 | 0 | 1 | 0 | 1 | A | 0 | 1 | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                               | 1  | 1  | 1  | 1  | 0.6             | 0.9             |
| 18-Apr                                      | 0                             | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                               | 1  | 1  | 1  | 1  | 0.8             | 1.1             |
| 19-Apr                                      | 1                             | 1 | 1 | 1 | A | 1 | 0 | 1 | 1 | 1                                                                                                                                                          | 1  | 1  | 0  | 1  | 1  | 1  | 1  | 1  | 1  | 1                               | 1  | 1  | 1  | 1  | 0.6             | 0.8             |
| 20-Apr                                      | 1                             | 0 | 1 | A | 0 | 1 | 1 | 1 | 1 | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 0                               | 0  | 1  | 0  | 1  | 0.6             | 0.9             |
| 21-Apr                                      | 0                             | 0 | A | 1 | 0 | 1 | 1 | 1 | 4 | 5                                                                                                                                                          | 3  | 2  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 1                               | 0  | 1  | 1  | 0  | 1.0             | 4.5             |
| 22-Apr                                      | 1                             | A | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 2                                                                                                                                                          | 2  | 2  | 1  | 1  | 1  | 1  | 0  | 1  | 1  | 1                               | 1  | 1  | 1  | 1  | 0.8             | 2.3             |
| 23-Apr                                      | A                             | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0                                                                                                                                                          | 1  | 1  | 1  | 0  | 2  | 3  | 0  | 1  | 0  | 0                               | 0  | 0  | 1  | A  | 0.7             | 3.1             |
| 24-Apr                                      | 0                             | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1                                                                                                                                                          | 0  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 1  | 1                               | 1  | 0  | A  | 0  | 0.5             | 0.9             |
| 25-Apr                                      | 1                             | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 0  | 1  | 1  | 0  | 1  | 1                               | 1  | A  | 1  | 1  | 0.6             | 0.9             |
| 26-Apr                                      | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                               | A  | 1  | 1  | 1  | 0.8             | 1.3             |
| 27-Apr                                      | 1                             | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 1  | A                               | 1  | 1  | 1  | 1  | 0.7             | 1.2             |
| 28-Apr                                      | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1                                                                                                                                                          | 1  | 1  | 3  | 1  | 3  | 1  | 1  | 1  | A  | 1                               | 1  | 1  | 1  | 1  | 0.9             | 2.8             |
| 29-Apr                                      | 1                             | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1  | 0                               | 1  | 1  | 1  | 1  | 0.8             | 1.6             |
| 30-Apr                                      | 1                             | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 3                                                                                                                                                          | 3  | 8  | 2  | 1  | 1  | 1  | A  | 2  | 1  | 1                               | 1  | 5  | 7  | 5  | 2.0             | 7.5             |
|                                             |                               |   |   |   |   |   |   |   |   |                                                                                                                                                            |    |    |    |    |    |    |    |    |    |                                 |    |    |    |    | Diurnal Average | Diurnal Maximum |
|                                             |                               |   |   |   |   |   |   |   |   |                                                                                                                                                            |    |    |    |    |    |    |    |    |    |                                 |    |    |    |    |                 |                 |
| C - Calibration                             |                               |   |   |   |   |   |   |   |   | A - Automated Daily Zero Span                                                                                                                              |    |    |    |    |    |    |    |    |    |                                 |    |    |    |    |                 |                 |

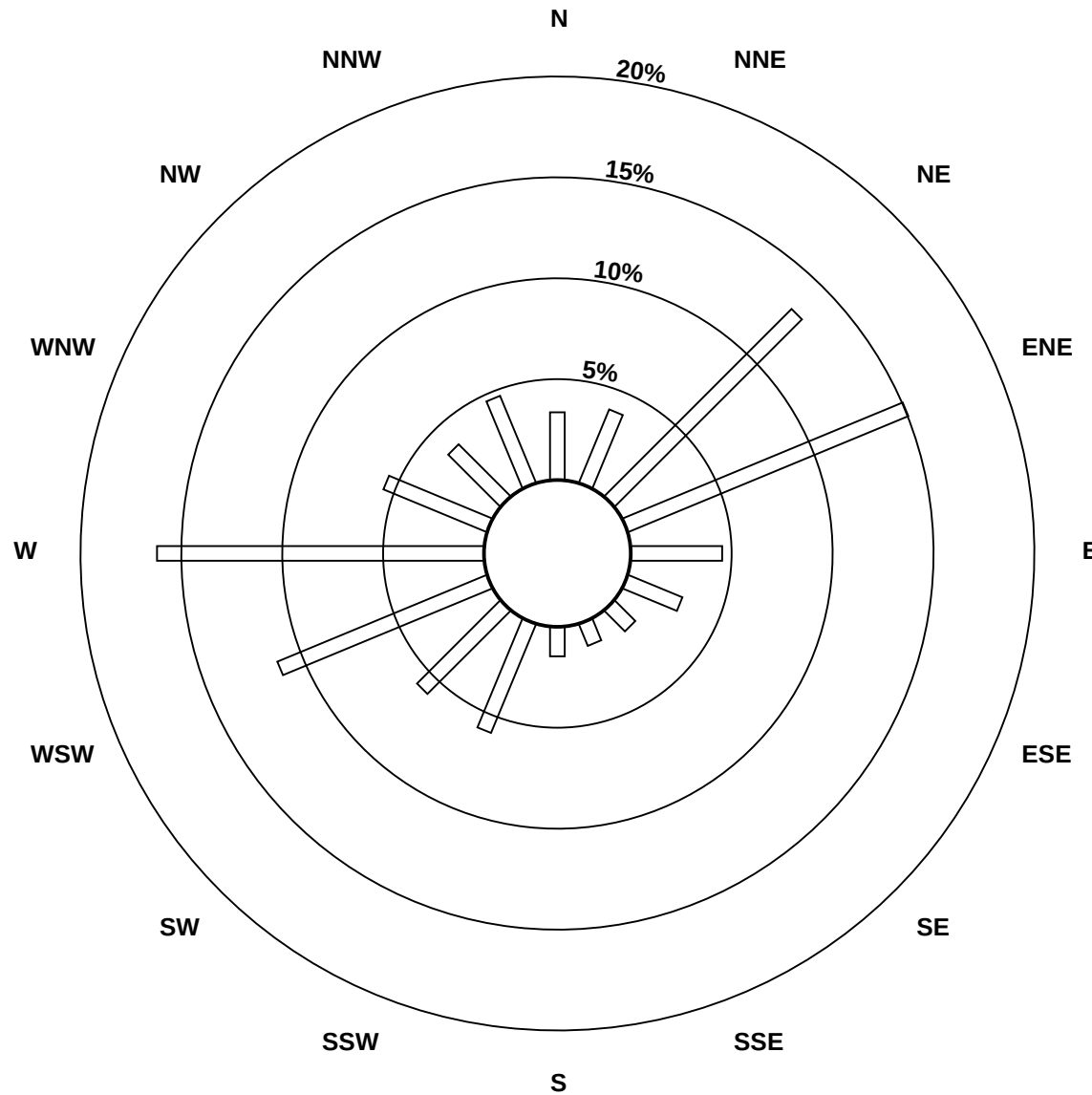
## Hourly Maximums

**Sulphur Dioxide (SO<sub>2</sub>) - ppb**  
**Evergreen Park - April 2014**

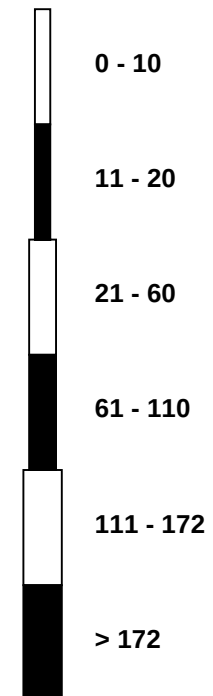


## Pollutant Rose

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Evergreen Park - April 2014

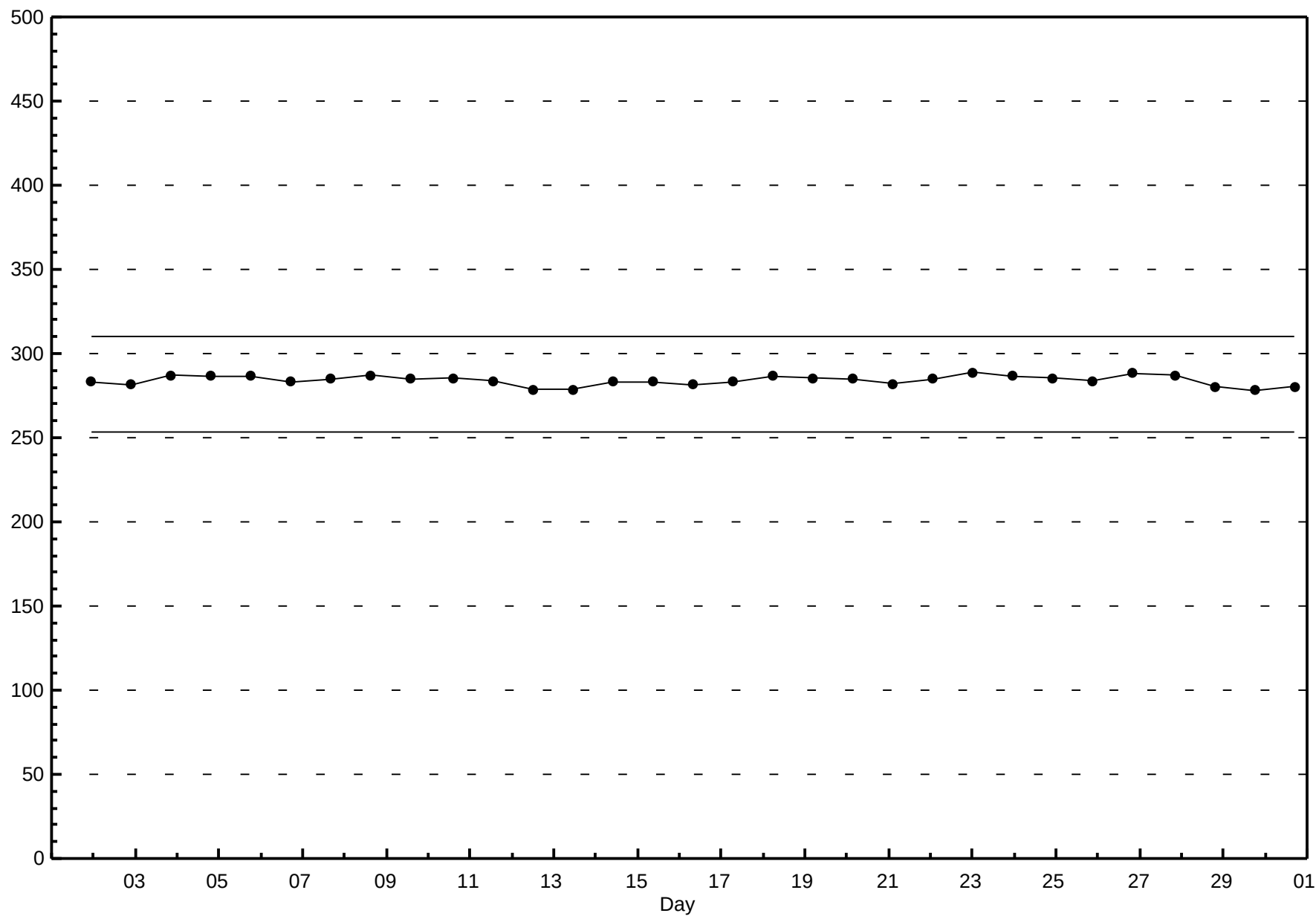


## Pollutant Classes (ppb)



## Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Evergreen Park - April 2014



# Hourly Averages

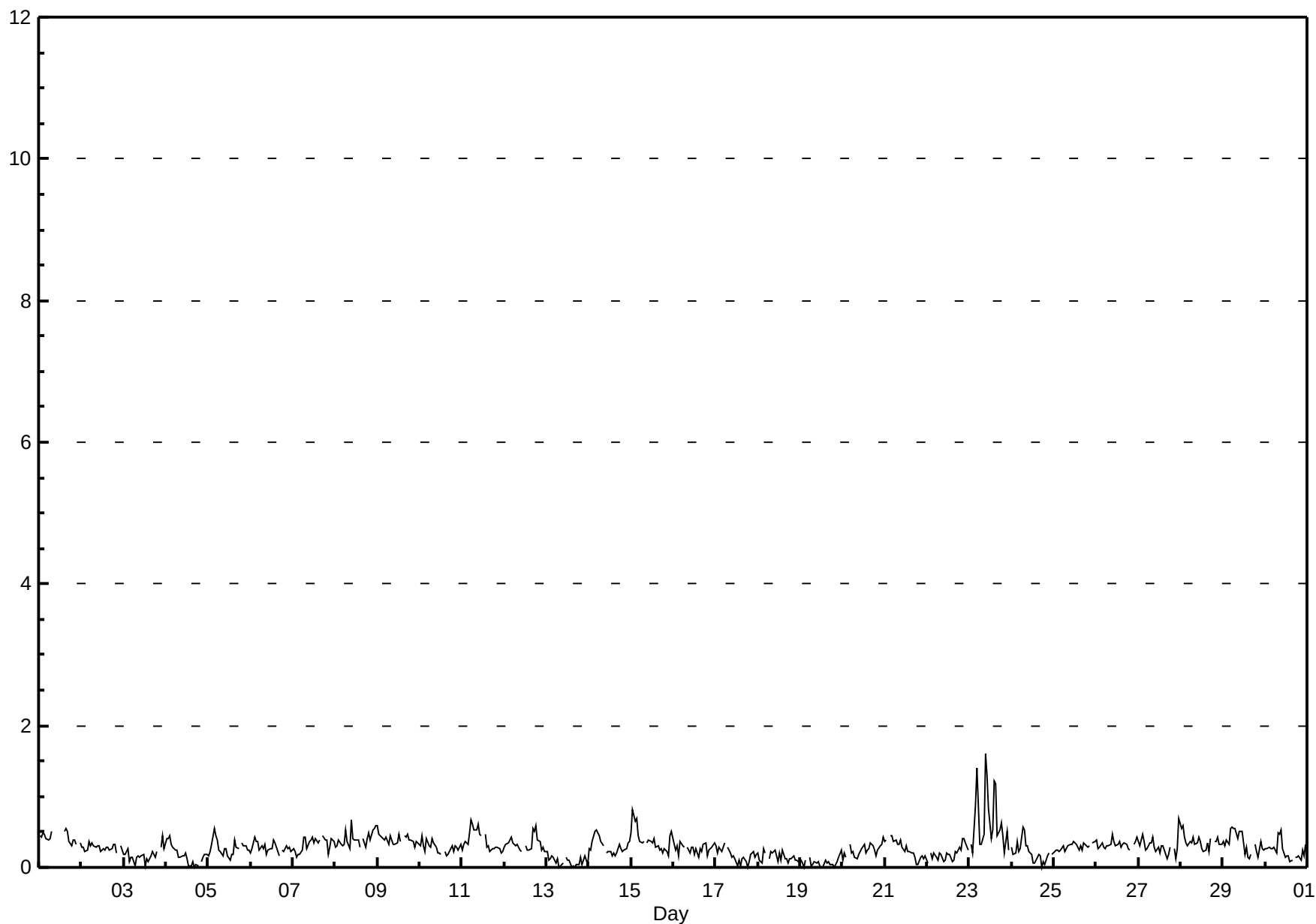
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - April 2014

|                                                                                                     |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |                                 |    |                 |               |               |     |
|-----------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------|----|---------------------------------|----|-----------------|---------------|---------------|-----|
| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0                                                     |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720                                                                                                                                      |    |                                 |    |                 |               |               |     |
| Maximum Value: 1.6 ppb on Apr 23 10:00                                                              |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 0.7 ppb on Apr 23                                                                                                                   |    | Hours of Data: 683              |    |                 |               |               |     |
| Minimum Value: 0 ppb on Apr 4 17:00                                                                 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.1 ppb on Apr 19                                                                                                                   |    | Hours of Missing Data: 37       |    |                 |               |               |     |
| Maximum Diurnal Average: 0.4 ppb at hour 5                                                          |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 0.2 ppb at hour 13                                                                                                                |    | Hours of Calibration: 37        |    |                 |               |               |     |
| Monthly Average: 0.28 ppb                                                                           |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.3 Q <sub>3</sub> = 0.4 P <sub>90</sub> = 0.5 P <sub>99</sub> = 0.9 |    | 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-Apr                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | C | C  | C  | C  | C  | C  | 0  | 1  | 1  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | A  | 0               | --            | 0.5           |     |
| 2-Apr                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | A                               | A  | 0               | 0             | 0.3           | 0.4 |
| 3-Apr                                                                                               | 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 |
| 4-Apr                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0             | 0.2           | 0.4 |
| 5-Apr                                                                                               | 0                             | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0             | 0.3           | 0.5 |
| 6-Apr                                                                                               | 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           | 0.4 |
| 7-Apr                                                                                               | 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             | 0.3           | 0.5 |
| 8-Apr                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 1                               | 1  | 1               | 1             | 0.4           | 0.7 |
| 9-Apr                                                                                               | 1                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0             | 0.4           | 0.6 |
| 10-Apr                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0             | 0.3           | 0.4 |
| 11-Apr                                                                                              | 0                             | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1  | 0  | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0             | 0.4           | 0.7 |
| 12-Apr                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | A  | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0             | 0.3           | 0.6 |
| 13-Apr                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0             | 0.1           | 0.2 |
| 14-Apr                                                                                              | 0                             | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0             | 0.3           | 0.5 |
| 15-Apr                                                                                              | 0                             | 1 | 1 | 1 | 0 | 0 | 0 | 0 | A | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 1             | 0.4           | 0.8 |
| 16-Apr                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0             | 0.3           | 0.4 |
| 17-Apr                                                                                              | 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           | 0.3 |
| 18-Apr                                                                                              | 0                             | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0             | 0.2           | 0.3 |
| 19-Apr                                                                                              | 0                             | 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-Apr                                                                                              | 0                             | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0             | 0.2           | 0.4 |
| 21-Apr                                                                                              | 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             | 0.3           | 0.5 |
| 22-Apr                                                                                              | 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           | 0.4 |
| 23-Apr                                                                                              | A                             | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 2  | 1  | 1  | 0  | 1  | 1  | 1  | 0  | 1  | 1  | 0                                                                                                                                                          | 0  | 1                               | 0  | A               | 0             | 0.7           | 1.6 |
| 24-Apr                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | A  | 0               | 0             | 0.2           | 0.6 |
| 25-Apr                                                                                              | 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           | 0.4 |
| 26-Apr                                                                                              | 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           | 0.5 |
| 27-Apr                                                                                              | 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           | 0.7           |     |
| 28-Apr                                                                                              | 1                             | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0             | 0.4           | 0.6 |
| 29-Apr                                                                                              | 0                             | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0             | 0.3           | 0.6 |
| 30-Apr                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0                                                                                                                                                          | 0  | 0                               | 0  | 0               | 0             | 0.2           | 0.5 |
| 0.3 0.3 0.3 0.3 0.4 0.3 0.3 0.3 0.3 0.3 0.3 0.3 0.2 0.2 0.2 0.3 0.2 0.3 0.2 0.2 0.2 0.3 0.3 0.3     |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |                                 |    | Diurnal Average |               |               |     |
| 0.6 0.8 0.6 0.9 1.4 0.9 0.6 0.5 0.5 0.3 1.6 1.3 0.8 0.5 0.5 1.2 1.2 0.6 0.5 0.6 0.5 0.4 0.5 0.5 0.7 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |                                 |    | Diurnal Maximum |               |               |     |
| C - Calibration A - Automated Daily Zero Span                                                       |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |                                 |    |                 |               |               |     |
| Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |                                 |    |                 |               |               |     |

## Hourly Averages

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



# Hourly Maximums

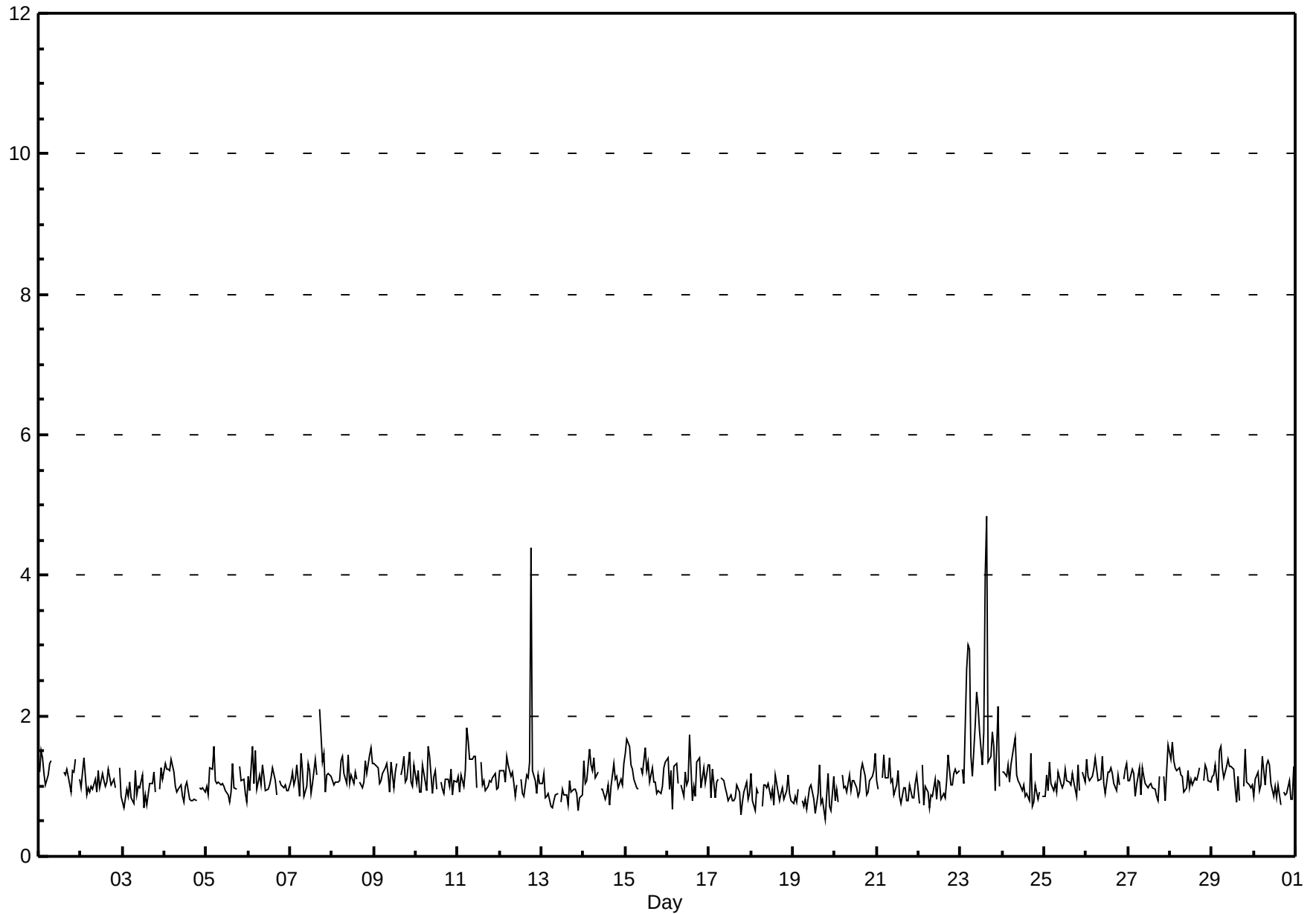
Total Reduced Sulphur (TRS) - ppb

Evergreen Park - April 2014

| Maximum Value: 4.8 ppb on Apr 23 16:00                                                          |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 2.0 ppb on Apr 23                                                                                                                   |    |    |    |    |    |                               |               |  |  | Hours in Service: 720           |  |
|-------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|-------------------------------|---------------|--|--|---------------------------------|--|
| Minimum Value: 1 ppb on Apr 19 19:00                                                            |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.9 ppb on Apr 19                                                                                                                   |    |    |    |    |    |                               |               |  |  | Hours of Data: 683              |  |
| Maximum Diurnal Average: 1.2 ppb at hour 5                                                      |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 1.0 ppb at hour 14                                                                                                                |    |    |    |    |    |                               |               |  |  | Hours of Missing Data: 37       |  |
| Monthly Average: 1.11 ppb                                                                       |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.7 P <sub>10</sub> = 0.8 Q <sub>1</sub> = 0.9 Median = 1.1 Q <sub>3</sub> = 1.2 P <sub>90</sub> = 1.4 P <sub>99</sub> = 2.2 |    |    |    |    |    |                               |               |  |  | 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-Apr                                                                                           | 1                             | 2 | 1 | 1 | 1 | 1 | 1 | 1 | C | C  | C  | C  | C  | C  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | A  | 1  | --                            | 1.5           |  |  |                                 |  |
| 2-Apr                                                                                           | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | A  | 1  | 1  | 1.1                           | 1.4           |  |  |                                 |  |
| 3-Apr                                                                                           | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | A  | 1  | 1  | 1  | 1.0                           | 1.3           |  |  |                                 |  |
| 4-Apr                                                                                           | 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                           | 1.4           |  |  |                                 |  |
| 5-Apr                                                                                           | 1                             | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1.0                           | 1.6           |  |  |                                 |  |
| 6-Apr                                                                                           | 1                             | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 2  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1.1                           | 1.6           |  |  |                                 |  |
| 7-Apr                                                                                           | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1.2                           | 2.1           |  |  |                                 |  |
| 8-Apr                                                                                           | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 2  | 1  | 1.2                           | 1.5           |  |  |                                 |  |
| 9-Apr                                                                                           | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | A  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1.2                           | 1.5           |  |  |                                 |  |
| 10-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1  | 1  | 1  | 1  | A  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1.1                           | 1.6           |  |  |                                 |  |
| 11-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1  | 1  | 1  | A  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1.2                           | 1.8           |  |  |                                 |  |
| 12-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | A  | 1  | 1  | 1  | 1  | 1  | 1  | 4                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1.3                           | 4.4           |  |  |                                 |  |
| 13-Apr                                                                                          | 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                           | 1.2           |  |  |                                 |  |
| 14-Apr                                                                                          | 1                             | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | A  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1.1                           | 1.5           |  |  |                                 |  |
| 15-Apr                                                                                          | 1                             | 2 | 2 | 1 | 1 | 1 | 1 | 1 | A | 1  | 1  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1.2                           | 1.7           |  |  |                                 |  |
| 16-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1  | 1  | 1  | 1  | 2  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1.1                           | 1.7           |  |  |                                 |  |
| 17-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 0.9                           | 1.3           |  |  |                                 |  |
| 18-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 0.9                           | 1.2           |  |  |                                 |  |
| 19-Apr                                                                                          | 1                             | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 0.9                           | 1.3           |  |  |                                 |  |
| 20-Apr                                                                                          | 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                           | 1.5           |  |  |                                 |  |
| 21-Apr                                                                                          | 1                             | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1.0                           | 1.4           |  |  |                                 |  |
| 22-Apr                                                                                          | 1                             | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1.0                           | 1.4           |  |  |                                 |  |
| 23-Apr                                                                                          | A                             | 1 | 1 | 3 | 3 | 3 | 1 | 1 | 2 | 2  | 2  | 2  | 1  | 2  | 4  | 5  | 1  | 1  | 2                                                                                                                                                          | 2  | 1  | 2  | 1  | A  | 2.0                           | 4.8           |  |  |                                 |  |
| 24-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | A  | 1  | 1.1                           | 1.7           |  |  |                                 |  |
| 25-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | A  | 1  | 1  | 1.1                           | 1.3           |  |  |                                 |  |
| 26-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | A  | 1  | 1  | 1  | 1.2                           | 1.4           |  |  |                                 |  |
| 27-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | A  | 1  | 1  | 1  | 2  | 1.1                           | 1.6           |  |  |                                 |  |
| 28-Apr                                                                                          | 1                             | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1.2                           | 1.6           |  |  |                                 |  |
| 29-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1                                                                                                                                                          | 2  | 1  | 1  | 1  | 1  | 1.2                           | 1.6           |  |  |                                 |  |
| 30-Apr                                                                                          | 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 1.1 1.1 1.1 1.2 1.2 1.1 1.1 1.1 1.1 1.1 1.0 1.0 1.0 1.1 1.2 1.0 1.1 1.1 1.1 1.1 1.1 1.1     |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    |    | Diurnal Average               |               |  |  |                                 |  |
| 1.5 1.7 1.6 2.7 3.0 2.9 1.6 1.7 1.9 2.3 2.1 1.8 1.3 1.8 4.0 4.8 1.5 2.1 4.4 1.6 1.5 2.1 1.5 1.6 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    |    | Diurnal Maximum               |               |  |  |                                 |  |
| C - Calibration                                                                                 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    |    | A - Automated Daily Zero Span |               |  |  |                                 |  |

## Hourly Maximums

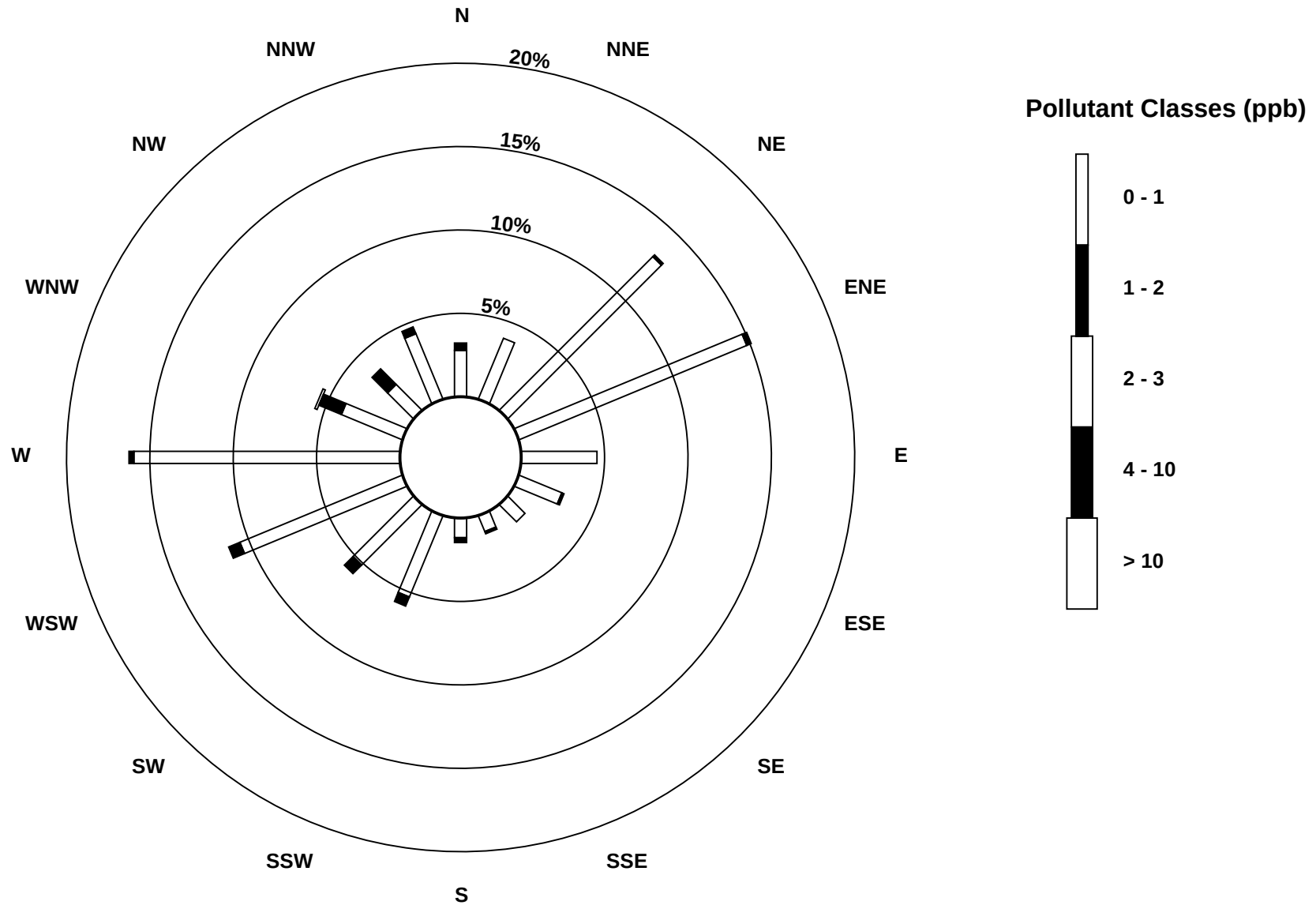
Total Reduced Sulphur (TRS) - ppb  
Evergreen Park - April 2014





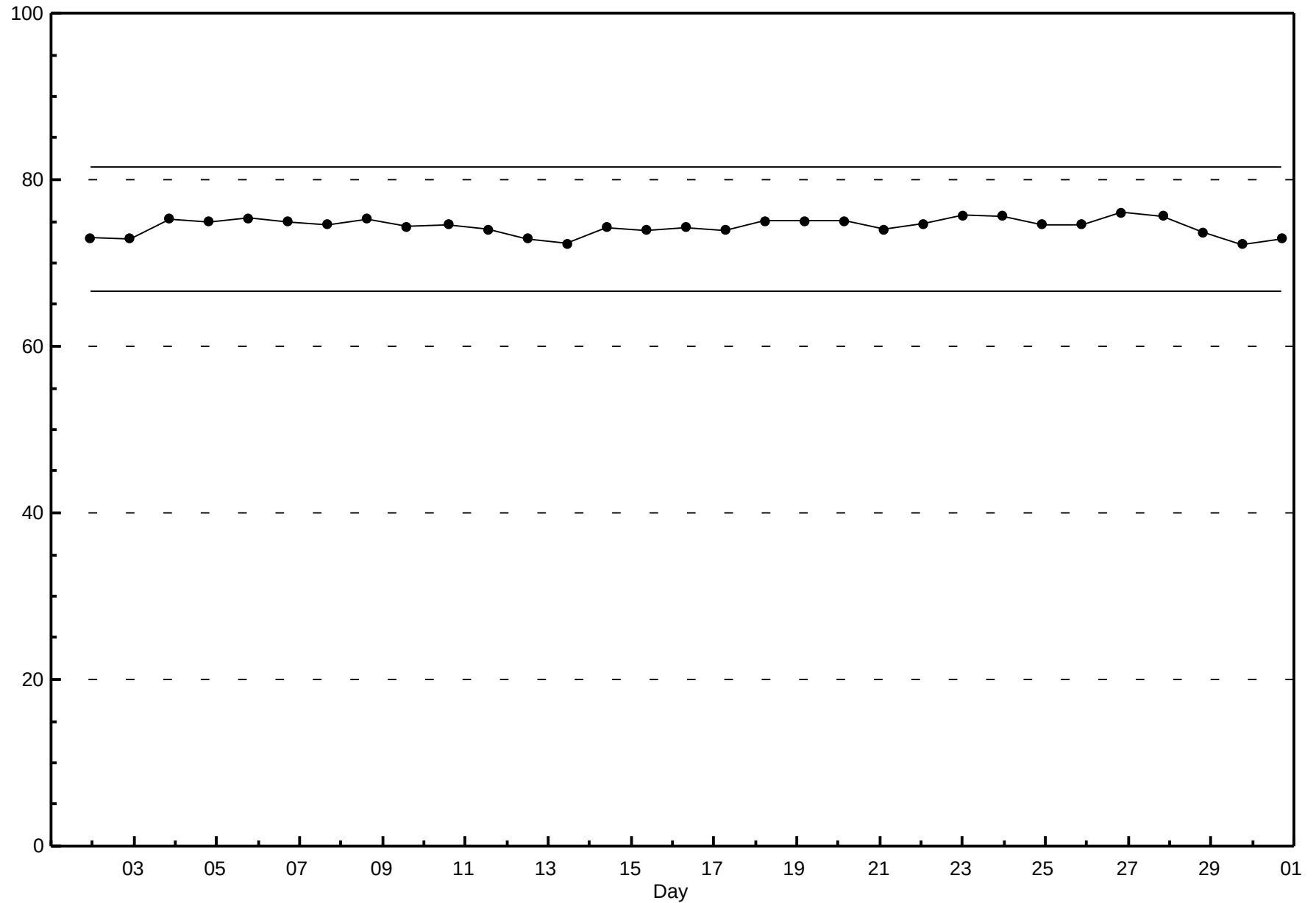
# Pollutant Rose

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



## Span Responses

Total Reduced Sulphur (TRS)  
Evergreen Park - April 2014

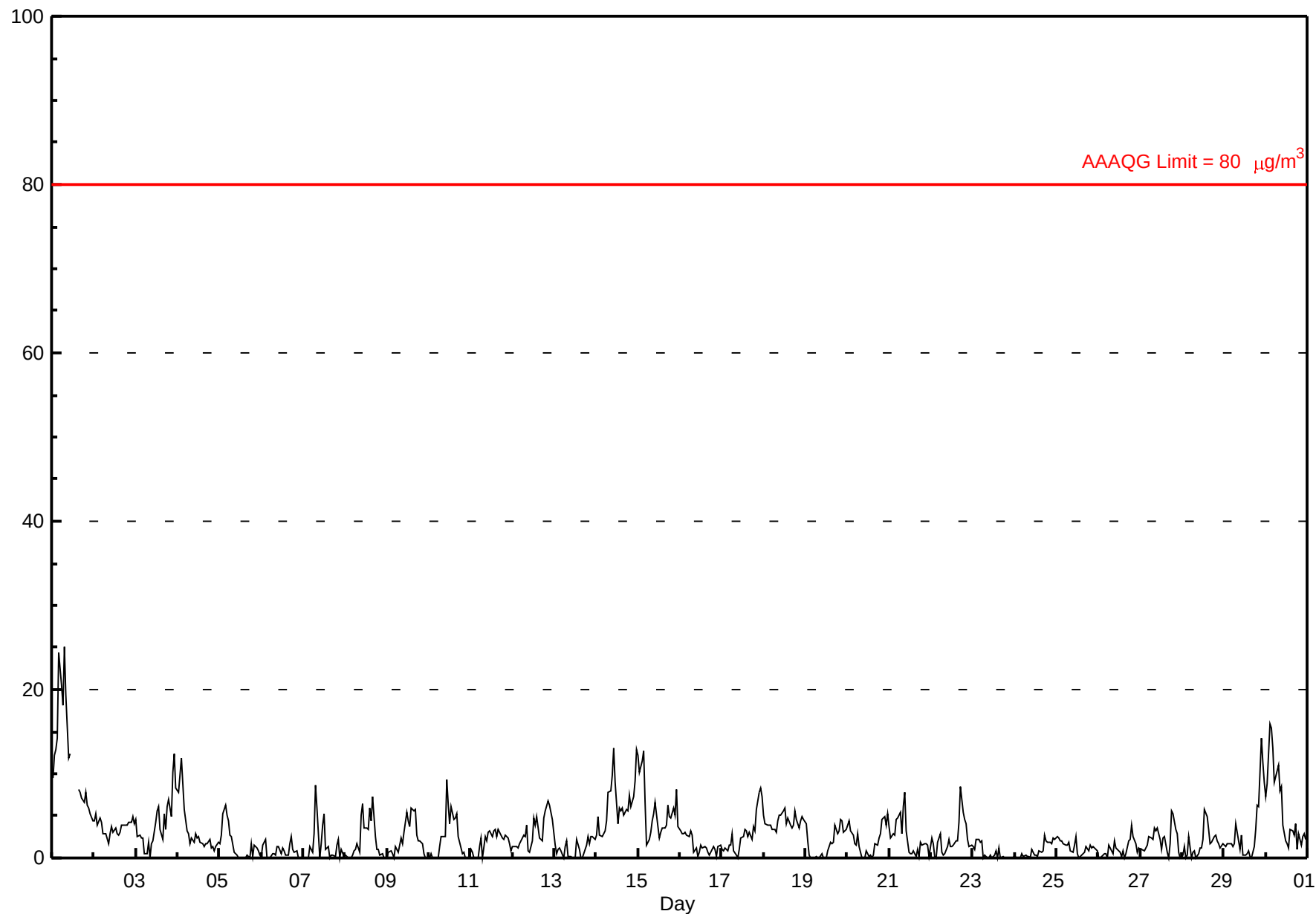


# Hourly Averages

Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

Evergreen Park - April 2014

|                                                                                                                                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                            |               |               |  |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|--|
| Number of Exceedences: 1-hr: 0 24-hr: 0<br>Maximum Value: 25.0 µg/m³ on Apr 1 08:00<br>Maximum Daily Average: 12.0 µg/m³ on Apr 1 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 716<br>Hours of Missing Data: 4<br>Hours of Calibration: 2<br>Percent Operational Time: 99.7                                                                                                                       |               |               |  |
| Minimum Value: 0 µg/m³ on Apr 3 09:00<br>Maximum Diurnal Average: 3.3 µg/m³ at hour 22<br>Monthly Average: 2.81 µg/m³             |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.6 µg/m³ on Apr 23<br>Minimum Diurnal Average: 2.2 µg/m³ at hour 13<br>Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.7 Median = 2.0 Q <sub>3</sub> = 3.9 P <sub>90</sub> = 6.1 P <sub>99</sub> = 15.2 |               |               |  |
| 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-Apr                                                                                                                             | 10                            | 12 | 13 | 14 | 24 | 20 | 18 | 25 | 19 | 12 | 12 | M  | M  | R  | R  | 8  | 8  | 7  | 7  | 8  | 6  | 6  | 5  | 4                                                                                                                                                                                                                                                          | 12.0          | 25.0          |  |
| 2-Apr                                                                                                                             | 4                             | 5  | 4  | 5  | 4  | 3  | 3  | 3  | 2  | 3  | 4  | 3  | 4  | 3  | 3  | 3  | 4  | 4  | 4  | 4  | 4  | 4  | 5  | 4                                                                                                                                                                                                                                                          | 3.7           | 5.2           |  |
| 3-Apr                                                                                                                             | 5                             | 3  | 3  | 2  | 2  | 1  | 1  | 2  | 0  | 2  | 2  | 4  | 6  | 6  | 3  | 2  | 5  | 3  | 6  | 7  | 5  | 10 | 12 | 8                                                                                                                                                                                                                                                          | 4.2           | 12.3          |  |
| 4-Apr                                                                                                                             | 8                             | 10 | 12 | 9  | 6  | 3  | 3  | 2  | 2  | 2  | 3  | 2  | 3  | 2  | 2  | 1  | 2  | 2  | 2  | 1  | 1  | 1  | 1  | 2                                                                                                                                                                                                                                                          | 3.4           | 11.8          |  |
| 5-Apr                                                                                                                             | 2                             | 3  | 5  | 6  | 5  | 4  | 3  | 3  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 2  | 0  | 1  | 1  | 1  | 0                                                                                                                                                                                                                                                          | 1.6           | 6.2           |  |
| 6-Apr                                                                                                                             | 0                             | 2  | 2  | 0  | 0  | 0  | 1  | 1  | 0  | 1  | 1  | 0  | 1  | 1  | 0  | 0  | 2  | 3  | 1  | 1  | 1  | 0  | 0  | 0                                                                                                                                                                                                                                                          | 0.8           | 2.5           |  |
| 7-Apr                                                                                                                             | 0                             | 0  | 0  | 0  | 1  | 1  | 3  | 9  | 6  | 0  | 2  | 4  | 5  | 1  | 1  | 0  | 0  | 0  | 0  | 1  | 2  | 0  | 1  | 0                                                                                                                                                                                                                                                          | 1.6           | 8.6           |  |
| 8-Apr                                                                                                                             | 0                             | 0  | 0  | 0  | 0  | 1  | 1  | 2  | 1  | 5  | 6  | 4  | 4  | 3  | 6  | 4  | 7  | 3  | 1  | 1  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                          | 2.1           | 7.4           |  |
| 9-Apr                                                                                                                             | 0                             | 1  | 1  | 0  | 0  | 1  | 1  | 1  | 2  | 2  | 3  | 5  | 4  | 4  | 6  | 6  | 6  | 3  | 2  | 2  | 2  | 1  | 0  | 0                                                                                                                                                                                                                                                          | 2.2           | 6.0           |  |
| 10-Apr                                                                                                                            | 0                             | 1  | 0  | 0  | 0  | 0  | 1  | 3  | 2  | 3  | 9  | 7  | 4  | 6  | 5  | 5  | 5  | 2  | 1  | 1  | 1  | 0  | 0  | 0                                                                                                                                                                                                                                                          | 2.3           | 9.3           |  |
| 11-Apr                                                                                                                            | 1                             | 1  | 0  | 0  | 0  | 1  | 2  | 0  | 2  | 2  | 3  | 3  | 2  | 3  | 3  | 3  | 3  | 3  | 2  | 2  | 3  | 2  | 2  | 1                                                                                                                                                                                                                                                          | 1.9           | 3.4           |  |
| 12-Apr                                                                                                                            | 1                             | 1  | 1  | 1  | 2  | 2  | 3  | 3  | 4  | 1  | 1  | 2  | 5  | 4  | 5  | 2  | 2  | 2  | 5  | 6  | 7  | 6  | 6  | 5                                                                                                                                                                                                                                                          | 3.1           | 6.8           |  |
| 13-Apr                                                                                                                            | 2                             | 1  | 1  | 1  | 1  | 0  | 1  | 2  | 0  | 0  | 0  | 0  | 0  | 2  | 1  | 0  | 0  | 0  | 1  | 3  | 2  | 3  | 3  | 2                                                                                                                                                                                                                                                          | 1.1           | 2.6           |  |
| 14-Apr                                                                                                                            | 3                             | 5  | 3  | 3  | 3  | 3  | 4  | 8  | 8  | 10 | 13 | 9  | 4  | 6  | 6  | 6  | 5  | 6  | 6  | 7  | 6  | 7  | 9  | 13                                                                                                                                                                                                                                                         | 6.3           | 13.0          |  |
| 15-Apr                                                                                                                            | 12                            | 10 | 12 | 13 | 7  | 2  | 2  | 3  | 4  | 5  | 7  | 4  | 2  | 3  | 4  | 4  | 4  | 6  | 5  | 5  | 6  | 5  | 8  | 4                                                                                                                                                                                                                                                          | 5.6           | 12.7          |  |
| 16-Apr                                                                                                                            | 3                             | 3  | 3  | 3  | 3  | 3  | 3  | 3  | 1  | 1  | 0  | 1  | 2  | 1  | 1  | 1  | 1  | 0  | 1  | 1  | 1  | 0  | 1  | 1                                                                                                                                                                                                                                                          | 1.6           | 3.3           |  |
| 17-Apr                                                                                                                            | 1                             | 1  | 1  | 1  | 1  | 1  | 3  | 1  | 0  | 0  | 1  | 2  | 3  | 3  | 3  | 3  | 3  | 2  | 4  | 3  | 6  | 8  | 8  | 7                                                                                                                                                                                                                                                          | 2.8           | 8.3           |  |
| 18-Apr                                                                                                                            | 5                             | 4  | 4  | 4  | 4  | 3  | 3  | 3  | 4  | 5  | 5  | 6  | 6  | 4  | 5  | 4  | 4  | 4  | 6  | 5  | 4  | 4  | 5  | 5                                                                                                                                                                                                                                                          | 4.4           | 5.9           |  |
| 19-Apr                                                                                                                            | 4                             | 2  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 2  | 2  | 2  | 4  | 3  | 3  | 5  | 4  | 3  | 3                                                                                                                                                                                                                                                          | 1.6           | 4.6           |  |
| 20-Apr                                                                                                                            | 4                             | 4  | 3  | 3  | 2  | 2  | 3  | 1  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 2  | 2  | 2  | 3  | 4  | 5  | 4  | 5                                                                                                                                                                                                                                                          | 2.1           | 5.2           |  |
| 21-Apr                                                                                                                            | 4                             | 2  | 3  | 3  | 5  | 5  | 5  | 3  | 6  | 8  | 3  | 1  | 1  | 1  | 1  | 0  | 1  | 0  | 2  | 1  | 2  | 2  | 1  | 0                                                                                                                                                                                                                                                          | 2.4           | 7.7           |  |
| 22-Apr                                                                                                                            | 2                             | 2  | 0  | 0  | 2  | 3  | 1  | 0  | 1  | 1  | 2  | 1  | 1  | 2  | 2  | 2  | 4  | 9  | 5  | 5  | 4  | 2  | 1  | 2                                                                                                                                                                                                                                                          | 2.3           | 8.5           |  |
| 23-Apr                                                                                                                            | 1                             | 1  | 2  | 2  | 2  | 2  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                          | 0.6           | 2.2           |  |
| 24-Apr                                                                                                                            | 0                             | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 1  | 1  | 1  | 3  | 2  | 2  | 2  | 2  | 2  | 2                                                                                                                                                                                                                                                          | 0.9           | 2.7           |  |
| 25-Apr                                                                                                                            | 3                             | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 1  | 1  | 2  | 2  | 1  | 0  | 0  | 0  | 1  | 1  | 1  | 2  | 1  | 1  | 1  | 1                                                                                                                                                                                                                                                          | 1.3           | 2.6           |  |
| 26-Apr                                                                                                                            | 0                             | 0  | 0  | 0  | 1  | 0  | 2  | 1  | 1  | 2  | 1  | 1  | 1  | 0  | 1  | 0  | 0  | 2  | 2  | 4  | 3  | 2  | 1  | 1                                                                                                                                                                                                                                                          | 1.0           | 3.9           |  |
| 27-Apr                                                                                                                            | 1                             | 1  | 1  | 1  | 1  | 3  | 2  | 2  | 4  | 3  | 4  | 2  | 1  | 2  | 3  | 1  | 0  | 2  | 6  | 5  | 3  | 3  | 1  | 0                                                                                                                                                                                                                                                          | 2.2           | 5.7           |  |
| 28-Apr                                                                                                                            | 0                             | 1  | 0  | 0  | 3  | 0  | 1  | 1  | 0  | 1  | 1  | 1  | 2  | 6  | 5  | 3  | 2  | 2  | 2  | 3  | 2  | 2  | 1  | 2                                                                                                                                                                                                                                                          | 1.7           | 5.7           |  |
| 29-Apr                                                                                                                            | 1                             | 1  | 2  | 2  | 2  | 1  | 2  | 4  | 2  | 1  | 3  | 0  | 0  | 1  | 1  | 0  | 0  | 1  | 3  | 6  | 6  | 14 | 11 | 9                                                                                                                                                                                                                                                          | 3.1           | 14.2          |  |
| 30-Apr                                                                                                                            | 7                             | 9  | 16 | 16 | 13 | 9  | 10 | 11 | 8  | 9  | 4  | 2  | 2  | 1  | 3  | 3  | 3  | 4  | 1  | 3  | 2  | 3  | 3  | 2                                                                                                                                                                                                                                                          | 5.9           | 15.9          |  |
| 2.8 2.9 3.1 3.0 3.2 2.5 2.8 3.2 2.7 2.7 3.1 2.4 2.2 2.3 2.5 2.2 2.6 2.7 2.9 3.1 3.0 3.3 3.2 2.8                                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Diurnal Average                                                                                                                                                                                                                                            |               |               |  |
| 12.2 12.2 15.9 15.5 24.4 20.5 18.1 25.0 19.3 11.9 13.0 8.9 5.9 6.0 6.0 8.2 7.9 8.5 6.7 7.8 6.8 14.2 12.3 12.9                     |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Diurnal Maximum                                                                                                                                                                                                                                            |               |               |  |
| R - Recovery M - Maintenance                                                                                                      |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                            |               |               |  |
| Alberta Ambient Air Quality Guideline (AAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAQO): 24-hr 30 µg/m³          |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                            |               |               |  |



# Hourly Maximums

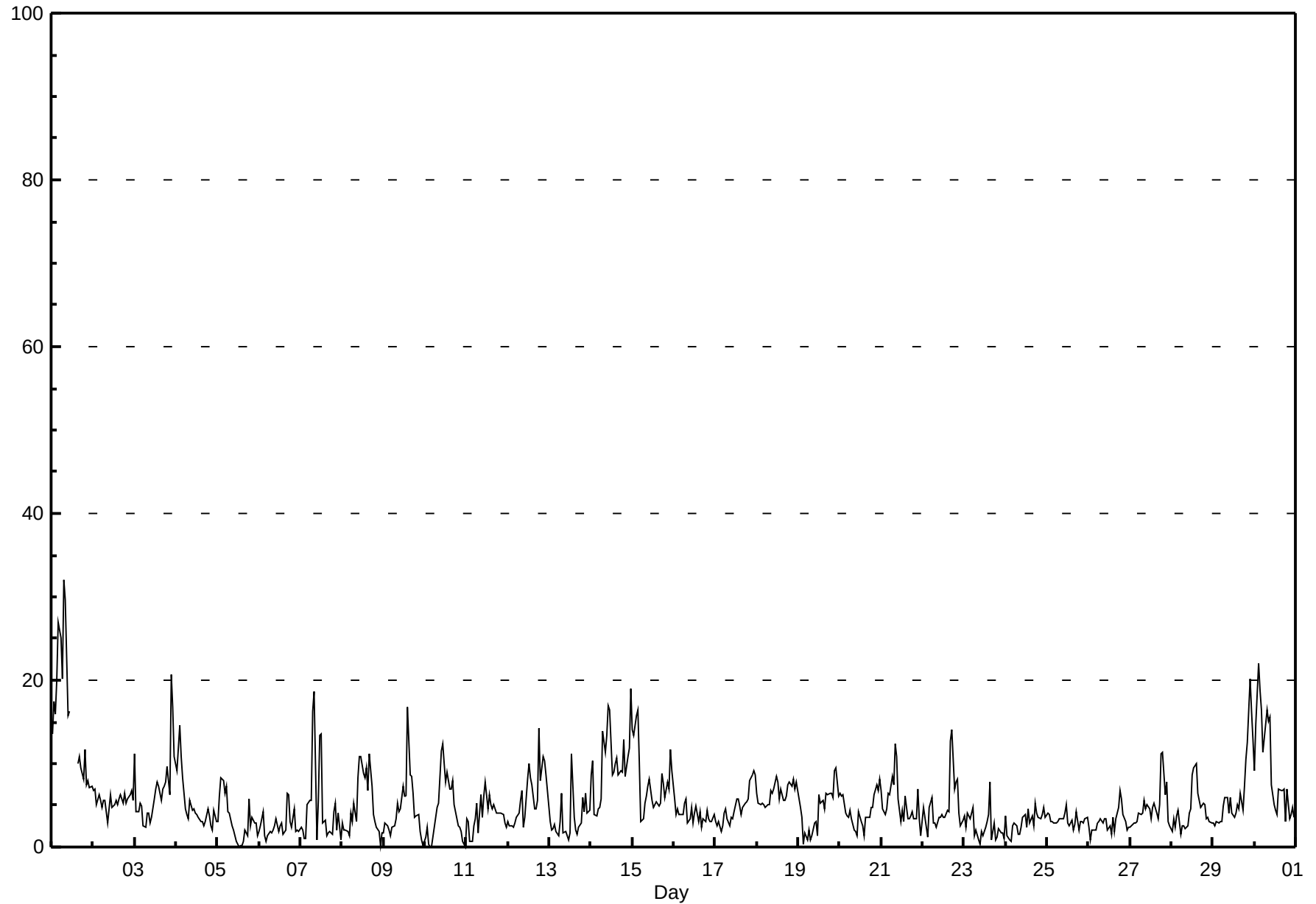
Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

Evergreen Park - April 2014

| Maximum Value: 32.1 μg/m³ on Apr 1 08:00                                                                                |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 15.6 μg/m³ on Apr 1                                                                                                                  |    |    |    |    |                 |               |  |  |  | Hours in Service: 720          |  |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-----------------|---------------|--|--|--|--------------------------------|--|
| Minimum Value: 0 μg/m³ on Apr 5 13:00                                                                                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 2.5 μg/m³ on Apr 23                                                                                                                  |    |    |    |    |                 |               |  |  |  | Hours of Data: 716             |  |
| Maximum Diurnal Average: 6.1 μg/m³ at hour 22                                                                           |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 4.6 μg/m³ at hour 6                                                                                                                |    |    |    |    |                 |               |  |  |  | Hours of Missing Data: 4       |  |
| Monthly Average: 5.29 μg/m³                                                                                             |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 1.8 Q <sub>1</sub> = 2.8 Median = 4.1 Q <sub>3</sub> = 6.5 P <sub>90</sub> = 9.9 P <sub>99</sub> = 19.9 |    |    |    |    |                 |               |  |  |  | Hours of Calibration: 2        |  |
|                                                                                                                         |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    |                 |               |  |  |  | Percent Operational Time: 99.7 |  |
| Day                                                                                                                     | Hourly Period Ending At (MST) |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    | Daily Average   | Daily Maximum |  |  |  |                                |  |
|                                                                                                                         | 1                             | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20                                                                                                                                                          | 21 | 22 | 23 | 24 |                 |               |  |  |  |                                |  |
| 1-Apr                                                                                                                   | 14                            | 17 | 16 | 20 | 27 | 25 | 20 | 32 | 30 | 16 | 16 | M  | M  | R  | R  | 10 | 11 | 9  | 8  | 12                                                                                                                                                          | 7  | 8  | 7  | 7  | 15.6            | 32.1          |  |  |  |                                |  |
| 2-Apr                                                                                                                   | 7                             | 7  | 5  | 6  | 6  | 5  | 6  | 6  | 3  | 5  | 6  | 5  | 5  | 6  | 5  | 6  | 6  | 5  | 7  | 5                                                                                                                                                           | 6  | 6  | 7  | 6  | 5.6             | 7.0           |  |  |  |                                |  |
| 3-Apr                                                                                                                   | 11                            | 4  | 4  | 5  | 5  | 3  | 2  | 4  | 4  | 3  | 4  | 6  | 7  | 8  | 7  | 6  | 7  | 7  | 8  | 10                                                                                                                                                          | 6  | 21 | 17 | 11 | 7.0             | 20.6          |  |  |  |                                |  |
| 4-Apr                                                                                                                   | 9                             | 12 | 15 | 11 | 8  | 5  | 4  | 3  | 6  | 4  | 5  | 4  | 4  | 4  | 3  | 3  | 3  | 3  | 5  | 4                                                                                                                                                           | 3  | 2  | 4  | 3  | 5.2             | 14.5          |  |  |  |                                |  |
| 5-Apr                                                                                                                   | 3                             | 6  | 8  | 8  | 6  | 7  | 4  | 4  | 3  | 2  | 1  | 1  | 0  | 0  | 0  | 1  | 2  | 1  | 6  | 3                                                                                                                                                           | 4  | 3  | 3  | 1  | 3.2             | 8.2           |  |  |  |                                |  |
| 6-Apr                                                                                                                   | 2                             | 3  | 4  | 1  | 1  | 1  | 2  | 2  | 2  | 3  | 3  | 2  | 3  | 3  | 2  | 2  | 6  | 6  | 3  | 2                                                                                                                                                           | 5  | 2  | 2  | 2  | 2.6             | 6.5           |  |  |  |                                |  |
| 7-Apr                                                                                                                   | 2                             | 2  | 1  | 1  | 5  | 6  | 6  | 16 | 19 | 1  | 6  | 13 | 14 | 3  | 3  | 1  | 2  | 2  | 2  | 4                                                                                                                                                           | 5  | 2  | 4  | 1  | 5.0             | 18.7          |  |  |  |                                |  |
| 8-Apr                                                                                                                   | 3                             | 2  | 2  | 2  | 1  | 4  | 3  | 5  | 3  | 8  | 11 | 11 | 9  | 8  | 9  | 7  | 11 | 7  | 4  | 3                                                                                                                                                           | 2  | 2  | 0  | 2  | 5.0             | 11.2          |  |  |  |                                |  |
| 9-Apr                                                                                                                   | 2                             | 3  | 3  | 2  | 1  | 2  | 3  | 3  | 5  | 4  | 5  | 7  | 6  | 6  | 17 | 9  | 8  | 6  | 4  | 4                                                                                                                                                           | 4  | 2  | 1  | 0  | 4.4             | 16.7          |  |  |  |                                |  |
| 10-Apr                                                                                                                  | 1                             | 2  | 0  | 0  | 0  | 2  | 4  | 5  | 5  | 12 | 12 | 10 | 8  | 9  | 7  | 7  | 8  | 5  | 3  | 3                                                                                                                                                           | 2  | 2  | 1  | 0  | 4.5             | 12.3          |  |  |  |                                |  |
| 11-Apr                                                                                                                  | 3                             | 3  | 1  | 1  | 3  | 3  | 5  | 2  | 6  | 4  | 6  | 8  | 5  | 6  | 5  | 5  | 5  | 4  | 4  | 4                                                                                                                                                           | 4  | 4  | 3  | 2  | 3.9             | 7.7           |  |  |  |                                |  |
| 12-Apr                                                                                                                  | 3                             | 3  | 3  | 2  | 3  | 4  | 4  | 6  | 7  | 2  | 4  | 8  | 10 | 8  | 7  | 5  | 5  | 6  | 14 | 8                                                                                                                                                           | 11 | 10 | 9  | 7  | 6.1             | 14.3          |  |  |  |                                |  |
| 13-Apr                                                                                                                  | 3                             | 2  | 2  | 3  | 2  | 1  | 3  | 7  | 2  | 2  | 1  | 1  | 2  | 11 | 4  | 2  | 2  | 2  | 3  | 6                                                                                                                                                           | 4  | 6  | 4  | 4  | 3.3             | 11.2          |  |  |  |                                |  |
| 14-Apr                                                                                                                  | 9                             | 10 | 4  | 4  | 5  | 5  | 6  | 14 | 11 | 13 | 17 | 17 | 9  | 9  | 10 | 11 | 9  | 9  | 9  | 13                                                                                                                                                          | 8  | 11 | 12 | 19 | 10.1            | 18.9          |  |  |  |                                |  |
| 15-Apr                                                                                                                  | 14                            | 13 | 16 | 16 | 10 | 3  | 3  | 5  | 6  | 7  | 8  | 6  | 5  | 5  | 6  | 5  | 5  | 9  | 8  | 6                                                                                                                                                           | 8  | 7  | 12 | 9  | 8.0             | 16.5          |  |  |  |                                |  |
| 16-Apr                                                                                                                  | 6                             | 4  | 5  | 4  | 4  | 4  | 5  | 6  | 3  | 3  | 5  | 3  | 4  | 5  | 3  | 4  | 2  | 3  | 3  | 4                                                                                                                                                           | 3  | 3  | 3  | 4  | 3.9             | 5.8           |  |  |  |                                |  |
| 17-Apr                                                                                                                  | 3                             | 3  | 3  | 2  | 3  | 4  | 5  | 3  | 3  | 4  | 3  | 4  | 6  | 6  | 5  | 4  | 5  | 5  | 6  | 6                                                                                                                                                           | 8  | 9  | 9  | 9  | 4.8             | 9.2           |  |  |  |                                |  |
| 18-Apr                                                                                                                  | 7                             | 5  | 5  | 5  | 5  | 5  | 5  | 7  | 6  | 7  | 8  | 8  | 6  | 7  | 6  | 6  | 6  | 7  | 8  | 7                                                                                                                                                           | 8  | 7  | 8  | 8  | 6.4             | 8.5           |  |  |  |                                |  |
| 19-Apr                                                                                                                  | 6                             | 5  | 4  | 0  | 2  | 1  | 2  | 1  | 1  | 3  | 3  | 1  | 6  | 5  | 6  | 4  | 7  | 6  | 7  | 7                                                                                                                                                           | 6  | 9  | 9  | 6  | 4.4             | 9.4           |  |  |  |                                |  |
| 20-Apr                                                                                                                  | 7                             | 6  | 6  | 4  | 4  | 4  | 4  | 3  | 2  | 2  | 1  | 4  | 3  | 3  | 1  | 4  | 4  | 4  | 5  | 5                                                                                                                                                           | 6  | 7  | 7  | 8  | 4.3             | 8.2           |  |  |  |                                |  |
| 21-Apr                                                                                                                  | 7                             | 5  | 4  | 5  | 6  | 6  | 8  | 7  | 12 | 11 | 6  | 3  | 4  | 3  | 6  | 3  | 3  | 4  | 4  | 3                                                                                                                                                           | 3  | 7  | 3  | 1  | 5.3             | 12.4          |  |  |  |                                |  |
| 22-Apr                                                                                                                  | 5                             | 4  | 2  | 1  | 5  | 6  | 3  | 3  | 2  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 13 | 14 | 7  | 8                                                                                                                                                           | 8  | 4  | 3  | 3  | 4.9             | 14.1          |  |  |  |                                |  |
| 23-Apr                                                                                                                  | 4                             | 2  | 4  | 3  | 4  | 5  | 1  | 2  | 1  | 0  | 2  | 1  | 2  | 3  | 4  | 8  | 1  | 3  | 1  | 1                                                                                                                                                           | 2  | 2  | 2  | 1  | 2.5             | 7.7           |  |  |  |                                |  |
| 24-Apr                                                                                                                  | 4                             | 1  | 1  | 1  | 3  | 3  | 3  | 2  | 2  | 2  | 4  | 4  | 2  | 5  | 3  | 4  | 3  | 5  | 4  | 4                                                                                                                                                           | 3  | 4  | 5  | 4  | 3.0             | 5.2           |  |  |  |                                |  |
| 25-Apr                                                                                                                  | 4                             | 4  | 3  | 3  | 3  | 3  | 3  | 3  | 3  | 3  | 4  | 5  | 3  | 3  | 3  | 2  | 3  | 4  | 2  | 3                                                                                                                                                           | 3  | 3  | 3  | 4  | 3.2             | 5.1           |  |  |  |                                |  |
| 26-Apr                                                                                                                  | 2                             | 1  | 2  | 2  | 2  | 3  | 3  | 3  | 3  | 3  | 3  | 2  | 3  | 2  | 3  | 2  | 3  | 5  | 7  | 6                                                                                                                                                           | 4  | 3  | 2  | 2  | 3.0             | 6.8           |  |  |  |                                |  |
| 27-Apr                                                                                                                  | 2                             | 3  | 3  | 3  | 3  | 4  | 4  | 4  | 6  | 5  | 5  | 5  | 3  | 5  | 5  | 4  | 3  | 5  | 11 | 11                                                                                                                                                          | 6  | 8  | 3  | 3  | 4.7             | 11.4          |  |  |  |                                |  |
| 28-Apr                                                                                                                  | 2                             | 3  | 2  | 4  | 4  | 2  | 3  | 3  | 2  | 3  | 4  | 5  | 9  | 9  | 10 | 7  | 6  | 5  | 5  | 5                                                                                                                                                           | 3  | 4  | 3  | 3  | 4.3             | 9.9           |  |  |  |                                |  |
| 29-Apr                                                                                                                  | 3                             | 3  | 3  | 3  | 3  | 3  | 5  | 6  | 6  | 4  | 6  | 4  | 4  | 4  | 5  | 5  | 6  | 4  | 7  | 10                                                                                                                                                          | 13 | 20 | 16 | 13 | 6.5             | 20.2          |  |  |  |                                |  |
| 30-Apr                                                                                                                  | 9                             | 15 | 22 | 19 | 16 | 11 | 15 | 17 | 15 | 16 | 7  | 5  | 4  | 4  | 7  | 7  | 7  | 7  | 3  | 7                                                                                                                                                           | 3  | 4  | 5  | 4  | 9.5             | 22.0          |  |  |  |                                |  |
| 5.2 5.1 5.1 4.7 5.0 4.6 4.8 6.0 6.0 5.1 5.6 5.4 5.1 5.2 5.4 4.8 5.3 5.5 5.5 5.8 5.3 6.1 5.5 4.8                         |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    | Diurnal Average |               |  |  |  |                                |  |
| 14.1 17.5 22.0 19.9 27.0 25.0 20.2 32.1 29.7 15.8 17.0 16.5 13.6 11.2 16.7 10.7 12.6 14.1 14.3 12.8 12.6 20.6 16.7 18.9 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    | Diurnal Maximum |               |  |  |  |                                |  |
| R - Recovery M - Maintenance                                                                                            |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    |                 |               |  |  |  |                                |  |

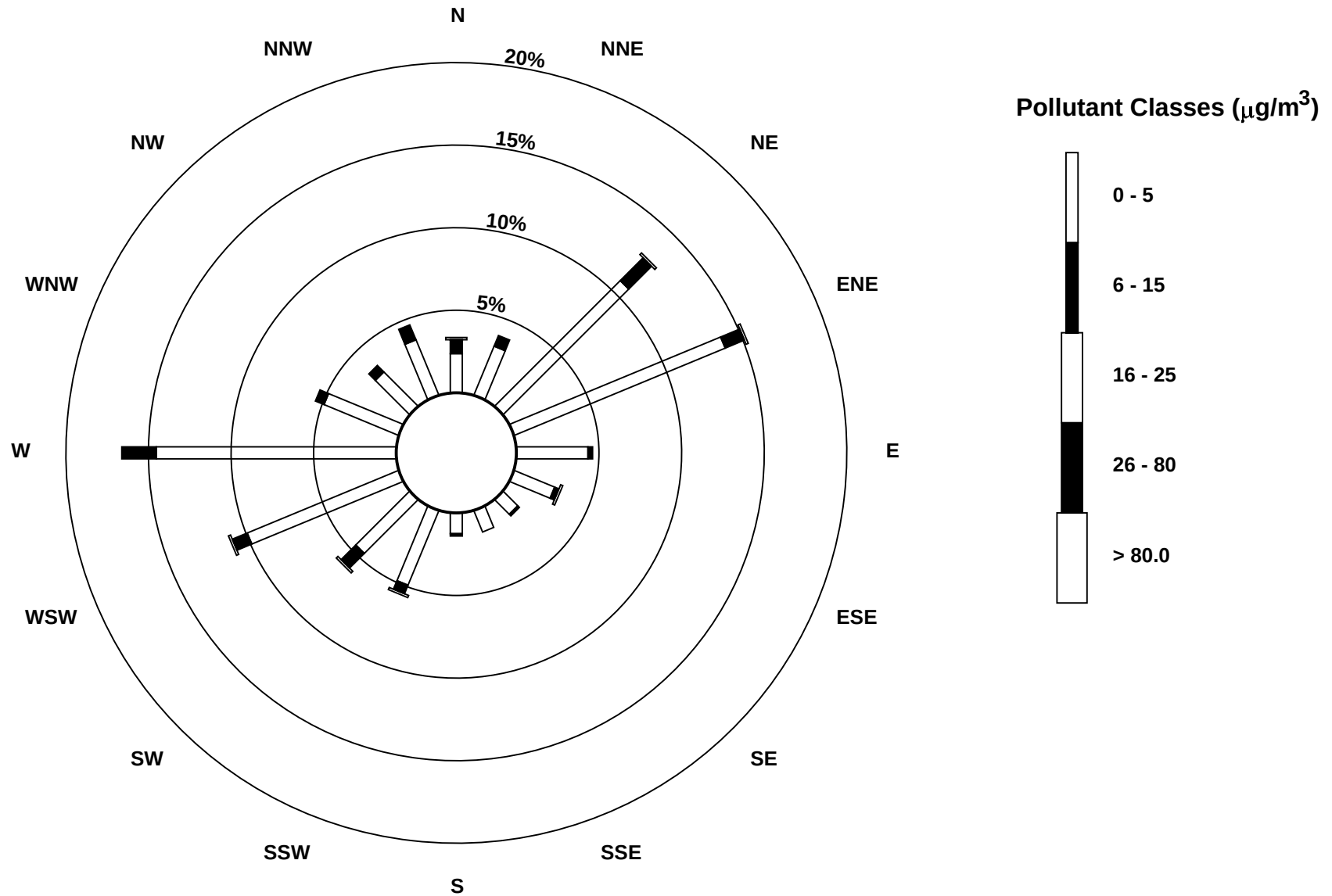
## Hourly Maximums

Particulate Matter 2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$   
Evergreen Park - April 2014



# Pollutant Rose

Particulate Matter 2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$   
Evergreen Park - April 2014



# Hourly Averages

External Temperature (ET) - °C

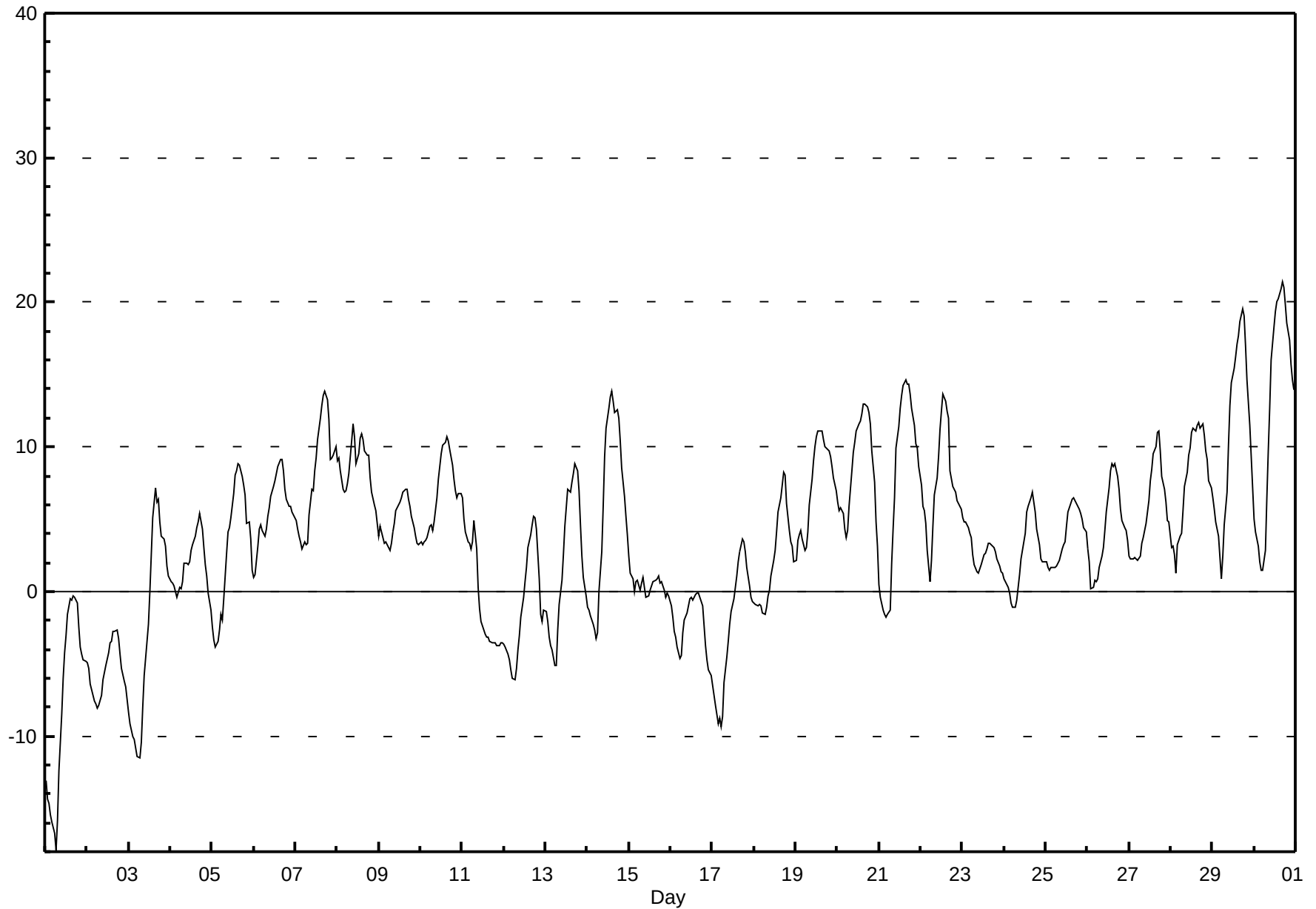
Evergreen Park - April 2014

| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 21.5 °C on Apr 30 17:00 Maximum Daily Average: 12.8 °C on Apr 30 |                               |     |     |     |     |     |     |     |     |                                                                                                                                                                                                                                                           |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 720<br>Hours of Missing Data: 0<br>Hours of Calibration: 0<br>Percent Operational Time: 100.0 |    |    |    |    |               |               |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|----|----|----|----|---------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|---------------|---------------|
| Minimum Value: -18 °C on Apr 1 07:00<br>Maximum Diurnal Average: 7.9 °C at hour 17<br>Monthly Average: 3.63 °C                     |                               |     |     |     |     |     |     |     |     | Minimum Daily Average: -7.6 °C on Apr 1<br>Minimum Diurnal Average: -0.7 °C at hour 6<br>Percentiles: P <sub>1</sub> = -13.3 P <sub>10</sub> = -3.8 Q <sub>1</sub> = -0.1 Median = 3.7 Q <sub>3</sub> = 7.3 P <sub>90</sub> = 11.1 P <sub>99</sub> = 19.3 |    |    |    |    |    |    |    |    |    |                                                                                                                                       |    |    |    |    |               |               |
| Day                                                                                                                                | Hourly Period Ending At (MST) |     |     |     |     |     |     |     |     |                                                                                                                                                                                                                                                           |    |    |    |    |    |    |    |    |    |                                                                                                                                       |    |    |    |    | Daily Average | Daily Maximum |
| 1-Apr                                                                                                                              | -13                           | -14 | -15 | -15 | -16 | -17 | -18 | -16 | -12 | -8                                                                                                                                                                                                                                                        | -6 | -4 | -3 | -2 | -1 | -1 | 0  | 0  | -1 | -2                                                                                                                                    | -4 | -4 | -5 | -5 | -7.6          | -0.3          |
| 2-Apr                                                                                                                              | -5                            | -5  | -6  | -7  | -8  | -8  | -8  | -8  | -7  | -6                                                                                                                                                                                                                                                        | -6 | -5 | -4 | -3 | -3 | -3 | -3 | -3 | -3 | -4                                                                                                                                    | -5 | -6 | -7 | -7 | -5.5          | -2.7          |
| 3-Apr                                                                                                                              | -8                            | -9  | -10 | -10 | -11 | -11 | -11 | -10 | -8  | -6                                                                                                                                                                                                                                                        | -5 | -2 | 0  | 3  | 5  | 7  | 6  | 6  | 5  | 4                                                                                                                                     | 4  | 3  | 2  | 1  | -2.4          | 7.2           |
| 4-Apr                                                                                                                              | 1                             | 1   | 0   | 0   | 0   | 0   | 0   | 1   | 2   | 2                                                                                                                                                                                                                                                         | 2  | 2  | 3  | 3  | 4  | 4  | 5  | 5  | 4  | 3                                                                                                                                     | 2  | 1  | 0  | -1 | 1.8           | 5.4           |
| 5-Apr                                                                                                                              | -2                            | -3  | -4  | -3  | -3  | -2  | -2  | -1  | 3   | 4                                                                                                                                                                                                                                                         | 4  | 5  | 7  | 8  | 8  | 9  | 9  | 8  | 7  | 7                                                                                                                                     | 5  | 5  | 4  | 1  | 3.1           | 8.9           |
| 6-Apr                                                                                                                              | 1                             | 1   | 3   | 4   | 5   | 4   | 4   | 4   | 5   | 6                                                                                                                                                                                                                                                         | 7  | 7  | 8  | 8  | 9  | 9  | 9  | 8  | 7  | 6                                                                                                                                     | 6  | 6  | 6  | 5  | 5.8           | 9.1           |
| 7-Apr                                                                                                                              | 5                             | 4   | 4   | 3   | 3   | 3   | 3   | 3   | 5   | 7                                                                                                                                                                                                                                                         | 7  | 8  | 9  | 10 | 12 | 13 | 14 | 14 | 13 | 12                                                                                                                                    | 9  | 9  | 9  | 10 | 8.0           | 13.8          |
| 8-Apr                                                                                                                              | 9                             | 9   | 8   | 7   | 7   | 7   | 7   | 8   | 10  | 12                                                                                                                                                                                                                                                        | 11 | 9  | 10 | 11 | 11 | 10 | 10 | 9  | 9  | 8                                                                                                                                     | 7  | 6  | 6  | 5  | 8.6           | 11.6          |
| 9-Apr                                                                                                                              | 4                             | 5   | 4   | 3   | 3   | 3   | 3   | 3   | 4   | 5                                                                                                                                                                                                                                                         | 6  | 6  | 6  | 7  | 7  | 7  | 6  | 6  | 5  | 4                                                                                                                                     | 4  | 3  | 3  | 3  | 4.8           | 7.1           |
| 10-Apr                                                                                                                             | 3                             | 3   | 3   | 4   | 4   | 4   | 5   | 4   | 5   | 6                                                                                                                                                                                                                                                         | 8  | 9  | 10 | 10 | 10 | 11 | 10 | 10 | 9  | 8                                                                                                                                     | 7  | 6  | 7  | 7  | 6.8           | 10.7          |
| 11-Apr                                                                                                                             | 6                             | 5   | 4   | 3   | 3   | 3   | 3   | 5   | 3   | 0                                                                                                                                                                                                                                                         | -1 | -2 | -3 | -3 | -3 | -3 | -4 | -4 | -4 | -4                                                                                                                                    | -4 | -4 | -4 | -4 | -0.3          | 6.5           |
| 12-Apr                                                                                                                             | -4                            | -4  | -4  | -5  | -5  | -6  | -6  | -5  | -4  | -3                                                                                                                                                                                                                                                        | -2 | 0  | 1  | 2  | 3  | 4  | 5  | 5  | 5  | 4                                                                                                                                     | 1  | -2 | -2 | -1 | -1.0          | 5.2           |
| 13-Apr                                                                                                                             | -1                            | -2  | -3  | -4  | -4  | -5  | -5  | -3  | -1  | 1                                                                                                                                                                                                                                                         | 3  | 4  | 6  | 7  | 7  | 8  | 8  | 9  | 8  | 7                                                                                                                                     | 5  | 2  | 1  | 0  | 2.0           | 8.8           |
| 14-Apr                                                                                                                             | -1                            | -1  | -2  | -2  | -3  | -3  | -3  | 0   | 3   | 6                                                                                                                                                                                                                                                         | 9  | 11 | 13 | 13 | 14 | 13 | 12 | 13 | 12 | 10                                                                                                                                    | 9  | 7  | 5  | 4  | 5.8           | 13.9          |
| 15-Apr                                                                                                                             | 2                             | 1   | 1   | 0   | 1   | 1   | 0   | 1   | 1   | 0                                                                                                                                                                                                                                                         | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                     | 0  | 0  | 0  | 0  | 0.5           | 2.5           |
| 16-Apr                                                                                                                             | -1                            | -2  | -3  | -3  | -4  | -5  | -4  | -3  | -2  | -1                                                                                                                                                                                                                                                        | -1 | -1 | 0  | -1 | 0  | 0  | 0  | 0  | -1 | -2                                                                                                                                    | -4 | -5 | -5 | -6 | -2.3          | -0.1          |
| 17-Apr                                                                                                                             | -6                            | -7  | -8  | -9  | -9  | -9  | -9  | -6  | -5  | -3                                                                                                                                                                                                                                                        | -2 | -1 | 0  | 0  | 1  | 2  | 3  | 4  | 3  | 3                                                                                                                                     | 2  | 0  | 0  | -1 | -2.5          | 3.7           |
| 18-Apr                                                                                                                             | -1                            | -1  | -1  | -1  | -1  | -1  | -2  | -1  | 0   | 0                                                                                                                                                                                                                                                         | 1  | 2  | 3  | 4  | 6  | 6  | 7  | 8  | 8  | 6                                                                                                                                     | 4  | 3  | 3  | 2  | 2.3           | 8.2           |
| 19-Apr                                                                                                                             | 2                             | 4   | 4   | 4   | 4   | 3   | 3   | 4   | 6   | 8                                                                                                                                                                                                                                                         | 9  | 10 | 11 | 11 | 11 | 11 | 10 | 10 | 10 | 10                                                                                                                                    | 9  | 9  | 8  | 7  | 7.4           | 11.1          |
| 20-Apr                                                                                                                             | 6                             | 6   | 6   | 5   | 4   | 4   | 4   | 6   | 8   | 10                                                                                                                                                                                                                                                        | 10 | 11 | 12 | 12 | 12 | 13 | 13 | 13 | 12 | 12                                                                                                                                    | 10 | 8  | 5  | 3  | 8.5           | 12.9          |
| 21-Apr                                                                                                                             | 0                             | 0   | -1  | -2  | -2  | -2  | -1  | 2   | 4   | 6                                                                                                                                                                                                                                                         | 10 | 11 | 13 | 14 | 14 | 15 | 14 | 14 | 14 | 13                                                                                                                                    | 11 | 10 | 10 | 9  | 7.4           | 14.6          |
| 22-Apr                                                                                                                             | 7                             | 6   | 6   | 5   | 3   | 1   | 2   | 5   | 7   | 8                                                                                                                                                                                                                                                         | 9  | 11 | 12 | 14 | 13 | 12 | 12 | 8  | 7  | 7                                                                                                                                     | 7  | 6  | 6  | 6  | 7.5           | 13.7          |
| 23-Apr                                                                                                                             | 5                             | 5   | 5   | 4   | 4   | 4   | 3   | 2   | 1   | 1                                                                                                                                                                                                                                                         | 2  | 2  | 3  | 3  | 3  | 3  | 3  | 3  | 3  | 3                                                                                                                                     | 2  | 2  | 1  | 1  | 2.8           | 5.1           |
| 24-Apr                                                                                                                             | 1                             | 1   | 0   | 0   | -1  | -1  | -1  | -1  | 0   | 1                                                                                                                                                                                                                                                         | 2  | 3  | 4  | 5  | 6  | 6  | 7  | 6  | 6  | 4                                                                                                                                     | 3  | 2  | 2  | 2  | 2.5           | 6.9           |
| 25-Apr                                                                                                                             | 2                             | 2   | 1   | 2   | 2   | 2   | 2   | 2   | 2   | 3                                                                                                                                                                                                                                                         | 3  | 3  | 5  | 5  | 6  | 6  | 6  | 6  | 6  | 6                                                                                                                                     | 5  | 5  | 4  | 4  | 3.8           | 6.4           |
| 26-Apr                                                                                                                             | 3                             | 2   | 0   | 0   | 1   | 1   | 1   | 2   | 2   | 3                                                                                                                                                                                                                                                         | 4  | 6  | 7  | 8  | 9  | 9  | 9  | 8  | 7  | 6                                                                                                                                     | 5  | 4  | 4  | 4  | 4.3           | 8.9           |
| 27-Apr                                                                                                                             | 2                             | 2   | 2   | 2   | 2   | 2   | 2   | 3   | 4   | 4                                                                                                                                                                                                                                                         | 5  | 6  | 8  | 8  | 9  | 10 | 11 | 11 | 10 | 8                                                                                                                                     | 7  | 6  | 5  | 5  | 5.7           | 11.1          |
| 28-Apr                                                                                                                             | 3                             | 3   | 3   | 1   | 3   | 4   | 4   | 6   | 7   | 8                                                                                                                                                                                                                                                         | 9  | 10 | 11 | 11 | 11 | 11 | 12 | 11 | 12 | 11                                                                                                                                    | 10 | 9  | 8  | 7  | 7.7           | 11.7          |
| 29-Apr                                                                                                                             | 6                             | 6   | 5   | 4   | 2   | 1   | 2   | 5   | 7   | 10                                                                                                                                                                                                                                                        | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 19 | 17                                                                                                                                    | 15 | 12 | 9  | 7  | 10.8          | 19.5          |
| 30-Apr                                                                                                                             | 5                             | 4   | 3   | 2   | 2   | 1   | 3   | 6   | 10  | 13                                                                                                                                                                                                                                                        | 16 | 18 | 19 | 20 | 20 | 21 | 21 | 21 | 20 | 19                                                                                                                                    | 17 | 16 | 15 | 14 | 12.8          | 21.5          |
| 1.1 0.6 0.2 -0.2 -0.4 -0.7 -0.6 0.6 2.0 3.2 4.2 5.2 6.1 6.9 7.4 7.8 7.9 7.7 7.2 6.2 5.0 4.0 3.3 2.7 Diurnal Average                |                               |     |     |     |     |     |     |     |     |                                                                                                                                                                                                                                                           |    |    |    |    |    |    |    |    |    |                                                                                                                                       |    |    |    |    |               |               |
| 9.0 9.3 8.3 7.1 6.9 7.0 7.5 8.1 10.4 12.7 16.0 18.3 19.3 20.1 20.3 20.9 21.5 21.0 19.9 18.6 17.4 15.7 14.7 14.0 Diurnal Maximum    |                               |     |     |     |     |     |     |     |     |                                                                                                                                                                                                                                                           |    |    |    |    |    |    |    |    |    |                                                                                                                                       |    |    |    |    |               |               |



## Hourly Averages

External Temperature (ET) - °C  
Evergreen Park - April 2014



# Hourly Averages

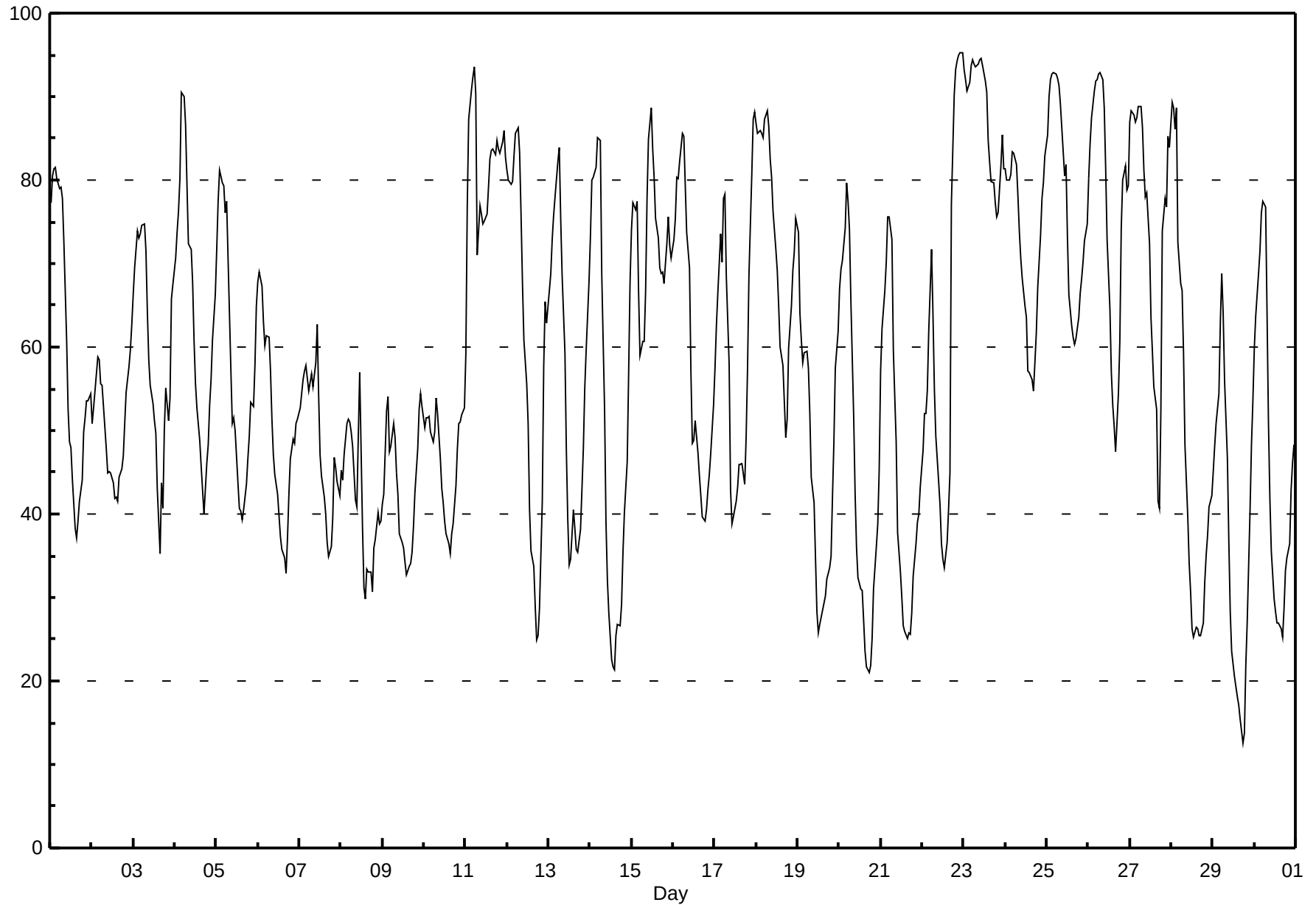
Relative Humidity (RH) - %

Evergreen Park - April 2014

|                                                 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                   |               |                                 |  |
|-------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------------------------|--|
| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720                                                                                                                                             |               |                                 |  |
| Maximum Value: 95.3 % on Apr 22 23:00           |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 87.8 % on Apr 23                                                                                                                           |               | Hours of Data: 720              |  |
| Minimum Value: 12 % on Apr 29 18:00             |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 37.2 % on Apr 29                                                                                                                           |               | Hours of Missing Data: 0        |  |
| Maximum Diurnal Average: 74.8 % at hour 6       |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 41.5 % at hour 17                                                                                                                        |               | Hours of Calibration: 0         |  |
| Monthly Average: 58.31 %                        |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 21.0 P <sub>10</sub> = 33.0 Q <sub>1</sub> = 42.3 Median = 55.9 Q <sub>3</sub> = 75.7 P <sub>90</sub> = 85.3 P <sub>99</sub> = 94.0 |               | 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-Apr                                           | 77                            | 81 | 81 | 82 | 80 | 79 | 79 | 78 | 73 | 61 | 53 | 49 | 48 | 44 | 38 | 37 | 39 | 42 | 44 | 50 | 52 | 53 | 54 | 54                                                                                                                                                                | 59.4          | 81.5                            |  |
| 2-Apr                                           | 51                            | 53 | 55 | 59 | 59 | 56 | 55 | 53 | 48 | 45 | 45 | 45 | 44 | 42 | 42 | 42 | 44 | 46 | 47 | 51 | 55 | 58 | 60 | 63                                                                                                                                                                | 50.6          | 62.7                            |  |
| 3-Apr                                           | 66                            | 70 | 74 | 73 | 74 | 75 | 75 | 71 | 64 | 59 | 55 | 53 | 51 | 50 | 43 | 35 | 44 | 41 | 50 | 55 | 51 | 54 | 66 | 67                                                                                                                                                                | 59.0          | 74.8                            |  |
| 4-Apr                                           | 71                            | 74 | 76 | 80 | 91 | 90 | 87 | 79 | 72 | 72 | 68 | 61 | 56 | 53 | 49 | 46 | 43 | 40 | 46 | 48 | 53 | 56 | 61 | 66                                                                                                                                                                | 64.0          | 90.5                            |  |
| 5-Apr                                           | 72                            | 77 | 81 | 80 | 79 | 76 | 77 | 71 | 57 | 51 | 52 | 50 | 44 | 41 | 40 | 39 | 40 | 43 | 47 | 49 | 53 | 53 | 58 | 65                                                                                                                                                                | 58.2          | 81.1                            |  |
| 6-Apr                                           | 68                            | 69 | 67 | 63 | 60 | 61 | 61 | 57 | 51 | 47 | 45 | 42 | 40 | 37 | 36 | 35 | 33 | 37 | 42 | 47 | 49 | 48 | 51 | 51                                                                                                                                                                | 49.9          | 68.9                            |  |
| 7-Apr                                           | 53                            | 54 | 56 | 57 | 58 | 55 | 56 | 57 | 55 | 58 | 63 | 54 | 47 | 44 | 42 | 40 | 37 | 35 | 36 | 40 | 47 | 46 | 44 | 42                                                                                                                                                                | 49.0          | 62.7                            |  |
| 8-Apr                                           | 45                            | 44 | 47 | 51 | 51 | 51 | 50 | 48 | 42 | 41 | 49 | 57 | 38 | 31 | 30 | 33 | 33 | 33 | 31 | 36 | 37 | 40 | 39 | 39                                                                                                                                                                | 41.5          | 57.0                            |  |
| 9-Apr                                           | 41                            | 42 | 52 | 54 | 47 | 48 | 51 | 49 | 45 | 42 | 38 | 37 | 36 | 34 | 33 | 34 | 34 | 35 | 38 | 42 | 48 | 53 | 54 | 53                                                                                                                                                                | 43.4          | 54.4                            |  |
| 10-Apr                                          | 50                            | 52 | 52 | 52 | 50 | 49 | 50 | 54 | 52 | 47 | 43 | 41 | 39 | 38 | 36 | 35 | 38 | 39 | 43 | 48 | 51 | 51 | 52 | 53                                                                                                                                                                | 46.4          | 53.8                            |  |
| 11-Apr                                          | 59                            | 77 | 87 | 91 | 92 | 93 | 90 | 71 | 77 | 76 | 75 | 75 | 76 | 79 | 83 | 84 | 84 | 83 | 85 | 84 | 83 | 85 | 86 | 83                                                                                                                                                                | 81.6          | 93.5                            |  |
| 12-Apr                                          | 81                            | 80 | 79 | 80 | 83 | 86 | 86 | 83 | 76 | 68 | 61 | 56 | 51 | 40 | 36 | 34 | 29 | 25 | 25 | 29 | 42 | 58 | 65 | 63                                                                                                                                                                | 58.9          | 86.4                            |  |
| 13-Apr                                          | 67                            | 69 | 73 | 76 | 78 | 82 | 84 | 75 | 69 | 59 | 48 | 39 | 34 | 35 | 40 | 38 | 36 | 35 | 38 | 43 | 48 | 55 | 60 | 68                                                                                                                                                                | 56.2          | 83.9                            |  |
| 14-Apr                                          | 73                            | 80 | 80 | 82 | 85 | 85 | 85 | 69 | 53 | 39 | 32 | 28 | 23 | 22 | 21 | 25 | 27 | 27 | 29 | 35 | 40 | 46 | 57 | 68                                                                                                                                                                | 50.4          | 85.1                            |  |
| 15-Apr                                          | 74                            | 77 | 76 | 77 | 67 | 59 | 61 | 61 | 67 | 78 | 85 | 89 | 84 | 80 | 75 | 73 | 69 | 69 | 69 | 68 | 72 | 76 | 72 | 71                                                                                                                                                                | 72.9          | 88.6                            |  |
| 16-Apr                                          | 73                            | 75 | 80 | 80 | 82 | 86 | 85 | 79 | 74 | 69 | 57 | 48 | 49 | 51 | 47 | 45 | 42 | 40 | 39 | 41 | 43 | 45 | 47 | 53                                                                                                                                                                | 59.6          | 85.7                            |  |
| 17-Apr                                          | 57                            | 63 | 66 | 74 | 70 | 78 | 78 | 69 | 58 | 43 | 39 | 40 | 42 | 43 | 46 | 46 | 46 | 44 | 49 | 57 | 69 | 81 | 87 | 88                                                                                                                                                                | 59.7          | 88.2                            |  |
| 18-Apr                                          | 87                            | 86 | 86 | 86 | 85 | 87 | 88 | 86 | 82 | 80 | 76 | 72 | 69 | 65 | 60 | 58 | 53 | 49 | 51 | 60 | 65 | 69 | 71 | 75                                                                                                                                                                | 72.8          | 88.2                            |  |
| 19-Apr                                          | 74                            | 64 | 61 | 58 | 59 | 59 | 57 | 52 | 44 | 41 | 35 | 28 | 26 | 27 | 28 | 29 | 30 | 32 | 34 | 35 | 42 | 49 | 57 | 62                                                                                                                                                                | 45.2          | 73.8                            |  |
| 20-Apr                                          | 67                            | 69 | 70 | 74 | 80 | 77 | 74 | 66 | 52 | 42 | 36 | 32 | 31 | 31 | 27 | 24 | 22 | 21 | 22 | 25 | 31 | 36 | 39 | 45                                                                                                                                                                | 45.6          | 79.7                            |  |
| 21-Apr                                          | 57                            | 62 | 67 | 70 | 76 | 76 | 73 | 60 | 54 | 49 | 38 | 33 | 30 | 27 | 26 | 25 | 26 | 26 | 28 | 33 | 36 | 39 | 40 | 43                                                                                                                                                                | 45.5          | 75.5                            |  |
| 22-Apr                                          | 48                            | 52 | 52 | 55 | 62 | 72 | 64 | 55 | 49 | 44 | 41 | 36 | 35 | 34 | 37 | 41 | 45 | 77 | 90 | 93 | 94 | 95 | 95 | 95                                                                                                                                                                | 60.8          | 95.3                            |  |
| 23-Apr                                          | 93                            | 92 | 91 | 92 | 94 | 94 | 94 | 94 | 94 | 94 | 95 | 94 | 92 | 91 | 85 | 82 | 80 | 80 | 77 | 76 | 76 | 82 | 85 | 81                                                                                                                                                                | 87.8          | 94.6                            |  |
| 24-Apr                                          | 81                            | 80 | 80 | 81 | 83 | 83 | 82 | 78 | 74 | 71 | 68 | 65 | 64 | 57 | 57 | 56 | 55 | 58 | 62 | 67 | 73 | 78 | 80 | 83                                                                                                                                                                | 71.5          | 83.5                            |  |
| 25-Apr                                          | 85                            | 90 | 92 | 93 | 93 | 93 | 92 | 91 | 89 | 83 | 80 | 82 | 73 | 66 | 63 | 61 | 60 | 61 | 63 | 66 | 68 | 70 | 73 | 75                                                                                                                                                                | 77.7          | 92.8                            |  |
| 26-Apr                                          | 80                            | 84 | 87 | 91 | 92 | 92 | 93 | 93 | 92 | 89 | 81 | 73 | 65 | 57 | 53 | 50 | 48 | 54 | 61 | 74 | 80 | 82 | 79 | 79                                                                                                                                                                | 76.2          | 92.9                            |  |
| 27-Apr                                          | 87                            | 88 | 88 | 87 | 88 | 89 | 89 | 86 | 81 | 78 | 79 | 72 | 64 | 60 | 55 | 53 | 41 | 41 | 52 | 74 | 78 | 77 | 85 | 84                                                                                                                                                                | 73.9          | 88.9                            |  |
| 28-Apr                                          | 89                            | 89 | 86 | 89 | 73 | 68 | 67 | 59 | 48 | 40 | 34 | 31 | 26 | 25 | 26 | 26 | 25 | 25 | 27 | 32 | 35 | 37 | 41 | 42                                                                                                                                                                | 47.6          | 89.4                            |  |
| 29-Apr                                          | 45                            | 48 | 51 | 54 | 63 | 69 | 64 | 56 | 47 | 37 | 28 | 24 | 20 | 19 | 18 | 17 | 15 | 12 | 14 | 22 | 27 | 40 | 48 | 54                                                                                                                                                                | 37.2          | 68.8                            |  |
| 30-Apr                                          | 60                            | 64 | 69 | 71 | 76 | 77 | 77 | 64 | 51 | 42 | 36 | 30 | 28 | 27 | 27 | 26 | 25 | 29 | 33 | 35 | 36 | 43 | 46 | 48                                                                                                                                                                | 46.7          | 77.4                            |  |
|                                                 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Diurnal Average                                                                                                                                                   |               |                                 |  |
|                                                 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Diurnal Maximum                                                                                                                                                   |               |                                 |  |

## Hourly Averages

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



## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Evergreen Park - April 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                             | 1   | 1   | 1   | 3   | 1   | 1   | 1   | 5   | 3   | 8   | 10  | 11  | 11  | 11  | 18  | 18  | 20  | 15  | 10  | 9   | 7   | 8   | 8   | 6.2           | 19.8          |
| Dir    | 210                           | 11  | 264 | 238 | 244 | 207 | 34  | 220 | 351 | 324 | 352 | 17  | 10  | 30  | 37  | 50  | 61  | 59  | 54  | 48  | 56  | 53  | 66  | 53  | 41.3          | 59.4          |
| 2 Spd  | 8                             | 5   | 10  | 7   | 8   | 9   | 7   | 8   | 14  | 7   | 10  | 11  | 10  | 11  | 12  | 13  | 13  | 10  | 11  | 8   | 5   | 5   | 2   | 3   | 8.2           | 13.9          |
| Dir    | 64                            | 31  | 47  | 25  | 38  | 39  | 23  | 7   | 40  | 27  | 21  | 45  | 19  | 19  | 27  | 48  | 63  | 57  | 71  | 74  | 70  | 63  | 56  | 62  | 42.2          | 40.0          |
| 3 Spd  | 2                             | 3   | 3   | 5   | 4   | 7   | 7   | 6   | 6   | 4   | 11  | 11  | 10  | 11  | 7   | 12  | 11  | 8   | 6   | 3   | 4   | 1   | 3   | 1   | 5.3           | 12.3          |
| Dir    | 59                            | 65  | 62  | 74  | 60  | 69  | 74  | 76  | 86  | 3   | 57  | 45  | 27  | 4   | 44  | 84  | 54  | 78  | 30  | 41  | 79  | 38  | 224 | 169 | 55.5          | 83.9          |
| 4 Spd  | 0                             | 1   | 4   | 10  | 12  | 14  | 16  | 22  | 20  | 22  | 24  | 27  | 21  | 22  | 19  | 17  | 18  | 14  | 10  | 6   | 5   | 2   | 1   | 2   | 8.5           | 26.8          |
| Dir    | 324                           | 346 | 270 | 301 | 230 | 249 | 256 | 255 | 275 | 323 | 333 | 337 | 346 | 344 | 351 | 346 | 340 | 348 | 73  | 82  | 113 | 128 | 138 | 51  | 320.4         | 336.7         |
| 5 Spd  | 0                             | 0   | 3   | 1   | 1   | 1   | 5   | 7   | 14  | 26  | 24  | 23  | 27  | 28  | 24  | 19  | 15  | 19  | 11  | 2   | 4   | 8   | 0   | 1   | 10.3          | 28.0          |
| Dir    | 71                            | 254 | 205 | 283 | 352 | 246 | 223 | 230 | 251 | 263 | 262 | 265 | 269 | 271 | 278 | 286 | 273 | 267 | 266 | 274 | 202 | 236 | 194 | 57  | 264.7         | 270.7         |
| 6 Spd  | 2                             | 3   | 3   | 17  | 29  | 27  | 33  | 39  | 44  | 48  | 44  | 43  | 45  | 39  | 32  | 36  | 47  | 45  | 42  | 35  | 30  | 26  | 30  | 27  | 31.4          | 48.4          |
| Dir    | 181                           | 206 | 261 | 247 | 247 | 246 | 253 | 262 | 266 | 264 | 265 | 265 | 264 | 269 | 282 | 275 | 267 | 264 | 263 | 264 | 260 | 251 | 246 | 243 | 261.3         | 264.4         |
| 7 Spd  | 18                            | 9   | 3   | 3   | 3   | 5   | 1   | 3   | 7   | 5   | 7   | 12  | 13  | 9   | 11  | 12  | 23  | 24  | 13  | 7   | 3   | 2   | 9   | 13  | 8.4           | 24.0          |
| Dir    | 229                           | 211 | 209 | 199 | 180 | 175 | 163 | 221 | 214 | 178 | 157 | 194 | 201 | 206 | 225 | 211 | 225 | 238 | 233 | 207 | 199 | 127 | 195 | 199 | 211.4         | 238.2         |
| 8 Spd  | 12                            | 22  | 12  | 6   | 9   | 8   | 13  | 8   | 15  | 8   | 28  | 43  | 57  | 47  | 52  | 48  | 54  | 49  | 43  | 49  | 39  | 29  | 32  | 28  | 27.8          | 57.2          |
| Dir    | 219                           | 221 | 214 | 198 | 202 | 195 | 201 | 199 | 207 | 301 | 274 | 273 | 260 | 263 | 263 | 269 | 264 | 259 | 258 | 260 | 262 | 256 | 253 | 247 | 255.4         | 260.3         |
| 9 Spd  | 30                            | 32  | 33  | 33  | 39  | 40  | 33  | 26  | 46  | 42  | 43  | 48  | 48  | 41  | 44  | 41  | 51  | 47  | 40  | 42  | 41  | 34  | 25  | 17  | 37.6          | 51.4          |
| Dir    | 245                           | 262 | 266 | 260 | 259 | 260 | 263 | 269 | 269 | 271 | 274 | 268 | 268 | 277 | 281 | 277 | 267 | 264 | 263 | 262 | 268 | 265 | 248 | 237 | 265.8         | 267.2         |
| 10 Spd | 23                            | 22  | 27  | 18  | 20  | 21  | 15  | 6   | 17  | 40  | 54  | 53  | 45  | 45  | 46  | 43  | 41  | 36  | 30  | 22  | 9   | 14  | 24  | 22  | 28.0          | 53.7          |
| Dir    | 245                           | 246 | 246 | 233 | 229 | 245 | 254 | 288 | 257 | 265 | 264 | 265 | 271 | 268 | 269 | 266 | 268 | 270 | 267 | 266 | 244 | 221 | 232 | 233 | 258.4         | 263.6         |
| 11 Spd | 22                            | 7   | 2   | 2   | 1   | 4   | 11  | 26  | 35  | 43  | 45  | 34  | 34  | 34  | 32  | 24  | 17  | 13  | 11  | 7   | 9   | 6   | 5   | 8   | 14.4          | 44.8          |
| Dir    | 242                           | 213 | 189 | 60  | 135 | 217 | 255 | 264 | 326 | 336 | 336 | 329 | 333 | 329 | 332 | 338 | 8   | 26  | 30  | 4   | 335 | 316 | 289 | 327 | 326.0         | 335.5         |
| 12 Spd | 7                             | 9   | 9   | 8   | 8   | 8   | 8   | 13  | 13  | 16  | 16  | 11  | 13  | 13  | 11  | 11  | 13  | 15  | 11  | 3   | 1   | 4   | 2   | 9   | 7.6           | 16.2          |
| Dir    | 309                           | 295 | 306 | 314 | 267 | 254 | 258 | 254 | 274 | 268 | 265 | 276 | 283 | 283 | 295 | 286 | 327 | 351 | 350 | 24  | 222 | 217 | 53  | 56  | 291.4         | 268.3         |
| 13 Spd | 7                             | 5   | 6   | 7   | 4   | 3   | 3   | 3   | 7   | 8   | 6   | 5   | 8   | 4   | 18  | 18  | 16  | 11  | 7   | 6   | 5   | 1   | 1   | 2   | 5.4           | 17.7          |
| Dir    | 75                            | 78  | 59  | 68  | 78  | 65  | 61  | 79  | 128 | 151 | 151 | 141 | 156 | 58  | 53  | 57  | 57  | 62  | 60  | 54  | 64  | 30  | 35  | 243 | 75.5          | 56.5          |
| 14 Spd | 1                             | 2   | 0   | 1   | 2   | 2   | 1   | 6   | 7   | 8   | 3   | 8   | 11  | 12  | 14  | 13  | 12  | 9   | 5   | 3   | 2   | 2   | 1   | 2   | 2.0           | 13.5          |
| Dir    | 295                           | 238 | 32  | 192 | 207 | 213 | 219 | 207 | 228 | 282 | 244 | 275 | 333 | 357 | 16  | 47  | 55  | 66  | 61  | 55  | 57  | 51  | 334 | 246 | 2.7           | 16.2          |
| 15 Spd | 1                             | 2   | 2   | 2   | 6   | 13  | 15  | 18  | 21  | 21  | 18  | 15  | 19  | 15  | 15  | 18  | 15  | 11  | 12  | 3   | 1   | 2   | 2   | 6   | 10.1          | 21.0          |
| Dir    | 333                           | 6   | 338 | 318 | 16  | 40  | 48  | 54  | 50  | 45  | 41  | 42  | 37  | 52  | 56  | 62  | 60  | 74  | 52  | 46  | 253 | 29  | 44  | 60  | 48.1          | 44.6          |
| 16 Spd | 6                             | 4   | 5   | 6   | 6   | 8   | 6   | 10  | 13  | 13  | 12  | 16  | 14  | 14  | 14  | 15  | 14  | 15  | 15  | 16  | 17  | 11  | 6   | 5   | 10.8          | 16.8          |
| Dir    | 68                            | 64  | 57  | 57  | 44  | 47  | 51  | 59  | 55  | 69  | 52  | 47  | 43  | 46  | 43  | 40  | 48  | 47  | 60  | 62  | 58  | 64  | 76  | 59  | 53.5          | 58.5          |
| 17 Spd | 3                             | 1   | 0   | 3   | 2   | 0   | 3   | 6   | 9   | 13  | 12  | 18  | 20  | 18  | 17  | 13  | 14  | 7   | 6   | 9   | 13  | 11  | 8   | 7   | 8.4           | 20.1          |
| Dir    | 61                            | 42  | 52  | 56  | 59  | 245 | 76  | 82  | 92  | 112 | 89  | 56  | 56  | 55  | 56  | 59  | 57  | 80  | 109 | 96  | 100 | 105 | 86  | 75  | 74.6          | 56.0          |
| 18 Spd | 7                             | 9   | 6   | 4   | 6   | 6   | 6   | 5   | 1   | 6   | 4   | 5   | 7   | 5   | 5   | 8   | 5   | 5   | 6   | 5   | 5   | 1   | 1   | 1   | 2.3           | 9.0           |
| Dir    | 80                            | 82  | 83  | 65  | 60  | 68  | 64  | 70  | 182 | 257 | 273 | 348 | 321 | 318 | 330 | 354 | 211 | 342 | 63  | 61  | 81  | 144 | 251 | 219 | 38.2          | 82.0          |
| 19 Spd | 1                             | 5   | 9   | 15  | 9   | 13  | 13  | 17  | 15  | 13  | 9   | 4   | 2   | 11  | 15  | 19  | 20  | 15  | 12  | 3   | 13  | 6   | 1   | 1   | 2.3           | 19.7          |
| Dir    | 254                           | 248 | 250 | 251 | 249 | 237 | 246 | 256 | 263 | 272 | 288 | 339 | 214 | 70  | 52  | 52  | 59  | 59  | 51  | 49  | 255 | 214 | 282 | 219 | 287.9         | 58.9          |
| 20 Spd | 1                             | 1   | 5   | 4   | 1   | 2   | 5   | 11  | 27  | 40  | 44  | 40  | 39  | 34  | 30  | 29  | 32  | 29  | 26  | 13  | 7   | 3   | 4   | 2   | 17.2          | 44.4          |
| Dir    | 242                           | 231 | 272 | 231 | 200 | 202 | 217 | 240 | 260 | 267 | 267 | 271 | 276 | 284 | 273 | 268 | 281 | 285 | 288 | 284 | 258 | 224 | 196 | 207 | 270.6         | 267.0         |
| 21 Spd | 1                             | 1   | 0   | 0   | 1   | 1   | 3   | 4   | 3   | 5   | 4   | 6   | 3   | 9   | 2   | 10  | 10  | 10  | 11  | 9   | 5   | 9   | 7   | 6   | 2.7           | 10.5          |
| Dir    | 53                            | 221 | 102 | 66  | 239 | 225 | 216 | 210 | 270 | 272 | 318 | 20  | 351 | 162 | 164 | 95  | 70  | 82  | 68  | 61  | 65  | 63  | 60  | 65  | 73.0          | 67.5          |
| 22 Spd | 2                             | 2   | 5   | 6   | 1   | 0   | 7   | 9   | 7   | 16  | 13  | 13  | 15  | 19  | 21  | 20  | 20  | 13  | 4   | 2   | 2   | 4   | 5   | 9   | 8.1           | 20.8          |
| Dir    | 45                            | 53  | 66  | 73  | 69  | 36  | 74  | 73  | 74  | 110 | 104 | 96  | 76  | 66  | 77  | 69  | 94  | 107 | 76  | 45  | 357 | 48  | 13  | 353 | 77.4          | 76.8          |

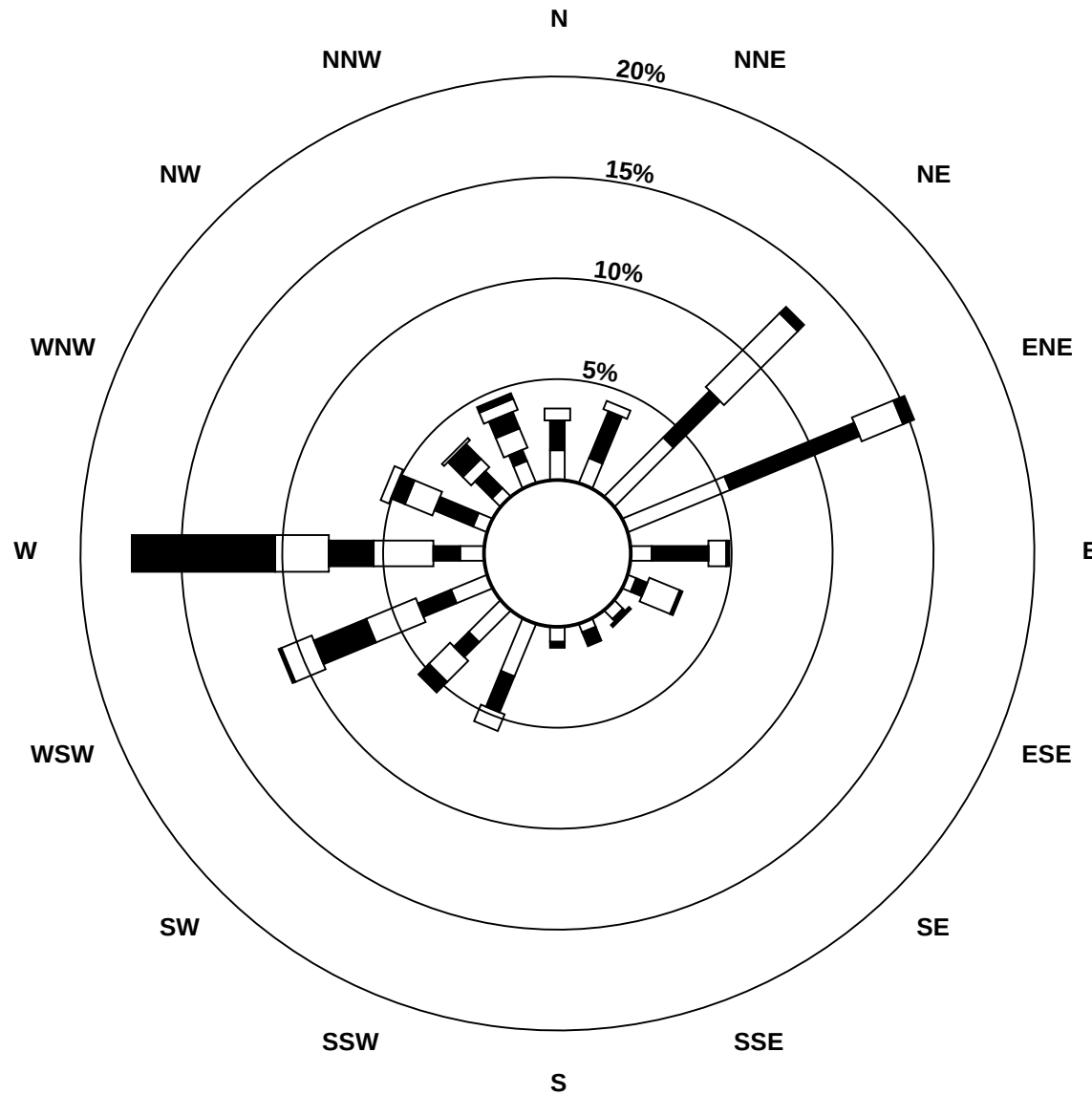
## Hourly Averages

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

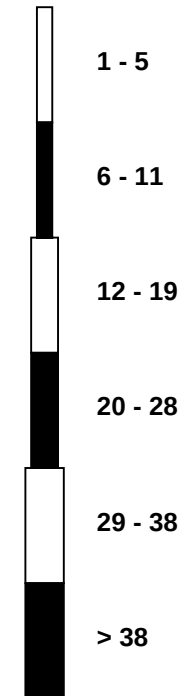
| Day                                                                                | Hourly Period Ending At (MST) |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       |       |       |                                                                                                                                                                     |       |       |       |       | 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                                                                             | 6                             | 5     | 4       | 7     | 7        | 9     | 13       | 11    | 11       | 11    | 16    | 19    | 25    | 22    | 24    | 23    | 24    | 20    | 21    | 16                                                                                                                                                                  | 18    | 13    | 10    | 13    | 13.8            | 24.7          |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 22                            | 14    | 283     | 310   | 299      | 295   | 334      | 322   | 314      | 302   | 305   | 295   | 287   | 309   | 304   | 301   | 309   | 314   | 310   | 311                                                                                                                                                                 | 323   | 311   | 284   | 267   | 306.7           | 287.5         |  |  |  |                           |  |  |  |       |
| 24 Spd                                                                             | 16                            | 17    | 15      | 12    | 12       | 14    | 14       | 15    | 17       | 17    | 13    | 10    | 12    | 7     | 10    | 11    | 14    | 17    | 18    | 15                                                                                                                                                                  | 11    | 6     | 5     | 4     | 6.8             | 17.9          |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 276                           | 277   | 277     | 293   | 278      | 271   | 293      | 295   | 274      | 280   | 289   | 300   | 341   | 349   | 34    | 35    | 48    | 51    | 40    | 49                                                                                                                                                                  | 50    | 50    | 44    | 55    | 325.0           | 39.6          |  |  |  |                           |  |  |  |       |
| 25 Spd                                                                             | 4                             | 5     | 3       | 1     | 2        | 2     | 2        | 3     | 7        | 4     | 3     | 7     | 6     | 5     | 6     | 7     | 7     | 7     | 7     | 6                                                                                                                                                                   | 2     | 2     | 3     | 4     | 4.1             | 7.4           |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 46                            | 42    | 14      | 10    | 358      | 11    | 16       | 34    | 59       | 80    | 48    | 52    | 29    | 40    | 16    | 48    | 92    | 76    | 78    | 67                                                                                                                                                                  | 64    | 70    | 68    | 80    | 53.1            | 52.5          |  |  |  |                           |  |  |  |       |
| 26 Spd                                                                             | 4                             | 4     | 1       | 5     | 4        | 1     | 4        | 7     | 10       | 11    | 11    | 13    | 14    | 15    | 22    | 18    | 16    | 20    | 14    | 11                                                                                                                                                                  | 8     | 10    | 14    | 17    | 10.0            | 21.8          |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 100                           | 102   | 56      | 47    | 60       | 77    | 71       | 73    | 58       | 68    | 86    | 90    | 102   | 119   | 109   | 103   | 109   | 130   | 121   | 120                                                                                                                                                                 | 110   | 94    | 101   | 109   | 101.0           | 108.9         |  |  |  |                           |  |  |  |       |
| 27 Spd                                                                             | 13                            | 11    | 8       | 4     | 4        | 3     | 3        | 1     | 7        | 13    | 10    | 11    | 18    | 20    | 20    | 19    | 10    | 5     | 4     | 2                                                                                                                                                                   | 7     | 18    | 3     | 2     | 3.4             | 20.0          |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 98                            | 97    | 90      | 81    | 45       | 44    | 52       | 61    | 273      | 273   | 269   | 270   | 284   | 310   | 328   | 345   | 355   | 5     | 224   | 166                                                                                                                                                                 | 200   | 215   | 347   | 262   | 306.2           | 309.9         |  |  |  |                           |  |  |  |       |
| 28 Spd                                                                             | 8                             | 11    | 7       | 2     | 20       | 25    | 22       | 22    | 27       | 34    | 33    | 36    | 38    | 40    | 38    | 39    | 30    | 28    | 32    | 32                                                                                                                                                                  | 24    | 19    | 17    | 19    | 24.2            | 40.2          |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 206                           | 230   | 212     | 121   | 248      | 248   | 239      | 238   | 250      | 253   | 254   | 255   | 261   | 271   | 267   | 266   | 276   | 277   | 264   | 259                                                                                                                                                                 | 256   | 238   | 225   | 236   | 255.0           | 270.5         |  |  |  |                           |  |  |  |       |
| 29 Spd                                                                             | 17                            | 14    | 11      | 9     | 1        | 1     | 1        | 3     | 5        | 7     | 7     | 4     | 1     | 6     | 4     | 11    | 8     | 16    | 13    | 6                                                                                                                                                                   | 3     | 3     | 3     | 1     | 3.8             | 17.3          |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 243                           | 248   | 252     | 256   | 281      | 119   | 188      | 234   | 220      | 223   | 188   | 157   | 161   | 179   | 145   | 85    | 83    | 222   | 243   | 347                                                                                                                                                                 | 350   | 251   | 242   | 205   | 227.8           | 242.8         |  |  |  |                           |  |  |  |       |
| 30 Spd                                                                             | 0                             | 1     | 0       | 0     | 1        | 1     | 0        | 0     | 1        | 4     | 9     | 13    | 19    | 27    | 26    | 22    | 30    | 27    | 24    | 31                                                                                                                                                                  | 19    | 11    | 13    | 8     | 11.6            | 30.9          |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 66                            | 205   | 105     | 69    | 223      | 43    | 145      | 340   | 249      | 291   | 289   | 269   | 268   | 248   | 265   | 263   | 253   | 293   | 284   | 274                                                                                                                                                                 | 270   | 279   | 271   | 276   | 270.0           | 274.3         |  |  |  |                           |  |  |  |       |
| Spd                                                                                | 3.0                           | 3.1   | 3.1     | 2.7   | 4.1      | 4.4   | 4.2      | 5.1   | 7.3      | 9.8   | 10.4  | 10.4  | 11.8  | 10.5  | 9.5   | 7.5   | 6.7   | 6.4   | 5.4   | 4.9                                                                                                                                                                 | 3.9   | 3.5   | 3.5   | 2.8   | Diurnal Average |               |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 238.7                         | 246.6 | 261.6   | 273.0 | 255.0    | 255.8 | 262.8    | 265.1 | 276.8    | 281.8 | 286.4 | 289.7 | 290.8 | 297.8 | 308.6 | 318.5 | 305.0 | 297.0 | 295.0 | 286.9                                                                                                                                                               | 275.6 | 250.5 | 244.0 | 242.0 | Diurnal Maximum |               |  |  |  |                           |  |  |  |       |
| Spd                                                                                | 29.6                          | 31.8  | 33.0    | 32.7  | 38.8     | 40.4  | 33.1     | 38.5  | 46.3     | 48.4  | 53.7  | 52.6  | 57.2  | 47.3  | 52.1  | 48.1  | 53.9  | 48.8  | 42.7  | 48.7                                                                                                                                                                | 40.6  | 33.7  | 31.6  | 27.7  | Diurnal Maximum |               |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 245.0                         | 262.3 | 265.8   | 259.9 | 259.3    | 260.4 | 263.2    | 262.0 | 268.9    | 264.4 | 263.6 | 265.2 | 260.3 | 263.1 | 263.4 | 268.7 | 263.5 | 259.3 | 258.2 | 260.5                                                                                                                                                               | 268.2 | 264.6 | 252.9 | 246.8 |                 |               |  |  |  |                           |  |  |  |       |
| Maximum Speed Value: 57 km/h on Apr 8 13:00                                        |                               |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       |       |       | Minimum Speed Value: 0 km/h on Apr 17 06:00                                                                                                                         |       |       |       |       |                 |               |  |  |  | Hours in Service:         |  |  |  | 720   |
| Maximum Daily Speed Average: 37.6 km/h on Apr 9                                    |                               |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       |       |       | Minimum Daily Speed Average: 2.0 km/h on Apr 25                                                                                                                     |       |       |       |       |                 |               |  |  |  | Hours of Data:            |  |  |  | 720   |
| Maximum Diurnal Speed Average: 11.8 km/h at hour 13                                |                               |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       |       |       | Minimum Diurnal Speed Average: 2.7 km/h at hour 4                                                                                                                   |       |       |       |       |                 |               |  |  |  | Hours of Missing Data:    |  |  |  | 0     |
| Monthly Average Velocity: 5.63 km/h 283.06 deg                                     |                               |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       |       |       | Speed Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 1.6 Q <sub>1</sub> = 4.5 Median = 9.5 Q <sub>3</sub> = 17.8 P <sub>90</sub> = 31.8 P <sub>99</sub> = 47.0 |       |       |       |       |                 |               |  |  |  | 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                                                                              | 18                            |       | 22      |       | 11       |       | 4        |       | 0        |       | 0     |       | 55    |       |       |       |       |       |       |                                                                                                                                                                     |       |       |       |       |                 |               |  |  |  |                           |  |  |  |       |
| NorthEast                                                                          | 60                            |       | 54      |       | 54       |       | 7        |       | 0        |       | 0     |       | 175   |       |       |       |       |       |       |                                                                                                                                                                     |       |       |       |       |                 |               |  |  |  |                           |  |  |  |       |
| East                                                                               | 20                            |       | 47      |       | 21       |       | 4        |       | 0        |       | 0     |       | 92    |       |       |       |       |       |       |                                                                                                                                                                     |       |       |       |       |                 |               |  |  |  |                           |  |  |  |       |
| SouthEast                                                                          | 10                            |       | 7       |       | 3        |       | 1        |       | 0        |       | 0     |       | 21    |       |       |       |       |       |       |                                                                                                                                                                     |       |       |       |       |                 |               |  |  |  |                           |  |  |  |       |
| South                                                                              | 20                            |       | 9       |       | 4        |       | 0        |       | 0        |       | 0     |       | 33    |       |       |       |       |       |       |                                                                                                                                                                     |       |       |       |       |                 |               |  |  |  |                           |  |  |  |       |
| SouthWest                                                                          | 43                            |       | 19      |       | 19       |       | 17       |       | 3        |       | 0     |       | 101   |       |       |       |       |       |       |                                                                                                                                                                     |       |       |       |       |                 |               |  |  |  |                           |  |  |  |       |
| West                                                                               | 20                            |       | 22      |       | 37       |       | 27       |       | 29       |       | 51    |       | 186   |       |       |       |       |       |       |                                                                                                                                                                     |       |       |       |       |                 |               |  |  |  |                           |  |  |  |       |
| NorthWest                                                                          | 8                             |       | 16      |       | 14       |       | 12       |       | 5        |       | 2     |       | 57    |       |       |       |       |       |       |                                                                                                                                                                     |       |       |       |       |                 |               |  |  |  |                           |  |  |  |       |
| Total                                                                              | 199                           |       | 196     |       | 163      |       | 72       |       | 37       |       | 53    |       | 720   |       |       |       |       |       |       |                                                                                                                                                                     |       |       |       |       |                 |               |  |  |  |                           |  |  |  |       |

## Wind Rose

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



### Wind Speed Classes (km/h)



## Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Evergreen Park - April 2014

| Maximum Speed: 58 km/h on Apr 8 13:00                                              |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Maximum Daily Speed Average: 38.5 km/h on Apr 9                                                                                                                |      |      |      |      |                 |               |  |  |  | Hours in Service: 720           |  |
|------------------------------------------------------------------------------------|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|-----------------|---------------|--|--|--|---------------------------------|--|
| Minimum Speed: 0 km/h on Apr 17 06:00                                              |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Minimum Daily Speed Average: 5.1 km/h on Apr 25                                                                                                                |      |      |      |      |                 |               |  |  |  | Hours of Data: 720              |  |
| Maximum Diurnal Speed Average: 22.1 km/h at hour 13                                |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Minimum Diurnal Speed Average: 7.1 km/h at hour 3                                                                                                              |      |      |      |      |                 |               |  |  |  | Hours of Missing Data: 0        |  |
| Monthly Average Speed: 14.01 km/h                                                  |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 2.3 Q <sub>1</sub> = 5.4 Median = 10.9 Q <sub>3</sub> = 18.6 P <sub>90</sub> = 32.3 P <sub>99</sub> = 47.3 |      |      |      |      |                 |               |  |  |  | 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-Apr                                                                              | 3                             | 2    | 2    | 2    | 3    | 2    | 1    | 3    | 6    | 5    | 8    | 11   | 13   | 12   | 12   | 19   | 18   | 20   | 15   | 11                                                                                                                                                             | 9    | 7    | 8    | 8    | 8.3             | 20.2          |  |  |  |                                 |  |
| 2-Apr                                                                              | 8                             | 5    | 10   | 8    | 8    | 10   | 7    | 9    | 14   | 8    | 12   | 12   | 11   | 12   | 14   | 15   | 14   | 12   | 11   | 8                                                                                                                                                              | 5    | 5    | 3    | 3    | 9.4             | 14.8          |  |  |  |                                 |  |
| 3-Apr                                                                              | 2                             | 3    | 3    | 6    | 4    | 7    | 7    | 6    | 7    | 6    | 12   | 12   | 11   | 12   | 13   | 14   | 12   | 9    | 7    | 3                                                                                                                                                              | 4    | 2    | 3    | 2    | 7.0             | 14.3          |  |  |  |                                 |  |
| 4-Apr                                                                              | 1                             | 2    | 5    | 11   | 12   | 14   | 16   | 23   | 21   | 24   | 25   | 27   | 22   | 23   | 20   | 18   | 19   | 15   | 10   | 7                                                                                                                                                              | 5    | 3    | 2    | 2    | 13.6            | 27.5          |  |  |  |                                 |  |
| 5-Apr                                                                              | 1                             | 1    | 3    | 2    | 1    | 1    | 6    | 7    | 14   | 27   | 24   | 23   | 27   | 29   | 24   | 20   | 15   | 19   | 11   | 3                                                                                                                                                              | 4    | 8    | 3    | 2    | 11.5            | 28.7          |  |  |  |                                 |  |
| 6-Apr                                                                              | 3                             | 4    | 4    | 17   | 30   | 27   | 33   | 39   | 44   | 49   | 44   | 43   | 45   | 40   | 32   | 37   | 47   | 45   | 42   | 35                                                                                                                                                             | 30   | 27   | 30   | 27   | 32.3            | 48.7          |  |  |  |                                 |  |
| 7-Apr                                                                              | 18                            | 9    | 4    | 4    | 4    | 6    | 1    | 5    | 8    | 5    | 7    | 12   | 13   | 10   | 11   | 13   | 24   | 25   | 13   | 7                                                                                                                                                              | 3    | 2    | 10   | 13   | 9.5             | 24.7          |  |  |  |                                 |  |
| 8-Apr                                                                              | 12                            | 22   | 13   | 7    | 9    | 8    | 13   | 8    | 15   | 10   | 29   | 44   | 58   | 48   | 53   | 49   | 54   | 49   | 43   | 49                                                                                                                                                             | 39   | 29   | 32   | 28   | 30.0            | 57.7          |  |  |  |                                 |  |
| 9-Apr                                                                              | 30                            | 32   | 33   | 33   | 39   | 41   | 33   | 26   | 47   | 42   | 44   | 49   | 49   | 42   | 44   | 42   | 52   | 47   | 40   | 42                                                                                                                                                             | 41   | 34   | 25   | 17   | 38.5            | 51.9          |  |  |  |                                 |  |
| 10-Apr                                                                             | 23                            | 22   | 27   | 19   | 21   | 21   | 16   | 6    | 17   | 41   | 54   | 53   | 46   | 45   | 46   | 44   | 41   | 36   | 31   | 22                                                                                                                                                             | 9    | 14   | 24   | 22   | 29.2            | 54.3          |  |  |  |                                 |  |
| 11-Apr                                                                             | 23                            | 7    | 2    | 2    | 1    | 4    | 11   | 26   | 37   | 43   | 45   | 35   | 34   | 34   | 33   | 25   | 19   | 14   | 11   | 8                                                                                                                                                              | 10   | 7    | 5    | 8    | 18.5            | 45.4          |  |  |  |                                 |  |
| 12-Apr                                                                             | 8                             | 9    | 10   | 9    | 8    | 8    | 8    | 13   | 14   | 17   | 17   | 13   | 14   | 15   | 14   | 13   | 16   | 15   | 12   | 4                                                                                                                                                              | 1    | 4    | 4    | 9    | 10.7            | 17.1          |  |  |  |                                 |  |
| 13-Apr                                                                             | 7                             | 5    | 6    | 8    | 4    | 3    | 3    | 4    | 8    | 10   | 8    | 8    | 10   | 10   | 18   | 18   | 17   | 11   | 7    | 7                                                                                                                                                              | 5    | 2    | 2    | 3    | 7.7             | 18.3          |  |  |  |                                 |  |
| 14-Apr                                                                             | 2                             | 2    | 1    | 2    | 2    | 2    | 1    | 6    | 7    | 8    | 4    | 10   | 13   | 13   | 15   | 14   | 13   | 9    | 5    | 3                                                                                                                                                              | 2    | 3    | 2    | 3    | 5.9             | 15.5          |  |  |  |                                 |  |
| 15-Apr                                                                             | 2                             | 3    | 4    | 4    | 6    | 13   | 15   | 19   | 21   | 21   | 19   | 16   | 19   | 16   | 16   | 19   | 16   | 12   | 13   | 3                                                                                                                                                              | 1    | 2    | 2    | 6    | 11.1            | 21.4          |  |  |  |                                 |  |
| 16-Apr                                                                             | 6                             | 4    | 5    | 7    | 6    | 8    | 6    | 10   | 14   | 15   | 14   | 18   | 15   | 16   | 16   | 17   | 15   | 16   | 16   | 16                                                                                                                                                             | 17   | 11   | 6    | 5    | 11.5            | 17.5          |  |  |  |                                 |  |
| 17-Apr                                                                             | 3                             | 2    | 1    | 3    | 2    | 0    | 4    | 7    | 10   | 14   | 14   | 19   | 21   | 19   | 18   | 13   | 15   | 9    | 8    | 10                                                                                                                                                             | 13   | 12   | 8    | 7    | 9.7             | 20.7          |  |  |  |                                 |  |
| 18-Apr                                                                             | 7                             | 9    | 6    | 4    | 6    | 6    | 6    | 6    | 3    | 6    | 6    | 7    | 11   | 9    | 8    | 12   | 7    | 8    | 7    | 5                                                                                                                                                              | 5    | 4    | 3    | 2    | 6.4             | 11.7          |  |  |  |                                 |  |
| 19-Apr                                                                             | 1                             | 5    | 9    | 15   | 9    | 13   | 13   | 17   | 16   | 13   | 12   | 11   | 10   | 14   | 17   | 20   | 20   | 15   | 13   | 10                                                                                                                                                             | 14   | 7    | 7    | 2    | 11.8            | 20.2          |  |  |  |                                 |  |
| 20-Apr                                                                             | 2                             | 2    | 6    | 4    | 1    | 3    | 6    | 11   | 27   | 41   | 45   | 41   | 40   | 35   | 31   | 30   | 33   | 30   | 26   | 14                                                                                                                                                             | 7    | 3    | 4    | 2    | 18.6            | 45.4          |  |  |  |                                 |  |
| 21-Apr                                                                             | 1                             | 1    | 1    | 1    | 3    | 1    | 3    | 5    | 4    | 5    | 6    | 9    | 11   | 13   | 14   | 12   | 12   | 11   | 11   | 10                                                                                                                                                             | 5    | 10   | 8    | 6    | 6.8             | 13.8          |  |  |  |                                 |  |
| 22-Apr                                                                             | 2                             | 3    | 5    | 6    | 2    | 1    | 7    | 9    | 8    | 17   | 14   | 14   | 16   | 20   | 22   | 21   | 22   | 14   | 4    | 3                                                                                                                                                              | 2    | 5    | 6    | 10   | 9.7             | 22.1          |  |  |  |                                 |  |
| 23-Apr                                                                             | 6                             | 5    | 5    | 7    | 8    | 9    | 14   | 11   | 12   | 12   | 16   | 19   | 26   | 23   | 25   | 24   | 24   | 21   | 21   | 17                                                                                                                                                             | 19   | 13   | 10   | 14   | 15.0            | 25.7          |  |  |  |                                 |  |
| 24-Apr                                                                             | 16                            | 17   | 15   | 12   | 12   | 14   | 15   | 16   | 17   | 18   | 16   | 13   | 13   | 12   | 11   | 13   | 15   | 18   | 18   | 15                                                                                                                                                             | 11   | 6    | 5    | 4    | 13.5            | 18.2          |  |  |  |                                 |  |
| 25-Apr                                                                             | 4                             | 5    | 3    | 2    | 2    | 3    | 2    | 3    | 7    | 5    | 4    | 8    | 9    | 8    | 7    | 9    | 8    | 8    | 7    | 6                                                                                                                                                              | 2    | 2    | 3    | 4    | 5.1             | 8.6           |  |  |  |                                 |  |
| 26-Apr                                                                             | 4                             | 5    | 1    | 5    | 5    | 1    | 5    | 8    | 10   | 11   | 12   | 14   | 16   | 17   | 23   | 19   | 17   | 21   | 15   | 12                                                                                                                                                             | 9    | 10   | 14   | 17   | 11.2            | 23.0          |  |  |  |                                 |  |
| 27-Apr                                                                             | 14                            | 11   | 8    | 4    | 4    | 3    | 3    | 2    | 8    | 14   | 11   | 12   | 21   | 23   | 22   | 20   | 11   | 7    | 10   | 4                                                                                                                                                              | 8    | 20   | 6    | 5    | 10.4            | 22.7          |  |  |  |                                 |  |
| 28-Apr                                                                             | 8                             | 11   | 8    | 4    | 20   | 25   | 22   | 22   | 27   | 35   | 35   | 38   | 39   | 41   | 39   | 39   | 32   | 29   | 32   | 32                                                                                                                                                             | 24   | 20   | 17   | 19   | 25.8            | 41.1          |  |  |  |                                 |  |
| 29-Apr                                                                             | 17                            | 14   | 11   | 9    | 2    | 2    | 1    | 4    | 6    | 7    | 10   | 9    | 10   | 12   | 10   | 14   | 14   | 19   | 15   | 7                                                                                                                                                              | 4    | 3    | 3    | 1    | 8.5             | 19.2          |  |  |  |                                 |  |
| 30-Apr                                                                             | 2                             | 2    | 1    | 1    | 1    | 1    | 1    | 0    | 2    | 6    | 10   | 14   | 21   | 29   | 28   | 24   | 31   | 29   | 24   | 31                                                                                                                                                             | 19   | 12   | 13   | 10   | 13.0            | 31.2          |  |  |  |                                 |  |
| 8.0                                                                                |                               | 7.5  | 7.1  | 7.2  | 7.9  | 8.6  | 9.3  | 11.0 | 15.1 | 17.9 | 19.2 | 20.4 | 22.1 | 21.7 | 21.9 | 21.5 | 21.8 | 19.8 | 16.7 | 13.5                                                                                                                                                           | 10.9 | 9.5  | 8.9  | 8.7  | Diurnal Average |               |  |  |  |                                 |  |
| 30.0                                                                               |                               | 32.5 | 33.5 | 32.9 | 39.0 | 40.7 | 33.3 | 38.8 | 46.7 | 48.7 | 54.3 | 53.2 | 57.7 | 48.1 | 52.8 | 48.6 | 54.4 | 49.2 | 43.1 | 49.0                                                                                                                                                           | 40.9 | 34.0 | 31.8 | 27.9 | Diurnal Maximum |               |  |  |  |                                 |  |
| All monthly, daily, and diurnal averages have been calculated using scalar methods |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                                                                                                                                                                |      |      |      |      |                 |               |  |  |  |                                 |  |

## Hourly Standard Deviations

Wind Direction (WD) - deg

Evergreen Park - April 2014

|                                                                                                                                                                 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                 |    |    |    |    |    |    |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---------------------------------|----|----|----|----|----|----|---------------|
| Maximum Value: 97.3 deg on Apr 30 04:00                                                                                                                         |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720           |    |    |    |    |    |    |               |
| Minimum Value: 4.4 deg on Apr 16 06:00                                                                                                                          |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Data: 720              |    |    |    |    |    |    |               |
|                                                                                                                                                                 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Missing Data: 0        |    |    |    |    |    |    |               |
| Percentiles: P <sub>1</sub> = 5.6 P <sub>10</sub> = 8.1 Q <sub>1</sub> = 12.2 Median = 19.6 Q <sub>3</sub> = 37.0 P <sub>90</sub> = 67.9 P <sub>99</sub> = 92.7 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Calibration: 0         |    |    |    |    |    |    |               |
|                                                                                                                                                                 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percent Operational Time: 100.0 |    |    |    |    |    |    |               |
|                                                                                                                                                                 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                 |    |    |    |    |    |    |               |
| Day                                                                                                                                                             | Hourly Period Ending At (MST) |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                 |    |    |    |    |    |    | Daily Maximum |
|                                                                                                                                                                 | 1                             | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18                              | 19 | 20 | 21 | 22 | 23 | 24 |               |
| 1-Apr                                                                                                                                                           | 59                            | 57 | 69 | 73 | 22 | 69 | 53 | 71 | 38 | 51 | 36 | 31 | 31 | 27 | 33 | 16 | 21 | 12                              | 13 | 13 | 8  | 10 | 15 | 7  | 72.8          |
| 2-Apr                                                                                                                                                           | 14                            | 25 | 11 | 25 | 14 | 18 | 20 | 21 | 18 | 43 | 35 | 27 | 30 | 31 | 32 | 26 | 25 | 29                              | 19 | 15 | 12 | 17 | 24 | 15 | 42.5          |
| 3-Apr                                                                                                                                                           | 28                            | 25 | 45 | 30 | 14 | 6  | 17 | 19 | 33 | 75 | 20 | 18 | 25 | 25 | 61 | 33 | 15 | 28                              | 26 | 31 | 21 | 85 | 35 | 88 | 88.1          |
| 4-Apr                                                                                                                                                           | 84                            | 79 | 47 | 20 | 17 | 8  | 8  | 6  | 10 | 24 | 15 | 14 | 21 | 18 | 24 | 20 | 20 | 23                              | 19 | 15 | 15 | 56 | 77 | 56 | 84.1          |
| 5-Apr                                                                                                                                                           | 84                            | 86 | 52 | 76 | 76 | 72 | 42 | 24 | 13 | 8  | 8  | 9  | 13 | 12 | 13 | 19 | 12 | 8                               | 14 | 29 | 39 | 20 | 78 | 59 | 86.2          |
| 6-Apr                                                                                                                                                           | 72                            | 47 | 37 | 11 | 7  | 6  | 6  | 6  | 6  | 6  | 7  | 7  | 8  | 11 | 11 | 12 | 8  | 7                               | 7  | 6  | 6  | 8  | 8  | 7  | 71.8          |
| 7-Apr                                                                                                                                                           | 7                             | 12 | 81 | 61 | 40 | 32 | 67 | 52 | 33 | 26 | 19 | 16 | 11 | 13 | 19 | 24 | 8  | 13                              | 12 | 23 | 73 | 38 | 12 | 15 | 80.5          |
| 8-Apr                                                                                                                                                           | 15                            | 5  | 36 | 44 | 10 | 13 | 6  | 13 | 13 | 34 | 11 | 9  | 8  | 10 | 9  | 8  | 8  | 7                               | 8  | 7  | 5  | 6  | 6  | 6  | 43.8          |
| 9-Apr                                                                                                                                                           | 9                             | 12 | 10 | 6  | 6  | 6  | 7  | 9  | 8  | 12 | 11 | 11 | 10 | 10 | 11 | 11 | 8  | 7                               | 7  | 6  | 7  | 7  | 6  | 8  | 11.9          |
| 10-Apr                                                                                                                                                          | 7                             | 5  | 6  | 7  | 6  | 8  | 11 | 28 | 12 | 9  | 8  | 9  | 11 | 10 | 9  | 10 | 11 | 10                              | 9  | 8  | 15 | 9  | 7  | 8  | 27.6          |
| 11-Apr                                                                                                                                                          | 13                            | 24 | 55 | 44 | 78 | 48 | 27 | 8  | 21 | 10 | 10 | 15 | 11 | 11 | 12 | 13 | 26 | 20                              | 18 | 27 | 11 | 18 | 16 | 19 | 78.1          |
| 12-Apr                                                                                                                                                          | 22                            | 15 | 19 | 21 | 26 | 10 | 9  | 8  | 15 | 18 | 22 | 33 | 29 | 28 | 38 | 37 | 44 | 21                              | 29 | 43 | 89 | 20 | 84 | 7  | 89.0          |
| 13-Apr                                                                                                                                                          | 16                            | 24 | 19 | 10 | 12 | 13 | 25 | 37 | 40 | 43 | 55 | 66 | 57 | 86 | 16 | 15 | 16 | 18                              | 16 | 14 | 14 | 33 | 60 | 73 | 86.5          |
| 14-Apr                                                                                                                                                          | 75                            | 58 | 79 | 89 | 24 | 31 | 37 | 19 | 21 | 19 | 60 | 36 | 29 | 28 | 28 | 18 | 18 | 16                              | 13 | 16 | 37 | 57 | 54 | 70 | 89.4          |
| 15-Apr                                                                                                                                                          | 63                            | 71 | 61 | 56 | 21 | 9  | 12 | 14 | 14 | 12 | 11 | 15 | 14 | 17 | 18 | 16 | 17 | 28                              | 17 | 29 | 46 | 35 | 24 | 12 | 71.1          |
| 16-Apr                                                                                                                                                          | 13                            | 10 | 6  | 7  | 6  | 4  | 8  | 13 | 20 | 26 | 28 | 28 | 26 | 25 | 33 | 24 | 24 | 20                              | 19 | 13 | 11 | 14 | 16 | 19 | 32.5          |
| 17-Apr                                                                                                                                                          | 13                            | 40 | 81 | 25 | 33 | 75 | 21 | 27 | 32 | 25 | 35 | 24 | 17 | 24 | 17 | 22 | 22 | 43                              | 47 | 28 | 18 | 21 | 20 | 19 | 80.7          |
| 18-Apr                                                                                                                                                          | 20                            | 16 | 26 | 17 | 18 | 18 | 21 | 37 | 86 | 26 | 56 | 65 | 55 | 85 | 58 | 59 | 83 | 66                              | 48 | 12 | 15 | 81 | 90 | 96 | 95.6          |
| 19-Apr                                                                                                                                                          | 66                            | 16 | 7  | 6  | 12 | 10 | 6  | 7  | 14 | 18 | 48 | 89 | 96 | 46 | 25 | 16 | 14 | 15                              | 16 | 91 | 19 | 38 | 81 | 94 | 95.9          |
| 20-Apr                                                                                                                                                          | 73                            | 75 | 50 | 52 | 65 | 87 | 49 | 16 | 12 | 10 | 12 | 14 | 14 | 15 | 18 | 15 | 15 | 14                              | 13 | 16 | 10 | 28 | 12 | 86 | 86.8          |
| 21-Apr                                                                                                                                                          | 60                            | 44 | 75 | 84 | 83 | 87 | 47 | 10 | 44 | 29 | 61 | 47 | 86 | 62 | 90 | 41 | 39 | 23                              | 18 | 11 | 13 | 18 | 17 | 17 | 90.0          |
| 22-Apr                                                                                                                                                          | 42                            | 34 | 12 | 7  | 86 | 85 | 8  | 12 | 27 | 17 | 27 | 27 | 23 | 20 | 15 | 15 | 22 | 26                              | 17 | 40 | 49 | 43 | 30 | 34 | 86.1          |
| 23-Apr                                                                                                                                                          | 15                            | 26 | 44 | 18 | 12 | 15 | 11 | 15 | 17 | 17 | 14 | 15 | 17 | 16 | 14 | 15 | 15 | 17                              | 14 | 15 | 14 | 18 | 15 | 13 | 43.8          |
| 24-Apr                                                                                                                                                          | 11                            | 8  | 11 | 14 | 13 | 10 | 24 | 19 | 19 | 23 | 34 | 44 | 39 | 68 | 35 | 36 | 25 | 20                              | 11 | 11 | 9  | 7  | 12 | 13 | 68.1          |
| 25-Apr                                                                                                                                                          | 9                             | 12 | 30 | 24 | 29 | 23 | 24 | 25 | 18 | 40 | 50 | 28 | 45 | 57 | 44 | 51 | 38 | 22                              | 18 | 14 | 15 | 10 | 24 | 29 | 57.4          |
| 26-Apr                                                                                                                                                          | 17                            | 36 | 41 | 6  | 21 | 66 | 20 | 27 | 21 | 28 | 28 | 21 | 27 | 29 | 20 | 16 | 21 | 24                              | 21 | 20 | 17 | 16 | 13 | 14 | 65.8          |
| 27-Apr                                                                                                                                                          | 14                            | 17 | 19 | 32 | 13 | 28 | 24 | 83 | 34 | 17 | 28 | 37 | 28 | 28 | 27 | 23 | 33 | 54                              | 95 | 86 | 17 | 53 | 74 | 62 | 94.9          |
| 28-Apr                                                                                                                                                          | 32                            | 11 | 60 | 70 | 14 | 7  | 8  | 9  | 13 | 12 | 17 | 16 | 15 | 13 | 14 | 11 | 17 | 16                              | 12 | 9  | 6  | 14 | 7  | 6  | 69.6          |
| 29-Apr                                                                                                                                                          | 5                             | 5  | 6  | 8  | 61 | 72 | 68 | 40 | 29 | 27 | 53 | 78 | 97 | 85 | 80 | 40 | 62 | 55                              | 30 | 38 | 48 | 54 | 37 | 61 | 97.3          |
| 30-Apr                                                                                                                                                          | 82                            | 79 | 79 | 97 | 86 | 56 | 93 | 54 | 77 | 48 | 37 | 25 | 21 | 21 | 19 | 21 | 14 | 21                              | 16 | 9  | 10 | 17 | 12 | 40 | 97.3          |
| 84.4 86.2 80.7 97.3 86.1 87.4 93.2 82.7 86.0 74.8 61.5 88.8 97.3 86.5 90.0 59.2 82.7 65.8 94.9 91.2 89.0 85.2 90.3 95.6                                         |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                 |    |    |    |    |    |    |               |



PAZA  
Smoky Heights Station  
Monthly Summary Tables, Graphs and  
Roses

# Hourly Averages

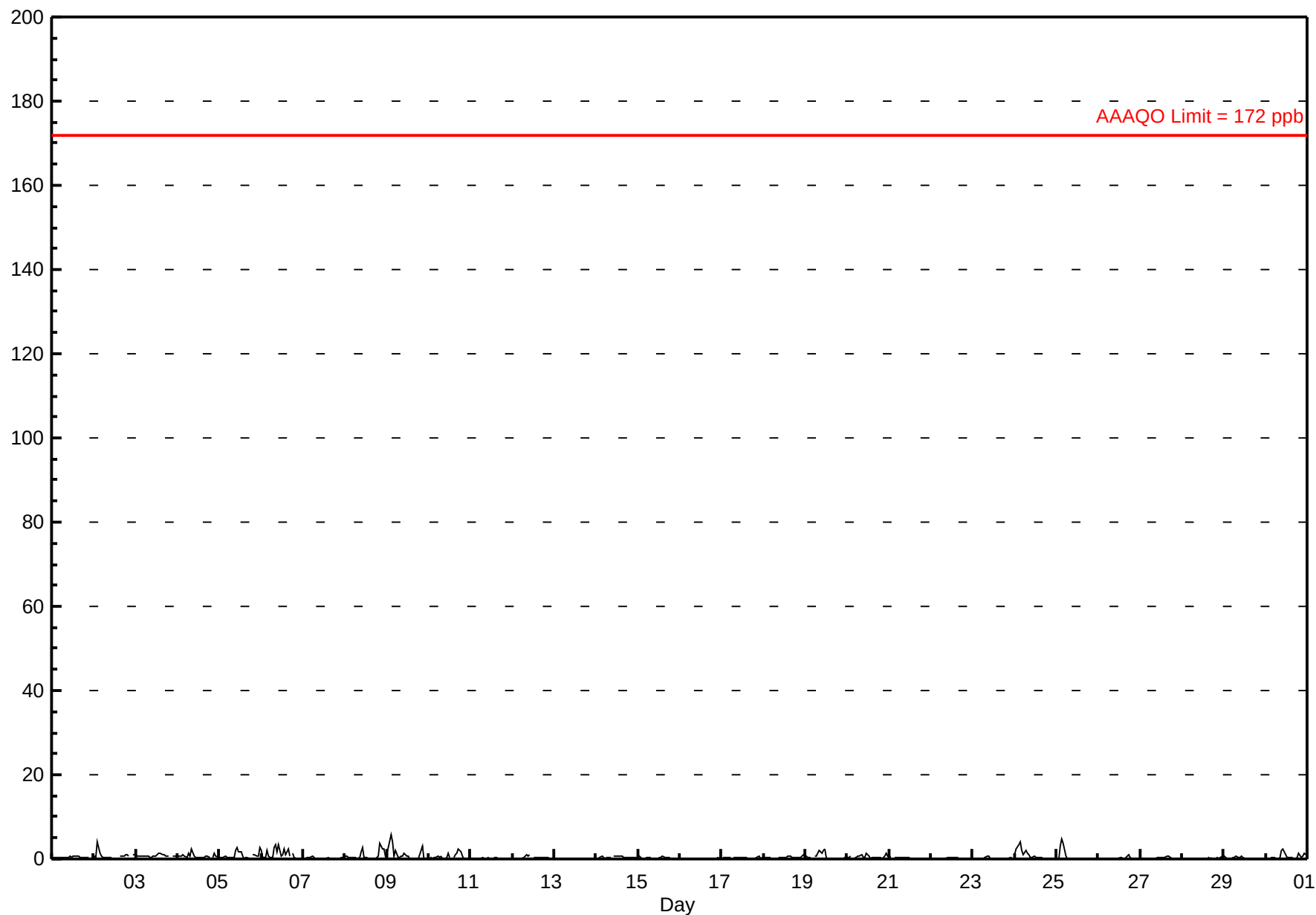
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Smoky Heights - April 2014

| Number of Exceedences (AAAQO):<br>Maximum Value: 5.7 ppb on Apr 9 03:00                                         |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | 1-hr: 0    24-hr: 0<br>Maximum Daily Average: 1.2 ppb on Apr 6                                                                                                                                                                                        |    |    |    |    | Hours in Service: 720<br>Hours of Data: 685<br>Hours of Missing Data: 35<br>Hours of Calibration: 35<br>Percent Operational Time: 100.0 |                 |               |  |  |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------|--|--|
| Minimum Value: 0 ppb on Apr 11 03:00<br>Maximum Diurnal Average: 0.8 ppb at hour 4<br>Monthly Average: 0.45 ppb |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.1 ppb on Apr 16<br>Minimum Diurnal Average: 0.3 ppb at hour 15<br>Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.2 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 1.0 P <sub>99</sub> = 3.5 |    |    |    |    |                                                                                                                                         |                 |               |  |  |
| 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-Apr                                                                                                           | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 1  | 0  | 1  | 1  | 1  | 1  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 1  | 0  | A  | 1                                                                                                                                       | 0.5             | 0.6           |  |  |
| 2-Apr                                                                                                           | 1                             | 0 | 4 | 1 | 1 | 0 | 0 | 0 | 0 | 0  | 0  | C  | C  | C  | C  | 1  | 1  | 1  | 1                                                                                                                                                                                                                                                     | 1  | 1  | A  | 1  | 1                                                                                                                                       | 0.8             | 4.2           |  |  |
| 3-Apr                                                                                                           | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                                                                                                                     | 1  | A  | 1  | 1  | 1                                                                                                                                       | 0.7             | 1.3           |  |  |
| 4-Apr                                                                                                           | 1                             | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 0                                                                                                                                                                                                                                                     | A  | 0  | 1  | 1  | 0                                                                                                                                       | 0.7             | 2.5           |  |  |
| 5-Apr                                                                                                           | 0                             | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2  | 3  | 2  | 2  | 1  | 0  | 0  | 0  | 0  | A                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 3                                                                                                                                       | 0.8             | 2.8           |  |  |
| 6-Apr                                                                                                           | 2                             | 0 | 0 | 2 | 1 | 0 | 0 | 3 | 3 | 2  | 3  | 1  | 1  | 2  | 1  | 3  | 1  | A  | 1                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 1.2             | 3.4           |  |  |
| 7-Apr                                                                                                           | 0                             | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.2             | 0.6           |  |  |
| 8-Apr                                                                                                           | 1                             | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2  | 3  | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 1  | 4  | 3  | 2  | 1                                                                                                                                       | 0.8             | 3.6           |  |  |
| 9-Apr                                                                                                           | 1                             | 3 | 6 | 4 | 1 | 2 | 0 | 0 | 1 | 1  | 1  | 1  | 1  | 0  | A  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 1  | 3  | 0  | 0  | 0                                                                                                                                       | 1.2             | 5.7           |  |  |
| 10-Apr                                                                                                          | 0                             | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0  | 0  | 1  | 0  | A  | 0  | 1  | 2  | 2  | 2                                                                                                                                                                                                                                                     | 1  | 0  | 0  | 0  | 0                                                                                                                                       | 0.5             | 2.3           |  |  |
| 11-Apr                                                                                                          | 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           |  |  |
| 12-Apr                                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1  | 1  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.3             | 1.0           |  |  |
| 13-Apr                                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1             | 0.2           |  |  |
| 14-Apr                                                                                                          | 0                             | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | A  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.3             | 0.8           |  |  |
| 15-Apr                                                                                                          | 0                             | 1 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.2             | 0.6           |  |  |
| 16-Apr                                                                                                          | 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-Apr                                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 0  | 1  | 0  | 0                                                                                                                                       | 0.2             | 0.5           |  |  |
| 18-Apr                                                                                                          | 0                             | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 1  | 1                                                                                                                                       | 0.4             | 0.9           |  |  |
| 19-Apr                                                                                                          | 1                             | 0 | 0 | 0 | A | 1 | 1 | 1 | 2 | 1  | 2  | 2  | 1  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 1                                                                                                                                       | 0.6             | 2.5           |  |  |
| 20-Apr                                                                                                          | 0                             | 0 | 1 | A | 0 | 1 | 1 | 1 | 1 | 0  | 0  | 1  | 1  | 0  | 0  | 1  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 0  | 1  | 1  | 1                                                                                                                                       | 0.5             | 1.5           |  |  |
| 21-Apr                                                                                                          | 1                             | 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             | 1.1           |  |  |
| 22-Apr                                                                                                          | 0                             | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1             | 0.3           |  |  |
| 23-Apr                                                                                                          | A                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | A                                                                                                                                       | 0.1             | 0.7           |  |  |
| 24-Apr                                                                                                          | 1                             | 2 | 3 | 4 | 2 | 1 | 2 | 1 | 1 | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | A  | 0                                                                                                                                       | 0.9             | 4.1           |  |  |
| 25-Apr                                                                                                          | 0                             | 0 | 3 | 5 | 4 | 1 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 0  | A  | 0  | 0                                                                                                                                       | 0.6             | 4.7           |  |  |
| 26-Apr                                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 1                                                                                                                                                                                                                                                     | 0  | A  | 0  | 0  | 0                                                                                                                                       | 0.1             | 1.0           |  |  |
| 27-Apr                                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 0  | 0                                                                                                                                                                                                                                                     | A  | 0  | 0  | 0  | 0                                                                                                                                       | 0.2             | 0.5           |  |  |
| 28-Apr                                                                                                          | 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             | 0.6           |  |  |
| 29-Apr                                                                                                          | 1                             | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.2             | 0.7           |  |  |
| 30-Apr                                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2  | 2  | 1  | 0  | 0  | 0  | 0  | A  | 0  | 0                                                                                                                                                                                                                                                     | 1  | 0  | 1  | 1  | 1                                                                                                                                       | 0.6             | 2.4           |  |  |
|                                                                                                                 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                       |    |    |    |    |                                                                                                                                         | 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 (SO<sub>2</sub>) - ppb  
Smoky Heights - April 2014



# Hourly Maximums

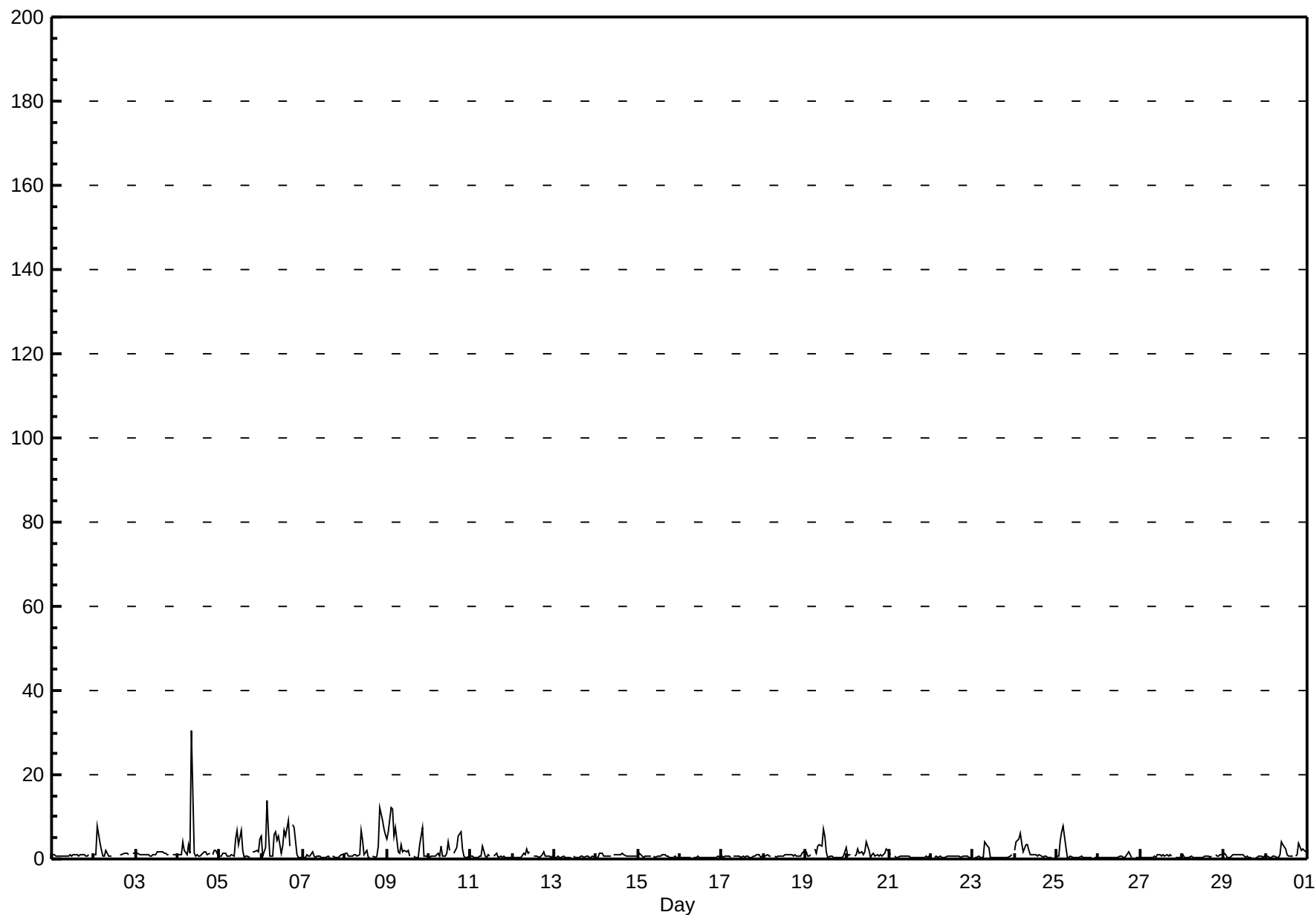
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Smoky Heights - April 2014

| Maximum Value: 30.6 ppb on Apr 4 09:00     |                               |                               |      |      |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     | Maximum Daily Average: 4.3 ppb on Apr 6                                                                                                                    |      |     |     |     |                 |               |  |  |  | Hours in Service: 720     |  |  |  |  |  |  |  |  |  |
|--------------------------------------------|-------------------------------|-------------------------------|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-----|-----|-----|-----------------|---------------|--|--|--|---------------------------|--|--|--|--|--|--|--|--|--|
| Minimum Value: 0 ppb on Apr 26 23:00       |                               |                               |      |      |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     | Minimum Daily Average: 0.4 ppb on Apr 16                                                                                                                   |      |     |     |     |                 |               |  |  |  | Hours of Data: 685        |  |  |  |  |  |  |  |  |  |
| Maximum Diurnal Average: 2.3 ppb at hour 9 |                               |                               |      |      |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     | Minimum Diurnal Average: 0.8 ppb at hour 17                                                                                                                |      |     |     |     |                 |               |  |  |  | Hours of Missing Data: 35 |  |  |  |  |  |  |  |  |  |
| Monthly Average: 1.26 ppb                  |                               |                               |      |      |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     | Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.4 Q <sub>1</sub> = 0.5 Median = 0.6 Q <sub>3</sub> = 1.1 P <sub>90</sub> = 2.6 P <sub>99</sub> = 9.1 |      |     |     |     |                 |               |  |  |  | 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-Apr                                      | 1                             | 1                             | 1    | 1    | 1   | 1   | 1   | 1   | 1    | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | 1    | 1   | A   | 1   | 0.8             | 1.1           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 2-Apr                                      | 1                             | 1                             | 8    | 4    | 2   | 1   | 1   | 2   | 1    | 1   | 1   | C   | C   | C   | C   | 1   | 1   | 1   | 1   | 2                                                                                                                                                          | 1    | A   | 1   | 1   | 1.6             | 7.9           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 3-Apr                                      | 2                             | 1                             | 1    | 1    | 1   | 1   | 1   | 1   | 1    | 1   | 1   | 1   | 2   | 2   | 2   | 2   | 1   | 1   | 1   | 1                                                                                                                                                          | A    | 1   | 1   | 1   | 1.2             | 1.6           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 4-Apr                                      | 1                             | 1                             | 1    | 4    | 2   | 1   | 3   | 1   | 31   | 1   | 1   | 1   | 1   | 1   | 1   | 2   | 2   | 1   | 1   | A                                                                                                                                                          | 1    | 2   | 2   | 1   | 2.7             | 30.6          |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 5-Apr                                      | 1                             | 1                             | 1    | 1    | 1   | 1   | 1   | 1   | 1    | 5   | 7   | 3   | 7   | 2   | 0   | 1   | 1   | 0   | A   | 2                                                                                                                                                          | 2    | 2   | 2   | 5   | 2.0             | 6.9           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 6-Apr                                      | 5                             | 1                             | 3    | 14   | 6   | 1   | 1   | 6   | 6    | 4   | 5   | 1   | 3   | 7   | 5   | 9   | 3   | A   | 8   | 7                                                                                                                                                          | 1    | 0   | 0   | 0   | 4.3             | 13.9          |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 7-Apr                                      | 0                             | 0                             | 1    | 1    | 1   | 2   | 1   | 0   | 1    | 1   | 0   | 0   | 0   | 0   | 1   | 0   | A   | 1   | 0   | 0                                                                                                                                                          | 0    | 1   | 1   | 1   | 0.6             | 1.7           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 8-Apr                                      | 1                             | 1                             | 1    | 1    | 1   | 1   | 1   | 1   | 1    | 7   | 4   | 1   | 2   | 0   | 0   | A   | 1   | 0   | 1   | 3                                                                                                                                                          | 12   | 9   | 7   | 6   | 2.7             | 12.1          |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 9-Apr                                      | 5                             | 6                             | 12   | 12   | 6   | 7   | 2   | 1   | 3    | 2   | 2   | 2   | 2   | 1   | A   | 1   | 0   | 0   | 0   | 3                                                                                                                                                          | 8    | 1   | 1   | 1   | 3.4             | 12.2          |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 10-Apr                                     | 0                             | 1                             | 1    | 1    | 1   | 1   | 1   | 3   | 1    | 1   | 1   | 4   | 2   | A   | 1   | 2   | 3   | 5   | 6   | 2                                                                                                                                                          | 1    | 0   | 0   | 1   | 1.7             | 6.5           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 11-Apr                                     | 1                             | 1                             | 0    | 0    | 0   | 1   | 1   | 3   | 1    | 0   | 1   | 1   | A   | 1   | 1   | 1   | 0   | 1   | 0   | 1                                                                                                                                                          | 0    | 0   | 0   | 0   | 0.7             | 2.9           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 12-Apr                                     | 0                             | 0                             | 0    | 0    | 0   | 0   | 1   | 1   | 2    | 2   | 2   | A   | 1   | 1   | 1   | 0   | 1   | 1   | 2   | 1                                                                                                                                                          | 1    | 1   | 0   | 1   | 0.8             | 2.4           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 13-Apr                                     | 0                             | 0                             | 1    | 0    | 0   | 1   | 0   | 0   | 0    | 0   | A   | 1   | 0   | 0   | 0   | 1   | 1   | 0   | 1   | 1                                                                                                                                                          | 0    | 0   | 1   | 0   | 0.5             | 0.6           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 14-Apr                                     | 0                             | 0                             | 1    | 1    | 1   | 1   | 1   | 1   | 1    | A   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | 1    | 1   | 1   | 1   | 0.8             | 1.3           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 15-Apr                                     | 1                             | 1                             | 1    | 0    | 1   | 1   | 1   | 1   | A    | 1   | 0   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 0                                                                                                                                                          | 0    | 1   | 0   | 0   | 0.6             | 1.3           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 16-Apr                                     | 0                             | 0                             | 0    | 0    | 0   | 0   | 0   | A   | 0    | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0                                                                                                                                                          | 0    | 0   | 1   | 1   | 0.4             | 0.6           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 17-Apr                                     | 1                             | 0                             | 1    | 1    | 1   | 0   | A   | 1   | 1    | 1   | 1   | 0   | 1   | 0   | 1   | 1   | 0   | 0   | 1   | 1                                                                                                                                                          | 1    | 1   | 0   | 1   | 0.6             | 1.2           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 18-Apr                                     | 0                             | 1                             | 1    | 1    | 1   | A   | 1   | 0   | 1    | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | 1    | 1   | 1   | 2   | 0.8             | 1.6           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 19-Apr                                     | 2                             | 1                             | 1    | 1    | A   | 2   | 1   | 3   | 3    | 3   | 7   | 5   | 2   | 1   | 1   | 1   | 0   | 0   | 0   | 0                                                                                                                                                          | 0    | 0   | 1   | 3   | 1.7             | 7.0           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 20-Apr                                     | 1                             | 1                             | 1    | A    | 1   | 1   | 2   | 1   | 2    | 1   | 2   | 4   | 2   | 0   | 1   | 2   | 1   | 1   | 1   | 1                                                                                                                                                          | 1    | 1   | 2   | 2   | 1.3             | 4.0           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 21-Apr                                     | 2                             | 1                             | A    | 1    | 0   | 0   | 1   | 1   | 1    | 1   | 1   | 1   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0                                                                                                                                                          | 0    | 1   | 1   | 1   | 0.6             | 1.8           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 22-Apr                                     | 1                             | A                             | 0    | 1    | 0   | 1   | 0   | 1   | 1    | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 0   | 1   | 1                                                                                                                                                          | 1    | 1   | 0   | 0   | 0.5             | 0.7           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 23-Apr                                     | A                             | 0                             | 0    | 1    | 0   | 0   | 0   | 4   | 3    | 3   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0                                                                                                                                                          | 0    | 1   | 1   | A   | 0.8             | 3.9           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 24-Apr                                     | 2                             | 4                             | 5    | 6    | 4   | 2   | 3   | 4   | 2    | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 0   | 1   | 1   | 0                                                                                                                                                          | 0    | 0   | A   | 0   | 1.8             | 6.2           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 25-Apr                                     | 1                             | 1                             | 5    | 7    | 8   | 3   | 0   | 0   | 1    | 0   | 0   | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 0                                                                                                                                                          | 0    | A   | 0   | 0   | 1.3             | 7.6           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 26-Apr                                     | 0                             | 0                             | 0    | 0    | 0   | 0   | 0   | 0   | 0    | 0   | 0   | 0   | 1   | 1   | 0   | 0   | 1   | 2   | 1   | 0                                                                                                                                                          | A    | 0   | 0   | 0   | 0.5             | 1.7           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 27-Apr                                     | 0                             | 0                             | 0    | 0    | 0   | 0   | 0   | 0   | 1    | 0   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | A                                                                                                                                                          | 0    | 0   | 0   | 0   | 0.6             | 1.1           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 28-Apr                                     | 1                             | 0                             | 0    | 0    | 0   | 1   | 0   | 0   | 0    | 0   | 0   | 0   | 0   | 1   | 1   | 1   | 0   | 1   | A   | 1                                                                                                                                                          | 1    | 1   | 1   | 1   | 0.6             | 1.1           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 29-Apr                                     | 1                             | 1                             | 0    | 0    | 1   | 1   | 1   | 1   | 1    | 1   | 1   | 1   | 0   | 1   | 0   | 0   | 0   | A   | 0   | 0                                                                                                                                                          | 1    | 1   | 1   | 1   | 0.7             | 1.2           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 30-Apr                                     | 0                             | 1                             | 1    | 1    | 1   | 1   | 0   | 0   | 1    | 4   | 4   | 2   | 1   | 1   | 1   | 1   | A   | 1   | 1   | 4                                                                                                                                                          | 2    | 2   | 2   | 2   | 1.3             | 4.0           |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 1.1                                        |                               | 1.0                           | 1.7  | 2.1  | 1.4 | 1.1 | 0.9 | 1.4 | 2.3  | 1.5 | 1.6 | 1.3 | 1.2 | 0.9 | 0.9 | 1.1 | 0.8 | 0.9 | 1.2 | 1.3                                                                                                                                                        | 1.4  | 1.1 | 1.1 | 1.1 | Diurnal Average |               |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| 5.5                                        |                               | 6.4                           | 12.2 | 13.9 | 7.6 | 7.4 | 3.5 | 5.6 | 30.6 | 6.9 | 7.0 | 5.4 | 6.9 | 6.9 | 5.3 | 9.1 | 2.9 | 5.3 | 8.2 | 7.4                                                                                                                                                        | 12.1 | 9.3 | 7.2 | 5.6 | Diurnal Maximum |               |  |  |  |                           |  |  |  |  |  |  |  |  |  |
| C - Calibration                            |                               | A - Automated Daily Zero Span |      |      |     |     |     |     |      |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                            |      |     |     |     |                 |               |  |  |  |                           |  |  |  |  |  |  |  |  |  |

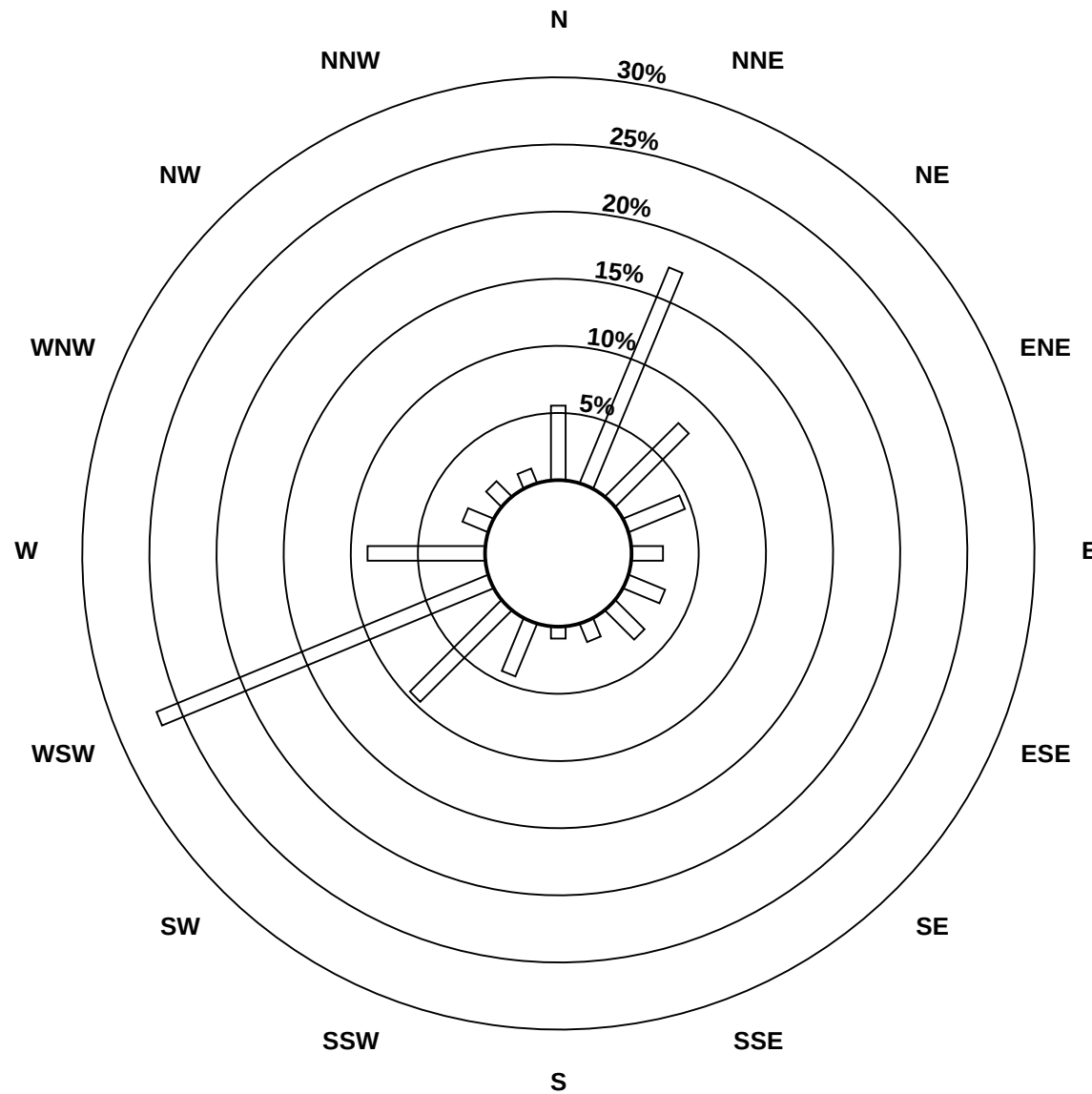
## Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Smoky Heights - April 2014

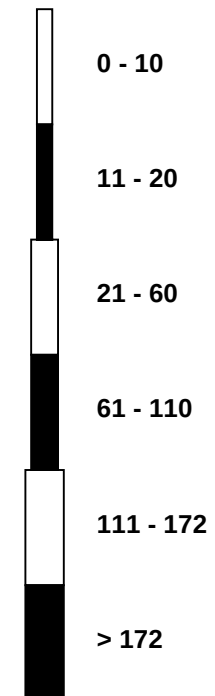


## Pollutant Rose

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Smoky Heights - April 2014

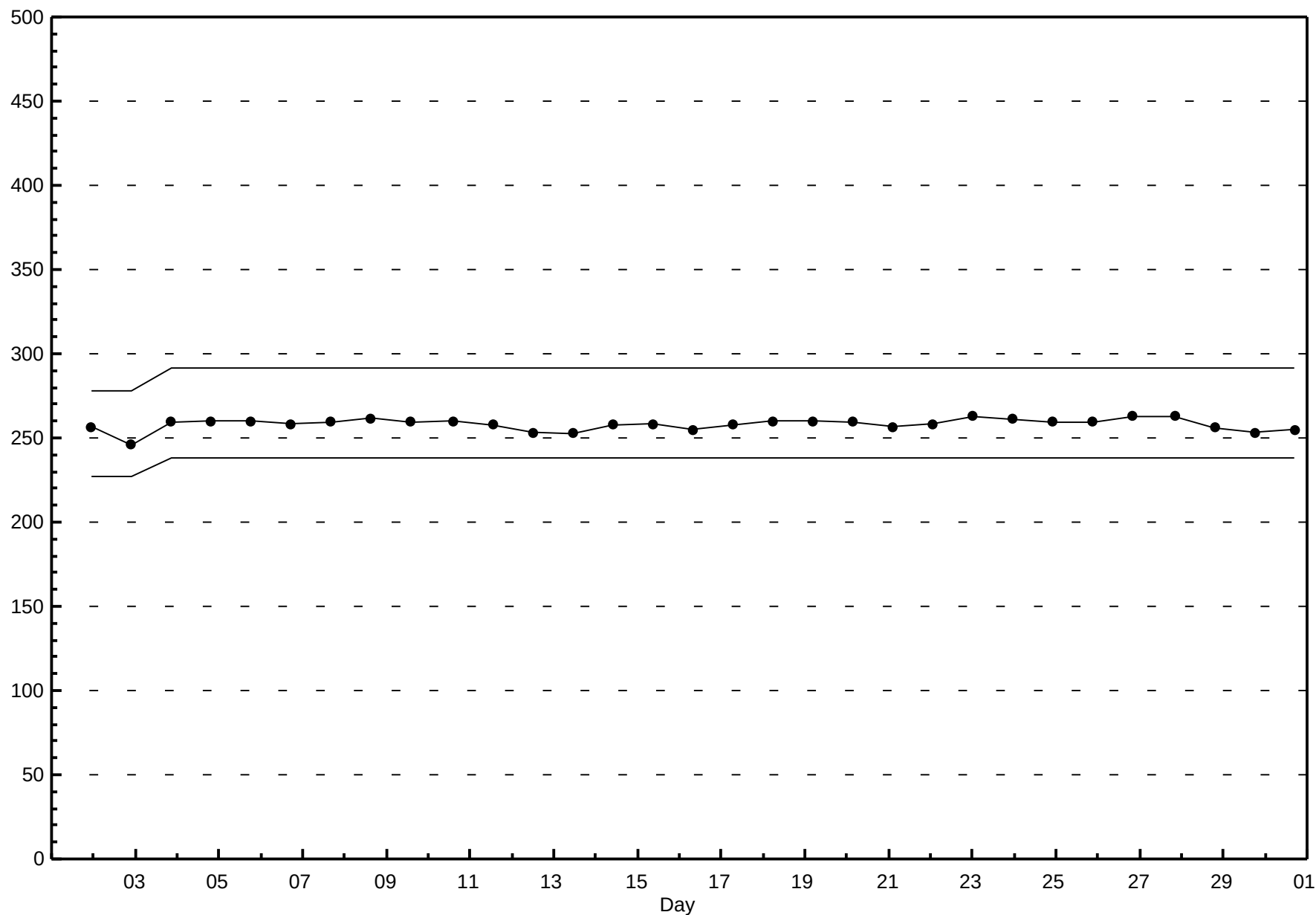


## Pollutant Classes (ppb)



## Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Smoky Heights - April 2014



## Hourly Averages

Total Reduced Sulphur (TRS) - ppb

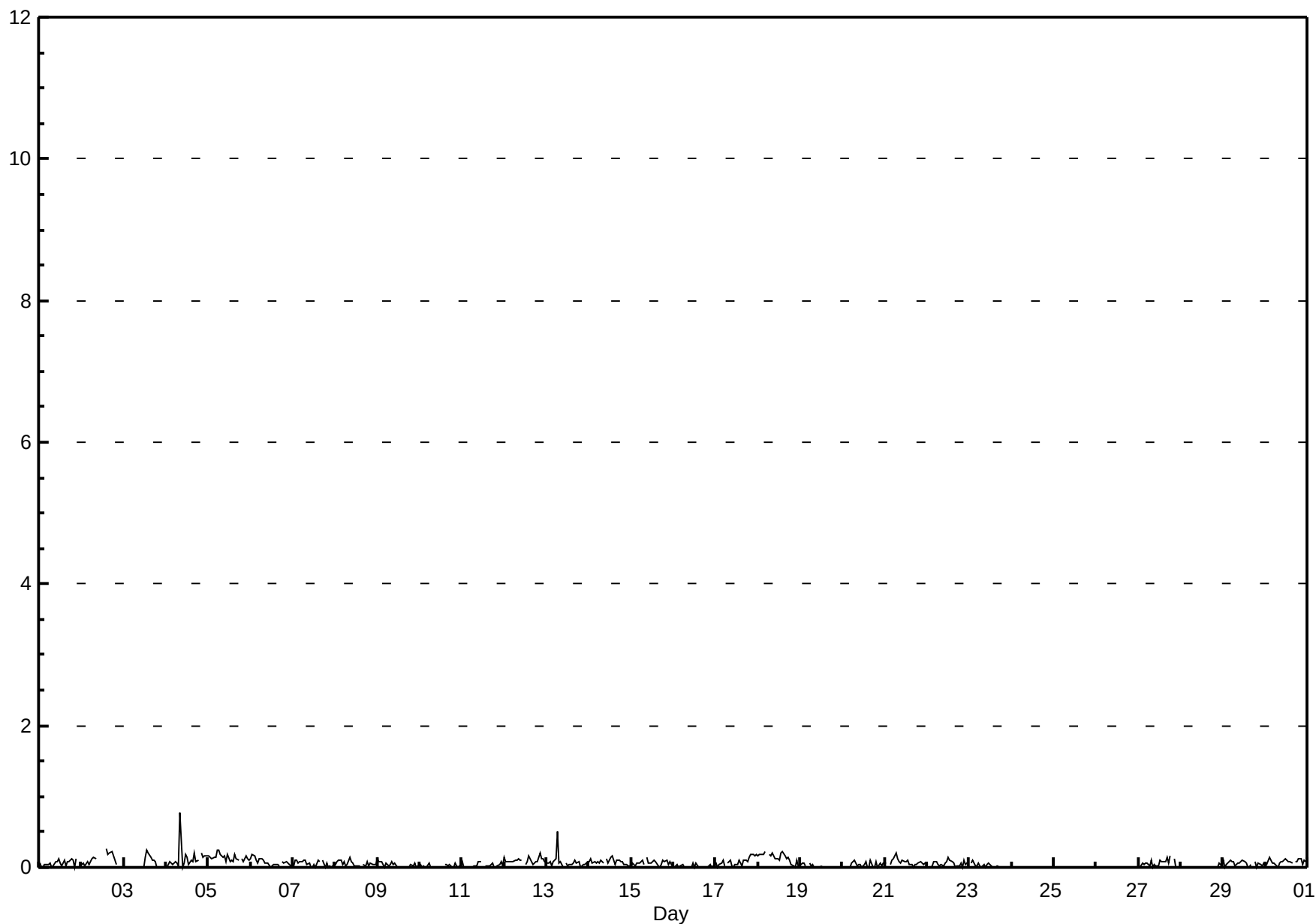
Smoky Heights - April 2014

|                                                                                                                                                           |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                                   |    |    |    |    |                                                                                                                                         |               |               |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-----------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|--|--|
| Number of Exceedences (AAAQO):<br>Maximum Value: 0.8 ppb on Apr 4 09:00                                                                                   |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | 1-hr: 0    24-hr: 0<br>Maximum Daily Average: 0.1 ppb on Apr 5                                                                                                                                                                                                    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 684<br>Hours of Missing Data: 36<br>Hours of Calibration: 36<br>Percent Operational Time: 100.0 |               |               |  |  |
| Minimum Value: 0 ppb on Apr 1 03:00<br>Maximum Diurnal Average: 0.1 ppb at hour 9<br>Monthly Average: 0.05 ppb                                            |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.0 ppb on Apr 24<br>Minimum Diurnal Average: 0.0 ppb at hour 20<br>Percentiles: P <sub>1</sub> = 0.0   P <sub>10</sub> = 0.0   Q <sub>1</sub> = 0.0   Median = 0.0   Q <sub>3</sub> = 0.1   P <sub>90</sub> = 0.1   P <sub>99</sub> = 0.2 |    |    |    |    |                                                                                                                                         |               |               |  |  |
| 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-Apr                                                                                                                                                     | 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           | 0.1           |  |  |
| 2-Apr                                                                                                                                                     | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C  | C  | C  | C  | C  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                 | 0  | 0  | A  | 0  | 0                                                                                                                                       | 0.1           | 0.3           |  |  |
| 3-Apr                                                                                                                                                     | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                 | 0  | A  | 0  | 0  | 0                                                                                                                                       | 0.0           | 0.2           |  |  |
| 4-Apr                                                                                                                                                     | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                 | A  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1           | 0.8           |  |  |
| 5-Apr                                                                                                                                                     | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A                                                                                                                                                                                                                                                                 | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1           | 0.3           |  |  |
| 6-Apr                                                                                                                                                     | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0                                                                                                                                                                                                                                                                 | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1           | 0.2           |  |  |
| 7-Apr                                                                                                                                                     | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0                                                                                                                                                                                                                                                                 | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1           | 0.1           |  |  |
| 8-Apr                                                                                                                                                     | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0                                                                                                                                                                                                                                                                 | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1           | 0.1           |  |  |
| 9-Apr                                                                                                                                                     | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                 | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.0           | 0.1           |  |  |
| 10-Apr                                                                                                                                                    | 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-Apr                                                                                                                                                    | 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-Apr                                                                                                                                                    | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                 | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1           | 0.2           |  |  |
| 13-Apr                                                                                                                                                    | 0                             | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                 | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1           | 0.5           |  |  |
| 14-Apr                                                                                                                                                    | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                 | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1           | 0.2           |  |  |
| 15-Apr                                                                                                                                                    | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                 | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1           | 0.1           |  |  |
| 16-Apr                                                                                                                                                    | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                 | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.0           | 0.1           |  |  |
| 17-Apr                                                                                                                                                    | 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-Apr                                                                                                                                                    | 0                             | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                 | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1           | 0.2           |  |  |
| 19-Apr                                                                                                                                                    | 0                             | 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           |  |  |
| 20-Apr                                                                                                                                                    | 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           |  |  |
| 21-Apr                                                                                                                                                    | 0                             | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                 | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1           | 0.2           |  |  |
| 22-Apr                                                                                                                                                    | 0                             | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                 | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1           | 0.1           |  |  |
| 23-Apr                                                                                                                                                    | 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           |  |  |
| 24-Apr                                                                                                                                                    | 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           |  |  |
| 25-Apr                                                                                                                                                    | 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           |  |  |
| 26-Apr                                                                                                                                                    | 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           |  |  |
| 27-Apr                                                                                                                                                    | 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           |  |  |
| 28-Apr                                                                                                                                                    | 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           |  |  |
| 29-Apr                                                                                                                                                    | 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           | 0.1           |  |  |
| 30-Apr                                                                                                                                                    | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0                                                                                                                                                                                                                                                                 | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1           | 0.1           |  |  |
| 0.1   0.0   0.1   0.0   0.1   0.1   0.1   0.1   0.1   0.1   0.0   0.0   0.1   0.1   0.1   0.1   0.1   0.1   0.1   0.1   0.1   0.0   0.1   0.1   0.0   0.0 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                                   |    |    |    |    | Diurnal Average                                                                                                                         |               |               |  |  |
| 0.2   0.2   0.2   0.2   0.2   0.3   0.5   0.2   0.8   0.2   0.1   0.2   0.1   0.2   0.3   0.2   0.2   0.2   0.2   0.2   0.1   0.2   0.2   0.2   0.2       |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                                   |    |    |    |    | 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 - April 2014

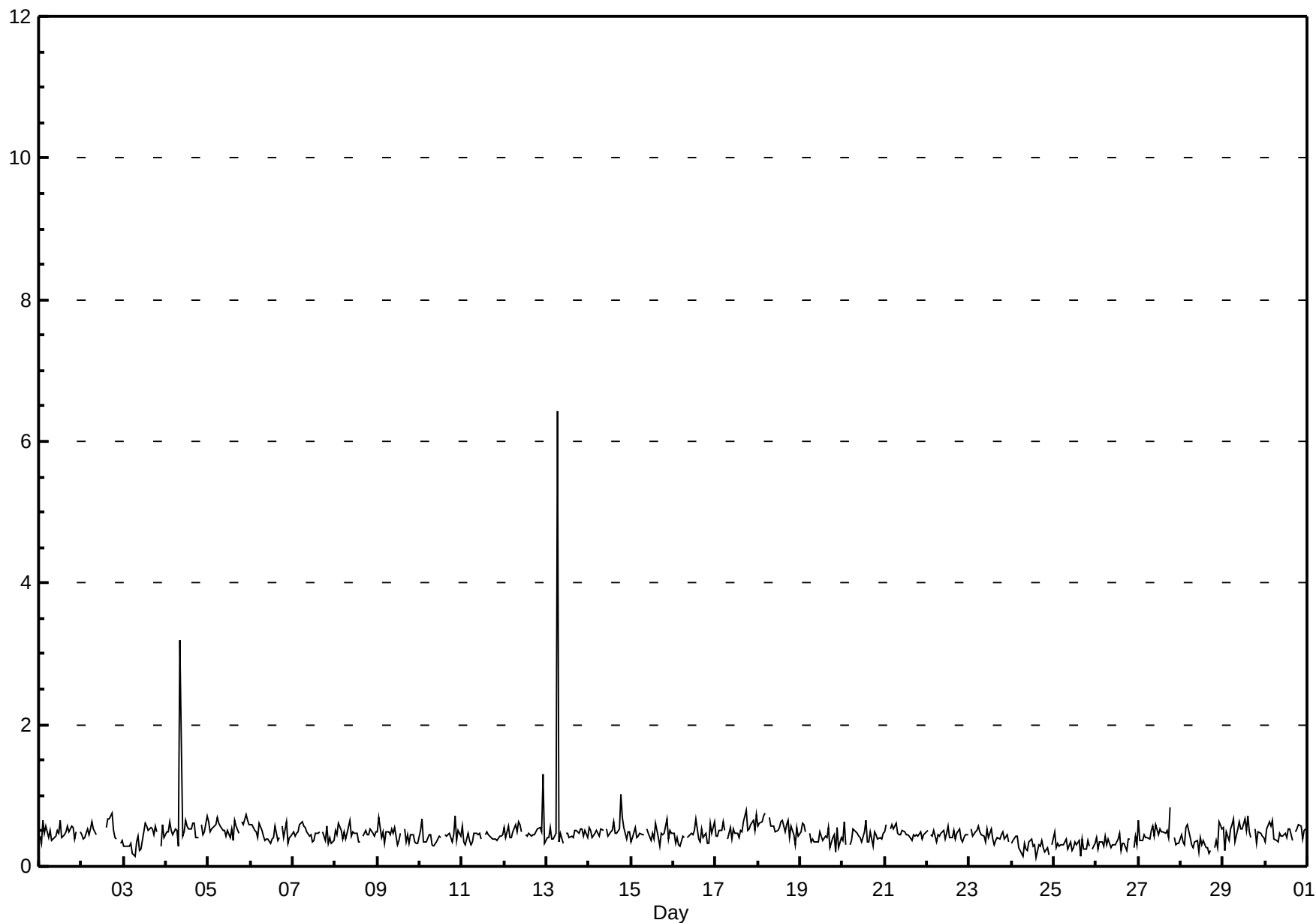


# Hourly Maximums

Total Reduced Sulphur (TRS) - ppb

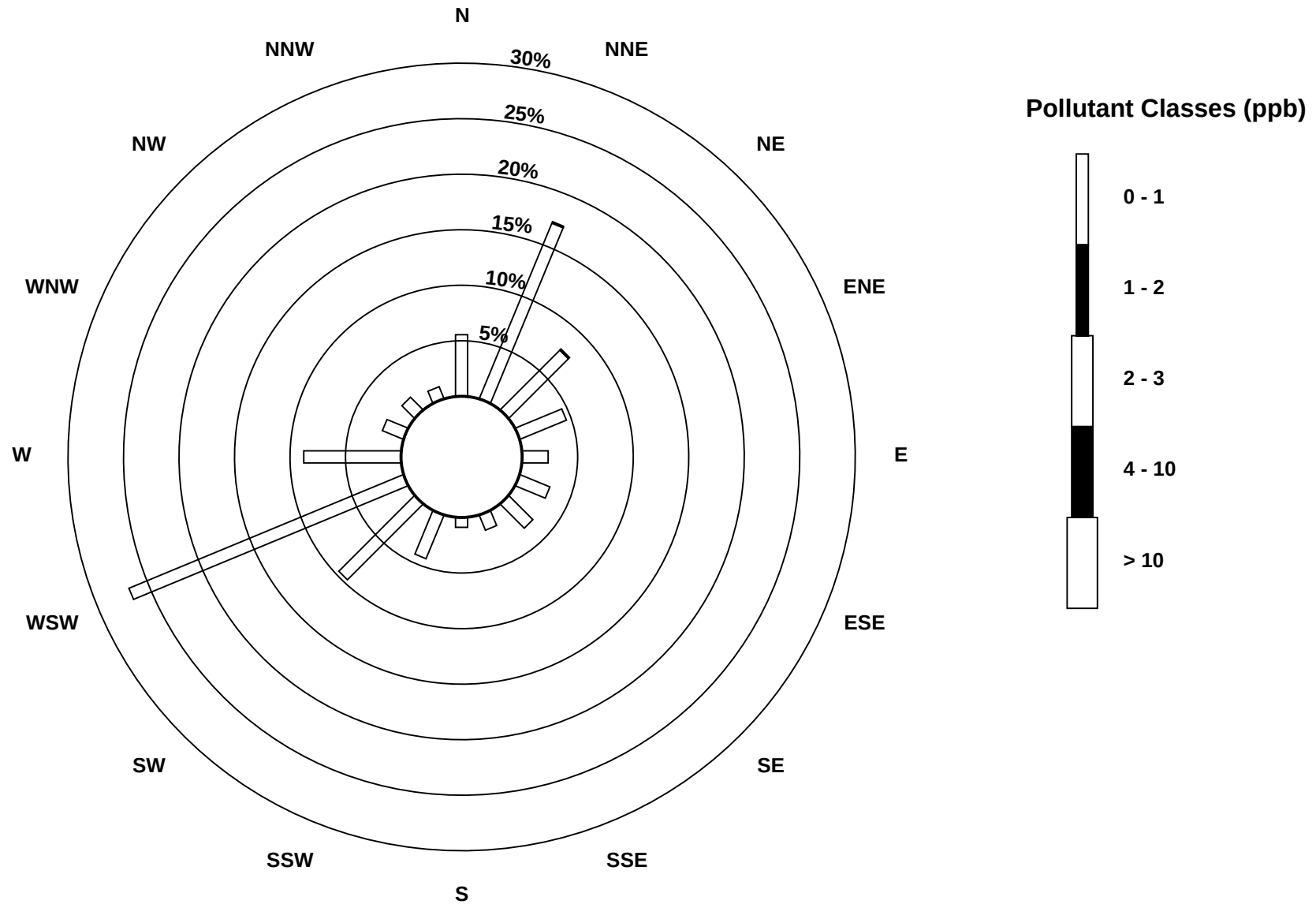
Smoky Heights - April 2014

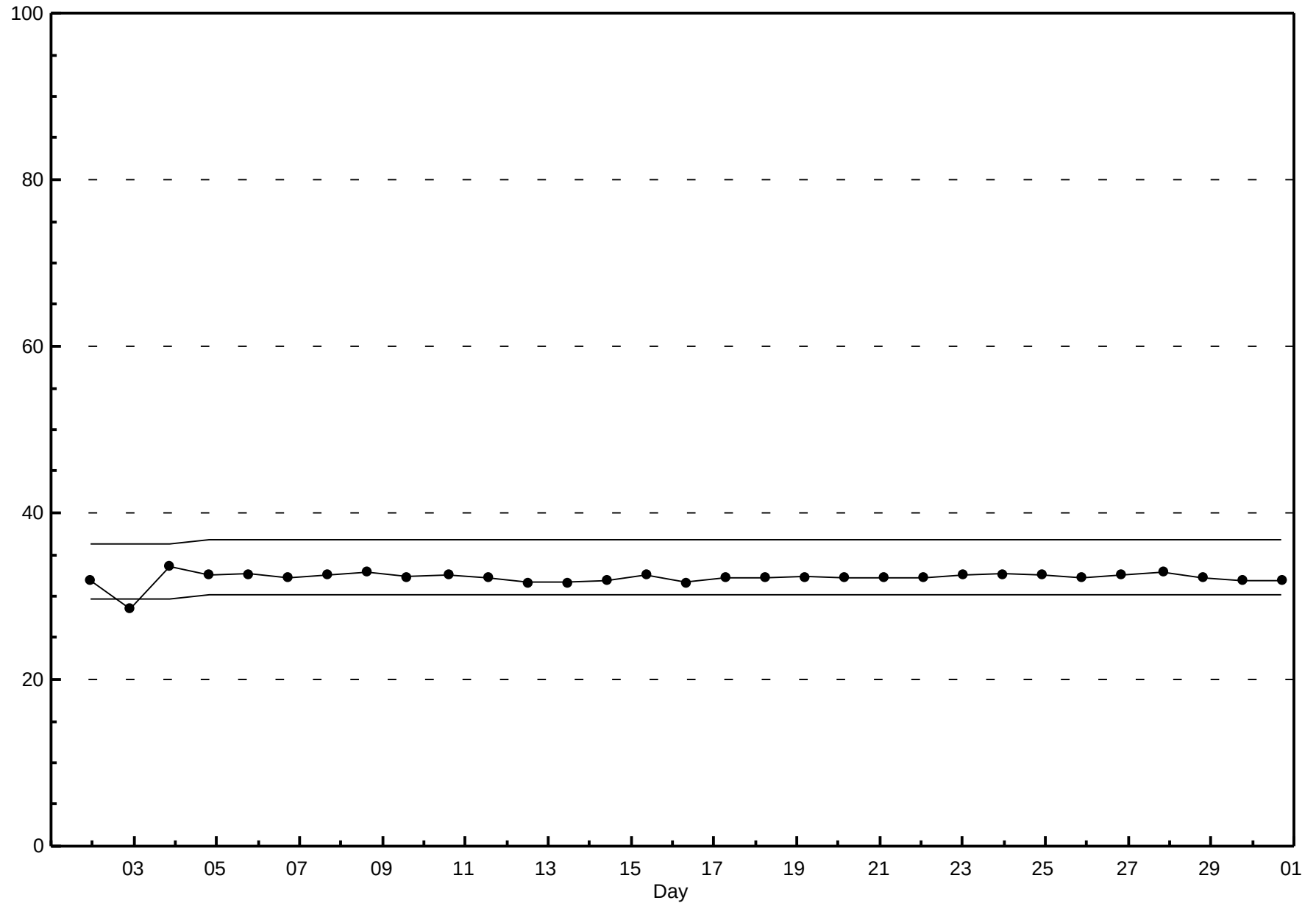
| Maximum Value: 6.4 ppb on Apr 13 07:00                                                          |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 0.7 ppb on Apr 13                                                                                                                   |    |    |    |    |                 |               |               |  |  | Hours in Service: 720           |  |
|-------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-----------------|---------------|---------------|--|--|---------------------------------|--|
| Minimum Value: 0 ppb on Apr 24 15:00                                                            |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.3 ppb on Apr 24                                                                                                                   |    |    |    |    |                 |               |               |  |  | Hours of Data: 684              |  |
| Maximum Diurnal Average: 0.7 ppb at hour 7                                                      |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 0.4 ppb at hour 22                                                                                                                |    |    |    |    |                 |               |               |  |  | Hours of Missing Data: 36       |  |
| Monthly Average: 0.46 ppb                                                                       |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.4 Median = 0.4 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 0.6 P <sub>99</sub> = 0.7 |    |    |    |    |                 |               |               |  |  | 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-Apr                                                                                           | 0                             | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0  | 1  | 0  | 1  | 0  | 0  | 0  | 1  | 0  | 1                                                                                                                                                          | 1  | 0  | 0  | A  | 0               | 0.5           | 0.6           |  |  |                                 |  |
| 2-Apr                                                                                           | 0                             | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | C  | C  | C  | C  | C  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 0  | 0  | A  | 0  | 0               | 0.5           | 0.7           |  |  |                                 |  |
| 3-Apr                                                                                           | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 1  | 0  | 1                                                                                                                                                          | 0  | A  | 0  | 1  | 0               | 0.4           | 0.6           |  |  |                                 |  |
| 4-Apr                                                                                           | 0                             | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 3 | 0  | 0  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 0                                                                                                                                                          | A  | 1  | 0  | 0  | 1               | 0.6           | 3.2           |  |  |                                 |  |
| 5-Apr                                                                                           | 1                             | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1  | 0  | 1  | 0  | 1  | 0  | 1  | 1  | 0  | A                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.6           | 0.7           |  |  |                                 |  |
| 6-Apr                                                                                           | 1                             | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | A  | 1                                                                                                                                                          | 0  | 1  | 0  | 0  | 0               | 0.5           | 0.6           |  |  |                                 |  |
| 7-Apr                                                                                           | 0                             | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0                                                                                                                                                          | 1  | 0  | 0  | 0  | 0               | 0.5           | 0.6           |  |  |                                 |  |
| 8-Apr                                                                                           | 1                             | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0  | 1                                                                                                                                                          | 0  | 0  | 1  | 0  | 0               | 0.5           | 0.7           |  |  |                                 |  |
| 9-Apr                                                                                           | 0                             | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0  | 1  | 0  | 0  | 0  | 0  | A  | 1  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0               | 0.4           | 0.7           |  |  |                                 |  |
| 10-Apr                                                                                          | 1                             | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 1  | 0  | 1  | 0               | 0.4           | 0.7           |  |  |                                 |  |
| 11-Apr                                                                                          | 1                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0               | 0.4           | 0.6           |  |  |                                 |  |
| 12-Apr                                                                                          | 1                             | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1  | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 1  | 1  | 0  | 1  | 0               | 0.5           | 1.3           |  |  |                                 |  |
| 13-Apr                                                                                          | 0                             | 0 | 1 | 0 | 0 | 0 | 6 | 0 | 0 | 0  | A  | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 0                                                                                                                                                          | 1  | 1  | 0  | 1  | 0               | 0.7           | 6.4           |  |  |                                 |  |
| 14-Apr                                                                                          | 1                             | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | A  | 1  | 0  | 0  | 1  | 1  | 0  | 0  | 1  | 1                                                                                                                                                          | 1  | 1  | 0  | 0  | 0               | 0.5           | 1.0           |  |  |                                 |  |
| 15-Apr                                                                                          | 0                             | 0 | 1 | 0 | 0 | 0 | 0 | 0 | A | 1  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 1  | 0  | 1  | 0               | 0.5           | 0.7           |  |  |                                 |  |
| 16-Apr                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0  | 0  | 0  | 1  | 1  | 0  | 0  | 1  | 0  | 0                                                                                                                                                          | 0  | 0  | 1  | 0  | 1               | 0.4           | 0.7           |  |  |                                 |  |
| 17-Apr                                                                                          | 0                             | 0 | 1 | 1 | 1 | 1 | A | 0 | 1 | 0  | 1  | 0  | 0  | 0  | 1  | 0  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.5           | 0.8           |  |  |                                 |  |
| 18-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1  | 1  | 0  | 1  | 1  | 1  | 0  | 1  | 1  | 0                                                                                                                                                          | 1  | 0  | 0  | 1  | 0               | 0.6           | 0.8           |  |  |                                 |  |
| 19-Apr                                                                                          | 0                             | 1 | 1 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0                                                                                                                                                          | 0  | 0  | 1  | 0  | 0               | 0.4           | 0.6           |  |  |                                 |  |
| 20-Apr                                                                                          | 0                             | 1 | 0 | A | 0 | 0 | 1 | 1 | 0 | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0               | 0.4           | 0.6           |  |  |                                 |  |
| 21-Apr                                                                                          | 0                             | 1 | A | 1 | 1 | 1 | 1 | 0 | 0 | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0               | 0.5           | 0.6           |  |  |                                 |  |
| 22-Apr                                                                                          | 1                             | A | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1  | 0  | 0  | 1  | 0  | 0  | 1  | 0  | 0  | 1                                                                                                                                                          | 0  | 0  | 0  | 0  | 0               | 0.4           | 0.6           |  |  |                                 |  |
| 23-Apr                                                                                          | A                             | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0  | 1  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | A               | 0.4           | 0.6           |  |  |                                 |  |
| 24-Apr                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | A  | 0               | 0.3           | 0.4           |  |  |                                 |  |
| 25-Apr                                                                                          | 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           |  |  |                                 |  |
| 26-Apr                                                                                          | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | A  | 0  | 0  | 0               | 0.3           | 0.5           |  |  |                                 |  |
| 27-Apr                                                                                          | 1                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0  | 1  | 0  | 1  | 0  | 0  | 0  | 1  | 0  | 1                                                                                                                                                          | A  | 0  | 0  | 0  | 0               | 0.5           | 0.8           |  |  |                                 |  |
| 28-Apr                                                                                          | 0                             | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A                                                                                                                                                          | 0  | 0  | 0  | 1  | 1               | 0.4           | 0.6           |  |  |                                 |  |
| 29-Apr                                                                                          | 1                             | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | A  | 1                                                                                                                                                          | 0  | 0  | 0  | 0  | 0               | 0.5           | 0.7           |  |  |                                 |  |
| 30-Apr                                                                                          | 0                             | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 1  | 1  | 0  | A  | 0  | 1                                                                                                                                                          | 1  | 1  | 0  | 1  | 1               | 0.5           | 0.7           |  |  |                                 |  |
| 0.5 0.4 0.5 0.5 0.5 0.5 0.7 0.4 0.5 0.4 0.4 0.4 0.5 0.5 0.4 0.4 0.5 0.4 0.5 0.5 0.5 0.4 0.5 0.4 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    | Diurnal Average |               |               |  |  |                                 |  |
| 0.6 0.7 0.6 0.7 0.8 0.7 6.4 0.6 3.2 0.6 0.6 0.7 0.7 0.7 0.7 0.7 0.7 0.8 1.0 0.7 0.7 0.7 1.3 0.7 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    | Diurnal Maximum |               |               |  |  |                                 |  |
| C - Calibration A - Automated Daily Zero Span                                                   |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    |                 |               |               |  |  |                                 |  |



## Pollutant Rose

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



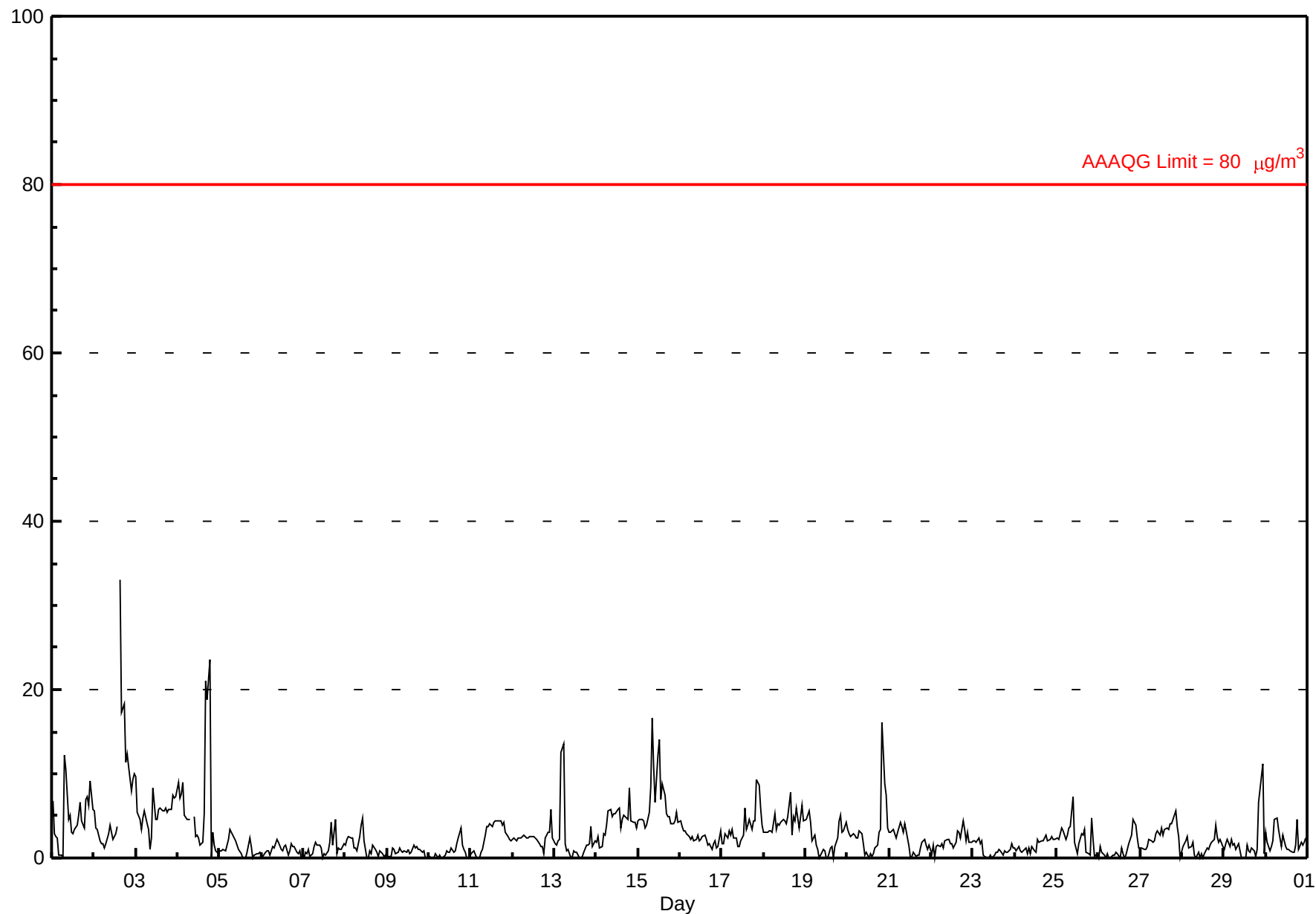


# Hourly Averages

Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

Smoky Heights - April 2014

| Number of Exceedences: 1-hr: 0 24-hr: 0<br>Maximum Value: 33.0 µg/m³ on Apr 2 16:00<br>Maximum Daily Average: 7.4 µg/m³ on Apr 2 |                               |   |   |   |    |    |   |    |    |                                                                                                                                                                                                                                                            |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 718<br>Hours of Missing Data: 2<br>Hours of Calibration: 0<br>Percent Operational Time: 99.7 |    |    |    |                 |               |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|----|----|---|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|----|----|----|----|----|--------------------------------------------------------------------------------------------------------------------------------------|----|----|----|-----------------|---------------|
| Minimum Value: 0 µg/m³ on Apr 4 20:00<br>Maximum Diurnal Average: 3.9 µg/m³ at hour 21<br>Monthly Average: 2.72 µg/m³            |                               |   |   |   |    |    |   |    |    | Minimum Daily Average: 0.7 µg/m³ on Apr 10<br>Minimum Diurnal Average: 2.0 µg/m³ at hour 13<br>Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.9 Median = 2.0 Q <sub>3</sub> = 3.5 P <sub>90</sub> = 5.5 P <sub>99</sub> = 16.1 |    |    |    |    |    |    |    |    |    |    |                                                                                                                                      |    |    |    |                 |               |
| Day                                                                                                                              | Hourly Period Ending At (MST) |   |   |   |    |    |   |    |    |                                                                                                                                                                                                                                                            |    |    |    |    |    |    |    |    |    |    |                                                                                                                                      |    |    |    | Daily Average   | Daily Maximum |
|                                                                                                                                  | 1                             | 2 | 3 | 4 | 5  | 6  | 7 | 8  | 9  | 10                                                                                                                                                                                                                                                         | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21                                                                                                                                   | 22 | 23 | 24 |                 |               |
| 1-Apr                                                                                                                            | 7                             | 3 | 3 | 2 | 0  | 0  | 0 | 12 | 10 | 5                                                                                                                                                                                                                                                          | 5  | 3  | 3  | 3  | 4  | 5  | 7  | 4  | 4  | 7  | 7                                                                                                                                    | 6  | 9  | 6  | 4.8             | 12.2          |
| 2-Apr                                                                                                                            | 6                             | 4 | 3 | 2 | 2  | 2  | 1 | 2  | 3  | 4                                                                                                                                                                                                                                                          | 3  | 2  | 3  | 4  | M  | 33 | 17 | 18 | 11 | 12 | 11                                                                                                                                   | 8  | 9  | 10 | 7.4             | 33.0          |
| 3-Apr                                                                                                                            | 10                            | 5 | 5 | 3 | 5  | 6  | 4 | 3  | 1  | 2                                                                                                                                                                                                                                                          | 8  | 4  | 4  | 6  | 6  | 6  | 6  | 6  | 5  | 6  | 6                                                                                                                                    | 7  | 7  | 7  | 5.4             | 9.7           |
| 4-Apr                                                                                                                            | 9                             | 7 | 8 | 9 | 5  | 5  | 5 | 5  | N  | 5                                                                                                                                                                                                                                                          | 3  | 3  | 2  | 2  | 2  | 5  | 21 | 19 | 24 | 0  | 3                                                                                                                                    | 2  | 1  | 1  | 6.2             | 23.6          |
| 5-Apr                                                                                                                            | 1                             | 1 | 1 | 1 | 2  | 2  | 3 | 3  | 2  | 2                                                                                                                                                                                                                                                          | 2  | 1  | 1  | 0  | 0  | 0  | 1  | 2  | 1  | 0  | 0                                                                                                                                    | 0  | 0  | 1  | 1.2             | 3.5           |
| 6-Apr                                                                                                                            | 0                             | 0 | 1 | 1 | 1  | 0  | 1 | 1  | 2  | 2                                                                                                                                                                                                                                                          | 2  | 1  | 1  | 1  | 2  | 0  | 1  | 2  | 1  | 1  | 1                                                                                                                                    | 1  | 1  | 0  | 1.0             | 2.2           |
| 7-Apr                                                                                                                            | 0                             | 1 | 0 | 1 | 0  | 1  | 1 | 2  | 1  | 1                                                                                                                                                                                                                                                          | 1  | 0  | 0  | 0  | 1  | 2  | 4  | 2  | 4  | 1  | 1                                                                                                                                    | 1  | 1  | 2  | 1.2             | 4.5           |
| 8-Apr                                                                                                                            | 2                             | 2 | 3 | 2 | 2  | 1  | 1 | 1  | 2  | 4                                                                                                                                                                                                                                                          | 5  | 2  | 0  | 0  | 1  | 1  | 1  | 1  | 1  | 0  | 1                                                                                                                                    | 1  | 0  | 0  | 1.4             | 4.8           |
| 9-Apr                                                                                                                            | 0                             | 0 | 0 | 1 | 1  | 1  | 1 | 1  | 1  | 1                                                                                                                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                    | 1  | 0  | 0  | 0.7             | 1.5           |
| 10-Apr                                                                                                                           | 0                             | 0 | 0 | 0 | 1  | 0  | 0 | 0  | 0  | 0                                                                                                                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 4  | 2  | 1                                                                                                                                    | 1  | 0  | 0  | 0.7             | 3.5           |
| 11-Apr                                                                                                                           | 0                             | 1 | 1 | 0 | 0  | 0  | 1 | 1  | 3  | 4                                                                                                                                                                                                                                                          | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 4  | 3                                                                                                                                    | 3  | 2  | 2  | 2.6             | 4.5           |
| 12-Apr                                                                                                                           | 2                             | 2 | 2 | 2 | 2  | 2  | 3 | 3  | 2  | 2                                                                                                                                                                                                                                                          | 3  | 3  | 3  | 2  | 2  | 2  | 1  | 1  | 0  | 2  | 3                                                                                                                                    | 3  | 6  | 2  | 2.4             | 5.8           |
| 13-Apr                                                                                                                           | 2                             | 2 | 2 | 2 | 13 | 14 | 2 | 1  | 1  | 0                                                                                                                                                                                                                                                          | 0  | 1  | 1  | 1  | 0  | 0  | 0  | 1  | 2  | 1  | 2                                                                                                                                    | 4  | 1  | 2  | 2.2             | 13.6          |
| 14-Apr                                                                                                                           | 2                             | 3 | 1 | 1 | 3  | 3  | 4 | 6  | 6  | 5                                                                                                                                                                                                                                                          | 5  | 5  | 6  | 6  | 4  | 5  | 5  | 5  | 5  | 8  | 4                                                                                                                                    | 4  | 4  | 4  | 4.3             | 8.3           |
| 15-Apr                                                                                                                           | 4                             | 5 | 5 | 4 | 4  | 4  | 5 | 8  | 17 | 11                                                                                                                                                                                                                                                         | 7  | 12 | 14 | 7  | 9  | 7  | 5  | 5  | 5  | 4  | 4                                                                                                                                    | 4  | 5  | 4  | 6.7             | 16.6          |
| 16-Apr                                                                                                                           | 4                             | 4 | 3 | 3 | 3  | 3  | 2 | 3  | 2  | 2                                                                                                                                                                                                                                                          | 3  | 2  | 2  | 3  | 3  | 2  | 2  | 2  | 1  | 2  | 2                                                                                                                                    | 1  | 1  | 3  | 2.4             | 4.4           |
| 17-Apr                                                                                                                           | 2                             | 2 | 3 | 2 | 3  | 3  | 3 | 2  | 2  | 1                                                                                                                                                                                                                                                          | 1  | 2  | 3  | 6  | 3  | 4  | 5  | 3  | 4  | 4  | 9                                                                                                                                    | 9  | 6  | 4  | 3.6             | 9.2           |
| 18-Apr                                                                                                                           | 3                             | 3 | 3 | 3 | 3  | 3  | 5 | 3  | 4  | 4                                                                                                                                                                                                                                                          | 4  | 5  | 4  | 4  | 5  | 8  | 3  | 5  | 4  | 6  | 4                                                                                                                                    | 5  | 6  | 4  | 4.3             | 7.8           |
| 19-Apr                                                                                                                           | 5                             | 5 | 6 | 4 | 2  | 3  | 1 | 1  | 0  | 1                                                                                                                                                                                                                                                          | 1  | 1  | 0  | 0  | 1  | 1  | 0  | 1  | 2  | 4  | 5                                                                                                                                    | 3  | 3  | 4  | 2.3             | 5.5           |
| 20-Apr                                                                                                                           | 3                             | 3 | 3 | 3 | 3  | 2  | 2 | 3  | 3  | 2                                                                                                                                                                                                                                                          | 0  | 1  | 0  | 1  | 0  | 0  | 1  | 1  | 3  | 3  | 16                                                                                                                                   | 9  | 7  | 4  | 3.1             | 16.1          |
| 21-Apr                                                                                                                           | 3                             | 3 | 3 | 3 | 2  | 3  | 4 | 4  | 3  | 4                                                                                                                                                                                                                                                          | 3  | 1  | 0  | 0  | 1  | 0  | 0  | 0  | 1  | 2  | 2                                                                                                                                    | 2  | 1  | 2  | 2.0             | 4.2           |
| 22-Apr                                                                                                                           | 1                             | 2 | 0 | 1 | 2  | 1  | 2 | 1  | 2  | 2                                                                                                                                                                                                                                                          | 2  | 2  | 2  | 1  | 2  | 3  | 3  | 2  | 4  | 3  | 2                                                                                                                                    | 3  | 2  | 2  | 2.0             | 4.5           |
| 23-Apr                                                                                                                           | 2                             | 2 | 2 | 2 | 2  | 2  | 0 | 0  | 0  | 0                                                                                                                                                                                                                                                          | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 0  | 1  | 1  | 1                                                                                                                                    | 1  | 2  | 1  | 0.9             | 2.4           |
| 24-Apr                                                                                                                           | 1                             | 1 | 1 | 1 | 1  | 1  | 1 | 1  | 1  | 1                                                                                                                                                                                                                                                          | 1  | 1  | 1  | 2  | 2  | 2  | 2  | 2  | 3  | 2  | 2                                                                                                                                    | 3  | 2  | 2  | 1.5             | 2.7           |
| 25-Apr                                                                                                                           | 2                             | 2 | 3 | 4 | 3  | 2  | 3 | 4  | 4  | 7                                                                                                                                                                                                                                                          | 2  | 1  | 1  | 2  | 3  | 3  | 3  | 1  | 1  | 0  | 5                                                                                                                                    | 2  | 0  | 1  | 2.4             | 7.3           |
| 26-Apr                                                                                                                           | 0                             | 1 | 1 | 0 | 0  | 0  | 0 | 0  | 0  | 0                                                                                                                                                                                                                                                          | 1  | 1  | 0  | 1  | 1  | 0  | 0  | 2  | 2  | 3  | 5                                                                                                                                    | 4  | 2  | 1  | 1.1             | 4.5           |
| 27-Apr                                                                                                                           | 1                             | 1 | 1 | 1 | 1  | 2  | 2 | 2  | 2  | 3                                                                                                                                                                                                                                                          | 3  | 3  | 4  | 3  | 3  | 4  | 3  | 4  | 4  | 5  | 6                                                                                                                                    | 4  | 2  | 0  | 2.7             | 5.6           |
| 28-Apr                                                                                                                           | 1                             | 2 | 2 | 2 | 1  | 1  | 2 | 0  | 0  | 1                                                                                                                                                                                                                                                          | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 2  | 2  | 4  | 3                                                                                                                                    | 2  | 2  | 1  | 1.4             | 3.9           |
| 29-Apr                                                                                                                           | 1                             | 2 | 2 | 1 | 2  | 1  | 2 | 1  | 2  | 1                                                                                                                                                                                                                                                          | 0  | 0  | 0  | 2  | 1  | 1  | 1  | 1  | 0  | 1  | 7                                                                                                                                    | 10 | 11 | 0  | 2.0             | 11.1          |
| 30-Apr                                                                                                                           | 3                             | 2 | 1 | 1 | 2  | 5  | 5 | 3  | 2  | 1                                                                                                                                                                                                                                                          | 3  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 5  | 1  | 2                                                                                                                                    | 1  | 2  | 2  | 2.0             | 4.8           |
| 2.6 2.3 2.2 2.2 2.3 2.4 2.3 2.6 2.7 2.6 2.5 2.1 2.0 2.1 2.1 3.4 3.5 3.4 3.7 3.1 3.9 3.4 3.3 2.4                                  |                               |   |   |   |    |    |   |    |    |                                                                                                                                                                                                                                                            |    |    |    |    |    |    |    |    |    |    |                                                                                                                                      |    |    |    | Diurnal Average |               |
| 9.7 7.0 7.7 9.0 12.6 13.6 5.4 12.2 16.6 10.9 8.4 12.2 14.1 6.9 8.8 33.0 21.0 18.9 23.6 12.4 16.1 9.7 11.1 10.0                   |                               |   |   |   |    |    |   |    |    |                                                                                                                                                                                                                                                            |    |    |    |    |    |    |    |    |    |    |                                                                                                                                      |    |    |    | Diurnal Maximum |               |
| M - Maintenance N - Not Valid                                                                                                    |                               |   |   |   |    |    |   |    |    |                                                                                                                                                                                                                                                            |    |    |    |    |    |    |    |    |    |    |                                                                                                                                      |    |    |    |                 |               |
| Alberta Ambient Air Quality Guideline (AAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAQO): 24-hr 30 µg/m³         |                               |   |   |   |    |    |   |    |    |                                                                                                                                                                                                                                                            |    |    |    |    |    |    |    |    |    |    |                                                                                                                                      |    |    |    |                 |               |



# Hourly Maximums

Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

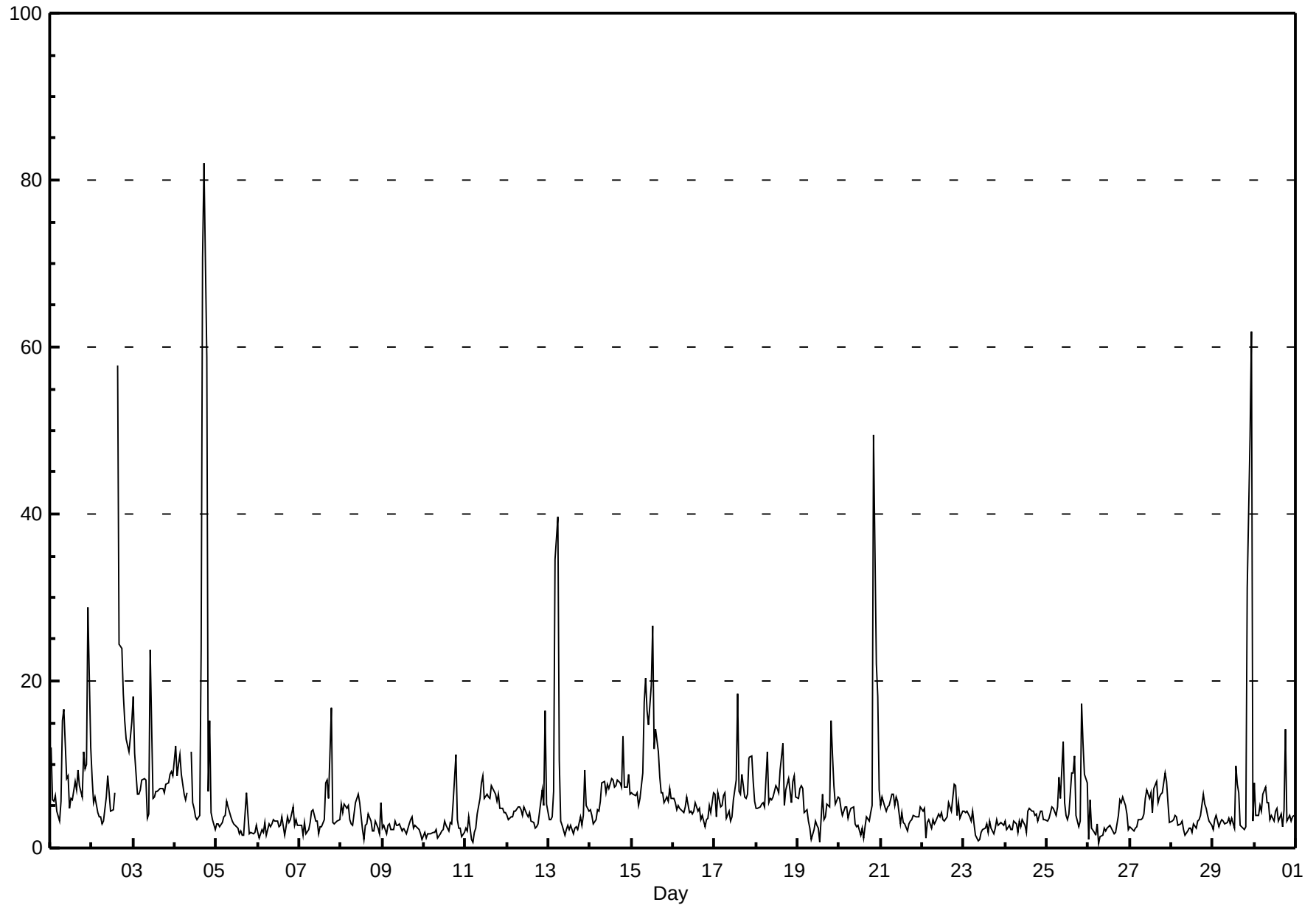
Smoky Heights - April 2014

| Maximum Value: 82.1 μg/m³ on Apr 4 18:00                                                                                |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 16.1 μg/m³ on Apr 4                                                                                                                  |    |    |    |    | Hours in Service: 720          |               |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|--------------------------------|---------------|
| Minimum Value: 1 μg/m³ on Apr 26 07:00                                                                                  |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 2.5 μg/m³ on Apr 9                                                                                                                   |    |    |    |    | Hours of Data: 718             |               |
| Maximum Diurnal Average: 8.7 μg/m³ at hour 21                                                                           |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 4.2 μg/m³ at hour 3                                                                                                                |    |    |    |    | Hours of Missing Data: 2       |               |
| Monthly Average: 5.77 μg/m³                                                                                             |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 1.0 P <sub>10</sub> = 2.1 Q <sub>1</sub> = 2.9 Median = 4.2 Q <sub>3</sub> = 6.4 P <sub>90</sub> = 8.9 P <sub>99</sub> = 49.3 |    |    |    |    | Hours of Calibration: 0        |               |
|                                                                                                                         |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    | Percent Operational Time: 99.7 |               |
| Day                                                                                                                     | Hourly Period Ending At (MST) |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    | Daily Average                  | Daily Maximum |
|                                                                                                                         | 1                             | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20                                                                                                                                                          | 21 | 22 | 23 | 24 |                                |               |
| 1-Apr                                                                                                                   | 12                            | 6  | 6  | 6  | 4  | 3  | 6  | 15 | 17 | 8  | 9  | 5  | 6  | 6  | 8  | 7  | 9  | 7  | 6  | 12                                                                                                                                                          | 10 | 10 | 29 | 12 | 9.1                            | 28.8          |
| 2-Apr                                                                                                                   | 8                             | 5  | 6  | 4  | 4  | 4  | 3  | 3  | 6  | 9  | 7  | 4  | 5  | 7  | M  | 58 | 24 | 24 | 18 | 15                                                                                                                                                          | 13 | 12 | 13 | 15 | 11.6                           | 57.9          |
| 3-Apr                                                                                                                   | 18                            | 11 | 6  | 6  | 7  | 8  | 8  | 8  | 4  | 4  | 24 | 6  | 6  | 7  | 7  | 7  | 7  | 7  | 7  | 8                                                                                                                                                           | 8  | 9  | 9  | 9  | 8.4                            | 23.8          |
| 4-Apr                                                                                                                   | 12                            | 9  | 10 | 11 | 9  | 6  | 6  | 7  | N  | 12 | 5  | 5  | 4  | 3  | 4  | 24 | 71 | 82 | 59 | 7                                                                                                                                                           | 15 | 4  | 3  | 2  | 16.1                           | 82.1          |
| 5-Apr                                                                                                                   | 3                             | 3  | 2  | 3  | 4  | 4  | 6  | 5  | 4  | 3  | 3  | 3  | 2  | 2  | 2  | 1  | 2  | 7  | 4  | 2                                                                                                                                                           | 2  | 2  | 2  | 3  | 3.0                            | 6.7           |
| 6-Apr                                                                                                                   | 2                             | 1  | 2  | 2  | 3  | 1  | 3  | 3  | 3  | 3  | 3  | 3  | 3  | 3  | 4  | 1  | 2  | 4  | 3  | 3                                                                                                                                                           | 5  | 3  | 3  | 3  | 2.8                            | 4.9           |
| 7-Apr                                                                                                                   | 3                             | 3  | 1  | 3  | 2  | 2  | 3  | 4  | 5  | 3  | 3  | 2  | 2  | 3  | 3  | 8  | 8  | 6  | 17 | 3                                                                                                                                                           | 3  | 3  | 3  | 3  | 4.0                            | 16.9          |
| 8-Apr                                                                                                                   | 5                             | 4  | 5  | 5  | 5  | 3  | 3  | 3  | 5  | 6  | 6  | 5  | 2  | 1  | 3  | 3  | 4  | 3  | 2  | 2                                                                                                                                                           | 3  | 2  | 2  | 5  | 3.7                            | 6.4           |
| 9-Apr                                                                                                                   | 2                             | 3  | 2  | 3  | 3  | 2  | 2  | 3  | 3  | 3  | 3  | 2  | 2  | 2  | 2  | 3  | 3  | 4  | 2  | 3                                                                                                                                                           | 2  | 2  | 2  | 1  | 2.5                            | 3.7           |
| 10-Apr                                                                                                                  | 2                             | 1  | 2  | 2  | 2  | 2  | 2  | 2  | 1  | 2  | 2  | 2  | 3  | 3  | 2  | 3  | 3  | 6  | 11 | 3                                                                                                                                                           | 2  | 2  | 1  | 2  | 2.6                            | 11.2          |
| 11-Apr                                                                                                                  | 2                             | 2  | 4  | 1  | 1  | 2  | 2  | 4  | 6  | 8  | 9  | 6  | 6  | 6  | 6  | 7  | 7  | 6  | 6  | 6                                                                                                                                                           | 5  | 5  | 4  | 4  | 4.8                            | 8.6           |
| 12-Apr                                                                                                                  | 4                             | 3  | 4  | 4  | 4  | 4  | 5  | 5  | 5  | 4  | 5  | 4  | 4  | 4  | 3  | 3  | 2  | 2  | 3  | 4                                                                                                                                                           | 7  | 5  | 16 | 5  | 4.6                            | 16.4          |
| 13-Apr                                                                                                                  | 3                             | 3  | 4  | 7  | 35 | 40 | 11 | 3  | 3  | 2  | 2  | 3  | 2  | 3  | 2  | 2  | 3  | 2  | 4  | 3                                                                                                                                                           | 4  | 9  | 5  | 4  | 6.6                            | 39.6          |
| 14-Apr                                                                                                                  | 5                             | 4  | 3  | 3  | 5  | 4  | 6  | 8  | 8  | 7  | 8  | 7  | 8  | 8  | 7  | 7  | 8  | 8  | 7  | 13                                                                                                                                                          | 7  | 7  | 9  | 6  | 6.9                            | 13.5          |
| 15-Apr                                                                                                                  | 7                             | 6  | 6  | 7  | 5  | 6  | 9  | 17 | 20 | 16 | 15 | 19 | 27 | 12 | 14 | 12 | 8  | 7  | 7  | 5                                                                                                                                                           | 6  | 6  | 7  | 6  | 10.4                           | 26.7          |
| 16-Apr                                                                                                                  | 6                             | 5  | 5  | 5  | 5  | 4  | 4  | 5  | 6  | 4  | 4  | 4  | 4  | 5  | 4  | 5  | 3  | 4  | 2  | 3                                                                                                                                                           | 4  | 5  | 4  | 7  | 4.6                            | 6.6           |
| 17-Apr                                                                                                                  | 6                             | 4  | 7  | 5  | 5  | 6  | 7  | 4  | 4  | 3  | 4  | 6  | 8  | 18 | 7  | 6  | 9  | 6  | 6  | 6                                                                                                                                                           | 11 | 11 | 8  | 6  | 6.8                            | 18.4          |
| 18-Apr                                                                                                                  | 5                             | 5  | 5  | 5  | 5  | 5  | 12 | 5  | 6  | 6  | 6  | 7  | 7  | 7  | 9  | 13 | 5  | 7  | 8  | 8                                                                                                                                                           | 5  | 8  | 9  | 6  | 6.8                            | 12.5          |
| 19-Apr                                                                                                                  | 6                             | 7  | 7  | 7  | 4  | 5  | 3  | 2  | 1  | 2  | 3  | 3  | 2  | 1  | 6  | 3  | 4  | 5  | 5  | 15                                                                                                                                                          | 11 | 7  | 5  | 6  | 5.1                            | 15.3          |
| 20-Apr                                                                                                                  | 6                             | 5  | 4  | 5  | 5  | 4  | 4  | 5  | 5  | 3  | 2  | 3  | 2  | 2  | 1  | 3  | 4  | 3  | 4  | 5                                                                                                                                                           | 49 | 22 | 18 | 7  | 7.1                            | 49.4          |
| 21-Apr                                                                                                                  | 5                             | 6  | 5  | 4  | 5  | 5  | 6  | 6  | 5  | 6  | 6  | 3  | 4  | 3  | 3  | 2  | 3  | 3  | 3  | 4                                                                                                                                                           | 4  | 4  | 4  | 5  | 4.4                            | 6.4           |
| 22-Apr                                                                                                                  | 4                             | 5  | 1  | 3  | 3  | 2  | 3  | 3  | 3  | 4  | 4  | 4  | 3  | 3  | 4  | 5  | 5  | 4  | 8  | 7                                                                                                                                                           | 4  | 5  | 4  | 4  | 4.1                            | 7.6           |
| 23-Apr                                                                                                                  | 4                             | 4  | 4  | 4  | 3  | 4  | 3  | 1  | 1  | 1  | 2  | 2  | 2  | 3  | 2  | 3  | 2  | 2  | 2  | 3                                                                                                                                                           | 3  | 3  | 3  | 3  | 2.8                            | 4.5           |
| 24-Apr                                                                                                                  | 3                             | 2  | 3  | 2  | 2  | 3  | 3  | 2  | 3  | 2  | 3  | 3  | 2  | 4  | 5  | 4  | 4  | 4  | 4  | 3                                                                                                                                                           | 4  | 4  | 3  | 3  | 3.3                            | 4.7           |
| 25-Apr                                                                                                                  | 3                             | 3  | 4  | 5  | 5  | 4  | 5  | 8  | 6  | 13 | 5  | 4  | 3  | 4  | 9  | 9  | 11 | 4  | 2  | 3                                                                                                                                                           | 17 | 13 | 9  | 8  | 6.6                            | 17.4          |
| 26-Apr                                                                                                                  | 1                             | 6  | 2  | 2  | 1  | 3  | 1  | 1  | 1  | 2  | 2  | 2  | 3  | 2  | 2  | 2  | 2  | 4  | 6  | 5                                                                                                                                                           | 6  | 5  | 4  | 2  | 2.9                            | 6.1           |
| 27-Apr                                                                                                                  | 2                             | 2  | 2  | 2  | 2  | 3  | 3  | 4  | 4  | 6  | 7  | 6  | 7  | 4  | 7  | 8  | 5  | 6  | 6  | 7                                                                                                                                                           | 9  | 8  | 6  | 3  | 5.0                            | 8.9           |
| 28-Apr                                                                                                                  | 3                             | 3  | 4  | 4  | 3  | 3  | 3  | 2  | 1  | 2  | 2  | 2  | 2  | 3  | 2  | 3  | 3  | 4  | 6  | 5                                                                                                                                                           | 5  | 4  | 3  | 3  | 3.2                            | 6.4           |
| 29-Apr                                                                                                                  | 2                             | 3  | 4  | 3  | 3  | 3  | 3  | 3  | 3  | 4  | 3  | 3  | 2  | 10 | 8  | 7  | 3  | 2  | 2  | 3                                                                                                                                                           | 31 | 49 | 62 | 3  | 9.2                            | 61.9          |
| 30-Apr                                                                                                                  | 8                             | 4  | 4  | 5  | 4  | 6  | 7  | 5  | 5  | 3  | 4  | 3  | 4  | 5  | 3  | 4  | 3  | 5  | 14 | 3                                                                                                                                                           | 4  | 3  | 4  | 4  | 4.8                            | 14.2          |
| 5.2 4.4 4.2 4.3 4.9 5.2 4.7 4.9 5.0 5.0 5.4 4.4 4.7 4.8 4.8 7.5 7.6 7.9 7.9 5.7 8.7 7.8 8.5 5.0                         |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    | Diurnal Average                |               |
| 18.2 11.3 10.0 11.3 34.5 39.6 11.5 17.5 20.3 16.5 23.8 19.4 26.7 18.4 14.3 57.9 70.6 82.1 58.8 15.3 49.4 49.4 61.9 15.0 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    | Diurnal Maximum                |               |
| M - Maintenance N - Not Valid                                                                                           |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    |                                |               |



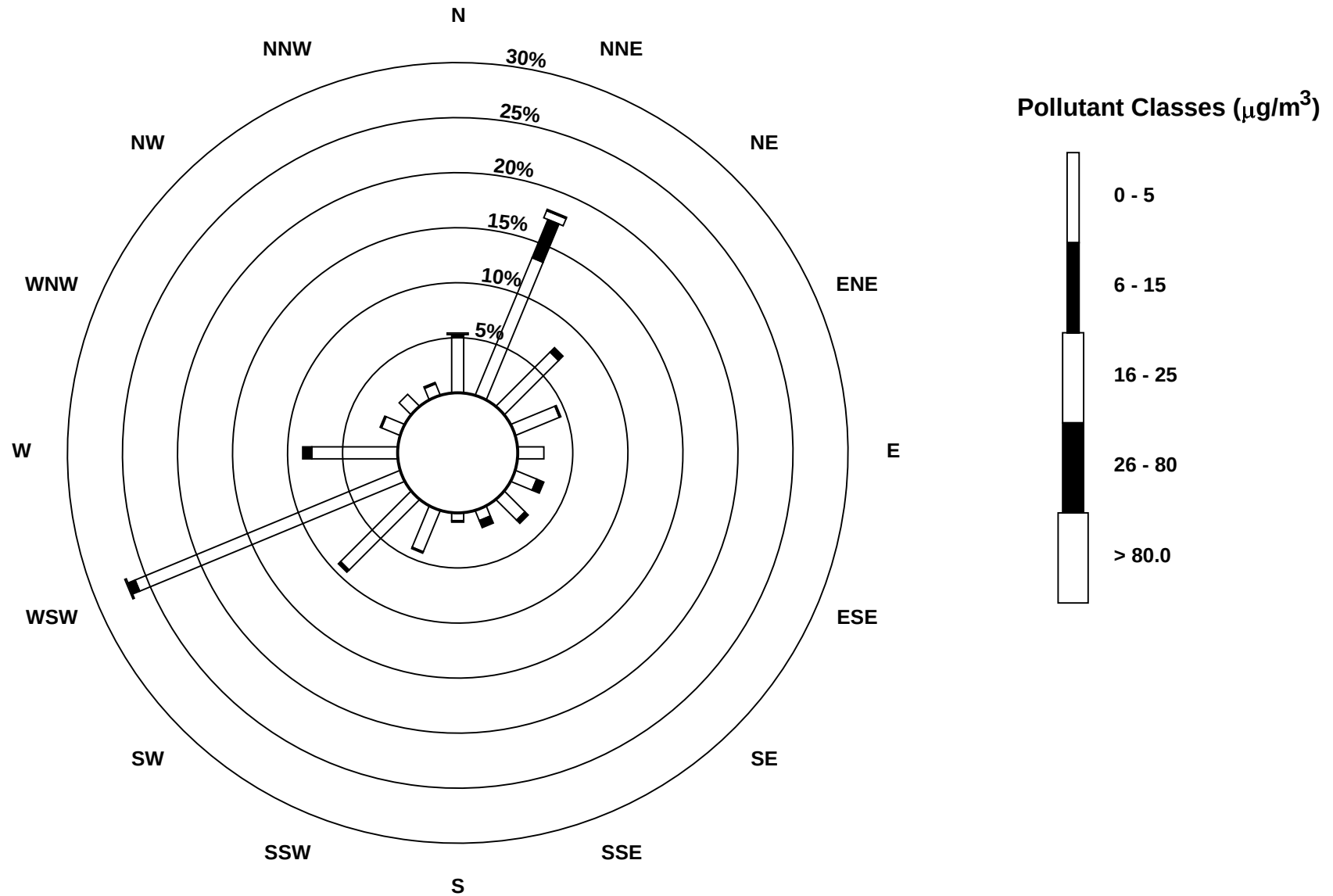
## Hourly Maximums

Particulate Matter 2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$   
Smoky Heights - April 2014



# Pollutant Rose

Particulate Matter 2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$   
Smoky Heights - April 2014



# Hourly Averages

External Temperature (ET) - °C

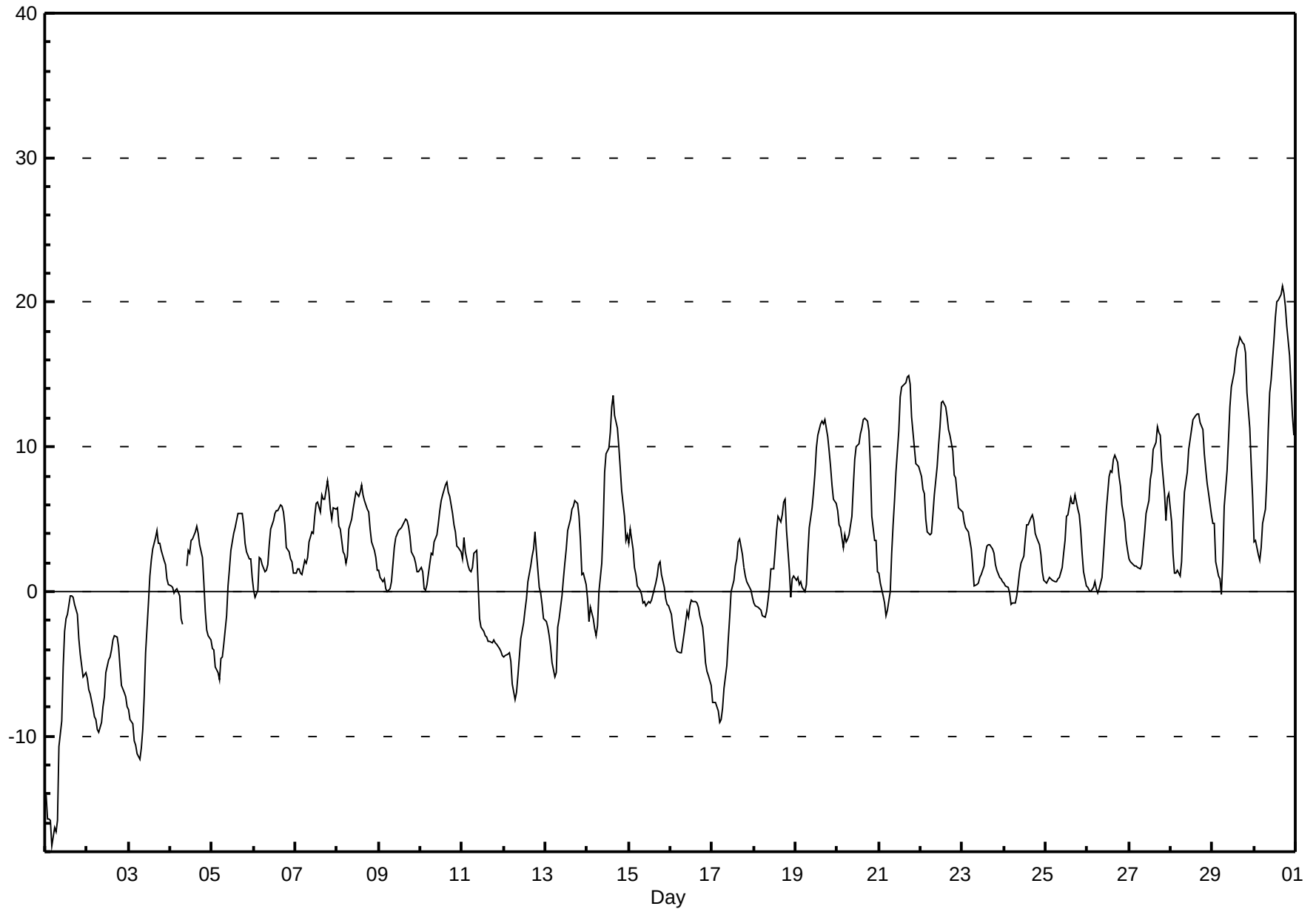
Smoky Heights - April 2014

|                                                                                                                                                                                                                                                                                                                                                                    |                               |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                       |                 |      |      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---------------------------------------------------------------------------------------|-----------------|------|------|
| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 21.1 °C on Apr 30 17:00 Maximum Daily Average: 12.6 °C on Apr 30                                                                                                                                                                                                                                 |                               |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 719                                           |                 |      |      |
| Minimum Value: -18 °C on Apr 1 05:00 Minimum Daily Average: -7.8 °C on Apr 1<br>Maximum Diurnal Average: 6.8 °C at hour 17 Minimum Diurnal Average: -1.5 °C at hour 6<br>Monthly Average: 2.59 °C Percentiles: P <sub>1</sub> = -14.8 P <sub>10</sub> = -4.5 Q <sub>1</sub> = -0.4 Median = 2.3 Q <sub>3</sub> = 5.7 P <sub>90</sub> = 10.5 P <sub>99</sub> = 18.4 |                               |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Missing Data: 1<br>Hours of Calibration: 0<br>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-Apr                                                                                                                                                                                                                                                                                                                                                              | -14                           | -16 | -16 | -16 | -18 | -16 | -17 | -16 | -11 | -9 | -5 | -3 | -2 | -2 | 0  | 0  | 0  | -1 | -2 | -3 | -4 | -5 | -6 | -6                                                                                    | -7.8            | -0.3 |      |
| 2-Apr                                                                                                                                                                                                                                                                                                                                                              | -6                            | -7  | -7  | -8  | -9  | -9  | -10 | -10 | -9  | -8 | -7 | -6 | -5 | -4 | -4 | -3 | -3 | -3 | -4 | -5 | -7 | -7 | -7 | -8                                                                                    | -6.5            | -3.1 |      |
| 3-Apr                                                                                                                                                                                                                                                                                                                                                              | -8                            | -9  | -9  | -10 | -11 | -11 | -12 | -11 | -10 | -7 | -4 | -1 | 1  | 2  | 3  | 4  | 4  | 3  | 3  | 3  | 2  | 2  | 1  | 1                                                                                     | -3.1            | 4.2  |      |
| 4-Apr                                                                                                                                                                                                                                                                                                                                                              | 0                             | 0   | 0   | 0   | 0   | 0   | -2  | -2  | N   | 2  | 3  | 3  | 4  | 4  | 4  | 4  | 4  | 3  | 2  | 1  | -1 | -3 | -3 | -3                                                                                    | 0.8             | 4.5  |      |
| 5-Apr                                                                                                                                                                                                                                                                                                                                                              | -4                            | -4  | -5  | -6  | -6  | -5  | -5  | -4  | -2  | 0  | 2  | 3  | 4  | 4  | 5  | 5  | 5  | 5  | 5  | 3  | 3  | 2  | 2  | 1                                                                                     | 0.5             | 5.4  |      |
| 6-Apr                                                                                                                                                                                                                                                                                                                                                              | 0                             | 0   | 0   | 2   | 2   | 2   | 1   | 1   | 2   | 3  | 4  | 5  | 5  | 6  | 6  | 6  | 6  | 5  | 5  | 3  | 3  | 2  | 2  | 1                                                                                     | 3.1             | 6.0  |      |
| 7-Apr                                                                                                                                                                                                                                                                                                                                                              | 1                             | 2   | 2   | 1   | 1   | 2   | 2   | 2   | 3   | 4  | 4  | 5  | 6  | 6  | 5  | 7  | 6  | 6  | 8  | 7  | 6  | 5  | 6  | 6                                                                                     | 4.3             | 7.7  |      |
| 8-Apr                                                                                                                                                                                                                                                                                                                                                              | 6                             | 5   | 4   | 3   | 3   | 2   | 2   | 4   | 5   | 6  | 6  | 7  | 7  | 7  | 7  | 7  | 6  | 6  | 5  | 4  | 3  | 3  | 2  | 2                                                                                     | 4.7             | 7.4  |      |
| 9-Apr                                                                                                                                                                                                                                                                                                                                                              | 1                             | 1   | 1   | 1   | 0   | 0   | 0   | 1   | 2   | 3  | 4  | 4  | 4  | 4  | 5  | 5  | 5  | 4  | 4  | 3  | 2  | 2  | 1  | 1                                                                                     | 2.5             | 5.0  |      |
| 10-Apr                                                                                                                                                                                                                                                                                                                                                             | 2                             | 1   | 0   | 0   | 0   | 2   | 3   | 3   | 3   | 4  | 5  | 6  | 6  | 7  | 7  | 8  | 7  | 7  | 5  | 5  | 4  | 3  | 3  | 3                                                                                     | 3.9             | 7.6  |      |
| 11-Apr                                                                                                                                                                                                                                                                                                                                                             | 2                             | 4   | 3   | 2   | 1   | 1   | 2   | 3   | 3   | 1  | -2 | -2 | -3 | -3 | -3 | -3 | -3 | -4 | -3 | -4 | -4 | -4 | -4 | -4                                                                                    | -1.1            | 3.7  |      |
| 12-Apr                                                                                                                                                                                                                                                                                                                                                             | -4                            | -4  | -4  | -4  | -5  | -6  | -7  | -7  | -6  | -5 | -3 | -2 | -1 | 0  | 1  | 2  | 2  | 3  | 4  | 3  | 0  | 0  | -1 | -2                                                                                    | -2.0            | 4.1  |      |
| 13-Apr                                                                                                                                                                                                                                                                                                                                                             | -2                            | -2  | -3  | -4  | -5  | -6  | -6  | -2  | -2  | 0  | 1  | 2  | 3  | 4  | 5  | 6  | 6  | 6  | 6  | 5  | 4  | 1  | 1  | 1                                                                                     | 0.8             | 6.3  |      |
| 14-Apr                                                                                                                                                                                                                                                                                                                                                             | -1                            | -2  | -1  | -2  | -3  | -3  | -2  | 0   | 2   | 5  | 8  | 9  | 10 | 11 | 13 | 14 | 12 | 11 | 10 | 9  | 7  | 5  | 4  | 4                                                                                     | 5.0             | 13.6 |      |
| 15-Apr                                                                                                                                                                                                                                                                                                                                                             | 3                             | 4   | 3   | 2   | 1   | 0   | 0   | 0   | -1  | -1 | -1 | -1 | -1 | -1 | 0  | 1  | 1  | 2  | 2  | 1  | 0  | -1 | -1 | -1                                                                                    | 0.6             | 4.3  |      |
| 16-Apr                                                                                                                                                                                                                                                                                                                                                             | -2                            | -3  | -3  | -4  | -4  | -4  | -4  | -4  | -3  | -1 | -2 | -1 | -1 | -1 | -1 | -1 | -1 | -2 | -2 | -4 | -5 | -5 | -6 | -7                                                                                    | -2.9            | -0.6 |      |
| 17-Apr                                                                                                                                                                                                                                                                                                                                                             | -8                            | -8  | -8  | -8  | -9  | -9  | -8  | -7  | -5  | -3 | -2 | 0  | 1  | 2  | 2  | 3  | 4  | 3  | 2  | 1  | 1  | 0  | 0  | 0                                                                                     | -2.4            | 3.7  |      |
| 18-Apr                                                                                                                                                                                                                                                                                                                                                             | -1                            | -1  | -1  | -1  | -1  | -2  | -2  | -1  | -1  | 0  | 2  | 2  | 3  | 4  | 5  | 5  | 5  | 6  | 6  | 4  | 1  | 0  | 1  | 1                                                                                     | 1.5             | 6.4  |      |
| 19-Apr                                                                                                                                                                                                                                                                                                                                                             | 1                             | 1   | 0   | 1   | 0   | 0   | 0   | 3   | 4   | 6  | 7  | 8  | 10 | 11 | 12 | 12 | 12 | 12 | 11 | 10 | 9  | 7  | 6  | 6                                                                                     | 6.2             | 11.9 |      |
| 20-Apr                                                                                                                                                                                                                                                                                                                                                             | 6                             | 5   | 4   | 3   | 4   | 3   | 4   | 4   | 5   | 7  | 9  | 10 | 10 | 11 | 11 | 12 | 12 | 12 | 12 | 11 | 9  | 5  | 3  | 4                                                                                     | 1               | 6.9  | 12.0 |
| 21-Apr                                                                                                                                                                                                                                                                                                                                                             | 1                             | 1   | 0   | -1  | -2  | -1  | 0   | 3   | 5   | 6  | 8  | 11 | 14 | 14 | 14 | 14 | 15 | 15 | 14 | 12 | 10 | 9  | 9  | 9                                                                                     | 7.5             | 14.9 |      |
| 22-Apr                                                                                                                                                                                                                                                                                                                                                             | 8                             | 7   | 7   | 5   | 4   | 4   | 4   | 5   | 7   | 9  | 10 | 11 | 13 | 13 | 13 | 12 | 11 | 11 | 10 | 8  | 8  | 7  | 6  | 6                                                                                     | 8.2             | 13.1 |      |
| 23-Apr                                                                                                                                                                                                                                                                                                                                                             | 5                             | 5   | 4   | 4   | 4   | 3   | 2   | 0   | 0   | 1  | 1  | 1  | 2  | 3  | 3  | 3  | 3  | 3  | 3  | 2  | 1  | 1  | 1  | 1                                                                                     | 2.3             | 5.5  |      |
| 24-Apr                                                                                                                                                                                                                                                                                                                                                             | 1                             | 0   | 0   | 0   | -1  | -1  | -1  | 0   | 0   | 1  | 2  | 2  | 4  | 5  | 5  | 5  | 5  | 5  | 4  | 4  | 3  | 3  | 1  | 1                                                                                     | 2.0             | 5.3  |      |
| 25-Apr                                                                                                                                                                                                                                                                                                                                                             | 1                             | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 2  | 3  | 3  | 5  | 5  | 6  | 6  | 6  | 7  | 6  | 5  | 4  | 3  | 1  | 0                                                                                     | 2.9             | 6.7  |      |
| 26-Apr                                                                                                                                                                                                                                                                                                                                                             | 0                             | 0   | 0   | 0   | 1   | 0   | 0   | 0   | 1   | 2  | 4  | 6  | 8  | 8  | 8  | 9  | 9  | 9  | 8  | 7  | 6  | 5  | 4  | 3                                                                                     | 4.1             | 9.5  |      |
| 27-Apr                                                                                                                                                                                                                                                                                                                                                             | 2                             | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 3   | 4  | 5  | 6  | 8  | 8  | 10 | 10 | 11 | 11 | 11 | 9  | 7  | 5  | 7  | 7                                                                                     | 5.7             | 11.4 |      |
| 28-Apr                                                                                                                                                                                                                                                                                                                                                             | 5                             | 3   | 1   | 1   | 1   | 1   | 2   | 5   | 7   | 8  | 10 | 10 | 11 | 12 | 12 | 12 | 12 | 12 | 11 | 9  | 8  | 7  | 7  | 5                                                                                     | 7.3             | 12.3 |      |
| 29-Apr                                                                                                                                                                                                                                                                                                                                                             | 5                             | 5   | 2   | 1   | 1   | 0   | 2   | 6   | 8   | 11 | 13 | 14 | 15 | 16 | 17 | 17 | 18 | 17 | 17 | 17 | 14 | 11 | 9  | 6                                                                                     | 10.0            | 17.6 |      |
| 30-Apr                                                                                                                                                                                                                                                                                                                                                             | 3                             | 4   | 3   | 2   | 3   | 5   | 6   | 8   | 11  | 14 | 15 | 17 | 19 | 20 | 20 | 21 | 21 | 21 | 20 | 18 | 16 | 14 | 12 | 11                                                                                    | 12.6            | 21.1 |      |
| 0.2 -0.2 -0.7 -1.1 -1.4 -1.5 -1.4 -0.4 0.9 2.1 3.3 4.4 5.3 5.9 6.4 6.7 6.8 6.5 6.0 4.9 3.6 2.5 2.0 1.5                                                                                                                                                                                                                                                             |                               |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                       | Diurnal Average |      |      |
| 8.0 7.1 6.8 5.0 4.1 4.7 5.7 7.8 11.2 13.7 14.6 17.4 18.9 20.0 20.2 20.5 21.1 20.6 19.7 18.3 16.3 14.3 12.2 10.8                                                                                                                                                                                                                                                    |                               |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                       | Diurnal Maximum |      |      |
| N - Not Valid                                                                                                                                                                                                                                                                                                                                                      |                               |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                       |                 |      |      |

## Hourly Averages

External Temperature (ET) - °C

Smoky Heights - April 2014



## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Smoky Heights - April 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                             | 2   | 4   | 4   | 1   | 2   | 3   | 7   | 3   | 2   | 2   | 5   | 3   | 3   | 5   | 9   | 11  | 11  | 13  | 10  | 10  | 10  | 10  | 11  | 4.3           | 12.8          |
| Dir    | 47                            | 288 | 301 | 308 | 180 | 201 | 237 | 268 | 269 | 133 | 70  | 45  | 350 | 293 | 6   | 24  | 23  | 26  | 32  | 19  | 19  | 16  | 21  | 22  | 11.5          | 31.9          |
| 2 Spd  | 13                            | 14  | 15  | 16  | 17  | 17  | 16  | 15  | 17  | 24  | 19  | 18  | 16  | 14  | 18  | 9   | 12  | 23  | 20  | 21  | 11  | 10  | 5   | 6   | 15.1          | 23.7          |
| Dir    | 14                            | 12  | 6   | 360 | 4   | 6   | 7   | 7   | 16  | 20  | 19  | 29  | 27  | 24  | 29  | 25  | 23  | 21  | 8   | 15  | 20  | 23  | 22  | 18  | 16.0          | 19.8          |
| 3 Spd  | 8                             | 7   | 10  | 12  | 15  | 12  | 11  | 12  | 15  | 14  | 10  | 11  | 14  | 22  | 21  | 19  | 18  | 24  | 25  | 25  | 23  | 21  | 20  | 11  | 9.3           | 25.3          |
| Dir    | 16                            | 15  | 18  | 23  | 17  | 20  | 20  | 25  | 28  | 31  | 32  | 35  | 120 | 132 | 134 | 125 | 120 | 106 | 121 | 147 | 149 | 158 | 156 | 159 | 100.3         | 147.5         |
| 4 Spd  | 6                             | 10  | 8   | 13  | 15  | 24  | 24  | 23  | 12  | 21  | 24  | 18  | 19  | 16  | 15  | 11  | 12  | 11  | 7   | 2   | 0   | 2   | 5   | 4   | 8.6           | 24.1          |
| Dir    | 191                           | 200 | 244 | 273 | 229 | 243 | 262 | 267 | 38  | 294 | 304 | 291 | 309 | 303 | 314 | 349 | 6   | 12  | 23  | 6   | 3   | 227 | 258 | 236 | 288.5         | 262.5         |
| 5 Spd  | 8                             | 8   | 7   | 10  | 10  | 14  | 10  | 10  | 14  | 12  | 14  | 14  | 12  | 15  | 14  | 14  | 10  | 5   | 11  | 14  | 11  | 12  | 14  | 12  | 11.1          | 14.8          |
| Dir    | 265                           | 252 | 243 | 250 | 250 | 261 | 260 | 229 | 234 | 239 | 240 | 254 | 253 | 234 | 233 | 234 | 248 | 286 | 258 | 258 | 244 | 259 | 249 | 267 | 248.6         | 234.4         |
| 6 Spd  | 11                            | 10  | 12  | 18  | 14  | 19  | 19  | 21  | 24  | 25  | 29  | 29  | 27  | 23  | 22  | 21  | 23  | 22  | 21  | 16  | 16  | 15  | 15  | 14  | 19.3          | 29.3          |
| Dir    | 261                           | 252 | 253 | 249 | 250 | 244 | 246 | 261 | 260 | 256 | 255 | 255 | 254 | 248 | 256 | 246 | 247 | 256 | 254 | 241 | 257 | 247 | 237 | 225 | 251.0         | 255.0         |
| 7 Spd  | 16                            | 14  | 13  | 9   | 8   | 8   | 6   | 7   | 5   | 9   | 12  | 14  | 21  | 13  | 10  | 9   | 8   | 14  | 8   | 6   | 6   | 5   | 11  | 9   | 9.1           | 20.8          |
| Dir    | 235                           | 244 | 238 | 242 | 213 | 232 | 186 | 195 | 192 | 202 | 198 | 185 | 203 | 240 | 244 | 243 | 266 | 243 | 246 | 231 | 252 | 273 | 230 | 258 | 227.8         | 202.7         |
| 8 Spd  | 11                            | 7   | 7   | 1   | 4   | 4   | 10  | 13  | 10  | 14  | 14  | 26  | 25  | 36  | 34  | 26  | 28  | 28  | 25  | 20  | 21  | 22  | 23  | 23  | 17.8          | 35.9          |
| Dir    | 264                           | 274 | 241 | 225 | 264 | 258 | 230 | 246 | 252 | 261 | 263 | 262 | 255 | 240 | 240 | 244 | 240 | 245 | 252 | 259 | 256 | 250 | 248 | 255 | 250.0         | 240.4         |
| 9 Spd  | 22                            | 21  | 26  | 28  | 24  | 26  | 23  | 27  | 30  | 32  | 32  | 29  | 38  | 36  | 29  | 32  | 29  | 26  | 22  | 19  | 20  | 21  | 22  | 21  | 26.3          | 37.5          |
| Dir    | 251                           | 254 | 258 | 258 | 262 | 261 | 258 | 259 | 255 | 255 | 256 | 247 | 257 | 264 | 261 | 265 | 267 | 259 | 264 | 255 | 255 | 250 | 245 | 237 | 256.9         | 257.2         |
| 10 Spd | 20                            | 20  | 17  | 16  | 15  | 18  | 25  | 31  | 24  | 19  | 17  | 24  | 25  | 22  | 25  | 21  | 18  | 19  | 16  | 8   | 5   | 12  | 11  | 10  | 18.1          | 31.5          |
| Dir    | 233                           | 236 | 236 | 237 | 233 | 242 | 247 | 257 | 250 | 249 | 255 | 259 | 247 | 245 | 259 | 249 | 250 | 258 | 258 | 273 | 215 | 251 | 255 | 248 | 248.5         | 257.2         |
| 11 Spd | 10                            | 21  | 21  | 9   | 7   | 7   | 11  | 16  | 22  | 24  | 18  | 19  | 19  | 21  | 20  | 19  | 18  | 16  | 13  | 9   | 7   | 7   | 7   | 5   | 8.1           | 24.0          |
| Dir    | 235                           | 230 | 238 | 232 | 217 | 231 | 250 | 268 | 306 | 318 | 1   | 353 | 348 | 348 | 357 | 353 | 1   | 6   | 13  | 21  | 37  | 52  | 61  | 82  | 327.6         | 317.6         |
| 12 Spd | 4                             | 5   | 4   | 3   | 6   | 6   | 8   | 12  | 14  | 18  | 16  | 20  | 19  | 20  | 19  | 17  | 18  | 14  | 10  | 10  | 7   | 13  | 12  | 8   | 7.7           | 19.8          |
| Dir    | 125                           | 140 | 159 | 210 | 202 | 242 | 256 | 251 | 241 | 233 | 241 | 242 | 238 | 238 | 241 | 246 | 244 | 244 | 304 | 309 | 339 | 37  | 35  | 31  | 248.5         | 241.5         |
| 13 Spd | 9                             | 9   | 7   | 4   | 4   | 3   | 3   | 2   | 7   | 12  | 11  | 11  | 9   | 7   | 9   | 11  | 12  | 12  | 9   | 6   | 6   | 2   | 3   | 5   | 5.2           | 12.0          |
| Dir    | 46                            | 55  | 45  | 44  | 30  | 29  | 20  | 93  | 136 | 145 | 141 | 140 | 133 | 138 | 140 | 133 | 138 | 143 | 144 | 123 | 99  | 163 | 207 | 240 | 122.3         | 143.0         |
| 14 Spd | 6                             | 5   | 8   | 10  | 9   | 3   | 5   | 5   | 5   | 5   | 2   | 3   | 3   | 3   | 1   | 4   | 9   | 7   | 5   | 5   | 7   | 5   | 4   | 5   | 1.3           | 9.6           |
| Dir    | 235                           | 231 | 224 | 204 | 200 | 198 | 224 | 218 | 233 | 241 | 231 | 246 | 266 | 243 | 223 | 40  | 39  | 48  | 21  | 4   | 20  | 3   | 354 | 355 | 259.6         | 203.8         |
| 15 Spd | 7                             | 12  | 13  | 14  | 14  | 17  | 17  | 18  | 20  | 20  | 16  | 18  | 16  | 17  | 16  | 12  | 9   | 10  | 11  | 13  | 9   | 8   | 6   | 6   | 13.0          | 20.4          |
| Dir    | 17                            | 3   | 11  | 22  | 16  | 23  | 26  | 21  | 28  | 33  | 14  | 21  | 24  | 34  | 31  | 26  | 27  | 25  | 30  | 42  | 59  | 59  | 39  | 60  | 27.1          | 33.1          |
| 16 Spd | 7                             | 9   | 8   | 7   | 9   | 9   | 8   | 11  | 10  | 7   | 11  | 11  | 12  | 11  | 11  | 11  | 12  | 15  | 15  | 11  | 8   | 10  | 14  | 4   | 9.9           | 15.1          |
| Dir    | 36                            | 41  | 27  | 8   | 9   | 14  | 12  | 30  | 29  | 34  | 13  | 18  | 33  | 21  | 16  | 26  | 27  | 31  | 35  | 38  | 15  | 24  | 34  | 27  | 25.6          | 31.4          |
| 17 Spd | 4                             | 6   | 8   | 5   | 4   | 6   | 5   | 9   | 10  | 8   | 9   | 7   | 7   | 6   | 5   | 1   | 9   | 16  | 13  | 13  | 16  | 12  | 14  | 12  | 6.8           | 16.3          |
| Dir    | 338                           | 5   | 20  | 17  | 342 | 18  | 31  | 48  | 57  | 69  | 72  | 79  | 90  | 54  | 22  | 8   | 66  | 68  | 74  | 81  | 121 | 118 | 120 | 118 | 71.0          | 121.4         |
| 18 Spd | 10                            | 10  | 6   | 5   | 7   | 6   | 8   | 7   | 5   | 3   | 1   | 4   | 3   | 4   | 4   | 13  | 8   | 4   | 2   | 6   | 3   | 0   | 5   | 5   | 0.1           | 13.4          |
| Dir    | 111                           | 107 | 81  | 65  | 73  | 62  | 35  | 47  | 36  | 50  | 226 | 260 | 263 | 205 | 232 | 255 | 249 | 246 | 265 | 288 | 319 | 271 | 243 | 254 | 347.0         | 254.8         |
| 19 Spd | 6                             | 10  | 12  | 17  | 14  | 11  | 11  | 14  | 16  | 17  | 13  | 11  | 9   | 10  | 3   | 7   | 4   | 3   | 4   | 2   | 4   | 10  | 11  | 16  | 8.0           | 16.6          |
| Dir    | 247                           | 222 | 254 | 261 | 258 | 226 | 218 | 207 | 224 | 230 | 239 | 238 | 244 | 251 | 347 | 99  | 149 | 61  | 65  | 253 | 248 | 231 | 267 | 267 | 239.1         | 229.6         |
| 20 Spd | 5                             | 5   | 8   | 7   | 9   | 11  | 12  | 11  | 16  | 21  | 23  | 26  | 25  | 26  | 25  | 23  | 24  | 21  | 16  | 11  | 5   | 7   | 10  | 8   | 14.7          | 26.3          |
| Dir    | 247                           | 257 | 258 | 239 | 235 | 255 | 249 | 254 | 244 | 244 | 249 | 252 | 246 | 242 | 243 | 256 | 268 | 261 | 262 | 262 | 247 | 262 | 269 | 243 | 251.7         | 242.1         |
| 21 Spd | 9                             | 9   | 7   | 6   | 6   | 7   | 8   | 7   | 7   | 6   | 6   | 5   | 2   | 5   | 9   | 7   | 7   | 5   | 4   | 8   | 10  | 9   | 11  | 10  | 1.4           | 11.4          |
| Dir    | 249                           | 268 | 200 | 228 | 224 | 225 | 233 | 208 | 185 | 196 | 244 | 258 | 77  | 154 | 140 | 152 | 135 | 111 | 88  | 41  | 35  | 25  | 22  | 27  | 190.2         | 22.4          |
| 22 Spd | 11                            | 10  | 13  | 12  | 12  | 12  | 10  | 11  | 16  | 16  | 15  | 15  | 20  | 21  | 24  | 25  | 21  | 20  | 18  | 10  | 9   | 9   | 18  | 17  | 14.0          | 24.7          |
| Dir    | 28                            | 34  | 36  | 35  | 24  | 20  | 21  | 32  | 30  | 31  | 39  | 47  | 59  | 68  | 77  | 77  | 68  | 70  | 91  | 92  | 88  | 59  | 27  | 25  | 51.8          | 76.9          |

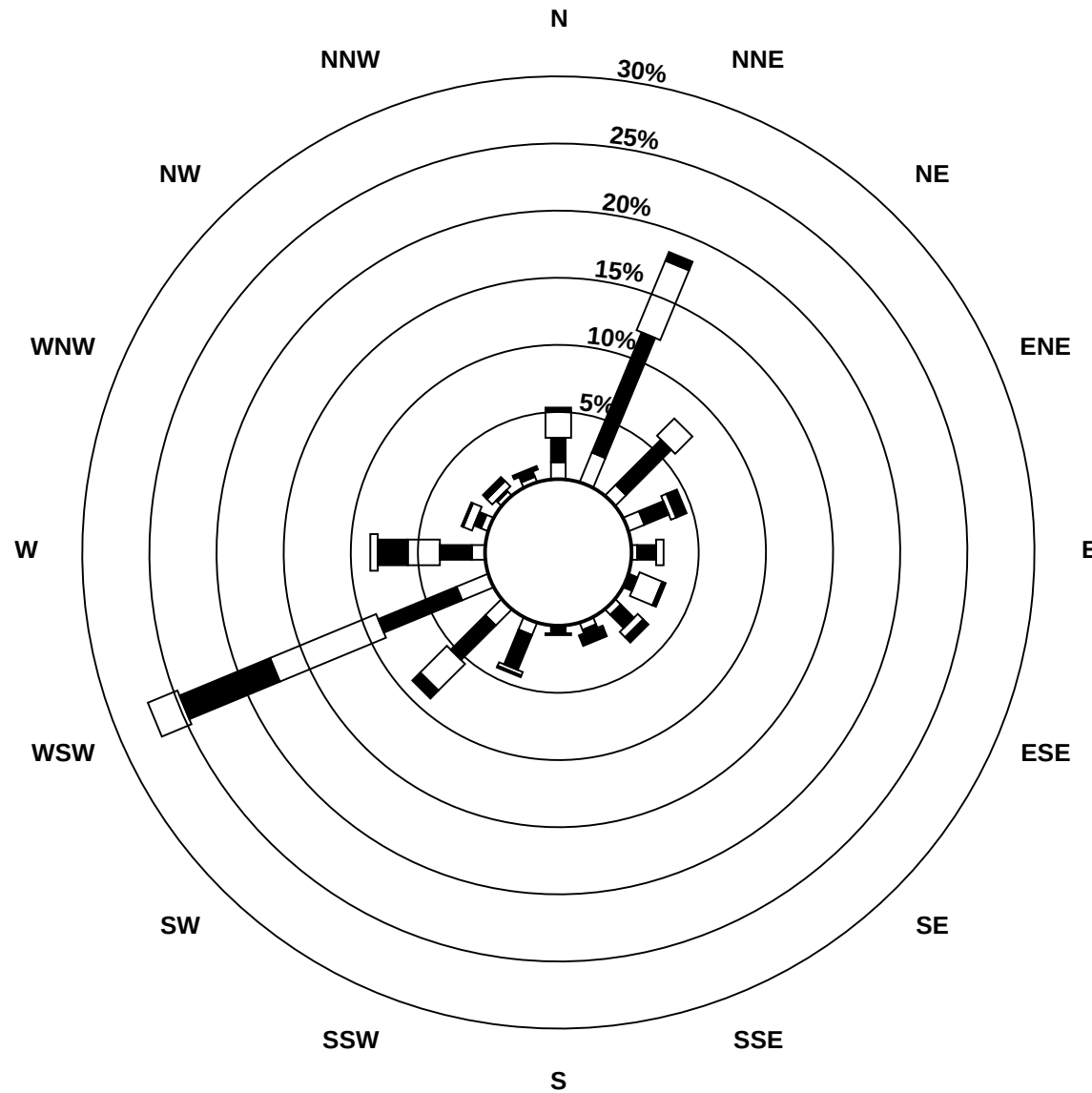
## Hourly Averages

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

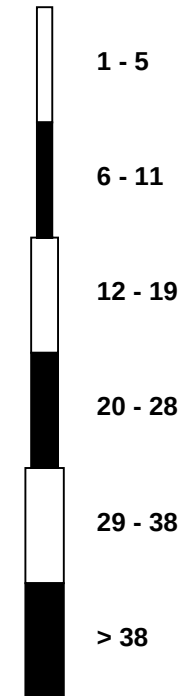
| Day                                                                                                                                                                  | Hourly Period Ending At (MST) |         |          |          |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | 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                                                                                                                                                               | 17                            | 14      | 13       | 10       | 10       | 10    | 8     | 8     | 9     | 7     | 5     | 7     | 10    | 11    | 13    | 12    | 13    | 15    | 13    | 13    | 15    | 14    | 12    | 11    | 7.9                             | 17.0          |
| Dir                                                                                                                                                                  | 30                            | 28      | 27       | 13       | 30       | 29    | 2     | 357   | 349   | 329   | 308   | 269   | 285   | 303   | 304   | 315   | 306   | 301   | 293   | 278   | 274   | 274   | 264   | 257   | 320.3                           | 29.8          |
| 24 Spd                                                                                                                                                               | 11                            | 12      | 12       | 14       | 11       | 11    | 9     | 11    | 10    | 14    | 13    | 7     | 4     | 3     | 10    | 9     | 9     | 11    | 11    | 10    | 9     | 9     | 8     | 9     | 3.3                             | 13.6          |
| Dir                                                                                                                                                                  | 252                           | 249     | 251      | 249      | 251      | 237   | 251   | 247   | 229   | 229   | 231   | 223   | 215   | 65    | 37    | 44    | 22    | 32    | 34    | 28    | 8     | 14    | 15    | 5     | 284.1                           | 229.3         |
| 25 Spd                                                                                                                                                               | 8                             | 7       | 7        | 7        | 7        | 7     | 9     | 11    | 10    | 10    | 8     | 5     | 4     | 8     | 6     | 6     | 6     | 3     | 7     | 5     | 5     | 3     | 3     | 4     | 6.2                             | 10.6          |
| Dir                                                                                                                                                                  | 0                             | 0       | 356      | 356      | 13       | 20    | 21    | 19    | 18    | 19    | 53    | 40    | 26    | 36    | 29    | 40    | 34    | 63    | 51    | 65    | 40    | 24    | 7     | 21    | 24.5                            | 18.8          |
| 26 Spd                                                                                                                                                               | 6                             | 7       | 3        | 4        | 8        | 9     | 11    | 11    | 11    | 12    | 12    | 14    | 12    | 18    | 17    | 17    | 20    | 16    | 13    | 15    | 21    | 22    | 19    | 16    | 9.3                             | 21.9          |
| Dir                                                                                                                                                                  | 20                            | 27      | 21       | 21       | 13       | 31    | 34    | 35    | 31    | 35    | 33    | 37    | 94    | 123   | 111   | 109   | 132   | 112   | 111   | 150   | 147   | 130   | 117   | 107   | 93.3                            | 130.0         |
| 27 Spd                                                                                                                                                               | 12                            | 12      | 11       | 9        | 9        | 8     | 7     | 6     | 3     | 5     | 6     | 12    | 12    | 13    | 8     | 7     | 4     | 6     | 8     | 6     | 1     | 9     | 18    | 15    | 0.7                             | 18.3          |
| Dir                                                                                                                                                                  | 86                            | 78      | 77       | 66       | 34       | 30    | 33    | 40    | 28    | 241   | 263   | 244   | 245   | 251   | 269   | 1     | 59    | 38    | 44    | 40    | 26    | 209   | 229   | 238   | 342.5                           | 229.0         |
| 28 Spd                                                                                                                                                               | 10                            | 7       | 9        | 10       | 13       | 12    | 11    | 19    | 31    | 35    | 34    | 36    | 38    | 33    | 31    | 28    | 27    | 26    | 26    | 23    | 22    | 16    | 14    | 13    | 21.6                            | 37.5          |
| Dir                                                                                                                                                                  | 221                           | 211     | 238      | 247      | 223      | 256   | 233   | 243   | 243   | 244   | 245   | 243   | 250   | 248   | 256   | 259   | 239   | 242   | 242   | 257   | 234   | 234   | 240   | 241   | 243.8                           | 250.1         |
| 29 Spd                                                                                                                                                               | 14                            | 17      | 16       | 16       | 13       | 12    | 8     | 8     | 11    | 14    | 10    | 9     | 7     | 5     | 6     | 5     | 8     | 9     | 11    | 7     | 7     | 2     | 1     | 1     | 5.1                             | 17.2          |
| Dir                                                                                                                                                                  | 247                           | 246     | 268      | 262      | 256      | 260   | 240   | 205   | 200   | 223   | 209   | 220   | 237   | 255   | 190   | 146   | 119   | 85    | 97    | 80    | 75    | 13    | 348   | 235   | 226.7                           | 246.2         |
| 30 Spd                                                                                                                                                               | 4                             | 7       | 8        | 8        | 4        | 6     | 6     | 7     | 10    | 13    | 15    | 16    | 19    | 21    | 21    | 20    | 25    | 28    | 26    | 24    | 24    | 18    | 12    | 10    | 14.0                            | 27.7          |
| Dir                                                                                                                                                                  | 229                           | 259     | 203      | 209      | 208      | 223   | 194   | 205   | 213   | 231   | 232   | 237   | 245   | 244   | 247   | 236   | 234   | 259   | 264   | 253   | 255   | 255   | 257   | 247   | 242.4                           | 258.7         |
| Spd                                                                                                                                                                  | 2.9                           | 3.2     | 3.9      | 4.5      | 3.7      | 4.5   | 4.7   | 5.4   | 4.7   | 6.3   | 6.3   | 7.0   | 6.9   | 6.7   | 5.1   | 3.9   | 3.2   | 2.6   | 2.2   | 2.2   | 1.7   | 2.2   | 2.9   | 3.2   | Diurnal Average                 |               |
| Dir                                                                                                                                                                  | 271.1                         | 270.2   | 275.1    | 279.2    | 277.1    | 278.8 | 275.6 | 274.4 | 276.2 | 269.1 | 270.1 | 266.0 | 259.4 | 253.8 | 264.4 | 267.3 | 265.9 | 299.1 | 309.1 | 290.6 | 250.7 | 253.7 | 257.8 | 260.6 | Diurnal Maximum                 |               |
| Spd                                                                                                                                                                  | 22.1                          | 21.4    | 26.1     | 27.7     | 23.6     | 25.5  | 25.3  | 31.5  | 30.8  | 35.0  | 34.1  | 36.3  | 37.5  | 36.2  | 34.1  | 32.5  | 28.9  | 28.1  | 26.5  | 25.3  | 24.2  | 22.1  | 22.9  | 22.7  | Diurnal Maximum                 |               |
| Dir                                                                                                                                                                  | 250.6                         | 254.1   | 257.7    | 257.7    | 261.7    | 260.8 | 246.6 | 257.2 | 243.2 | 244.5 | 244.5 | 243.0 | 257.2 | 263.7 | 239.7 | 265.2 | 266.5 | 244.8 | 242.0 | 147.5 | 254.7 | 250.2 | 247.9 | 254.8 |                                 |               |
| Maximum Speed Value: 38 km/h on Apr 9 13:00                                                                                                                          |                               |         |          |          |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Hours in Service: 720           |               |
| Maximum Daily Speed Average: 26.3 km/h on Apr 9                                                                                                                      |                               |         |          |          |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Hours of Data: 720              |               |
| Maximum Diurnal Speed Average: 7.0 km/h at hour 12                                                                                                                   |                               |         |          |          |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Hours of Missing Data: 0        |               |
| Minimum Speed Value: 0 km/h on Apr 4 21:00                                                                                                                           |                               |         |          |          |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Percent Operational Time: 100.0 |               |
| Minimum Daily Speed Average: 0.1 km/h on Apr 14                                                                                                                      |                               |         |          |          |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 |               |
| Minimum Diurnal Speed Average: 1.7 km/h at hour 21                                                                                                                   |                               |         |          |          |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 |               |
| Monthly Average Velocity: 4.09 km/h 270.08 deg                                                                                                                       |                               |         |          |          |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 |               |
| Speed Percentiles: P <sub>1</sub> = 1.2 P <sub>10</sub> = 4.3 Q <sub>1</sub> = 7.0 Median = 10.8 Q <sub>3</sub> = 16.1 P <sub>90</sub> = 22.8 P <sub>99</sub> = 33.4 |                               |         |          |          |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 |               |
| 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                                                                                                                                                                | 18                            | 55      | 28       | 9        | 0        | 0     | 110   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 |               |
| NorthEast                                                                                                                                                            | 17                            | 74      | 46       | 3        | 0        | 0     | 140   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 |               |
| East                                                                                                                                                                 | 6                             | 16      | 13       | 6        | 0        | 0     | 41    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 |               |
| SouthEast                                                                                                                                                            | 5                             | 13      | 14       | 9        | 0        | 0     | 41    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 |               |
| South                                                                                                                                                                | 5                             | 13      | 4        | 1        | 0        | 0     | 23    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 |               |
| SouthWest                                                                                                                                                            | 26                            | 57      | 54       | 34       | 8        | 0     | 179   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 |               |
| West                                                                                                                                                                 | 15                            | 38      | 51       | 46       | 15       | 0     | 165   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 |               |
| NorthWest                                                                                                                                                            | 4                             | 5       | 7        | 5        | 0        | 0     | 21    |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 |               |
| Total                                                                                                                                                                | 96                            | 271     | 217      | 113      | 23       | 0     | 720   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 |               |

## Wind Rose

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



## Wind Speed Classes (km/h)



## Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Smoky Heights - April 2014

| Maximum Speed: 38 km/h on Apr 28 13:00                                                                                  |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Speed Average: 26.6 km/h on Apr 9                                                                                                                |    |    |    |    |                 |               |  |  |  | Hours in Service: 720           |  |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-----------------|---------------|--|--|--|---------------------------------|--|
| Minimum Speed: 0 km/h on Apr 18 22:00                                                                                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Speed Average: 5.2 km/h on Apr 14                                                                                                                |    |    |    |    |                 |               |  |  |  | Hours of Data: 720              |  |
| Maximum Diurnal Speed Average: 15.9 km/h at hour 14                                                                     |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Speed Average: 9.8 km/h at hour 1                                                                                                              |    |    |    |    |                 |               |  |  |  | Hours of Missing Data: 0        |  |
| Monthly Average Speed: 12.66 km/h                                                                                       |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 1.7 P <sub>10</sub> = 4.8 Q <sub>1</sub> = 7.4 Median = 11.1 Q <sub>3</sub> = 16.4 P <sub>90</sub> = 23.2 P <sub>99</sub> = 33.9 |    |    |    |    |                 |               |  |  |  | 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-Apr                                                                                                                   | 2                             | 2  | 4  | 4  | 1  | 2  | 4  | 7  | 4  | 2  | 2  | 6  | 4  | 3  | 6  | 10 | 11 | 11 | 13 | 10                                                                                                                                                             | 10 | 10 | 10 | 11 | 6.1             | 12.8          |  |  |  |                                 |  |
| 2-Apr                                                                                                                   | 13                            | 14 | 15 | 17 | 17 | 17 | 16 | 16 | 17 | 24 | 20 | 18 | 16 | 14 | 18 | 9  | 12 | 23 | 21 | 21                                                                                                                                                             | 11 | 10 | 5  | 6  | 15.4            | 23.9          |  |  |  |                                 |  |
| 3-Apr                                                                                                                   | 8                             | 7  | 10 | 12 | 15 | 12 | 11 | 12 | 16 | 14 | 11 | 12 | 16 | 22 | 21 | 19 | 18 | 24 | 26 | 26                                                                                                                                                             | 23 | 21 | 20 | 12 | 16.1            | 25.8          |  |  |  |                                 |  |
| 4-Apr                                                                                                                   | 8                             | 10 | 9  | 14 | 15 | 24 | 24 | 24 | 15 | 22 | 24 | 18 | 20 | 17 | 16 | 12 | 13 | 11 | 7  | 2                                                                                                                                                              | 1  | 2  | 5  | 4  | 13.2            | 24.2          |  |  |  |                                 |  |
| 5-Apr                                                                                                                   | 8                             | 8  | 7  | 10 | 10 | 14 | 10 | 10 | 14 | 12 | 14 | 14 | 12 | 15 | 14 | 14 | 11 | 5  | 11 | 15                                                                                                                                                             | 12 | 12 | 14 | 13 | 11.5            | 14.8          |  |  |  |                                 |  |
| 6-Apr                                                                                                                   | 11                            | 10 | 12 | 18 | 14 | 20 | 19 | 21 | 24 | 26 | 29 | 29 | 27 | 23 | 22 | 22 | 23 | 22 | 21 | 16                                                                                                                                                             | 16 | 15 | 15 | 14 | 19.5            | 29.4          |  |  |  |                                 |  |
| 7-Apr                                                                                                                   | 16                            | 14 | 13 | 9  | 8  | 8  | 6  | 7  | 5  | 9  | 12 | 14 | 21 | 14 | 10 | 10 | 8  | 14 | 8  | 9                                                                                                                                                              | 7  | 7  | 11 | 10 | 10.4            | 21.0          |  |  |  |                                 |  |
| 8-Apr                                                                                                                   | 11                            | 7  | 8  | 2  | 4  | 5  | 11 | 13 | 10 | 14 | 14 | 26 | 25 | 36 | 34 | 26 | 28 | 28 | 25 | 20                                                                                                                                                             | 21 | 22 | 23 | 23 | 18.2            | 36.0          |  |  |  |                                 |  |
| 9-Apr                                                                                                                   | 22                            | 21 | 26 | 28 | 24 | 26 | 23 | 27 | 30 | 32 | 32 | 29 | 38 | 36 | 29 | 33 | 29 | 26 | 22 | 19                                                                                                                                                             | 20 | 21 | 22 | 21 | 26.6            | 37.6          |  |  |  |                                 |  |
| 10-Apr                                                                                                                  | 20                            | 21 | 17 | 16 | 15 | 19 | 26 | 32 | 24 | 19 | 17 | 24 | 25 | 22 | 25 | 21 | 18 | 19 | 17 | 9                                                                                                                                                              | 6  | 12 | 11 | 10 | 18.5            | 31.6          |  |  |  |                                 |  |
| 11-Apr                                                                                                                  | 10                            | 21 | 21 | 9  | 7  | 7  | 12 | 16 | 22 | 25 | 19 | 19 | 20 | 21 | 21 | 20 | 19 | 16 | 13 | 9                                                                                                                                                              | 7  | 7  | 7  | 5  | 14.7            | 24.9          |  |  |  |                                 |  |
| 12-Apr                                                                                                                  | 4                             | 5  | 4  | 4  | 6  | 6  | 8  | 12 | 14 | 18 | 16 | 20 | 20 | 20 | 19 | 17 | 18 | 14 | 11 | 10                                                                                                                                                             | 9  | 13 | 12 | 8  | 12.0            | 19.9          |  |  |  |                                 |  |
| 13-Apr                                                                                                                  | 9                             | 9  | 7  | 4  | 4  | 3  | 3  | 3  | 7  | 12 | 11 | 11 | 9  | 7  | 9  | 11 | 12 | 12 | 9  | 6                                                                                                                                                              | 6  | 2  | 3  | 5  | 7.3             | 12.1          |  |  |  |                                 |  |
| 14-Apr                                                                                                                  | 6                             | 5  | 8  | 10 | 9  | 3  | 5  | 5  | 5  | 5  | 2  | 3  | 3  | 3  | 2  | 4  | 9  | 7  | 6  | 5                                                                                                                                                              | 7  | 5  | 4  | 5  | 5.2             | 9.7           |  |  |  |                                 |  |
| 15-Apr                                                                                                                  | 7                             | 12 | 13 | 14 | 15 | 17 | 17 | 18 | 20 | 20 | 16 | 18 | 16 | 17 | 16 | 12 | 10 | 10 | 11 | 13                                                                                                                                                             | 9  | 8  | 6  | 7  | 13.5            | 20.5          |  |  |  |                                 |  |
| 16-Apr                                                                                                                  | 7                             | 9  | 8  | 7  | 9  | 9  | 8  | 11 | 10 | 8  | 11 | 11 | 12 | 11 | 12 | 11 | 13 | 15 | 15 | 11                                                                                                                                                             | 8  | 10 | 14 | 5  | 10.3            | 15.3          |  |  |  |                                 |  |
| 17-Apr                                                                                                                  | 4                             | 6  | 8  | 5  | 4  | 6  | 5  | 9  | 10 | 9  | 9  | 8  | 7  | 7  | 6  | 3  | 11 | 16 | 13 | 13                                                                                                                                                             | 16 | 12 | 14 | 12 | 9.0             | 16.4          |  |  |  |                                 |  |
| 18-Apr                                                                                                                  | 10                            | 10 | 7  | 6  | 7  | 6  | 8  | 7  | 5  | 3  | 2  | 5  | 4  | 5  | 5  | 14 | 9  | 4  | 3  | 7                                                                                                                                                              | 3  | 0  | 5  | 5  | 5.8             | 13.7          |  |  |  |                                 |  |
| 19-Apr                                                                                                                  | 6                             | 10 | 12 | 17 | 14 | 13 | 11 | 14 | 16 | 17 | 13 | 11 | 9  | 10 | 7  | 9  | 4  | 3  | 4  | 5                                                                                                                                                              | 5  | 10 | 11 | 16 | 10.3            | 16.6          |  |  |  |                                 |  |
| 20-Apr                                                                                                                  | 7                             | 6  | 8  | 7  | 10 | 11 | 12 | 11 | 16 | 21 | 23 | 26 | 25 | 26 | 25 | 23 | 25 | 21 | 16 | 11                                                                                                                                                             | 6  | 7  | 10 | 9  | 15.2            | 26.4          |  |  |  |                                 |  |
| 21-Apr                                                                                                                  | 9                             | 9  | 7  | 6  | 6  | 7  | 8  | 7  | 7  | 6  | 7  | 6  | 4  | 7  | 10 | 9  | 7  | 5  | 4  | 8                                                                                                                                                              | 10 | 9  | 11 | 10 | 7.6             | 11.5          |  |  |  |                                 |  |
| 22-Apr                                                                                                                  | 11                            | 11 | 13 | 12 | 12 | 12 | 10 | 11 | 16 | 16 | 15 | 16 | 21 | 22 | 24 | 25 | 21 | 20 | 19 | 10                                                                                                                                                             | 9  | 10 | 18 | 17 | 15.4            | 25.0          |  |  |  |                                 |  |
| 23-Apr                                                                                                                  | 17                            | 14 | 13 | 10 | 10 | 10 | 8  | 8  | 10 | 7  | 6  | 7  | 10 | 11 | 13 | 13 | 13 | 15 | 14 | 13                                                                                                                                                             | 15 | 14 | 12 | 11 | 11.4            | 17.1          |  |  |  |                                 |  |
| 24-Apr                                                                                                                  | 11                            | 12 | 12 | 14 | 11 | 12 | 9  | 11 | 10 | 14 | 14 | 8  | 4  | 4  | 11 | 9  | 9  | 11 | 11 | 10                                                                                                                                                             | 9  | 9  | 8  | 9  | 10.0            | 13.8          |  |  |  |                                 |  |
| 25-Apr                                                                                                                  | 8                             | 7  | 7  | 7  | 7  | 7  | 9  | 11 | 10 | 10 | 9  | 6  | 5  | 8  | 7  | 6  | 7  | 4  | 7  | 5                                                                                                                                                              | 5  | 4  | 4  | 4  | 6.8             | 10.6          |  |  |  |                                 |  |
| 26-Apr                                                                                                                  | 6                             | 7  | 3  | 4  | 8  | 9  | 11 | 11 | 11 | 13 | 12 | 14 | 14 | 19 | 18 | 17 | 20 | 16 | 14 | 16                                                                                                                                                             | 22 | 22 | 19 | 16 | 13.4            | 22.1          |  |  |  |                                 |  |
| 27-Apr                                                                                                                  | 12                            | 12 | 11 | 9  | 9  | 8  | 7  | 6  | 5  | 5  | 6  | 13 | 13 | 14 | 12 | 8  | 6  | 6  | 8  | 6                                                                                                                                                              | 2  | 9  | 19 | 17 | 9.3             | 18.5          |  |  |  |                                 |  |
| 28-Apr                                                                                                                  | 11                            | 7  | 9  | 10 | 13 | 12 | 11 | 19 | 31 | 35 | 34 | 37 | 38 | 34 | 32 | 29 | 28 | 26 | 28 | 23                                                                                                                                                             | 22 | 16 | 14 | 13 | 22.2            | 38.1          |  |  |  |                                 |  |
| 29-Apr                                                                                                                  | 14                            | 17 | 16 | 16 | 13 | 12 | 9  | 9  | 12 | 14 | 11 | 10 | 8  | 8  | 9  | 7  | 9  | 10 | 11 | 7                                                                                                                                                              | 8  | 2  | 2  | 1  | 9.9             | 17.3          |  |  |  |                                 |  |
| 30-Apr                                                                                                                  | 4                             | 7  | 8  | 8  | 4  | 6  | 6  | 7  | 10 | 13 | 15 | 16 | 20 | 22 | 22 | 20 | 25 | 28 | 27 | 24                                                                                                                                                             | 24 | 18 | 12 | 10 | 14.8            | 28.2          |  |  |  |                                 |  |
| 9.8 10.4 10.6 10.2 10.1 10.8 10.9 12.5 13.5 14.8 14.2 15.2 15.6 15.9 15.8 14.7 14.9 14.9 13.7 12.0 11.0 10.7 11.4 10.2  |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                |    |    |    |    | Diurnal Average |               |  |  |  |                                 |  |
| 22.1 21.5 26.1 27.7 23.6 25.5 25.7 31.6 30.9 35.3 34.4 36.6 38.1 36.3 34.1 32.7 29.2 28.2 27.6 25.8 24.3 22.2 23.0 23.4 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                |    |    |    |    | Diurnal Maximum |               |  |  |  |                                 |  |
| All monthly, daily, and diurnal averages have been calculated using scalar methods                                      |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                |    |    |    |    |                 |               |  |  |  |                                 |  |



## Hourly Standard Deviations

Wind Direction (WD) - deg

Smoky Heights - April 2014

| Maximum Value: 88.0 deg on Apr 19 20:00                                                                                                                       |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720           |    |    |    |    |    |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---------------------------------|----|----|----|----|----|---------------|
| Minimum Value: 1.9 deg on Apr 29 03:00                                                                                                                        |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Data: 720              |    |    |    |    |    |               |
| Percentiles: P <sub>1</sub> = 3.0 P <sub>10</sub> = 4.5 Q <sub>1</sub> = 6.2 Median = 9.3 Q <sub>3</sub> = 15.2 P <sub>90</sub> = 29.4 P <sub>99</sub> = 74.3 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 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-Apr                                                                                                                                                         | 23                            | 68 | 13 | 30 | 86 | 13 | 34 | 9  | 45 | 16 | 29 | 13 | 45 | 15 | 26 | 8  | 6  | 6  | 4                               | 7  | 6  | 7  | 4  | 4  | 86.4          |
| 2-Apr                                                                                                                                                         | 6                             | 6  | 8  | 9  | 8  | 7  | 7  | 8  | 7  | 8  | 10 | 8  | 10 | 10 | 10 | 7  | 7  | 6  | 7                               | 8  | 5  | 4  | 14 | 6  | 14.0          |
| 3-Apr                                                                                                                                                         | 4                             | 5  | 5  | 4  | 6  | 5  | 4  | 4  | 5  | 6  | 8  | 11 | 34 | 7  | 7  | 7  | 6  | 6  | 13                              | 12 | 4  | 6  | 3  | 36 | 36.1          |
| 4-Apr                                                                                                                                                         | 63                            | 17 | 26 | 10 | 16 | 6  | 7  | 27 | 40 | 9  | 8  | 7  | 14 | 18 | 20 | 19 | 20 | 11 | 11                              | 27 | 77 | 34 | 8  | 17 | 76.9          |
| 5-Apr                                                                                                                                                         | 15                            | 11 | 9  | 5  | 11 | 7  | 15 | 12 | 8  | 3  | 5  | 5  | 7  | 5  | 5  | 3  | 19 | 24 | 9                               | 12 | 12 | 11 | 10 | 11 | 24.2          |
| 6-Apr                                                                                                                                                         | 8                             | 6  | 6  | 6  | 5  | 3  | 4  | 4  | 5  | 4  | 3  | 5  | 4  | 5  | 5  | 6  | 6  | 10 | 10                              | 4  | 9  | 9  | 8  | 5  | 10.0          |
| 7-Apr                                                                                                                                                         | 7                             | 4  | 4  | 11 | 18 | 12 | 15 | 9  | 10 | 15 | 17 | 6  | 7  | 18 | 15 | 22 | 16 | 5  | 18                              | 50 | 45 | 45 | 13 | 14 | 49.7          |
| 8-Apr                                                                                                                                                         | 7                             | 26 | 42 | 60 | 47 | 22 | 28 | 10 | 12 | 6  | 9  | 3  | 9  | 4  | 3  | 4  | 3  | 4  | 5                               | 4  | 7  | 3  | 4  | 15 | 59.8          |
| 9-Apr                                                                                                                                                         | 5                             | 5  | 4  | 3  | 3  | 3  | 4  | 3  | 4  | 4  | 3  | 6  | 3  | 3  | 4  | 7  | 9  | 5  | 3                               | 7  | 4  | 5  | 3  | 4  | 8.8           |
| 10-Apr                                                                                                                                                        | 4                             | 4  | 5  | 3  | 4  | 10 | 12 | 5  | 4  | 4  | 5  | 4  | 6  | 6  | 4  | 7  | 6  | 9  | 13                              | 33 | 39 | 8  | 5  | 7  | 39.3          |
| 11-Apr                                                                                                                                                        | 11                            | 4  | 3  | 7  | 9  | 18 | 13 | 6  | 13 | 16 | 14 | 12 | 14 | 11 | 12 | 12 | 11 | 11 | 10                              | 9  | 11 | 16 | 12 | 14 | 17.7          |
| 12-Apr                                                                                                                                                        | 14                            | 21 | 19 | 24 | 15 | 18 | 10 | 11 | 6  | 5  | 7  | 5  | 7  | 6  | 6  | 6  | 4  | 5  | 29                              | 10 | 43 | 5  | 10 | 6  | 42.8          |
| 13-Apr                                                                                                                                                        | 8                             | 9  | 6  | 7  | 7  | 14 | 14 | 32 | 9  | 9  | 11 | 13 | 18 | 17 | 14 | 10 | 11 | 8  | 8                               | 9  | 10 | 58 | 30 | 26 | 57.9          |
| 14-Apr                                                                                                                                                        | 11                            | 6  | 15 | 8  | 15 | 11 | 6  | 6  | 8  | 9  | 34 | 12 | 28 | 20 | 75 | 16 | 8  | 9  | 15                              | 10 | 5  | 16 | 22 | 14 | 75.3          |
| 15-Apr                                                                                                                                                        | 11                            | 10 | 6  | 7  | 5  | 6  | 5  | 6  | 7  | 5  | 13 | 7  | 8  | 7  | 7  | 12 | 18 | 12 | 9                               | 17 | 7  | 10 | 12 | 24 | 24.3          |
| 16-Apr                                                                                                                                                        | 12                            | 5  | 8  | 11 | 6  | 8  | 10 | 7  | 8  | 22 | 17 | 19 | 18 | 20 | 21 | 22 | 18 | 9  | 8                               | 7  | 8  | 11 | 3  | 49 | 48.9          |
| 17-Apr                                                                                                                                                        | 20                            | 10 | 5  | 9  | 13 | 5  | 9  | 13 | 9  | 28 | 18 | 29 | 32 | 29 | 36 | 81 | 28 | 12 | 8                               | 14 | 7  | 8  | 8  | 9  | 80.7          |
| 18-Apr                                                                                                                                                        | 6                             | 6  | 25 | 8  | 7  | 14 | 6  | 10 | 11 | 32 | 86 | 33 | 69 | 33 | 40 | 10 | 12 | 39 | 33                              | 23 | 38 | 85 | 24 | 11 | 86.0          |
| 19-Apr                                                                                                                                                        | 18                            | 7  | 9  | 2  | 5  | 24 | 6  | 10 | 5  | 5  | 8  | 10 | 11 | 12 | 69 | 41 | 46 | 27 | 13                              | 88 | 39 | 8  | 10 | 13 | 88.0          |
| 20-Apr                                                                                                                                                        | 50                            | 21 | 8  | 12 | 15 | 4  | 3  | 5  | 5  | 4  | 9  | 7  | 9  | 5  | 7  | 8  | 8  | 8  | 6                               | 6  | 30 | 24 | 7  | 15 | 49.9          |
| 21-Apr                                                                                                                                                        | 17                            | 16 | 14 | 16 | 15 | 14 | 11 | 15 | 5  | 15 | 14 | 29 | 85 | 47 | 35 | 37 | 39 | 36 | 25                              | 15 | 6  | 5  | 5  | 13 | 85.3          |
| 22-Apr                                                                                                                                                        | 21                            | 7  | 7  | 7  | 4  | 6  | 6  | 8  | 5  | 6  | 11 | 12 | 9  | 12 | 9  | 8  | 9  | 8  | 18                              | 11 | 10 | 18 | 5  | 5  | 21.0          |
| 23-Apr                                                                                                                                                        | 5                             | 5  | 7  | 10 | 10 | 8  | 11 | 10 | 7  | 9  | 11 | 5  | 11 | 9  | 9  | 12 | 9  | 7  | 9                               | 7  | 4  | 4  | 8  | 5  | 11.7          |
| 24-Apr                                                                                                                                                        | 6                             | 4  | 6  | 6  | 8  | 7  | 9  | 7  | 10 | 10 | 11 | 16 | 43 | 60 | 11 | 14 | 13 | 13 | 9                               | 8  | 15 | 7  | 8  | 7  | 60.1          |
| 25-Apr                                                                                                                                                        | 8                             | 9  | 9  | 11 | 11 | 6  | 6  | 8  | 7  | 9  | 18 | 32 | 53 | 15 | 49 | 23 | 29 | 67 | 19                              | 14 | 9  | 25 | 18 | 8  | 67.1          |
| 26-Apr                                                                                                                                                        | 4                             | 4  | 26 | 11 | 6  | 10 | 6  | 6  | 6  | 8  | 9  | 11 | 33 | 15 | 15 | 12 | 10 | 18 | 17                              | 10 | 7  | 7  | 9  | 8  | 33.4          |
| 27-Apr                                                                                                                                                        | 9                             | 6  | 6  | 9  | 6  | 5  | 4  | 8  | 64 | 38 | 34 | 18 | 19 | 16 | 54 | 28 | 59 | 26 | 11                              | 10 | 52 | 12 | 9  | 29 | 63.9          |
| 28-Apr                                                                                                                                                        | 18                            | 13 | 12 | 7  | 10 | 10 | 5  | 4  | 6  | 6  | 8  | 8  | 10 | 11 | 9  | 12 | 11 | 8  | 16                              | 13 | 10 | 3  | 4  | 5  | 17.7          |
| 29-Apr                                                                                                                                                        | 6                             | 8  | 2  | 4  | 5  | 3  | 22 | 8  | 13 | 12 | 17 | 33 | 42 | 65 | 47 | 56 | 30 | 28 | 17                              | 8  | 15 | 54 | 64 | 41 | 64.8          |
| 30-Apr                                                                                                                                                        | 19                            | 11 | 8  | 11 | 19 | 10 | 27 | 7  | 9  | 14 | 9  | 12 | 12 | 17 | 11 | 10 | 11 | 11 | 7                               | 5  | 5  | 5  | 6  | 14 | 27.2          |
| 63.3 67.7 41.7 59.8 86.4 23.6 34.2 31.9 63.9 38.0 86.0 33.1 85.3 64.8 75.3 80.7 59.1 67.1 32.8 88.0 76.9 84.8 63.8 48.9                                       |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                 |    |    |    |    |    |               |

PAZA  
Beaverlodge Station  
Monthly Summary Tables, Graphs and  
Roses

# Hourly Averages

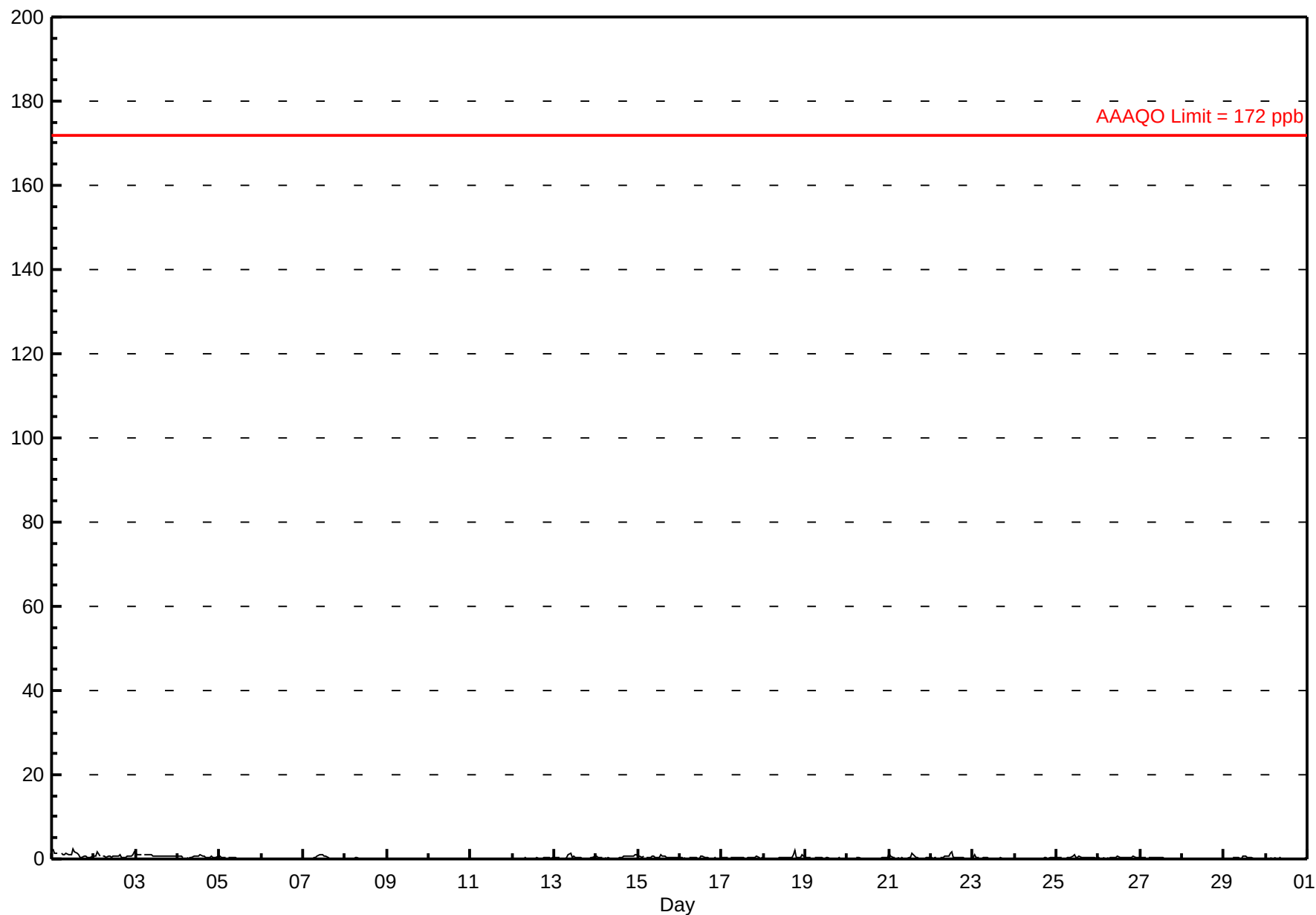
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Beaverlodge - April 2014

|                                                                                                                                              |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                                  |    |    |    |    |                                                                                                                                         |                 |               |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------|--|--|
| Number of Exceedences (AAAQO):<br>Maximum Value: 2.5 ppb on Apr 1 13:00                                                                      |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | 1-hr: 0    24-hr: 0<br>Maximum Daily Average: 1.1 ppb on Apr 1                                                                                                                                                                                                   |    |    |    |    | Hours in Service: 720<br>Hours of Data: 686<br>Hours of Missing Data: 34<br>Hours of Calibration: 34<br>Percent Operational Time: 100.0 |                 |               |  |  |
| Minimum Value: 0 ppb on Apr 8 14:00<br>Maximum Diurnal Average: 0.4 ppb at hour 1<br>Monthly Average: 0.30 ppb                               |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.0 ppb on Apr 9<br>Minimum Diurnal Average: 0.2 ppb at hour 17<br>Percentiles: P <sub>1</sub> = 0.0   P <sub>10</sub> = 0.0   Q <sub>1</sub> = 0.1   Median = 0.2   Q <sub>3</sub> = 0.4   P <sub>90</sub> = 0.7   P <sub>99</sub> = 1.6 |    |    |    |    |                                                                                                                                         |                 |               |  |  |
| 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-Apr                                                                                                                                        | 2                             | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 2  | 2  | 1  | 1  | 0  | 0  | 1                                                                                                                                                                                                                                                                | 1  | 0  | 0  | 0  | 1                                                                                                                                       | 1.1             | 2.5           |  |  |
| 2-Apr                                                                                                                                        | 1                             | 1 | 2 | 1 | A | 1 | 1 | 0 | 1 | 1  | 0  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 1  | 1  | 1  | 1  | 2                                                                                                                                       | 0.7             | 1.7           |  |  |
| 3-Apr                                                                                                                                        | 1                             | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                                                                                                                                | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 0.8             | 1.5           |  |  |
| 4-Apr                                                                                                                                        | 1                             | 1 | 1 | 0 | A | 0 | 0 | 0 | 0 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 1  | 0  | 0  | 0  | 1                                                                                                                                       | 0.5             | 1.0           |  |  |
| 5-Apr                                                                                                                                        | 1                             | 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             | 0.6           |  |  |
| 6-Apr                                                                                                                                        | 0                             | 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           |  |  |
| 7-Apr                                                                                                                                        | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 1 | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.3             | 1.0           |  |  |
| 8-Apr                                                                                                                                        | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | C  | C  | C  | C  | 0                                                                                                                                                                                                                                                                | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1             | 0.5           |  |  |
| 9-Apr                                                                                                                                        | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.0             | 0.1           |  |  |
| 10-Apr                                                                                                                                       | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.0             | 0.1           |  |  |
| 11-Apr                                                                                                                                       | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1             | 0.2           |  |  |
| 12-Apr                                                                                                                                       | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.1             | 0.2           |  |  |
| 13-Apr                                                                                                                                       | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 1 | 1  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 0  | 0  | 0  | 0  | 1                                                                                                                                       | 0.3             | 1.2           |  |  |
| 14-Apr                                                                                                                                       | 1                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 1                                                                                                                                                                                                                                                                | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 0.4             | 1.1           |  |  |
| 15-Apr                                                                                                                                       | 1                             | 1 | 0 | 1 | A | 0 | 0 | 0 | 1 | 1  | 0  | 0  | 0  | 1  | 1  | 1  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.4             | 1.0           |  |  |
| 16-Apr                                                                                                                                       | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 1  | 1  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.2             | 0.6           |  |  |
| 17-Apr                                                                                                                                       | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 0  | 1  | 0  | 0  | 0                                                                                                                                       | 0.3             | 0.8           |  |  |
| 18-Apr                                                                                                                                       | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 1  | 2                                                                                                                                                                                                                                                                | 0  | 0  | 0  | 1  | 1                                                                                                                                       | 0.4             | 1.9           |  |  |
| 19-Apr                                                                                                                                       | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.2             | 0.4           |  |  |
| 20-Apr                                                                                                                                       | 0                             | 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-Apr                                                                                                                                       | 1                             | 1 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 1  | 1  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.4             | 1.5           |  |  |
| 22-Apr                                                                                                                                       | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 1 | 1  | 1  | 1  | 2  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.4             | 1.8           |  |  |
| 23-Apr                                                                                                                                       | 0                             | 1 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.2             | 0.9           |  |  |
| 24-Apr                                                                                                                                       | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.2             | 0.4           |  |  |
| 25-Apr                                                                                                                                       | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1  | 1  | 0  | 0  | 1  | 1  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.4             | 1.1           |  |  |
| 26-Apr                                                                                                                                       | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 0  | 1  | 0  | 0  | 0                                                                                                                                       | 0.3             | 0.5           |  |  |
| 27-Apr                                                                                                                                       | 0                             | 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           |  |  |
| 28-Apr                                                                                                                                       | 0                             | 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           |  |  |
| 29-Apr                                                                                                                                       | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                                | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0.2             | 0.7           |  |  |
| 30-Apr                                                                                                                                       | 0                             | 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           |  |  |
| 0.4   0.3   0.3   0.3   --   0.3   0.2   0.3   0.3   0.3   0.3   0.3   0.4   0.4   0.3   0.3   0.2   0.2   0.3   0.2   0.3   0.2   0.3   0.3 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                                  |    |    |    |    |                                                                                                                                         | Diurnal Average |               |  |  |
| 2.3   1.4   1.7   1.4   --   1.2   1.0   1.0   1.4   1.2   1.1   1.2   2.5   1.8   1.2   1.0   0.6   1.1   1.9   0.8   0.8   0.7   1.1   1.6 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                                  |    |    |    |    |                                                                                                                                         | 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 (SO<sub>2</sub>) - ppb  
Beaverlodge - April 2014



# Hourly Maximums

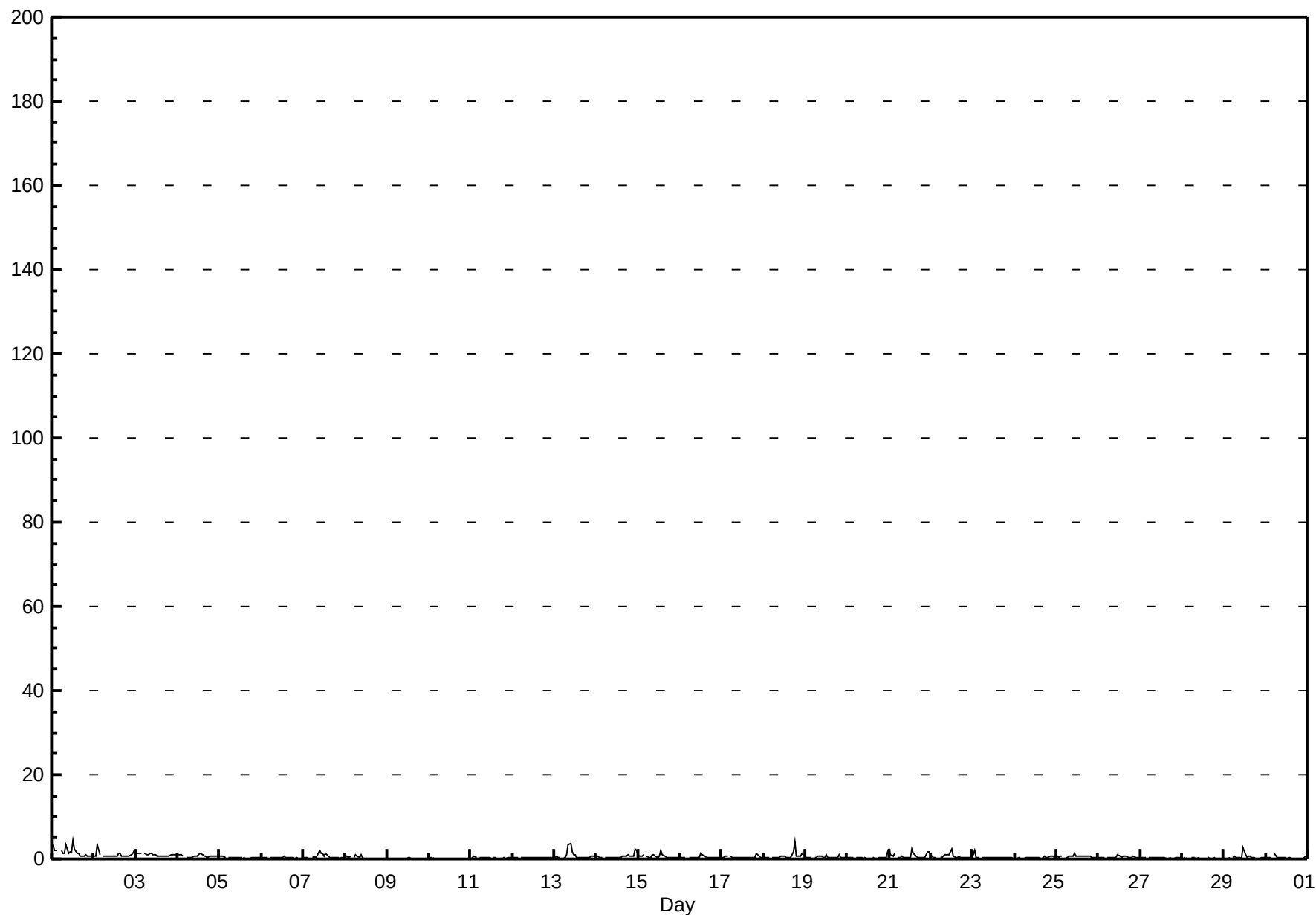
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Beaverlodge - April 2014

| Maximum Value: 4.4 ppb on Apr 1 13:00                                                          |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 1.6 ppb on Apr 1                                                                                                                    |    |    |    |    |    |                 |               |  |  |  |  |  |  |  |  |  |  |  | Hours in Service: 720           |  |
|------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|-----------------|---------------|--|--|--|--|--|--|--|--|--|--|--|---------------------------------|--|
| Minimum Value: 0 ppb on Apr 8 14:00                                                            |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.1 ppb on Apr 9                                                                                                                    |    |    |    |    |    |                 |               |  |  |  |  |  |  |  |  |  |  |  | Hours of Data: 686              |  |
| Maximum Diurnal Average: 0.7 ppb at hour 13                                                    |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 0.4 ppb at hour 17                                                                                                                |    |    |    |    |    |                 |               |  |  |  |  |  |  |  |  |  |  |  | Hours of Missing Data: 34       |  |
| Monthly Average: 0.50 ppb                                                                      |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.3 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 1.0 P <sub>99</sub> = 3.1 |    |    |    |    |    |                 |               |  |  |  |  |  |  |  |  |  |  |  | Hours of Calibration: 34        |  |
|                                                                                                |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    |    |                 |               |  |  |  |  |  |  |  |  |  |  |  | Percent Operational Time: 100.0 |  |
| Day                                                                                            | Hourly Period Ending At (MST) |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    |    | Daily Average   | Daily Maximum |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
|                                                                                                | 1                             | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19                                                                                                                                                         | 20 | 21 | 22 | 23 | 24 |                 |               |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 1-Apr                                                                                          | 3                             | 2 | 2 | 2 | A | 2 | 1 | 1 | 3 | 1  | 2  | 2  | 4  | 2  | 2  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1.6             | 4.4           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 2-Apr                                                                                          | 1                             | 1 | 3 | 1 | A | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 2  | 1.0             | 3.5           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 3-Apr                                                                                          | 2                             | 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             | 1.8           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 4-Apr                                                                                          | 1                             | 1 | 1 | 1 | A | 0 | 0 | 0 | 0 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 0.7             | 1.5           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 5-Apr                                                                                          | 1                             | 1 | 1 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.3             | 0.7           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 6-Apr                                                                                          | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.3             | 0.7           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 7-Apr                                                                                          | 0                             | 0 | 0 | 0 | A | 0 | 1 | 0 | 1 | 2  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.5             | 2.0           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 8-Apr                                                                                          | 0                             | 1 | 0 | 1 | A | 0 | 1 | 1 | 0 | 1  | 0  | 0  | 0  | 0  | C  | C  | C  | C  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.3             | 0.9           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 9-Apr                                                                                          | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.1             | 0.2           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 10-Apr                                                                                         | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.1             | 0.2           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 11-Apr                                                                                         | 0                             | 0 | 1 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.2             | 0.5           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 12-Apr                                                                                         | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.3             | 0.4           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 13-Apr                                                                                         | 0                             | 1 | 0 | 0 | A | 0 | 0 | 1 | 3 | 4  | 2  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 1  | 1  | 1  | 0.8             | 3.7           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 14-Apr                                                                                         | 1                             | 1 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 2  | 2  | 0.7             | 2.5           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 15-Apr                                                                                         | 1                             | 1 | 1 | 1 | A | 1 | 0 | 0 | 1 | 1  | 1  | 0  | 1  | 2  | 1  | 1  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 1  | 0  | 0.7             | 2.0           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 16-Apr                                                                                         | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.4             | 1.2           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 17-Apr                                                                                         | 0                             | 0 | 1 | 1 | A | 1 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 1  | 1  | 0  | 0  | 0.4             | 1.4           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 18-Apr                                                                                         | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 1  | 1  | 1  | 0  | 0  | 0  | 1  | 2  | 4                                                                                                                                                          | 1  | 1  | 1  | 2  | 1  | 0.7             | 4.0           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 19-Apr                                                                                         | 1                             | 0 | 0 | 0 | A | 0 | 0 | 1 | 1 | 1  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 1  | 0  | 0  | 0  | 0  | 0.4             | 1.1           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 20-Apr                                                                                         | 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             | 1.8           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 21-Apr                                                                                         | 2                             | 1 | 1 | 1 | A | 0 | 0 | 1 | 0 | 0  | 0  | 0  | 0  | 2  | 1  | 1  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 1  | 2  | 2  | 0.8             | 2.4           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 22-Apr                                                                                         | 1                             | 0 | 0 | 0 | A | 0 | 0 | 1 | 1 | 1  | 1  | 2  | 2  | 1  | 0  | 0  | 1  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.6             | 2.3           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 23-Apr                                                                                         | 1                             | 2 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.3             | 1.9           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 24-Apr                                                                                         | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0                                                                                                                                                          | 0  | 1  | 1  | 1  | 0  | 0.3             | 0.8           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 25-Apr                                                                                         | 1                             | 0 | 1 | 1 | A | 0 | 0 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 0  | 0  | 0  | 0  | 0.6             | 1.5           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 26-Apr                                                                                         | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 1  | 1  | 0  | 1  | 1  | 1  | 0  | 0                                                                                                                                                          | 0  | 1  | 0  | 0  | 0  | 0.4             | 0.9           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 27-Apr                                                                                         | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.3             | 0.4           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 28-Apr                                                                                         | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.2             | 0.2           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 29-Apr                                                                                         | 0                             | 0 | 0 | 0 | A | 0 | 1 | 0 | 0 | 0  | 0  | 3  | 1  | 0  | 1  | 1  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.4             | 2.6           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 30-Apr                                                                                         | 0                             | 0 | 0 | 0 | A | 1 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 1  | 0.3             | 1.5           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 0.6 0.5 0.6 0.5 -- 0.4 0.4 0.4 0.6 0.6 0.5 0.6 0.7 0.6 0.5 0.4 0.4 0.4 0.5 0.4 0.4 0.4 0.5 0.6 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    |    | Diurnal Average |               |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| 3.2 1.9 3.5 1.9 -- 2.1 1.3 1.2 3.5 3.7 1.6 2.6 4.4 2.5 1.5 1.4 0.9 1.8 4.0 1.1 1.4 0.9 2.5 2.0 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    |    | Diurnal Maximum |               |  |  |  |  |  |  |  |  |  |  |  |                                 |  |
| C - Calibration A - Automated Daily Zero Span                                                  |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    |    |                 |               |  |  |  |  |  |  |  |  |  |  |  |                                 |  |

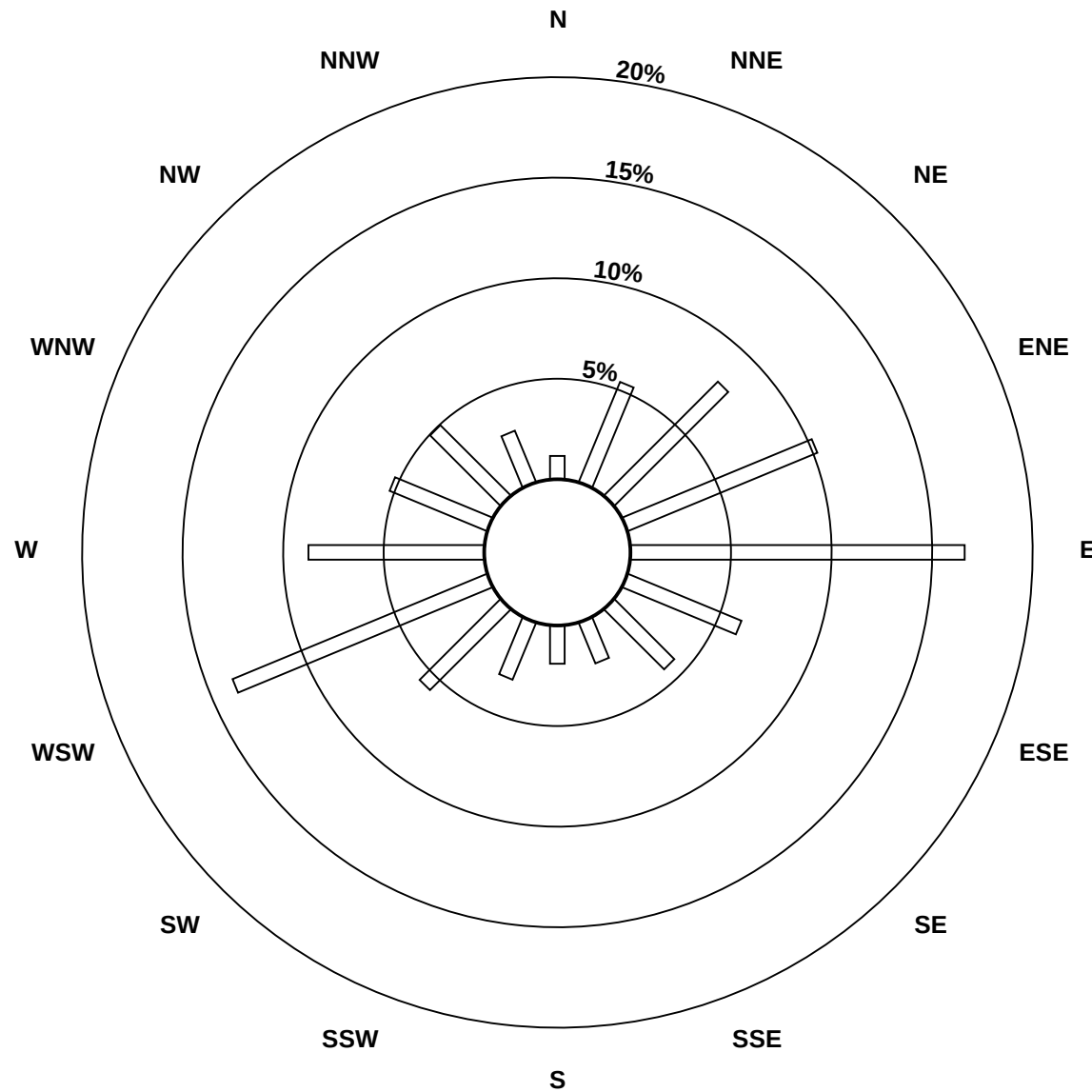
## Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Beaverlodge - April 2014

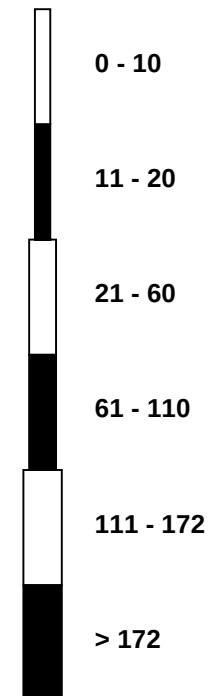


## Pollutant Rose

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Beaverlodge - April 2014

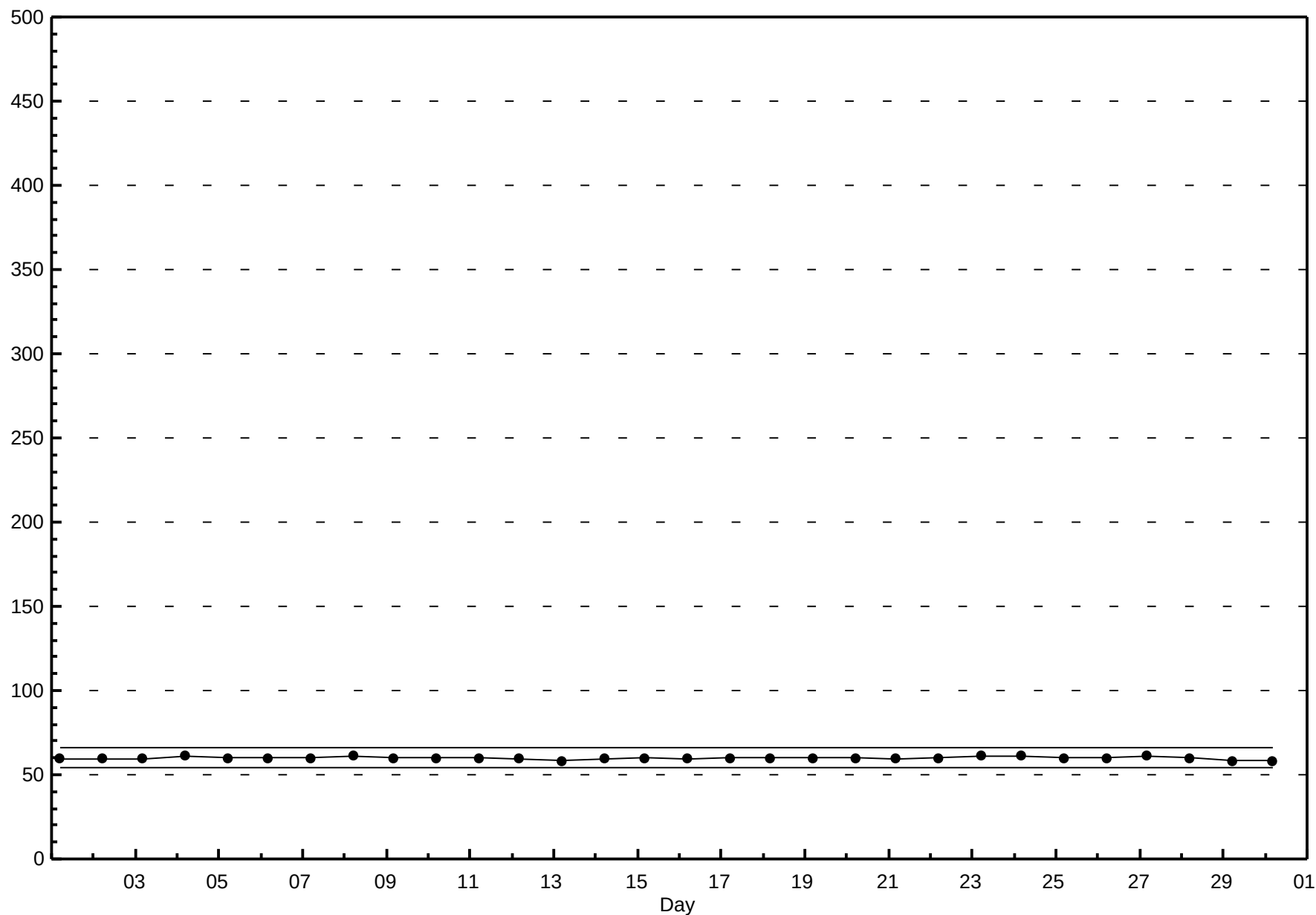


## Pollutant Classes (ppb)



## Span Responses

Sulphur Dioxide (SO<sub>2</sub>)  
Beaverlodge - April 2014





# Hourly Averages

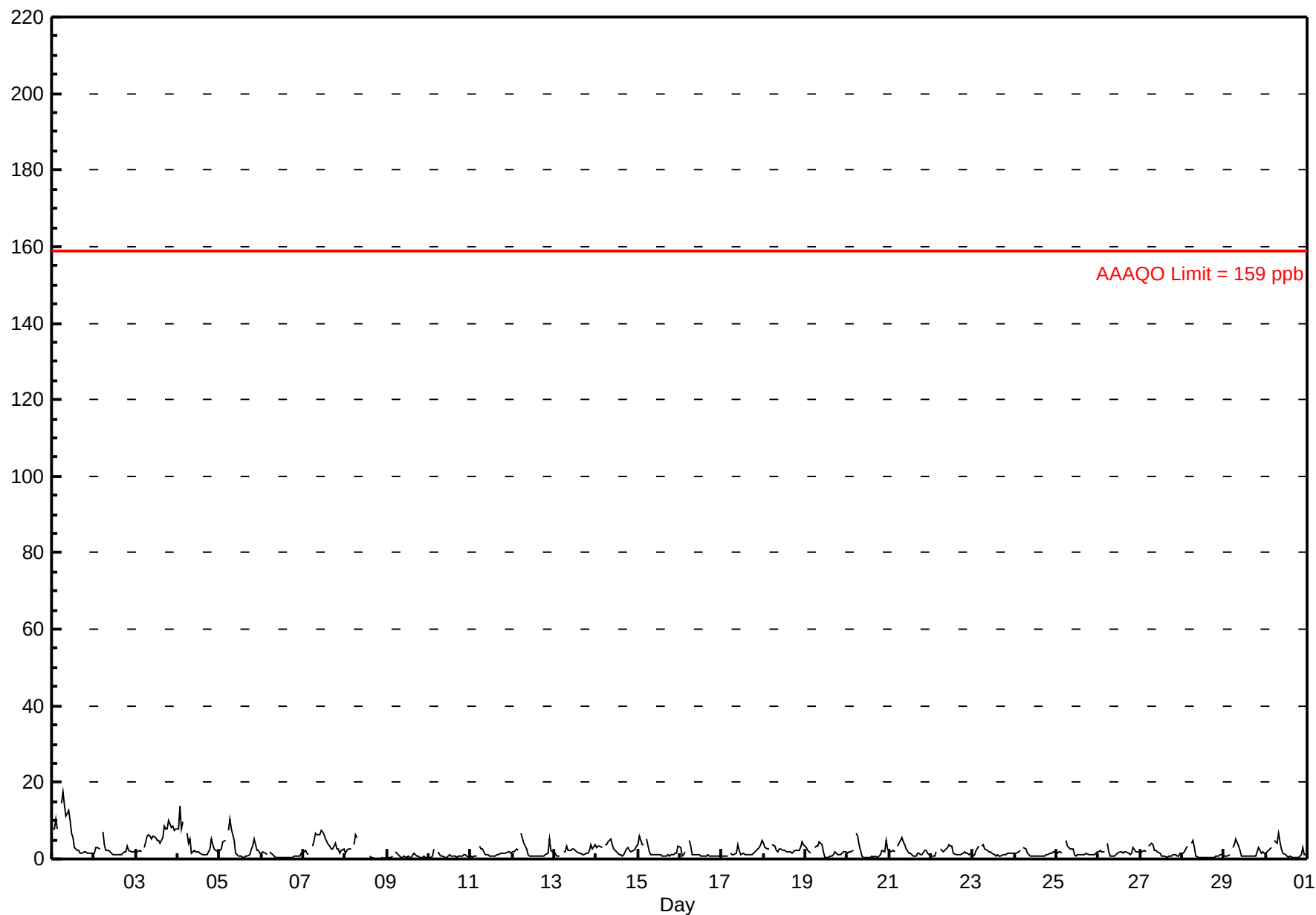
Nitrogen Dioxide (NO<sub>2</sub>) - ppb

Beaverlodge - April 2014

| Number of Exceedences (AAAO): 1-hr: 0 24-hr: 0<br>Maximum Value: 17.4 ppb on Apr 1 07:00 Maximum Daily Average: 6.4 ppb on Apr 1 |                               |    |    |    |   |    |    |    |    |    |    |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 684<br>Hours of Missing Data: 36<br>Hours of Calibration: 36<br>Percent Operational Time: 100.0 |               |               |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|---|----|----|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|----|----|----|----|----|----|-----------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|
| Minimum Value: 0 ppb on Apr 8 20:00<br>Maximum Diurnal Average: 4.3 ppb at hour 6<br>Monthly Average: 2.17 ppb                   |                               |    |    |    |   |    |    |    |    |    |    | Minimum Daily Average: 0.7 ppb on Apr 9<br>Minimum Diurnal Average: 1.2 ppb at hour 15<br>Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 0.9 Median = 1.5 Q <sub>3</sub> = 2.6 P <sub>90</sub> = 4.7 P <sub>99</sub> = 10.2 |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |               |               |
| 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-Apr                                                                                                                            | 8                             | 8  | 10 | 8  | A | 15 | 17 | 14 | 11 | 13 | 10 | 7                                                                                                                                                                                                                                                     | 6  | 3  | 2  | 2  | 1  | 1  | 2  | 2  | 1  | 2  | 2  | 1                                                                                                                                       | 6.4           | 17.4          |
| 2-Apr                                                                                                                            | 2                             | 3  | 3  | 3  | A | 7  | 4  | 2  | 2  | 2  | 1  | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 3  | 2  | 2  | 2  | 2                                                                                                                                       | 2.2           | 7.0           |
| 3-Apr                                                                                                                            | 2                             | 2  | 2  | 2  | A | 3  | 6  | 6  | 6  | 5  | 6  | 6                                                                                                                                                                                                                                                     | 5  | 5  | 4  | 6  | 8  | 8  | 8  | 10 | 8  | 8  | 7  | 8                                                                                                                                       | 5.7           | 10.1          |
| 4-Apr                                                                                                                            | 8                             | 14 | 8  | 10 | A | 7  | 4  | 5  | 2  | 2  | 2  | 2                                                                                                                                                                                                                                                     | 2  | 1  | 1  | 1  | 1  | 1  | 3  | 5  | 4  | 3  | 2  | 2                                                                                                                                       | 3.8           | 13.7          |
| 5-Apr                                                                                                                            | 2                             | 3  | 4  | 5  | A | 7  | 10 | 8  | 5  | 1  | 1  | 1                                                                                                                                                                                                                                                     | 1  | 0  | 0  | 1  | 1  | 1  | 2  | 3  | 5  | 2  | 2  | 1                                                                                                                                       | 3.0           | 10.3          |
| 6-Apr                                                                                                                            | 2                             | 2  | 2  | 1  | A | 2  | 1  | 1  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 0.8           | 2.0           |
| 7-Apr                                                                                                                            | 2                             | 2  | 1  | 1  | A | 4  | 5  | 7  | 6  | 6  | 7  | 7                                                                                                                                                                                                                                                     | 6  | 5  | 4  | 3  | 3  | 2  | 4  | 3  | 3  | 2  | 2  | 3                                                                                                                                       | 3.8           | 7.5           |
| 8-Apr                                                                                                                            | 2                             | 2  | 3  | 3  | A | 4  | 6  | 5  | C  | C  | C  | C                                                                                                                                                                                                                                                     | C  | C  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | --            | 6.2           |
| 9-Apr                                                                                                                            | 0                             | 0  | 0  | 1  | A | 2  | 1  | 1  | 0  | 0  | 1  | 0                                                                                                                                                                                                                                                     | 1  | 0  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 0                                                                                                                                       | 0.7           | 1.7           |
| 10-Apr                                                                                                                           | 0                             | 0  | 1  | 3  | A | 2  | 1  | 1  | 1  | 0  | 0  | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 0.8           | 2.7           |
| 11-Apr                                                                                                                           | 1                             | 1  | 1  | 1  | A | 3  | 2  | 2  | 1  | 1  | 1  | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 2                                                                                                                                       | 1.3           | 3.3           |
| 12-Apr                                                                                                                           | 2                             | 2  | 3  | 2  | A | 7  | 4  | 3  | 2  | 1  | 1  | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 5  | 2  | 2                                                                                                                                       | 1.9           | 6.6           |
| 13-Apr                                                                                                                           | 1                             | 1  | 1  | 1  | A | 2  | 2  | 3  | 2  | 2  | 3  | 2                                                                                                                                                                                                                                                     | 2  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 2  | 4  | 3  | 4                                                                                                                                       | 1.9           | 3.8           |
| 14-Apr                                                                                                                           | 3                             | 3  | 3  | 3  | A | 4  | 4  | 4  | 5  | 4  | 2  | 2                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 3  | 3  | 2  | 2  | 2  | 3  | 3                                                                                                                                       | 2.7           | 5.2           |
| 15-Apr                                                                                                                           | 4                             | 6  | 4  | 4  | A | 5  | 2  | 1  | 1  | 1  | 1  | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 3                                                                                                                                       | 1.9           | 5.9           |
| 16-Apr                                                                                                                           | 3                             | 1  | 1  | 2  | A | 5  | 3  | 1  | 1  | 1  | 1  | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1.3           | 5.0           |
| 17-Apr                                                                                                                           | 1                             | 1  | 1  | 1  | A | 2  | 1  | 1  | 1  | 4  | 2  | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 3  | 4  | 5                                                                                                                                       | 1.7           | 5.0           |
| 18-Apr                                                                                                                           | 4                             | 3  | 3  | 3  | A | 4  | 3  | 2  | 2  | 2  | 2  | 2                                                                                                                                                                                                                                                     | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 3  | 5  | 4                                                                                                                                       | 2.6           | 4.5           |
| 19-Apr                                                                                                                           | 3                             | 2  | 2  | 1  | A | 3  | 3  | 3  | 4  | 4  | 2  | 1                                                                                                                                                                                                                                                     | 0  | 1  | 1  | 1  | 1  | 2  | 1  | 1  | 1  | 1  | 2  | 2                                                                                                                                       | 1.9           | 4.4           |
| 20-Apr                                                                                                                           | 2                             | 2  | 2  | 2  | A | 7  | 6  | 4  | 1  | 0  | 0  | 1                                                                                                                                                                                                                                                     | 0  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 5  | 3                                                                                                                                       | 1.8           | 6.9           |
| 21-Apr                                                                                                                           | 2                             | 2  | 2  | 2  | A | 3  | 5  | 6  | 4  | 4  | 3  | 2                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 2  | 1                                                                                                                                       | 2.2           | 5.6           |
| 22-Apr                                                                                                                           | 1                             | 1  | 1  | 2  | A | 3  | 2  | 2  | 2  | 3  | 4  | 3                                                                                                                                                                                                                                                     | 3  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 1  | 1  | 1                                                                                                                                       | 1.8           | 3.6           |
| 23-Apr                                                                                                                           | 1                             | 1  | 2  | 3  | A | 4  | 4  | 2  | 2  | 2  | 2  | 2                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 1                                                                                                                                       | 1.7           | 3.6           |
| 24-Apr                                                                                                                           | 2                             | 1  | 2  | 2  | A | 3  | 3  | 2  | 1  | 1  | 1  | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 1  | 2  | 2                                                                                                                                       | 1.4           | 3.1           |
| 25-Apr                                                                                                                           | 2                             | 2  | 2  | 2  | A | 5  | 3  | 3  | 2  | 3  | 1  | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2                                                                                                                                       | 1.7           | 4.8           |
| 26-Apr                                                                                                                           | 2                             | 2  | 2  | 2  | A | 4  | 2  | 1  | 1  | 1  | 1  | 2                                                                                                                                                                                                                                                     | 2  | 2  | 2  | 2  | 2  | 1  | 1  | 2  | 3  | 2  | 2  | 2                                                                                                                                       | 1.8           | 4.0           |
| 27-Apr                                                                                                                           | 2                             | 2  | 2  | 2  | A | 3  | 4  | 4  | 2  | 2  | 2  | 2                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1.6           | 4.1           |
| 28-Apr                                                                                                                           | 1                             | 2  | 2  | 3  | A | 4  | 5  | 3  | 1  | 0  | 0  | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1.3           | 4.9           |
| 29-Apr                                                                                                                           | 1                             | 1  | 1  | 1  | A | 3  | 4  | 5  | 4  | 2  | 1  | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 3  | 2  | 2  | 1                                                                                                                                       | 1.6           | 5.1           |
| 30-Apr                                                                                                                           | 1                             | 2  | 3  | 3  | A | 5  | 4  | 7  | 5  | 3  | 2  | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 0  | 0  | 0  | 1  | 0  | 1  | 3  | 1  | 1                                                                                                                                       | 2.0           | 6.7           |
| 2.1 2.4 2.4 2.5 -- 4.3 4.1 3.7 2.8 2.5 2.1 1.8 1.6 1.3 1.2 1.2 1.2 1.4 1.5 1.8 2.0 2.0 2.0 2.1                                   |                               |    |    |    |   |    |    |    |    |    |    |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |    |    | Diurnal Average                                                                                                                         |               |               |
| 7.9 13.7 10.4 9.5 -- 14.7 17.4 14.2 11.1 12.8 9.9 7.0 6.3 5.1 4.2 5.7 8.4 7.8 7.9 10.1 8.1 8.5 7.4 7.7                           |                               |    |    |    |   |    |    |    |    |    |    |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |    |    | Diurnal Maximum                                                                                                                         |               |               |
| C - Calibration A - Automated Daily Zero Span                                                                                    |                               |    |    |    |   |    |    |    |    |    |    |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |               |               |
| Alberta Ambient Air Quality Objectives (AAAO): 1-hr 159 ppb 24-hr 106 ppb                                                        |                               |    |    |    |   |    |    |    |    |    |    |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |               |               |

## Hourly Averages

Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
Beaverlodge - April 2014



## Hourly Maximums

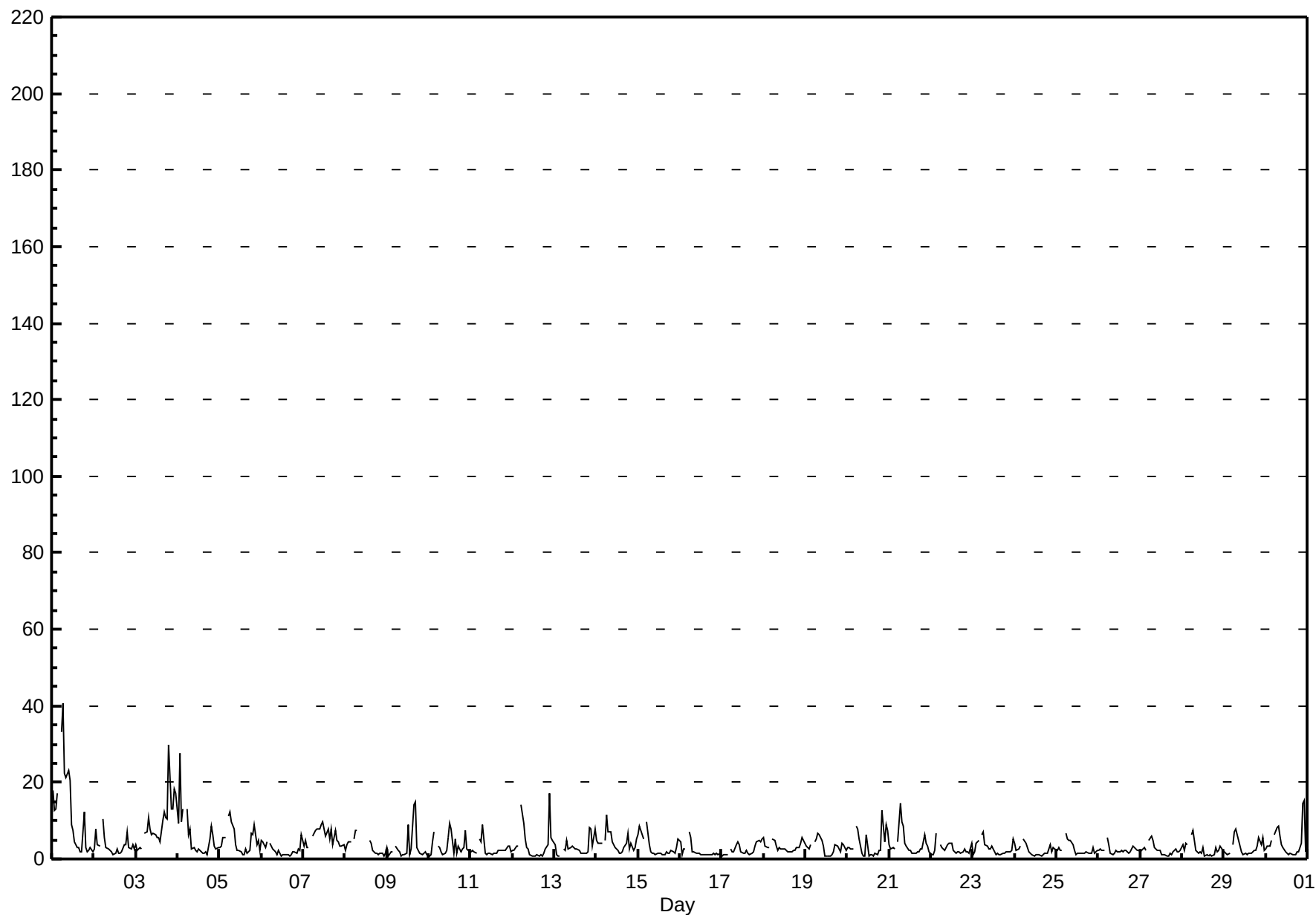
Nitrogen Dioxide (NO<sub>2</sub>) - ppb

Beaverlodge - April 2014

| Maximum Value: 40.6 ppb on Apr 1 07:00                                                                            |                               |    |    |    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 12.0 ppb on Apr 1                                                                                                                    |    |    |    |    |                 |               |  |  |  | Hours in Service: 720     |  |
|-------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-----------------|---------------|--|--|--|---------------------------|--|
| Minimum Value: 1 ppb on Apr 19 13:00                                                                              |                               |    |    |    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 2.0 ppb on Apr 16                                                                                                                    |    |    |    |    |                 |               |  |  |  | Hours of Data: 684        |  |
| Maximum Diurnal Average: 7.2 ppb at hour 7                                                                        |                               |    |    |    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 2.0 ppb at hour 15                                                                                                                 |    |    |    |    |                 |               |  |  |  | Hours of Missing Data: 36 |  |
| Monthly Average: 3.80 ppb                                                                                         |                               |    |    |    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.7 P <sub>10</sub> = 1.1 Q <sub>1</sub> = 1.6 Median = 2.5 Q <sub>3</sub> = 4.5 P <sub>90</sub> = 7.8 P <sub>99</sub> = 21.0 |    |    |    |    |                 |               |  |  |  | Hours of Calibration: 36  |  |
|                                                                                                                   |                               |    |    |    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percent Operational Time: 100.0                                                                                                                             |    |    |    |    |                 |               |  |  |  |                           |  |
| Day                                                                                                               | Hourly Period Ending At (MST) |    |    |    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    | Daily Average   | Daily Maximum |  |  |  |                           |  |
|                                                                                                                   | 1                             | 2  | 3  | 4  | 5                             | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20                                                                                                                                                          | 21 | 22 | 23 | 24 |                 |               |  |  |  |                           |  |
| 1-Apr                                                                                                             | 18                            | 13 | 13 | 17 | A                             | 33 | 41 | 22 | 21 | 23 | 20 | 9  | 7  | 4  | 3  | 3  | 2  | 2  | 12 | 3                                                                                                                                                           | 2  | 2  | 3  | 2  | 12.0            | 40.6          |  |  |  |                           |  |
| 2-Apr                                                                                                             | 2                             | 8  | 4  | 3  | A                             | 10 | 5  | 3  | 3  | 2  | 2  | 1  | 1  | 3  | 1  | 1  | 2  | 4  | 4  | 7                                                                                                                                                           | 3  | 2  | 4  | 3  | 3.5             | 10.4          |  |  |  |                           |  |
| 3-Apr                                                                                                             | 4                             | 2  | 3  | 3  | A                             | 7  | 7  | 11 | 8  | 7  | 7  | 6  | 6  | 6  | 5  | 10 | 12 | 11 | 11 | 30                                                                                                                                                          | 13 | 13 | 18 | 17 | 9.4             | 29.8          |  |  |  |                           |  |
| 4-Apr                                                                                                             | 9                             | 28 | 10 | 13 | A                             | 13 | 6  | 8  | 3  | 3  | 2  | 2  | 3  | 2  | 2  | 1  | 2  | 1  | 5  | 8                                                                                                                                                           | 6  | 3  | 3  | 3  | 6.0             | 27.6          |  |  |  |                           |  |
| 5-Apr                                                                                                             | 3                             | 4  | 6  | 6  | A                             | 11 | 12 | 10 | 8  | 4  | 2  | 2  | 2  | 1  | 1  | 3  | 2  | 2  | 7  | 6                                                                                                                                                           | 9  | 4  | 5  | 2  | 4.7             | 12.3          |  |  |  |                           |  |
| 6-Apr                                                                                                             | 5                             | 4  | 3  | 4  | A                             | 4  | 3  | 2  | 2  | 1  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2                                                                                                                                                           | 2  | 2  | 2  | 6  | 2.4             | 6.4           |  |  |  |                           |  |
| 7-Apr                                                                                                             | 3                             | 5  | 3  | 3  | A                             | 6  | 7  | 8  | 8  | 8  | 9  | 10 | 8  | 6  | 8  | 5  | 8  | 4  | 8  | 5                                                                                                                                                           | 4  | 3  | 3  | 4  | 5.8             | 9.6           |  |  |  |                           |  |
| 8-Apr                                                                                                             | 2                             | 4  | 5  | 5  | A                             | 5  | 7  | 7  | C  | C  | C  | C  | C  | C  | 5  | 4  | 2  | 2  | 1  | 1                                                                                                                                                           | 1  | 2  | 1  | 2  | --              | 7.3           |  |  |  |                           |  |
| 9-Apr                                                                                                             | 3                             | 1  | 2  | 2  | A                             | 3  | 2  | 2  | 1  | 1  | 1  | 1  | 9  | 1  | 3  | 14 | 15 | 3  | 2  | 1                                                                                                                                                           | 1  | 1  | 2  | 1  | 3.2             | 14.8          |  |  |  |                           |  |
| 10-Apr                                                                                                            | 1                             | 1  | 5  | 7  | A                             | 3  | 3  | 2  | 1  | 1  | 2  | 6  | 9  | 8  | 1  | 5  | 1  | 3  | 2  | 3                                                                                                                                                           | 3  | 7  | 3  | 2  | 3.5             | 9.4           |  |  |  |                           |  |
| 11-Apr                                                                                                            | 2                             | 2  | 2  | 2  | A                             | 5  | 4  | 9  | 1  | 1  | 2  | 2  | 1  | 1  | 1  | 2  | 2  | 2  | 2  | 2                                                                                                                                                           | 2  | 3  | 3  | 2  | 2.5             | 8.8           |  |  |  |                           |  |
| 12-Apr                                                                                                            | 2                             | 2  | 3  | 3  | A                             | 14 | 9  | 5  | 3  | 3  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2                                                                                                                                                           | 4  | 17 | 6  | 5  | 3.8             | 17.1          |  |  |  |                           |  |
| 13-Apr                                                                                                            | 4                             | 1  | 1  | 1  | A                             | 3  | 2  | 5  | 3  | 3  | 3  | 3  | 3  | 3  | 2  | 2  | 2  | 1  | 2  | 2                                                                                                                                                           | 8  | 8  | 3  | 8  | 3.1             | 8.2           |  |  |  |                           |  |
| 14-Apr                                                                                                            | 5                             | 4  | 4  | 4  | A                             | 5  | 12 | 7  | 7  | 5  | 4  | 3  | 2  | 2  | 2  | 2  | 3  | 4  | 7  | 3                                                                                                                                                           | 4  | 2  | 3  | 5  | 4.3             | 11.7          |  |  |  |                           |  |
| 15-Apr                                                                                                            | 6                             | 9  | 6  | 5  | A                             | 10 | 4  | 2  | 2  | 1  | 1  | 2  | 2  | 2  | 1  | 1  | 2  | 2  | 1  | 2                                                                                                                                                           | 2  | 2  | 3  | 5  | 3.2             | 9.7           |  |  |  |                           |  |
| 16-Apr                                                                                                            | 5                             | 1  | 2  | 3  | A                             | 7  | 6  | 2  | 2  | 2  | 1  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2                                                                                                                                                           | 1  | 1  | 1  | 1  | 2.0             | 7.1           |  |  |  |                           |  |
| 17-Apr                                                                                                            | 1                             | 1  | 1  | 1  | A                             | 3  | 2  | 2  | 4  | 4  | 4  | 2  | 2  | 2  | 2  | 1  | 1  | 2  | 2  | 3                                                                                                                                                           | 5  | 5  | 5  | 5  | 2.5             | 5.4           |  |  |  |                           |  |
| 18-Apr                                                                                                            | 5                             | 3  | 3  | 3  | A                             | 5  | 5  | 3  | 2  | 3  | 3  | 3  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 3                                                                                                                                                           | 3  | 4  | 6  | 5  | 3.3             | 5.7           |  |  |  |                           |  |
| 19-Apr                                                                                                            | 3                             | 3  | 3  | 4  | A                             | 4  | 5  | 7  | 6  | 5  | 3  | 1  | 1  | 1  | 1  | 1  | 2  | 4  | 3  | 2                                                                                                                                                           | 2  | 4  | 4  | 2  | 3.1             | 6.5           |  |  |  |                           |  |
| 20-Apr                                                                                                            | 3                             | 3  | 2  | 3  | A                             | 9  | 8  | 5  | 1  | 1  | 1  | 6  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2                                                                                                                                                           | 13 | 4  | 9  | 8  | 3.8             | 12.7          |  |  |  |                           |  |
| 21-Apr                                                                                                            | 4                             | 3  | 3  | 3  | A                             | 5  | 15 | 10 | 8  | 4  | 3  | 2  | 2  | 2  | 2  | 1  | 2  | 2  | 3  | 3                                                                                                                                                           | 6  | 4  | 3  | 2  | 3.9             | 14.6          |  |  |  |                           |  |
| 22-Apr                                                                                                            | 1                             | 1  | 2  | 7  | A                             | 4  | 3  | 3  | 2  | 4  | 4  | 4  | 4  | 2  | 2  | 2  | 2  | 2  | 2  | 3                                                                                                                                                           | 2  | 2  | 2  | 4  | 2.7             | 6.7           |  |  |  |                           |  |
| 23-Apr                                                                                                            | 1                             | 2  | 4  | 5  | A                             | 6  | 7  | 4  | 3  | 3  | 3  | 3  | 2  | 1  | 2  | 1  | 1  | 2  | 1  | 2                                                                                                                                                           | 2  | 2  | 2  | 5  | 2.8             | 7.2           |  |  |  |                           |  |
| 24-Apr                                                                                                            | 4                             | 2  | 2  | 3  | A                             | 5  | 4  | 3  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2                                                                                                                                                           | 4  | 2  | 3  | 2  | 2.2             | 5.2           |  |  |  |                           |  |
| 25-Apr                                                                                                            | 2                             | 3  | 2  | 2  | A                             | 7  | 5  | 5  | 5  | 4  | 2  | 1  | 2  | 1  | 2  | 1  | 2  | 2  | 2  | 2                                                                                                                                                           | 1  | 3  | 2  | 2  | 2.6             | 6.7           |  |  |  |                           |  |
| 26-Apr                                                                                                            | 2                             | 2  | 2  | 2  | A                             | 5  | 4  | 1  | 1  | 1  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2                                                                                                                                                           | 3  | 3  | 2  | 2  | 2.3             | 5.4           |  |  |  |                           |  |
| 27-Apr                                                                                                            | 2                             | 2  | 3  | 2  | A                             | 5  | 6  | 5  | 3  | 3  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 2  | 1  | 2                                                                                                                                                           | 2  | 2  | 2  | 2  | 2.3             | 5.9           |  |  |  |                           |  |
| 28-Apr                                                                                                            | 4                             | 2  | 4  | 4  | A                             | 6  | 7  | 5  | 2  | 2  | 2  | 1  | 3  | 1  | 1  | 1  | 1  | 1  | 1  | 3                                                                                                                                                           | 2  | 2  | 4  | 2  | 2.7             | 7.3           |  |  |  |                           |  |
| 29-Apr                                                                                                            | 2                             | 1  | 1  | 2  | A                             | 4  | 7  | 8  | 5  | 3  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 3                                                                                                                                                           | 6  | 4  | 6  | 2  | 2.9             | 7.7           |  |  |  |                           |  |
| 30-Apr                                                                                                            | 3                             | 3  | 3  | 5  | A                             | 6  | 8  | 9  | 6  | 4  | 3  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 2  | 2                                                                                                                                                           | 4  | 15 | 15 | 2  | 4.3             | 15.4          |  |  |  |                           |  |
| 3.7 4.0 3.6 4.2 -- 7.2 7.2 5.7 4.2 3.7 3.3 2.8 2.8 2.1 2.0 2.5 2.6 2.3 3.2 3.8 4.0 4.3 4.2 3.8                    |                               |    |    |    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    | Diurnal Average |               |  |  |  |                           |  |
| 17.8 27.6 13.2 17.3 -- 33.3 40.6 22.4 21.3 23.2 20.4 9.6 9.4 7.7 8.0 14.3 14.8 10.8 12.3 29.8 13.2 17.1 18.3 17.3 |                               |    |    |    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    | Diurnal Maximum |               |  |  |  |                           |  |
| C - Calibration                                                                                                   |                               |    |    |    | A - Automated Daily Zero Span |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    |                 |               |  |  |  |                           |  |

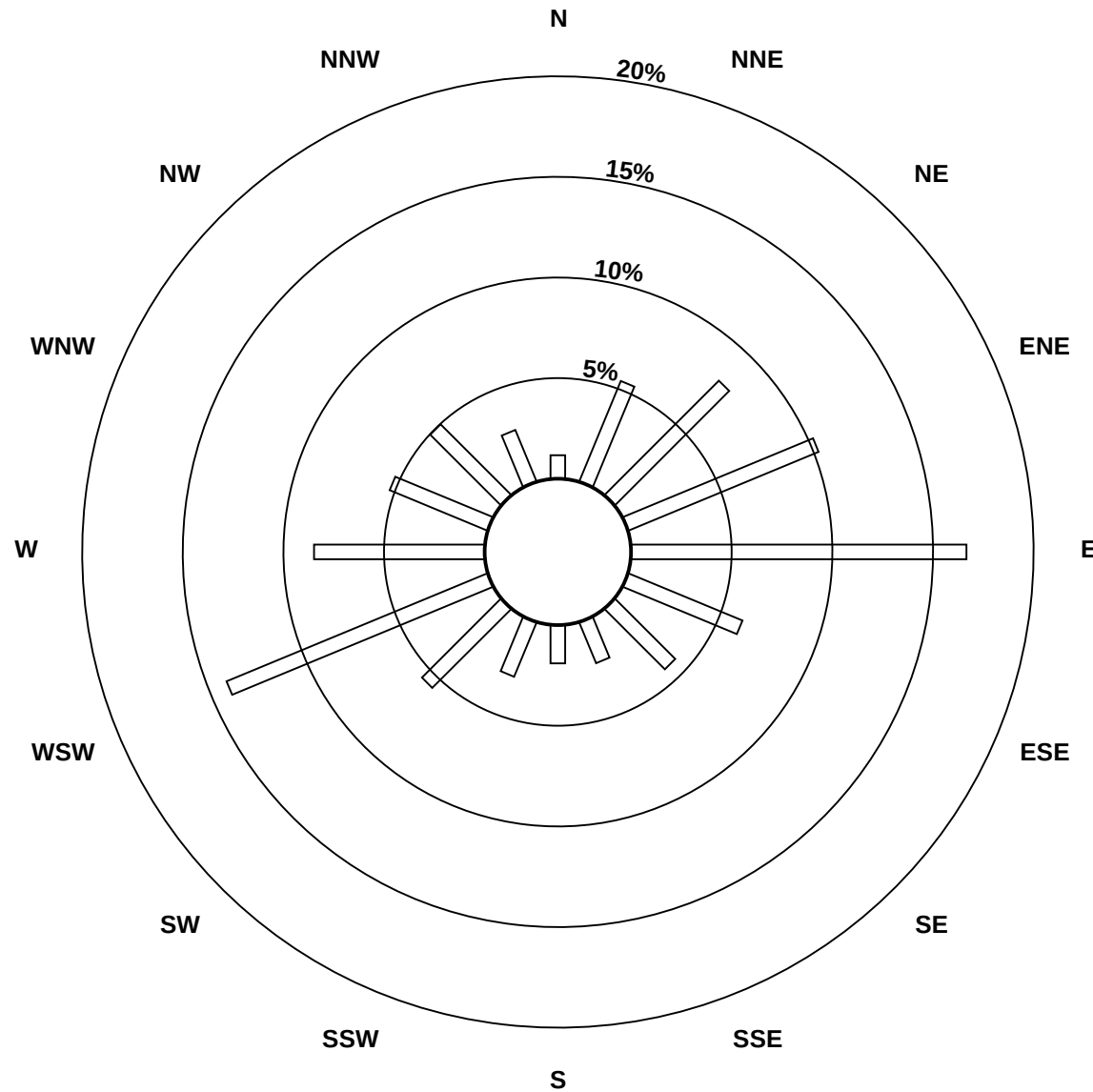
## Hourly Maximums

Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
Beaverlodge - April 2014

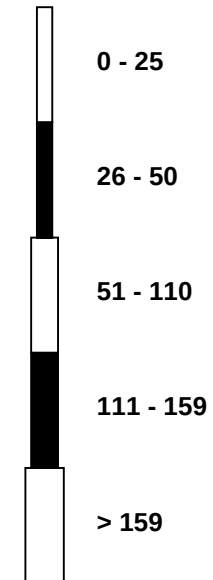


## Pollutant Rose

Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
Beaverlodge - April 2014

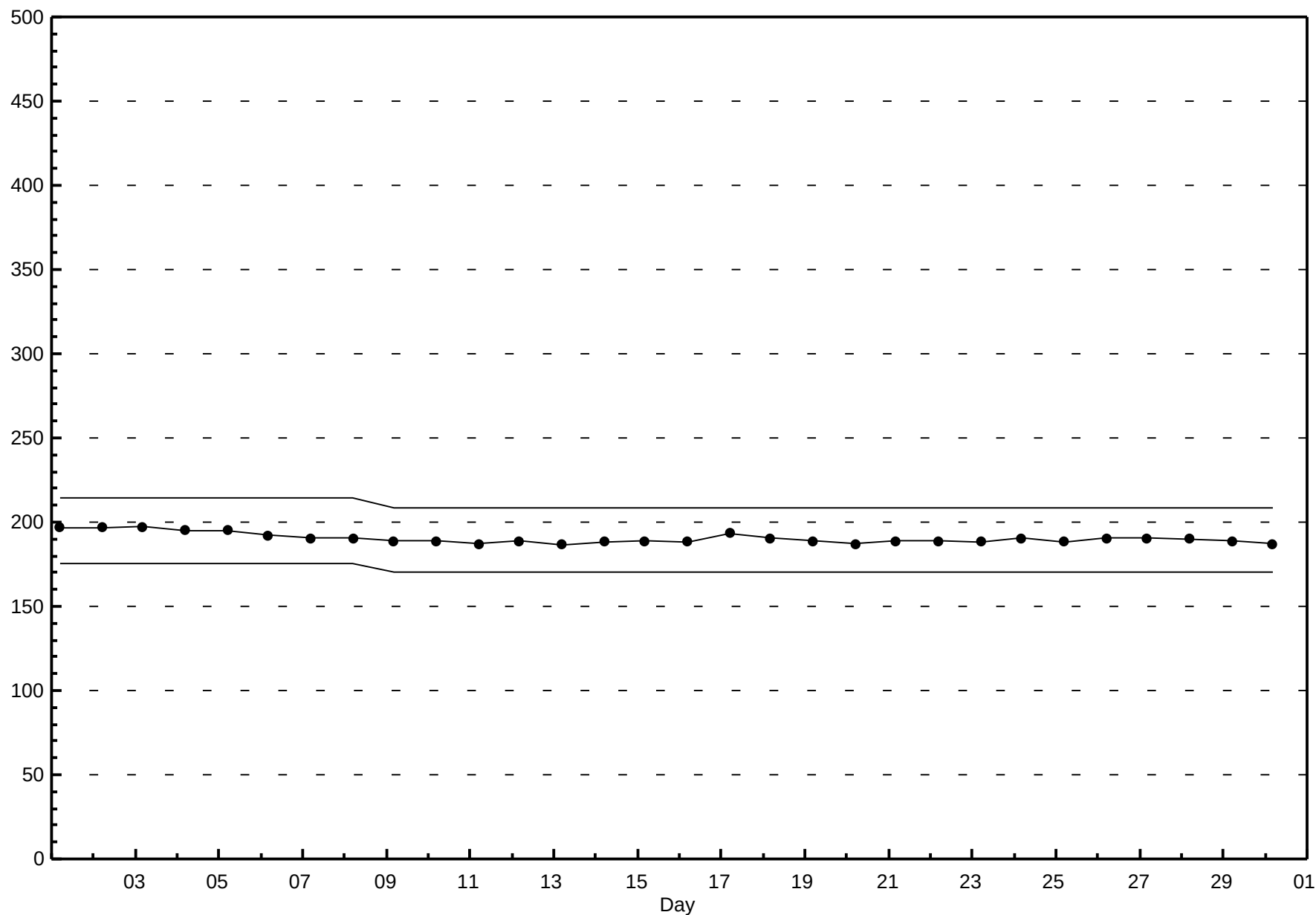


### Pollutant Classes (ppb)



## Span Responses

**Nitrogen Dioxide (NO<sub>2</sub>)**  
**Beaverlodge - April 2014**



# Hourly Averages

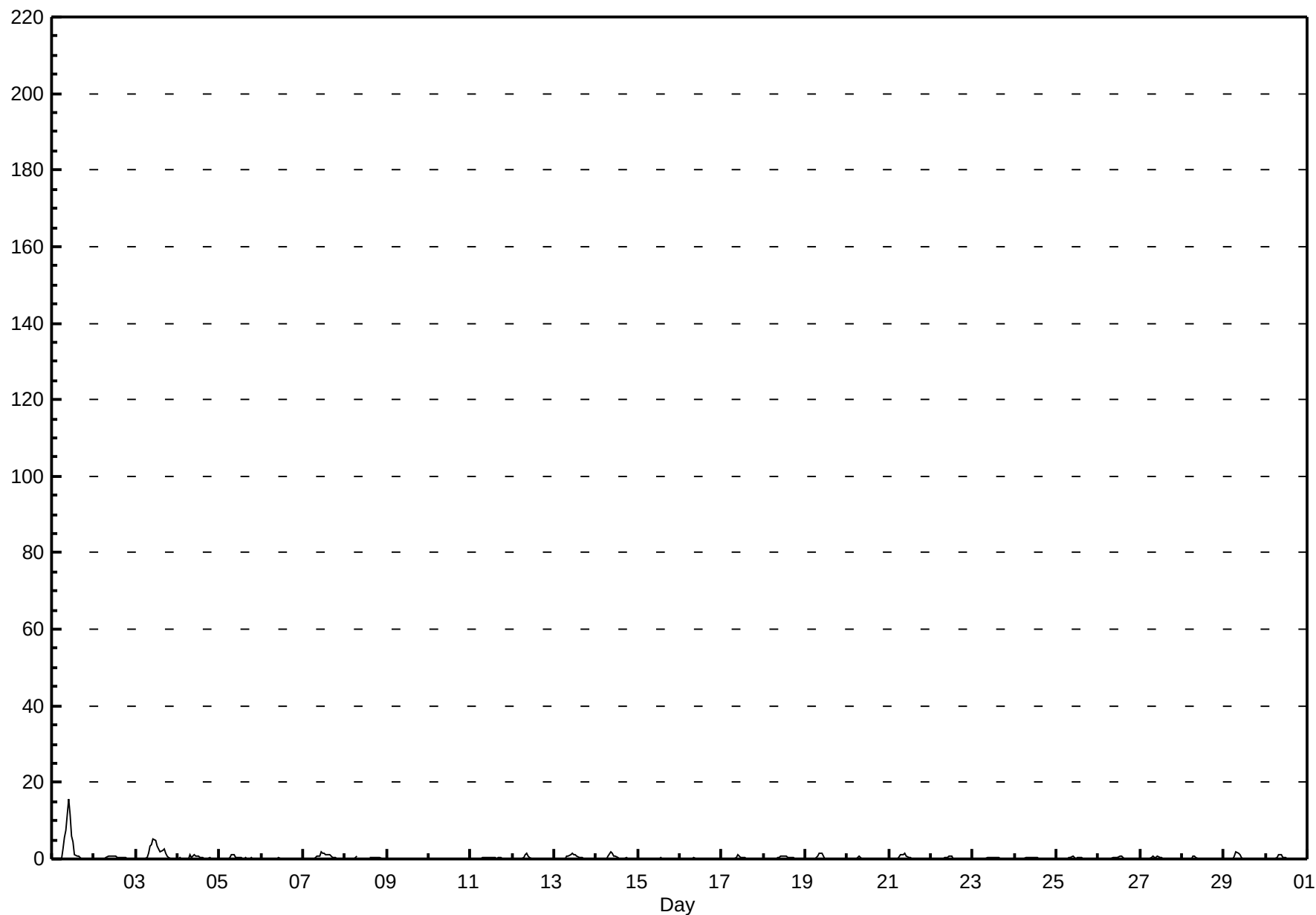
Nitrogen Oxide (NO) - ppb

Beaverlodge - April 2014

|                                                                                                                                   |                               |   |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |    |               |               |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|----|----|----|----|-----------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|---------------|---------------|
| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 15.8 ppb on Apr 1 10:00 Maximum Daily Average: 2.5 ppb on Apr 1 |                               |   |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 684<br>Hours of Missing Data: 36<br>Hours of Calibration: 36<br>Percent Operational Time: 100.0 |    |    |    |    |               |               |
| Minimum Value: 0 ppb on Apr 2 21:00<br>Maximum Diurnal Average: 1.2 ppb at hour 10<br>Monthly Average: 0.32 ppb                   |                               |   |   |   |   |   |   |   |   | Minimum Daily Average: 0.1 ppb on Apr 16<br>Minimum Diurnal Average: 0.0 ppb at hour 24<br>Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.1 Q <sub>3</sub> = 0.2 P <sub>90</sub> = 0.8 P <sub>99</sub> = 4.5 |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |    |               |               |
| 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-Apr                                                                                                                             | 0                             | 0 | 0 | 0 | A | 0 | 2 | 6 | 7 | 16                                                                                                                                                                                                                                                    | 11 | 6  | 4  | 1  | 1  | 1  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 2.5           | 15.8          |
| 2-Apr                                                                                                                             | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 1 | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.3           | 0.9           |
| 3-Apr                                                                                                                             | 0                             | 0 | 0 | 0 | A | 0 | 0 | 2 | 3 | 4                                                                                                                                                                                                                                                     | 5  | 5  | 3  | 3  | 2  | 2  | 3  | 1  | 1  | 1                                                                                                                                       | 0  | 0  | 0  | 0  | 1.5           | 5.2           |
| 4-Apr                                                                                                                             | 0                             | 0 | 0 | 0 | A | 0 | 0 | 1 | 1 | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.3           | 1.2           |
| 5-Apr                                                                                                                             | 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           |
| 6-Apr                                                                                                                             | 0                             | 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           |
| 7-Apr                                                                                                                             | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 1 | 1                                                                                                                                                                                                                                                     | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.5           | 1.7           |
| 8-Apr                                                                                                                             | 0                             | 0 | 0 | 0 | A | 0 | 0 | 1 | C | C                                                                                                                                                                                                                                                     | C  | C  | C  | C  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | --            | 0.9           |
| 9-Apr                                                                                                                             | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.1           | 0.2           |
| 10-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.1           | 0.2           |
| 11-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.1           | 0.4           |
| 12-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 0 | 1 | 1 | 1                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.2           | 1.4           |
| 13-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 0 | 1 | 1 | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.4           | 1.4           |
| 14-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 0 | 1 | 2 | 1                                                                                                                                                                                                                                                     | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.3           | 1.8           |
| 15-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.1           | 0.2           |
| 16-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.1           | 0.2           |
| 17-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1                                                                                                                                                                                                                                                     | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.2           | 1.2           |
| 18-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.3           | 0.9           |
| 19-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 0 | 1 | 1 | 2                                                                                                                                                                                                                                                     | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.2           | 1.6           |
| 20-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 0 | 1 | 0 | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.1           | 0.6           |
| 21-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 1 | 1 | 1 | 1                                                                                                                                                                                                                                                     | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.3           | 1.5           |
| 22-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.2           | 0.8           |
| 23-Apr                                                                                                                            | 0                             | 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           |
| 24-Apr                                                                                                                            | 0                             | 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           |
| 25-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 1 | 1                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.2           | 0.7           |
| 26-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                     | 0  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.2           | 0.7           |
| 27-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 0 | 1 | 0 | 0                                                                                                                                                                                                                                                     | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.2           | 0.8           |
| 28-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 1 | 1 | 0 | 0                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.1           | 0.8           |
| 29-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 1 | 2 | 2 | 1                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.3           | 1.8           |
| 30-Apr                                                                                                                            | 0                             | 0 | 0 | 0 | A | 0 | 0 | 1 | 1 | 1                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.2           | 1.1           |
| 0.0 0.0 0.0 0.0 -- 0.1 0.3 0.8 0.9 1.2 1.1 0.8 0.6 0.4 0.3 0.3 0.3 0.2 0.1 0.1 0.0 0.0 0.0 0.0 Diurnal Average                    |                               |   |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |    |               |               |
| 0.1 0.2 0.1 0.1 -- 0.1 2.5 5.7 7.4 15.8 11.5 6.1 4.3 2.8 1.9 2.4 2.6 1.4 0.8 0.5 0.2 0.1 0.1 0.1 Diurnal Maximum                  |                               |   |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |    |               |               |
| C - Calibration A - Automated Daily Zero Span                                                                                     |                               |   |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |    |               |               |

## Hourly Averages

Nitrogen Oxide (NO) - ppb  
Beaverlodge - April 2014





# Hourly Maximums

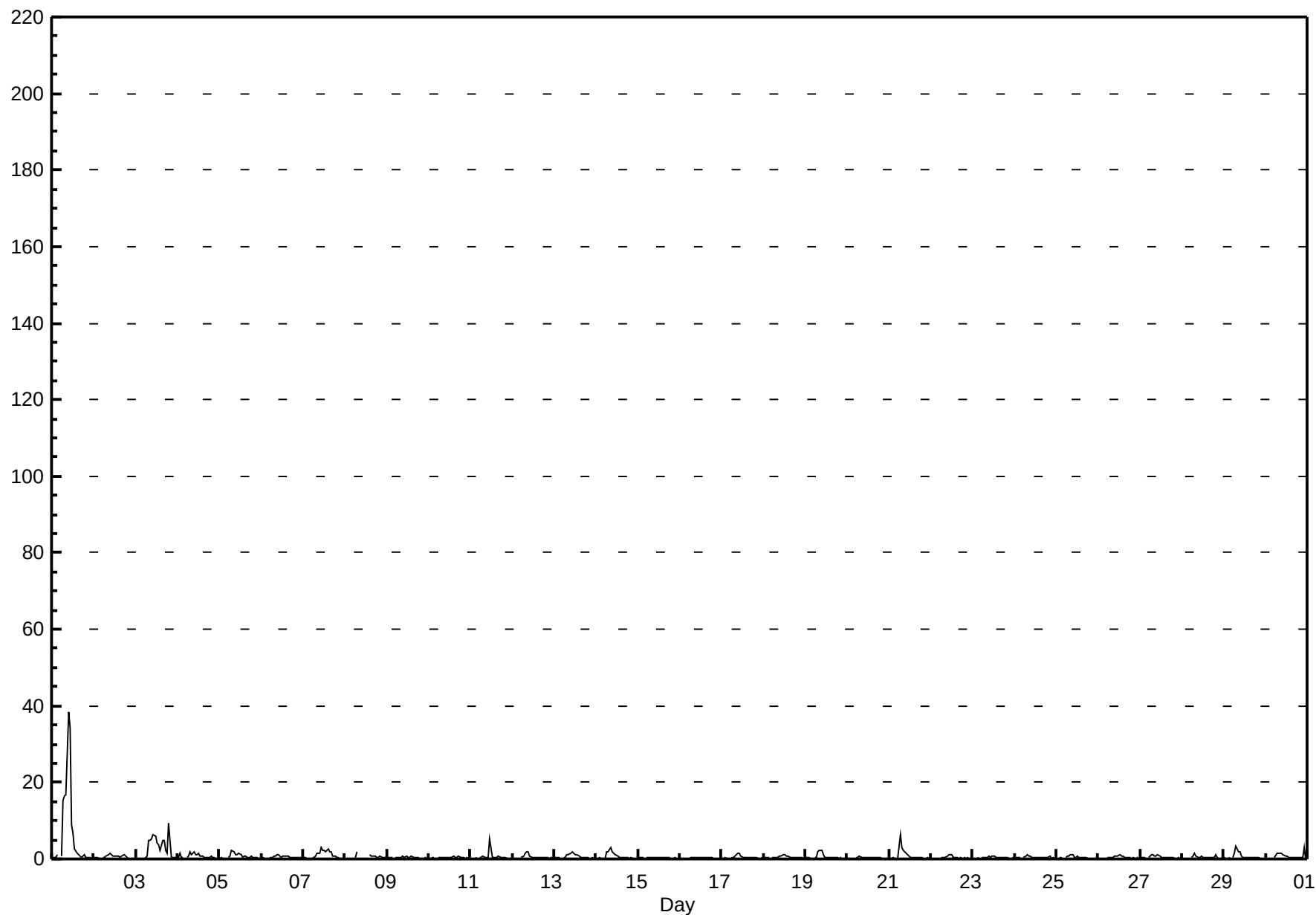
Nitrogen Oxide (NO) - ppb

Beaverlodge - April 2014

| Maximum Value: 38.6 ppb on Apr 1 10:00                                                              |                               |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 6.4 ppb on Apr 1                                                                                                                    |    |    |    |    | Hours in Service: 720         |               |
|-----------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-------------------------------|---------------|
| Minimum Value: 0 ppb on Apr 3 04:00                                                                 |                               |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.2 ppb on Apr 16                                                                                                                   |    |    |    |    | Hours of Data: 684            |               |
| Maximum Diurnal Average: 2.5 ppb at hour 10                                                         |                               |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 0.2 ppb at hour 24                                                                                                                |    |    |    |    | Hours of Missing Data: 36     |               |
| Monthly Average: 0.77 ppb                                                                           |                               |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 0.2 Median = 0.3 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 1.4 P <sub>99</sub> = 8.6 |    |    |    |    | 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-Apr                                                                                               | 0                             | 0 | 0 | 1 | A | 1 | 15 | 16 | 17 | 39 | 34 | 9  | 7  | 3  | 1  | 1  | 1  | 0  | 1  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 6.4                           | 38.6          |
| 2-Apr                                                                                               | 0                             | 0 | 0 | 0 | A | 0 | 0  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.6                           | 1.4           |
| 3-Apr                                                                                               | 0                             | 0 | 0 | 0 | A | 0 | 1  | 5  | 5  | 5  | 6  | 6  | 4  | 4  | 2  | 5  | 5  | 2  | 2  | 9                                                                                                                                                          | 0  | 0  | 0  | 0  | 2.7                           | 9.4           |
| 4-Apr                                                                                               | 0                             | 2 | 0 | 0 | A | 0 | 1  | 2  | 1  | 2  | 1  | 1  | 2  | 1  | 1  | 0  | 0  | 0  | 0  | 1                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.7                           | 2.1           |
| 5-Apr                                                                                               | 0                             | 0 | 0 | 0 | A | 0 | 1  | 2  | 2  | 1  | 1  | 1  | 1  | 0  | 1  | 1  | 1  | 0  | 1  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.7                           | 2.1           |
| 6-Apr                                                                                               | 0                             | 0 | 0 | 0 | A | 0 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.5                           | 1.2           |
| 7-Apr                                                                                               | 0                             | 0 | 0 | 0 | A | 0 | 0  | 1  | 1  | 1  | 3  | 2  | 2  | 2  | 3  | 2  | 2  | 1  | 1  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 1.0                           | 3.0           |
| 8-Apr                                                                                               | 0                             | 0 | 0 | 0 | A | 0 | 0  | 2  | C  | C  | C  | C  | C  | C  | 1  | 1  | 1  | 1  | 1  | 0                                                                                                                                                          | 1  | 0  | 0  | 0  | --                            | 1.8           |
| 9-Apr                                                                                               | 0                             | 0 | 0 | 0 | A | 0 | 0  | 0  | 0  | 1  | 0  | 1  | 1  | 0  | 1  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.4                           | 0.8           |
| 10-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 1  | 0  | 1  | 1  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.4                           | 0.9           |
| 11-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 0  | 1  | 0  | 0  | 0  | 5  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.6                           | 5.1           |
| 12-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 1  | 2  | 2  | 2  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.5                           | 2.0           |
| 13-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 0  | 1  | 1  | 1  | 2  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.6                           | 1.7           |
| 14-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 2  | 2  | 3  | 2  | 2  | 1  | 1  | 0  | 0  | 0  | 0  | 1  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.7                           | 2.9           |
| 15-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.3                           | 0.5           |
| 16-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.2                           | 0.4           |
| 17-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 0  | 0  | 1  | 2  | 2  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.4                           | 1.6           |
| 18-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 1  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.4                           | 1.2           |
| 19-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 0  | 2  | 2  | 2  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.5                           | 2.1           |
| 20-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.3                           | 0.8           |
| 21-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 6  | 3  | 2  | 2  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.8                           | 6.2           |
| 22-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.3                           | 1.0           |
| 23-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 0  | 0  | 0  | 1  | 0  | 1  | 1  | 0  | 1  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.4                           | 0.8           |
| 24-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 1  | 0  | 0  | 0  | 0.4                           | 1.0           |
| 25-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 1  | 1  | 1  | 1  | 1  | 0  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.4                           | 1.2           |
| 26-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.4                           | 1.2           |
| 27-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.4                           | 1.2           |
| 28-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 1  | 1  | 1  | 0  | 0  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 1                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.4                           | 1.5           |
| 29-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 1  | 3  | 2  | 2  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.6                           | 3.2           |
| 30-Apr                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 1  | 2  | 2  | 2  | 1  | 1  | 1  | 0  | 1  | 0  | 0  | 0  | 1  | 0                                                                                                                                                          | 0  | 0  | 3  | 0  | 0.7                           | 3.1           |
| 0.2 0.2 0.2 0.2 -- 0.2 1.3 1.8 1.7 2.5 2.3 1.4 1.0 0.7 0.7 0.6 0.6 0.5 0.4 0.6 0.2 0.2 0.3 0.2      |                               |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    | Diurnal Average               |               |
| 0.4 1.7 0.3 1.2 -- 0.6 15.1 16.4 16.9 38.6 34.3 8.8 6.6 3.7 2.7 5.0 4.8 2.3 1.6 9.4 0.7 0.4 3.1 0.4 |                               |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    | Diurnal Maximum               |               |
| C - Calibration                                                                                     |                               |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    | A - Automated Daily Zero Span |               |

## Hourly Maximums

Nitrogen Oxide (NO) - ppb  
Beaverlodge - April 2014



# Hourly Averages

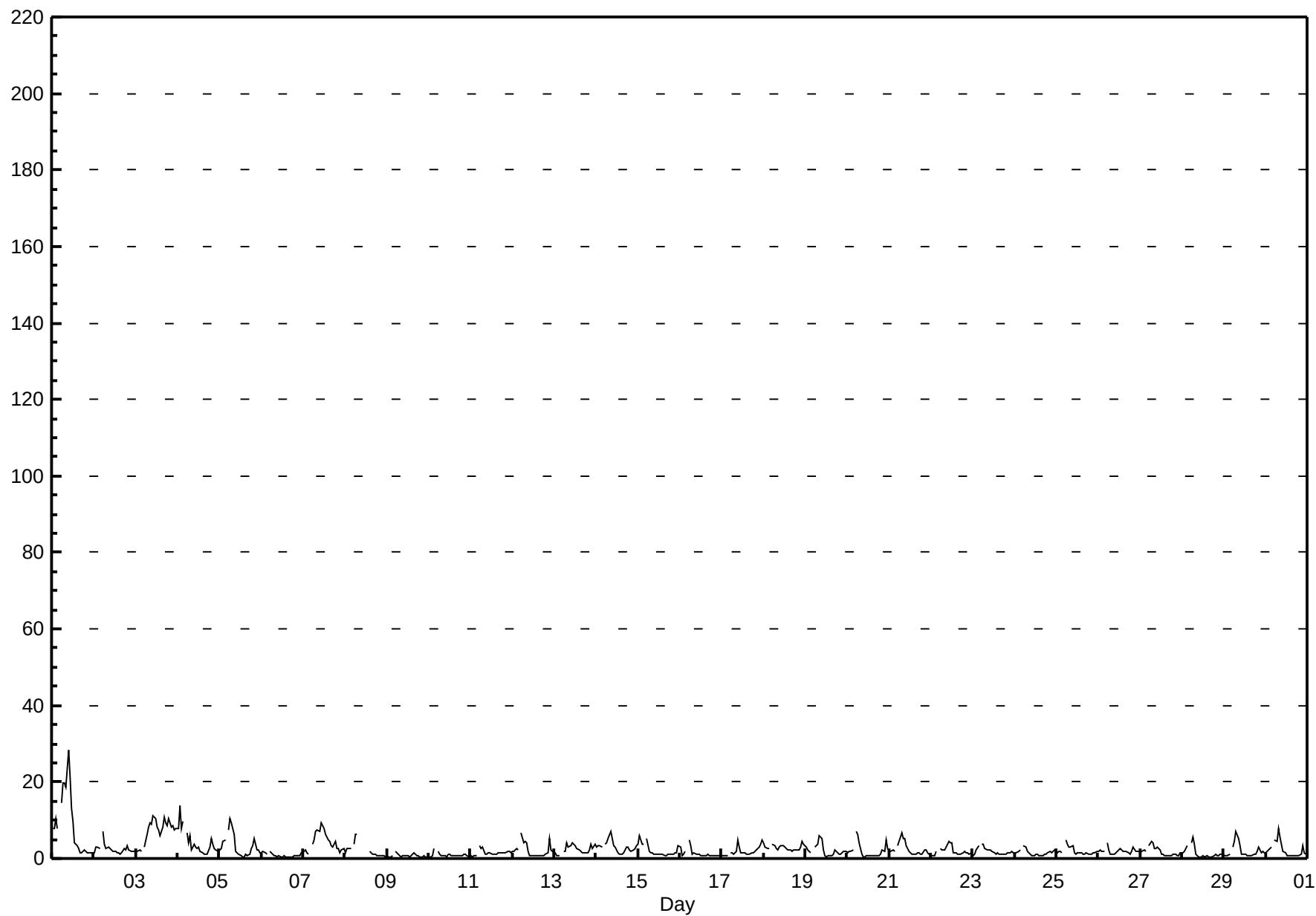
Oxides of Nitrogen (NO<sub>x</sub>) - ppb

Beaverlodge - April 2014

|                                            |                               |                                                                                                                                                                         |      |                                                                                                                                                                                    |    |      |      |      |      |      |      |      |     |     |     |     |      |     |     |      |     |     |     |     |                 |               |
|--------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|------|------|------|------|------|------|------|-----|-----|-----|-----|------|-----|-----|------|-----|-----|-----|-----|-----------------|---------------|
| Number of Exceedences (AAAQO):             |                               | 1-hr: 0    24-hr: 0                                                                                                                                                     |      | <div>Hours in Service: 720</div> <div>Hours of Data: 684</div> <div>Hours of Missing Data: 36</div> <div>Hours of Calibration: 36</div> <div>Percent Operational Time: 100.0</div> |    |      |      |      |      |      |      |      |     |     |     |     |      |     |     |      |     |     |     |     |                 |               |
| Maximum Value: 28.5 ppb on Apr 1 10:00     |                               | Maximum Daily Average: 8.8 ppb on Apr 1                                                                                                                                 |      |                                                                                                                                                                                    |    |      |      |      |      |      |      |      |     |     |     |     |      |     |     |      |     |     |     |     |                 |               |
| Minimum Value: 0 ppb on Apr 6 12:00        |                               | Minimum Daily Average: 0.8 ppb on Apr 9                                                                                                                                 |      |                                                                                                                                                                                    |    |      |      |      |      |      |      |      |     |     |     |     |      |     |     |      |     |     |     |     |                 |               |
| Maximum Diurnal Average: 4.4 ppb at hour 8 |                               | Minimum Diurnal Average: 1.5 ppb at hour 16                                                                                                                             |      |                                                                                                                                                                                    |    |      |      |      |      |      |      |      |     |     |     |     |      |     |     |      |     |     |     |     |                 |               |
| Monthly Average: 2.50 ppb                  |                               | Percentiles: P <sub>1</sub> = 0.4   P <sub>10</sub> = 0.7   Q <sub>1</sub> = 1.0   Median = 1.7   Q <sub>3</sub> = 3.0   P <sub>90</sub> = 5.2   P <sub>99</sub> = 13.6 |      |                                                                                                                                                                                    |    |      |      |      |      |      |      |      |     |     |     |     |      |     |     |      |     |     |     |     |                 |               |
| 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-Apr                                      | 8                             | 8                                                                                                                                                                       | 10   | 8                                                                                                                                                                                  | A  | 15   | 20   | 20   | 19   | 29   | 21   | 13   | 10  | 4   | 3   | 3   | 2    | 2   | 2   | 2    | 1   | 2   | 2   | 1   | 8.8             | 28.5          |
| 2-Apr                                      | 2                             | 3                                                                                                                                                                       | 3    | 3                                                                                                                                                                                  | A  | 7    | 4    | 3    | 3    | 3    | 2    | 2    | 2   | 2   | 1   | 1   | 2    | 2   | 2   | 4    | 2   | 2   | 2   | 2   | 2.5             | 7.0           |
| 3-Apr                                      | 2                             | 2                                                                                                                                                                       | 2    | 2                                                                                                                                                                                  | A  | 3    | 6    | 8    | 9    | 9    | 11   | 10   | 8   | 8   | 6   | 8   | 11   | 9   | 9   | 11   | 8   | 9   | 7   | 8   | 7.2             | 11.2          |
| 4-Apr                                      | 8                             | 14                                                                                                                                                                      | 8    | 10                                                                                                                                                                                 | A  | 7    | 4    | 6    | 2    | 4    | 3    | 3    | 3   | 2   | 2   | 1   | 1    | 1   | 3   | 5    | 4   | 3   | 2   | 2   | 4.2             | 13.9          |
| 5-Apr                                      | 2                             | 3                                                                                                                                                                       | 4    | 5                                                                                                                                                                                  | A  | 7    | 11   | 9    | 6    | 2    | 1    | 1    | 1   | 1   | 1   | 1   | 1    | 1   | 3   | 3    | 5   | 2   | 2   | 1   | 3.2             | 10.5          |
| 6-Apr                                      | 2                             | 2                                                                                                                                                                       | 2    | 1                                                                                                                                                                                  | A  | 2    | 1    | 1    | 1    | 0    | 1    | 0    | 0   | 1   | 0   | 0   | 0    | 0   | 0   | 1    | 1   | 1   | 1   | 1   | 0.9             | 2.0           |
| 7-Apr                                      | 2                             | 2                                                                                                                                                                       | 1    | 1                                                                                                                                                                                  | A  | 4    | 5    | 7    | 7    | 7    | 9    | 9    | 8   | 6   | 5   | 4   | 3    | 3   | 5   | 3    | 3   | 2   | 2   | 3   | 4.3             | 9.2           |
| 8-Apr                                      | 2                             | 2                                                                                                                                                                       | 3    | 3                                                                                                                                                                                  | A  | 4    | 6    | 6    | C    | C    | C    | C    | C   | C   | 2   | 1   | 1    | 1   | 1   | 1    | 1   | 1   | 1   | 1   | --              | 6.2           |
| 9-Apr                                      | 1                             | 0                                                                                                                                                                       | 1    | 1                                                                                                                                                                                  | A  | 2    | 1    | 1    | 0    | 1    | 1    | 1    | 1   | 1   | 1   | 2   | 1    | 1   | 1   | 1    | 1   | 1   | 0   | 0   | 0.8             | 1.8           |
| 10-Apr                                     | 0                             | 0                                                                                                                                                                       | 1    | 3                                                                                                                                                                                  | A  | 2    | 1    | 1    | 1    | 1    | 1    | 1    | 1   | 1   | 1   | 1   | 1    | 1   | 1   | 1    | 1   | 1   | 1   | 1   | 0.9             | 2.7           |
| 11-Apr                                     | 1                             | 1                                                                                                                                                                       | 1    | 1                                                                                                                                                                                  | A  | 3    | 3    | 3    | 1    | 1    | 2    | 1    | 1   | 1   | 1   | 1   | 1    | 2   | 2   | 1    | 1   | 2   | 2   | 2   | 1.5             | 3.3           |
| 12-Apr                                     | 2                             | 2                                                                                                                                                                       | 3    | 2                                                                                                                                                                                  | A  | 7    | 4    | 5    | 4    | 2    | 1    | 1    | 1   | 1   | 1   | 1   | 1    | 1   | 1   | 1    | 2   | 5   | 2   | 2   | 2.1             | 6.6           |
| 13-Apr                                     | 1                             | 1                                                                                                                                                                       | 1    | 1                                                                                                                                                                                  | A  | 2    | 2    | 4    | 3    | 3    | 4    | 4    | 3   | 3   | 2   | 2   | 2    | 1   | 1   | 1    | 2   | 4   | 3   | 4   | 2.3             | 4.1           |
| 14-Apr                                     | 3                             | 3                                                                                                                                                                       | 3    | 3                                                                                                                                                                                  | A  | 4    | 4    | 5    | 7    | 5    | 3    | 3    | 2   | 1   | 1   | 1   | 1    | 3   | 3   | 2    | 2   | 2   | 3   | 3   | 3.0             | 7.0           |
| 15-Apr                                     | 4                             | 6                                                                                                                                                                       | 4    | 4                                                                                                                                                                                  | A  | 5    | 2    | 1    | 1    | 1    | 1    | 1    | 1   | 1   | 1   | 1   | 1    | 1   | 1   | 1    | 1   | 1   | 2   | 3   | 2.0             | 5.9           |
| 16-Apr                                     | 3                             | 1                                                                                                                                                                       | 1    | 2                                                                                                                                                                                  | A  | 5    | 4    | 1    | 1    | 1    | 1    | 1    | 1   | 1   | 1   | 1   | 1    | 1   | 1   | 1    | 1   | 1   | 1   | 1   | 1.4             | 5.0           |
| 17-Apr                                     | 1                             | 1                                                                                                                                                                       | 1    | 1                                                                                                                                                                                  | A  | 2    | 1    | 1    | 2    | 5    | 3    | 2    | 2   | 1   | 1   | 1   | 1    | 1   | 2   | 2    | 2   | 3   | 4   | 5   | 1.9             | 5.0           |
| 18-Apr                                     | 4                             | 3                                                                                                                                                                       | 3    | 3                                                                                                                                                                                  | A  | 4    | 3    | 3    | 2    | 3    | 3    | 3    | 3   | 3   | 2   | 2   | 2    | 2   | 2   | 2    | 2   | 3   | 5   | 4   | 2.9             | 4.5           |
| 19-Apr                                     | 3                             | 2                                                                                                                                                                       | 2    | 1                                                                                                                                                                                  | A  | 3    | 4    | 4    | 6    | 5    | 2    | 1    | 0   | 1   | 1   | 1   | 1    | 2   | 1   | 1    | 1   | 1   | 2   | 2   | 2.1             | 5.9           |
| 20-Apr                                     | 2                             | 2                                                                                                                                                                       | 2    | 2                                                                                                                                                                                  | A  | 7    | 6    | 4    | 1    | 1    | 1    | 1    | 1   | 1   | 1   | 1   | 1    | 1   | 1   | 1    | 2   | 2   | 5   | 3   | 1.9             | 6.9           |
| 21-Apr                                     | 2                             | 2                                                                                                                                                                       | 2    | 2                                                                                                                                                                                  | A  | 3    | 6    | 7    | 5    | 5    | 3    | 2    | 2   | 1   | 1   | 1   | 2    | 2   | 1   | 1    | 2   | 2   | 2   | 1   | 2.5             | 6.7           |
| 22-Apr                                     | 1                             | 1                                                                                                                                                                       | 1    | 2                                                                                                                                                                                  | A  | 3    | 2    | 2    | 2    | 4    | 4    | 4    | 4   | 2   | 1   | 1   | 1    | 1   | 1   | 2    | 2   | 1   | 1   | 1   | 2.0             | 4.4           |
| 23-Apr                                     | 1                             | 1                                                                                                                                                                       | 2    | 3                                                                                                                                                                                  | A  | 4    | 4    | 3    | 2    | 2    | 2    | 2    | 1   | 1   | 1   | 1   | 1    | 1   | 1   | 1    | 1   | 1   | 2   | 2   | 1.8             | 3.7           |
| 24-Apr                                     | 2                             | 2                                                                                                                                                                       | 2    | 2                                                                                                                                                                                  | A  | 3    | 3    | 2    | 1    | 1    | 1    | 1    | 1   | 1   | 1   | 1   | 1    | 1   | 1   | 1    | 2   | 1   | 2   | 2   | 1.5             | 3.2           |
| 25-Apr                                     | 2                             | 2                                                                                                                                                                       | 2    | 2                                                                                                                                                                                  | A  | 5    | 4    | 3    | 3    | 3    | 2    | 1    | 1   | 1   | 2   | 1   | 1    | 2   | 1   | 1    | 1   | 1   | 1   | 2   | 1.9             | 4.8           |
| 26-Apr                                     | 2                             | 2                                                                                                                                                                       | 2    | 2                                                                                                                                                                                  | A  | 4    | 2    | 1    | 1    | 1    | 2    | 2    | 2   | 2   | 2   | 2   | 2    | 1   | 1   | 2    | 3   | 2   | 2   | 2   | 1.9             | 4.0           |
| 27-Apr                                     | 1                             | 2                                                                                                                                                                       | 2    | 2                                                                                                                                                                                  | A  | 3    | 4    | 4    | 3    | 3    | 3    | 2    | 1   | 1   | 1   | 1   | 1    | 1   | 1   | 1    | 1   | 1   | 1   | 1   | 1.8             | 4.5           |
| 28-Apr                                     | 1                             | 2                                                                                                                                                                       | 3    | 3                                                                                                                                                                                  | A  | 4    | 5    | 4    | 1    | 0    | 1    | 1    | 1   | 1   | 1   | 1   | 1    | 1   | 1   | 1    | 1   | 1   | 1   | 1   | 1.4             | 5.4           |
| 29-Apr                                     | 1                             | 1                                                                                                                                                                       | 1    | 1                                                                                                                                                                                  | A  | 3    | 4    | 7    | 5    | 3    | 1    | 1    | 1   | 1   | 1   | 1   | 1    | 1   | 1   | 2    | 3   | 2   | 2   | 1   | 1.9             | 7.0           |
| 30-Apr                                     | 1                             | 2                                                                                                                                                                       | 3    | 3                                                                                                                                                                                  | A  | 5    | 5    | 8    | 6    | 4    | 2    | 2    | 1   | 1   | 1   | 1   | 1    | 1   | 1   | 1    | 1   | 3   | 1   | 1   | 2.2             | 7.8           |
| 2.2                                        |                               | 2.5                                                                                                                                                                     | 2.4  | 2.6                                                                                                                                                                                | -- | 4.3  | 4.4  | 4.4  | 3.7  | 3.7  | 3.2  | 2.5  | 2.2 | 1.7 | 1.5 | 1.5 | 1.5  | 1.6 | 1.7 | 1.9  | 2.0 | 2.1 | 2.0 | 2.1 | Diurnal Average |               |
| 7.9                                        |                               | 13.9                                                                                                                                                                    | 10.5 | 9.5                                                                                                                                                                                | -- | 14.7 | 19.8 | 19.8 | 18.5 | 28.5 | 21.4 | 13.0 | 9.9 | 7.5 | 6.1 | 8.1 | 11.0 | 9.2 | 8.7 | 10.6 | 8.2 | 8.5 | 7.4 | 7.7 | Diurnal Maximum |               |
| C - Calibration                            |                               | A - Automated Daily Zero Span                                                                                                                                           |      |                                                                                                                                                                                    |    |      |      |      |      |      |      |      |     |     |     |     |      |     |     |      |     |     |     |     |                 |               |

## Hourly Averages

Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
Beaverlodge - April 2014



## Hourly Maximums

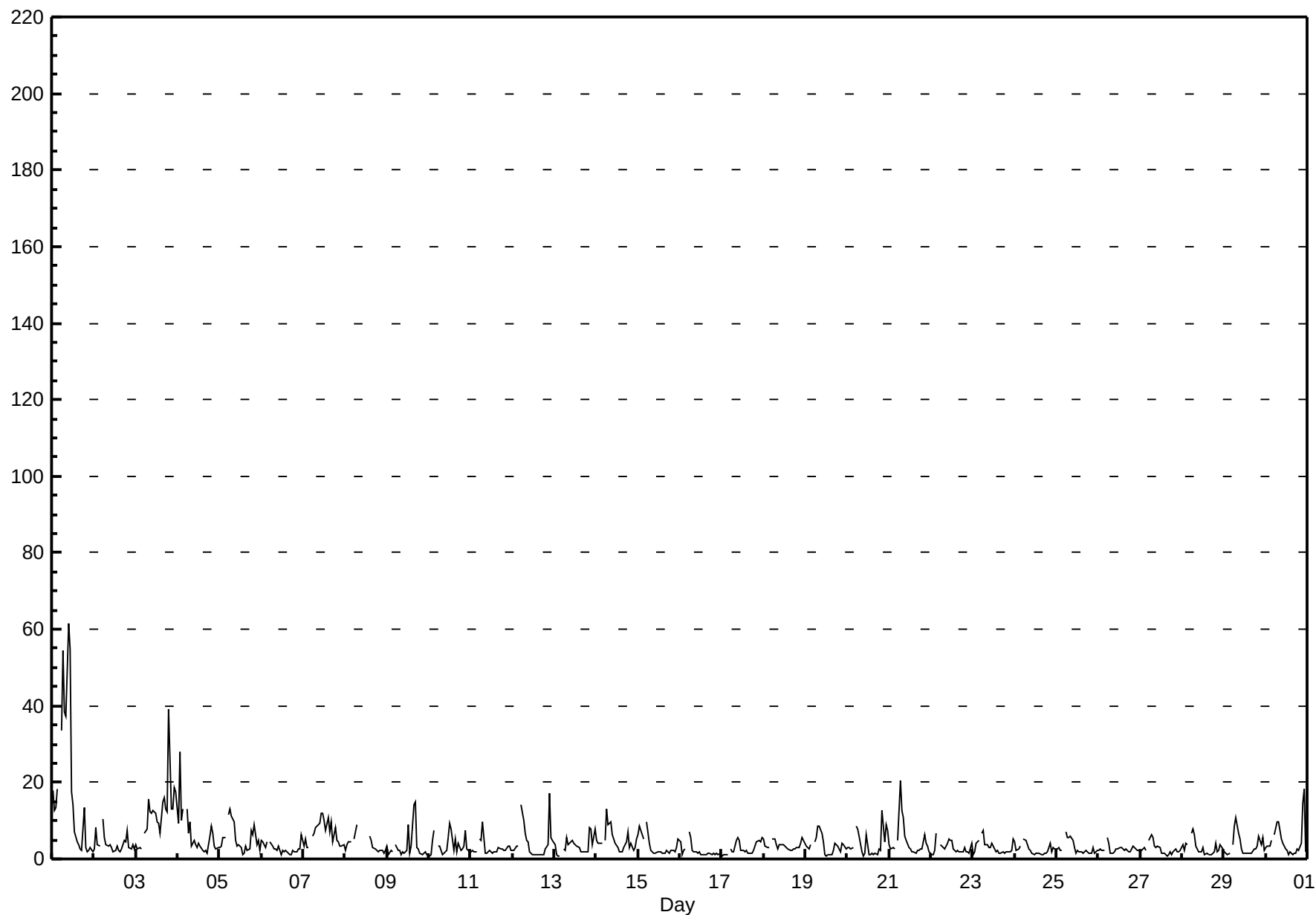
Oxides of Nitrogen (NO<sub>x</sub>) - ppb

Beaverlodge - April 2014

| Maximum Value: 61.7 ppb on Apr 1 10:00                                                                               |                               |    |    |    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 18.3 ppb on Apr 1                                                                                                                    |    |    |    |    |                 |               |  |  |  | Hours in Service: 720     |  |
|----------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-----------------|---------------|--|--|--|---------------------------|--|
| Minimum Value: 1 ppb on Apr 19 13:00                                                                                 |                               |    |    |    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 2.1 ppb on Apr 16                                                                                                                    |    |    |    |    |                 |               |  |  |  | Hours of Data: 684        |  |
| Maximum Diurnal Average: 8.3 ppb at hour 7                                                                           |                               |    |    |    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 2.5 ppb at hour 15                                                                                                                 |    |    |    |    |                 |               |  |  |  | Hours of Missing Data: 36 |  |
| Monthly Average: 4.45 ppb                                                                                            |                               |    |    |    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 1.4 Q <sub>1</sub> = 1.9 Median = 2.8 Q <sub>3</sub> = 4.9 P <sub>90</sub> = 8.8 P <sub>99</sub> = 32.3 |    |    |    |    |                 |               |  |  |  | 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-Apr                                                                                                                | 18                            | 13 | 13 | 18 | A                             | 34 | 55 | 38 | 37 | 62 | 55 | 18 | 14 | 7  | 5  | 4  | 2  | 2  | 13 | 3                                                                                                                                                           | 2  | 2  | 3  | 2  | 18.3            | 61.7          |  |  |  |                           |  |
| 2-Apr                                                                                                                | 2                             | 8  | 4  | 4  | A                             | 10 | 6  | 4  | 3  | 4  | 3  | 2  | 2  | 3  | 2  | 2  | 3  | 5  | 5  | 7                                                                                                                                                           | 3  | 3  | 4  | 3  | 4.0             | 10.5          |  |  |  |                           |  |
| 3-Apr                                                                                                                | 4                             | 3  | 3  | 3  | A                             | 7  | 8  | 16 | 12 | 12 | 13 | 12 | 10 | 9  | 7  | 15 | 16 | 13 | 12 | 39                                                                                                                                                          | 13 | 13 | 19 | 17 | 11.9            | 39.0          |  |  |  |                           |  |
| 4-Apr                                                                                                                | 9                             | 28 | 10 | 13 | A                             | 13 | 7  | 10 | 3  | 5  | 4  | 3  | 4  | 3  | 2  | 2  | 2  | 2  | 6  | 9                                                                                                                                                           | 7  | 3  | 3  | 3  | 6.5             | 28.1          |  |  |  |                           |  |
| 5-Apr                                                                                                                | 3                             | 3  | 6  | 6  | A                             | 11 | 13 | 11 | 10 | 5  | 3  | 4  | 3  | 1  | 2  | 4  | 2  | 3  | 7  | 6                                                                                                                                                           | 9  | 4  | 5  | 2  | 5.3             | 12.9          |  |  |  |                           |  |
| 6-Apr                                                                                                                | 5                             | 5  | 3  | 4  | A                             | 4  | 3  | 3  | 3  | 2  | 3  | 1  | 2  | 2  | 2  | 2  | 1  | 1  | 2  | 2                                                                                                                                                           | 2  | 3  | 2  | 6  | 2.8             | 6.5           |  |  |  |                           |  |
| 7-Apr                                                                                                                | 3                             | 5  | 3  | 3  | A                             | 6  | 7  | 8  | 9  | 9  | 12 | 12 | 10 | 8  | 11 | 7  | 10 | 4  | 8  | 5                                                                                                                                                           | 4  | 3  | 3  | 4  | 6.7             | 11.9          |  |  |  |                           |  |
| 8-Apr                                                                                                                | 2                             | 4  | 5  | 4  | A                             | 5  | 7  | 9  | C  | C  | C  | C  | C  | C  | 6  | 5  | 3  | 3  | 2  | 2                                                                                                                                                           | 2  | 2  | 1  | 2  | --              | 8.8           |  |  |  |                           |  |
| 9-Apr                                                                                                                | 3                             | 1  | 2  | 2  | A                             | 4  | 2  | 2  | 1  | 2  | 2  | 2  | 9  | 1  | 3  | 14 | 15 | 3  | 3  | 1                                                                                                                                                           | 1  | 1  | 2  | 1  | 3.4             | 14.8          |  |  |  |                           |  |
| 10-Apr                                                                                                               | 1                             | 1  | 5  | 7  | A                             | 3  | 3  | 2  | 1  | 2  | 2  | 6  | 9  | 8  | 2  | 5  | 2  | 4  | 2  | 3                                                                                                                                                           | 3  | 8  | 3  | 2  | 3.7             | 9.4           |  |  |  |                           |  |
| 11-Apr                                                                                                               | 2                             | 2  | 2  | 2  | A                             | 5  | 5  | 10 | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 3  | 3  | 2  | 2                                                                                                                                                           | 2  | 3  | 3  | 2  | 2.7             | 9.6           |  |  |  |                           |  |
| 12-Apr                                                                                                               | 2                             | 2  | 3  | 3  | A                             | 14 | 10 | 7  | 5  | 5  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 3                                                                                                                                                           | 4  | 17 | 6  | 5  | 4.2             | 17.1          |  |  |  |                           |  |
| 13-Apr                                                                                                               | 4                             | 1  | 1  | 1  | A                             | 3  | 2  | 5  | 4  | 4  | 5  | 4  | 4  | 4  | 3  | 2  | 2  | 2  | 2  | 2                                                                                                                                                           | 8  | 8  | 4  | 8  | 3.5             | 8.2           |  |  |  |                           |  |
| 14-Apr                                                                                                               | 5                             | 4  | 4  | 4  | A                             | 5  | 13 | 9  | 10 | 6  | 5  | 4  | 3  | 2  | 2  | 2  | 3  | 4  | 7  | 3                                                                                                                                                           | 4  | 2  | 3  | 5  | 4.8             | 13.1          |  |  |  |                           |  |
| 15-Apr                                                                                                               | 6                             | 8  | 6  | 5  | A                             | 10 | 4  | 2  | 2  | 2  | 1  | 2  | 2  | 2  | 1  | 1  | 2  | 2  | 2  | 2                                                                                                                                                           | 2  | 2  | 3  | 5  | 3.3             | 9.8           |  |  |  |                           |  |
| 16-Apr                                                                                                               | 5                             | 1  | 2  | 3  | A                             | 7  | 6  | 2  | 2  | 2  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                           | 1  | 1  | 1  | 1  | 2.1             | 7.0           |  |  |  |                           |  |
| 17-Apr                                                                                                               | 1                             | 1  | 1  | 1  | A                             | 3  | 2  | 2  | 5  | 6  | 5  | 2  | 2  | 2  | 2  | 1  | 1  | 2  | 2  | 4                                                                                                                                                           | 4  | 5  | 5  | 6  | 2.8             | 5.7           |  |  |  |                           |  |
| 18-Apr                                                                                                               | 5                             | 3  | 3  | 3  | A                             | 5  | 5  | 4  | 3  | 4  | 4  | 4  | 3  | 3  | 3  | 2  | 2  | 3  | 3  | 3                                                                                                                                                           | 3  | 4  | 6  | 5  | 3.6             | 5.7           |  |  |  |                           |  |
| 19-Apr                                                                                                               | 3                             | 3  | 3  | 4  | A                             | 5  | 5  | 8  | 9  | 7  | 4  | 1  | 1  | 1  | 1  | 1  | 2  | 4  | 3  | 3                                                                                                                                                           | 2  | 4  | 4  | 2  | 3.5             | 8.5           |  |  |  |                           |  |
| 20-Apr                                                                                                               | 3                             | 3  | 3  | 3  | A                             | 9  | 8  | 6  | 2  | 1  | 1  | 7  | 1  | 1  | 1  | 1  | 2  | 1  | 2  | 2                                                                                                                                                           | 13 | 4  | 9  | 8  | 3.9             | 12.6          |  |  |  |                           |  |
| 21-Apr                                                                                                               | 4                             | 3  | 3  | 3  | A                             | 5  | 20 | 13 | 11 | 6  | 5  | 3  | 3  | 2  | 2  | 1  | 2  | 2  | 3  | 3                                                                                                                                                           | 6  | 4  | 3  | 2  | 4.7             | 20.5          |  |  |  |                           |  |
| 22-Apr                                                                                                               | 1                             | 1  | 2  | 7  | A                             | 4  | 3  | 3  | 3  | 4  | 5  | 5  | 5  | 2  | 2  | 2  | 2  | 2  | 2  | 3                                                                                                                                                           | 2  | 2  | 2  | 4  | 2.9             | 6.8           |  |  |  |                           |  |
| 23-Apr                                                                                                               | 1                             | 2  | 4  | 5  | A                             | 7  | 7  | 4  | 4  | 3  | 3  | 4  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2                                                                                                                                                           | 2  | 2  | 2  | 5  | 3.1             | 7.3           |  |  |  |                           |  |
| 24-Apr                                                                                                               | 4                             | 2  | 2  | 3  | A                             | 5  | 5  | 4  | 3  | 2  | 2  | 1  | 2  | 2  | 1  | 1  | 1  | 2  | 2  | 2                                                                                                                                                           | 4  | 2  | 3  | 3  | 2.5             | 5.3           |  |  |  |                           |  |
| 25-Apr                                                                                                               | 2                             | 3  | 2  | 2  | A                             | 7  | 6  | 6  | 6  | 5  | 3  | 1  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2                                                                                                                                                           | 1  | 3  | 2  | 2  | 2.9             | 6.9           |  |  |  |                           |  |
| 26-Apr                                                                                                               | 2                             | 3  | 2  | 2  | A                             | 5  | 4  | 2  | 2  | 2  | 3  | 3  | 3  | 3  | 2  | 2  | 3  | 2  | 2  | 3                                                                                                                                                           | 4  | 3  | 2  | 2  | 2.6             | 5.5           |  |  |  |                           |  |
| 27-Apr                                                                                                               | 2                             | 2  | 3  | 2  | A                             | 5  | 6  | 6  | 3  | 3  | 3  | 3  | 2  | 1  | 1  | 1  | 1  | 2  | 1  | 2                                                                                                                                                           | 3  | 2  | 2  | 2  | 2.6             | 6.3           |  |  |  |                           |  |
| 28-Apr                                                                                                               | 4                             | 2  | 4  | 4  | A                             | 7  | 8  | 6  | 3  | 2  | 2  | 2  | 3  | 1  | 1  | 1  | 1  | 1  | 2  | 4                                                                                                                                                           | 2  | 2  | 4  | 2  | 3.0             | 7.9           |  |  |  |                           |  |
| 29-Apr                                                                                                               | 2                             | 1  | 1  | 2  | A                             | 4  | 8  | 11 | 7  | 5  | 3  | 1  | 1  | 1  | 2  | 2  | 2  | 3  | 3  | 3                                                                                                                                                           | 6  | 4  | 6  | 2  | 3.4             | 10.8          |  |  |  |                           |  |
| 30-Apr                                                                                                               | 3                             | 3  | 3  | 5  | A                             | 7  | 10 | 10 | 7  | 5  | 4  | 3  | 2  | 1  | 2  | 1  | 1  | 1  | 2  | 2                                                                                                                                                           | 4  | 15 | 18 | 2  | 4.9             | 18.4          |  |  |  |                           |  |
| 3.8 4.1 3.6 4.2 -- 7.3 8.3 7.4 5.9 6.1 5.5 4.0 3.7 2.7 2.5 3.0 3.1 2.7 3.5 4.2 4.1 4.4 4.4 3.9                       |                               |    |    |    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    | Diurnal Average |               |  |  |  |                           |  |
| 17.8 28.1 13.3 18.3 -- 33.6 54.6 38.2 37.5 61.7 54.7 17.6 14.1 9.3 10.7 15.1 16.0 13.1 13.3 39.0 13.1 17.1 18.7 17.4 |                               |    |    |    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    | Diurnal Maximum |               |  |  |  |                           |  |
| C - Calibration                                                                                                      |                               |    |    |    | A - Automated Daily Zero Span |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |    |                 |               |  |  |  |                           |  |

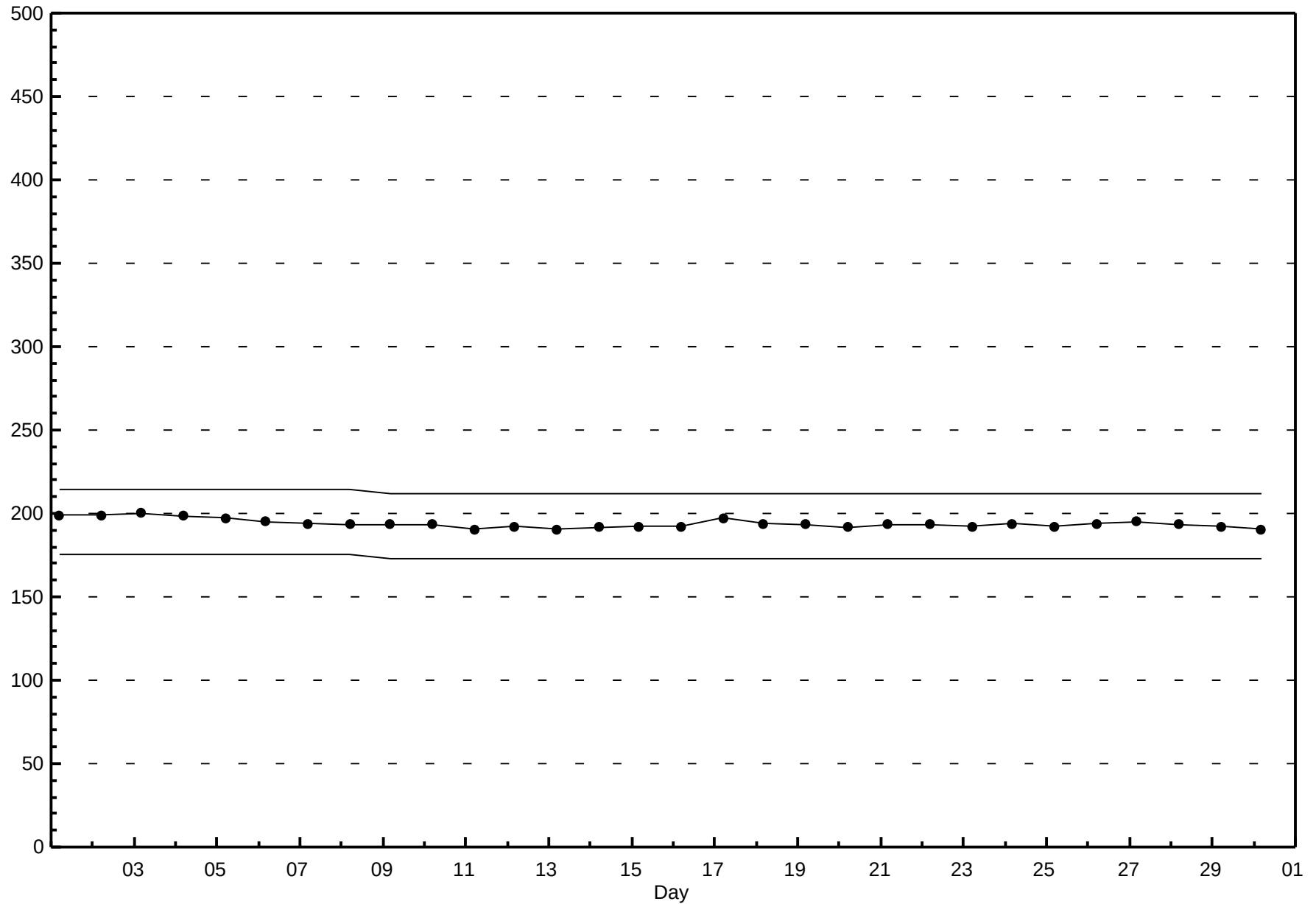
## Hourly Maximums

Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
Beaverlodge - April 2014



## Span Responses

Oxides of Nitrogen ( $\text{NO}_x$ )  
Beaverlodge - April 2014



# Hourly Averages

Ozone (O<sub>3</sub>) - ppb

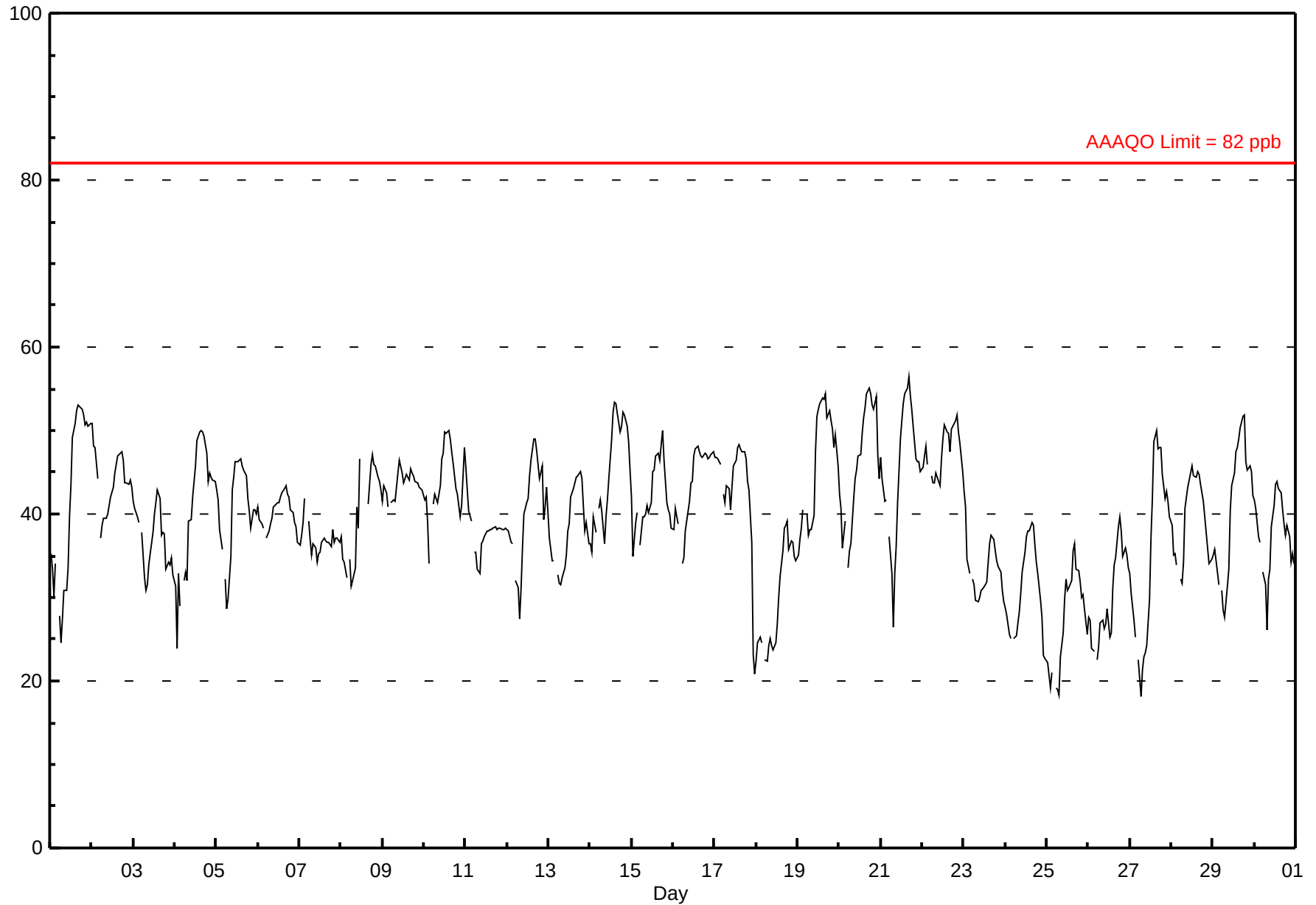
Beaverlodge - April 2014

|                                                                                                                                      |                               |    |    |    |   |    |    |    |    |    |    |                                                                                                                                                                                                                                                               |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |               |               |
|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|---|----|----|----|----|----|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|----|----|----|----|----|----|-----------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|
| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 56.4 ppb on Apr 21 17:00 Maximum Daily Average: 47.5 ppb on Apr 22 |                               |    |    |    |   |    |    |    |    |    |    |                                                                                                                                                                                                                                                               |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 686<br>Hours of Missing Data: 34<br>Hours of Calibration: 34<br>Percent Operational Time: 100.0 |               |               |
| Minimum Value: 18 ppb on Apr 27 07:00<br>Maximum Diurnal Average: 45.3 ppb at hour 16<br>Monthly Average: 39.58 ppb                  |                               |    |    |    |   |    |    |    |    |    |    | Minimum Daily Average: 27.3 ppb on Apr 25<br>Minimum Diurnal Average: 32.8 ppb at hour 8<br>Percentiles: P <sub>1</sub> = 21.0 P <sub>10</sub> = 29.4 Q <sub>1</sub> = 34.6 Median = 40.0 Q <sub>3</sub> = 45.1 P <sub>90</sub> = 49.2 P <sub>99</sub> = 54.3 |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |               |               |
| 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-Apr                                                                                                                                | 35                            | 33 | 30 | 34 | A | 28 | 25 | 27 | 31 | 31 | 34 | 40                                                                                                                                                                                                                                                            | 43 | 49 | 51 | 52 | 53 | 53 | 53 | 52 | 51 | 51 | 51 | 51                                                                                                                                      | 41.6          | 53.0          |
| 2-Apr                                                                                                                                | 51                            | 48 | 48 | 44 | A | 37 | 39 | 40 | 39 | 40 | 41 | 42                                                                                                                                                                                                                                                            | 43 | 45 | 46 | 47 | 47 | 47 | 46 | 44 | 44 | 43 | 44 | 43                                                                                                                                      | 43.9          | 50.8          |
| 3-Apr                                                                                                                                | 42                            | 41 | 40 | 39 | A | 38 | 32 | 31 | 32 | 34 | 35 | 38                                                                                                                                                                                                                                                            | 40 | 41 | 43 | 42 | 37 | 38 | 38 | 33 | 34 | 34 | 35 | 33                                                                                                                                      | 36.9          | 42.9          |
| 4-Apr                                                                                                                                | 31                            | 24 | 33 | 29 | A | 32 | 33 | 32 | 39 | 39 | 42 | 44                                                                                                                                                                                                                                                            | 46 | 49 | 50 | 50 | 50 | 49 | 47 | 44 | 45 | 44 | 44 | 44                                                                                                                                      | 40.9          | 50.0          |
| 5-Apr                                                                                                                                | 43                            | 42 | 38 | 36 | A | 32 | 29 | 30 | 35 | 43 | 44 | 46                                                                                                                                                                                                                                                            | 46 | 46 | 47 | 46 | 45 | 45 | 42 | 40 | 38 | 41 | 41 | 40                                                                                                                                      | 40.6          | 46.7          |
| 6-Apr                                                                                                                                | 41                            | 39 | 39 | 38 | A | 37 | 38 | 39 | 39 | 41 | 41 | 41                                                                                                                                                                                                                                                            | 41 | 42 | 43 | 43 | 43 | 42 | 42 | 40 | 40 | 39 | 39 | 37                                                                                                                                      | 40.2          | 43.3          |
| 7-Apr                                                                                                                                | 36                            | 37 | 39 | 42 | A | 39 | 37 | 35 | 36 | 36 | 34 | 35                                                                                                                                                                                                                                                            | 35 | 37 | 37 | 37 | 37 | 37 | 36 | 38 | 37 | 37 | 37 | 37                                                                                                                                      | 36.9          | 41.8          |
| 8-Apr                                                                                                                                | 37                            | 35 | 34 | 32 | A | 35 | 31 | 32 | 33 | 41 | 38 | 47                                                                                                                                                                                                                                                            | C  | C  | C  | C  | 41 | 46 | 47 | 46 | 46 | 44 | 44 | 43                                                                                                                                      | 39.6          | 47.1          |
| 9-Apr                                                                                                                                | 42                            | 43 | 42 | 41 | A | 41 | 42 | 42 | 43 | 45 | 46 | 45                                                                                                                                                                                                                                                            | 44 | 44 | 45 | 44 | 45 | 45 | 45 | 44 | 44 | 43 | 43 | 43                                                                                                                                      | 43.5          | 46.4          |
| 10-Apr                                                                                                                               | 42                            | 42 | 39 | 34 | A | 41 | 42 | 42 | 41 | 43 | 47 | 47                                                                                                                                                                                                                                                            | 50 | 50 | 50 | 49 | 48 | 46 | 43 | 42 | 41 | 40 | 41 | 48                                                                                                                                      | 43.8          | 50.0          |
| 11-Apr                                                                                                                               | 46                            | 43 | 40 | 39 | A | 35 | 35 | 33 | 33 | 36 | 37 | 37                                                                                                                                                                                                                                                            | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38                                                                                                                                      | 38.0          | 45.7          |
| 12-Apr                                                                                                                               | 38                            | 38 | 37 | 36 | A | 32 | 31 | 27 | 31 | 36 | 40 | 41                                                                                                                                                                                                                                                            | 42 | 45 | 46 | 49 | 49 | 48 | 46 | 44 | 46 | 39 | 41 | 43                                                                                                                                      | 40.3          | 49.0          |
| 13-Apr                                                                                                                               | 37                            | 36 | 34 | 34 | A | 33 | 32 | 32 | 32 | 34 | 35 | 38                                                                                                                                                                                                                                                            | 39 | 42 | 43 | 44 | 44 | 45 | 45 | 44 | 41 | 38 | 39 | 36                                                                                                                                      | 38.1          | 45.1          |
| 14-Apr                                                                                                                               | 36                            | 35 | 40 | 38 | A | 41 | 42 | 40 | 36 | 40 | 42 | 44                                                                                                                                                                                                                                                            | 49 | 52 | 53 | 53 | 52 | 50 | 51 | 52 | 52 | 50 | 49 | 45                                                                                                                                      | 45.3          | 53.4          |
| 15-Apr                                                                                                                               | 42                            | 35 | 39 | 40 | A | 36 | 40 | 40 | 40 | 41 | 40 | 41                                                                                                                                                                                                                                                            | 45 | 45 | 47 | 47 | 46 | 48 | 50 | 46 | 41 | 40 | 40 | 38                                                                                                                                      | 42.2          | 50.0          |
| 16-Apr                                                                                                                               | 38                            | 41 | 40 | 39 | A | 34 | 35 | 38 | 39 | 42 | 44 | 44                                                                                                                                                                                                                                                            | 47 | 48 | 48 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47 | 47                                                                                                                                      | 43.4          | 48.1          |
| 17-Apr                                                                                                                               | 47                            | 47 | 47 | 46 | A | 42 | 41 | 43 | 43 | 40 | 43 | 46                                                                                                                                                                                                                                                            | 47 | 48 | 48 | 48 | 47 | 47 | 47 | 44 | 43 | 37 | 23 | 21                                                                                                                                      | 42.8          | 48.3          |
| 18-Apr                                                                                                                               | 22                            | 25 | 25 | 25 | A | 23 | 22 | 24 | 25 | 24 | 24 | 25                                                                                                                                                                                                                                                            | 27 | 30 | 32 | 36 | 38 | 39 | 39 | 36 | 37 | 37 | 35 | 34                                                                                                                                      | 29.7          | 39.1          |
| 19-Apr                                                                                                                               | 35                            | 37 | 38 | 41 | A | 40 | 37 | 38 | 38 | 40 | 47 | 52                                                                                                                                                                                                                                                            | 53 | 53 | 54 | 54 | 54 | 51 | 52 | 51 | 50 | 48 | 50 | 46                                                                                                                                      | 46.1          | 54.4          |
| 20-Apr                                                                                                                               | 42                            | 41 | 36 | 39 | A | 34 | 36 | 36 | 42 | 44 | 45 | 47                                                                                                                                                                                                                                                            | 47 | 50 | 52 | 53 | 54 | 55 | 54 | 53 | 53 | 54 | 47 | 44                                                                                                                                      | 46.0          | 55.1          |
| 21-Apr                                                                                                                               | 47                            | 44 | 42 | 42 | A | 37 | 33 | 26 | 33 | 36 | 41 | 49                                                                                                                                                                                                                                                            | 51 | 53 | 54 | 55 | 56 | 54 | 52 | 50 | 47 | 46 | 46 | 45                                                                                                                                      | 45.3          | 56.4          |
| 22-Apr                                                                                                                               | 46                            | 47 | 48 | 46 | A | 45 | 44 | 44 | 45 | 44 | 43 | 47                                                                                                                                                                                                                                                            | 49 | 51 | 50 | 50 | 47 | 50 | 51 | 51 | 52 | 50 | 48 | 45                                                                                                                                      | 47.5          | 51.9          |
| 23-Apr                                                                                                                               | 43                            | 41 | 35 | 33 | A | 32 | 32 | 30 | 30 | 30 | 31 | 31                                                                                                                                                                                                                                                            | 32 | 32 | 34 | 36 | 38 | 37 | 36 | 34 | 34 | 33 | 31 | 29                                                                                                                                      | 33.5          | 42.7          |
| 24-Apr                                                                                                                               | 29                            | 28 | 26 | 25 | A | 25 | 25 | 27 | 28 | 31 | 33 | 35                                                                                                                                                                                                                                                            | 37 | 38 | 38 | 39 | 39 | 36 | 34 | 33 | 30 | 28 | 23 | 23                                                                                                                                      | 30.9          | 38.9          |
| 25-Apr                                                                                                                               | 22                            | 21 | 19 | 21 | A | 19 | 19 | 18 | 23 | 26 | 30 | 32                                                                                                                                                                                                                                                            | 31 | 31 | 32 | 36 | 36 | 33 | 33 | 32 | 30 | 30 | 29 | 26                                                                                                                                      | 27.3          | 36.4          |
| 26-Apr                                                                                                                               | 28                            | 27 | 24 | 24 | A | 23 | 24 | 27 | 27 | 26 | 27 | 29                                                                                                                                                                                                                                                            | 25 | 26 | 31 | 34 | 35 | 38 | 40 | 38 | 35 | 36 | 35 | 34                                                                                                                                      | 30.0          | 39.6          |
| 27-Apr                                                                                                                               | 33                            | 30 | 27 | 25 | A | 23 | 18 | 21 | 23 | 23 | 24 | 30                                                                                                                                                                                                                                                            | 37 | 42 | 49 | 50 | 48 | 48 | 48 | 45 | 42 | 43 | 42 | 40                                                                                                                                      | 35.2          | 50.0          |
| 28-Apr                                                                                                                               | 39                            | 35 | 35 | 34 | A | 32 | 32 | 34 | 41 | 43 | 44 | 45                                                                                                                                                                                                                                                            | 46 | 45 | 44 | 45 | 44 | 42 | 40 | 38 | 36 | 34 | 35 | 35                                                                                                                                      | 39.4          | 45.8          |
| 29-Apr                                                                                                                               | 35                            | 36 | 34 | 32 | A | 31 | 28 | 28 | 31 | 33 | 40 | 43                                                                                                                                                                                                                                                            | 45 | 47 | 48 | 49 | 50 | 52 | 52 | 46 | 45 | 46 | 45 | 42                                                                                                                                      | 40.9          | 51.9          |
| 30-Apr                                                                                                                               | 42                            | 41 | 37 | 37 | A | 33 | 31 | 26 | 32 | 33 | 38 | 41                                                                                                                                                                                                                                                            | 44 | 44 | 43 | 43 | 41 | 39 | 37 | 39 | 37 | 34 | 35 | 34                                                                                                                                      | 37.4          | 43.9          |
| 38.2 37.0 36.2 35.5 -- 33.6 32.8 32.8 34.8 36.5 38.4 40.7 42.0 43.5 44.7 45.3 45.1 44.9 44.4 43.0 41.9 40.9 39.8 38.8                |                               |    |    |    |   |    |    |    |    |    |    |                                                                                                                                                                                                                                                               |    |    |    |    |    |    |    |    |    |    |    | Diurnal Average                                                                                                                         |               |               |
| 50.8 48.1 48.2 45.9 -- 44.6 43.7 43.7 45.0 44.8 47.4 51.8 52.5 53.3 54.5 55.0 56.4 55.1 54.5 53.0 52.6 54.1 50.6 50.9                |                               |    |    |    |   |    |    |    |    |    |    |                                                                                                                                                                                                                                                               |    |    |    |    |    |    |    |    |    |    |    | 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 (O<sub>3</sub>) - ppb  
Beaverlodge - April 2014



# Hourly Maximums

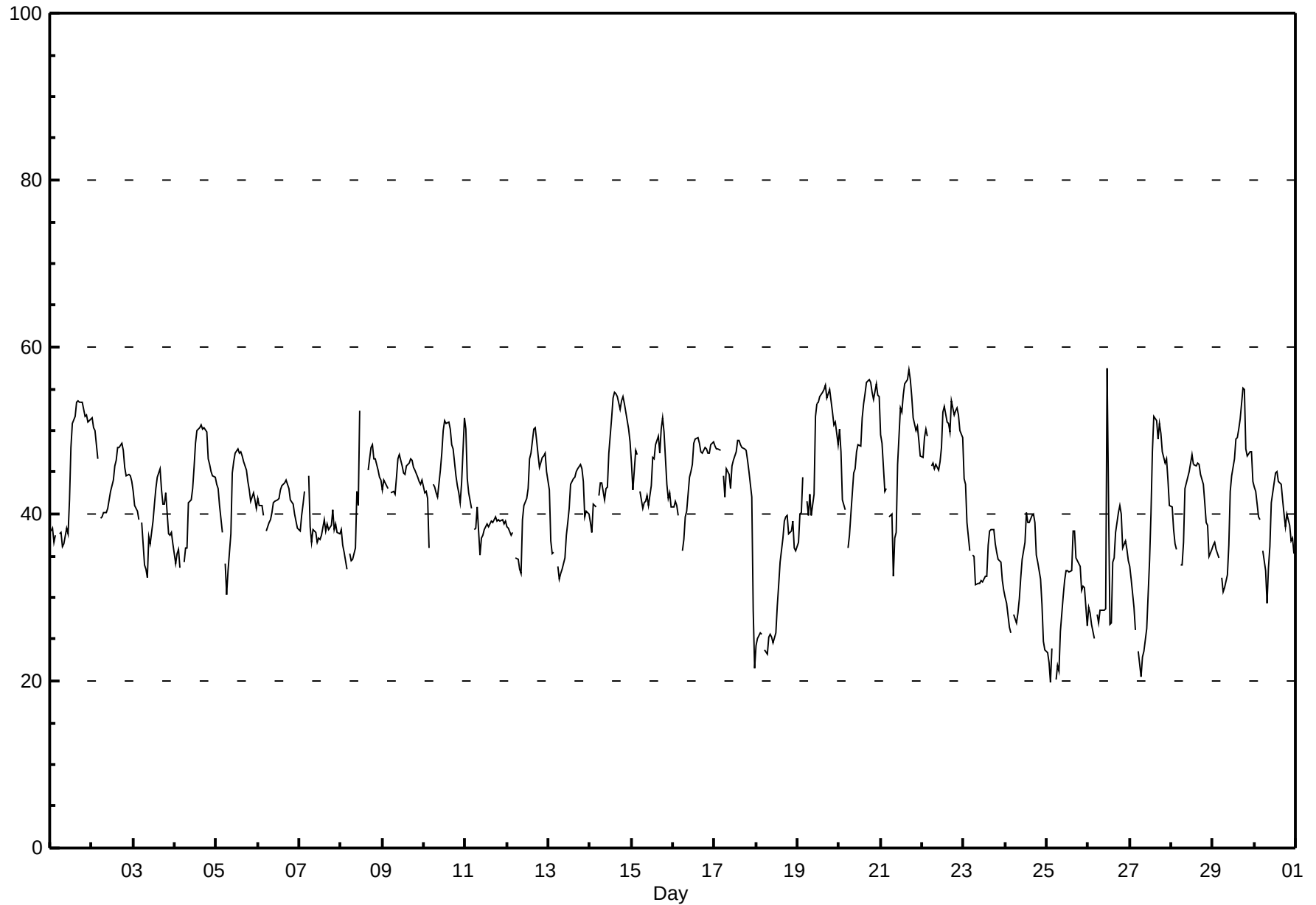
Ozone (O<sub>3</sub>) - ppb

Beaverlodge - April 2014

| Maximum Value: 57.4 ppb on Apr 26 12:00                                                                               |                               |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 49.4 ppb on Apr 22                                                                                                                         |    |    |                 |               |               |  |  |  |  | Hours in Service: 720     |  |
|-----------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|-----------------|---------------|---------------|--|--|--|--|---------------------------|--|
| Minimum Value: 20 ppb on Apr 25 03:00                                                                                 |                               |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 29.2 ppb on Apr 25                                                                                                                         |    |    |                 |               |               |  |  |  |  | Hours of Data: 686        |  |
| Maximum Diurnal Average: 46.6 ppb at hour 16                                                                          |                               |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 35.3 ppb at hour 7                                                                                                                       |    |    |                 |               |               |  |  |  |  | Hours of Missing Data: 34 |  |
| Monthly Average: 41.53 ppb                                                                                            |                               |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 22.8 P <sub>10</sub> = 31.9 Q <sub>1</sub> = 37.0 Median = 41.8 Q <sub>3</sub> = 47.1 P <sub>90</sub> = 51.1 P <sub>99</sub> = 55.7 |    |    |                 |               |               |  |  |  |  | Hours of Calibration: 34  |  |
|                                                                                                                       |                               |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percent Operational Time: 100.0                                                                                                                                   |    |    |                 |               |               |  |  |  |  |                           |  |
| Day                                                                                                                   | Hourly Period Ending At (MST) |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                   |    |    |                 | Daily Average | Daily Maximum |  |  |  |  |                           |  |
|                                                                                                                       | 1                             | 2  | 3  | 4  | 5 | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21                                                                                                                                                                | 22 | 23 | 24              |               |               |  |  |  |  |                           |  |
| 1-Apr                                                                                                                 | 38                            | 38 | 37 | 37 | A | 38 | 38 | 36 | 36 | 38 | 38 | 42 | 48 | 51 | 52 | 53 | 54 | 53 | 53 | 53 | 52                                                                                                                                                                | 52 | 51 | 51              | 45.2          | 53.6          |  |  |  |  |                           |  |
| 2-Apr                                                                                                                 | 51                            | 50 | 50 | 47 | A | 39 | 40 | 40 | 40 | 41 | 42 | 43 | 44 | 46 | 46 | 48 | 48 | 48 | 48 | 46 | 45                                                                                                                                                                | 45 | 45 | 44              | 45.0          | 51.5          |  |  |  |  |                           |  |
| 3-Apr                                                                                                                 | 43                            | 41 | 40 | 39 | A | 39 | 34 | 33 | 32 | 37 | 36 | 39 | 41 | 43 | 44 | 45 | 43 | 41 | 41 | 42 | 38                                                                                                                                                                | 37 | 38 | 36              | 39.4          | 45.3          |  |  |  |  |                           |  |
| 4-Apr                                                                                                                 | 34                            | 35 | 36 | 34 | A | 34 | 36 | 36 | 41 | 42 | 43 | 46 | 48 | 50 | 50 | 51 | 50 | 50 | 50 | 47 | 46                                                                                                                                                                | 45 | 45 | 44              | 43.2          | 50.6          |  |  |  |  |                           |  |
| 5-Apr                                                                                                                 | 44                            | 43 | 41 | 38 | A | 34 | 30 | 33 | 38 | 45 | 46 | 47 | 48 | 47 | 47 | 47 | 46 | 45 | 44 | 43 | 41                                                                                                                                                                | 43 | 42 | 41              | 42.3          | 47.8          |  |  |  |  |                           |  |
| 6-Apr                                                                                                                 | 42                            | 41 | 41 | 40 | A | 38 | 39 | 39 | 40 | 41 | 42 | 42 | 42 | 43 | 43 | 44 | 44 | 44 | 43 | 42 | 41                                                                                                                                                                | 40 | 39 | 38              | 41.2          | 44.1          |  |  |  |  |                           |  |
| 7-Apr                                                                                                                 | 38                            | 40 | 41 | 43 | A | 45 | 38 | 37 | 38 | 38 | 37 | 37 | 37 | 38 | 39 | 38 | 39 | 38 | 39 | 41 | 38                                                                                                                                                                | 39 | 38 | 38              | 38.7          | 44.5          |  |  |  |  |                           |  |
| 8-Apr                                                                                                                 | 38                            | 36 | 35 | 33 | A | 35 | 34 | 35 | 36 | 43 | 41 | 52 | C  | C  | C  | C  | 45 | 48 | 48 | 47 | 47                                                                                                                                                                | 45 | 44 | 44              | 41.5          | 52.4          |  |  |  |  |                           |  |
| 9-Apr                                                                                                                 | 43                            | 44 | 43 | 43 | A | 43 | 43 | 42 | 44 | 47 | 47 | 46 | 45 | 45 | 46 | 46 | 47 | 46 | 46 | 45 | 44                                                                                                                                                                | 44 | 44 | 44              | 44.6          | 47.2          |  |  |  |  |                           |  |
| 10-Apr                                                                                                                | 43                            | 43 | 42 | 36 | A | 44 | 43 | 43 | 42 | 45 | 47 | 50 | 51 | 51 | 51 | 50 | 48 | 48 | 45 | 43 | 42                                                                                                                                                                | 41 | 44 | 52              | 45.4          | 51.6          |  |  |  |  |                           |  |
| 11-Apr                                                                                                                | 50                            | 44 | 43 | 41 | A | 38 | 38 | 41 | 35 | 37 | 37 | 38 | 39 | 38 | 39 | 39 | 39 | 40 | 39 | 39 | 39                                                                                                                                                                | 39 | 39 | 39              | 39.6          | 50.1          |  |  |  |  |                           |  |
| 12-Apr                                                                                                                | 39                            | 38 | 37 | 38 | A | 35 | 35 | 33 | 33 | 39 | 41 | 42 | 43 | 47 | 47 | 50 | 50 | 49 | 47 | 46 | 47                                                                                                                                                                | 47 | 47 | 45              | 42.4          | 50.3          |  |  |  |  |                           |  |
| 13-Apr                                                                                                                | 43                            | 37 | 35 | 35 | A | 34 | 32 | 33 | 33 | 35 | 38 | 39 | 41 | 44 | 44 | 44 | 45 | 45 | 46 | 45 | 44                                                                                                                                                                | 40 | 40 | 40              | 39.7          | 45.9          |  |  |  |  |                           |  |
| 14-Apr                                                                                                                | 39                            | 38 | 41 | 41 | A | 42 | 44 | 44 | 42 | 43 | 43 | 47 | 52 | 54 | 55 | 54 | 54 | 53 | 54 | 54 | 53                                                                                                                                                                | 51 | 50 | 49              | 47.6          | 54.6          |  |  |  |  |                           |  |
| 15-Apr                                                                                                                | 46                            | 43 | 48 | 47 | A | 43 | 41 | 41 | 42 | 42 | 41 | 43 | 47 | 47 | 48 | 49 | 47 | 50 | 51 | 50 | 44                                                                                                                                                                | 42 | 43 | 41              | 45.0          | 51.5          |  |  |  |  |                           |  |
| 16-Apr                                                                                                                | 41                            | 42 | 41 | 40 | A | 36 | 37 | 40 | 40 | 44 | 45 | 46 | 48 | 49 | 49 | 48 | 47 | 47 | 48 | 48 | 47                                                                                                                                                                | 47 | 48 | 49              | 44.7          | 49.1          |  |  |  |  |                           |  |
| 17-Apr                                                                                                                | 48                            | 48 | 48 | 48 | A | 45 | 42 | 45 | 45 | 43 | 46 | 46 | 47 | 49 | 49 | 48 | 48 | 48 | 48 | 46 | 45                                                                                                                                                                | 42 | 29 | 22              | 44.5          | 48.9          |  |  |  |  |                           |  |
| 18-Apr                                                                                                                | 24                            | 25 | 26 | 26 | A | 24 | 23 | 25 | 26 | 25 | 25 | 26 | 29 | 32 | 34 | 37 | 39 | 40 | 40 | 38 | 38                                                                                                                                                                | 39 | 36 | 36              | 30.9          | 39.8          |  |  |  |  |                           |  |
| 19-Apr                                                                                                                | 37                            | 40 | 40 | 44 | A | 42 | 40 | 42 | 40 | 42 | 52 | 53 | 53 | 54 | 55 | 55 | 55 | 54 | 55 | 54 | 52                                                                                                                                                                | 51 | 51 | 48              | 48.2          | 55.5          |  |  |  |  |                           |  |
| 20-Apr                                                                                                                | 50                            | 47 | 42 | 40 | A | 36 | 37 | 40 | 45 | 45 | 48 | 48 | 48 | 52 | 53 | 54 | 56 | 56 | 56 | 55 | 54                                                                                                                                                                | 56 | 54 | 54              | 49.0          | 56.1          |  |  |  |  |                           |  |
| 21-Apr                                                                                                                | 49                            | 49 | 43 | 43 | A | 40 | 40 | 33 | 37 | 38 | 46 | 53 | 52 | 54 | 56 | 56 | 57 | 56 | 54 | 51 | 50                                                                                                                                                                | 50 | 49 | 47              | 48.0          | 57.3          |  |  |  |  |                           |  |
| 22-Apr                                                                                                                | 47                            | 49 | 50 | 49 | A | 46 | 46 | 45 | 46 | 45 | 46 | 48 | 52 | 53 | 51 | 51 | 50 | 54 | 52 | 52 | 53                                                                                                                                                                | 52 | 50 | 49              | 49.4          | 53.6          |  |  |  |  |                           |  |
| 23-Apr                                                                                                                | 44                            | 44 | 39 | 36 | A | 35 | 35 | 32 | 32 | 32 | 32 | 32 | 32 | 33 | 36 | 38 | 38 | 38 | 36 | 35 | 35                                                                                                                                                                | 34 | 32 | 31              | 35.2          | 44.2          |  |  |  |  |                           |  |
| 24-Apr                                                                                                                | 30                            | 29 | 26 | 26 | A | 28 | 27 | 28 | 30 | 32 | 35 | 37 | 40 | 39 | 39 | 40 | 40 | 39 | 35 | 34 | 32                                                                                                                                                                | 29 | 25 | 24              | 32.3          | 40.1          |  |  |  |  |                           |  |
| 25-Apr                                                                                                                | 23                            | 22 | 20 | 24 | A | 20 | 22 | 21 | 26 | 30 | 32 | 33 | 33 | 33 | 33 | 38 | 38 | 35 | 34 | 34 | 31                                                                                                                                                                | 31 | 31 | 27              | 29.2          | 38.0          |  |  |  |  |                           |  |
| 26-Apr                                                                                                                | 29                            | 28 | 27 | 25 | A | 28 | 27 | 28 | 28 | 29 | 29 | 57 | 27 | 27 | 34 | 35 | 38 | 40 | 41 | 40 | 36                                                                                                                                                                | 37 | 36 | 34              | 33.0          | 57.4          |  |  |  |  |                           |  |
| 27-Apr                                                                                                                | 34                            | 32 | 29 | 26 | A | 24 | 21 | 23 | 24 | 25 | 26 | 34 | 40 | 48 | 52 | 51 | 49 | 51 | 50 | 48 | 46                                                                                                                                                                | 47 | 44 | 41              | 37.5          | 51.6          |  |  |  |  |                           |  |
| 28-Apr                                                                                                                | 41                            | 38 | 36 | 36 | A | 34 | 34 | 37 | 43 | 44 | 45 | 46 | 47 | 46 | 46 | 46 | 46 | 45 | 44 | 41 | 39                                                                                                                                                                | 39 | 35 | 36              | 41.0          | 47.1          |  |  |  |  |                           |  |
| 29-Apr                                                                                                                | 36                            | 37 | 36 | 35 | A | 32 | 31 | 31 | 33 | 36 | 43 | 45 | 47 | 49 | 49 | 50 | 51 | 55 | 55 | 48 | 47                                                                                                                                                                | 47 | 47 | 44              | 42.8          | 55.0          |  |  |  |  |                           |  |
| 30-Apr                                                                                                                | 43                            | 43 | 40 | 39 | A | 36 | 33 | 29 | 34 | 36 | 41 | 44 | 45 | 45 | 44 | 43 | 42 | 40 | 38 | 40 | 39                                                                                                                                                                | 37 | 37 | 35              | 39.3          | 45.1          |  |  |  |  |                           |  |
| 40.2 39.5 38.4 37.6 -- 36.1 35.3 35.6 36.7 38.7 40.3 43.4 43.7 45.0 46.0 46.6 46.5 46.6 45.9 44.9 43.5 42.9 41.7 40.8 |                               |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                   |    |    | Diurnal Average |               |               |  |  |  |  |                           |  |
| 51.5 50.3 50.2 49.2 -- 45.7 46.2 45.4 45.9 46.5 51.7 57.4 53.5 54.3 55.6 56.2 57.3 56.1 55.7 54.6 53.7 55.6 54.3 54.1 |                               |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                   |    |    | Diurnal Maximum |               |               |  |  |  |  |                           |  |
| C - Calibration A - Automated Daily Zero Span                                                                         |                               |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                   |    |    |                 |               |               |  |  |  |  |                           |  |

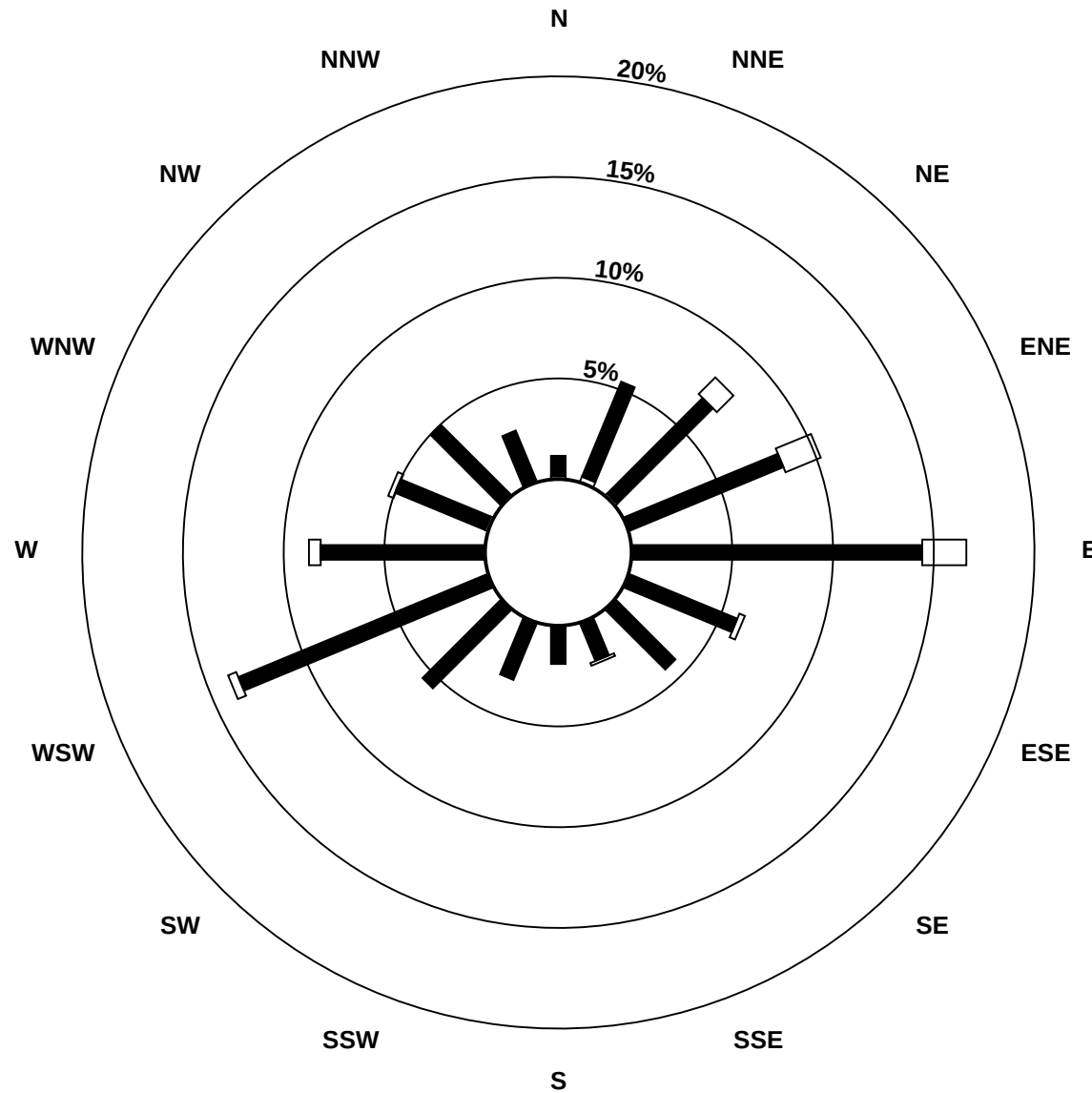
## Hourly Maximums

Ozone (O<sub>3</sub>) - ppb  
Beaverlodge - April 2014

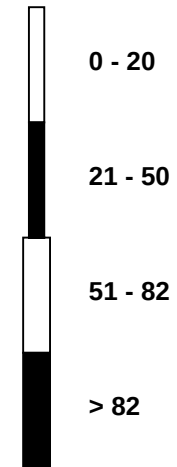


# Pollutant Rose

Ozone (O<sub>3</sub>) - ppb  
Beaverlodge - April 2014



## Pollutant Classes (ppb)



# Eight Hour Running Averages

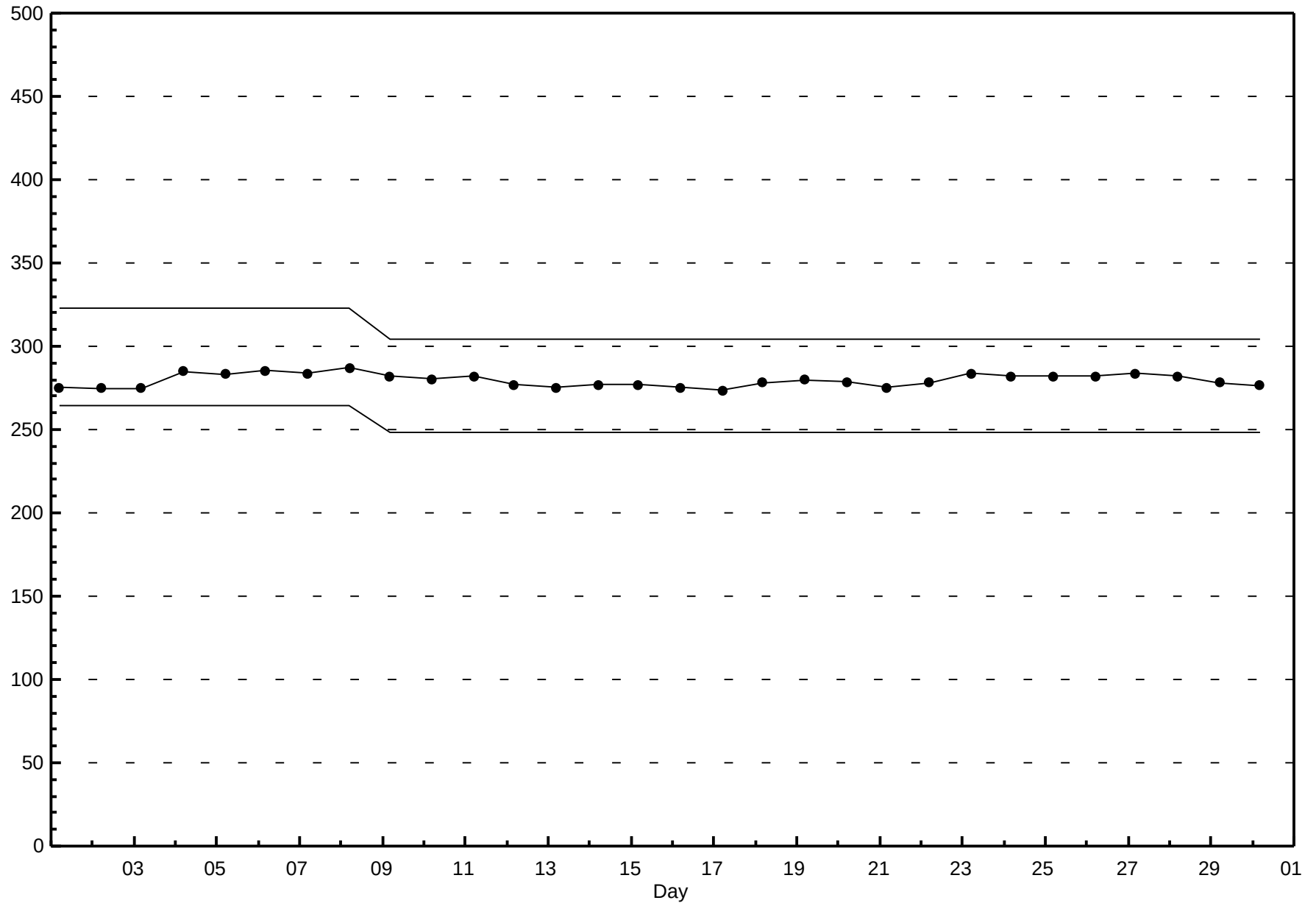
Ozone (O<sub>3</sub>) - ppb

Beaverlodge - April 2014

| Maximum Value: 53.5 ppb on Apr 20 22:00                                                                                                                           |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720           |                  |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---------------------------------|------------------|------|
| Minimum Value: 19.9 ppb on Apr 25 08:00                                                                                                                           |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Data: 713              |                  |      |
|                                                                                                                                                                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Missing Data: 7        |                  |      |
| Percentiles: P <sub>1</sub> = 22.4 P <sub>10</sub> = 30.4 Q <sub>1</sub> = 35.2 Median = 39.6 Q <sub>3</sub> = 44.6 P <sub>90</sub> = 47.5 P <sub>99</sub> = 52.8 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 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-Apr                                                                                                                                                             | 33                            | 33 | 32 | 31 | 31 | 30 | 31 | 30 | 30 | 29 | 30 | 31 | 32 | 35 | 38 | 41 | 44 | 47 | 49 | 51 | 52 | 52 | 52 | 52                              | 52               | 51.9 |
| 2-Apr                                                                                                                                                             | 51                            | 51 | 50 | 49 | 49 | 47 | 45 | 44 | 42 | 41 | 40 | 40 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 46 | 46 | 46 | 45 | 45                              | 45               | 51.4 |
| 3-Apr                                                                                                                                                             | 44                            | 43 | 43 | 42 | 42 | 41 | 39 | 37 | 36 | 35 | 34 | 34 | 35 | 35 | 37 | 38 | 39 | 39 | 40 | 39 | 38 | 37 | 36 | 35                              | 35               | 44.2 |
| 4-Apr                                                                                                                                                             | 34                            | 33 | 32 | 32 | 31 | 31 | 31 | 31 | 32 | 34 | 35 | 37 | 38 | 41 | 43 | 45 | 46 | 47 | 48 | 48 | 48 | 47 | 47 | 46                              | 46               | 48.1 |
| 5-Apr                                                                                                                                                             | 45                            | 44 | 43 | 42 | 42 | 40 | 38 | 36 | 34 | 35 | 36 | 37 | 38 | 40 | 42 | 44 | 45 | 46 | 45 | 45 | 44 | 43 | 42 | 41                              | 41               | 45.7 |
| 6-Apr                                                                                                                                                             | 41                            | 40 | 40 | 40 | 40 | 39 | 39 | 39 | 39 | 39 | 39 | 39 | 40 | 40 | 41 | 41 | 42 | 42 | 42 | 42 | 42 | 42 | 41 | 40                              | 40               | 42.2 |
| 7-Apr                                                                                                                                                             | 39                            | 39 | 38 | 39 | 38 | 38 | 38 | 38 | 38 | 38 | 37 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 37 | 37 | 37 | 37 | 37                              | 37               | 39.5 |
| 8-Apr                                                                                                                                                             | 37                            | 37 | 36 | 36 | 36 | 35 | 34 | 34 | 33 | 34 | 35 | 37 | 37 | 37 | N  | N  | N  | N  | N  | N  | N  | 45 | 45 | 45                              | 45               | 45.1 |
| 9-Apr                                                                                                                                                             | 45                            | 44 | 44 | 43 | 43 | 42 | 42 | 42 | 42 | 42 | 43 | 43 | 43 | 44 | 44 | 45 | 45 | 45 | 45 | 44 | 44 | 44 | 44 | 44                              | 44               | 44.8 |
| 10-Apr                                                                                                                                                            | 44                            | 43 | 42 | 41 | 41 | 41 | 40 | 40 | 40 | 40 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 48 | 48 | 48 | 47 | 46 | 45 | 44                              | 44               | 48.3 |
| 11-Apr                                                                                                                                                            | 43                            | 43 | 43 | 42 | 42 | 42 | 41 | 39 | 37 | 36 | 36 | 35 | 36 | 36 | 36 | 37 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 38                              | 38               | 43.4 |
| 12-Apr                                                                                                                                                            | 38                            | 38 | 38 | 38 | 38 | 37 | 36 | 34 | 33 | 33 | 33 | 34 | 35 | 37 | 39 | 41 | 44 | 45 | 46 | 46 | 47 | 46 | 45 | 45                              | 45               | 46.6 |
| 13-Apr                                                                                                                                                            | 43                            | 42 | 40 | 39 | 38 | 37 | 36 | 34 | 33 | 33 | 33 | 34 | 34 | 35 | 37 | 38 | 40 | 41 | 42 | 43 | 44 | 43 | 43 | 42                              | 42               | 43.5 |
| 14-Apr                                                                                                                                                            | 41                            | 39 | 39 | 38 | 38 | 38 | 38 | 39 | 39 | 39 | 40 | 41 | 42 | 43 | 45 | 46 | 48 | 49 | 51 | 52 | 52 | 52 | 51 | 50                              | 50               | 51.9 |
| 15-Apr                                                                                                                                                            | 49                            | 47 | 46 | 44 | 43 | 41 | 40 | 39 | 39 | 39 | 40 | 40 | 40 | 42 | 42 | 43 | 44 | 45 | 46 | 47 | 46 | 46 | 45 | 44                              | 44               | 48.9 |
| 16-Apr                                                                                                                                                            | 43                            | 42 | 41 | 40 | 39 | 39 | 38 | 38 | 38 | 38 | 39 | 39 | 40 | 42 | 44 | 45 | 46 | 46 | 47 | 47 | 47 | 47 | 47 | 47                              | 47               | 47.3 |
| 17-Apr                                                                                                                                                            | 47                            | 47 | 47 | 47 | 47 | 46 | 45 | 45 | 44 | 43 | 43 | 43 | 43 | 44 | 45 | 45 | 46 | 47 | 47 | 47 | 47 | 45 | 42 | 39                              | 39               | 47.2 |
| 18-Apr                                                                                                                                                            | 35                            | 33 | 30 | 28 | 25 | 23 | 23 | 24 | 24 | 24 | 24 | 24 | 25 | 26 | 28 | 29 | 31 | 33 | 35 | 36 | 37 | 37 | 37 | 37                              | 37               | 36.9 |
| 19-Apr                                                                                                                                                            | 36                            | 36 | 36 | 37 | 37 | 37 | 38 | 38 | 39 | 39 | 40 | 42 | 43 | 45 | 47 | 49 | 51 | 52 | 53 | 53 | 53 | 52 | 51 | 50                              | 50               | 52.9 |
| 20-Apr                                                                                                                                                            | 49                            | 48 | 45 | 44 | 43 | 41 | 39 | 38 | 38 | 38 | 39 | 41 | 41 | 43 | 45 | 47 | 49 | 50 | 51 | 52 | 53 | 53 | 53 | 52                              | 52               | 53.5 |
| 21-Apr                                                                                                                                                            | 51                            | 50 | 48 | 47 | 46 | 43 | 41 | 39 | 37 | 36 | 36 | 37 | 38 | 40 | 43 | 47 | 50 | 52 | 53 | 53 | 53 | 52 | 51 | 50                              | 50               | 53.4 |
| 22-Apr                                                                                                                                                            | 48                            | 47 | 47 | 46 | 46 | 46 | 46 | 46 | 45 | 45 | 44 | 44 | 45 | 46 | 47 | 47 | 48 | 48 | 49 | 50 | 50 | 50 | 50 | 49                              | 49               | 50.2 |
| 23-Apr                                                                                                                                                            | 49                            | 48 | 46 | 43 | 42 | 40 | 37 | 35 | 33 | 31 | 31 | 31 | 31 | 31 | 31 | 32 | 33 | 34 | 34 | 35 | 35 | 35 | 35 | 34                              | 34               | 48.8 |
| 24-Apr                                                                                                                                                            | 33                            | 32 | 31 | 29 | 29 | 28 | 27 | 26 | 26 | 27 | 28 | 29 | 30 | 32 | 33 | 35 | 36 | 37 | 37 | 37 | 36 | 35 | 33 | 31                              | 31               | 37.1 |
| 25-Apr                                                                                                                                                            | 29                            | 27 | 25 | 23 | 22 | 21 | 21 | 20 | 20 | 21 | 22 | 24 | 25 | 26 | 28 | 30 | 32 | 33 | 33 | 33 | 33 | 33 | 32 | 31                              | 31               | 33.1 |
| 26-Apr                                                                                                                                                            | 30                            | 29 | 28 | 27 | 27 | 26 | 25 | 25 | 25 | 25 | 25 | 26 | 26 | 26 | 27 | 28 | 29 | 31 | 32 | 33 | 35 | 36 | 36 | 36                              | 36               | 36.3 |
| 27-Apr                                                                                                                                                            | 36                            | 35 | 34 | 32 | 31 | 30 | 27 | 25 | 24 | 23 | 23 | 23 | 25 | 27 | 31 | 35 | 38 | 41 | 44 | 46 | 46 | 46 | 46 | 44                              | 44               | 46.5 |
| 28-Apr                                                                                                                                                            | 43                            | 42 | 40 | 39 | 38 | 37 | 35 | 34 | 35 | 36 | 37 | 39 | 40 | 41 | 43 | 44 | 45 | 45 | 44 | 44 | 43 | 42 | 40 | 39                              | 39               | 44.6 |
| 29-Apr                                                                                                                                                            | 38                            | 37 | 36 | 35 | 34 | 34 | 33 | 32 | 31 | 31 | 32 | 34 | 35 | 37 | 40 | 42 | 45 | 47 | 48 | 49 | 49 | 49 | 48 | 47                              | 47               | 48.7 |
| 30-Apr                                                                                                                                                            | 46                            | 45 | 43 | 42 | 41 | 40 | 38 | 35 | 34 | 33 | 33 | 34 | 35 | 36 | 38 | 40 | 41 | 41 | 41 | 41 | 40 | 39 | 38 | 37                              | 37               | 46.2 |
| 51.4 50.8 50.3 49.3 49.1 47.1 45.7 45.5 45.4 45.0 44.3 44.4 45.0 45.7 46.9 48.8 50.8 52.3 53.2 53.4 52.9 53.5 52.9 51.9                                           |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                 | Diurnal Maximums |      |
| N - Not Valid                                                                                                                                                     |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                 |                  |      |

## Span Responses

Ozone (O<sub>3</sub>)  
Beaverlodge - April 2014

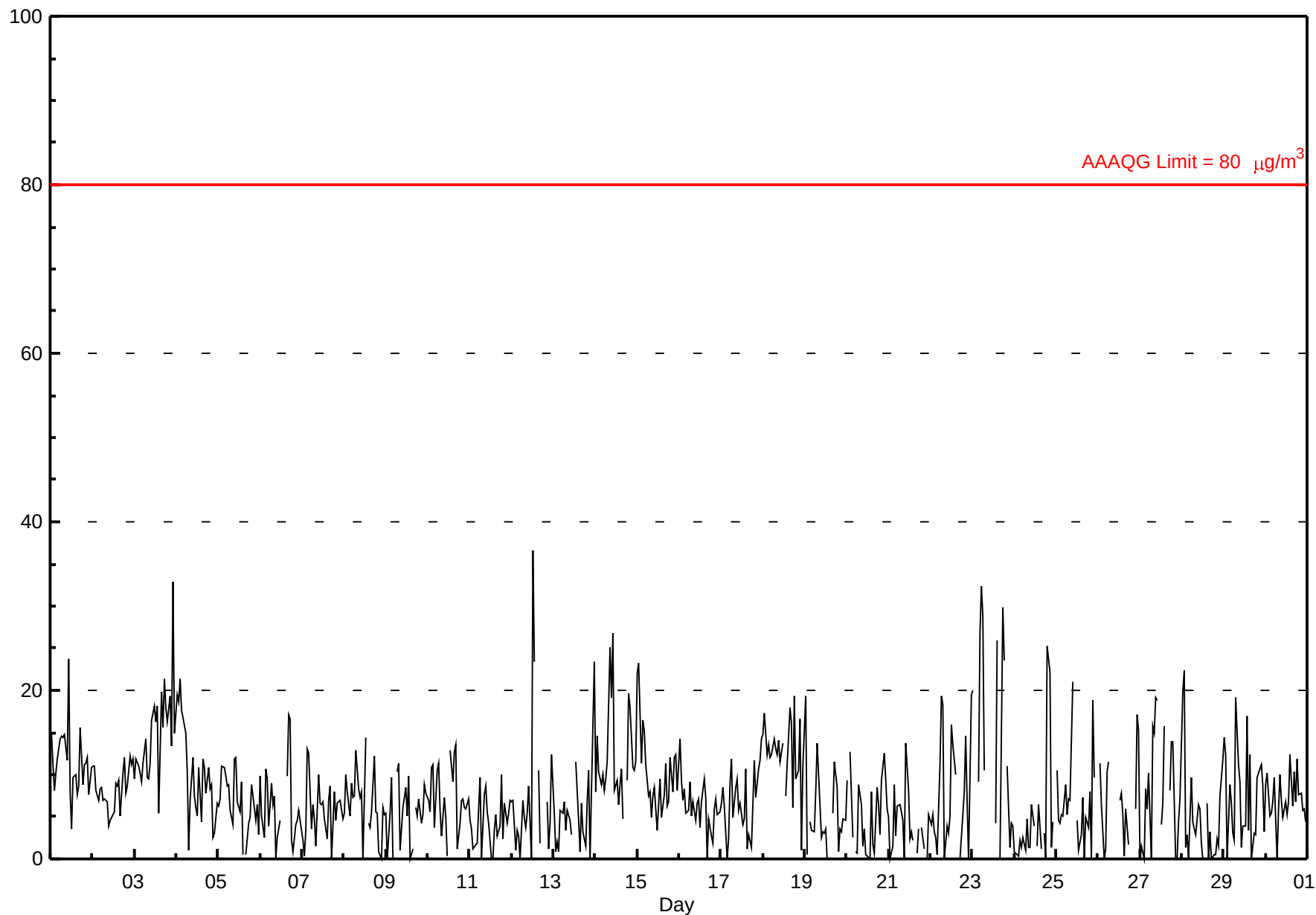


# Hourly Averages

Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

Beaverlodge - April 2014

|                                                                                                                                                                                                              |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                                                                            |               |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------|--|
| Number of Exceedences: 1-hr: 0 24-hr: 0<br>Maximum Value: 36.5 µg/m³ on Apr 12 13:00<br>Minimum Value: 0 µg/m³ on Apr 7 18:00<br>Maximum Diurnal Average: 9.8 µg/m³ at hour 1<br>Monthly Average: 7.70 µg/m³ |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 14.7 µg/m³ on Apr 3<br>Minimum Daily Average: 4.0 µg/m³ on Apr 21<br>Minimum Diurnal Average: 5.6 µg/m³ at hour 12<br>Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 1.0 Q <sub>1</sub> = 3.8 Median = 6.8 Q <sub>3</sub> = 10.6 P <sub>90</sub> = 14.8 P <sub>99</sub> = 26.7 |               |                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Hours in Service: 720<br>Hours of Data: 670<br>Hours of Missing Data: 50<br>Hours of Calibration: 0<br>Percent Operational Time: 93.1 |  |
| Day                                                                                                                                                                                                          | Hourly Period Ending At (MST) |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                                                                            | Daily Average | Daily Maximum   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 1-Apr                                                                                                                                                                                                        | 15                            | 11 | 8  | 10 | 12 | 14 | 15 | 14 | 15 | 12 | 24 | 8  | 3  | 10 | 10 | 8  | 9  | 16 | 9  | 11 | 11 | 12 | 8  | 11                                                                                                                                                                                                                                                                                                         | 11.4          | 23.8            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 2-Apr                                                                                                                                                                                                        | 11                            | 11 | 8  | 7  | 8  | 8  | 7  | 7  | 7  | 4  | 5  | 5  | 6  | 9  | 9  | 9  | 5  | 10 | 12 | 8  | 9  | 12 | 11 | 12                                                                                                                                                                                                                                                                                                         | 8.3           | 12.1            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 3-Apr                                                                                                                                                                                                        | 10                            | 12 | 11 | 10 | 9  | 11 | 14 | 10 | 9  | 11 | 16 | 18 | 16 | 18 | 5  | 20 | 16 | 21 | 18 | 16 | 19 | 13 | 33 | 15                                                                                                                                                                                                                                                                                                         | 14.7          | 32.9            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 4-Apr                                                                                                                                                                                                        | 19                            | 19 | 21 | 18 | 17 | 15 | 10 | 1  | 7  | 12 | 8  | 6  | 5  | 11 | 4  | 12 | 11 | 8  | 11 | 8  | 9  | 3  | 3  | 7                                                                                                                                                                                                                                                                                                          | 10.1          | 21.4            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 5-Apr                                                                                                                                                                                                        | 6                             | 7  | 11 | 11 | 10 | 9  | 9  | 6  | 4  | 12 | 12 | 7  | 6  | 9  | 1  | N  | 0  | 4  | 5  | 9  | 7  | 4  | 6  | 3                                                                                                                                                                                                                                                                                                          | 6.9           | 12.1            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 6-Apr                                                                                                                                                                                                        | 10                            | 5  | 2  | 11 | 10 | 4  | 9  | 6  | 7  | 0  | 3  | 5  | N  | N  | N  | 10 | 17 | 17 | 2  | 1  | 4  | 5  | 6  | 5                                                                                                                                                                                                                                                                                                          | 6.5           | 17.2            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 7-Apr                                                                                                                                                                                                        | 2                             | 0  | 3  | 13 | 12 | 4  | 6  | 5  | 2  | 10 | 7  | 6  | 7  | 5  | 2  | 7  | 9  | 0  | 8  | 5  | 7  | 7  | 7  | 5                                                                                                                                                                                                                                                                                                          | 5.7           | 13.1            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 8-Apr                                                                                                                                                                                                        | 5                             | 10 | 8  | 5  | 9  | 7  | 8  | 13 | 8  | 7  | 8  | 0  | 14 | N  | 4  | 4  | 6  | 12 | 6  | 5  | 1  | 0  | 6  | 5                                                                                                                                                                                                                                                                                                          | 6.6           | 14.3            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 9-Apr                                                                                                                                                                                                        | 5                             | 0  | 5  | 10 | 0  | N  | 10 | 11 | 1  | 4  | 6  | 9  | 5  | 10 | 0  | 1  | N  | 6  | 5  | 7  | 4  | 5  | 9  | 8                                                                                                                                                                                                                                                                                                          | 5.5           | 11.4            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 10-Apr                                                                                                                                                                                                       | 7                             | 6  | 11 | 11 | 4  | 10 | 11 | 6  | 3  | 7  | 5  | 0  | N  | 13 | 9  | 13 | 14 | 1  | 4  | 7  | 7  | 6  | 6  | 7                                                                                                                                                                                                                                                                                                          | 7.3           | 13.5            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 11-Apr                                                                                                                                                                                                       | 5                             | 4  | 1  | 2  | 2  | 6  | 10 | 0  | 8  | 9  | 6  | 4  | 0  | 0  | 3  | 5  | 3  | 4  | 10 | 2  | 7  | 4  | 6  | 7                                                                                                                                                                                                                                                                                                          | 4.4           | 9.9             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 12-Apr                                                                                                                                                                                                       | 7                             | 7  | 1  | 3  | 3  | 0  | 7  | 5  | 4  | 5  | 9  | 0  | 37 | 23 | N  | 11 | 2  | N  | N  | N  | 7  | 1  | 4  | 12                                                                                                                                                                                                                                                                                                         | 7.4           | 36.5            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 13-Apr                                                                                                                                                                                                       | 5                             | 1  | 2  | 1  | 6  | 5  | 7  | 3  | 6  | 5  | 3  | N  | N  | 12 | 5  | 1  | 7  | 3  | 1  | 7  | 10 | 0  | 8  | 23                                                                                                                                                                                                                                                                                                         | 5.5           | 23.4            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 14-Apr                                                                                                                                                                                                       | 8                             | 15 | 10 | 9  | 10 | 8  | 10 | 12 | 25 | 19 | 27 | 8  | 9  | 6  | 9  | 11 | 5  | N  | 9  | 20 | 18 | 11 | 10 | 12                                                                                                                                                                                                                                                                                                         | 12.2          | 26.7            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 15-Apr                                                                                                                                                                                                       | 22                            | 23 | 11 | 16 | 15 | 11 | 7  | 8  | 5  | 7  | 9  | 3  | 6  | 9  | 5  | 8  | 11 | 6  | 7  | 12 | 8  | 12 | 12 | 8                                                                                                                                                                                                                                                                                                          | 10.2          | 23.1            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 16-Apr                                                                                                                                                                                                       | 14                            | 9  | 7  | 8  | 5  | 6  | 9  | 5  | 7  | 5  | 7  | 7  | 4  | 7  | 10 | 7  | 0  | 5  | 3  | 2  | 6  | 7  | 5  | 6                                                                                                                                                                                                                                                                                                          | 6.3           | 14.3            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 17-Apr                                                                                                                                                                                                       | 7                             | 8  | 6  | 0  | 2  | 9  | 12 | 5  | 8  | 9  | 6  | 7  | 4  | 5  | 11 | 1  | 3  | 1  | 6  | 12 | 7  | 11 | 12 | 14                                                                                                                                                                                                                                                                                                         | 7.0           | 14.3            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 18-Apr                                                                                                                                                                                                       | 15                            | 17 | 12 | 14 | 12 | 12 | 14 | 13 | 12 | 14 | 12 | 14 | N  | 7  | 11 | 18 | 16 | 6  | 19 | 9  | 11 | 17 | 1  | 11                                                                                                                                                                                                                                                                                                         | 12.5          | 19.3            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 19-Apr                                                                                                                                                                                                       | 19                            | 0  | N  | 4  | 3  | 3  | 8  | 14 | 10 | 3  | 3  | 3  | 4  | 0  | N  | N  | 5  | 11 | 8  | 1  | 4  | 3  | 5  | 5                                                                                                                                                                                                                                                                                                          | 5.6           | 19.3            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 20-Apr                                                                                                                                                                                                       | 9                             | N  | 13 | 3  | N  | 1  | 1  | 9  | 6  | 1  | 4  | 1  | 0  | 0  | 8  | 2  | 1  | 9  | 7  | 3  | 9  | 13 | 10 | 6                                                                                                                                                                                                                                                                                                          | 5.1           | 12.8            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 21-Apr                                                                                                                                                                                                       | 5                             | 0  | 2  | 9  | 3  | 6  | 6  | 6  | 5  | 0  | 14 | 8  | 2  | 3  | 2  | N  | 1  | 4  | N  | 4  | 1  | N  | 0  | 5                                                                                                                                                                                                                                                                                                          | 4.0           | 13.7            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 22-Apr                                                                                                                                                                                                       | 4                             | 5  | 3  | 2  | 0  | 11 | 19 | 18 | 0  | 4  | 3  | 5  | 16 | 14 | 10 | N  | 0  | 0  | 5  | 8  | 15 | 7  | 0  | 19                                                                                                                                                                                                                                                                                                         | 7.4           | 19.5            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 23-Apr                                                                                                                                                                                                       | 20                            | N  | N  | 9  | 27 | 32 | 29 | 10 | N  | N  | 12 | N  | N  | 4  | 26 | N  | 0  | 30 | 24 | N  | 11 | 1  | 4  | 4                                                                                                                                                                                                                                                                                                          | --            | 32.4            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 24-Apr                                                                                                                                                                                                       | 1                             | 1  | 0  | 2  | 1  | 3  | 1  | 5  | 1  | 1  | 6  | 4  | N  | 1  | 6  | 1  | N  | 3  | 0  | 25 | 22 | 1  | 4  | N                                                                                                                                                                                                                                                                                                          | 4.4           | 25.2            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 25-Apr                                                                                                                                                                                                       | 11                            | 5  | 4  | 5  | 5  | 9  | 5  | 7  | 7  | 21 | N  | N  | 5  | 1  | 3  | 7  | 0  | 5  | 4  | 8  | 0  | 19 | 10 | N                                                                                                                                                                                                                                                                                                          | 6.6           | 21.0            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 26-Apr                                                                                                                                                                                                       | N                             | 11 | 6  | 0  | 1  | 10 | 12 | N  | N  | 0  | N  | N  | 7  | 8  | 5  | 0  | 6  | 2  | N  | 11 | N  | 6  | 17 | 15                                                                                                                                                                                                                                                                                                         | --            | 17.1            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 27-Apr                                                                                                                                                                                                       | 0                             | 2  | 0  | 8  | 6  | 10 | 0  | 16 | 15 | 19 | 19 | N  | 4  | 7  | 16 | N  | N  | 8  | 14 | 14 | 0  | 0  | 4  | 7                                                                                                                                                                                                                                                                                                          | 8.0           | 19.2            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 28-Apr                                                                                                                                                                                                       | 20                            | 22 | 1  | 3  | 0  | 10 | 4  | 4  | 3  | 6  | 6  | 2  | 0  | N  | 7  | 0  | 3  | 0  | 0  | 1  | 2  | 2  | 7  | 12                                                                                                                                                                                                                                                                                                         | 5.0           | 22.4            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 29-Apr                                                                                                                                                                                                       | 14                            | 12 | 0  | 9  | 7  | 3  | 2  | 19 | 11 | 9  | 1  | 4  | 4  | 17 | 3  | 12 | 0  | 3  | 3  | 10 | 10 | 11 | 9  | 3                                                                                                                                                                                                                                                                                                          | 7.4           | 19.2            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 30-Apr                                                                                                                                                                                                       | 9                             | 10 | 5  | 5  | 7  | 10 | 0  | 6  | 10 | 7  | 5  | 7  | 5  | 7  | 12 | 6  | 10 | 7  | 12 | 8  | 8  | 6  | 6  | 4                                                                                                                                                                                                                                                                                                          | 7.1           | 12.4            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 9.8 8.3 6.3 7.3 7.1 8.6 8.8 8.4 7.4 7.7 8.7 5.6 7.0 8.0 7.3 7.2 5.9 7.2 7.9 8.3 8.1 6.9 7.7 8.9                                                                                                              |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                                                                            |               | Diurnal Average |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 22.0 23.1 21.4 17.6 26.7 32.4 28.8 19.2 25.2 21.0 26.7 18.1 36.5 23.4 25.9 19.7 17.2 29.8 23.6 25.2 22.3 18.9 32.9 23.4                                                                                      |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                                                                            |               | Diurnal Maximum |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |                                                                                                                                       |  |
| 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 Maximums

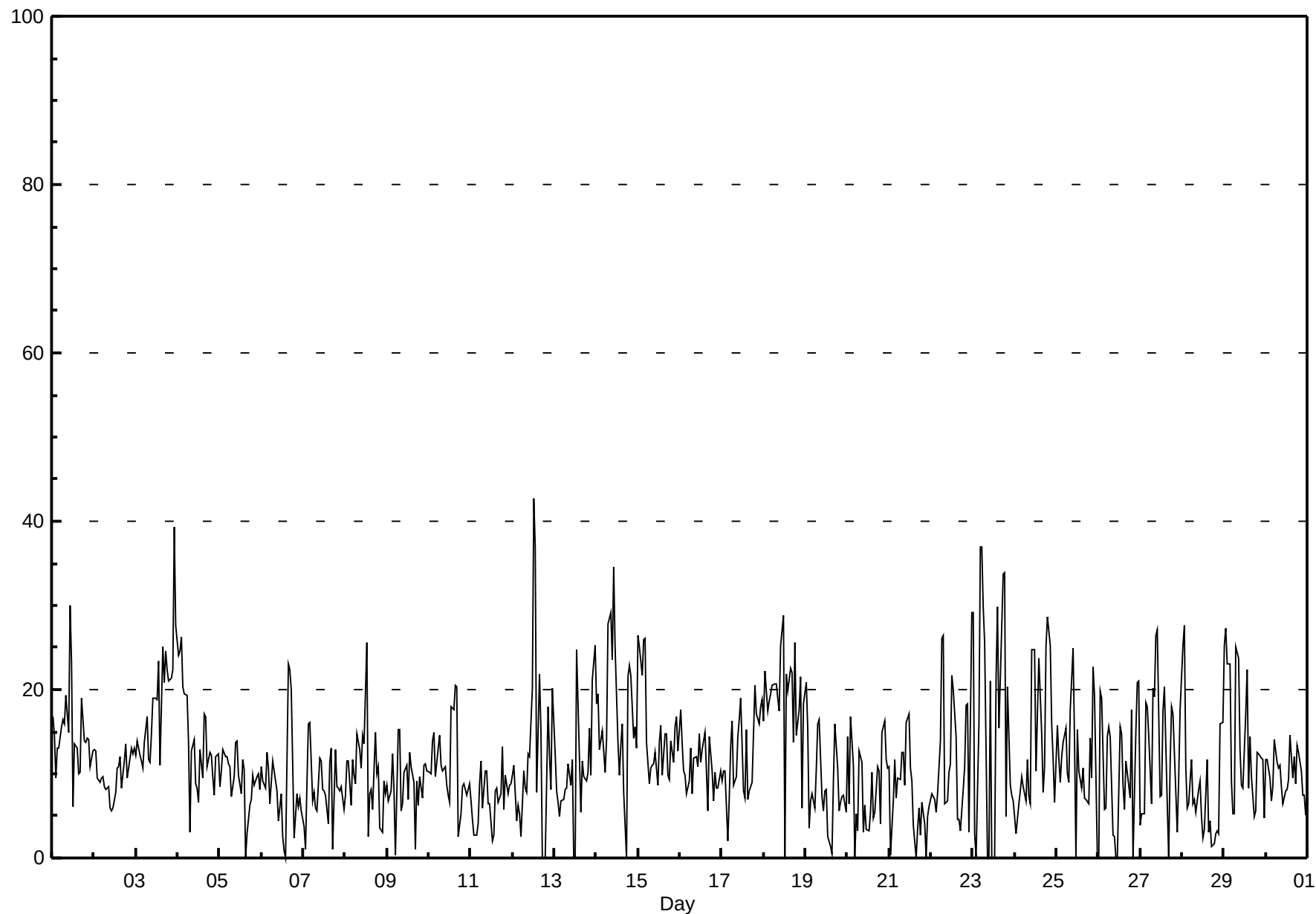
Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

Beaverlodge - April 2014

| Maximum Value: 42.7 μg/m³ on Apr 12 13:00      |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 18.7 μg/m³ on Apr 18                                                                                                                    |    |    |    |                 |               |  |  |  |  | Hours in Service: 720    |  |
|------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|-----------------|---------------|--|--|--|--|--------------------------|--|
| Minimum Value: 0 μg/m³ on Apr 5 16:00          |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 7.1 μg/m³ on Apr 11                                                                                                                     |    |    |    |                 |               |  |  |  |  | Hours of Data: 720       |  |
| Maximum Diurnal Average: 13.5 μg/m³ at hour 11 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 10.2 μg/m³ at hour 18                                                                                                                 |    |    |    |                 |               |  |  |  |  | Hours of Missing Data: 0 |  |
| Monthly Average: 11.71 μg/m³                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 4.0 Q <sub>1</sub> = 7.2 Median = 10.6 Q <sub>3</sub> = 15.1 P <sub>90</sub> = 21.4 P <sub>99</sub> = 33.6 |    |    |    |                 |               |  |  |  |  | Hours of Calibration: 0  |  |
|                                                |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percent Operational Time: 100.0                                                                                                                                |    |    |    |                 |               |  |  |  |  |                          |  |
| Day                                            | Hourly Period Ending At (MST) |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                |    |    |    | Daily Average   | Daily Maximum |  |  |  |  |                          |  |
|                                                | 1                             | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21                                                                                                                                                             | 22 | 23 | 24 |                 |               |  |  |  |  |                          |  |
| 1-Apr                                          | 17                            | 15 | 10 | 13 | 13 | 16 | 16 | 16 | 19 | 15 | 30 | 23 | 6  | 14 | 13 | 10 | 10 | 19 | 14 | 14 | 14                                                                                                                                                             | 14 | 11 | 13 | 14.7            | 30.1          |  |  |  |  |                          |  |
| 2-Apr                                          | 13                            | 13 | 10 | 9  | 9  | 10 | 9  | 8  | 8  | 6  | 6  | 6  | 8  | 11 | 11 | 12 | 8  | 12 | 14 | 9  | 11                                                                                                                                                             | 13 | 12 | 13 | 10.0            | 13.5          |  |  |  |  |                          |  |
| 3-Apr                                          | 12                            | 14 | 12 | 12 | 11 | 14 | 17 | 12 | 11 | 15 | 19 | 19 | 19 | 23 | 11 | 25 | 21 | 25 | 22 | 21 | 21                                                                                                                                                             | 22 | 39 | 28 | 18.5            | 39.4          |  |  |  |  |                          |  |
| 4-Apr                                          | 24                            | 25 | 26 | 20 | 20 | 19 | 14 | 3  | 13 | 14 | 9  | 8  | 7  | 13 | 10 | 17 | 17 | 11 | 13 | 12 | 10                                                                                                                                                             | 7  | 12 | 12 | 13.9            | 26.2          |  |  |  |  |                          |  |
| 5-Apr                                          | 8                             | 10 | 13 | 12 | 12 | 11 | 11 | 7  | 10 | 14 | 14 | 10 | 8  | 12 | 11 | 0  | 3  | 6  | 7  | 10 | 9                                                                                                                                                              | 10 | 10 | 8  | 9.4             | 13.9          |  |  |  |  |                          |  |
| 6-Apr                                          | 11                            | 9  | 8  | 13 | 11 | 6  | 12 | 10 | 9  | 8  | 4  | 8  | 3  | 1  | 0  | 23 | 22 | 20 | 11 | 2  | 8                                                                                                                                                              | 6  | 7  | 6  | 9.1             | 23.0          |  |  |  |  |                          |  |
| 7-Apr                                          | 4                             | 1  | 9  | 16 | 16 | 7  | 8  | 6  | 6  | 12 | 12 | 8  | 8  | 7  | 4  | 11 | 13 | 1  | 13 | 8  | 8                                                                                                                                                              | 8  | 8  | 6  | 8.3             | 16.0          |  |  |  |  |                          |  |
| 8-Apr                                          | 7                             | 12 | 11 | 6  | 12 | 10 | 9  | 15 | 13 | 11 | 15 | 14 | 26 | 3  | 8  | 8  | 6  | 15 | 10 | 11 | 4                                                                                                                                                              | 3  | 9  | 8  | 10.1            | 25.5          |  |  |  |  |                          |  |
| 9-Apr                                          | 9                             | 7  | 8  | 12 | 8  | 0  | 15 | 15 | 6  | 6  | 10 | 11 | 7  | 13 | 11 | 9  | 1  | 9  | 6  | 10 | 7                                                                                                                                                              | 11 | 11 | 10 | 8.9             | 15.3          |  |  |  |  |                          |  |
| 10-Apr                                         | 10                            | 10 | 14 | 15 | 10 | 13 | 15 | 11 | 10 | 11 | 9  | 7  | 7  | 18 | 18 | 20 | 20 | 3  | 5  | 9  | 9                                                                                                                                                              | 8  | 7  | 9  | 11.1            | 20.4          |  |  |  |  |                          |  |
| 11-Apr                                         | 7                             | 5  | 3  | 3  | 4  | 9  | 12 | 6  | 10 | 10 | 6  | 6  | 2  | 3  | 8  | 8  | 7  | 8  | 13 | 6  | 10                                                                                                                                                             | 8  | 9  | 9  | 7.1             | 13.2          |  |  |  |  |                          |  |
| 12-Apr                                         | 10                            | 11 | 4  | 6  | 5  | 2  | 10 | 8  | 8  | 12 | 12 | 20 | 43 | 37 | 8  | 22 | 15 | 0  | 0  | 0  | 18                                                                                                                                                             | 12 | 8  | 20 | 12.2            | 42.7          |  |  |  |  |                          |  |
| 13-Apr                                         | 12                            | 8  | 7  | 5  | 7  | 7  | 8  | 8  | 11 | 9  | 12 | 0  | 0  | 25 | 12 | 5  | 12 | 10 | 9  | 10 | 15                                                                                                                                                             | 10 | 21 | 25 | 10.3            | 25.2          |  |  |  |  |                          |  |
| 14-Apr                                         | 18                            | 20 | 13 | 15 | 13 | 10 | 14 | 28 | 29 | 24 | 35 | 25 | 14 | 10 | 13 | 16 | 8  | 0  | 21 | 23 | 22                                                                                                                                                             | 14 | 16 | 13 | 17.2            | 34.5          |  |  |  |  |                          |  |
| 15-Apr                                         | 26                            | 25 | 22 | 26 | 26 | 14 | 9  | 11 | 11 | 11 | 13 | 9  | 14 | 16 | 10 | 15 | 15 | 10 | 9  | 14 | 11                                                                                                                                                             | 16 | 17 | 13 | 15.0            | 26.4          |  |  |  |  |                          |  |
| 16-Apr                                         | 18                            | 14 | 10 | 10 | 8  | 9  | 13 | 8  | 12 | 12 | 11 | 15 | 11 | 13 | 15 | 10 | 6  | 14 | 10 | 7  | 10                                                                                                                                                             | 8  | 8  | 10 | 10.9            | 17.7          |  |  |  |  |                          |  |
| 17-Apr                                         | 9                             | 10 | 10 | 2  | 7  | 13 | 16 | 9  | 10 | 14 | 16 | 19 | 8  | 7  | 15 | 7  | 8  | 9  | 15 | 21 | 17                                                                                                                                                             | 16 | 18 | 19 | 12.3            | 20.5          |  |  |  |  |                          |  |
| 18-Apr                                         | 16                            | 22 | 17 | 19 | 19 | 21 | 21 | 21 | 19 | 17 | 25 | 29 | 0  | 22 | 20 | 22 | 14 | 26 | 15 | 18 | 22                                                                                                                                                             | 6  | 18 |    | 18.7            | 28.9          |  |  |  |  |                          |  |
| 19-Apr                                         | 21                            | 15 | 4  | 7  | 8  | 6  | 11 | 16 | 17 | 7  | 6  | 8  | 8  | 3  | 1  | 0  | 9  | 16 | 11 | 6  | 7                                                                                                                                                              | 7  | 7  | 6  | 8.5             | 20.9          |  |  |  |  |                          |  |
| 20-Apr                                         | 14                            | 6  | 17 | 11 | 0  | 5  | 3  | 13 | 11 | 3  | 6  | 3  | 3  | 5  | 10 | 5  | 5  | 11 | 10 | 4  | 15                                                                                                                                                             | 16 | 12 | 11 | 8.4             | 16.7          |  |  |  |  |                          |  |
| 21-Apr                                         | 11                            | 0  | 7  | 12 | 7  | 10 | 9  | 13 | 13 | 9  | 16 | 17 | 11 | 9  | 4  | 0  | 3  | 6  | 3  | 7  | 4                                                                                                                                                              | 0  | 5  | 6  | 7.5             | 17.1          |  |  |  |  |                          |  |
| 22-Apr                                         | 8                             | 7  | 7  | 5  | 8  | 14 | 26 | 26 | 6  | 7  | 10 | 11 | 22 | 20 | 14 | 5  | 5  | 3  | 8  | 11 | 18                                                                                                                                                             | 18 | 3  | 29 | 12.2            | 29.1          |  |  |  |  |                          |  |
| 23-Apr                                         | 29                            | 3  | 0  | 16 | 37 | 37 | 30 | 26 | 0  | 0  | 21 | 0  | 0  | 21 | 30 | 16 | 21 | 34 | 34 | 5  | 20                                                                                                                                                             | 9  | 7  | 7  | 16.8            | 37.0          |  |  |  |  |                          |  |
| 24-Apr                                         | 5                             | 3  | 6  | 8  | 10 | 8  | 7  | 12 | 7  | 7  | 25 | 25 | 10 | 17 | 24 | 15 | 8  | 11 | 25 | 29 | 25                                                                                                                                                             | 16 | 12 | 7  | 13.3            | 28.7          |  |  |  |  |                          |  |
| 25-Apr                                         | 16                            | 12 | 9  | 12 | 14 | 16 | 10 | 9  | 18 | 25 | 14 | 0  | 15 | 10 | 8  | 11 | 7  | 7  | 6  | 14 | 10                                                                                                                                                             | 23 | 19 | 0  | 11.9            | 24.9          |  |  |  |  |                          |  |
| 26-Apr                                         | 0                             | 20 | 19 | 6  | 6  | 14 | 16 | 14 | 3  | 3  | 0  | 0  | 16 | 15 | 9  | 6  | 12 | 9  | 7  | 18 | 0                                                                                                                                                              | 15 | 21 | 21 | 10.3            | 21.0          |  |  |  |  |                          |  |
| 27-Apr                                         | 4                             | 5  | 5  | 18 | 18 | 15 | 6  | 20 | 19 | 26 | 27 | 7  | 7  | 17 | 20 | 6  | 0  | 11 | 18 | 17 | 8                                                                                                                                                              | 3  | 9  | 18 | 12.8            | 27.1          |  |  |  |  |                          |  |
| 28-Apr                                         | 25                            | 28 | 11 | 6  | 6  | 12 | 6  | 7  | 5  | 8  | 9  | 5  | 2  | 3  | 12 | 3  | 4  | 1  | 2  | 3  | 3                                                                                                                                                              | 3  | 16 | 16 | 8.2             | 27.7          |  |  |  |  |                          |  |
| 29-Apr                                         | 25                            | 27 | 23 | 23 | 9  | 5  | 5  | 25 | 24 | 13 | 9  | 8  | 17 | 22 | 8  | 14 | 10 | 5  | 6  | 13 | 12                                                                                                                                                             | 12 | 12 | 5  | 13.8            | 27.2          |  |  |  |  |                          |  |
| 30-Apr                                         | 12                            | 12 | 10 | 7  | 8  | 14 | 11 | 11 | 11 | 8  | 6  | 8  | 8  | 9  | 15 | 9  | 12 | 9  | 13 | 13 | 10                                                                                                                                                             | 7  | 7  | 5  | 9.9             | 14.7          |  |  |  |  |                          |  |
|                                                |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                |    |    |    | Diurnal Average |               |  |  |  |  |                          |  |
|                                                |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                |    |    |    | Diurnal Maximum |               |  |  |  |  |                          |  |

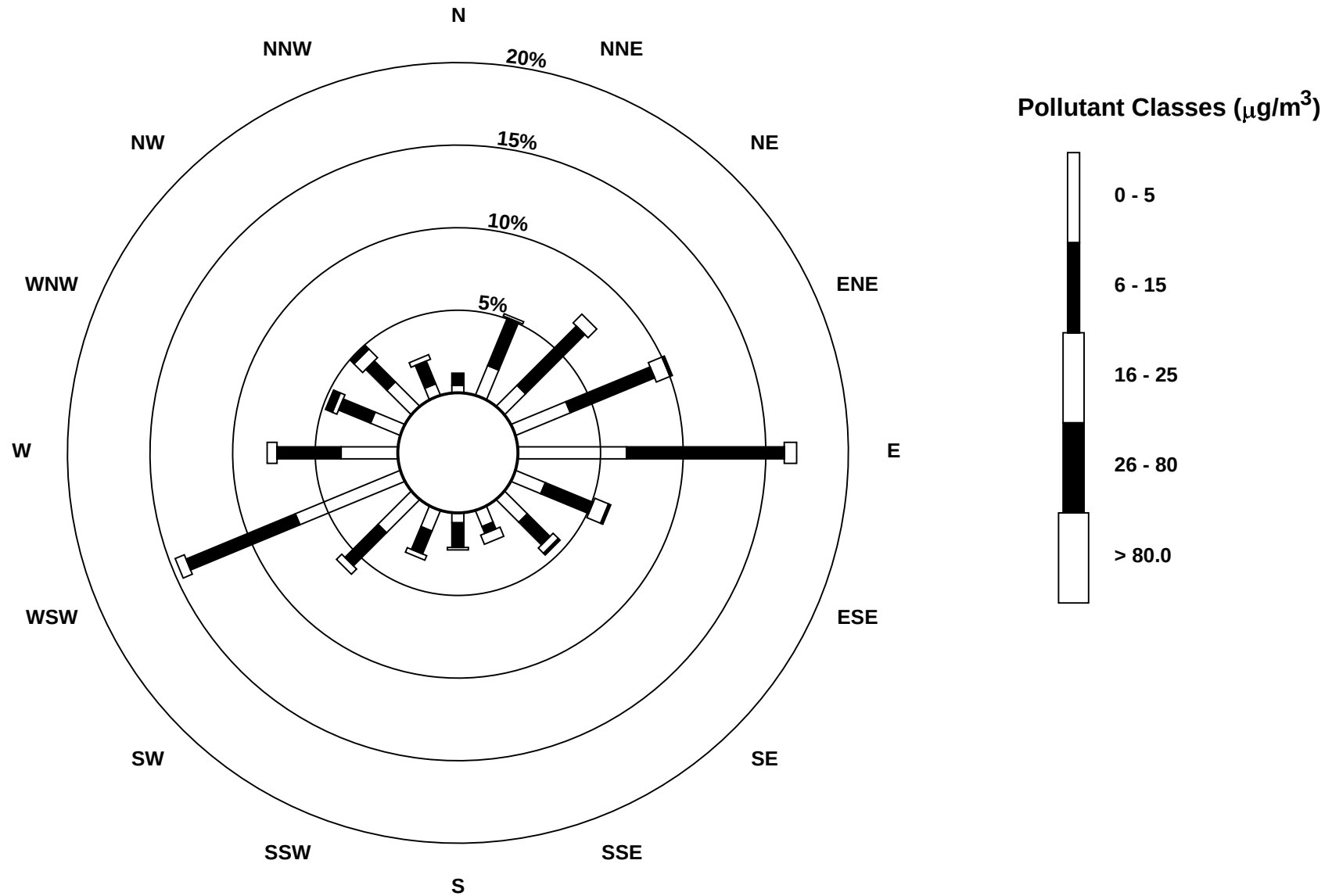
## Hourly Maximums

Particulate Matter 2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$   
Beaverlodge - April 2014



# Pollutant Rose

Particulate Matter 2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>  
Beaverlodge - April 2014



# Hourly Averages

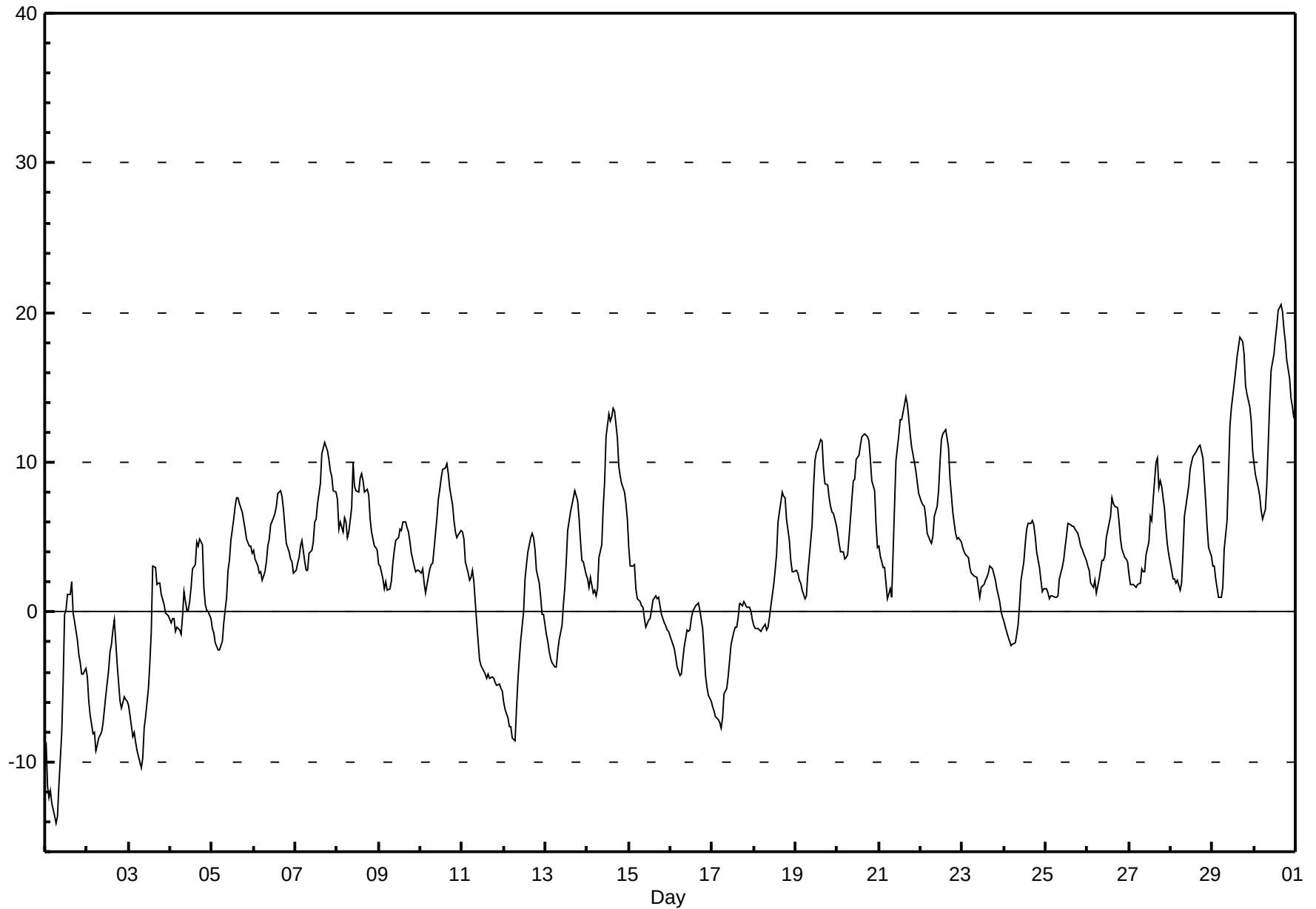
External Temperature (ET) - °C

Beaverlodge - April 2014

| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 20.5 °C on Apr 30 16:00 Maximum Daily Average: 13.8 °C on Apr 30 |                               |     |     |     |      |      |      |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Hours in Service: 720<br>Hours of Data: 720<br>Hours of Missing Data: 0<br>Hours of Calibration: 0<br>Percent Operational Time: 100.0                                                                                                                     |               |                 |      |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-----|-----|------|------|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-----------------|------|
| Minimum Value: -14 °C on Apr 1 07:00<br>Maximum Diurnal Average: 7.3 °C at hour 16<br>Monthly Average: 3.21 °C                     |                               |     |     |     |      |      |      |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Minimum Daily Average: -5.8 °C on Apr 1<br>Minimum Diurnal Average: -0.6 °C at hour 6<br>Percentiles: P <sub>1</sub> = -11.9 P <sub>10</sub> = -4.2 Q <sub>1</sub> = -0.1 Median = 3.1 Q <sub>3</sub> = 6.6 P <sub>90</sub> = 10.3 P <sub>99</sub> = 18.1 |               |                 |      |
| Day                                                                                                                                | Hourly Period Ending At (MST) |     |     |     |      |      |      |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                                                                                                                                                                                                                                                           | Daily Average | Daily Maximum   |      |
|                                                                                                                                    | 1                             | 2   | 3   | 4   | 5    | 6    | 7    | 8   | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23                                                                                                                                                                                                                                                        | 24            |                 |      |
| 1-Apr                                                                                                                              | -9                            | -12 | -12 | -12 | -13  | -14  | -14  | -14 | -12  | -8   | -5   | 0    | 0    | 1    | 1    | 2    | 0    | -1   | -2   | -3   | -3   | -4   | -4                                                                                                                                                                                                                                                        | -4            | -5.8            | 2.0  |
| 2-Apr                                                                                                                              | -4                            | -6  | -7  | -8  | -8   | -9   | -9   | -8  | -8   | -7   | -6   | -4   | -3   | -2   | -1   | -1   | -3   | -5   | -6   | -6   | -6   | -6   | -6                                                                                                                                                                                                                                                        | -6            | -5.7            | -0.5 |
| 3-Apr                                                                                                                              | -6                            | -7  | -8  | -8  | -9   | -9   | -10  | -10 | -10  | -8   | -7   | -5   | -3   | -1   | 3    | 3    | 2    | 2    | 2    | 1    | 1    | 0    | 0                                                                                                                                                                                                                                                         | 0             | -3.7            | 3.1  |
| 4-Apr                                                                                                                              | -1                            | 0   | 0   | -1  | -1   | -1   | -1   | 0   | 1    | 0    | 0    | 1    | 2    | 3    | 3    | 5    | 4    | 5    | 4    | 2    | 1    | 0    | 0                                                                                                                                                                                                                                                         | 0             | 1.0             | 4.9  |
| 5-Apr                                                                                                                              | -1                            | -1  | -2  | -2  | -2   | -2   | -2   | -1  | 1    | 3    | 3    | 5    | 6    | 7    | 8    | 8    | 7    | 7    | 6    | 6    | 5    | 4    | 4                                                                                                                                                                                                                                                         | 4             | 2.9             | 7.7  |
| 6-Apr                                                                                                                              | 4                             | 4   | 3   | 3   | 3    | 2    | 3    | 3   | 4    | 5    | 6    | 6    | 7    | 7    | 8    | 8    | 8    | 7    | 6    | 5    | 4    | 4    | 3                                                                                                                                                                                                                                                         | 3             | 4.7             | 8.1  |
| 7-Apr                                                                                                                              | 3                             | 3   | 4   | 4   | 5    | 3    | 3    | 3   | 4    | 4    | 5    | 6    | 6    | 7    | 9    | 11   | 11   | 11   | 11   | 10   | 9    | 9    | 8                                                                                                                                                                                                                                                         | 8             | 6.5             | 11.3 |
| 8-Apr                                                                                                                              | 8                             | 6   | 6   | 5   | 6    | 6    | 5    | 5   | 7    | 10   | 8    | 8    | 8    | 9    | 9    | 9    | 8    | 8    | 8    | 6    | 5    | 4    | 4                                                                                                                                                                                                                                                         | 4             | 6.8             | 10.0 |
| 9-Apr                                                                                                                              | 3                             | 3   | 2   | 2   | 2    | 1    | 2    | 2   | 3    | 4    | 5    | 5    | 6    | 5    | 6    | 6    | 6    | 5    | 5    | 4    | 3    | 3    | 3                                                                                                                                                                                                                                                         | 3             | 3.7             | 6.0  |
| 10-Apr                                                                                                                             | 3                             | 3   | 2   | 1   | 2    | 3    | 3    | 3   | 4    | 6    | 8    | 8    | 9    | 9    | 10   | 10   | 9    | 8    | 7    | 6    | 5    | 5    | 5                                                                                                                                                                                                                                                         | 5             | 5.7             | 9.9  |
| 11-Apr                                                                                                                             | 5                             | 5   | 3   | 3   | 2    | 2    | 3    | 2   | -1   | -2   | -3   | -4   | -4   | -4   | -4   | -4   | -4   | -4   | -4   | -5   | -5   | -5   | -5                                                                                                                                                                                                                                                        | -5            | -1.6            | 5.3  |
| 12-Apr                                                                                                                             | -6                            | -7  | -7  | -8  | -8   | -8   | -9   | -6  | -5   | -3   | -2   | 0    | 2    | 3    | 4    | 5    | 5    | 5    | 4    | 3    | 2    | 1    | 0                                                                                                                                                                                                                                                         | 0             | -1.4            | 5.2  |
| 13-Apr                                                                                                                             | -2                            | -2  | -3  | -3  | -3   | -4   | -4   | -3  | -2   | -1   | 0    | 2    | 3    | 5    | 7    | 7    | 8    | 8    | 7    | 6    | 5    | 3    | 3                                                                                                                                                                                                                                                         | 3             | 1.8             | 8.1  |
| 14-Apr                                                                                                                             | 2                             | 2   | 2   | 1   | 1    | 1    | 2    | 4   | 4    | 7    | 9    | 12   | 13   | 13   | 13   | 14   | 13   | 12   | 10   | 9    | 9    | 8    | 7                                                                                                                                                                                                                                                         | 6             | 7.2             | 13.6 |
| 15-Apr                                                                                                                             | 4                             | 3   | 3   | 3   | 2    | 1    | 1    | 0   | 0    | 0    | -1   | -1   | 0    | 0    | 1    | 1    | 1    | 1    | 0    | 0    | -1   | -1   | -1                                                                                                                                                                                                                                                        | -1            | 0.6             | 4.3  |
| 16-Apr                                                                                                                             | -2                            | -2  | -2  | -3  | -4   | -4   | -4   | -3  | -2   | -1   | -1   | -1   | 0    | 0    | 0    | 1    | 1    | 0    | -1   | -3   | -4   | -5   | -6                                                                                                                                                                                                                                                        | -6            | -2.2            | 0.6  |
| 17-Apr                                                                                                                             | -6                            | -7  | -7  | -7  | -7   | -8   | -7   | -5  | -5   | -4   | -3   | -2   | -1   | -1   | -1   | 0    | 1    | 0    | 1    | 1    | 0    | 0    | 0                                                                                                                                                                                                                                                         | -1            | -2.9            | 0.7  |
| 18-Apr                                                                                                                             | -1                            | -1  | -1  | -1  | -1   | -1   | -1   | -1  | -1   | 0    | 0    | 2    | 3    | 4    | 6    | 7    | 8    | 8    | 8    | 6    | 5    | 3    | 3                                                                                                                                                                                                                                                         | 3             | 2.3             | 8.0  |
| 19-Apr                                                                                                                             | 3                             | 3   | 2   | 2   | 2    | 1    | 1    | 3   | 4    | 6    | 8    | 10   | 11   | 11   | 12   | 11   | 10   | 9    | 8    | 8    | 7    | 7    | 7                                                                                                                                                                                                                                                         | 6             | 6.2             | 11.5 |
| 20-Apr                                                                                                                             | 5                             | 5   | 4   | 4   | 4    | 4    | 4    | 5   | 8    | 9    | 9    | 10   | 10   | 11   | 12   | 12   | 12   | 12   | 11   | 10   | 9    | 8    | 6                                                                                                                                                                                                                                                         | 4             | 7.8             | 11.9 |
| 21-Apr                                                                                                                             | 4                             | 4   | 3   | 3   | 2    | 1    | 2    | 1   | 4    | 7    | 10   | 12   | 13   | 13   | 13   | 14   | 14   | 13   | 12   | 11   | 10   | 9    | 9                                                                                                                                                                                                                                                         | 8             | 8.0             | 14.3 |
| 22-Apr                                                                                                                             | 7                             | 7   | 7   | 6   | 5    | 5    | 5    | 5   | 6    | 7    | 8    | 10   | 12   | 12   | 12   | 12   | 11   | 9    | 7    | 6    | 5    | 5    | 5                                                                                                                                                                                                                                                         | 5             | 7.5             | 12.2 |
| 23-Apr                                                                                                                             | 4                             | 4   | 4   | 4   | 3    | 3    | 3    | 2   | 2    | 2    | 1    | 2    | 2    | 2    | 2    | 3    | 3    | 3    | 3    | 2    | 2    | 1    | 0                                                                                                                                                                                                                                                         | 0             | 2.3             | 4.3  |
| 24-Apr                                                                                                                             | -1                            | -1  | -2  | -2  | -2   | -2   | -2   | -1  | -1   | 1    | 2    | 3    | 5    | 6    | 6    | 6    | 6    | 6    | 5    | 4    | 3    | 2    | 1                                                                                                                                                                                                                                                         | 2             | 1.8             | 6.2  |
| 25-Apr                                                                                                                             | 2                             | 1   | 1   | 1   | 1    | 1    | 1    | 1   | 2    | 3    | 3    | 4    | 5    | 6    | 6    | 6    | 6    | 6    | 5    | 5    | 4    | 4    | 4                                                                                                                                                                                                                                                         | 3             | 3.4             | 5.9  |
| 26-Apr                                                                                                                             | 3                             | 3   | 2   | 2   | 2    | 1    | 2    | 2   | 3    | 3    | 4    | 5    | 6    | 6    | 8    | 7    | 7    | 7    | 6    | 5    | 4    | 4    | 4                                                                                                                                                                                                                                                         | 3             | 4.1             | 7.6  |
| 27-Apr                                                                                                                             | 3                             | 2   | 2   | 2   | 2    | 2    | 2    | 3   | 3    | 3    | 4    | 5    | 6    | 6    | 8    | 10   | 10   | 8    | 9    | 8    | 7    | 6    | 5                                                                                                                                                                                                                                                         | 4             | 4.9             | 10.3 |
| 28-Apr                                                                                                                             | 3                             | 2   | 2   | 2   | 2    | 1    | 2    | 4   | 6    | 8    | 8    | 10   | 10   | 10   | 11   | 11   | 11   | 11   | 10   | 9    | 7    | 6    | 4                                                                                                                                                                                                                                                         | 4             | 6.5             | 11.1 |
| 29-Apr                                                                                                                             | 3                             | 3   | 2   | 1   | 1    | 1    | 2    | 4   | 6    | 9    | 12   | 14   | 15   | 16   | 17   | 18   | 18   | 18   | 17   | 15   | 15   | 14   | 13                                                                                                                                                                                                                                                        | 11            | 10.2            | 18.4 |
| 30-Apr                                                                                                                             | 10                            | 9   | 8   | 8   | 7    | 6    | 7    | 9   | 11   | 14   | 16   | 17   | 18   | 19   | 20   | 21   | 20   | 19   | 18   | 17   | 16   | 14   | 14                                                                                                                                                                                                                                                        | 13            | 13.8            | 20.5 |
|                                                                                                                                    | 1.4                           | 0.8 | 0.4 | 0.0 | -0.2 | -0.6 | -0.5 | 0.3 | 1.3  | 2.5  | 3.4  | 4.6  | 5.5  | 6.1  | 6.9  | 7.3  | 7.2  | 6.6  | 5.9  | 4.9  | 4.1  | 3.5  | 3.0                                                                                                                                                                                                                                                       | 2.6           | Diurnal Average |      |
|                                                                                                                                    | 9.9                           | 9.2 | 8.3 | 7.7 | 6.7  | 6.2  | 6.9  | 8.6 | 11.2 | 14.0 | 16.2 | 17.2 | 18.2 | 19.1 | 20.2 | 20.5 | 20.1 | 18.9 | 18.0 | 16.9 | 15.7 | 14.3 | 13.7                                                                                                                                                                                                                                                      | 12.9          | Diurnal Maximum |      |

## Hourly Averages

External Temperature (ET) - °C  
Beaverlodge - April 2014



# Hourly Averages

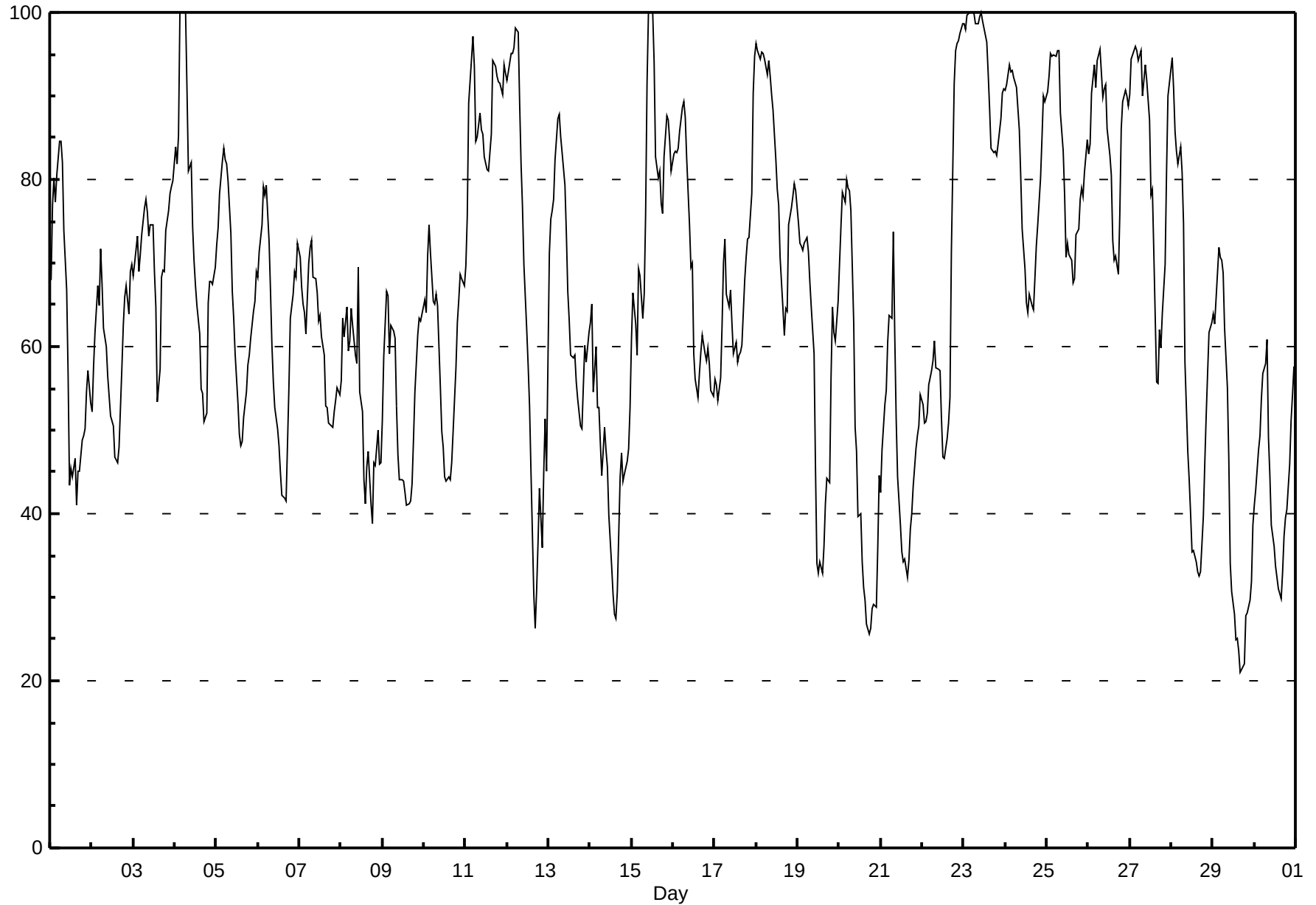
Relative Humidity (RH) - %

Beaverlodge - April 2014

| Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0                                                                                 |                               |    |     |     |     |     |     |    |    |     |     |                                                                                                                                                                    |     |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720           |               |               |
|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|-----|-----|-----|-----|-----|----|----|-----|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|----|----|----|----|----|----|----|----|----|---------------------------------|---------------|---------------|
| Maximum Value: 100.0 % on Apr 4 04:00 Maximum Daily Average: 93.9 % on Apr 23                                                  |                               |    |     |     |     |     |     |    |    |     |     |                                                                                                                                                                    |     |    |    |    |    |    |    |    |    |    |    | Hours of Data: 720              |               |               |
| Minimum Value: 21 % on Apr 29 17:00                                                                                            |                               |    |     |     |     |     |     |    |    |     |     | Minimum Daily Average: 42.7 % on Apr 29                                                                                                                            |     |    |    |    |    |    |    |    |    |    |    | Hours of Missing Data: 0        |               |               |
| Maximum Diurnal Average: 78.8 % at hour 6                                                                                      |                               |    |     |     |     |     |     |    |    |     |     | Minimum Diurnal Average: 50.6 % at hour 16                                                                                                                         |     |    |    |    |    |    |    |    |    |    |    | Hours of Calibration: 0         |               |               |
| Monthly Average: 65.72 %                                                                                                       |                               |    |     |     |     |     |     |    |    |     |     | Percentiles: P <sub>1</sub> = 26.2 P <sub>10</sub> = 41.2 Q <sub>1</sub> = 51.6 Median = 65.2 Q <sub>3</sub> = 80.9 P <sub>90</sub> = 92.3 P <sub>99</sub> = 100.0 |     |    |    |    |    |    |    |    |    |    |    | 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-Apr                                                                                                                          | 68                            | 77 | 80  | 77  | 80  | 85  | 85  | 82 | 74 | 67  | 57  | 43                                                                                                                                                                 | 45  | 44 | 47 | 41 | 45 | 45 | 49 | 49 | 50 | 55 | 57 | 53                              | 60.6          | 84.5          |
| 2-Apr                                                                                                                          | 52                            | 58 | 62  | 67  | 65  | 72  | 67  | 62 | 60 | 56  | 54  | 52                                                                                                                                                                 | 50  | 47 | 46 | 46 | 48 | 57 | 63 | 66 | 67 | 64 | 69 | 70                              | 59.2          | 71.8          |
| 3-Apr                                                                                                                          | 68                            | 70 | 73  | 69  | 71  | 73  | 77  | 78 | 76 | 73  | 75  | 75                                                                                                                                                                 | 69  | 65 | 53 | 57 | 68 | 69 | 69 | 74 | 76 | 78 | 79 | 80                              | 71.5          | 79.8          |
| 4-Apr                                                                                                                          | 84                            | 82 | 85  | 100 | 100 | 100 | 100 | 91 | 81 | 82  | 74  | 70                                                                                                                                                                 | 67  | 65 | 62 | 55 | 54 | 51 | 52 | 65 | 68 | 68 | 68 | 70                              | 74.7          | 100.0         |
| 5-Apr                                                                                                                          | 72                            | 74 | 78  | 82  | 84  | 82  | 82  | 80 | 74 | 67  | 63  | 59                                                                                                                                                                 | 53  | 50 | 48 | 49 | 52 | 55 | 58 | 59 | 61 | 64 | 65 | 69                              | 65.8          | 83.7          |
| 6-Apr                                                                                                                          | 68                            | 71 | 75  | 79  | 78  | 79  | 73  | 67 | 60 | 56  | 53  | 50                                                                                                                                                                 | 48  | 45 | 42 | 42 | 41 | 48 | 55 | 63 | 66 | 69 | 68 | 72                              | 61.3          | 79.4          |
| 7-Apr                                                                                                                          | 71                            | 67 | 65  | 64  | 61  | 70  | 72  | 73 | 68 | 68  | 67  | 63                                                                                                                                                                 | 64  | 61 | 59 | 53 | 53 | 51 | 51 | 50 | 52 | 54 | 55 | 54                              | 61.1          | 72.8          |
| 8-Apr                                                                                                                          | 56                            | 63 | 61  | 65  | 60  | 61  | 65  | 63 | 59 | 58  | 70  | 55                                                                                                                                                                 | 52  | 44 | 41 | 46 | 47 | 41 | 39 | 46 | 46 | 50 | 46 | 46                              | 53.3          | 69.5          |
| 9-Apr                                                                                                                          | 51                            | 59 | 67  | 66  | 59  | 63  | 62  | 61 | 53 | 47  | 44  | 44                                                                                                                                                                 | 44  | 43 | 41 | 41 | 42 | 44 | 49 | 54 | 61 | 63 | 63 | 64                              | 53.5          | 66.5          |
| 10-Apr                                                                                                                         | 66                            | 64 | 71  | 75  | 71  | 66  | 65  | 66 | 65 | 55  | 50  | 48                                                                                                                                                                 | 44  | 44 | 44 | 44 | 46 | 50 | 58 | 63 | 66 | 69 | 68 | 67                              | 59.3          | 74.6          |
| 11-Apr                                                                                                                         | 70                            | 76 | 89  | 94  | 97  | 94  | 85  | 85 | 88 | 86  | 85  | 83                                                                                                                                                                 | 81  | 81 | 83 | 85 | 94 | 94 | 92 | 92 | 91 | 90 | 94 | 93                              | 87.6          | 97.1          |
| 12-Apr                                                                                                                         | 92                            | 93 | 95  | 95  | 96  | 98  | 98  | 89 | 82 | 77  | 70  | 62                                                                                                                                                                 | 58  | 53 | 45 | 30 | 26 | 31 | 37 | 43 | 36 | 45 | 51 | 45                              | 64.4          | 98.2          |
| 13-Apr                                                                                                                         | 71                            | 75 | 76  | 78  | 82  | 87  | 88  | 85 | 83 | 79  | 74  | 67                                                                                                                                                                 | 63  | 59 | 59 | 59 | 56 | 54 | 50 | 50 | 55 | 60 | 58 | 62                              | 68.0          | 87.9          |
| 14-Apr                                                                                                                         | 63                            | 65 | 55  | 60  | 53  | 53  | 48  | 45 | 50 | 48  | 46  | 40                                                                                                                                                                 | 34  | 30 | 28 | 27 | 31 | 44 | 47 | 44 | 45 | 46 | 48 | 53                              | 45.9          | 65.1          |
| 15-Apr                                                                                                                         | 61                            | 66 | 63  | 59  | 69  | 69  | 63  | 66 | 76 | 92  | 100 | 100                                                                                                                                                                | 100 | 94 | 83 | 80 | 81 | 77 | 76 | 83 | 88 | 87 | 85 | 81                              | 79.1          | 100.0         |
| 16-Apr                                                                                                                         | 83                            | 83 | 83  | 84  | 86  | 89  | 89  | 87 | 83 | 75  | 69  | 70                                                                                                                                                                 | 59  | 56 | 54 | 57 | 59 | 61 | 59 | 58 | 60 | 58 | 55 | 54                              | 69.7          | 89.3          |
| 17-Apr                                                                                                                         | 56                            | 55 | 54  | 56  | 63  | 70  | 73  | 66 | 65 | 67  | 63  | 59                                                                                                                                                                 | 61  | 58 | 59 | 59 | 60 | 68 | 71 | 73 | 73 | 78 | 90 | 95                              | 66.3          | 94.8          |
| 18-Apr                                                                                                                         | 96                            | 95 | 94  | 95  | 95  | 94  | 93  | 94 | 92 | 90  | 88  | 82                                                                                                                                                                 | 79  | 77 | 71 | 65 | 61 | 65 | 64 | 75 | 77 | 78 | 80 | 79                              | 82.5          | 96.2          |
| 19-Apr                                                                                                                         | 75                            | 72 | 72  | 71  | 72  | 73  | 71  | 68 | 65 | 59  | 46  | 34                                                                                                                                                                 | 33  | 34 | 33 | 36 | 41 | 44 | 44 | 56 | 65 | 62 | 61 | 66                              | 56.4          | 74.8          |
| 20-Apr                                                                                                                         | 70                            | 74 | 78  | 77  | 80  | 79  | 79  | 76 | 63 | 50  | 47  | 40                                                                                                                                                                 | 40  | 34 | 31 | 30 | 27 | 26 | 26 | 29 | 29 | 29 | 36 | 45                              | 49.8          | 80.0          |
| 21-Apr                                                                                                                         | 43                            | 48 | 53  | 55  | 61  | 64  | 63  | 74 | 61 | 51  | 44  | 39                                                                                                                                                                 | 35  | 34 | 35 | 32 | 34 | 38 | 40 | 43 | 48 | 49 | 50 | 54                              | 47.9          | 73.8          |
| 22-Apr                                                                                                                         | 53                            | 51 | 51  | 52  | 55  | 57  | 58  | 61 | 57 | 57  | 57  | 51                                                                                                                                                                 | 47  | 47 | 49 | 51 | 54 | 71 | 92 | 95 | 96 | 97 | 97 | 99                              | 64.8          | 98.7          |
| 23-Apr                                                                                                                         | 99                            | 98 | 100 | 100 | 100 | 100 | 100 | 99 | 99 | 100 | 100 | 99                                                                                                                                                                 | 97  | 96 | 93 | 88 | 84 | 83 | 83 | 83 | 84 | 87 | 90 | 91                              | 93.9          | 100.0         |
| 24-Apr                                                                                                                         | 91                            | 91 | 94  | 93  | 93  | 92  | 91  | 88 | 86 | 80  | 74  | 69                                                                                                                                                                 | 65  | 64 | 66 | 65 | 64 | 68 | 72 | 75 | 80 | 85 | 90 | 89                              | 80.3          | 93.7          |
| 25-Apr                                                                                                                         | 90                            | 92 | 95  | 95  | 95  | 95  | 95  | 95 | 88 | 83  | 78  | 71                                                                                                                                                                 | 72  | 71 | 70 | 68 | 68 | 73 | 74 | 78 | 79 | 78 | 81 | 85                              | 82.1          | 95.4          |
| 26-Apr                                                                                                                         | 83                            | 84 | 90  | 94  | 91  | 94  | 95  | 96 | 90 | 91  | 91  | 86                                                                                                                                                                 | 83  | 81 | 73 | 70 | 71 | 69 | 76 | 86 | 89 | 91 | 90 | 89                              | 85.5          | 95.6          |
| 27-Apr                                                                                                                         | 90                            | 94 | 96  | 96  | 95  | 94  | 95  | 90 | 92 | 94  | 92  | 87                                                                                                                                                                 | 78  | 79 | 71 | 56 | 56 | 62 | 60 | 64 | 70 | 81 | 90 | 91                              | 82.2          | 95.9          |
| 28-Apr                                                                                                                         | 95                            | 91 | 86  | 83  | 82  | 84  | 81  | 75 | 58 | 47  | 44  | 40                                                                                                                                                                 | 35  | 36 | 34 | 33 | 33 | 33 | 40 | 46 | 52 | 57 | 62 | 63                              | 57.8          | 94.5          |
| 29-Apr                                                                                                                         | 64                            | 63 | 66  | 72  | 71  | 70  | 69  | 62 | 55 | 46  | 34  | 31                                                                                                                                                                 | 28  | 25 | 25 | 23 | 21 | 22 | 22 | 28 | 28 | 30 | 32 | 39                              | 42.7          | 71.8          |
| 30-Apr                                                                                                                         | 41                            | 43 | 48  | 49  | 54  | 57  | 58  | 61 | 49 | 45  | 39  | 36                                                                                                                                                                 | 34  | 32 | 31 | 30 | 33 | 37 | 39 | 40 | 46 | 51 | 54 | 58                              | 44.4          | 60.8          |
| 71.4 73.2 75.1 76.8 77.3 78.8 78.0 76.1 71.7 68.2 64.9 60.1 57.3 55.0 52.5 50.6 51.7 54.4 56.9 61.0 63.5 65.7 67.7 69.1        |                               |    |     |     |     |     |     |    |    |     |     |                                                                                                                                                                    |     |    |    |    |    |    |    |    |    |    |    | Diurnal Average                 |               |               |
| 98.7 97.9 99.7 100.0 100.0 100.0 100.0 98.7 98.7 99.5 100.0 100.0 100.0 96.4 92.7 88.5 94.2 93.5 92.3 95.5 96.3 96.6 97.5 98.7 |                               |    |     |     |     |     |     |    |    |     |     |                                                                                                                                                                    |     |    |    |    |    |    |    |    |    |    |    | Diurnal Maximum                 |               |               |

## Hourly Averages

Relative Humidity (RH) - %  
Beaverlodge - April 2014



## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Beaverlodge - April 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  | 7                             | 0   | 1   | 1   | 1   | 1   | 0   | 2   | 3   | 1   | 3   | 1   | 2   | 4   | 6   | 6   | 14  | 13  | 12  | 12  | 8   | 9   | 14  | 9   | 4.8           | 13.6          |
| Dir    | 13                            | 6   | 92  | 353 | 62  | 15  | 97  | 282 | 45  | 60  | 76  | 171 | 121 | 104 | 101 | 81  | 85  | 87  | 83  | 58  | 35  | 57  | 81  | 72  | 71            | 85            |
| 2 Spd  | 10                            | 12  | 16  | 16  | 15  | 8   | 10  | 10  | 12  | 13  | 14  | 10  | 7   | 6   | 8   | 8   | 9   | 15  | 13  | 9   | 7   | 5   | 11  | 9   | 7.6           | 16.4          |
| Dir    | 48                            | 14  | 12  | 27  | 15  | 308 | 326 | 355 | 16  | 14  | 21  | 32  | 48  | 35  | 37  | 56  | 96  | 119 | 114 | 115 | 84  | 96  | 93  | 88  | 42            | 27            |
| 3 Spd  | 8                             | 7   | 10  | 6   | 7   | 9   | 2   | 3   | 2   | 2   | 7   | 10  | 10  | 7   | 2   | 2   | 3   | 3   | 1   | 8   | 6   | 4   | 3   | 0   | 2.0           | 10.0          |
| Dir    | 78                            | 77  | 88  | 89  | 89  | 92  | 209 | 224 | 214 | 54  | 202 | 150 | 116 | 118 | 105 | 298 | 308 | 264 | 235 | 273 | 305 | 338 | 60  | 276 | 109           | 150           |
| 4 Spd  | 5                             | 3   | 7   | 4   | 1   | 1   | 7   | 12  | 18  | 16  | 18  | 14  | 17  | 10  | 10  | 6   | 8   | 3   | 3   | 5   | 7   | 7   | 5   | 3   | 4.3           | 18.3          |
| Dir    | 34                            | 326 | 336 | 247 | 144 | 218 | 252 | 276 | 305 | 331 | 323 | 329 | 358 | 26  | 52  | 53  | 29  | 21  | 89  | 94  | 86  | 96  | 109 | 100 | 353           | 323           |
| 5 Spd  | 2                             | 2   | 3   | 3   | 2   | 2   | 2   | 5   | 10  | 16  | 14  | 15  | 25  | 25  | 26  | 21  | 23  | 16  | 7   | 10  | 10  | 9   | 7   | 8   | 9.5           | 25.9          |
| Dir    | 97                            | 110 | 144 | 66  | 59  | 120 | 192 | 221 | 237 | 244 | 242 | 232 | 256 | 254 | 260 | 274 | 269 | 267 | 278 | 277 | 287 | 278 | 267 | 263 | 258           | 260           |
| 6 Spd  | 7                             | 6   | 8   | 11  | 17  | 17  | 24  | 27  | 32  | 39  | 36  | 37  | 33  | 29  | 32  | 41  | 41  | 37  | 31  | 24  | 24  | 23  | 18  | 12  | 24.9          | 40.7          |
| Dir    | 259                           | 234 | 243 | 237 | 242 | 243 | 254 | 257 | 259 | 264 | 265 | 264 | 259 | 273 | 260 | 263 | 257 | 257 | 253 | 244 | 240 | 245 | 253 | 239 | 256           | 263           |
| 7 Spd  | 11                            | 9   | 6   | 12  | 5   | 2   | 3   | 5   | 4   | 5   | 4   | 3   | 5   | 3   | 1   | 10  | 12  | 12  | 3   | 8   | 13  | 9   | 5   | 3   | 4.1           | 13.4          |
| Dir    | 231                           | 226 | 238 | 288 | 344 | 106 | 98  | 64  | 88  | 155 | 145 | 147 | 168 | 90  | 172 | 237 | 238 | 236 | 197 | 224 | 224 | 222 | 178 | 165 | 218           | 224           |
| 8 Spd  | 2                             | 5   | 4   | 6   | 5   | 2   | 4   | 4   | 6   | 25  | 41  | 44  | 40  | 44  | 44  | 40  | 41  | 34  | 36  | 29  | 36  | 25  | 29  | 28  | 22.1          | 44.2          |
| Dir    | 158                           | 96  | 145 | 199 | 173 | 105 | 86  | 180 | 199 | 261 | 264 | 258 | 233 | 241 | 253 | 246 | 248 | 250 | 255 | 254 | 253 | 251 | 257 | 250 | 248           | 253           |
| 9 Spd  | 20                            | 26  | 23  | 17  | 20  | 18  | 20  | 26  | 34  | 38  | 39  | 42  | 42  | 39  | 44  | 48  | 45  | 43  | 30  | 29  | 27  | 27  | 24  | 29  | 31.0          | 47.6          |
| Dir    | 249                           | 253 | 246 | 240 | 249 | 251 | 256 | 253 | 264 | 267 | 272 | 261 | 256 | 260 | 264 | 259 | 262 | 265 | 263 | 262 | 255 | 258 | 254 | 248 | 259           | 259           |
| 10 Spd | 28                            | 26  | 12  | 6   | 11  | 20  | 27  | 24  | 18  | 29  | 44  | 47  | 47  | 42  | 39  | 40  | 37  | 33  | 25  | 18  | 16  | 14  | 20  | 14  | 25.9          | 47.5          |
| Dir    | 248                           | 253 | 234 | 186 | 226 | 243 | 252 | 251 | 239 | 254 | 268 | 264 | 265 | 263 | 268 | 263 | 261 | 251 | 246 | 242 | 245 | 239 | 231 | 252 | 254           | 264           |
| 11 Spd | 2                             | 4   | 6   | 6   | 5   | 7   | 9   | 19  | 23  | 26  | 25  | 23  | 23  | 22  | 19  | 15  | 15  | 14  | 13  | 12  | 11  | 10  | 9   | 7   | 11.2          | 25.5          |
| Dir    | 206                           | 214 | 134 | 129 | 182 | 212 | 248 | 305 | 324 | 328 | 326 | 331 | 332 | 328 | 325 | 323 | 315 | 320 | 318 | 316 | 317 | 325 | 324 | 327 | 319           | 328           |
| 12 Spd | 6                             | 7   | 6   | 5   | 4   | 2   | 1   | 1   | 3   | 6   | 9   | 5   | 3   | 7   | 7   | 8   | 10  | 11  | 12  | 8   | 4   | 2   | 4   | 5   | 2.2           | 12.0          |
| Dir    | 322                           | 315 | 312 | 329 | 313 | 249 | 216 | 228 | 200 | 213 | 239 | 250 | 122 | 105 | 116 | 346 | 355 | 35  | 31  | 28  | 39  | 342 | 28  | 30  | 356           | 31            |
| 13 Spd | 10                            | 13  | 10  | 11  | 10  | 10  | 8   | 11  | 9   | 9   | 9   | 11  | 12  | 16  | 17  | 18  | 15  | 13  | 8   | 6   | 4   | 3   | 1   | 1   | 9.2           | 18.0          |
| Dir    | 78                            | 69  | 79  | 72  | 82  | 87  | 103 | 127 | 140 | 129 | 136 | 134 | 113 | 100 | 95  | 95  | 93  | 89  | 91  | 113 | 108 | 145 | 77  | 63  | 100           | 95            |
| 14 Spd | 1                             | 1   | 2   | 3   | 2   | 2   | 4   | 1   | 3   | 3   | 5   | 6   | 7   | 11  | 13  | 10  | 7   | 9   | 8   | 8   | 9   | 6   | 2   | 2   | 4.4           | 13.4          |
| Dir    | 120                           | 103 | 128 | 93  | 123 | 85  | 56  | 96  | 147 | 112 | 135 | 82  | 90  | 39  | 36  | 50  | 59  | 113 | 67  | 66  | 71  | 85  | 141 | 266 | 75            | 36            |
| 15 Spd | 7                             | 2   | 7   | 4   | 9   | 4   | 9   | 13  | 13  | 12  | 13  | 12  | 16  | 17  | 16  | 16  | 15  | 13  | 14  | 13  | 7   | 4   | 4   | 8   | 9.1           | 16.7          |
| Dir    | 37                            | 260 | 12  | 313 | 26  | 20  | 40  | 31  | 21  | 4   | 21  | 29  | 37  | 47  | 48  | 54  | 56  | 74  | 75  | 95  | 107 | 88  | 37  | 40  | 44            | 47            |
| 16 Spd | 11                            | 14  | 10  | 10  | 11  | 11  | 11  | 12  | 12  | 10  | 12  | 14  | 8   | 10  | 7   | 8   | 12  | 19  | 22  | 19  | 17  | 19  | 12  | 10  | 11.9          | 21.8          |
| Dir    | 49                            | 69  | 46  | 44  | 40  | 28  | 37  | 53  | 75  | 76  | 51  | 56  | 44  | 29  | 37  | 67  | 75  | 90  | 91  | 80  | 71  | 69  | 68  | 77  | 63            | 91            |
| 17 Spd | 11                            | 12  | 8   | 8   | 7   | 9   | 8   | 14  | 16  | 14  | 15  | 14  | 16  | 15  | 17  | 16  | 12  | 11  | 11  | 4   | 2   | 5   | 15  | 16  | 11.1          | 16.8          |
| Dir    | 81                            | 71  | 67  | 67  | 87  | 88  | 95  | 97  | 105 | 98  | 80  | 95  | 89  | 80  | 67  | 70  | 75  | 80  | 93  | 134 | 300 | 45  | 93  | 97  | 85            | 67            |
| 18 Spd | 15                            | 12  | 9   | 10  | 8   | 1   | 0   | 6   | 4   | 2   | 3   | 2   | 4   | 6   | 7   | 5   | 5   | 8   | 6   | 9   | 9   | 4   | 3   | 2   | 5.0           | 15.3          |
| Dir    | 88                            | 83  | 77  | 87  | 76  | 43  | 68  | 102 | 118 | 177 | 249 | 267 | 157 | 136 | 98  | 108 | 117 | 130 | 124 | 108 | 84  | 146 | 114 | 126 | 103           | 88            |
| 19 Spd | 2                             | 9   | 8   | 9   | 8   | 9   | 3   | 5   | 7   | 9   | 7   | 5   | 6   | 9   | 8   | 14  | 19  | 17  | 21  | 17  | 6   | 7   | 3   | 1   | 3.0           | 20.8          |
| Dir    | 182                           | 223 | 224 | 230 | 234 | 248 | 208 | 195 | 210 | 211 | 195 | 109 | 104 | 89  | 91  | 78  | 67  | 58  | 65  | 153 | 155 | 255 | 300 | 189 | 139           | 65            |
| 20 Spd | 2                             | 3   | 4   | 5   | 6   | 3   | 5   | 10  | 21  | 32  | 32  | 36  | 32  | 35  | 30  | 29  | 33  | 29  | 24  | 16  | 6   | 7   | 2   | 3   | 15.6          | 36.0          |
| Dir    | 245                           | 41  | 172 | 215 | 210 | 192 | 233 | 223 | 237 | 254 | 241 | 250 | 253 | 254 | 257 | 256 | 268 | 268 | 267 | 267 | 303 | 288 | 227 | 125 | 253           | 250           |
| 21 Spd | 6                             | 4   | 4   | 3   | 2   | 2   | 1   | 4   | 2   | 2   | 4   | 5   | 5   | 7   | 8   | 5   | 10  | 17  | 17  | 13  | 11  | 13  | 12  | 12  | 6.4           | 17.3          |
| Dir    | 61                            | 136 | 68  | 110 | 113 | 98  | 145 | 42  | 128 | 184 | 110 | 81  | 84  | 101 | 93  | 81  | 87  | 54  | 48  | 51  | 47  | 62  | 83  | 85  | 74            | 54            |
| 22 Spd | 15                            | 15  | 14  | 2   | 4   | 5   | 5   | 14  | 18  | 17  | 21  | 22  | 30  | 27  | 32  | 32  | 34  | 36  | 26  | 22  | 20  | 11  | 12  | 15  | 18.1          | 36.4          |
| Dir    | 64                            | 76  | 81  | 157 | 117 | 93  | 70  | 96  | 90  | 94  | 98  | 97  | 91  | 72  | 66  | 74  | 70  | 82  | 92  | 84  | 75  | 55  | 67  | 45  | 80            | 82            |





## Hourly Averages

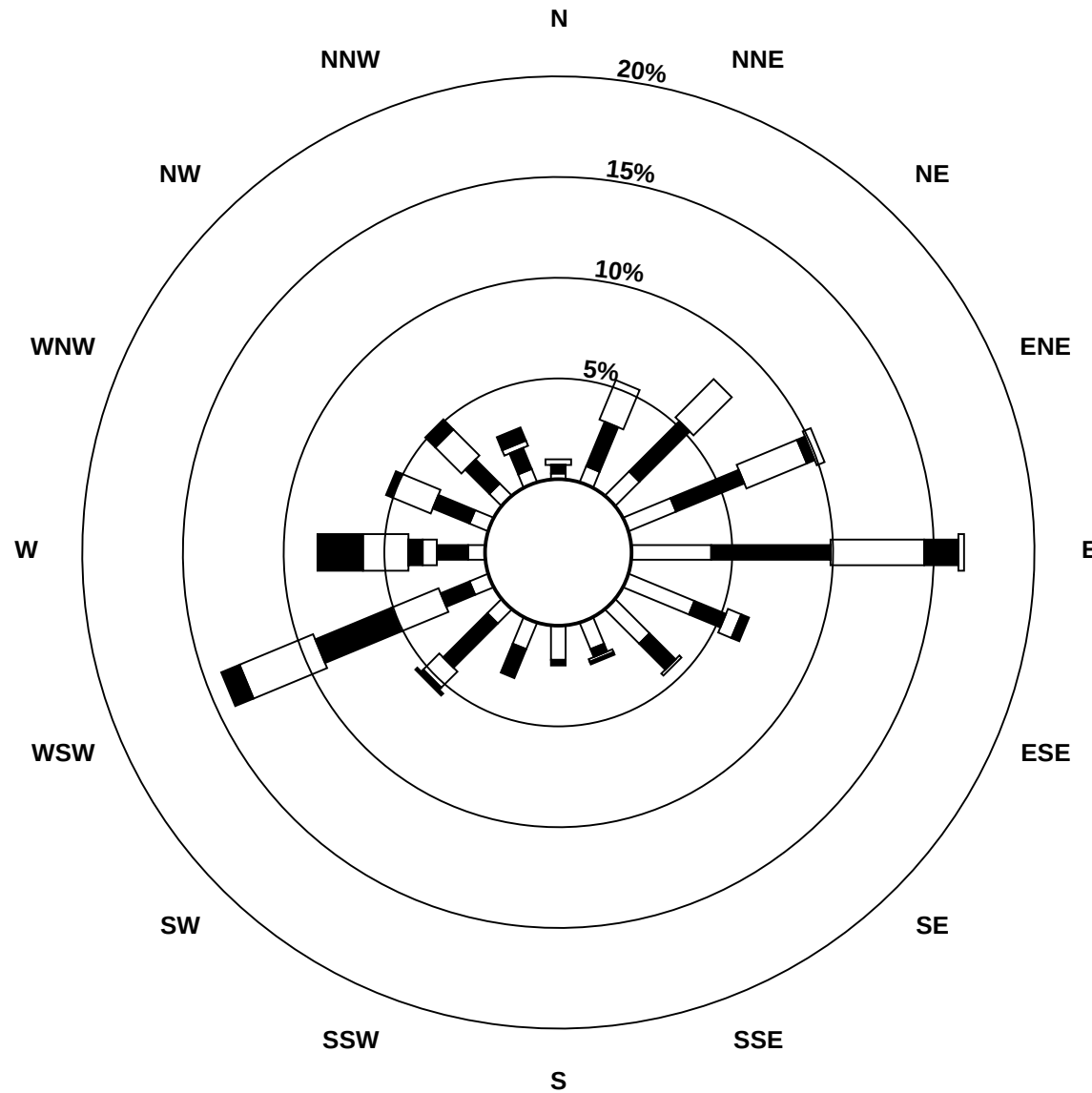
Wind Speed (km/h)  
Wind Direction (deg)  
Beaverlodge - April 2014

| 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                                                                             | 13                            | 8      | 7    | 9       | 11   | 14       | 12   | 15                 | 17   | 15       | 15   | 18       | 22   | 22   | 22   | 21    | 23   | 20   | 16   | 15                                                                                                                                                                  | 12   | 12   | 10   | 11   | 14.3            | 22.9          |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 30                            | 335    | 296  | 293     | 289  | 287      | 290  | 292                | 292  | 302      | 300  | 284      | 292  | 300  | 305  | 307   | 304  | 306  | 313  | 311                                                                                                                                                                 | 318  | 315  | 298  | 280  | 302             | 304           |  |  |  |                           |  |  |  |       |
| 24 Spd                                                                             | 13                            | 12     | 9    | 10      | 10   | 11       | 11   | 12                 | 11   | 11       | 9    | 8        | 9    | 9    | 13   | 13    | 13   | 15   | 16   | 16                                                                                                                                                                  | 12   | 10   | 6    | 6    | 7.2             | 16.2          |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 279                           | 288    | 286  | 294     | 292  | 297      | 301  | 290                | 291  | 307      | 305  | 310      | 338  | 9    | 33   | 30    | 36   | 40   | 50   | 36                                                                                                                                                                  | 36   | 32   | 22   | 13   | 344             | 36            |  |  |  |                           |  |  |  |       |
| 25 Spd                                                                             | 8                             | 8      | 7    | 5       | 4    | 5        | 6    | 8                  | 2    | 2        | 4    | 5        | 5    | 5    | 4    | 5     | 9    | 9    | 9    | 9                                                                                                                                                                   | 7    | 6    | 5    | 4    | 4.8             | 9.4           |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 20                            | 26     | 18   | 22      | 316  | 5        | 28   | 37                 | 345  | 296      | 27   | 59       | 100  | 88   | 120  | 52    | 41   | 73   | 81   | 94                                                                                                                                                                  | 65   | 64   | 91   | 77   | 51              | 73            |  |  |  |                           |  |  |  |       |
| 26 Spd                                                                             | 6                             | 6      | 7    | 7       | 6    | 7        | 7    | 11                 | 12   | 12       | 14   | 17       | 21   | 18   | 17   | 23    | 23   | 24   | 24   | 20                                                                                                                                                                  | 19   | 21   | 25   | 25   | 15.0            | 25.3          |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 61                            | 76     | 89   | 74      | 81   | 36       | 98   | 88                 | 75   | 65       | 52   | 82       | 95   | 99   | 92   | 98    | 92   | 110  | 115  | 106                                                                                                                                                                 | 98   | 89   | 89   | 94   | 91              | 89            |  |  |  |                           |  |  |  |       |
| 27 Spd                                                                             | 23                            | 19     | 14   | 9       | 8    | 3        | 3    | 2                  | 5    | 8        | 3    | 8        | 10   | 17   | 10   | 5     | 8    | 14   | 10   | 8                                                                                                                                                                   | 2    | 21   | 12   | 6    | 0.5             | 23.2          |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 97                            | 103    | 101  | 85      | 71   | 81       | 298  | 265                | 245  | 217      | 253  | 285      | 278  | 283  | 334  | 317   | 345  | 291  | 309  | 29                                                                                                                                                                  | 99   | 161  | 130  | 214  | 99              | 97            |  |  |  |                           |  |  |  |       |
| 28 Spd                                                                             | 6                             | 10     | 7    | 7       | 8    | 9        | 11   | 14                 | 27   | 34       | 35   | 34       | 35   | 34   | 33   | 31    | 29   | 32   | 29   | 26                                                                                                                                                                  | 18   | 14   | 12   | 10   | 20.4            | 35.3          |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 206                           | 231    | 221  | 223     | 215  | 217      | 213  | 215                | 243  | 247      | 242  | 244      | 255  | 262  | 259  | 257   | 262  | 258  | 240  | 241                                                                                                                                                                 | 239  | 242  | 242  | 233  | 245             | 255           |  |  |  |                           |  |  |  |       |
| 29 Spd                                                                             | 6                             | 7      | 7    | 1       | 2    | 3        | 4    | 3                  | 6    | 5        | 8    | 10       | 7    | 7    | 8    | 6     | 4    | 3    | 13   | 9                                                                                                                                                                   | 6    | 5    | 5    | 1    | 2.2             | 13.0          |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 233                           | 243    | 233  | 208     | 129  | 87       | 66   | 157                | 189  | 183      | 148  | 130      | 127  | 145  | 99   | 101   | 87   | 47   | 239  | 266                                                                                                                                                                 | 273  | 281  | 277  | 113  | 184             | 239           |  |  |  |                           |  |  |  |       |
| 30 Spd                                                                             | 4                             | 5      | 5    | 4       | 3    | 4        | 4    | 3                  | 3    | 4        | 10   | 13       | 16   | 19   | 25   | 26    | 30   | 33   | 29   | 29                                                                                                                                                                  | 19   | 12   | 14   | 12   | 10.3            | 32.6          |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 58                            | 75     | 126  | 136     | 77   | 87       | 69   | 70                 | 205  | 183      | 218  | 225      | 230  | 232  | 246  | 256   | 254  | 257  | 247  | 257                                                                                                                                                                 | 268  | 287  | 290  | 302  | 251             | 257           |  |  |  |                           |  |  |  |       |
| Spd                                                                                | 1.8                           | 0.5    | 0.7  | 0.2     | 0.3  | 1.2      | 2.1  | 2.2                | 4.0  | 6.5      | 6.9  | 6.5      | 5.3  | 4.9  | 4.5  | 4.7   | 4.6  | 3.0  | 1.4  | 1.8                                                                                                                                                                 | 1.7  | 1.4  | 0.4  | 0.3  | Diurnal Average |               |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 55                            | 56     | 77   | 37      | 303  | 261      | 268  | 265                | 262  | 267      | 270  | 262      | 259  | 274  | 288  | 282   | 289  | 273  | 255  | 246                                                                                                                                                                 | 277  | 266  | 207  | 239  |                 |               |  |  |  |                           |  |  |  |       |
| Spd                                                                                | 28.2                          | 26.0   | 23.5 | 17.4    | 19.6 | 19.7     | 26.6 | 26.7               | 34.3 | 39.5     | 43.7 | 47.5     | 46.7 | 44.2 | 44.2 | 47.6  | 44.9 | 42.6 | 35.6 | 29.5                                                                                                                                                                | 36.3 | 26.9 | 28.6 | 28.9 | Diurnal Maximum |               |  |  |  |                           |  |  |  |       |
| Dir                                                                                | 248                           | 253    | 246  | 240     | 249  | 243      | 252  | 257                | 264  | 264      | 268  | 264      | 265  | 241  | 253  | 259   | 262  | 265  | 255  | 254                                                                                                                                                                 | 253  | 258  | 257  | 248  |                 |               |  |  |  |                           |  |  |  |       |
| Maximum Speed Value: 48 km/h on Apr 9 16:00                                        |                               |        |      |         |      |          |      |                    |      |          |      |          |      |      |      |       |      |      |      | Minimum Speed Value: 0 km/h on Apr 1 02:00                                                                                                                          |      |      |      |      |                 |               |  |  |  | Hours in Service:         |  |  |  | 720   |
| Maximum Daily Speed Average: 31.0 km/h on Apr 9                                    |                               |        |      |         |      |          |      |                    |      |          |      |          |      |      |      |       |      |      |      | Minimum Daily Speed Average: 0.5 km/h on Apr 3                                                                                                                      |      |      |      |      |                 |               |  |  |  | Hours of Data:            |  |  |  | 720   |
| Maximum Diurnal Speed Average: 6.9 km/h at hour 11                                 |                               |        |      |         |      |          |      |                    |      |          |      |          |      |      |      |       |      |      |      | Minimum Diurnal Speed Average: 0.2 km/h at hour 4                                                                                                                   |      |      |      |      |                 |               |  |  |  | Hours of Missing Data:    |  |  |  | 0     |
| Monthly Average Velocity: 2.48 km/h 271.4 deg                                      |                               |        |      |         |      |          |      |                    |      |          |      |          |      |      |      |       |      |      |      | Speed Percentiles: P <sub>1</sub> = 0.8 P <sub>10</sub> = 2.7 Q <sub>1</sub> = 5.3 Median = 9.6 Q <sub>3</sub> = 16.4 P <sub>90</sub> = 28.5 P <sub>99</sub> = 43.6 |      |      |      |      |                 |               |  |  |  | Percent Operational Time: |  |  |  | 100.0 |
| All monthly, daily, and diurnal averages have been calculated using vector methods |                               |        |      |         |      |          |      |                    |      |          |      |          |      |      |      |       |      |      |      |                                                                                                                                                                     |      |      |      |      |                 |               |  |  |  |                           |  |  |  |       |
| Frequency Distribution                                                             |                               |        |      |         |      |          |      |                    |      |          |      |          |      |      |      |       |      |      |      |                                                                                                                                                                     |      |      |      |      |                 |               |  |  |  |                           |  |  |  |       |
| Direction                                                                          |                               | 0 to 5 |      | 5 to 11 |      | 11 to 19 |      | Speed Range (km/h) |      | 19 to 28 |      | 28 to 38 |      | > 38 |      | Total |      |      |      |                                                                                                                                                                     |      |      |      |      |                 |               |  |  |  |                           |  |  |  |       |
| North                                                                              |                               | 10     |      | 13      |      | 10       |      | 0                  |      | 0        |      | 0        |      | 0    |      | 33    |      |      |      |                                                                                                                                                                     |      |      |      |      |                 |               |  |  |  |                           |  |  |  |       |
| NorthEast                                                                          |                               | 23     |      | 46      |      | 38       |      | 1                  |      | 1        |      | 0        |      | 0    |      | 109   |      |      |      |                                                                                                                                                                     |      |      |      |      |                 |               |  |  |  |                           |  |  |  |       |
| East                                                                               |                               | 44     |      | 67      |      | 49       |      | 20                 |      | 4        |      | 0        |      | 0    |      | 184   |      |      |      |                                                                                                                                                                     |      |      |      |      |                 |               |  |  |  |                           |  |  |  |       |
| SouthEast                                                                          |                               | 33     |      | 24      |      | 6        |      | 1                  |      | 0        |      | 0        |      | 0    |      | 64    |      |      |      |                                                                                                                                                                     |      |      |      |      |                 |               |  |  |  |                           |  |  |  |       |
| South                                                                              |                               | 18     |      | 9       |      | 0        |      | 1                  |      | 0        |      | 0        |      | 0    |      | 28    |      |      |      |                                                                                                                                                                     |      |      |      |      |                 |               |  |  |  |                           |  |  |  |       |
| SouthWest                                                                          |                               | 17     |      | 36      |      | 24       |      | 12                 |      | 6        |      | 3        |      | 98   |      |       |      |      |      |                                                                                                                                                                     |      |      |      |      |                 |               |  |  |  |                           |  |  |  |       |
| West                                                                               |                               | 11     |      | 22      |      | 22       |      | 24                 |      | 38       |      | 22       |      | 139  |      |       |      |      |      |                                                                                                                                                                     |      |      |      |      |                 |               |  |  |  |                           |  |  |  |       |
| NorthWest                                                                          |                               | 11     |      | 22      |      | 20       |      | 12                 |      | 0        |      | 0        |      | 65   |      |       |      |      |      |                                                                                                                                                                     |      |      |      |      |                 |               |  |  |  |                           |  |  |  |       |
| Total                                                                              |                               | 167    |      | 239     |      | 169      |      | 71                 |      | 49       |      | 25       |      | 720  |      |       |      |      |      |                                                                                                                                                                     |      |      |      |      |                 |               |  |  |  |                           |  |  |  |       |

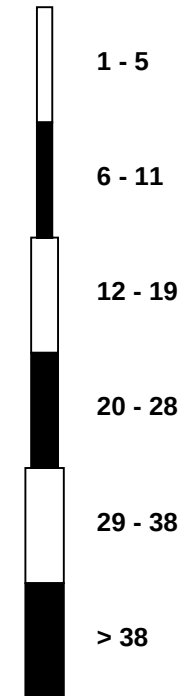
## Wind Rose

Wind Speed (WS) (km/h)

Beaverlodge - April 2014



### Wind Speed Classes (km/h)



## Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Beaverlodge - April 2014

| Maximum Speed: 48 km/h on Apr 9 16:00                                                                                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Speed Average: 31.4 km/h on Apr 9                                                                                                               |    |    |    |    |                 |               |  |  |  | Hours in Service: 720           |  |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-----------------|---------------|--|--|--|---------------------------------|--|
| Minimum Speed: 1 km/h on Apr 12 07:00                                                                                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Speed Average: 5.6 km/h on Apr 14                                                                                                               |    |    |    |    |                 |               |  |  |  | Hours of Data: 720              |  |
| Maximum Diurnal Speed Average: 19.2 km/h at hour 17                                                                     |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Speed Average: 7.2 km/h at hour 6                                                                                                             |    |    |    |    |                 |               |  |  |  | Hours of Missing Data: 0        |  |
| Monthly Average Speed: 13.00 km/h                                                                                       |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 1.6 P <sub>10</sub> = 3.3 Q <sub>1</sub> = 6.0 Median = 9.9 Q <sub>3</sub> = 16.7 P <sub>90</sub> = 28.6 P <sub>99</sub> = 43.7 |    |    |    |    |                 |               |  |  |  | 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-Apr                                                                                                                   | 8                             | 2  | 2  | 3  | 2  | 2  | 3  | 3  | 3  | 3  | 3  | 2  | 3  | 5  | 6  | 6  | 14 | 13 | 13 | 12                                                                                                                                                            | 9  | 10 | 14 | 9  | 6.2             | 13.8          |  |  |  |                                 |  |
| 2-Apr                                                                                                                   | 10                            | 13 | 16 | 16 | 16 | 9  | 10 | 10 | 12 | 14 | 14 | 10 | 7  | 7  | 8  | 8  | 9  | 15 | 13 | 9                                                                                                                                                             | 7  | 5  | 11 | 10 | 10.8            | 16.4          |  |  |  |                                 |  |
| 3-Apr                                                                                                                   | 8                             | 7  | 10 | 7  | 7  | 9  | 3  | 3  | 5  | 7  | 8  | 10 | 10 | 8  | 3  | 2  | 8  | 6  | 5  | 9                                                                                                                                                             | 7  | 5  | 3  | 2  | 6.3             | 10.4          |  |  |  |                                 |  |
| 4-Apr                                                                                                                   | 5                             | 4  | 7  | 5  | 2  | 2  | 7  | 12 | 19 | 17 | 18 | 15 | 17 | 11 | 10 | 7  | 8  | 3  | 3  | 6                                                                                                                                                             | 7  | 7  | 5  | 4  | 8.4             | 18.9          |  |  |  |                                 |  |
| 5-Apr                                                                                                                   | 3                             | 3  | 4  | 3  | 3  | 2  | 2  | 6  | 10 | 16 | 14 | 16 | 26 | 26 | 26 | 21 | 23 | 16 | 8  | 10                                                                                                                                                            | 11 | 9  | 7  | 8  | 11.3            | 26.1          |  |  |  |                                 |  |
| 6-Apr                                                                                                                   | 7                             | 6  | 8  | 11 | 17 | 17 | 24 | 27 | 32 | 40 | 36 | 37 | 34 | 30 | 32 | 41 | 41 | 37 | 31 | 24                                                                                                                                                            | 24 | 23 | 18 | 12 | 25.4            | 40.9          |  |  |  |                                 |  |
| 7-Apr                                                                                                                   | 12                            | 10 | 7  | 12 | 6  | 3  | 3  | 5  | 4  | 5  | 4  | 4  | 5  | 3  | 6  | 10 | 13 | 12 | 4  | 9                                                                                                                                                             | 13 | 10 | 5  | 4  | 7.0             | 13.4          |  |  |  |                                 |  |
| 8-Apr                                                                                                                   | 3                             | 6  | 6  | 6  | 5  | 3  | 4  | 4  | 6  | 25 | 41 | 44 | 40 | 45 | 44 | 40 | 42 | 35 | 36 | 30                                                                                                                                                            | 36 | 25 | 29 | 28 | 24.3            | 44.8          |  |  |  |                                 |  |
| 9-Apr                                                                                                                   | 20                            | 26 | 24 | 18 | 20 | 19 | 20 | 26 | 35 | 39 | 39 | 42 | 42 | 39 | 44 | 48 | 45 | 43 | 31 | 30                                                                                                                                                            | 27 | 27 | 24 | 29 | 31.4            | 47.8          |  |  |  |                                 |  |
| 10-Apr                                                                                                                  | 28                            | 26 | 13 | 6  | 11 | 20 | 27 | 24 | 18 | 29 | 44 | 48 | 47 | 43 | 39 | 41 | 37 | 33 | 25 | 18                                                                                                                                                            | 16 | 14 | 20 | 14 | 26.7            | 47.7          |  |  |  |                                 |  |
| 11-Apr                                                                                                                  | 4                             | 7  | 9  | 7  | 5  | 8  | 9  | 20 | 23 | 26 | 25 | 23 | 24 | 22 | 20 | 15 | 15 | 14 | 13 | 13                                                                                                                                                            | 11 | 10 | 9  | 7  | 14.2            | 25.7          |  |  |  |                                 |  |
| 12-Apr                                                                                                                  | 6                             | 7  | 6  | 5  | 4  | 2  | 1  | 2  | 3  | 6  | 9  | 6  | 6  | 7  | 7  | 9  | 10 | 11 | 12 | 8                                                                                                                                                             | 4  | 3  | 4  | 5  | 6.0             | 12.1          |  |  |  |                                 |  |
| 13-Apr                                                                                                                  | 11                            | 13 | 10 | 11 | 11 | 10 | 8  | 11 | 9  | 9  | 10 | 11 | 13 | 16 | 18 | 18 | 15 | 13 | 8  | 6                                                                                                                                                             | 5  | 4  | 2  | 2  | 10.1            | 18.1          |  |  |  |                                 |  |
| 14-Apr                                                                                                                  | 2                             | 2  | 3  | 3  | 2  | 2  | 4  | 1  | 3  | 3  | 5  | 6  | 7  | 12 | 13 | 10 | 7  | 9  | 8  | 9                                                                                                                                                             | 9  | 6  | 3  | 4  | 5.6             | 13.5          |  |  |  |                                 |  |
| 15-Apr                                                                                                                  | 7                             | 3  | 9  | 7  | 9  | 8  | 9  | 14 | 13 | 12 | 13 | 12 | 17 | 17 | 16 | 16 | 16 | 14 | 14 | 13                                                                                                                                                            | 7  | 4  | 4  | 8  | 10.8            | 17.1          |  |  |  |                                 |  |
| 16-Apr                                                                                                                  | 11                            | 14 | 10 | 10 | 11 | 11 | 11 | 13 | 12 | 11 | 12 | 15 | 9  | 11 | 8  | 10 | 12 | 19 | 22 | 19                                                                                                                                                            | 17 | 19 | 12 | 10 | 12.9            | 22.0          |  |  |  |                                 |  |
| 17-Apr                                                                                                                  | 11                            | 12 | 8  | 8  | 7  | 9  | 8  | 14 | 16 | 14 | 16 | 15 | 17 | 15 | 17 | 16 | 13 | 12 | 12 | 6                                                                                                                                                             | 2  | 6  | 15 | 16 | 11.8            | 16.9          |  |  |  |                                 |  |
| 18-Apr                                                                                                                  | 15                            | 12 | 9  | 10 | 8  | 3  | 1  | 6  | 4  | 3  | 4  | 4  | 5  | 7  | 7  | 6  | 6  | 8  | 6  | 9                                                                                                                                                             | 9  | 6  | 3  | 3  | 6.4             | 15.3          |  |  |  |                                 |  |
| 19-Apr                                                                                                                  | 3                             | 9  | 8  | 9  | 8  | 9  | 3  | 6  | 7  | 10 | 8  | 6  | 8  | 10 | 9  | 15 | 19 | 17 | 21 | 20                                                                                                                                                            | 9  | 8  | 3  | 2  | 9.5             | 21.1          |  |  |  |                                 |  |
| 20-Apr                                                                                                                  | 3                             | 4  | 5  | 5  | 6  | 3  | 5  | 10 | 21 | 32 | 32 | 37 | 33 | 35 | 31 | 30 | 33 | 29 | 24 | 16                                                                                                                                                            | 6  | 7  | 3  | 4  | 17.3            | 36.5          |  |  |  |                                 |  |
| 21-Apr                                                                                                                  | 6                             | 5  | 4  | 3  | 2  | 3  | 2  | 4  | 2  | 3  | 4  | 6  | 8  | 9  | 10 | 7  | 11 | 18 | 17 | 14                                                                                                                                                            | 11 | 13 | 15 | 12 | 7.9             | 17.5          |  |  |  |                                 |  |
| 22-Apr                                                                                                                  | 15                            | 15 | 14 | 6  | 5  | 5  | 5  | 14 | 18 | 17 | 21 | 23 | 30 | 27 | 32 | 32 | 34 | 37 | 26 | 22                                                                                                                                                            | 20 | 11 | 12 | 15 | 19.0            | 36.7          |  |  |  |                                 |  |
| 23-Apr                                                                                                                  | 14                            | 9  | 7  | 9  | 11 | 14 | 12 | 16 | 17 | 15 | 15 | 19 | 22 | 22 | 22 | 22 | 23 | 20 | 17 | 15                                                                                                                                                            | 12 | 12 | 10 | 11 | 15.2            | 23.1          |  |  |  |                                 |  |
| 24-Apr                                                                                                                  | 13                            | 12 | 9  | 10 | 10 | 11 | 11 | 12 | 11 | 11 | 10 | 10 | 10 | 10 | 14 | 13 | 13 | 15 | 16 | 16                                                                                                                                                            | 12 | 10 | 6  | 6  | 11.4            | 16.3          |  |  |  |                                 |  |
| 25-Apr                                                                                                                  | 8                             | 8  | 7  | 5  | 4  | 5  | 6  | 8  | 3  | 3  | 5  | 5  | 5  | 5  | 5  | 7  | 9  | 10 | 9  | 9                                                                                                                                                             | 7  | 7  | 5  | 4  | 6.2             | 9.6           |  |  |  |                                 |  |
| 26-Apr                                                                                                                  | 7                             | 6  | 8  | 8  | 6  | 7  | 8  | 11 | 13 | 13 | 15 | 18 | 22 | 19 | 17 | 23 | 23 | 25 | 24 | 20                                                                                                                                                            | 20 | 21 | 25 | 25 | 15.9            | 25.4          |  |  |  |                                 |  |
| 27-Apr                                                                                                                  | 23                            | 19 | 14 | 10 | 8  | 4  | 3  | 2  | 6  | 8  | 5  | 8  | 11 | 19 | 11 | 7  | 9  | 14 | 10 | 8                                                                                                                                                             | 7  | 21 | 12 | 6  | 10.2            | 23.3          |  |  |  |                                 |  |
| 28-Apr                                                                                                                  | 6                             | 10 | 7  | 7  | 8  | 9  | 11 | 14 | 27 | 34 | 35 | 35 | 36 | 35 | 34 | 32 | 30 | 32 | 30 | 26                                                                                                                                                            | 18 | 14 | 12 | 10 | 21.2            | 35.9          |  |  |  |                                 |  |
| 29-Apr                                                                                                                  | 6                             | 7  | 7  | 2  | 2  | 3  | 4  | 4  | 6  | 6  | 8  | 10 | 8  | 9  | 9  | 9  | 7  | 10 | 14 | 9                                                                                                                                                             | 6  | 5  | 5  | 1  | 6.7             | 13.5          |  |  |  |                                 |  |
| 30-Apr                                                                                                                  | 4                             | 5  | 5  | 4  | 3  | 4  | 4  | 3  | 3  | 5  | 12 | 13 | 17 | 20 | 25 | 27 | 30 | 33 | 29 | 29                                                                                                                                                            | 19 | 12 | 15 | 12 | 13.8            | 33.1          |  |  |  |                                 |  |
| 9.3 9.3 8.6 7.5 7.3 7.2 7.7 10.2 12.1 14.6 16.2 16.9 17.8 18.1 18.1 18.3 19.2 19.1 16.6 14.7 12.3 11.2 10.4 9.4         |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                               |    |    |    |    | Diurnal Average |               |  |  |  |                                 |  |
| 28.2 26.0 23.5 17.7 19.6 19.8 26.6 26.8 34.6 39.6 43.9 47.7 47.1 44.8 44.5 47.8 45.1 42.9 36.0 29.6 36.3 26.9 28.7 29.0 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                               |    |    |    |    | Diurnal Maximum |               |  |  |  |                                 |  |
| All monthly, daily, and diurnal averages have been calculated using scalar methods                                      |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                               |    |    |    |    |                 |               |  |  |  |                                 |  |

# Hourly Standard Deviations

Wind Direction (WD) - deg

Beaverlodge - April 2014

| Maximum Value: 95.0 deg on Apr 4 00:00                                                                                                                         |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Hours in Service: 720           |      |      |      |      |      |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------------------------------|------|------|------|------|------|---------------|
| Minimum Value: 1.8 deg on Apr 6 22:00                                                                                                                          |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Hours of Data: 720              |      |      |      |      |      |               |
|                                                                                                                                                                |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Hours of Missing Data: 0        |      |      |      |      |      |               |
| Percentiles: P <sub>1</sub> = 3.0 P <sub>10</sub> = 4.9 Q <sub>1</sub> = 7.0 Median = 11.0 Q <sub>3</sub> = 24.2 P <sub>90</sub> = 48.8 P <sub>99</sub> = 83.2 |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 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-Apr                                                                                                                                                          | 58                            | 91   | 67   | 75   | 66   | 80   | 93   | 64   | 20   | 88   | 26   | 61   | 56   | 24   | 12   | 22   | 7    | 9    | 10                              | 8    | 10   | 17   | 8    | 12   | 93.1          |
| 2-Apr                                                                                                                                                          | 8                             | 24   | 8    | 2    | 11   | 25   | 5    | 13   | 4    | 5    | 6    | 9    | 15   | 22   | 14   | 21   | 15   | 4    | 5                               | 7    | 8    | 29   | 6    | 5    | 28.9          |
| 3-Apr                                                                                                                                                          | 8                             | 8    | 6    | 7    | 6    | 28   | 27   | 29   | 62   | 83   | 19   | 19   | 6    | 12   | 42   | 66   | 71   | 81   | 87                              | 53   | 54   | 52   | 19   | 95   | 95.0          |
| 4-Apr                                                                                                                                                          | 17                            | 48   | 17   | 40   | 62   | 82   | 21   | 7    | 16   | 10   | 7    | 12   | 11   | 19   | 9    | 18   | 8    | 35   | 72                              | 19   | 11   | 14   | 18   | 26   | 81.8          |
| 5-Apr                                                                                                                                                          | 33                            | 25   | 35   | 16   | 42   | 34   | 58   | 41   | 5    | 4    | 7    | 10   | 12   | 9    | 7    | 6    | 4    | 5    | 37                              | 12   | 7    | 10   | 10   | 7    | 58.1          |
| 6-Apr                                                                                                                                                          | 7                             | 8    | 10   | 17   | 4    | 3    | 3    | 6    | 4    | 5    | 6    | 6    | 8    | 11   | 7    | 5    | 7    | 7    | 5                               | 4    | 2    | 2    | 4    | 10   | 17.4          |
| 7-Apr                                                                                                                                                          | 13                            | 14   | 20   | 16   | 21   | 52   | 24   | 19   | 38   | 11   | 12   | 30   | 8    | 31   | 74   | 8    | 17   | 7    | 35                              | 14   | 5    | 37   | 8    | 21   | 74.5          |
| 8-Apr                                                                                                                                                          | 65                            | 33   | 49   | 16   | 14   | 25   | 13   | 30   | 16   | 14   | 10   | 8    | 5    | 9    | 6    | 7    | 10   | 8    | 8                               | 5    | 4    | 4    | 4    | 6    | 65.4          |
| 9-Apr                                                                                                                                                          | 5                             | 5    | 5    | 9    | 4    | 11   | 6    | 4    | 6    | 8    | 8    | 8    | 8    | 6    | 5    | 5    | 6    | 6    | 7                               | 6    | 4    | 4    | 3    | 5    | 11.1          |
| 10-Apr                                                                                                                                                         | 4                             | 3    | 25   | 10   | 11   | 6    | 4    | 4    | 9    | 16   | 6    | 6    | 7    | 8    | 10   | 8    | 7    | 4    | 4                               | 3    | 4    | 8    | 8    | 14   | 24.8          |
| 11-Apr                                                                                                                                                         | 65                            | 82   | 49   | 34   | 15   | 14   | 9    | 22   | 7    | 6    | 6    | 9    | 8    | 8    | 9    | 9    | 7    | 10   | 9                               | 6    | 5    | 10   | 8    | 6    | 82.2          |
| 12-Apr                                                                                                                                                         | 5                             | 3    | 5    | 8    | 10   | 26   | 53   | 50   | 26   | 18   | 16   | 46   | 80   | 15   | 19   | 36   | 18   | 10   | 7                               | 7    | 17   | 67   | 31   | 10   | 79.8          |
| 13-Apr                                                                                                                                                         | 18                            | 7    | 13   | 15   | 6    | 4    | 8    | 8    | 15   | 9    | 13   | 9    | 12   | 6    | 7    | 6    | 8    | 5    | 7                               | 9    | 37   | 33   | 59   | 71   | 70.5          |
| 14-Apr                                                                                                                                                         | 47                            | 30   | 43   | 23   | 20   | 43   | 9    | 30   | 23   | 25   | 16   | 10   | 16   | 17   | 6    | 9    | 11   | 14   | 9                               | 11   | 9    | 9    | 36   | 71   | 71.0          |
| 15-Apr                                                                                                                                                         | 23                            | 71   | 44   | 55   | 25   | 61   | 17   | 10   | 11   | 10   | 6    | 6    | 8    | 11   | 9    | 9    | 10   | 13   | 9                               | 9    | 6    | 23   | 12   | 4    | 70.5          |
| 16-Apr                                                                                                                                                         | 8                             | 6    | 17   | 6    | 6    | 3    | 6    | 12   | 9    | 14   | 14   | 17   | 38   | 29   | 30   | 40   | 20   | 13   | 7                               | 8    | 5    | 4    | 10   | 11   | 40.3          |
| 17-Apr                                                                                                                                                         | 6                             | 7    | 5    | 13   | 11   | 7    | 8    | 7    | 12   | 13   | 13   | 16   | 12   | 13   | 8    | 9    | 12   | 15   | 17                              | 41   | 35   | 37   | 6    | 4    | 41.3          |
| 18-Apr                                                                                                                                                         | 5                             | 6    | 8    | 6    | 7    | 71   | 85   | 14   | 16   | 54   | 61   | 64   | 44   | 34   | 21   | 38   | 40   | 16   | 17                              | 4    | 13   | 45   | 35   | 38   | 84.8          |
| 19-Apr                                                                                                                                                         | 36                            | 9    | 7    | 8    | 9    | 15   | 27   | 45   | 19   | 15   | 28   | 50   | 48   | 37   | 27   | 18   | 7    | 6    | 10                              | 34   | 46   | 22   | 36   | 71   | 71.5          |
| 20-Apr                                                                                                                                                         | 72                            | 63   | 48   | 8    | 7    | 33   | 18   | 8    | 11   | 8    | 6    | 9    | 11   | 9    | 12   | 13   | 10   | 10   | 7                               | 12   | 8    | 20   | 75   | 47   | 75.2          |
| 21-Apr                                                                                                                                                         | 14                            | 22   | 33   | 30   | 26   | 38   | 64   | 16   | 49   | 65   | 39   | 37   | 52   | 51   | 44   | 40   | 26   | 9    | 6                               | 4    | 7    | 12   | 51   | 11   | 64.5          |
| 22-Apr                                                                                                                                                         | 5                             | 5    | 6    | 77   | 51   | 16   | 11   | 6    | 6    | 8    | 6    | 10   | 7    | 9    | 5    | 5    | 5    | 8    | 9                               | 11   | 8    | 10   | 8    | 10   | 77.1          |
| 23-Apr                                                                                                                                                         | 14                            | 16   | 12   | 5    | 6    | 6    | 7    | 4    | 5    | 7    | 8    | 5    | 6    | 9    | 6    | 7    | 6    | 7    | 7                               | 7    | 8    | 7    | 8    | 5    | 16.4          |
| 24-Apr                                                                                                                                                         | 4                             | 3    | 4    | 5    | 5    | 6    | 6    | 8    | 12   | 14   | 23   | 33   | 31   | 27   | 18   | 18   | 16   | 20   | 6                               | 7    | 5    | 4    | 8    | 5    | 33.3          |
| 25-Apr                                                                                                                                                         | 6                             | 7    | 7    | 8    | 18   | 13   | 8    | 7    | 69   | 40   | 30   | 31   | 45   | 51   | 40   | 42   | 21   | 12   | 7                               | 8    | 12   | 8    | 8    | 11   | 69.1          |
| 26-Apr                                                                                                                                                         | 10                            | 12   | 16   | 13   | 14   | 9    | 25   | 10   | 19   | 10   | 9    | 16   | 11   | 12   | 13   | 7    | 6    | 12   | 7                               | 6    | 5    | 4    | 3    | 3    | 24.6          |
| 27-Apr                                                                                                                                                         | 3                             | 4    | 5    | 9    | 8    | 38   | 14   | 61   | 27   | 8    | 74   | 16   | 21   | 26   | 22   | 61   | 37   | 12   | 23                              | 11   | 67   | 9    | 14   | 24   | 73.7          |
| 28-Apr                                                                                                                                                         | 14                            | 14   | 12   | 10   | 11   | 11   | 6    | 7    | 7    | 7    | 5    | 9    | 10   | 12   | 13   | 11   | 11   | 10   | 8                               | 4    | 3    | 4    | 2    | 9    | 14.3          |
| 29-Apr                                                                                                                                                         | 15                            | 10   | 14   | 76   | 50   | 27   | 11   | 51   | 23   | 33   | 24   | 19   | 43   | 47   | 36   | 60   | 71   | 92   | 16                              | 3    | 4    | 5    | 30   | 52   | 92.0          |
| 30-Apr                                                                                                                                                         | 10                            | 10   | 24   | 18   | 31   | 43   | 14   | 20   | 42   | 30   | 35   | 17   | 15   | 11   | 15   | 11   | 10   | 10   | 7                               | 5    | 7    | 11   | 8    | 12   | 42.8          |
|                                                                                                                                                                | 71.9                          | 91.0 | 67.1 | 77.1 | 66.2 | 81.8 | 93.1 | 64.3 | 69.1 | 88.4 | 73.7 | 64.4 | 79.8 | 51.5 | 74.5 | 66.0 | 71.1 | 92.0 | 87.2                            | 53.5 | 66.8 | 67.1 | 75.2 | 95.0 |               |

PAZA  
Valleyview Station  
Monthly Summary Tables, Graphs and  
Roses

## Hourly Averages

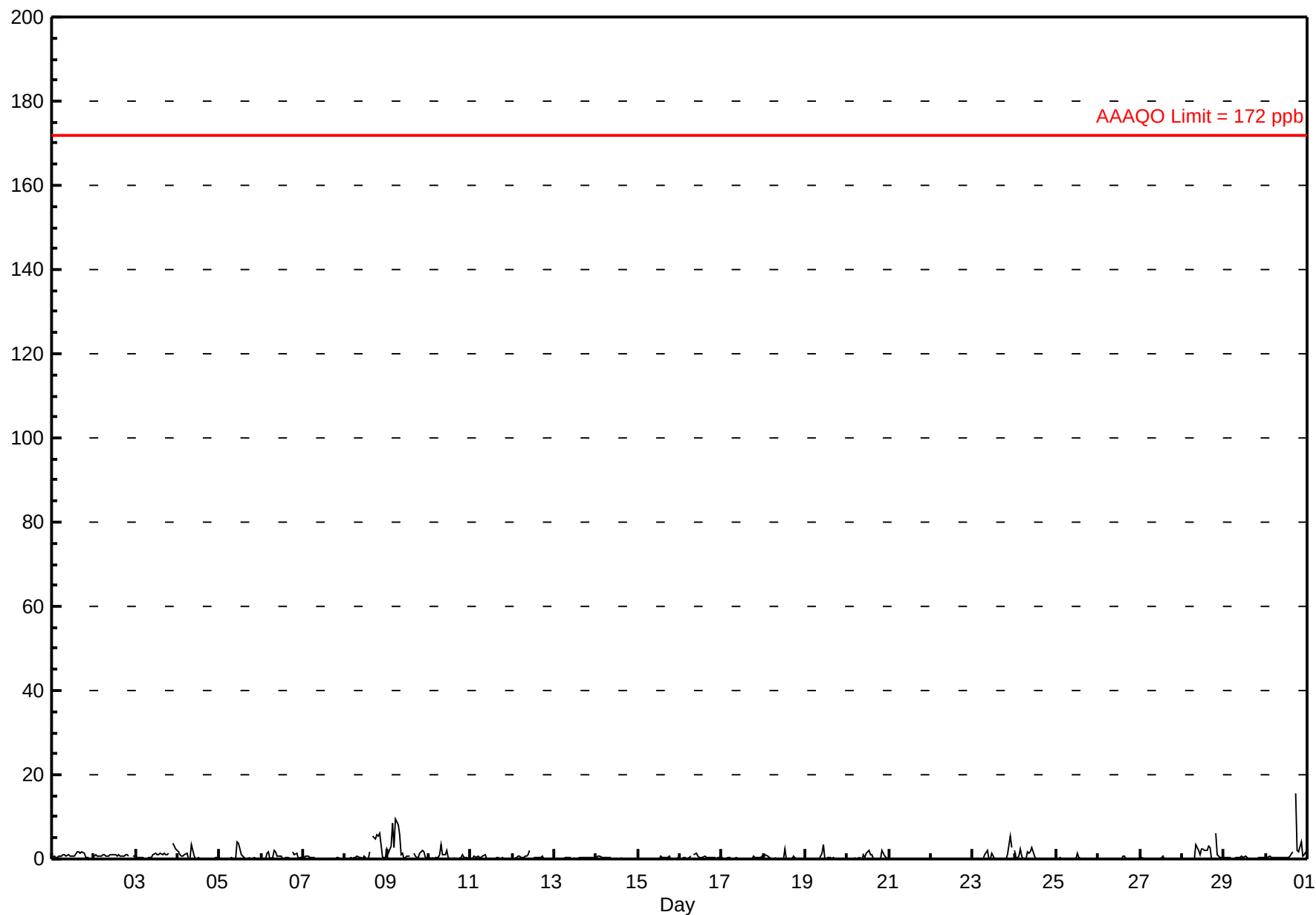
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Valleyview - April 2014

| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 15.7 ppb on Apr 30 18:00<br>Maximum Daily Average: 2.4 ppb on Apr 9                                                                                                                                                                                                                                   |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 686<br>Hours of Missing Data: 34<br>Hours of Calibration: 34<br>Percent Operational Time: 100.0 |    |    |    |                 |               |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|-----------------------------------------------------------------------------------------------------------------------------------------|----|----|----|-----------------|---------------|---------------|
| Minimum Value: 0 ppb on Apr 4 08:00<br>Maximum Diurnal Average: 1.0 ppb at hour 18<br>Monthly Average: 0.54 ppb<br>Minimum Daily Average: 0.0 ppb on Apr 22<br>Minimum Diurnal Average: 0.3 ppb at hour 2<br>Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.2 Q <sub>3</sub> = 0.5 P <sub>90</sub> = 1.4 P <sub>99</sub> = 5.9 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |                 |               |               |
| 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-Apr                                                                                                                                                                                                                                                                                                                                                                   | 0                             | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 1  | 2  | 1  | 0                                                                                                                                       | 0  | 0  | A  | 0               | 0.8           | 1.7           |
| 2-Apr                                                                                                                                                                                                                                                                                                                                                                   | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | A  | 1  | 1               | 0.8           | 1.1           |
| 3-Apr                                                                                                                                                                                                                                                                                                                                                                   | 1                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | A  | 4  | 3  | 2               | 1.0           | 3.6           |
| 4-Apr                                                                                                                                                                                                                                                                                                                                                                   | 2                             | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 4 | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A                                                                                                                                       | 0  | 0  | 0  | 0               | 0.5           | 3.5           |
| 5-Apr                                                                                                                                                                                                                                                                                                                                                                   | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 4  | 4  | 1  | 1  | 0  | 0  | 0  | 0  | A  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.5           | 4.1           |
| 6-Apr                                                                                                                                                                                                                                                                                                                                                                   | 0                             | 0 | 0 | 1 | 2 | 0 | 0 | 2 | 2 | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | A  | 2  | 1                                                                                                                                       | 1  | 0  | 0  | 0               | 0.7           | 2.1           |
| 7-Apr                                                                                                                                                                                                                                                                                                                                                                   | 0                             | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.2           | 0.6           |
| 8-Apr                                                                                                                                                                                                                                                                                                                                                                   | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0  | 0  | 1  | 0  | 0  | 2  | A  | 5  | 5  | 6  | 6                                                                                                                                       | 6  | 0  | 0  | 0               | 1.5           | 6.1           |
| 9-Apr                                                                                                                                                                                                                                                                                                                                                                   | 3                             | 1 | 3 | 9 | 3 | 9 | 8 | 6 | 1 | 1  | 0  | 1  | 1  | 1  | A  | 1  | 1  | 0  | 0  | 1                                                                                                                                       | 2  | 2  | 0  | 0               | 2.4           | 9.4           |
| 10-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 1  | 2  | 0  | 0  | A  | 0  | 0  | 0  | 0  | 0  | 1                                                                                                                                       | 0  | 0  | 0  | 0               | 0.6           | 3.5           |
| 11-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0  | 0  | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.2           | 0.9           |
| 12-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1  | 2  | A  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.4           | 2.0           |
| 13-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.2           | 0.5           |
| 14-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | A  | 0  | C  | C  | C  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.2           | 0.7           |
| 15-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 1  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.1           | 0.7           |
| 16-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | 0 | 0 | 1 | A | 1 | 1  | 1  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.4           | 1.2           |
| 17-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0                                                                                                                                       | 0  | 0  | 1  | 0.2             | 0.6           |               |
| 18-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 1 | 1 | 1 | 0 | A | 0 | 0 | 0 | 0  | 0  | 0  | 2  | 0  | 0  | 0  | 0  | 1  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.3           | 2.3           |
| 19-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1  | 3  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.2           | 3.3           |
| 20-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 1  | 0  | 2  | 2  | 1  | 1  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 2  | 1  | 0  | 0               | 0.4           | 2.0           |
| 21-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.0           | 0.1           |
| 22-Apr                                                                                                                                                                                                                                                                                                                                                                  | 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           |
| 23-Apr                                                                                                                                                                                                                                                                                                                                                                  | A                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 1  | 5  | 3  | A               | 0.6           | 5.5           |
| 24-Apr                                                                                                                                                                                                                                                                                                                                                                  | 2                             | 0 | 1 | 2 | 1 | 0 | 0 | 2 | 1 | 2  | 3  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | A  | 0               | 0.6           | 2.7           |
| 25-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | A  | 0  | 0               | 0.1           | 1.2           |
| 26-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 0  | 0  | 0  | 0                                                                                                                                       | A  | 0  | 0  | 0               | 0.1           | 0.8           |
| 27-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | A                                                                                                                                       | 0  | 0  | 0  | 0               | 0.1           | 0.8           |
| 28-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2  | 1  | 2  | 2  | 2  | 3  | 3  | 0  | A  | 6  | 1                                                                                                                                       | 1  | 0  | 0  | 0               | 1.3           | 6.0           |
| 29-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 1  | 0  | 1  | 0  | 0  | 0  | 0  | A  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0               | 0.3           | 0.8           |
| 30-Apr                                                                                                                                                                                                                                                                                                                                                                  | 0                             | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 1  | 2  | A  | 16 | 2  | 2                                                                                                                                       | 4  | 1  | 1  | 2               | 1.5           | 15.7          |
| 0.4 0.3 0.4 0.7 0.4 0.5 0.5 0.7 0.7 0.5 0.7 0.6 0.6 0.4 0.5 0.4 0.5 1.0 0.6 0.7 0.7 0.5 0.4 0.3                                                                                                                                                                                                                                                                         |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    | Diurnal Average |               |               |
| 2.5 1.4 3.1 8.5 2.9 9.4 8.2 5.7 3.5 2.1 4.1 3.8 2.3 2.2 2.2 3.1 5.4 15.7 5.9 6.0 6.1 5.5 3.0 2.5                                                                                                                                                                                                                                                                        |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    | Diurnal Maximum |               |               |
| C - Calibration A - Automated Daily Zero Span                                                                                                                                                                                                                                                                                                                           |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |                 |               |               |
| Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb                                                                                                                                                                                                                                                                                 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |                 |               |               |

## Hourly Averages

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Valleyview - April 2014



# Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb

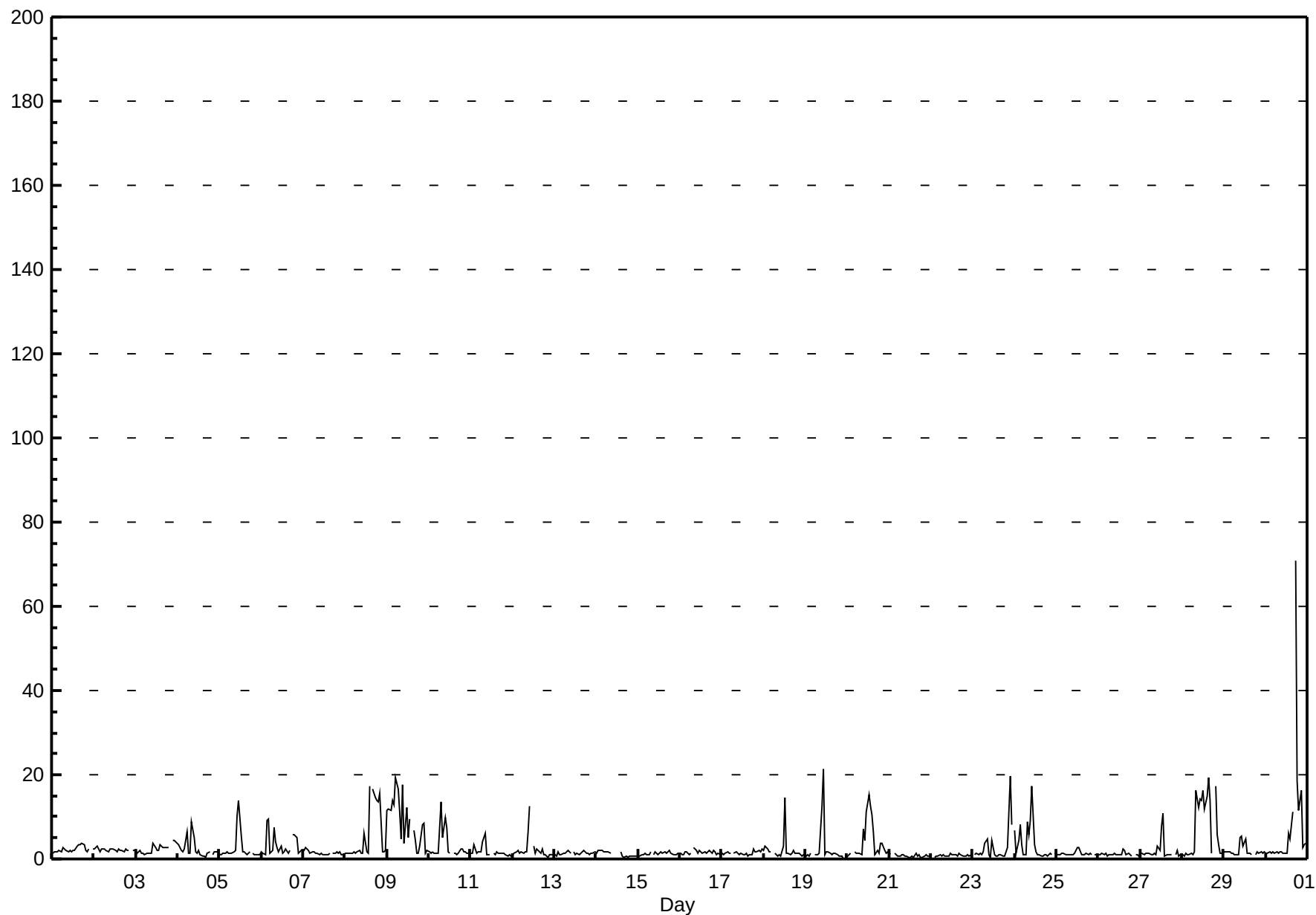
Valleyview - April 2014

| Maximum Value: 71.0 ppb on Apr 30 18:00                                                                               |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 8.6 ppb on Apr 9                                                                                                                     |    |    |    |                 | Hours in Service: 720     |  |
|-----------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|-----------------|---------------------------|--|
| Minimum Value: 0 ppb on Apr 19 23:00                                                                                  |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.8 ppb on Apr 21                                                                                                                    |    |    |    |                 | Hours of Data: 686        |  |
| Maximum Diurnal Average: 4.5 ppb at hour 18                                                                           |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 1.5 ppb at hour 24                                                                                                                 |    |    |    |                 | Hours of Missing Data: 34 |  |
| Monthly Average: 2.73 ppb                                                                                             |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.8 Q <sub>1</sub> = 1.1 Median = 1.4 Q <sub>3</sub> = 2.1 P <sub>90</sub> = 6.0 P <sub>99</sub> = 17.1 |    |    |    |                 | Hours of Calibration: 34  |  |
|                                                                                                                       |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percent Operational Time: 100.0                                                                                                                             |    |    |    |                 |                           |  |
| Day                                                                                                                   | Hourly Period Ending At (MST) |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    | Daily Average   | Daily Maximum             |  |
|                                                                                                                       | 1                             | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21                                                                                                                                                          | 22 | 23 | 24 |                 |                           |  |
| 1-Apr                                                                                                                 | 1                             | 2  | 2  | 2  | 2  | 2  | 3  | 3  | 2  | 2  | 2  | 2  | 2  | 2  | 3  | 3  | 3  | 4  | 3  | 2  | 2                                                                                                                                                           | 2  | A  | 2  | 2.2             | 3.6                       |  |
| 2-Apr                                                                                                                 | 2                             | 3  | 3  | 2  | 2  | 2  | 2  | 2  | 2  | 3  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2                                                                                                                                                           | A  | 2  | 2  | 2.2             | 2.9                       |  |
| 3-Apr                                                                                                                 | 2                             | 1  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 4  | 3  | 2  | 2  | 3  | 3  | 3  | 3  | 3  | 3  | A                                                                                                                                                           | 5  | 5  | 4  | 2.4             | 4.5                       |  |
| 4-Apr                                                                                                                 | 4                             | 3  | 2  | 2  | 2  | 6  | 1  | 1  | 9  | 5  | 2  | 1  | 2  | 1  | 1  | 1  | 0  | 1  | 2  | A  | 1                                                                                                                                                           | 2  | 2  | 2  | 2.3             | 8.8                       |  |
| 5-Apr                                                                                                                 | 1                             | 1  | 1  | 2  | 2  | 1  | 2  | 2  | 2  | 2  | 10 | 14 | 6  | 2  | 2  | 1  | 1  | 2  | A  | 1  | 1                                                                                                                                                           | 1  | 1  | 1  | 2.5             | 13.9                      |  |
| 6-Apr                                                                                                                 | 2                             | 1  | 1  | 9  | 10 | 1  | 2  | 7  | 4  | 3  | 2  | 3  | 1  | 2  | 3  | 1  | 2  | A  | 6  | 6  | 5                                                                                                                                                           | 1  | 2  | 2  | 3.3             | 9.5                       |  |
| 7-Apr                                                                                                                 | 2                             | 3  | 2  | 2  | 2  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 2  | 1  | 2  | 1                                                                                                                                                           | 2  | 1  | 1  | 1.5             | 2.6                       |  |
| 8-Apr                                                                                                                 | 1                             | 1  | 1  | 1  | 1  | 2  | 1  | 2  | 2  | 1  | 1  | 6  | 2  | 1  | 17 | A  | 17 | 15 | 14 | 13 | 16                                                                                                                                                          | 2  | 2  | 2  | 5.3             | 17.4                      |  |
| 9-Apr                                                                                                                 | 11                            | 12 | 12 | 14 | 13 | 19 | 16 | 11 | 5  | 18 | 4  | 12 | 5  | 10 | A  | 7  | 4  | 2  | 1  | 3  | 8                                                                                                                                                           | 8  | 1  | 2  | 8.6             | 19.3                      |  |
| 10-Apr                                                                                                                | 2                             | 1  | 2  | 1  | 1  | 1  | 7  | 14 | 5  | 10 | 7  | 2  | 1  | A  | 1  | 1  | 1  | 1  | 2  | 2  | 2                                                                                                                                                           | 2  | 1  | 1  | 3.1             | 13.6                      |  |
| 11-Apr                                                                                                                | 1                             | 1  | 3  | 1  | 2  | 2  | 2  | 4  | 6  | 1  | 1  | 1  | A  | 1  | 1  | 2  | 1  | 2  | 2  | 1  | 1                                                                                                                                                           | 1  | 1  | 1  | 1.7             | 6.1                       |  |
| 12-Apr                                                                                                                | 1                             | 1  | 2  | 2  | 1  | 2  | 1  | 2  | 2  | 6  | 13 | A  | 3  | 1  | 2  | 2  | 2  | 2  | 1  | 1  | 0                                                                                                                                                           | 1  | 1  | 1  | 2.2             | 12.6                      |  |
| 13-Apr                                                                                                                | 1                             | 1  | 2  | 1  | 1  | 1  | 1  | 2  | 2  | 1  | A  | 2  | 1  | 1  | 1  | 1  | 2  | 2  | 1  | 1  | 1                                                                                                                                                           | 1  | 1  | 2  | 1.4             | 2.1                       |  |
| 14-Apr                                                                                                                | 1                             | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 1  | A  | 1  | C  | C  | C  | 2  | 1  | 0  | 1  | 0  | 1  | 1                                                                                                                                                           | 1  | 1  | 1  | 1.2             | 2.0                       |  |
| 15-Apr                                                                                                                | 1                             | 1  | 1  | 1  | 1  | 1  | 1  | 2  | A  | 1  | 2  | 1  | 1  | 2  | 1  | 2  | 1  | 2  | 2  | 1  | 1                                                                                                                                                           | 1  | 1  | 1  | 1.3             | 2.0                       |  |
| 16-Apr                                                                                                                | 1                             | 1  | 1  | 2  | 2  | 1  | 1  | A  | 3  | 2  | 2  | 2  | 2  | 1  | 2  | 1  | 2  | 2  | 1  | 2  | 2                                                                                                                                                           | 1  | 2  | 1  | 1.6             | 2.8                       |  |
| 17-Apr                                                                                                                | 1                             | 1  | 1  | 2  | 1  | 1  | A  | 1  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 2                                                                                                                                                           | 2  | 2  | 2  | 1.4             | 2.3                       |  |
| 18-Apr                                                                                                                | 2                             | 3  | 2  | 2  | 2  | A  | 2  | 1  | 1  | 1  | 1  | 3  | 15 | 1  | 1  | 1  | 1  | 2  | 2  | 1  | 1                                                                                                                                                           | 1  | 1  | 1  | 2.0             | 14.5                      |  |
| 19-Apr                                                                                                                | 1                             | 1  | 1  | 1  | A  | 1  | 1  | 1  | 1  | 13 | 21 | 1  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                           | 1  | 0  | 0  | 2.4             | 21.3                      |  |
| 20-Apr                                                                                                                | 1                             | 1  | 1  | A  | 2  | 1  | 1  | 1  | 1  | 7  | 4  | 11 | 15 | 13 | 11 | 6  | 1  | 2  | 1  | 4  | 4                                                                                                                                                           | 2  | 1  | 2  | 4.1             | 15.4                      |  |
| 21-Apr                                                                                                                | 1                             | 1  | A  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 1  | 0  | 1  | 1  | 1  | 0  | 0  | 1                                                                                                                                                           | 1  | 1  | 1  | 0.8             | 1.5                       |  |
| 22-Apr                                                                                                                | 1                             | A  | 0  | 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-Apr                                                                                                                | A                             | 1  | 1  | 1  | 1  | 1  | 2  | 4  | 5  | 1  | 0  | 5  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 3                                                                                                                                                           | 20 | 8  | A  | 2.7             | 19.6                      |  |
| 24-Apr                                                                                                                | 7                             | 1  | 4  | 8  | 3  | 1  | 1  | 9  | 6  | 9  | 17 | 3  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                           | 1  | A  | 1  | 3.6             | 17.4                      |  |
| 25-Apr                                                                                                                | 1                             | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 3  | 3  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                           | A  | 1  | 1  | 1.3             | 2.7                       |  |
| 26-Apr                                                                                                                | 1                             | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 1  | 1  | 1  | 1  | A                                                                                                                                                           | 1  | 1  | 1  | 1.1             | 2.3                       |  |
| 27-Apr                                                                                                                | 1                             | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 3  | 2  | 8  | 11 | 1  | 1  | 1  | 1  | 1  | A  | 1                                                                                                                                                           | 2  | 1  | 1  | 2.0             | 10.7                      |  |
| 28-Apr                                                                                                                | 1                             | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 16 | 12 | 14 | 14 | 16 | 12 | 15 | 19 | 14 | 1  | A  | 17 | 6                                                                                                                                                           | 3  | 1  | 1  | 7.5             | 19.3                      |  |
| 29-Apr                                                                                                                | 2                             | 2  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 5  | 6  | 3  | 5  | 1  | 1  | 1  | 1  | A  | 1  | 2  | 1                                                                                                                                                           | 2  | 1  | 2  | 1.9             | 5.5                       |  |
| 30-Apr                                                                                                                | 1                             | 2  | 2  | 1  | 2  | 1  | 2  | 1  | 2  | 2  | 1  | 1  | 1  | 6  | 5  | 11 | A  | 71 | 19 | 11 | 16                                                                                                                                                          | 3  | 3  | 4  | 7.3             | 71.0                      |  |
| 1.9 1.8 2.0 2.3 2.2 2.1 2.1 2.8 3.0 3.9 4.4 3.6 3.6 3.0 3.0 2.7 2.4 4.5 2.7 3.1 2.9 2.5 1.6 1.5                       |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    | Diurnal Average |                           |  |
| 11.5 11.8 11.6 14.0 13.0 19.3 16.5 13.6 16.2 17.6 21.3 13.9 16.3 12.5 17.4 19.3 16.6 71.0 18.7 17.3 16.3 19.6 8.2 4.0 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    | Diurnal Maximum |                           |  |
| C - Calibration A - Automated Daily Zero Span                                                                         |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |                 |                           |  |



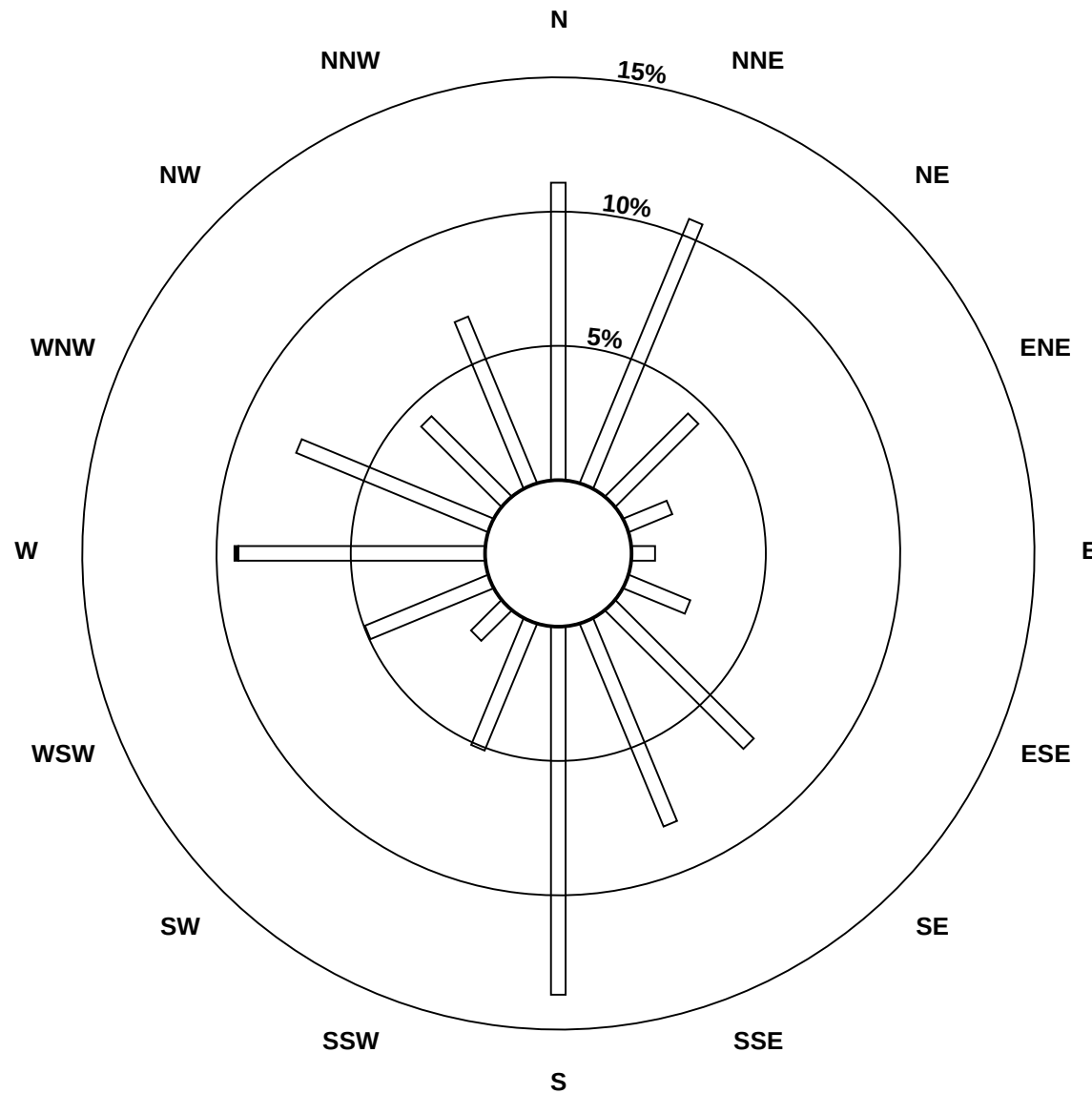
## Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Valleyview - April 2014

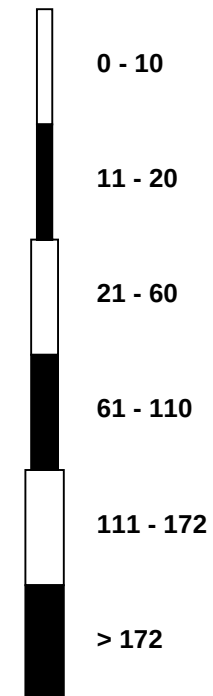


## Pollutant Rose

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Valleyview - April 2014

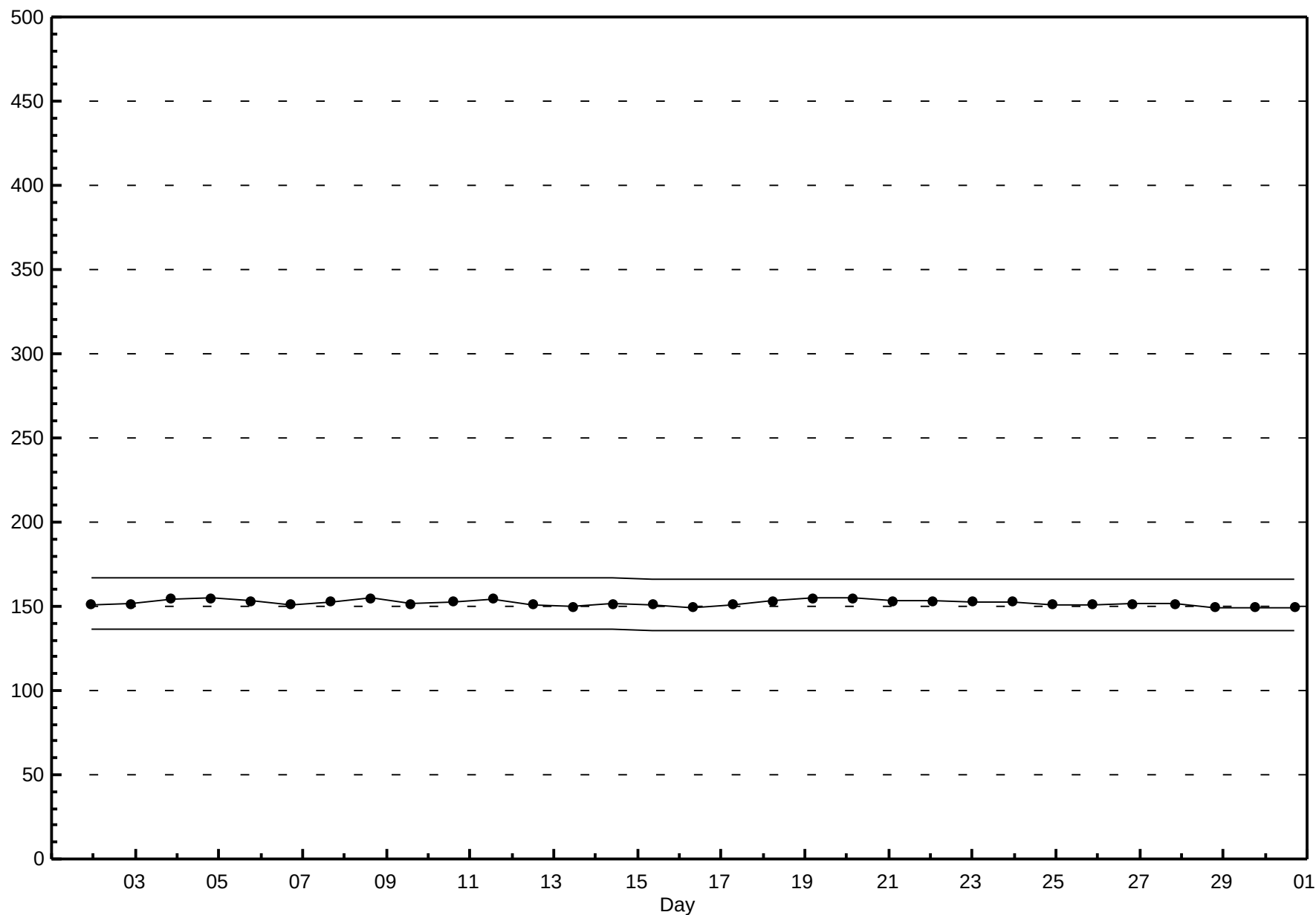


## Pollutant Classes (ppb)



## Span Responses

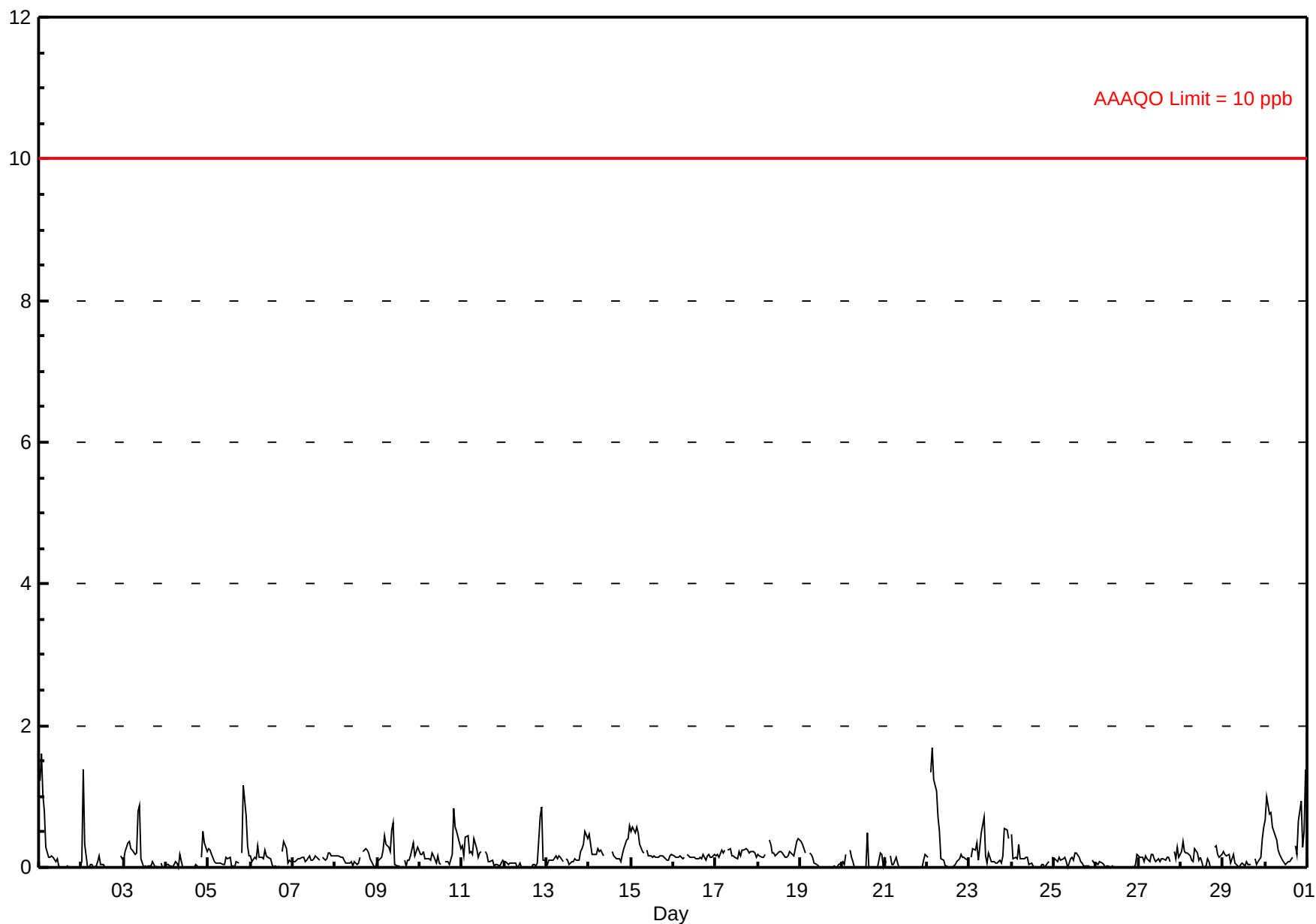
Sulphur Dioxide (SO<sub>2</sub>)  
Valleyview - April 2014



[illegible]

## Hourly Averages

Hydrogen Sulphide (H<sub>2</sub>S) - ppb  
Valleyview - April 2014



# Hourly Maximums

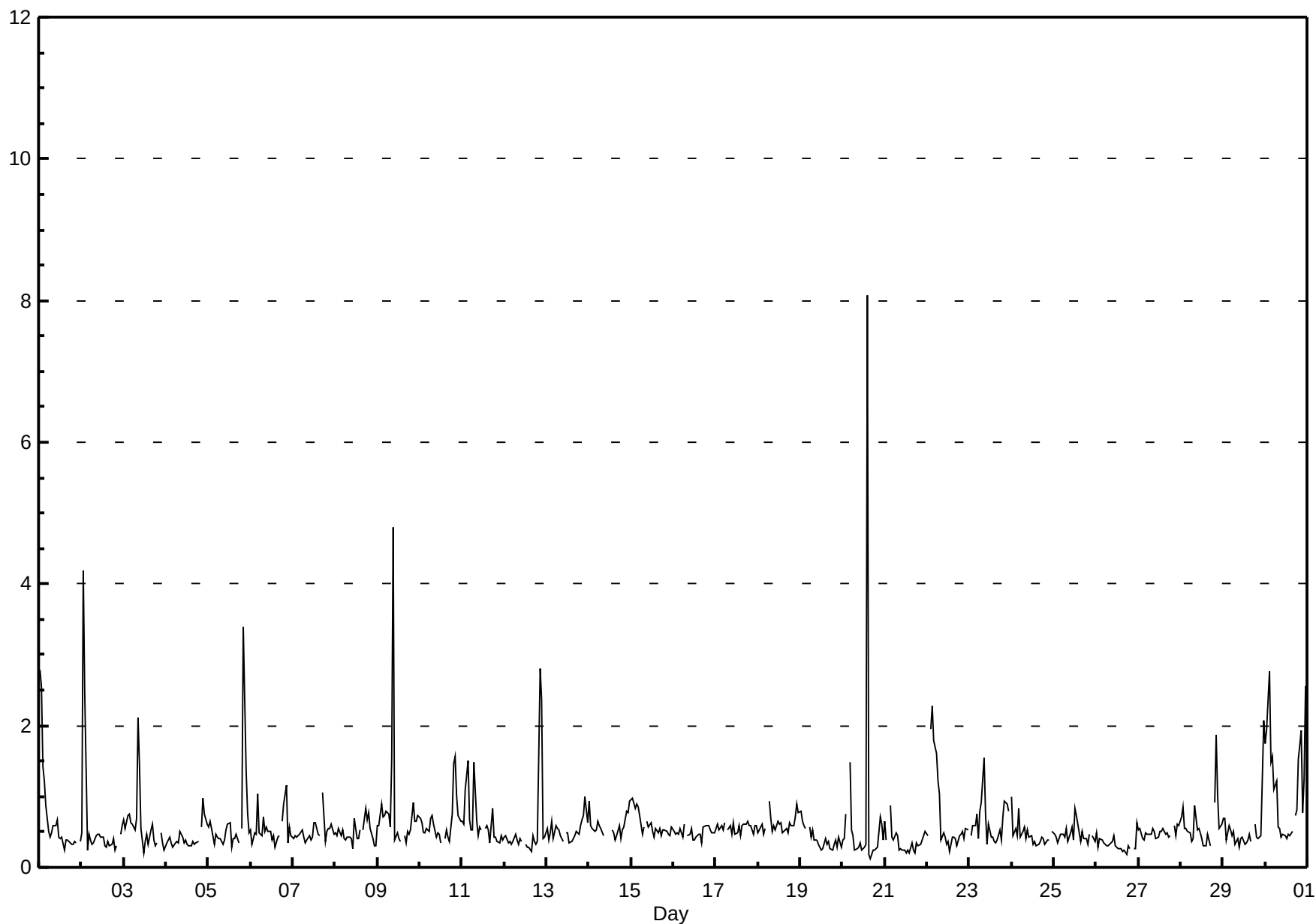
Hydrogen Sulphide (H<sub>2</sub>S) - ppb

Valleyview - April 2014

| Maximum Value: 8.1 ppb on Apr 20 15:00      |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 1.1 ppb on Apr 30                                                                                                                   |    |    |    |                               |                 |               |  |  |  | Hours in Service: 720     |  |
|---------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|-------------------------------|-----------------|---------------|--|--|--|---------------------------|--|
| Minimum Value: 0 ppb on Apr 20 17:00        |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.3 ppb on Apr 26                                                                                                                   |    |    |    |                               |                 |               |  |  |  | Hours of Data: 686        |  |
| Maximum Diurnal Average: 0.9 ppb at hour 21 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 0.4 ppb at hour 14                                                                                                                |    |    |    |                               |                 |               |  |  |  | Hours of Missing Data: 34 |  |
| Monthly Average: 0.58 ppb                   |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.4 Median = 0.5 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 0.9 P <sub>99</sub> = 2.8 |    |    |    |                               |                 |               |  |  |  | Hours of Calibration: 34  |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Percent Operational Time: 100.0                                                                                                                            |    |    |    |                               |                 |               |  |  |  |                           |  |
| Day                                         | Hourly Period Ending At (MST) |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |                               | Daily Average   | Daily Maximum |  |  |  |                           |  |
|                                             | 1                             | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20                                                                                                                                                         | 21 | 22 | 23 | 24                            |                 |               |  |  |  |                           |  |
| 1-Apr                                       | 3                             | 3 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | A  | 0                             | 0.7             | 2.8           |  |  |  |                           |  |
| 2-Apr                                       | 0                             | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | A  | 0  | 1                             | 0.6             | 4.2           |  |  |  |                           |  |
| 3-Apr                                       | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1  | 1  | 0  | 0  | 0  | 0  | 1  | 1  | 0  | 0  | 0                                                                                                                                                          | A  | 0  | 0  | 0                             | 0.6             | 2.1           |  |  |  |                           |  |
| 4-Apr                                       | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A                                                                                                                                                          | 1  | 1  | 1  | 1                             | 0.4             | 1.0           |  |  |  |                           |  |
| 5-Apr                                       | 1                             | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | A  | 1                                                                                                                                                          | 3  | 1  | 1  | 0                             | 0.6             | 3.4           |  |  |  |                           |  |
| 6-Apr                                       | 1                             | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | A  | 1  | 1                                                                                                                                                          | 1  | 0  | 1  | 0                             | 0.6             | 1.2           |  |  |  |                           |  |
| 7-Apr                                       | 0                             | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0  | 0  | 0  | 1  | 1  | 0  | 0  | A  | 1  | 0  | 1                                                                                                                                                          | 1  | 1  | 1  | 0                             | 0.5             | 1.1           |  |  |  |                           |  |
| 8-Apr                                       | 0                             | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0  | 0  | 1  | 0  | 0  | 1  | A  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 0  | 0  | 0                             | 0.5             | 0.8           |  |  |  |                           |  |
| 9-Apr                                       | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 5  | 0  | 0  | 0  | 0  | A  | 0  | 0  | 1  | 0  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 0.8             | 4.8           |  |  |  |                           |  |
| 10-Apr                                      | 1                             | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0  | 0  | 0  | 0  | A  | 0  | 1  | 0  | 0  | 1  | 1                                                                                                                                                          | 2  | 1  | 1  | 1                             | 0.7             | 1.6           |  |  |  |                           |  |
| 11-Apr                                      | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0  | 1  | 1  | A  | 1  | 1  | 1  | 0  | 1  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0                             | 0.6             | 1.5           |  |  |  |                           |  |
| 12-Apr                                      | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 3  | 2  | 0  | 0                             | 0.6             | 2.8           |  |  |  |                           |  |
| 13-Apr                                      | 1                             | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 0.5             | 1.0           |  |  |  |                           |  |
| 14-Apr                                      | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | A  | C  | C  | C  | 1  | 0  | 0  | 0  | 1  | 0  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 0.6             | 0.9           |  |  |  |                           |  |
| 15-Apr                                      | 1                             | 1 | 1 | 1 | 1 | 1 | 0 | 1 | A | 1  | 1  | 1  | 1  | 0  | 1  | 0  | 1  | 0  | 1  | 1                                                                                                                                                          | 0  | 0  | 0  | 1                             | 0.6             | 1.0           |  |  |  |                           |  |
| 16-Apr                                      | 1                             | 0 | 0 | 0 | 1 | 0 | 1 | A | 0 | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 0  | 0                             | 0.5             | 0.6           |  |  |  |                           |  |
| 17-Apr                                      | 1                             | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 0  | 1  | 0  | 0  | 1  | 0  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 0  | 1  | 1                             | 0.6             | 0.6           |  |  |  |                           |  |
| 18-Apr                                      | 0                             | 1 | 1 | 0 | 1 | A | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 0  | 1  | 1  | 0  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1                             | 0.6             | 0.9           |  |  |  |                           |  |
| 19-Apr                                      | 1                             | 1 | 1 | 1 | A | 1 | 0 | 1 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0                             | 0.4             | 0.8           |  |  |  |                           |  |
| 20-Apr                                      | 0                             | 0 | 1 | A | 1 | 1 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 8  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 1  | 1  | 0                             | 0.7             | 8.1           |  |  |  |                           |  |
| 21-Apr                                      | 1                             | 0 | A | 1 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 1                             | 0.4             | 0.9           |  |  |  |                           |  |
| 22-Apr                                      | 0                             | A | 2 | 2 | 2 | 2 | 1 | 1 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 1  | 0  | 1  | 1                             | 0.7             | 2.3           |  |  |  |                           |  |
| 23-Apr                                      | A                             | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 1  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 1                                                                                                                                                          | 1  | 1  | 1  | A                             | 0.6             | 1.5           |  |  |  |                           |  |
| 24-Apr                                      | 1                             | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | A  | 1                             | 0.5             | 1.0           |  |  |  |                           |  |
| 25-Apr                                      | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0  | 1  | 0  | 1  | 1  | 0  | 0  | 1  | 0  | 0  | 0                                                                                                                                                          | 0  | A  | 0  | 0                             | 0.5             | 0.8           |  |  |  |                           |  |
| 26-Apr                                      | 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             | 0.6           |  |  |  |                           |  |
| 27-Apr                                      | 1                             | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1  | 0  | 0  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | A                                                                                                                                                          | 1  | 0  | 1  | 1                             | 0.5             | 0.6           |  |  |  |                           |  |
| 28-Apr                                      | 1                             | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 1                                                                                                                                                          | 2  | 1  | 1  | 1                             | 0.6             | 1.9           |  |  |  |                           |  |
| 29-Apr                                      | 1                             | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 1  | 0                                                                                                                                                          | 0  | 0  | 1  | 2                             | 0.6             | 2.1           |  |  |  |                           |  |
| 30-Apr                                      | 2                             | 2 | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 0  | 0  | 0  | 0  | 0  | 0  | 1  | A  | 1  | 1  | 2                                                                                                                                                          | 2  | 1  | 1  | 3                             | 1.1             | 2.8           |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | Diurnal Average               | Diurnal Maximum |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.7                           | 2.8             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.8                           | 4.2             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.8                           | 2.8             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.7                           | 2.3             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.7                           | 1.8             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.6                           | 1.6             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.6                           | 1.2             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.6                           | 1.5             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.6                           | 2.1             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.6                           | 3.4             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.6                           | 1.2             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.5                           | 1.1             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.5                           | 0.8             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.6                           | 1.5             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.9                           | 3.4             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.7                           | 2.4             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.6                           | 1.2             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | 0.6                           | 2.6             |               |  |  |  |                           |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |                               |                 |               |  |  |  |                           |  |
| C - Calibration                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    | A - Automated Daily Zero Span |                 |               |  |  |  |                           |  |

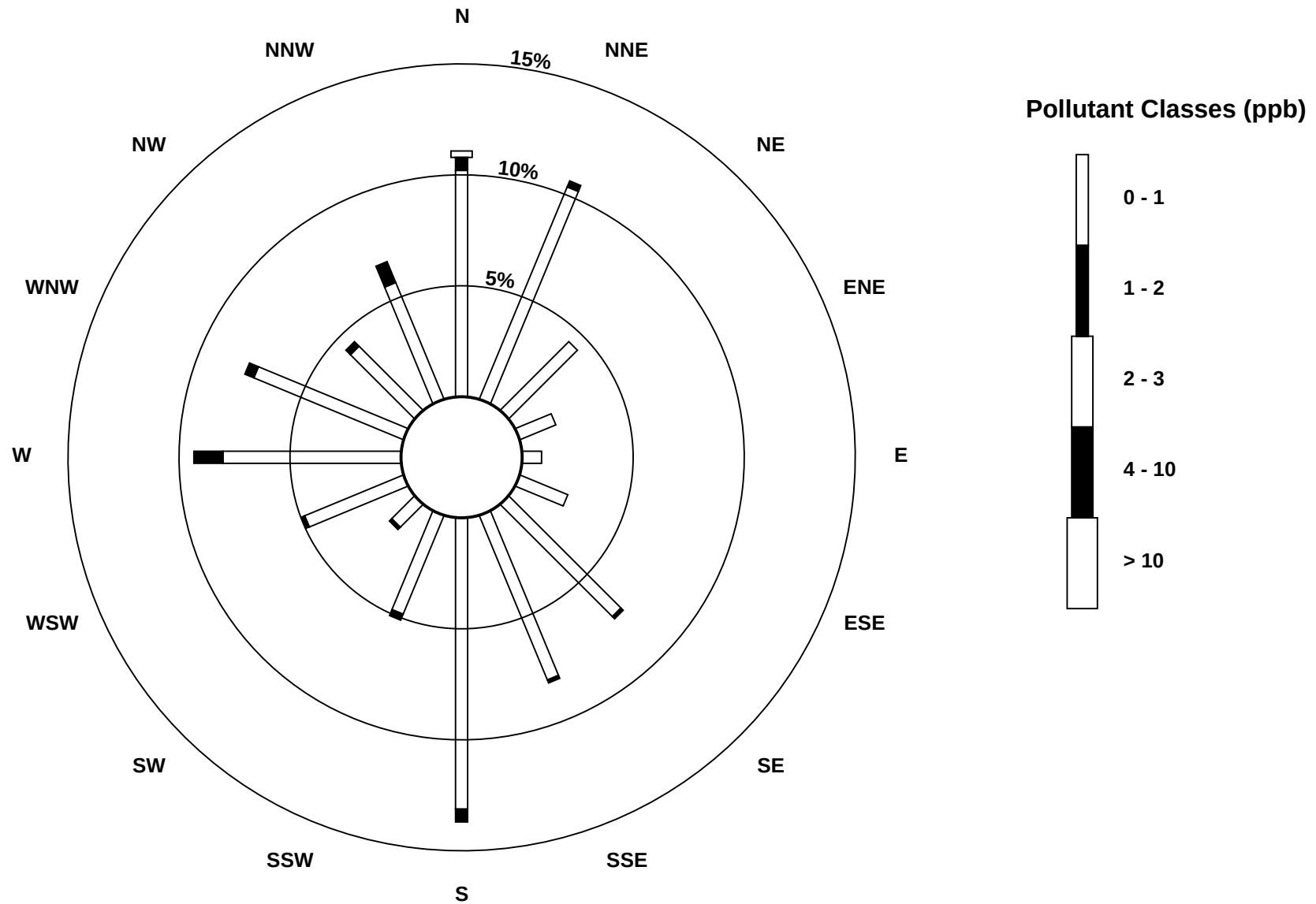
## Hourly Maximums

Hydrogen Sulphide (H<sub>2</sub>S) - ppb  
Valleyview - April 2014



## Pollutant Rose

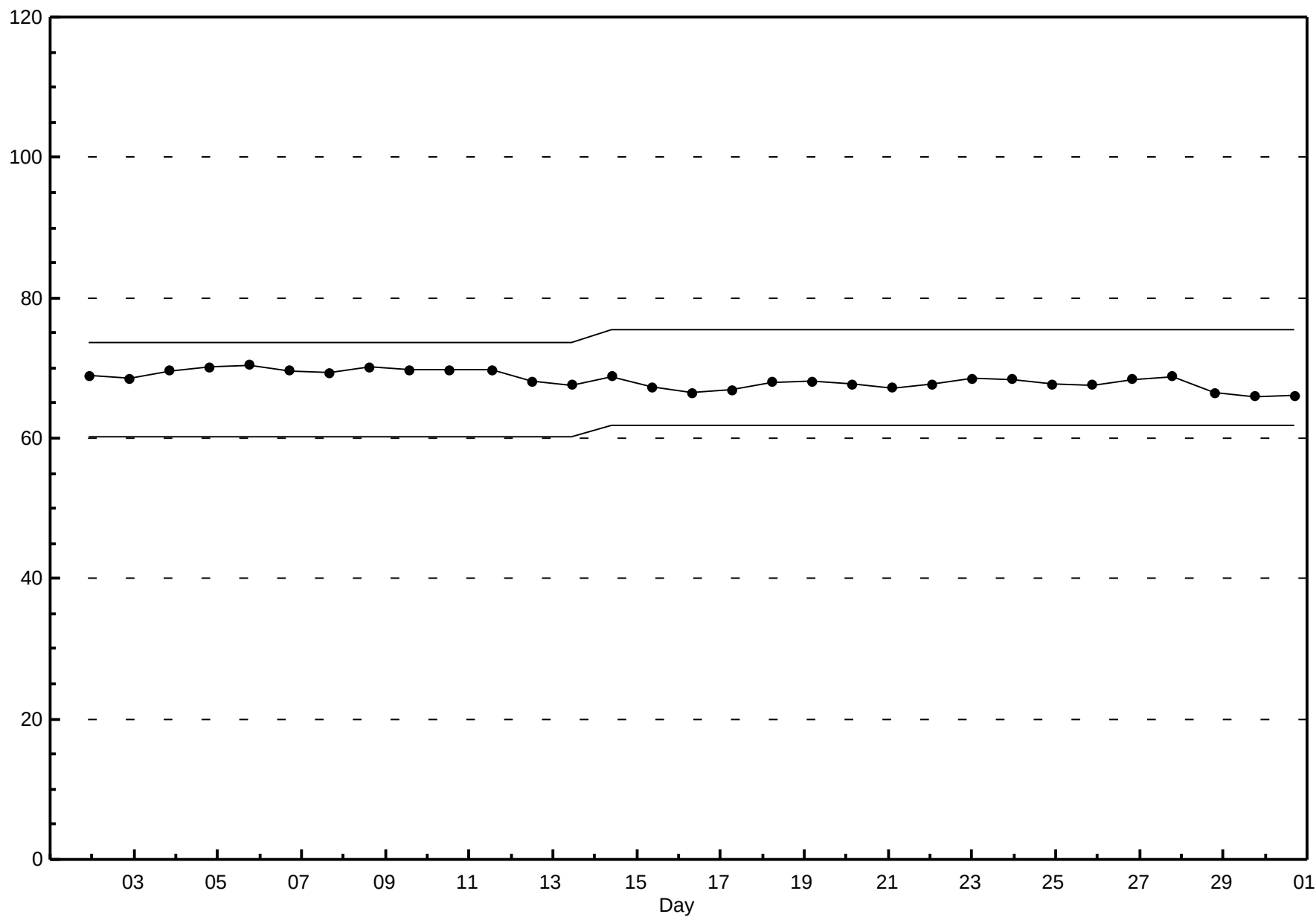
Hydrogen Sulphide (H<sub>2</sub>S) - ppb  
Valleyview - April 2014





## Span Responses

Hydrogen Sulphide ( $H_2S$ )  
Valleyview - April 2014



# Hourly Averages

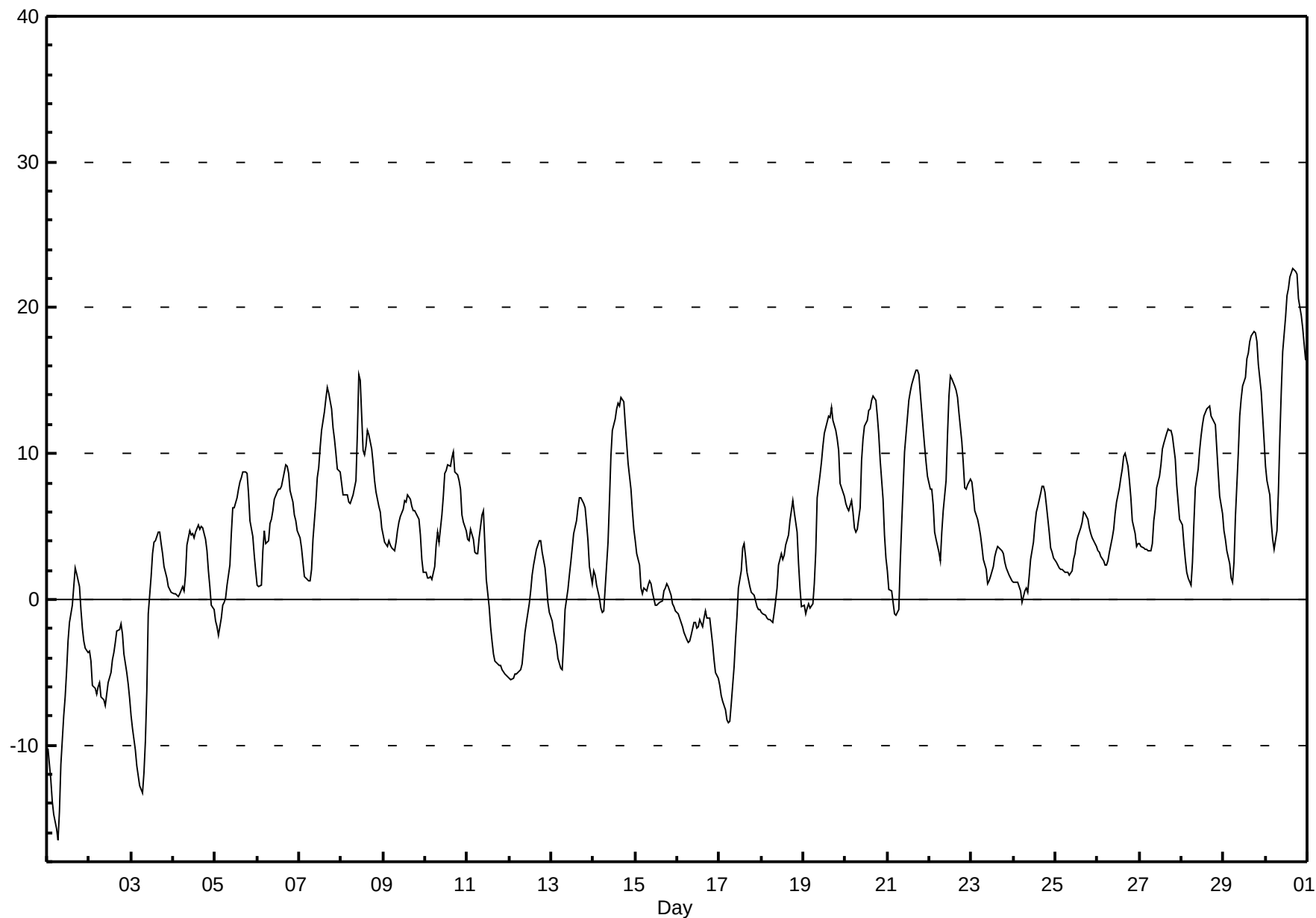
External Temperature (ET) - °C

Valleyview - April 2014

| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 22.7 °C on Apr 30 16:00 Maximum Daily Average: 14.9 °C on Apr 30                                                                                                                                                                                                                                |                               |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 720<br>Hours of Missing Data: 0<br>Hours of Calibration: 0<br>Percent Operational Time: 100.0 |               |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|
| Minimum Value: -17 °C on Apr 1 07:00 Minimum Daily Average: -6.3 °C on Apr 1<br>Maximum Diurnal Average: 8.2 °C at hour 17 Minimum Diurnal Average: -0.4 °C at hour 6<br>Monthly Average: 4.03 °C Percentiles: P <sub>1</sub> = -12.5 P <sub>10</sub> = -3.7 Q <sub>1</sub> = 0.4 Median = 3.8 Q <sub>3</sub> = 7.6 P <sub>90</sub> = 12.4 P <sub>99</sub> = 20.5 |                               |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                       |               |               |
| Day                                                                                                                                                                                                                                                                                                                                                               | Hourly Period Ending At (MST) |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                       | Daily Average | Daily Maximum |
| 1-Apr                                                                                                                                                                                                                                                                                                                                                             | -10                           | -11 | -12 | -14 | -15 | -16 | -17 | -15 | -11 | -8 | -7 | -5 | -3 | -2 | 0  | 1  | 2  | 2  | 1  | -1 | -2 | -3 | -3 | -4                                                                                                                                    | -6.3          | 2.2           |
| 2-Apr                                                                                                                                                                                                                                                                                                                                                             | -4                            | -4  | -6  | -6  | -6  | -6  | -6  | -7  | -7  | -7 | -7 | -6 | -5 | -4 | -4 | -3 | -2 | -2 | -2 | -2 | -4 | -5 | -6 | -7                                                                                                                                    | -4.9          | -1.7          |
| 3-Apr                                                                                                                                                                                                                                                                                                                                                             | -8                            | -9  | -10 | -11 | -12 | -13 | -13 | -12 | -10 | -6 | -1 | 2  | 3  | 4  | 4  | 5  | 5  | 4  | 3  | 2  | 1  | 1  | 1  | 0                                                                                                                                     | -3.0          | 4.6           |
| 4-Apr                                                                                                                                                                                                                                                                                                                                                             | 0                             | 0   | 0   | 0   | 0   | 1   | 1   | 2   | 4   | 5  | 4  | 4  | 4  | 5  | 5  | 5  | 5  | 5  | 4  | 3  | 2  | 1  | 0  | -1                                                                                                                                    | 2.5           | 5.1           |
| 5-Apr                                                                                                                                                                                                                                                                                                                                                             | -1                            | -2  | -2  | -1  | 0   | 0   | 0   | 1   | 2   | 4  | 6  | 6  | 7  | 8  | 8  | 8  | 9  | 9  | 9  | 7  | 5  | 4  | 3  | 2                                                                                                                                     | 3.8           | 8.8           |
| 6-Apr                                                                                                                                                                                                                                                                                                                                                             | 1                             | 1   | 1   | 3   | 5   | 4   | 4   | 5   | 6   | 6  | 7  | 7  | 8  | 8  | 8  | 9  | 9  | 9  | 9  | 8  | 7  | 6  | 5  | 5                                                                                                                                     | 5.8           | 9.2           |
| 7-Apr                                                                                                                                                                                                                                                                                                                                                             | 4                             | 4   | 3   | 2   | 1   | 1   | 1   | 2   | 4   | 7  | 8  | 9  | 10 | 12 | 13 | 14 | 15 | 14 | 13 | 12 | 11 | 10 | 9  | 9                                                                                                                                     | 7.8           | 14.5          |
| 8-Apr                                                                                                                                                                                                                                                                                                                                                             | 8                             | 7   | 7   | 7   | 7   | 7   | 7   | 7   | 8   | 11 | 15 | 15 | 10 | 10 | 11 | 12 | 11 | 10 | 9  | 8  | 7  | 6  | 6  | 5                                                                                                                                     | 8.9           | 15.5          |
| 9-Apr                                                                                                                                                                                                                                                                                                                                                             | 4                             | 4   | 4   | 4   | 4   | 4   | 3   | 4   | 5   | 5  | 6  | 6  | 7  | 7  | 7  | 6  | 6  | 6  | 6  | 5  | 4  | 3  | 2  | 2                                                                                                                                     | 4.9           | 7.1           |
| 10-Apr                                                                                                                                                                                                                                                                                                                                                            | 2                             | 1   | 1   | 2   | 1   | 2   | 4   | 5   | 4   | 6  | 7  | 9  | 9  | 9  | 9  | 10 | 10 | 9  | 9  | 8  | 8  | 6  | 5  | 5                                                                                                                                     | 5.8           | 10.1          |
| 11-Apr                                                                                                                                                                                                                                                                                                                                                            | 4                             | 4   | 5   | 4   | 3   | 3   | 3   | 4   | 6   | 6  | 4  | 1  | 0  | -2 | -3 | -4 | -4 | -4 | -4 | -5 | -5 | -5 | -5 | -5                                                                                                                                    | 0.0           | 6.1           |
| 12-Apr                                                                                                                                                                                                                                                                                                                                                            | -5                            | -6  | -5  | -5  | -5  | -5  | -5  | -4  | -3  | -2 | -2 | 0  | 1  | 2  | 2  | 3  | 4  | 4  | 4  | 3  | 2  | 1  | 0  | -1                                                                                                                                    | -1.0          | 4.1           |
| 13-Apr                                                                                                                                                                                                                                                                                                                                                            | -1                            | -2  | -3  | -3  | -4  | -5  | -5  | -3  | -1  | 1  | 2  | 3  | 4  | 5  | 5  | 6  | 7  | 7  | 7  | 6  | 5  | 4  | 2  | 1                                                                                                                                     | 1.6           | 7.0           |
| 14-Apr                                                                                                                                                                                                                                                                                                                                                            | 2                             | 2   | 1   | 0   | -1  | -1  | -1  | 1   | 4   | 7  | 10 | 12 | 12 | 13 | 13 | 13 | 14 | 14 | 12 | 11 | 9  | 8  | 6  | 5                                                                                                                                     | 6.9           | 13.9          |
| 15-Apr                                                                                                                                                                                                                                                                                                                                                            | 4                             | 3   | 2   | 1   | 0   | 1   | 1   | 1   | 1   | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | -1                                                                                                                                    | 0.7           | 4.0           |
| 16-Apr                                                                                                                                                                                                                                                                                                                                                            | -1                            | -1  | -2  | -2  | -2  | -3  | -3  | -3  | -2  | -2 | -2 | -2 | -2 | -1 | -2 | -1 | -1 | -1 | -1 | -2 | -3 | -4 | -5 | -5                                                                                                                                    | -2.2          | -0.8          |
| 17-Apr                                                                                                                                                                                                                                                                                                                                                            | -6                            | -7  | -7  | -8  | -8  | -8  | -8  | -7  | -5  | -3 | -1 | 1  | 2  | 4  | 4  | 3  | 2  | 1  | 1  | 0  | 0  | 0  | -1 | -1                                                                                                                                    | -2.2          | 3.9           |
| 18-Apr                                                                                                                                                                                                                                                                                                                                                            | -1                            | -1  | -1  | -1  | -1  | -1  | -2  | -1  | 0   | 1  | 2  | 3  | 3  | 3  | 4  | 4  | 5  | 6  | 7  | 6  | 5  | 2  | 1  | -1                                                                                                                                    | 1.8           | 6.8           |
| 19-Apr                                                                                                                                                                                                                                                                                                                                                            | 0                             | -1  | -1  | 0   | -1  | 0   | 1   | 3   | 7   | 9  | 9  | 10 | 11 | 12 | 13 | 12 | 13 | 12 | 12 | 11 | 10 | 8  | 8  | 7                                                                                                                                     | 6.9           | 13.2          |
| 20-Apr                                                                                                                                                                                                                                                                                                                                                            | 7                             | 6   | 6   | 7   | 6   | 5   | 5   | 5   | 6   | 10 | 11 | 12 | 12 | 13 | 13 | 14 | 14 | 14 | 13 | 11 | 10 | 7  | 4  | 3                                                                                                                                     | 8.8           | 14.0          |
| 21-Apr                                                                                                                                                                                                                                                                                                                                                            | 2                             | 1   | 1   | 0   | -1  | -1  | -1  | 3   | 5   | 8  | 10 | 13 | 14 | 14 | 15 | 15 | 16 | 16 | 15 | 14 | 12 | 11 | 9  | 8                                                                                                                                     | 8.2           | 15.8          |
| 22-Apr                                                                                                                                                                                                                                                                                                                                                            | 8                             | 8   | 6   | 5   | 4   | 3   | 3   | 5   | 6   | 8  | 11 | 14 | 15 | 15 | 15 | 14 | 14 | 13 | 11 | 9  | 8  | 8  | 8  | 8                                                                                                                                     | 9.1           | 15.3          |
| 23-Apr                                                                                                                                                                                                                                                                                                                                                            | 8                             | 7   | 6   | 5   | 5   | 4   | 4   | 3   | 2   | 1  | 1  | 2  | 2  | 3  | 3  | 4  | 4  | 3  | 3  | 3  | 2  | 2  | 1  | 1                                                                                                                                     | 3.3           | 8.0           |
| 24-Apr                                                                                                                                                                                                                                                                                                                                                            | 1                             | 1   | 1   | 1   | 1   | 0   | 1   | 1   | 0   | 2  | 3  | 4  | 5  | 6  | 6  | 7  | 8  | 8  | 7  | 6  | 5  | 4  | 3  | 3                                                                                                                                     | 3.5           | 7.7           |
| 25-Apr                                                                                                                                                                                                                                                                                                                                                            | 3                             | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 2  | 3  | 3  | 4  | 4  | 5  | 5  | 6  | 6  | 5  | 5  | 5  | 4  | 4  | 4                                                                                                                                     | 3.5           | 6.0           |
| 26-Apr                                                                                                                                                                                                                                                                                                                                                            | 3                             | 3   | 3   | 3   | 2   | 2   | 3   | 3   | 4   | 5  | 6  | 7  | 8  | 8  | 9  | 10 | 10 | 9  | 8  | 7  | 5  | 5  | 4  | 4                                                                                                                                     | 5.4           | 10.0          |
| 27-Apr                                                                                                                                                                                                                                                                                                                                                            | 4                             | 4   | 4   | 3   | 3   | 3   | 3   | 4   | 5   | 6  | 8  | 8  | 9  | 10 | 11 | 11 | 12 | 12 | 12 | 11 | 10 | 8  | 7  | 6                                                                                                                                     | 7.2           | 11.7          |
| 28-Apr                                                                                                                                                                                                                                                                                                                                                            | 5                             | 4   | 3   | 2   | 1   | 1   | 3   | 5   | 8   | 9  | 10 | 11 | 12 | 13 | 13 | 13 | 13 | 13 | 12 | 12 | 10 | 9  | 7  | 6                                                                                                                                     | 8.1           | 13.2          |
| 29-Apr                                                                                                                                                                                                                                                                                                                                                            | 5                             | 4   | 3   | 2   | 2   | 1   | 3   | 6   | 10  | 13 | 14 | 15 | 15 | 17 | 17 | 18 | 18 | 18 | 18 | 18 | 16 | 14 | 13 | 11                                                                                                                                    | 11.2          | 18.3          |
| 30-Apr                                                                                                                                                                                                                                                                                                                                                            | 9                             | 8   | 7   | 5   | 4   | 3   | 5   | 7   | 11  | 14 | 17 | 19 | 21 | 21 | 22 | 23 | 23 | 22 | 22 | 21 | 19 | 19 | 17 | 16                                                                                                                                    | 14.9          | 22.7          |
|                                                                                                                                                                                                                                                                                                                                                                   |                               |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Diurnal Average                                                                                                                       |               |               |
|                                                                                                                                                                                                                                                                                                                                                                   |                               |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Diurnal Maximum                                                                                                                       |               |               |

## Hourly Averages

External Temperature (ET) - °C  
Valleyview - April 2014



# Hourly Averages

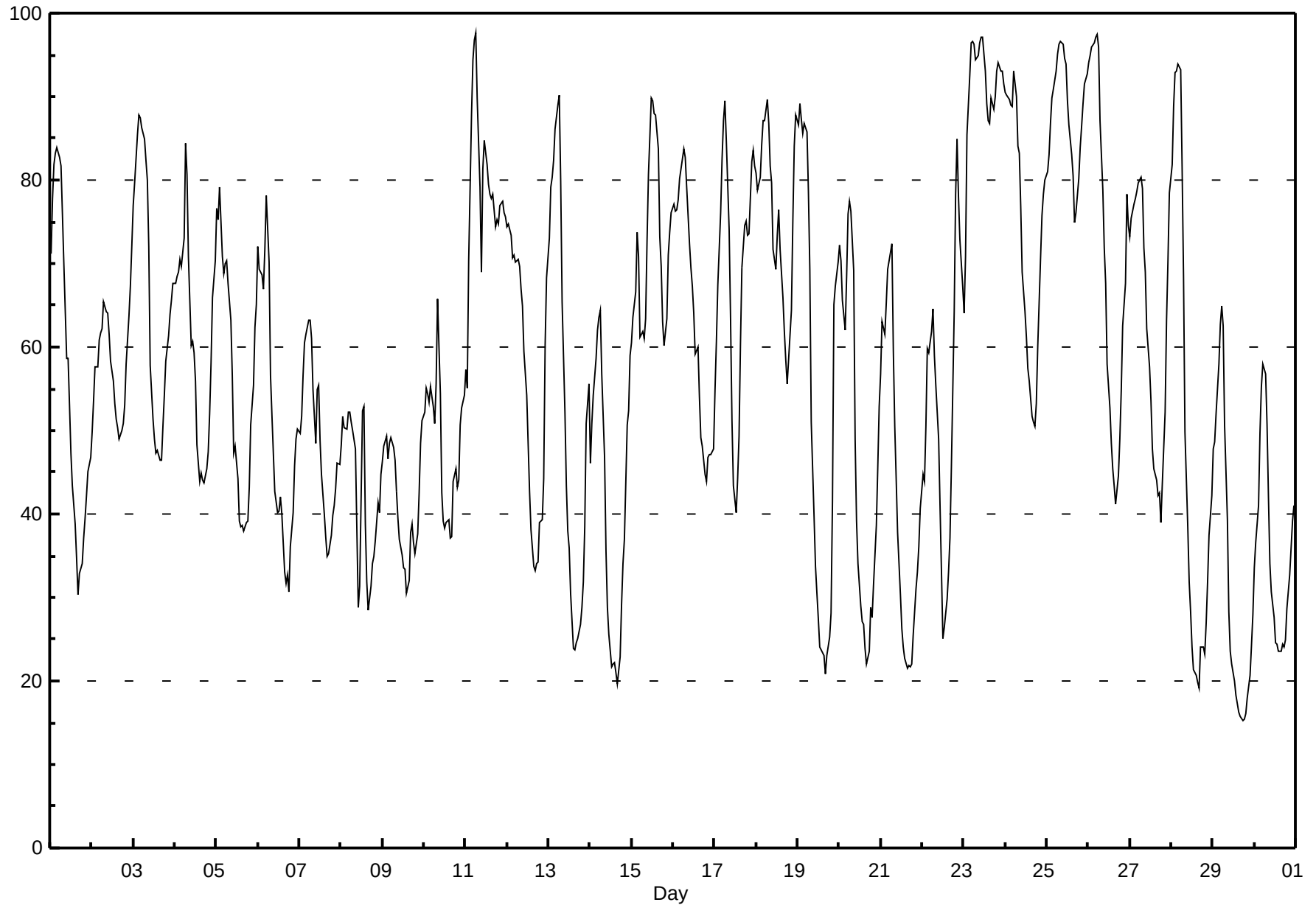
Relative Humidity (RH) - %

Valleyview - April 2014

|                                                                                                                         |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                   |               |               |  |                                 |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|--|---------------------------------|--|--|--|
| Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0                                                                          |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720                                                                                                                                             |               |               |  |                                 |  |  |  |
| Maximum Value: 97.7 % on Apr 11 07:00                                                                                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 90.5 % on Apr 23                                                                                                                           |               |               |  | Hours of Data: 720              |  |  |  |
| Minimum Value: 15 % on Apr 29 18:00                                                                                     |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 32.7 % on Apr 29                                                                                                                           |               |               |  | Hours of Missing Data: 0        |  |  |  |
| Maximum Diurnal Average: 75.9 % at hour 6                                                                               |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 41.6 % at hour 17                                                                                                                        |               |               |  | Hours of Calibration: 0         |  |  |  |
| Monthly Average: 57.76 %                                                                                                |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 17.9 P <sub>10</sub> = 28.8 Q <sub>1</sub> = 40.9 Median = 56.6 Q <sub>3</sub> = 75.2 P <sub>90</sub> = 87.1 P <sub>99</sub> = 96.5 |               |               |  | Percent Operational Time: 100.0 |  |  |  |
| Day                                                                                                                     | Hourly Period Ending At (MST) |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                   | Daily Average | Daily Maximum |  |                                 |  |  |  |
|                                                                                                                         | 1                             | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24                                                                                                                                                                |               |               |  |                                 |  |  |  |
| 1-Apr                                                                                                                   | 71                            | 78 | 82 | 83 | 84 | 83 | 82 | 76 | 70 | 59 | 59 | 53 | 47 | 43 | 39 | 35 | 30 | 33 | 34 | 37 | 39 | 42 | 45 | 47                                                                                                                                                                | 56.3          | 83.8          |  |                                 |  |  |  |
| 2-Apr                                                                                                                   | 50                            | 54 | 58 | 58 | 61 | 62 | 62 | 65 | 64 | 64 | 62 | 58 | 56 | 53 | 51 | 50 | 49 | 50 | 51 | 53 | 58 | 64 | 67 | 72                                                                                                                                                                | 58.0          | 72.0          |  |                                 |  |  |  |
| 3-Apr                                                                                                                   | 77                            | 80 | 85 | 88 | 87 | 86 | 85 | 82 | 80 | 72 | 58 | 51 | 49 | 47 | 48 | 46 | 47 | 51 | 54 | 58 | 61 | 64 | 66 | 68                                                                                                                                                                | 66.3          | 87.8          |  |                                 |  |  |  |
| 4-Apr                                                                                                                   | 68                            | 68 | 69 | 71 | 70 | 73 | 84 | 81 | 71 | 60 | 61 | 59 | 56 | 48 | 44 | 45 | 44 | 44 | 45 | 47 | 52 | 58 | 66 | 70                                                                                                                                                                | 60.6          | 84.4          |  |                                 |  |  |  |
| 5-Apr                                                                                                                   | 77                            | 75 | 79 | 71 | 69 | 70 | 70 | 68 | 63 | 57 | 47 | 48 | 44 | 39 | 38 | 39 | 38 | 39 | 39 | 43 | 51 | 55 | 62 | 65                                                                                                                                                                | 56.1          | 79.2          |  |                                 |  |  |  |
| 6-Apr                                                                                                                   | 72                            | 69 | 69 | 67 | 72 | 78 | 70 | 57 | 52 | 47 | 43 | 40 | 40 | 42 | 40 | 33 | 32 | 33 | 31 | 36 | 40 | 46 | 49 | 50                                                                                                                                                                | 50.3          | 78.1          |  |                                 |  |  |  |
| 7-Apr                                                                                                                   | 50                            | 52 | 57 | 61 | 62 | 63 | 63 | 61 | 55 | 48 | 55 | 55 | 49 | 45 | 40 | 37 | 35 | 35 | 37 | 40 | 41 | 43 | 46 | 46                                                                                                                                                                | 49.0          | 63.3          |  |                                 |  |  |  |
| 8-Apr                                                                                                                   | 48                            | 52 | 50 | 50 | 52 | 52 | 51 | 50 | 48 | 38 | 29 | 31 | 52 | 53 | 39 | 32 | 28 | 31 | 34 | 35 | 37 | 41 | 40 | 45                                                                                                                                                                | 42.5          | 52.8          |  |                                 |  |  |  |
| 9-Apr                                                                                                                   | 46                            | 48 | 49 | 47 | 48 | 49 | 48 | 46 | 43 | 39 | 37 | 35 | 34 | 33 | 30 | 32 | 38 | 39 | 37 | 35 | 38 | 43 | 49 | 51                                                                                                                                                                | 41.4          | 51.2          |  |                                 |  |  |  |
| 10-Apr                                                                                                                  | 52                            | 55 | 54 | 53 | 55 | 53 | 51 | 56 | 66 | 54 | 42 | 39 | 38 | 39 | 39 | 37 | 37 | 44 | 45 | 43 | 44 | 51 | 53 | 54                                                                                                                                                                | 48.2          | 65.7          |  |                                 |  |  |  |
| 11-Apr                                                                                                                  | 57                            | 55 | 70 | 88 | 94 | 97 | 98 | 90 | 79 | 69 | 81 | 85 | 82 | 79 | 78 | 78 | 78 | 74 | 75 | 75 | 77 | 77 | 76 | 76                                                                                                                                                                | 78.7          | 97.7          |  |                                 |  |  |  |
| 12-Apr                                                                                                                  | 74                            | 75 | 73 | 71 | 71 | 70 | 71 | 70 | 67 | 65 | 60 | 54 | 48 | 43 | 38 | 34 | 33 | 34 | 34 | 39 | 39 | 44 | 60 | 68                                                                                                                                                                | 55.7          | 74.8          |  |                                 |  |  |  |
| 13-Apr                                                                                                                  | 73                            | 79 | 80 | 82 | 86 | 89 | 90 | 80 | 65 | 52 | 43 | 38 | 36 | 30 | 24 | 24 | 25 | 25 | 27 | 29 | 32 | 38 | 51 | 56                                                                                                                                                                | 52.3          | 90.1          |  |                                 |  |  |  |
| 14-Apr                                                                                                                  | 46                            | 51 | 54 | 59 | 62 | 64 | 64 | 57 | 47 | 36 | 29 | 26 | 22 | 22 | 22 | 21 | 20 | 23 | 29 | 34 | 37 | 51 | 52 | 59                                                                                                                                                                | 41.1          | 64.3          |  |                                 |  |  |  |
| 15-Apr                                                                                                                  | 60                            | 64 | 67 | 74 | 71 | 61 | 62 | 61 | 63 | 73 | 81 | 90 | 89 | 88 | 88 | 84 | 73 | 70 | 63 | 60 | 63 | 71 | 74 | 76                                                                                                                                                                | 71.9          | 89.9          |  |                                 |  |  |  |
| 16-Apr                                                                                                                  | 77                            | 76 | 76 | 78 | 80 | 83 | 84 | 83 | 79 | 72 | 70 | 67 | 64 | 59 | 60 | 54 | 49 | 48 | 45 | 44 | 47 | 47 | 47 | 48                                                                                                                                                                | 64.0          | 83.7          |  |                                 |  |  |  |
| 17-Apr                                                                                                                  | 55                            | 61 | 67 | 76 | 83 | 87 | 89 | 85 | 74 | 63 | 51 | 43 | 40 | 44 | 49 | 60 | 70 | 75 | 75 | 73 | 74 | 82 | 84 | 82                                                                                                                                                                | 68.5          | 89.5          |  |                                 |  |  |  |
| 18-Apr                                                                                                                  | 81                            | 79 | 80 | 84 | 87 | 87 | 90 | 87 | 82 | 80 | 72 | 69 | 73 | 76 | 72 | 66 | 62 | 59 | 56 | 58 | 64 | 75 | 84 | 88                                                                                                                                                                | 75.5          | 89.7          |  |                                 |  |  |  |
| 19-Apr                                                                                                                  | 87                            | 89 | 87 | 86 | 87 | 86 | 79 | 69 | 51 | 40 | 34 | 30 | 27 | 24 | 23 | 23 | 21 | 23 | 25 | 28 | 41 | 65 | 67 | 70                                                                                                                                                                | 52.6          | 89.1          |  |                                 |  |  |  |
| 20-Apr                                                                                                                  | 72                            | 70 | 66 | 62 | 68 | 76 | 78 | 76 | 69 | 49 | 39 | 34 | 29 | 27 | 27 | 24 | 22 | 24 | 29 | 28 | 32 | 39 | 46 | 53                                                                                                                                                                | 47.4          | 77.5          |  |                                 |  |  |  |
| 21-Apr                                                                                                                  | 57                            | 63 | 62 | 65 | 69 | 70 | 72 | 60 | 51 | 44 | 38 | 30 | 26 | 24 | 23 | 22 | 22 | 22 | 22 | 25 | 31 | 33 | 36 | 41                                                                                                                                                                | 42.0          | 72.4          |  |                                 |  |  |  |
| 22-Apr                                                                                                                  | 45                            | 44 | 51 | 60 | 59 | 62 | 65 | 59 | 55 | 49 | 41 | 33 | 25 | 26 | 30 | 33 | 37 | 46 | 64 | 78 | 85 | 78 | 73 | 67                                                                                                                                                                | 52.7          | 84.9          |  |                                 |  |  |  |
| 23-Apr                                                                                                                  | 64                            | 71 | 85 | 93 | 96 | 97 | 96 | 94 | 95 | 96 | 97 | 97 | 93 | 89 | 87 | 87 | 90 | 88 | 90 | 93 | 94 | 93 | 93 | 91                                                                                                                                                                | 90.5          | 97.1          |  |                                 |  |  |  |
| 24-Apr                                                                                                                  | 90                            | 90 | 90 | 89 | 89 | 93 | 90 | 84 | 83 | 77 | 69 | 64 | 61 | 57 | 56 | 52 | 51 | 51 | 53 | 60 | 71 | 76 | 78 | 80                                                                                                                                                                | 73.1          | 93.0          |  |                                 |  |  |  |
| 25-Apr                                                                                                                  | 81                            | 83 | 87 | 90 | 91 | 93 | 95 | 96 | 97 | 96 | 95 | 94 | 89 | 87 | 83 | 81 | 75 | 76 | 80 | 84 | 86 | 89 | 91 | 93                                                                                                                                                                | 88.0          | 96.6          |  |                                 |  |  |  |
| 26-Apr                                                                                                                  | 94                            | 95 | 96 | 97 | 97 | 97 | 96 | 87 | 79 | 72 | 68 | 58 | 53 | 48 | 45 | 43 | 41 | 45 | 49 | 55 | 63 | 68 | 78 | 75                                                                                                                                                                | 70.7          | 97.4          |  |                                 |  |  |  |
| 27-Apr                                                                                                                  | 73                            | 75 | 77 | 78 | 79 | 80 | 80 | 79 | 72 | 69 | 62 | 58 | 54 | 48 | 45 | 44 | 42 | 43 | 39 | 44 | 52 | 63 | 70 | 79                                                                                                                                                                | 62.7          | 80.3          |  |                                 |  |  |  |
| 28-Apr                                                                                                                  | 82                            | 89 | 93 | 93 | 94 | 93 | 82 | 68 | 50 | 39 | 32 | 28 | 24 | 21 | 21 | 20 | 19 | 24 | 24 | 23 | 27 | 32 | 37 | 42                                                                                                                                                                | 48.2          | 93.9          |  |                                 |  |  |  |
| 29-Apr                                                                                                                  | 48                            | 49 | 52 | 58 | 63 | 65 | 63 | 51 | 39 | 28 | 24 | 22 | 20 | 18 | 17 | 16 | 16 | 15 | 16 | 16 | 18 | 21 | 24 | 28                                                                                                                                                                | 32.7          | 64.9          |  |                                 |  |  |  |
| 30-Apr                                                                                                                  | 34                            | 37 | 41 | 50 | 55 | 58 | 57 | 51 | 42 | 34 | 31 | 28 | 25 | 24 | 24 | 24 | 24 | 24 | 25 | 29 | 33 | 36 | 39 | 41                                                                                                                                                                | 36.0          | 58.0          |  |                                 |  |  |  |
| 65.4 67.5 70.3 72.6 74.7 75.9 75.5 70.9 65.0 58.1 53.5 50.7 48.2 46.0 44.0 42.5 41.6 42.8 44.3 46.8 50.9 56.2 60.2 62.6 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Diurnal Average                                                                                                                                                   |               |               |  |                                 |  |  |  |
| 94.0 94.9 95.9 96.5 97.1 97.4 97.7 96.2 96.6 96.5 97.1 97.1 93.0 89.2 87.8 86.8 89.8 88.4 90.1 93.0 94.0 93.0 93.1 92.7 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Diurnal Maximum                                                                                                                                                   |               |               |  |                                 |  |  |  |

## Hourly Averages

Relative Humidity (RH) - %  
Valleyview - April 2014



## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Valleyview - April 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                             | 0   | 0   | 1   | 0   | 0   | 0   | 0   | 2   | 2   | 3   | 4   | 5   | 8   | 9   | 9   | 6   | 7   | 8   | 7   | 6   | 6   | 3   | 2   | 3.0           | 9.1           |
| Dir    | 351                           | 0   | 206 | 181 | 267 | 181 | 175 | 162 | 161 | 149 | 346 | 344 | 339 | 342 | 340 | 337 | 52  | 33  | 17  | 20  | 8   | 1   | 20  | 75  | 5             | 340           |
| 2 Spd  | 2                             | 3   | 6   | 3   | 4   | 3   | 4   | 8   | 5   | 9   | 9   | 7   | 6   | 5   | 6   | 6   | 6   | 8   | 3   | 2   | 4   | 4   | 2   | 2   | 4.5           | 9.4           |
| Dir    | 159                           | 332 | 355 | 12  | 345 | 347 | 2   | 11  | 9   | 344 | 359 | 27  | 28  | 25  | 29  | 27  | 2   | 341 | 11  | 24  | 355 | 2   | 0   | 348 | 5             | 344           |
| 3 Spd  | 3                             | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1   | 1   | 7   | 11  | 10  | 10  | 12  | 11  | 11  | 11  | 11  | 10  | 11  | 10  | 11  | 11  | 5.9           | 11.9          |
| Dir    | 338                           | 335 | 144 | 165 | 321 | 246 | 137 | 32  | 344 | 23  | 162 | 158 | 157 | 162 | 159 | 153 | 153 | 146 | 149 | 153 | 159 | 167 | 170 | 166 | 158           | 159           |
| 4 Spd  | 10                            | 8   | 7   | 7   | 7   | 4   | 2   | 2   | 8   | 12  | 14  | 15  | 15  | 14  | 12  | 12  | 10  | 8   | 7   | 2   | 1   | 0   | 0   | 0   | 3.6           | 15.1          |
| Dir    | 169                           | 172 | 170 | 167 | 175 | 234 | 186 | 195 | 265 | 296 | 306 | 305 | 316 | 320 | 322 | 336 | 336 | 2   | 1   | 30  | 146 | 195 | 170 | 164 | 301           | 316           |
| 5 Spd  | 0                             | 0   | 1   | 2   | 1   | 2   | 2   | 3   | 3   | 4   | 13  | 12  | 9   | 9   | 8   | 4   | 5   | 2   | 0   | 1   | 1   | 1   | 2   | 1   | 1.9           | 13.2          |
| Dir    | 184                           | 248 | 174 | 178 | 173 | 176 | 176 | 174 | 178 | 231 | 264 | 266 | 291 | 296 | 319 | 352 | 36  | 3   | 69  | 166 | 317 | 229 | 175 | 159 | 272           | 264           |
| 6 Spd  | 1                             | 2   | 2   | 7   | 5   | 1   | 3   | 10  | 16  | 17  | 16  | 18  | 15  | 13  | 12  | 15  | 14  | 14  | 15  | 8   | 6   | 5   | 4   | 2   | 8.4           | 18.0          |
| Dir    | 175                           | 169 | 186 | 251 | 262 | 201 | 222 | 266 | 278 | 281 | 282 | 280 | 295 | 311 | 306 | 291 | 288 | 287 | 279 | 277 | 253 | 241 | 236 | 193 | 279           | 280           |
| 7 Spd  | 2                             | 2   | 1   | 2   | 3   | 2   | 2   | 2   | 3   | 4   | 3   | 2   | 4   | 5   | 3   | 3   | 3   | 3   | 2   | 2   | 2   | 3   | 2   | 4   | 2.6           | 4.5           |
| Dir    | 185                           | 190 | 186 | 198 | 193 | 193 | 191 | 168 | 170 | 183 | 212 | 147 | 176 | 180 | 192 | 163 | 203 | 207 | 173 | 157 | 174 | 176 | 177 | 170 | 182           | 180           |
| 8 Spd  | 3                             | 0   | 4   | 3   | 3   | 4   | 4   | 5   | 3   | 4   | 5   | 12  | 19  | 13  | 13  | 14  | 18  | 13  | 11  | 13  | 13  | 10  | 14  | 14  | 7.0           | 19.3          |
| Dir    | 175                           | 141 | 193 | 185 | 181 | 185 | 173 | 171 | 176 | 177 | 190 | 274 | 320 | 301 | 280 | 271 | 274 | 273 | 270 | 268 | 264 | 248 | 249 | 248 | 261           | 320           |
| 9 Spd  | 11                            | 11  | 10  | 12  | 13  | 14  | 14  | 17  | 22  | 21  | 22  | 20  | 19  | 21  | 21  | 19  | 15  | 14  | 12  | 10  | 10  | 1   | 1   | 2   | 13.4          | 22.3          |
| Dir    | 255                           | 257 | 260 | 268 | 277 | 268 | 269 | 273 | 278 | 284 | 284 | 284 | 283 | 286 | 283 | 286 | 298 | 302 | 291 | 279 | 275 | 193 | 166 | 173 | 279           | 284           |
| 10 Spd | 1                             | 2   | 2   | 2   | 2   | 2   | 4   | 13  | 10  | 5   | 11  | 15  | 19  | 16  | 13  | 15  | 12  | 15  | 8   | 6   | 1   | 0   | 1   | 1   | 6.2           | 19.5          |
| Dir    | 175                           | 194 | 202 | 192 | 187 | 172 | 250 | 273 | 278 | 239 | 276 | 291 | 301 | 306 | 314 | 313 | 315 | 325 | 296 | 270 | 277 | 140 | 165 | 162 | 291           | 301           |
| 11 Spd | 2                             | 3   | 7   | 2   | 2   | 2   | 2   | 4   | 5   | 17  | 17  | 21  | 19  | 20  | 15  | 18  | 18  | 18  | 17  | 17  | 14  | 12  | 13  | 11  | 9.3           | 20.6          |
| Dir    | 197                           | 199 | 264 | 240 | 162 | 180 | 181 | 254 | 271 | 295 | 314 | 331 | 327 | 345 | 7   | 8   | 6   | 5   | 355 | 360 | 358 | 358 | 351 | 353 | 342           | 331           |
| 12 Spd | 6                             | 5   | 4   | 2   | 2   | 1   | 2   | 3   | 3   | 4   | 7   | 6   | 9   | 9   | 10  | 9   | 13  | 12  | 8   | 5   | 4   | 4   | 5   | 7   | 4.2           | 12.6          |
| Dir    | 15                            | 31  | 33  | 27  | 45  | 135 | 166 | 166 | 171 | 248 | 268 | 284 | 310 | 306 | 318 | 316 | 326 | 308 | 297 | 297 | 286 | 328 | 344 | 0   | 318           | 326           |
| 13 Spd | 6                             | 5   | 4   | 2   | 2   | 1   | 1   | 1   | 2   | 3   | 3   | 2   | 2   | 4   | 5   | 4   | 4   | 4   | 3   | 1   | 2   | 0   | 1   | 0   | 1.9           | 6.1           |
| Dir    | 12                            | 22  | 21  | 33  | 29  | 46  | 358 | 127 | 151 | 141 | 136 | 48  | 360 | 28  | 46  | 47  | 67  | 62  | 63  | 27  | 18  | 4   | 173 | 139 | 46            | 12            |
| 14 Spd | 1                             | 6   | 6   | 4   | 4   | 3   | 2   | 4   | 3   | 4   | 1   | 2   | 8   | 8   | 10  | 12  | 5   | 5   | 4   | 2   | 3   | 2   | 1   | 3   | 0.9           | 11.5          |
| Dir    | 177                           | 173 | 174 | 180 | 180 | 186 | 183 | 170 | 167 | 177 | 123 | 319 | 305 | 323 | 345 | 342 | 2   | 28  | 62  | 59  | 350 | 325 | 339 | 21  | 335           | 342           |
| 15 Spd | 2                             | 1   | 1   | 0   | 3   | 8   | 10  | 10  | 9   | 14  | 16  | 15  | 15  | 16  | 14  | 13  | 9   | 7   | 6   | 4   | 6   | 5   | 4   | 4   | 7.7           | 16.1          |
| Dir    | 351                           | 345 | 345 | 325 | 9   | 9   | 5   | 14  | 7   | 1   | 359 | 5   | 5   | 4   | 7   | 11  | 30  | 31  | 41  | 45  | 48  | 42  | 12  | 11  | 11            | 359           |
| 16 Spd | 5                             | 5   | 6   | 5   | 6   | 4   | 4   | 3   | 5   | 5   | 8   | 12  | 10  | 8   | 10  | 9   | 7   | 9   | 11  | 8   | 6   | 9   | 5   | 3   | 6.6           | 11.8          |
| Dir    | 22                            | 33  | 44  | 36  | 37  | 20  | 19  | 11  | 13  | 359 | 6   | 2   | 22  | 32  | 26  | 18  | 353 | 18  | 7   | 26  | 15  | 8   | 23  | 9   | 18            | 2             |
| 17 Spd | 5                             | 3   | 1   | 0   | 2   | 2   | 2   | 3   | 2   | 3   | 3   | 4   | 4   | 5   | 5   | 9   | 11  | 10  | 8   | 9   | 5   | 7   | 7   | 5   | 3.4           | 11.0          |
| Dir    | 1                             | 8   | 18  | 44  | 18  | 22  | 33  | 21  | 29  | 23  | 49  | 68  | 143 | 131 | 128 | 129 | 128 | 125 | 130 | 127 | 133 | 133 | 138 | 141 | 112           | 128           |
| 18 Spd | 4                             | 3   | 4   | 4   | 2   | 2   | 2   | 2   | 2   | 2   | 3   | 1   | 3   | 3   | 3   | 4   | 2   | 2   | 1   | 2   | 1   | 0   | 0   | 1   | 1.0           | 4.4           |
| Dir    | 132                           | 126 | 124 | 122 | 98  | 97  | 56  | 83  | 137 | 150 | 184 | 225 | 288 | 334 | 328 | 354 | 45  | 96  | 78  | 125 | 145 | 150 | 343 | 163 | 105           | 122           |
| 19 Spd | 0                             | 1   | 2   | 2   | 1   | 2   | 3   | 3   | 2   | 5   | 5   | 2   | 1   | 3   | 2   | 1   | 1   | 6   | 5   | 4   | 4   | 2   | 2   | 1   | 0.5           | 5.6           |
| Dir    | 298                           | 182 | 185 | 185 | 182 | 175 | 172 | 165 | 196 | 299 | 287 | 333 | 241 | 151 | 107 | 26  | 1   | 47  | 28  | 76  | 176 | 196 | 170 | 172 | 156           | 47            |
| 20 Spd | 1                             | 2   | 3   | 4   | 1   | 1   | 1   | 2   | 3   | 12  | 16  | 17  | 18  | 16  | 14  | 14  | 13  | 13  | 13  | 10  | 3   | 2   | 1   | 1   | 6.4           | 18.2          |
| Dir    | 240                           | 229 | 252 | 276 | 184 | 208 | 186 | 182 | 178 | 275 | 287 | 283 | 279 | 284 | 284 | 289 | 300 | 318 | 334 | 329 | 326 | 163 | 197 | 171 | 288           | 279           |
| 21 Spd | 1                             | 1   | 1   | 1   | 1   | 0   | 0   | 2   | 1   | 1   | 2   | 2   | 2   | 1   | 3   | 3   | 5   | 4   | 3   | 4   | 6   | 5   | 4   | 4   | 1.2           | 6.1           |
| Dir    | 183                           | 192 | 188 | 198 | 194 | 194 | 167 | 171 | 155 | 172 | 148 | 157 | 93  | 134 | 78  | 104 | 141 | 125 | 113 | 52  | 56  | 56  | 345 | 326 | 100           | 56            |
| 22 Spd | 4                             | 1   | 1   | 1   | 2   | 1   | 2   | 2   | 3   | 3   | 2   | 7   | 11  | 10  | 9   | 8   | 11  | 13  | 3   | 3   | 9   | 7   | 7   | 7   | 3.0           | 12.7          |
| Dir    | 326                           | 257 | 355 | 357 | 1   | 346 | 344 | 336 | 10  | 338 | 350 | 39  | 92  | 109 | 103 | 92  | 125 | 124 | 110 | 13  | 10  | 9   | 8   | 12  | 59            | 124           |

## Hourly Averages

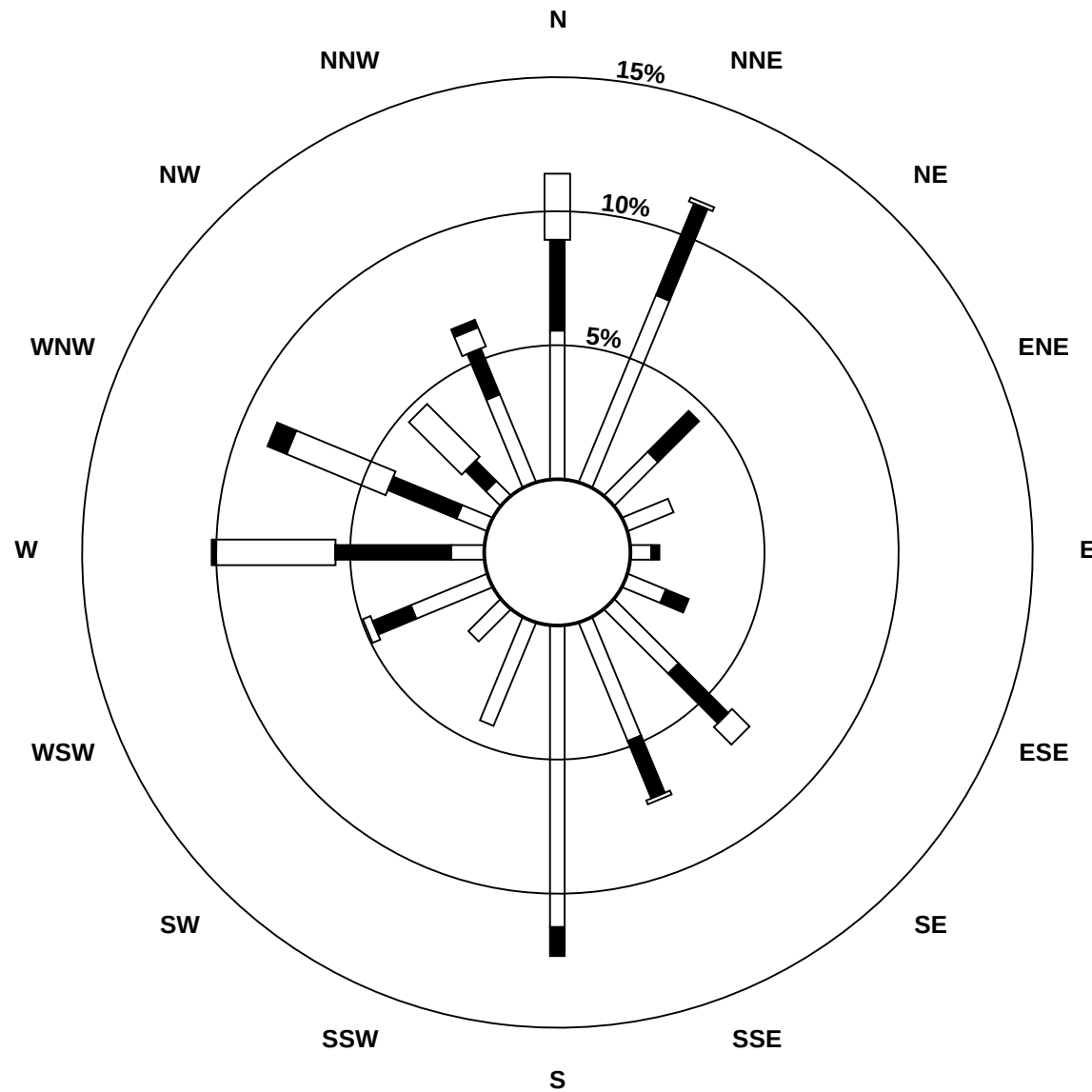
Wind Speed (km/h)  
Wind Direction (deg)  
Valleyview - April 2014

| 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                                                                             | 7                             | 3    | 1       | 1    | 2        | 3    | 7        | 9    | 8        | 3    | 2    | 5    | 8     | 10   | 11   | 12   | 9    | 12                                                                                                                                                                 | 8    | 7    | 6    | 9    | 8    | 8    | 5.7             | 11.7          |  |                                 |  |
| Dir                                                                                | 15                            | 58   | 341     | 342  | 351      | 343  | 278      | 272  | 272      | 240  | 238  | 267  | 299   | 298  | 297  | 295  | 296  | 284                                                                                                                                                                | 289  | 283  | 275  | 274  | 268  | 270  | 289             | 295           |  |                                 |  |
| 24 Spd                                                                             | 7                             | 6    | 5       | 6    | 3        | 1    | 1        | 3    | 4        | 5    | 4    | 3    | 2     | 4    | 5    | 5    | 5    | 6                                                                                                                                                                  | 6    | 8    | 7    | 6    | 5    | 5    | 1.9             | 8.5           |  |                                 |  |
| Dir                                                                                | 265                           | 249  | 254     | 255  | 255      | 182  | 163      | 265  | 256      | 256  | 277  | 295  | 358   | 30   | 357  | 9    | 50   | 41                                                                                                                                                                 | 40   | 45   | 37   | 35   | 27   | 9    | 344             | 45            |  |                                 |  |
| 25 Spd                                                                             | 4                             | 4    | 4       | 3    | 2        | 2    | 2        | 3    | 4        | 4    | 3    | 4    | 2     | 4    | 6    | 6    | 6    | 6                                                                                                                                                                  | 7    | 6    | 4    | 3    | 3    | 2    | 3.7             | 7.5           |  |                                 |  |
| Dir                                                                                | 11                            | 12   | 5       | 13   | 32       | 16   | 23       | 30   | 23       | 23   | 26   | 345  | 312   | 353  | 358  | 19   | 1    | 24                                                                                                                                                                 | 27   | 41   | 41   | 34   | 359  | 7    | 16              | 27            |  |                                 |  |
| 26 Spd                                                                             | 3                             | 1    | 2       | 1    | 2        | 1    | 1        | 2    | 3        | 6    | 5    | 8    | 7     | 9    | 11   | 11   | 13   | 12                                                                                                                                                                 | 12   | 12   | 13   | 11   | 6    | 9    | 6.1             | 13.4          |  |                                 |  |
| Dir                                                                                | 358                           | 24   | 14      | 32   | 2        | 12   | 113      | 111  | 123      | 130  | 135  | 142  | 135   | 123  | 133  | 134  | 131  | 132                                                                                                                                                                | 133  | 128  | 125  | 123  | 121  | 126  | 126             | 131           |  |                                 |  |
| 27 Spd                                                                             | 8                             | 7    | 5       | 4    | 4        | 5    | 6        | 7    | 6        | 4    | 4    | 9    | 8     | 11   | 12   | 10   | 10   | 13                                                                                                                                                                 | 10   | 6    | 2    | 6    | 1    | 2    | 1.5             | 12.8          |  |                                 |  |
| Dir                                                                                | 132                           | 137  | 146     | 137  | 140      | 147  | 164      | 164  | 177      | 197  | 249  | 303  | 290   | 283  | 325  | 332  | 347  | 342                                                                                                                                                                | 341  | 332  | 191  | 240  | 9    | 188  | 287             | 342           |  |                                 |  |
| 28 Spd                                                                             | 1                             | 1    | 2       | 2    | 2        | 3    | 3        | 3    | 12       | 16   | 15   | 15   | 17    | 16   | 13   | 13   | 14   | 13                                                                                                                                                                 | 12   | 10   | 7    | 8    | 3    | 1    | 7.5             | 16.8          |  |                                 |  |
| Dir                                                                                | 194                           | 193  | 193     | 192  | 172      | 185  | 178      | 191  | 270      | 278  | 281  | 276  | 281   | 275  | 281  | 277  | 277  | 300                                                                                                                                                                | 282  | 263  | 261  | 252  | 237  | 194  | 271             | 281           |  |                                 |  |
| 29 Spd                                                                             | 2                             | 3    | 3       | 3    | 2        | 3    | 3        | 4    | 3        | 4    | 6    | 6    | 4     | 2    | 2    | 4    | 4    | 5                                                                                                                                                                  | 6    | 5    | 4    | 4    | 2    | 2    | 2.1             | 5.9           |  |                                 |  |
| Dir                                                                                | 176                           | 179  | 175     | 174  | 150      | 159  | 160      | 158  | 159      | 254  | 249  | 261  | 296   | 257  | 232  | 162  | 143  | 132                                                                                                                                                                | 121  | 118  | 118  | 127  | 218  | 167  | 172             | 121           |  |                                 |  |
| 30 Spd                                                                             | 3                             | 3    | 2       | 1    | 0        | 1    | 1        | 1    | 3        | 4    | 3    | 2    | 3     | 6    | 6    | 8    | 10   | 11                                                                                                                                                                 | 11   | 9    | 11   | 10   | 5    | 5    | 3.9             | 11.3          |  |                                 |  |
| Dir                                                                                | 176                           | 180  | 185     | 206  | 242      | 212  | 200      | 181  | 166      | 173  | 182  | 224  | 220   | 282  | 265  | 275  | 281  | 268                                                                                                                                                                | 281  | 275  | 276  | 284  | 281  | 274  | 261             | 276           |  |                                 |  |
| Spd                                                                                | 0.2                           | 0.6  | 0.7     | 1.0  | 0.4      | 0.5  | 0.7      | 1.4  | 2.3      | 3.7  | 4.6  | 5.3  | 5.7   | 5.2  | 4.9  | 4.6  | 3.3  | 3.5                                                                                                                                                                | 3.0  | 1.6  | 1.1  | 0.7  | 0.8  | 0.3  | Diurnal Average |               |  |                                 |  |
| Dir                                                                                | 300                           | 188  | 214     | 216  | 229      | 228  | 238      | 252  | 266      | 282  | 290  | 302  | 309   | 314  | 323  | 326  | 330  | 341                                                                                                                                                                | 337  | 341  | 328  | 317  | 306  | 301  | Diurnal Maximum |               |  |                                 |  |
| Spd                                                                                | 11.1                          | 11.1 | 10.2    | 12.3 | 13.5     | 14.3 | 14.3     | 17.1 | 21.7     | 21.1 | 22.3 | 20.6 | 19.5  | 20.6 | 21.3 | 19.0 | 18.2 | 17.5                                                                                                                                                               | 16.6 | 16.8 | 13.7 | 11.6 | 14.0 | 13.8 | Diurnal Maximum |               |  |                                 |  |
| Dir                                                                                | 255                           | 257  | 260     | 268  | 277      | 268  | 269      | 273  | 278      | 284  | 284  | 331  | 301   | 286  | 283  | 286  | 6    | 5                                                                                                                                                                  | 355  | 360  | 358  | 358  | 249  | 248  |                 |               |  |                                 |  |
| Maximum Speed Value: 22 km/h on Apr 9 11:00                                        |                               |      |         |      |          |      |          |      |          |      |      |      |       |      |      |      |      | Minimum Speed Value: 0 km/h on Apr 18 22:00                                                                                                                        |      |      |      |      |      |      |                 |               |  | Hours in Service: 720           |  |
| Maximum Daily Speed Average: 13.4 km/h on Apr 9                                    |                               |      |         |      |          |      |          |      |          |      |      |      |       |      |      |      |      | Minimum Daily Speed Average: 0.5 km/h on Apr 18                                                                                                                    |      |      |      |      |      |      |                 |               |  | Hours of Data: 720              |  |
| Maximum Diurnal Speed Average: 5.7 km/h at hour 13                                 |                               |      |         |      |          |      |          |      |          |      |      |      |       |      |      |      |      | Minimum Diurnal Speed Average: 0.2 km/h at hour 1                                                                                                                  |      |      |      |      |      |      |                 |               |  | Hours of Missing Data: 0        |  |
| Monthly Average Velocity: 2.02 km/h 307.3 deg                                      |                               |      |         |      |          |      |          |      |          |      |      |      |       |      |      |      |      | Speed Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 1.0 Q <sub>1</sub> = 2.1 Median = 4.2 Q <sub>3</sub> = 8.9 P <sub>90</sub> = 13.2 P <sub>99</sub> = 20.2 |      |      |      |      |      |      |                 |               |  | 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                                                                              | 80                            |      | 46      |      | 19       |      | 1        |      | 0        |      | 0    |      | 146   |      |      |      |      |                                                                                                                                                                    |      |      |      |      |      |      |                 |               |  |                                 |  |
| NorthEast                                                                          | 50                            |      | 30      |      | 0        |      | 0        |      | 0        |      | 0    |      | 80    |      |      |      |      |                                                                                                                                                                    |      |      |      |      |      |      |                 |               |  |                                 |  |
| East                                                                               | 15                            |      | 4       |      | 0        |      | 0        |      | 0        |      | 0    |      | 19    |      |      |      |      |                                                                                                                                                                    |      |      |      |      |      |      |                 |               |  |                                 |  |
| SouthEast                                                                          | 45                            |      | 27      |      | 10       |      | 0        |      | 0        |      | 0    |      | 82    |      |      |      |      |                                                                                                                                                                    |      |      |      |      |      |      |                 |               |  |                                 |  |
| South                                                                              | 146                           |      | 17      |      | 2        |      | 0        |      | 0        |      | 0    |      | 165   |      |      |      |      |                                                                                                                                                                    |      |      |      |      |      |      |                 |               |  |                                 |  |
| SouthWest                                                                          | 27                            |      | 2       |      | 0        |      | 0        |      | 0        |      | 0    |      | 29    |      |      |      |      |                                                                                                                                                                    |      |      |      |      |      |      |                 |               |  |                                 |  |
| West                                                                               | 21                            |      | 47      |      | 52       |      | 6        |      | 0        |      | 0    |      | 126   |      |      |      |      |                                                                                                                                                                    |      |      |      |      |      |      |                 |               |  |                                 |  |
| NorthWest                                                                          | 21                            |      | 20      |      | 28       |      | 4        |      | 0        |      | 0    |      | 73    |      |      |      |      |                                                                                                                                                                    |      |      |      |      |      |      |                 |               |  |                                 |  |
| Total                                                                              | 405                           |      | 193     |      | 111      |      | 11       |      | 0        |      | 0    |      | 720   |      |      |      |      |                                                                                                                                                                    |      |      |      |      |      |      |                 |               |  |                                 |  |

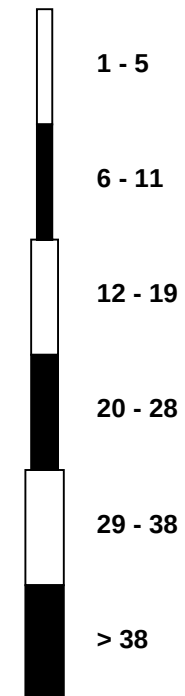
## Wind Rose

Wind Speed (WS) (km/h)

Valleyview - April 2014



## Wind Speed Classes (km/h)





## Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Valleyview - April 2014

| Maximum Speed: 23 km/h on Apr 9 11:00                                                                                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Speed Average: 14.2 km/h on Apr 9                                                                                                              |    |    |    |    |                 |               |  |  |  | Hours in Service: 720           |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-----------------|---------------|--|--|--|---------------------------------|--|--|--|
| Minimum Speed: 0 km/h on Apr 18 22:00                                                                                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Speed Average: 2.5 km/h on Apr 18                                                                                                              |    |    |    |    |                 |               |  |  |  | Hours of Data: 720              |  |  |  |
| Maximum Diurnal Speed Average: 10.0 km/h at hour 16                                                                     |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Speed Average: 2.7 km/h at hour 6                                                                                                            |    |    |    |    |                 |               |  |  |  | Hours of Missing Data: 0        |  |  |  |
| Monthly Average Speed: 6.20 km/h                                                                                        |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 1.3 Q <sub>1</sub> = 2.4 Median = 4.6 Q <sub>3</sub> = 9.1 P <sub>90</sub> = 13.6 P <sub>99</sub> = 20.8 |    |    |    |    |                 |               |  |  |  | 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-Apr                                                                                                                   | 1                             | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 2  | 2  | 3  | 4  | 5  | 8  | 9  | 9  | 7  | 8  | 9  | 7                                                                                                                                                            | 6  | 6  | 3  | 2  | 3.8             | 9.1           |  |  |  |                                 |  |  |  |
| 2-Apr                                                                                                                   | 2                             | 3  | 6  | 3  | 4  | 4  | 4  | 8  | 6  | 9  | 9  | 7  | 6  | 6  | 6  | 7  | 6  | 8  | 3  | 2                                                                                                                                                            | 4  | 4  | 3  | 2  | 5.1             | 9.4           |  |  |  |                                 |  |  |  |
| 3-Apr                                                                                                                   | 3                             | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 8  | 11 | 10 | 10 | 12 | 11 | 11 | 11 | 11 | 10                                                                                                                                                           | 11 | 10 | 11 | 11 | 6.5             | 12.1          |  |  |  |                                 |  |  |  |
| 4-Apr                                                                                                                   | 10                            | 8  | 7  | 7  | 8  | 4  | 2  | 2  | 9  | 12 | 14 | 15 | 15 | 15 | 12 | 12 | 10 | 9  | 7  | 2                                                                                                                                                            | 1  | 0  | 0  | 0  | 7.6             | 15.4          |  |  |  |                                 |  |  |  |
| 5-Apr                                                                                                                   | 0                             | 0  | 1  | 2  | 1  | 2  | 2  | 3  | 3  | 4  | 14 | 12 | 9  | 9  | 8  | 6  | 5  | 2  | 0  | 1                                                                                                                                                            | 1  | 2  | 2  | 1  | 3.8             | 13.6          |  |  |  |                                 |  |  |  |
| 6-Apr                                                                                                                   | 1                             | 2  | 2  | 7  | 6  | 1  | 3  | 11 | 16 | 17 | 16 | 18 | 15 | 13 | 12 | 15 | 14 | 14 | 15 | 8                                                                                                                                                            | 6  | 5  | 4  | 2  | 9.3             | 18.2          |  |  |  |                                 |  |  |  |
| 7-Apr                                                                                                                   | 2                             | 2  | 1  | 2  | 3  | 2  | 2  | 3  | 3  | 4  | 4  | 2  | 4  | 5  | 4  | 3  | 3  | 3  | 2  | 2                                                                                                                                                            | 2  | 3  | 2  | 4  | 2.8             | 4.6           |  |  |  |                                 |  |  |  |
| 8-Apr                                                                                                                   | 3                             | 1  | 4  | 3  | 3  | 4  | 4  | 5  | 3  | 4  | 5  | 13 | 20 | 13 | 13 | 15 | 18 | 13 | 11 | 14                                                                                                                                                           | 13 | 10 | 14 | 14 | 9.2             | 19.7          |  |  |  |                                 |  |  |  |
| 9-Apr                                                                                                                   | 11                            | 11 | 10 | 12 | 14 | 14 | 14 | 17 | 22 | 21 | 23 | 21 | 19 | 21 | 22 | 20 | 15 | 15 | 12 | 10                                                                                                                                                           | 10 | 2  | 1  | 2  | 14.2            | 22.7          |  |  |  |                                 |  |  |  |
| 10-Apr                                                                                                                  | 2                             | 2  | 2  | 2  | 2  | 2  | 5  | 13 | 11 | 6  | 12 | 15 | 20 | 16 | 14 | 15 | 13 | 15 | 8  | 6                                                                                                                                                            | 2  | 1  | 2  | 1  | 7.8             | 19.7          |  |  |  |                                 |  |  |  |
| 11-Apr                                                                                                                  | 2                             | 3  | 7  | 2  | 2  | 2  | 2  | 5  | 6  | 18 | 17 | 21 | 20 | 20 | 16 | 18 | 18 | 18 | 17 | 17                                                                                                                                                           | 14 | 12 | 13 | 11 | 11.6            | 20.9          |  |  |  |                                 |  |  |  |
| 12-Apr                                                                                                                  | 7                             | 5  | 4  | 2  | 2  | 2  | 2  | 3  | 3  | 5  | 8  | 7  | 9  | 9  | 11 | 10 | 13 | 12 | 8  | 5                                                                                                                                                            | 4  | 5  | 5  | 8  | 6.1             | 12.9          |  |  |  |                                 |  |  |  |
| 13-Apr                                                                                                                  | 6                             | 5  | 4  | 2  | 2  | 1  | 1  | 1  | 2  | 3  | 4  | 3  | 4  | 5  | 5  | 4  | 4  | 4  | 3  | 1                                                                                                                                                            | 2  | 1  | 1  | 1  | 2.9             | 6.3           |  |  |  |                                 |  |  |  |
| 14-Apr                                                                                                                  | 1                             | 6  | 6  | 4  | 4  | 3  | 2  | 4  | 3  | 4  | 3  | 4  | 9  | 8  | 10 | 12 | 6  | 5  | 4  | 2                                                                                                                                                            | 3  | 2  | 1  | 3  | 4.4             | 11.7          |  |  |  |                                 |  |  |  |
| 15-Apr                                                                                                                  | 2                             | 2  | 1  | 1  | 3  | 8  | 10 | 10 | 9  | 15 | 16 | 16 | 15 | 16 | 14 | 13 | 9  | 8  | 6  | 4                                                                                                                                                            | 6  | 5  | 4  | 4  | 8.1             | 16.2          |  |  |  |                                 |  |  |  |
| 16-Apr                                                                                                                  | 5                             | 5  | 6  | 5  | 6  | 4  | 4  | 3  | 6  | 5  | 8  | 12 | 10 | 9  | 10 | 10 | 8  | 10 | 11 | 8                                                                                                                                                            | 6  | 9  | 5  | 4  | 7.0             | 12.2          |  |  |  |                                 |  |  |  |
| 17-Apr                                                                                                                  | 5                             | 3  | 1  | 1  | 2  | 2  | 2  | 3  | 3  | 3  | 4  | 5  | 4  | 5  | 6  | 9  | 11 | 10 | 8  | 9                                                                                                                                                            | 5  | 7  | 7  | 5  | 5.0             | 11.1          |  |  |  |                                 |  |  |  |
| 18-Apr                                                                                                                  | 4                             | 3  | 4  | 4  | 2  | 2  | 2  | 2  | 2  | 2  | 3  | 3  | 4  | 4  | 4  | 5  | 3  | 3  | 1  | 2                                                                                                                                                            | 1  | 0  | 0  | 1  | 2.5             | 4.6           |  |  |  |                                 |  |  |  |
| 19-Apr                                                                                                                  | 1                             | 1  | 2  | 2  | 1  | 2  | 3  | 3  | 3  | 5  | 5  | 3  | 5  | 5  | 4  | 5  | 3  | 6  | 6  | 6                                                                                                                                                            | 6  | 2  | 2  | 2  | 3.4             | 5.8           |  |  |  |                                 |  |  |  |
| 20-Apr                                                                                                                  | 2                             | 3  | 3  | 4  | 1  | 1  | 1  | 2  | 3  | 13 | 16 | 17 | 19 | 16 | 15 | 15 | 13 | 13 | 13 | 10                                                                                                                                                           | 3  | 2  | 1  | 2  | 7.8             | 18.7          |  |  |  |                                 |  |  |  |
| 21-Apr                                                                                                                  | 1                             | 2  | 1  | 1  | 1  | 0  | 1  | 2  | 1  | 2  | 2  | 2  | 4  | 5  | 5  | 6  | 6  | 4  | 3  | 4                                                                                                                                                            | 6  | 5  | 4  | 4  | 3.0             | 6.2           |  |  |  |                                 |  |  |  |
| 22-Apr                                                                                                                  | 4                             | 2  | 1  | 1  | 2  | 1  | 2  | 2  | 3  | 4  | 3  | 8  | 11 | 11 | 9  | 8  | 12 | 13 | 4  | 3                                                                                                                                                            | 9  | 7  | 7  | 7  | 5.6             | 12.9          |  |  |  |                                 |  |  |  |
| 23-Apr                                                                                                                  | 7                             | 5  | 1  | 2  | 2  | 4  | 7  | 9  | 8  | 3  | 2  | 6  | 8  | 10 | 11 | 12 | 9  | 12 | 8  | 7                                                                                                                                                            | 6  | 9  | 8  | 8  | 6.8             | 11.9          |  |  |  |                                 |  |  |  |
| 24-Apr                                                                                                                  | 8                             | 6  | 5  | 6  | 3  | 1  | 1  | 3  | 4  | 5  | 4  | 4  | 4  | 5  | 6  | 6  | 6  | 7  | 6  | 9                                                                                                                                                            | 7  | 6  | 5  | 5  | 5.1             | 8.6           |  |  |  |                                 |  |  |  |
| 25-Apr                                                                                                                  | 4                             | 4  | 4  | 3  | 2  | 2  | 2  | 3  | 4  | 4  | 3  | 4  | 2  | 5  | 6  | 6  | 7  | 7  | 8  | 6                                                                                                                                                            | 5  | 3  | 3  | 2  | 4.1             | 7.7           |  |  |  |                                 |  |  |  |
| 26-Apr                                                                                                                  | 3                             | 1  | 2  | 1  | 2  | 1  | 1  | 2  | 3  | 6  | 6  | 8  | 7  | 9  | 11 | 11 | 14 | 12 | 12 | 12                                                                                                                                                           | 13 | 11 | 6  | 9  | 6.9             | 13.7          |  |  |  |                                 |  |  |  |
| 27-Apr                                                                                                                  | 8                             | 7  | 5  | 4  | 4  | 5  | 6  | 7  | 7  | 5  | 6  | 9  | 8  | 12 | 13 | 11 | 10 | 13 | 11 | 6                                                                                                                                                            | 3  | 7  | 3  | 2  | 7.2             | 13.1          |  |  |  |                                 |  |  |  |
| 28-Apr                                                                                                                  | 1                             | 1  | 2  | 3  | 2  | 3  | 3  | 3  | 13 | 17 | 15 | 16 | 18 | 16 | 14 | 14 | 14 | 14 | 12 | 10                                                                                                                                                           | 7  | 8  | 4  | 2  | 8.8             | 17.6          |  |  |  |                                 |  |  |  |
| 29-Apr                                                                                                                  | 2                             | 3  | 4  | 3  | 2  | 3  | 3  | 4  | 3  | 6  | 7  | 7  | 5  | 5  | 5  | 5  | 5  | 6  | 6  | 5                                                                                                                                                            | 4  | 4  | 3  | 2  | 4.2             | 7.1           |  |  |  |                                 |  |  |  |
| 30-Apr                                                                                                                  | 3                             | 3  | 2  | 1  | 0  | 1  | 1  | 1  | 3  | 4  | 4  | 4  | 5  | 7  | 8  | 9  | 10 | 11 | 11 | 9                                                                                                                                                            | 11 | 10 | 5  | 5  | 5.4             | 11.4          |  |  |  |                                 |  |  |  |
| 3.7 3.3 3.3 3.0 2.9 2.7 3.0 4.5 5.4 7.0 8.1 9.3 9.8 9.9 9.8 10.0 9.5 9.5 7.9 6.5 5.9 5.2 4.3 4.2                        |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                              |    |    |    |    | Diurnal Average |               |  |  |  |                                 |  |  |  |
| 11.3 11.2 10.4 12.5 13.7 14.4 14.5 17.3 22.0 21.3 22.7 20.9 19.7 21.0 21.6 19.6 18.3 17.7 16.7 17.0 13.9 11.7 14.0 13.9 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                              |    |    |    |    | Diurnal Maximum |               |  |  |  |                                 |  |  |  |
| All monthly, daily, and diurnal averages have been calculated using scalar methods                                      |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                              |    |    |    |    |                 |               |  |  |  |                                 |  |  |  |

## Hourly Standard Deviations

Wind Direction (WD) - deg

Valleyview - April 2014

| Maximum Value: 95.9 deg on Apr 21 14:00                                                                                                                         |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Hours in Service: 720           |               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------------------------------|---------------|
| Minimum Value: 4.4 deg on Apr 2 18:00                                                                                                                           |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Hours of Data: 720              |               |
|                                                                                                                                                                 |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Hours of Missing Data: 0        |               |
| Percentiles: P <sub>1</sub> = 5.2 P <sub>10</sub> = 8.1 Q <sub>1</sub> = 10.3 Median = 15.5 Q <sub>3</sub> = 31.1 P <sub>90</sub> = 54.7 P <sub>99</sub> = 88.1 |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | 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-Apr                                                                                                                                                           | 90                            | 73   | 75   | 39   | 64   | 54   | 79   | 81   | 24   | 25   | 8    | 6    | 9    | 5    | 6    | 28   | 35   | 19   | 8    | 8    | 8    | 9    | 41   | 29                              | 90.2          |
| 2-Apr                                                                                                                                                           | 19                            | 64   | 15   | 22   | 15   | 15   | 13   | 9    | 13   | 7    | 17   | 8    | 16   | 22   | 16   | 21   | 19   | 4    | 22   | 14   | 10   | 18   | 14   | 33                              | 63.9          |
| 3-Apr                                                                                                                                                           | 8                             | 81   | 68   | 73   | 90   | 92   | 53   | 51   | 33   | 50   | 39   | 12   | 13   | 14   | 11   | 12   | 11   | 10   | 9    | 10   | 8    | 9    | 7    | 7                               | 91.9          |
| 4-Apr                                                                                                                                                           | 7                             | 8    | 10   | 14   | 10   | 29   | 16   | 17   | 15   | 17   | 10   | 10   | 11   | 12   | 11   | 8    | 12   | 15   | 10   | 17   | 32   | 34   | 26   | 36                              | 35.6          |
| 5-Apr                                                                                                                                                           | 26                            | 70   | 33   | 7    | 45   | 13   | 43   | 6    | 8    | 61   | 13   | 16   | 16   | 14   | 12   | 39   | 11   | 14   | 63   | 24   | 70   | 48   | 22   | 16                              | 70.1          |
| 6-Apr                                                                                                                                                           | 47                            | 16   | 16   | 31   | 30   | 15   | 22   | 25   | 10   | 9    | 10   | 10   | 11   | 10   | 15   | 11   | 11   | 16   | 9    | 12   | 14   | 14   | 12   | 11                              | 46.7          |
| 7-Apr                                                                                                                                                           | 5                             | 7    | 23   | 6    | 6    | 8    | 6    | 21   | 21   | 15   | 37   | 31   | 13   | 10   | 52   | 11   | 27   | 16   | 8    | 11   | 18   | 9    | 12   | 6                               | 52.2          |
| 8-Apr                                                                                                                                                           | 12                            | 76   | 8    | 4    | 4    | 6    | 6    | 8    | 11   | 9    | 20   | 28   | 13   | 11   | 13   | 11   | 10   | 11   | 13   | 10   | 11   | 9    | 6    | 6                               | 76.4          |
| 9-Apr                                                                                                                                                           | 12                            | 8    | 10   | 9    | 9    | 8    | 9    | 8    | 10   | 9    | 10   | 12   | 13   | 10   | 10   | 14   | 16   | 20   | 14   | 11   | 12   | 43   | 19   | 20                              | 43.4          |
| 10-Apr                                                                                                                                                          | 14                            | 5    | 6    | 10   | 16   | 21   | 45   | 16   | 26   | 32   | 16   | 12   | 8    | 12   | 9    | 11   | 12   | 8    | 16   | 10   | 62   | 61   | 63   | 49                              | 62.9          |
| 11-Apr                                                                                                                                                          | 14                            | 13   | 21   | 36   | 14   | 31   | 11   | 34   | 46   | 13   | 13   | 10   | 9    | 10   | 8    | 8    | 7    | 8    | 8    | 9    | 9    | 8    | 8    | 9                               | 45.5          |
| 12-Apr                                                                                                                                                          | 17                            | 18   | 14   | 21   | 18   | 37   | 14   | 15   | 20   | 42   | 32   | 30   | 21   | 16   | 19   | 21   | 13   | 10   | 12   | 10   | 8    | 37   | 16   | 11                              | 41.9          |
| 13-Apr                                                                                                                                                          | 10                            | 13   | 10   | 15   | 9    | 36   | 70   | 65   | 42   | 27   | 41   | 64   | 69   | 35   | 28   | 35   | 27   | 12   | 37   | 18   | 13   | 55   | 63   | 52                              | 70.1          |
| 14-Apr                                                                                                                                                          | 50                            | 9    | 10   | 8    | 6    | 8    | 9    | 8    | 12   | 18   | 81   | 71   | 19   | 18   | 16   | 10   | 31   | 22   | 18   | 30   | 24   | 17   | 52   | 17                              | 81.5          |
| 15-Apr                                                                                                                                                          | 74                            | 74   | 71   | 80   | 38   | 6    | 7    | 8    | 10   | 9    | 8    | 8    | 8    | 8    | 10   | 15   | 13   | 18   | 14   | 15   | 13   | 15   | 11   | 9                               | 79.8          |
| 16-Apr                                                                                                                                                          | 9                             | 8    | 17   | 13   | 9    | 15   | 15   | 24   | 14   | 35   | 21   | 16   | 20   | 19   | 16   | 19   | 21   | 18   | 10   | 13   | 13   | 8    | 10   | 14                              | 34.8          |
| 17-Apr                                                                                                                                                          | 6                             | 52   | 12   | 81   | 45   | 35   | 16   | 18   | 26   | 48   | 38   | 34   | 37   | 30   | 20   | 12   | 8    | 7    | 9    | 8    | 15   | 10   | 12   | 13                              | 81.1          |
| 18-Apr                                                                                                                                                          | 12                            | 9    | 8    | 8    | 18   | 24   | 14   | 32   | 24   | 34   | 30   | 61   | 49   | 32   | 48   | 40   | 66   | 62   | 52   | 13   | 15   | 95   | 73   | 17                              | 95.2          |
| 19-Apr                                                                                                                                                          | 78                            | 23   | 9    | 8    | 34   | 11   | 13   | 8    | 37   | 42   | 34   | 84   | 86   | 60   | 61   | 80   | 91   | 16   | 13   | 51   | 45   | 11   | 25   | 80                              | 90.6          |
| 20-Apr                                                                                                                                                          | 47                            | 29   | 22   | 19   | 64   | 72   | 11   | 8    | 8    | 39   | 15   | 17   | 13   | 15   | 15   | 20   | 19   | 20   | 9    | 5    | 8    | 58   | 37   | 19                              | 71.9          |
| 21-Apr                                                                                                                                                          | 35                            | 40   | 28   | 14   | 19   | 58   | 66   | 14   | 51   | 31   | 26   | 50   | 68   | 96   | 62   | 69   | 38   | 36   | 30   | 11   | 15   | 9    | 18   | 19                              | 95.9          |
| 22-Apr                                                                                                                                                          | 10                            | 49   | 51   | 41   | 41   | 75   | 37   | 26   | 12   | 17   | 40   | 30   | 16   | 17   | 16   | 23   | 21   | 10   | 58   | 55   | 6    | 10   | 6    | 7                               | 74.6          |
| 23-Apr                                                                                                                                                          | 7                             | 60   | 52   | 67   | 25   | 35   | 18   | 8    | 9    | 14   | 29   | 16   | 16   | 15   | 13   | 11   | 12   | 9    | 12   | 15   | 8    | 8    | 11   | 9                               | 67.4          |
| 24-Apr                                                                                                                                                          | 11                            | 8    | 10   | 10   | 24   | 26   | 75   | 42   | 27   | 36   | 37   | 67   | 74   | 54   | 48   | 56   | 42   | 30   | 21   | 9    | 8    | 10   | 11   | 10                              | 74.9          |
| 25-Apr                                                                                                                                                          | 11                            | 9    | 12   | 20   | 14   | 13   | 24   | 13   | 11   | 18   | 22   | 17   | 32   | 25   | 15   | 18   | 25   | 20   | 14   | 9    | 10   | 14   | 13   | 16                              | 32.0          |
| 26-Apr                                                                                                                                                          | 11                            | 13   | 23   | 16   | 17   | 23   | 26   | 19   | 15   | 10   | 15   | 13   | 23   | 13   | 13   | 15   | 12   | 9    | 9    | 8    | 7    | 8    | 10   | 12                              | 26.2          |
| 27-Apr                                                                                                                                                          | 11                            | 12   | 12   | 13   | 13   | 11   | 9    | 11   | 14   | 25   | 45   | 26   | 26   | 24   | 18   | 20   | 23   | 14   | 12   | 13   | 70   | 64   | 88   | 27                              | 88.1          |
| 28-Apr                                                                                                                                                          | 26                            | 45   | 28   | 33   | 8    | 6    | 9    | 26   | 17   | 13   | 15   | 17   | 18   | 18   | 24   | 17   | 18   | 17   | 14   | 12   | 9    | 7    | 33   | 49                              | 49.2          |
| 29-Apr                                                                                                                                                          | 12                            | 5    | 5    | 5    | 13   | 9    | 9    | 11   | 24   | 61   | 35   | 42   | 54   | 89   | 79   | 43   | 55   | 29   | 15   | 8    | 9    | 28   | 38   | 18                              | 88.9          |
| 30-Apr                                                                                                                                                          | 11                            | 9    | 34   | 46   | 79   | 11   | 16   | 39   | 15   | 15   | 33   | 75   | 60   | 49   | 47   | 42   | 29   | 18   | 15   | 9    | 8    | 9    | 11   | 12                              | 79.2          |
|                                                                                                                                                                 | 90.2                          | 81.0 | 74.8 | 81.1 | 90.0 | 91.9 | 78.5 | 81.1 | 50.8 | 61.3 | 81.5 | 84.3 | 85.5 | 95.9 | 79.4 | 80.2 | 90.6 | 62.1 | 63.0 | 55.0 | 70.1 | 95.2 | 88.1 | 79.9                            |               |

PAZA

Portable – Reno Station

Monthly Summary Tables, Graphs and  
Roses

## Hourly Averages

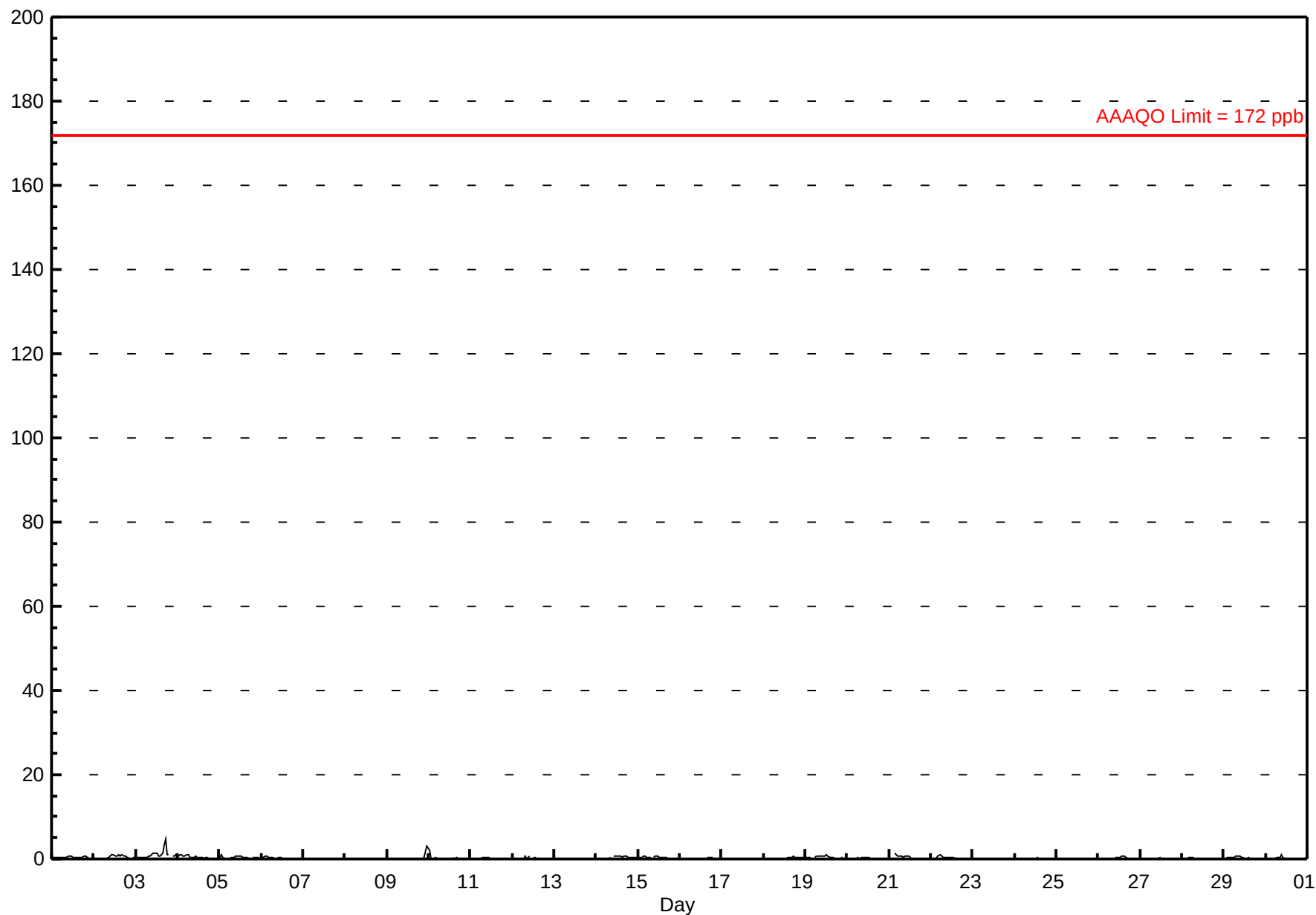
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Portable Reno - April 2014

| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 4.8 ppb on Apr 3 18:00<br>Maximum Daily Average: 1.0 ppb on Apr 3 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 685<br>Hours of Missing Data: 35<br>Hours of Calibration: 35<br>Percent Operational Time: 100.0                                                                                                              |    |    |    |    |    |                 |               |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|-----------------|---------------|
| Minimum Value: 0 ppb on Apr 2 06:00<br>Maximum Diurnal Average: 0.4 ppb at hour 11<br>Monthly Average: 0.21 ppb                     |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.0 ppb on Apr 8<br>Minimum Diurnal Average: 0.1 ppb at hour 21<br>Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.1 Q <sub>3</sub> = 0.3 P <sub>90</sub> = 0.6 P <sub>99</sub> = 1.2 |    |    |    |    |    |                 |               |
| 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-Apr                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 1                                                                                                                                                                                                                                                    | 1  | 0  | 0  | A  | 0  | 0.4             | 0.7           |
| 2-Apr                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                                                                                                                    | 0  | 0  | A  | 0  | 0  | 0.4             | 1.0           |
| 3-Apr                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 3  | 5  | 1                                                                                                                                                                                                                                                    | 1  | A  | 1  | 1  | 1  | 1.0             | 4.8           |
| 4-Apr                                                                                                                               | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                    | A  | 0  | 0  | 0  | 0  | 0.4             | 1.2           |
| 5-Apr                                                                                                                               | 0                             | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | A                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0.3             | 1.0           |
| 6-Apr                                                                                                                               | 0                             | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0.2             | 0.5           |
| 7-Apr                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0.0             | 0.1           |
| 8-Apr                                                                                                                               | 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           |
| 9-Apr                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 2  | 3  | 0.2             | 3.0           |
| 10-Apr                                                                                                                              | 2                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0.2             | 1.9           |
| 11-Apr                                                                                                                              | 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           |
| 12-Apr                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0  | 1  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0.1             | 0.6           |
| 13-Apr                                                                                                                              | 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           |
| 14-Apr                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A  | 1  | 1  | 1  | 1  | 1  | 0  | 1  | 1  | 1                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0.3             | 0.7           |
| 15-Apr                                                                                                                              | 0                             | 0 | 0 | 1 | 1 | 0 | 0 | 0 | A | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0.3             | 0.7           |
| 16-Apr                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0.1             | 0.3           |
| 17-Apr                                                                                                                              | 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           |
| 18-Apr                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0.2             | 0.6           |
| 19-Apr                                                                                                                              | 0                             | 0 | 0 | 0 | A | 0 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0.4             | 1.0           |
| 20-Apr                                                                                                                              | 0                             | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0.2             | 0.4           |
| 21-Apr                                                                                                                              | 0                             | 0 | A | 1 | 1 | 1 | 1 | 1 | 0 | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0.3             | 1.2           |
| 22-Apr                                                                                                                              | 0                             | A | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0.2             | 0.9           |
| 23-Apr                                                                                                                              | A                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C | C  | C  | C  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | A  | 0.0             | 0.1           |
| 24-Apr                                                                                                                              | 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           |
| 25-Apr                                                                                                                              | 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           |
| 26-Apr                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 0  | 0  | 0                                                                                                                                                                                                                                                    | 0  | A  | 0  | 0  | 0  | 0.2             | 0.6           |
| 27-Apr                                                                                                                              | 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           |
| 28-Apr                                                                                                                              | 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           |
| 29-Apr                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0.2             | 0.6           |
| 30-Apr                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0.2             | 0.9           |
| 0.2 0.1 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.4 0.3 0.3 0.2 0.2 0.2 0.2 0.3 0.3 0.2 0.2 0.1 0.1 0.2 0.2                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                      |    |    |    |    |    | Diurnal Average |               |
| 1.9 1.0 0.9 1.2 0.9 1.2 1.1 0.6 0.8 1.0 1.4 1.3 1.2 0.8 0.9 1.2 3.5 4.8 0.9 1.1 0.4 0.5 1.8 3.0                                     |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                      |    |    |    |    |    | Diurnal Maximum |               |
| C - Calibration A - Automated Daily Zero Span                                                                                       |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                      |    |    |    |    |    |                 |               |
| Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb 30-day 11 ppb                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                      |    |    |    |    |    |                 |               |

## Hourly Averages

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Portable Reno - April 2014



## Hourly Maximums

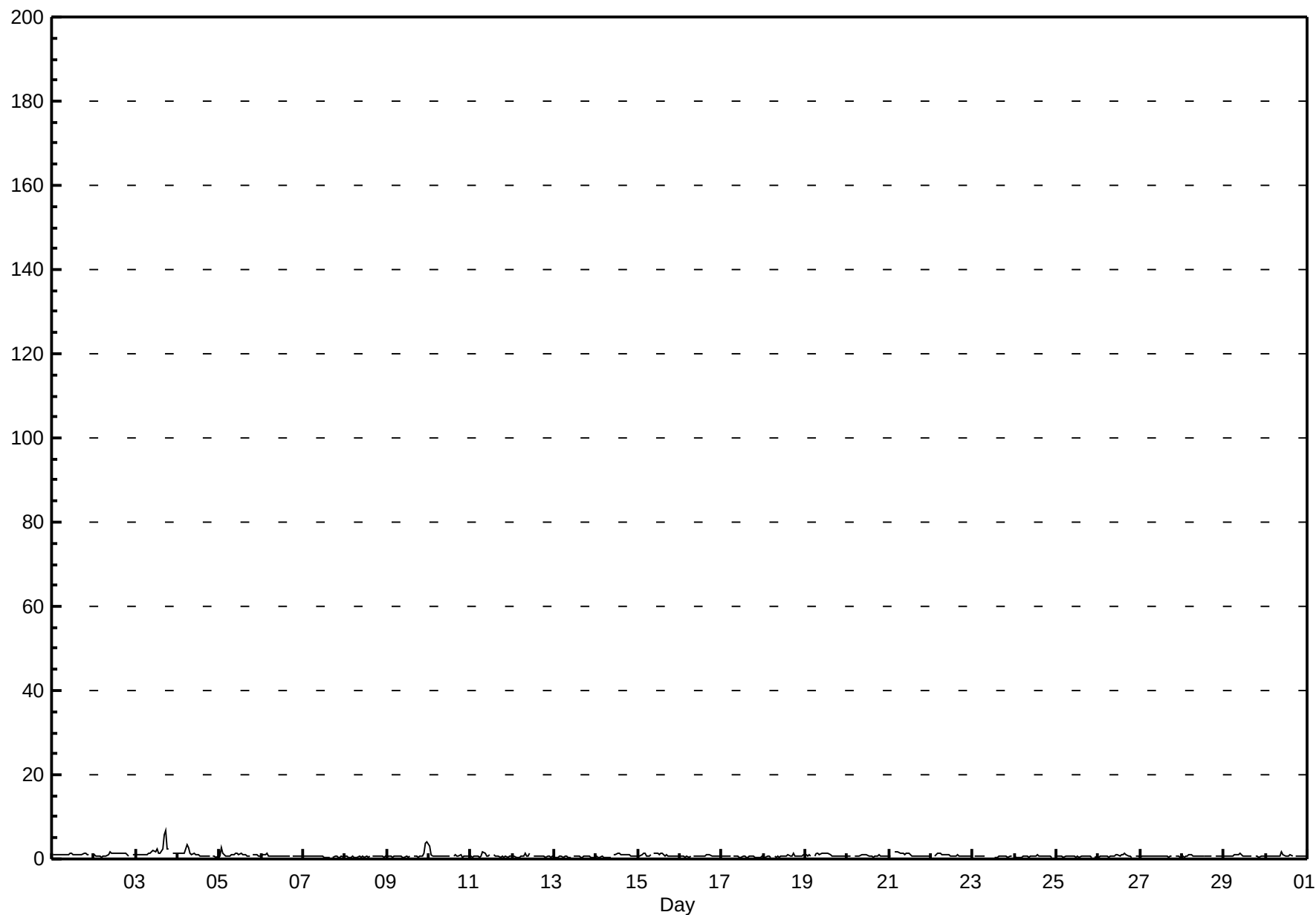
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Portable Reno - April 2014

| Maximum Value: 6.8 ppb on Apr 3 18:00       |                               |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Maximum Daily Average: 1.9 ppb on Apr 3                                                                                                                    |     |     |     |     |     |                 |                 |  |  | Hours in Service: 720     |  |
|---------------------------------------------|-------------------------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----------------|-----------------|--|--|---------------------------|--|
| Minimum Value: 0 ppb on Apr 17 20:00        |                               |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Minimum Daily Average: 0.5 ppb on Apr 13                                                                                                                   |     |     |     |     |     |                 |                 |  |  | Hours of Data: 685        |  |
| Maximum Diurnal Average: 1.0 ppb at hour 18 |                               |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Minimum Diurnal Average: 0.6 ppb at hour 21                                                                                                                |     |     |     |     |     |                 |                 |  |  | Hours of Missing Data: 35 |  |
| Monthly Average: 0.80 ppb                   |                               |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.6 Median = 0.7 Q <sub>3</sub> = 0.9 P <sub>90</sub> = 1.3 P <sub>99</sub> = 2.7 |     |     |     |     |     |                 |                 |  |  | 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-Apr                                       | 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             | 1.4             |  |  |                           |  |
| 2-Apr                                       | 1                             | 1                             | 1   | 1   | 0   | 1   | 1   | 1   | 1   | 2   | 1   | 1   | 1   | 1   | 1   | 1   | 2   | 1   | 1                                                                                                                                                          | 1   | 1   | A   | 1   | 1   | 1.1             | 1.6             |  |  |                           |  |
| 3-Apr                                       | 1                             | 1                             | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 2   | 2   | 2   | 2   | 1   | 1   | 2   | 6   | 7   | 2                                                                                                                                                          | 2   | A   | 1   | 1   | 1   | 1.9             | 6.8             |  |  |                           |  |
| 4-Apr                                       | 1                             | 1                             | 1   | 1   | 1   | 3   | 3   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | A   | 1   | 1   | 0   | 1   | 1.2             | 3.3             |  |  |                           |  |
| 5-Apr                                       | 1                             | 3                             | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | A                                                                                                                                                          | 1   | 1   | 1   | 1   | 1   | 1.0             | 2.8             |  |  |                           |  |
| 6-Apr                                       | 1                             | 1                             | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | A   | 1                                                                                                                                                          | 1   | 1   | 1   | 1   | 1   | 0.8             | 1.2             |  |  |                           |  |
| 7-Apr                                       | 1                             | 1                             | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 0   | 0   | 0   | 0   | A   | 0   | 1                                                                                                                                                          | 1   | 0   | 0   | 1   | 0   | 0.6             | 0.7             |  |  |                           |  |
| 8-Apr                                       | 1                             | 1                             | 0   | 0   | 1   | 0   | 0   | 0   | 1   | 0   | 1   | 0   | 1   | 0   | 1   | A   | 1   | 1   | 1                                                                                                                                                          | 1   | 1   | 1   | 0   | 1   | 0.5             | 0.6             |  |  |                           |  |
| 9-Apr                                       | 0                             | 1                             | 1   | 0   | 1   | 1   | 1   | 1   | 1   | 0   | 0   | 1   | 0   | 1   | A   | 1   | 1   | 1   | 0                                                                                                                                                          | 1   | 1   | 1   | 4   | 4   | 0.9             | 4.2             |  |  |                           |  |
| 10-Apr                                      | 3                             | 1                             | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | A   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | 0   | 1   | 1   | 1   | 1   | 0.8             | 3.2             |  |  |                           |  |
| 11-Apr                                      | 1                             | 0                             | 1   | 1   | 1   | 0   | 1   | 2   | 1   | 1   | 1   | 1   | A   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | 0   | 1   | 0   | 1   | 1   | 0.7             | 1.7             |  |  |                           |  |
| 12-Apr                                      | 1                             | 1                             | 0   | 0   | 0   | 1   | 1   | 1   | 1   | 1   | 1   | A   | 1   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | 0   | 1   | 1   | 0   | 1   | 0.7             | 1.3             |  |  |                           |  |
| 13-Apr                                      | 0                             | 0                             | 0   | 1   | 1   | 0   | 1   | 1   | 0   | 0   | A   | 1   | 1   | 1   | 1   | 0   | 0   | 1   | 1                                                                                                                                                          | 1   | 1   | 0   | 0   | 0   | 0.5             | 0.7             |  |  |                           |  |
| 14-Apr                                      | 1                             | 0                             | 0   | 1   | 0   | 0   | 0   | 0   | 0   | A   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | 1   | 1   | 1   | 1   | 1   | 0.8             | 1.2             |  |  |                           |  |
| 15-Apr                                      | 1                             | 1                             | 1   | 1   | 1   | 1   | 1   | 1   | A   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | 1   | 1   | 1   | 1   | 1   | 0.9             | 1.4             |  |  |                           |  |
| 16-Apr                                      | 1                             | 1                             | 1   | 0   | 1   | 1   | 1   | A   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | 1   | 1   | 1   | 1   | 1   | 0.7             | 1.0             |  |  |                           |  |
| 17-Apr                                      | 1                             | 1                             | 1   | 1   | 1   | 1   | A   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 0   | 1   | 1   | 1                                                                                                                                                          | 1   | 0   | 0   | 0   | 1   | 0.5             | 0.7             |  |  |                           |  |
| 18-Apr                                      | 0                             | 0                             | 1   | 1   | 0   | A   | 1   | 0   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | 1   | 1   | 1   | 1   | 1   | 0.7             | 1.3             |  |  |                           |  |
| 19-Apr                                      | 1                             | 1                             | 1   | 1   | A   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 2   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | 1   | 1   | 1   | 1   | 1   | 1.0             | 1.5             |  |  |                           |  |
| 20-Apr                                      | 1                             | 1                             | 1   | A   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 0   | 1   | 1   | 1                                                                                                                                                          | 1   | 1   | 1   | 1   | 1   | 0.7             | 1.1             |  |  |                           |  |
| 21-Apr                                      | 1                             | 1                             | A   | 2   | 2   | 2   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | 1   | 1   | 1   | 1   | 1   | 1.0             | 1.8             |  |  |                           |  |
| 22-Apr                                      | 1                             | A                             | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | 1   | 1   | 1   | 1   | 1   | 0.8             | 1.3             |  |  |                           |  |
| 23-Apr                                      | A                             | 1                             | 1   | 1   | 1   | 1   | 1   | 1   | C   | C   | C   | C   | 0   | 0   | 0   | 1   | 1   | 1   | 1                                                                                                                                                          | 1   | 0   | 1   | 1   | A   | 0.6             | 0.7             |  |  |                           |  |
| 24-Apr                                      | 1                             | 0                             | 0   | 0   | 0   | 1   | 1   | 1   | 0   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | 1   | 1   | 0   | A   | 1   | 0.6             | 1.1             |  |  |                           |  |
| 25-Apr                                      | 1                             | 1                             | 1   | 1   | 0   | 1   | 1   | 1   | 1   | 1   | 1   | 0   | 1   | 0   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | 1   | 1   | A   | 0   | 1   | 0.5             | 0.6             |  |  |                           |  |
| 26-Apr                                      | 0                             | 1                             | 1   | 1   | 1   | 1   | 0   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | 1   | A   | 1   | 1   | 1   | 0.7             | 1.2             |  |  |                           |  |
| 27-Apr                                      | 0                             | 1                             | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | A   | 1   | 1   | 1   | 0   | 0.6             | 0.8             |  |  |                           |  |
| 28-Apr                                      | 1                             | 0                             | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1                                                                                                                                                          | A   | 1   | 1   | 1   | 1   | 0.7             | 1.1             |  |  |                           |  |
| 29-Apr                                      | 1                             | 1                             | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | A   | 1                                                                                                                                                          | 1   | 0   | 1   | 1   | 1   | 0.8             | 1.2             |  |  |                           |  |
| 30-Apr                                      | 1                             | 1                             | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 2   | 1   | 1   | 1   | 1   | 1   | 1   | A   | 1   | 1                                                                                                                                                          | 1   | 1   | 1   | 1   | 1   | 0.7             | 1.8             |  |  |                           |  |
|                                             |                               | 0.8                           | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.9 | 1.0 | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 | 0.9 | 1.0 | 0.8                                                                                                                                                        | 0.7 | 0.6 | 0.7 | 0.7 | 0.8 | Diurnal Average |                 |  |  |                           |  |
|                                             |                               | 3.2                           | 2.8 | 1.5 | 1.8 | 1.7 | 3.3 | 2.6 | 1.7 | 1.4 | 1.8 | 1.9 | 1.8 | 2.2 | 1.5 | 1.4 | 2.3 | 5.8 | 6.8                                                                                                                                                        | 2.3 | 2.3 | 0.9 | 1.3 | 3.7 | 4.2             | Diurnal Maximum |  |  |                           |  |
| C - Calibration                             |                               | A - Automated Daily Zero Span |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                            |     |     |     |     |     |                 |                 |  |  |                           |  |

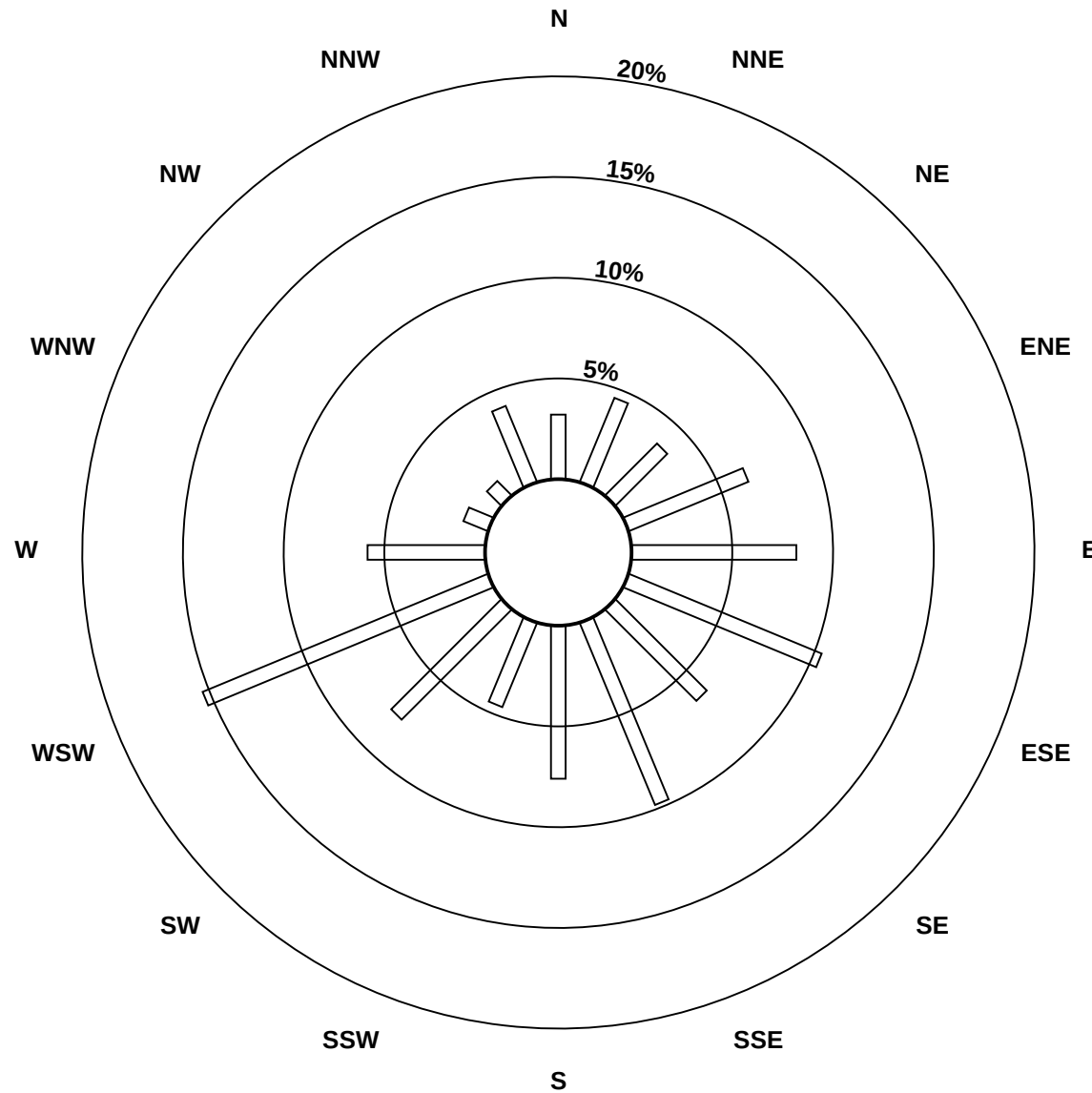
## Hourly Maximums

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Portable Reno - April 2014

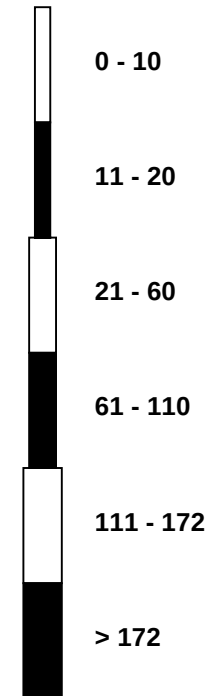


## Pollutant Rose

Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Portable Reno - April 2014



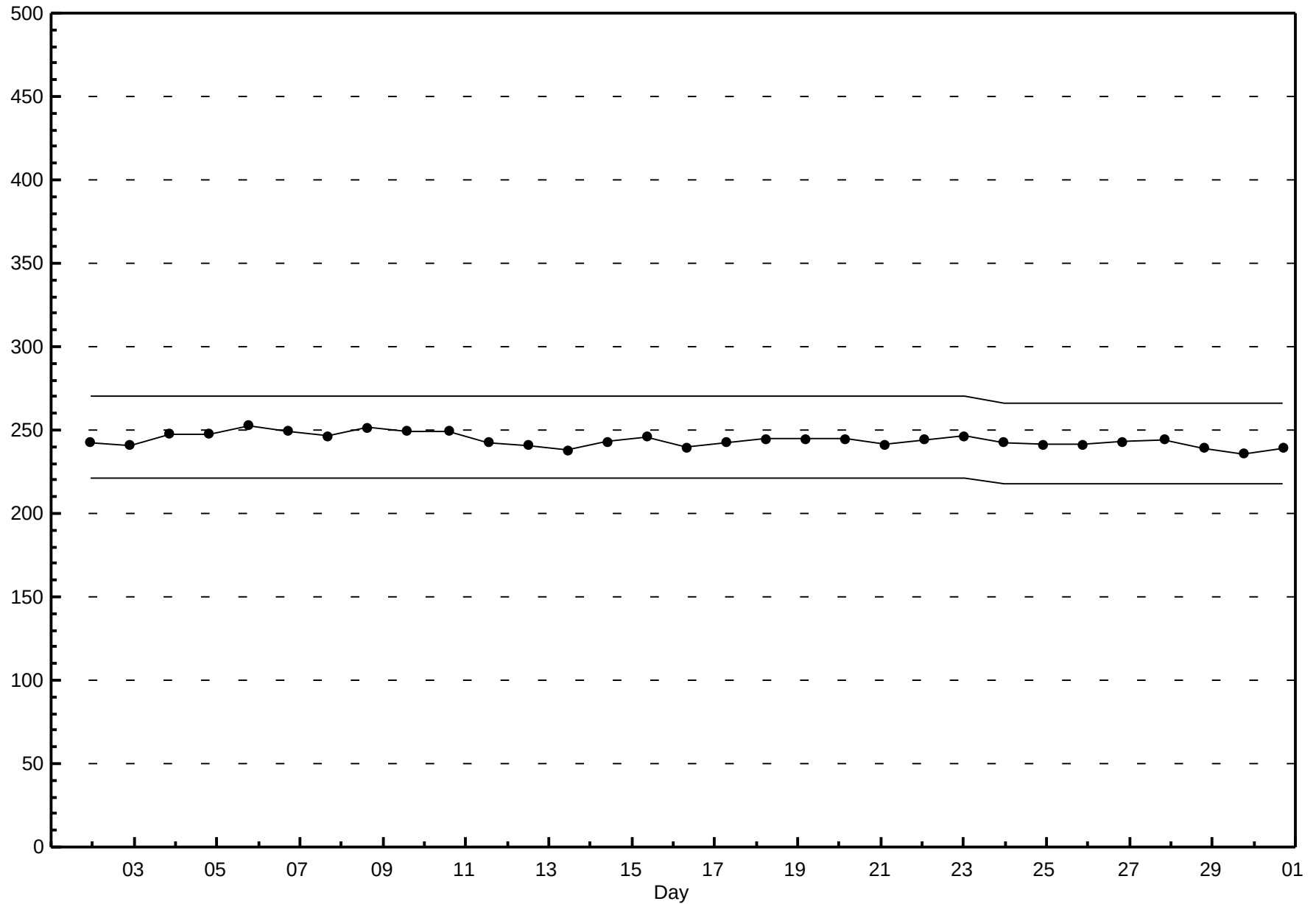
## Pollutant Classes (ppb)





## Span Responses

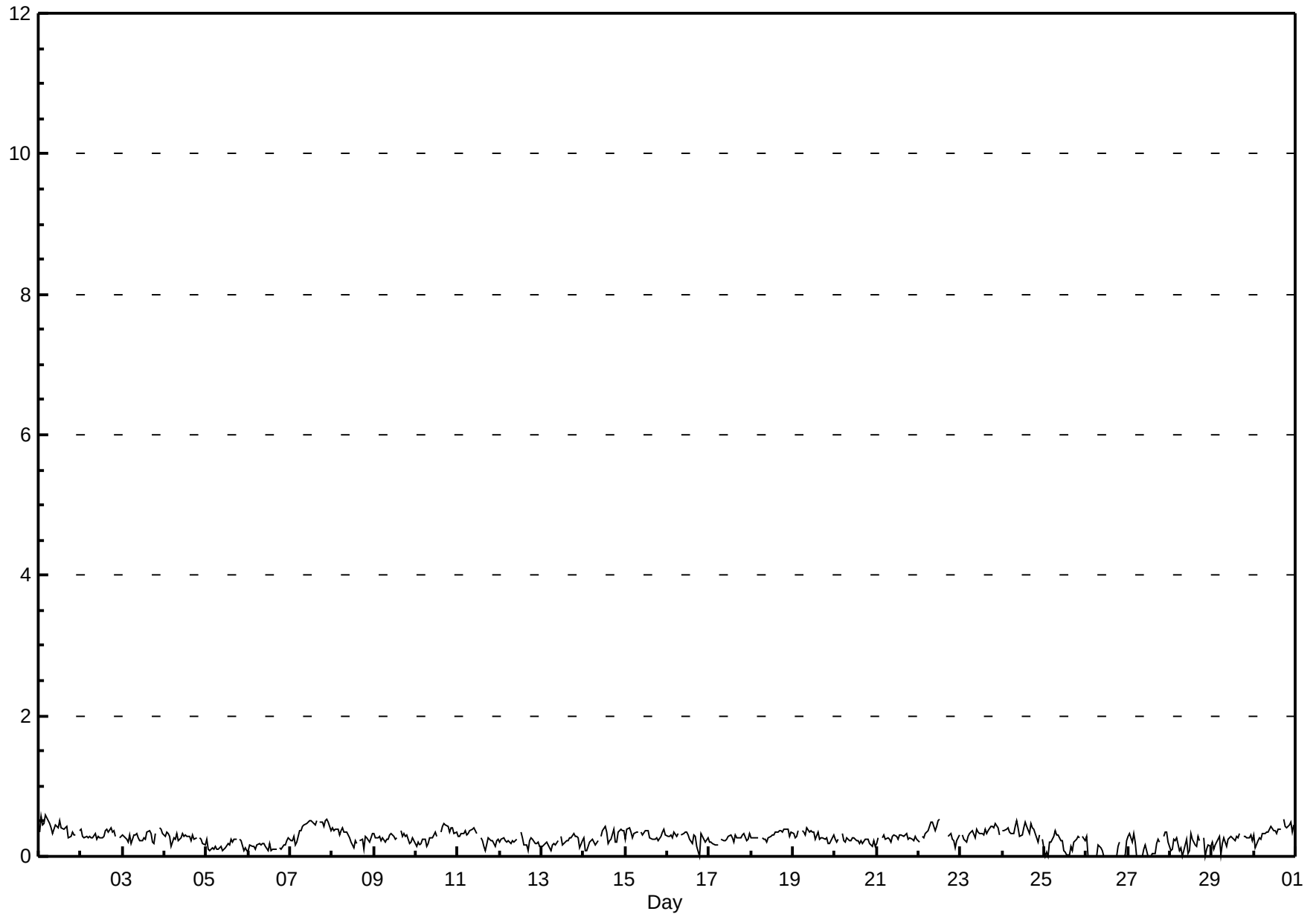
Sulphur Dioxide (SO<sub>2</sub>)  
Portable Reno - April 2014



[illegible]

## Hourly Averages

Total Reduced Sulphur (TRS) - ppb  
Portable Reno - April 2014



## Hourly Maximums

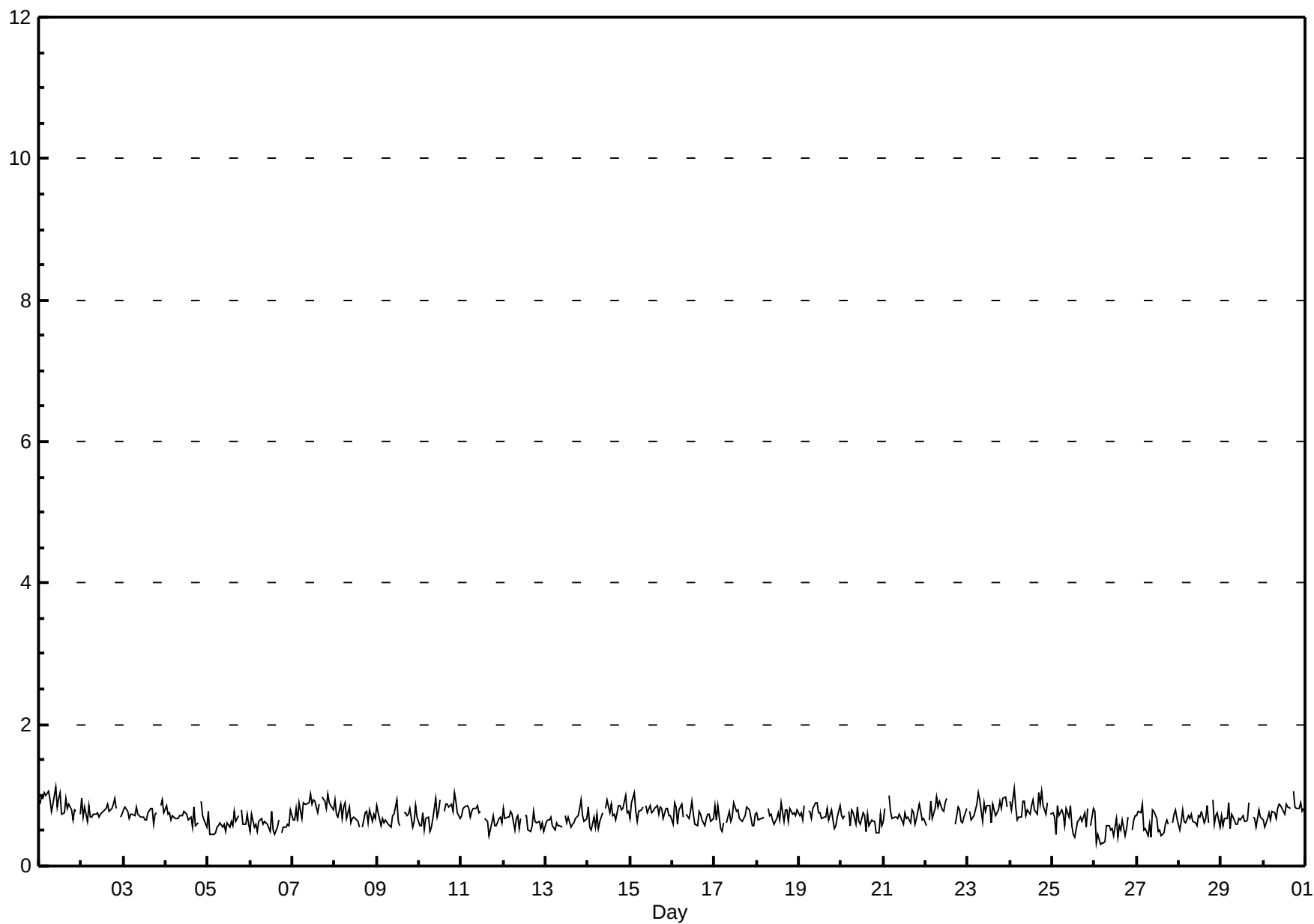
Total Reduced Sulphur (TRS) - ppb

Portable Reno - April 2014

| Maximum Value: 1.1 ppb on Apr 1 10:00                                                           |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 0.9 ppb on Apr 1                                                                                                                    |    |    |    |    |                 |               |               |  |  |  |  |  |  |  |  |  |  |  | Hours in Service: 720           |  |  |  |
|-------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-----------------|---------------|---------------|--|--|--|--|--|--|--|--|--|--|--|---------------------------------|--|--|--|
| Minimum Value: 0 ppb on Apr 26 04:00                                                            |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.5 ppb on Apr 26                                                                                                                   |    |    |    |    |                 |               |               |  |  |  |  |  |  |  |  |  |  |  | Hours of Data: 685              |  |  |  |
| Maximum Diurnal Average: 0.7 ppb at hour 12                                                     |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 0.7 ppb at hour 15                                                                                                                |    |    |    |    |                 |               |               |  |  |  |  |  |  |  |  |  |  |  | Hours of Missing Data: 35       |  |  |  |
| Monthly Average: 0.71 ppb                                                                       |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 0.6 Q <sub>1</sub> = 0.6 Median = 0.7 Q <sub>3</sub> = 0.8 P <sub>90</sub> = 0.9 P <sub>99</sub> = 1.0 |    |    |    |    |                 |               |               |  |  |  |  |  |  |  |  |  |  |  | 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-Apr                                                                                           | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | A  | A  | 1               | 0.9           | 1.1           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 2-Apr                                                                                           | 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           | 1.0           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 3-Apr                                                                                           | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | A  | 1  | 1  | 1               | 0.7           | 0.9           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 4-Apr                                                                                           | 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           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 5-Apr                                                                                           | 1                             | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1  | 0  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.6           | 0.8           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 6-Apr                                                                                           | 0                             | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1  | 1  | 0  | 1  | 1  | 0  | 1  | 1  | A  | 0                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.6           | 0.8           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 7-Apr                                                                                           | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.8           | 1.0           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 8-Apr                                                                                           | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.7           | 0.9           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 9-Apr                                                                                           | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | A  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.7           | 0.9           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 10-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1  | 1  | 1  | 1  | A  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.8           | 1.0           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 11-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | A  | 1  | 1  | 1  | 0  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.7           | 0.9           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 12-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | A  | 1  | 1  | 1  | 0  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 0               | 0.6           | 0.8           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 13-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | A  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.6           | 0.9           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 14-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.7           | 1.0           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 15-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.8           | 1.0           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 16-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.7           | 0.9           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 17-Apr                                                                                          | 1                             | 1 | 1 | 1 | 0 | 1 | A | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.7           | 0.9           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 18-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.7           | 0.9           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 19-Apr                                                                                          | 1                             | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.7           | 0.9           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 20-Apr                                                                                          | 1                             | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 0  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 0  | 0  | 1               | 0.7           | 0.8           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 21-Apr                                                                                          | 1                             | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.7           | 1.0           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 22-Apr                                                                                          | 1                             | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | C  | C  | C  | C  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.8           | 1.0           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 23-Apr                                                                                          | A                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | A               | 0.8           | 1.0           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 24-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | A  | 1               | 0.8           | 1.1           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 25-Apr                                                                                          | 1                             | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 0  | 0  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | A  | 1  | 1               | 0.7           | 0.9           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 26-Apr                                                                                          | 1                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1  | 1  | 0  | 1  | 0  | 1  | 1  | 1  | 0  | 1                                                                                                                                                          | 1  | A  | 1  | 1  | 1               | 0.5           | 0.8           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 27-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1  | 1  | 0  | 1  | 0  | 0  | 1  | 1  | 1  | 1                                                                                                                                                          | A  | 1  | 1  | 1  | 1               | 0.6           | 0.9           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 28-Apr                                                                                          | 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           | 0.9           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 29-Apr                                                                                          | 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           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 30-Apr                                                                                          | 1                             | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1               | 0.8           | 1.1           |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7     |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    | Diurnal Average |               |               |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| 1.0 1.0 1.1 1.0 1.0 1.1 1.0 0.9 0.9 1.1 1.0 1.0 1.0 0.9 0.9 1.0 1.0 1.1 1.1 1.0 1.0 1.0 0.9 0.8 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    | Diurnal Maximum |               |               |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |
| C - Calibration A - Automated Daily Zero Span                                                   |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    |                 |               |               |  |  |  |  |  |  |  |  |  |  |  |                                 |  |  |  |

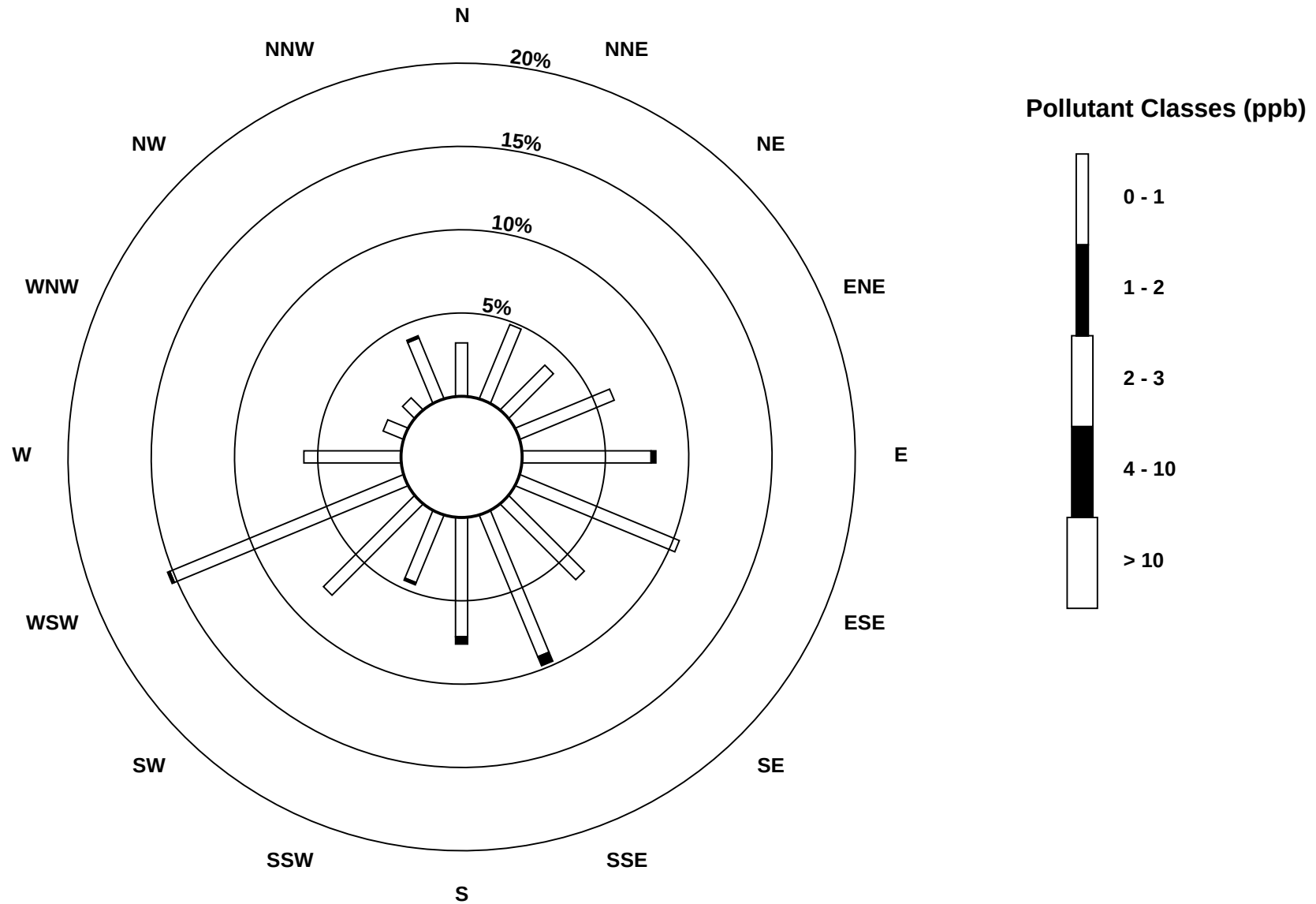
## Hourly Maximums

Total Reduced Sulphur (TRS) - ppb  
Portable Reno - April 2014



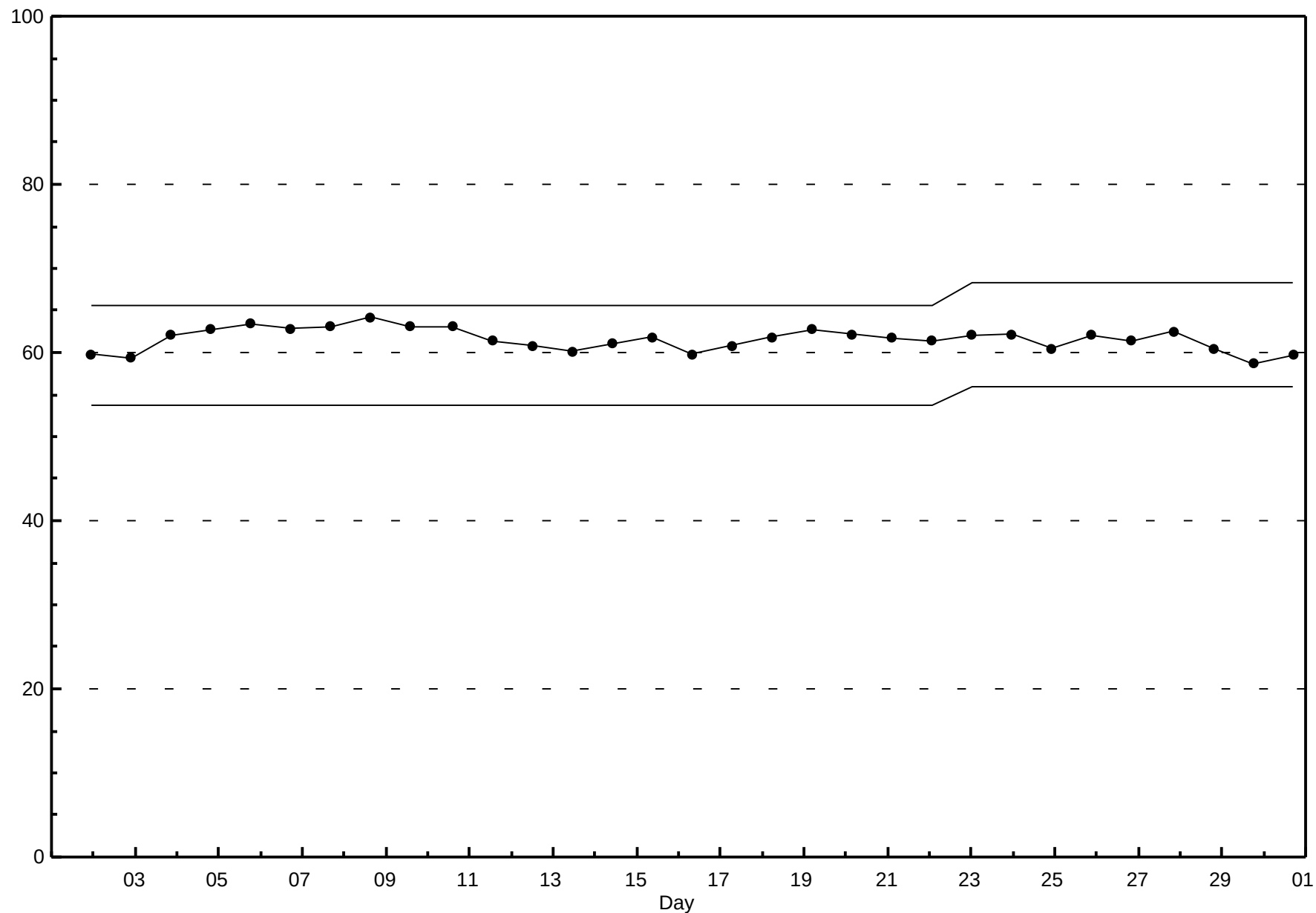
# Pollutant Rose

Total Reduced Sulphur (TRS) - ppb  
Portable Reno - April 2014



## Span Responses

Total Reduced Sulphur (TRS)  
Portable Reno - April 2014



## Hourly Averages

Nitrogen Dioxide (NO<sub>2</sub>) - ppb

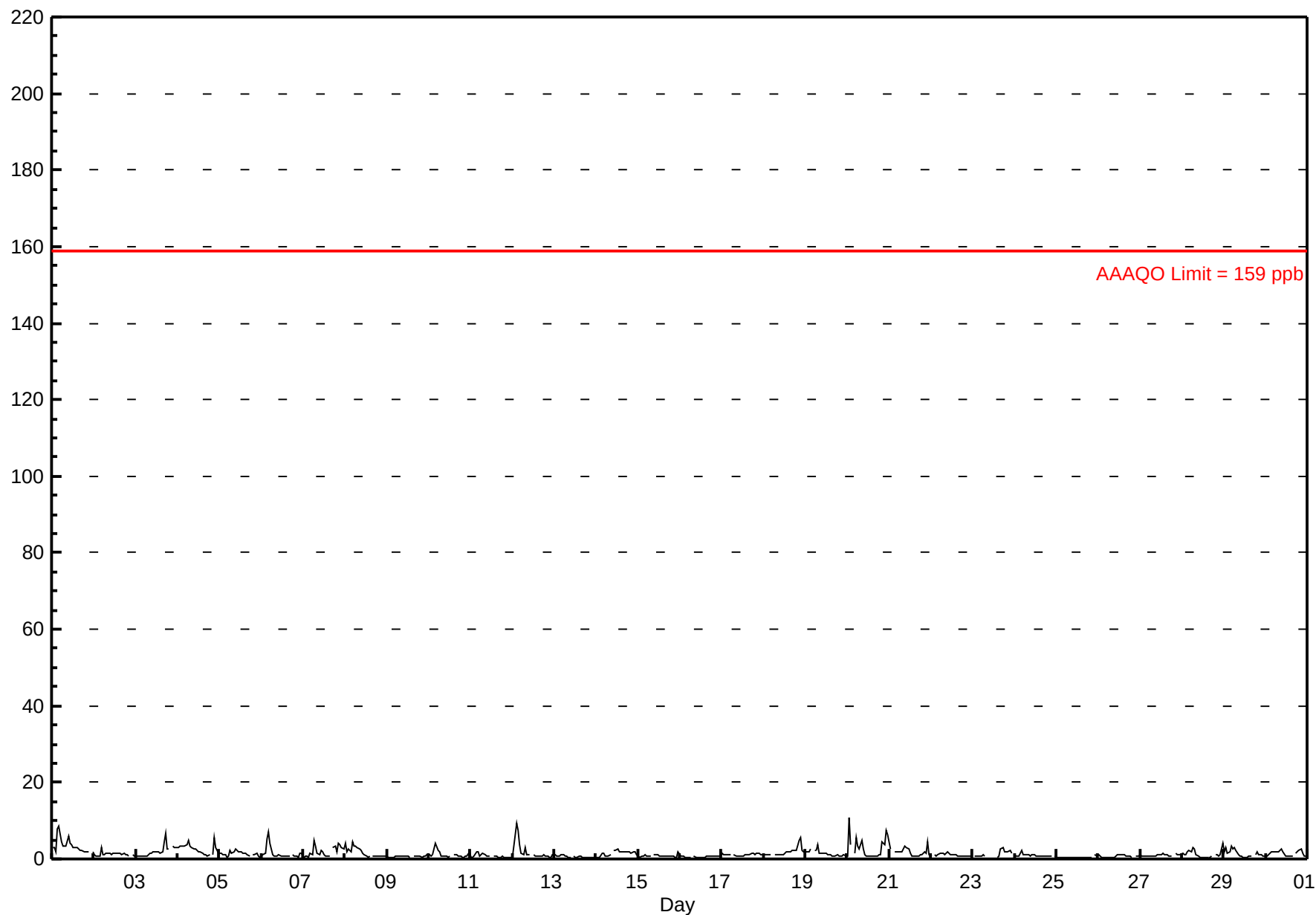
Portable Reno - April 2014

|                                                                                                                                    |                               |    |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |                 |               |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|---|---|---|---|---|---|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|----|----|----|----|----|-----------------------------------------------------------------------------------------------------------------------------------------|----|----|----|-----------------|---------------|
| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 10.7 ppb on Apr 20 02:00 Maximum Daily Average: 3.4 ppb on Apr 1 |                               |    |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 683<br>Hours of Missing Data: 37<br>Hours of Calibration: 37<br>Percent Operational Time: 100.0 |    |    |    |                 |               |
| Minimum Value: 0 ppb on Apr 13 10:00<br>Maximum Diurnal Average: 2.1 ppb at hour 5<br>Monthly Average: 1.41 ppb                    |                               |    |   |   |   |   |   |   |   | Minimum Daily Average: 0.5 ppb on Apr 25<br>Minimum Diurnal Average: 1.0 ppb at hour 16<br>Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.7 Median = 1.0 Q <sub>3</sub> = 1.7 P <sub>90</sub> = 2.9 P <sub>99</sub> = 7.2 |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |                 |               |
| Day                                                                                                                                | Hourly Period Ending At (MST) |    |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    | Daily Average   | Daily Maximum |
|                                                                                                                                    | 1                             | 2  | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10                                                                                                                                                                                                                                                    | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21                                                                                                                                      | 22 | 23 | 24 |                 |               |
| 1-Apr                                                                                                                              | 3                             | 3  | 2 | 8 | 9 | 4 | 3 | 3 | 3 | 6                                                                                                                                                                                                                                                     | 4  | 4  | 3  | 3  | 3  | 3  | 2  | 2  | 2  | 2  | 2                                                                                                                                       | 2  | A  | 2  | 3.4             | 8.7           |
| 2-Apr                                                                                                                              | 1                             | 1  | 1 | 1 | 3 | 1 | 1 | 2 | 1 | 1                                                                                                                                                                                                                                                     | 1  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | A  | 1  | 1  | 1.3             | 2.9           |
| 3-Apr                                                                                                                              | 1                             | 1  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2                                                                                                                                                                                                                                                     | 2  | 2  | 2  | 2  | 2  | 2  | 4  | 7  | 3  | 3  | A                                                                                                                                       | 3  | 3  | 3  | 1.9             | 6.8           |
| 4-Apr                                                                                                                              | 3                             | 3  | 3 | 3 | 3 | 4 | 5 | 3 | 3 | 3                                                                                                                                                                                                                                                     | 2  | 2  | 2  | 2  | 2  | 1  | 1  | 1  | 1  | A  | 1                                                                                                                                       | 6  | 3  | 2  | 2.6             | 5.5           |
| 5-Apr                                                                                                                              | 1                             | 2  | 1 | 1 | 0 | 1 | 2 | 2 | 2 | 3                                                                                                                                                                                                                                                     | 2  | 2  | 2  | 2  | 1  | 1  | 1  | 1  | A  | 1  | 1                                                                                                                                       | 1  | 1  | 1  | 1.4             | 2.7           |
| 6-Apr                                                                                                                              | 1                             | 1  | 2 | 5 | 7 | 4 | 1 | 1 | 1 | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1  | 1  | 1                                                                                                                                       | 1  | 1  | 1  | 1.5             | 7.2           |
| 7-Apr                                                                                                                              | 0                             | 1  | 1 | 0 | 2 | 1 | 5 | 3 | 1 | 1                                                                                                                                                                                                                                                     | 2  | 2  | 1  | 1  | 1  | 1  | A  | 3  | 3  | 2  | 4                                                                                                                                       | 4  | 3  | 3  | 1.9             | 4.8           |
| 8-Apr                                                                                                                              | 4                             | 2  | 3 | 2 | 4 | 3 | 3 | 3 | 2 | 2                                                                                                                                                                                                                                                     | 2  | 1  | 1  | 0  | 1  | A  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | 1  | 1  | 1.7             | 4.4           |
| 9-Apr                                                                                                                              | 1                             | 1  | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 0  | A  | 1  | 1  | 1  | 1  | 1  | 0                                                                                                                                       | 1  | 1  | 1  | 0.6             | 0.9           |
| 10-Apr                                                                                                                             | 1                             | 1  | 1 | 3 | 4 | 2 | 2 | 1 | 1 | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | A  | 1  | 1  | 1  | 1  | 1  | 1  | 0                                                                                                                                       | 1  | 1  | 2  | 1.2             | 4.1           |
| 11-Apr                                                                                                                             | 0                             | 1  | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1                                                                                                                                                                                                                                                     | 1  | 1  | A  | 1  | 1  | 1  | 0  | 1  | 1  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0.8             | 1.9           |
| 12-Apr                                                                                                                             | 0                             | 3  | 9 | 7 | 4 | 1 | 1 | 3 | 1 | 1                                                                                                                                                                                                                                                     | 1  | A  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | 0  | 1  | 1.9             | 9.4           |
| 13-Apr                                                                                                                             | 1                             | 1  | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0                                                                                                                                                                                                                                                     | A  | 1  | 0  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0                                                                                                                                       | 0  | 0  | 0  | 0.6             | 1.1           |
| 14-Apr                                                                                                                             | 0                             | 0  | 0 | 1 | 1 | 1 | 1 | 1 | 1 | A                                                                                                                                                                                                                                                     | 2  | 2  | 3  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 1                                                                                                                                       | 2  | 2  | 1  | 1.5             | 2.5           |
| 15-Apr                                                                                                                             | 1                             | 1  | 1 | 1 | 1 | 1 | 1 | 1 | A | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | 1  | 2  | 0.8             | 1.9           |
| 16-Apr                                                                                                                             | 1                             | 1  | 1 | 0 | 1 | 1 | 1 | A | 1 | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | 1  | 1  | 0.6             | 0.9           |
| 17-Apr                                                                                                                             | 1                             | 1  | 1 | 1 | 1 | 1 | A | 1 | 1 | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 1  | 1  | 1                                                                                                                                       | 2  | 1  | 1  | 1.1             | 1.5           |
| 18-Apr                                                                                                                             | 1                             | 1  | 1 | 1 | 1 | A | 1 | 1 | 1 | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 5                                                                                                                                       | 6  | 2  | 2  | 1.9             | 5.6           |
| 19-Apr                                                                                                                             | 2                             | 2  | 2 | 3 | A | 2 | 2 | 4 | 2 | 2                                                                                                                                                                                                                                                     | 2  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | 1  | 1  | 1.4             | 3.5           |
| 20-Apr                                                                                                                             | 1                             | 11 | 4 | A | 1 | 6 | 3 | 3 | 5 | 3                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 5                                                                                                                                       | 4  | 7  | 6  | 2.9             | 10.7          |
| 21-Apr                                                                                                                             | 4                             | 3  | A | 2 | 2 | 2 | 2 | 2 | 3 | 3                                                                                                                                                                                                                                                     | 3  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2                                                                                                                                       | 1  | 4  | 1  | 1.9             | 4.5           |
| 22-Apr                                                                                                                             | 1                             | A  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2                                                                                                                                                                                                                                                     | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | 1  | 1  | 1.0             | 1.9           |
| 23-Apr                                                                                                                             | A                             | 1  | 1 | 1 | 1 | 1 | 1 | 1 | C | C                                                                                                                                                                                                                                                     | C  | C  | C  | C  | 1  | 1  | 3  | 3  | 2  | 2  | 2                                                                                                                                       | 2  | 1  | A  | --              | 3.2           |
| 24-Apr                                                                                                                             | 1                             | 1  | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | A  | 1  | 0.9             | 2.2           |
| 25-Apr                                                                                                                             | 0                             | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                     | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                       | A  | 1  | 1  | 0.5             | 1.1           |
| 26-Apr                                                                                                                             | 1                             | 1  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A                                                                                                                                       | 1  | 1  | 1  | 0.7             | 1.2           |
| 27-Apr                                                                                                                             | 1                             | 1  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1                                                                                                                                                                                                                                                     | 1  | 1  | 1  | 2  | 1  | 1  | 1  | 1  | 1  | A  | 1                                                                                                                                       | 1  | 1  | 1  | 1.0             | 1.6           |
| 28-Apr                                                                                                                             | 1                             | 1  | 1 | 2 | 2 | 2 | 3 | 2 | 1 | 1                                                                                                                                                                                                                                                     | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | A  | 1  | 1                                                                                                                                       | 1  | 1  | 4  | 1.2             | 3.9           |
| 29-Apr                                                                                                                             | 2                             | 3  | 2 | 2 | 3 | 2 | 3 | 2 | 1 | 1                                                                                                                                                                                                                                                     | 1  | 0  | 1  | 1  | 1  | 1  | 1  | A  | 1  | 2  | 1                                                                                                                                       | 1  | 1  | 1  | 1.4             | 3.4           |
| 30-Apr                                                                                                                             | 1                             | 1  | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2                                                                                                                                                                                                                                                     | 2  | 1  | 1  | 1  | 1  | 1  | A  | 2  | 2  | 2  | 2                                                                                                                                       | 1  | 1  | 1  | 1.5             | 2.4           |
|                                                                                                                                    |                               |    |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    | Diurnal Average |               |
|                                                                                                                                    |                               |    |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    | Diurnal Maximum |               |
| C - Calibration A - Automated Daily Zero Span                                                                                      |                               |    |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |                 |               |
| Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb                                                         |                               |    |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                       |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |                 |               |



## Hourly Averages

Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
Portable Reno - April 2014



## Hourly Maximums

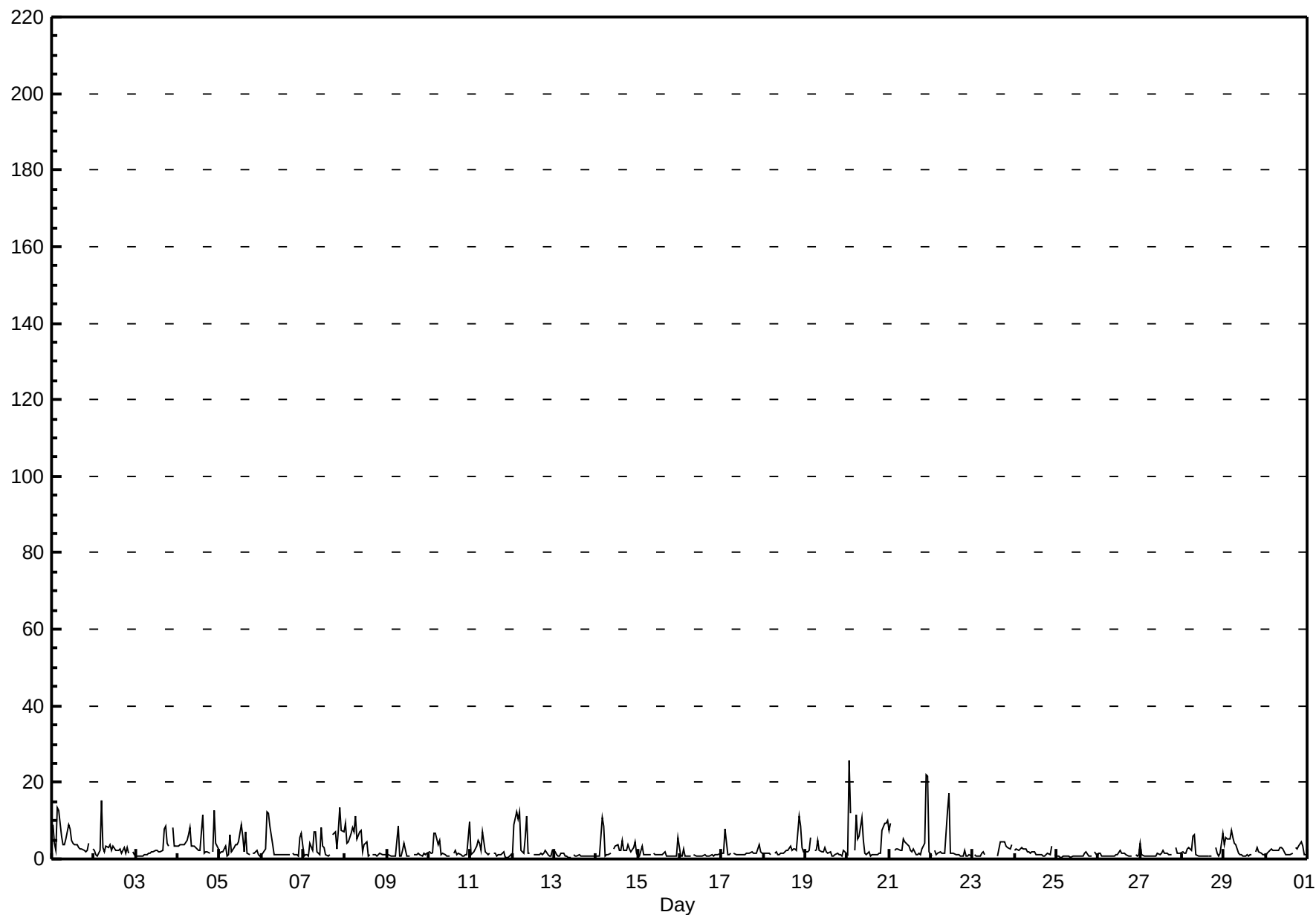
Nitrogen Dioxide (NO<sub>2</sub>) - ppb

Portable Reno - April 2014

| Maximum Value: 25.8 ppb on Apr 20 02:00                                                                      |                               |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 5.6 ppb on Apr 20                                                                                                                    |    |    |    |                 | Hours in Service: 720     |               |
|--------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|---|----|----|----|----|----|----|----|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|-----------------|---------------------------|---------------|
| Minimum Value: 0 ppb on Apr 25 09:00                                                                         |                               |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.8 ppb on Apr 25                                                                                                                    |    |    |    |                 | Hours of Data: 683        |               |
| Maximum Diurnal Average: 4.2 ppb at hour 5                                                                   |                               |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 1.6 ppb at hour 14                                                                                                                 |    |    |    |                 | Hours of Missing Data: 37 |               |
| Monthly Average: 2.59 ppb                                                                                    |                               |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.6 P <sub>10</sub> = 0.8 Q <sub>1</sub> = 1.0 Median = 1.5 Q <sub>3</sub> = 2.8 P <sub>90</sub> = 6.1 P <sub>99</sub> = 13.5 |    |    |    |                 | 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-Apr                                                                                                        | 9                             | 4  | 2  | 14 | 13 | 6  | 4  | 4 | 5  | 9  | 8  | 5  | 4  | 4  | 4  | 3  | 3  | 3  | 2  | 2                                                                                                                                                           | 2  | 4  | A  | 3               | 5.0                       | 13.5          |
| 2-Apr                                                                                                        | 2                             | 1  | 1  | 2  | 15 | 3  | 2  | 3 | 3  | 4  | 2  | 3  | 2  | 2  | 2  | 3  | 2  | 3  | 1  | 3                                                                                                                                                           | 2  | A  | 2  | 1               | 2.8                       | 15.1          |
| 3-Apr                                                                                                        | 1                             | 1  | 1  | 1  | 1  | 1  | 1  | 1 | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 8  | 9  | 4  | 3                                                                                                                                                           | A  | 8  | 3  | 3               | 2.7                       | 8.5           |
| 4-Apr                                                                                                        | 3                             | 4  | 4  | 4  | 4  | 5  | 6  | 8 | 3  | 3  | 3  | 2  | 2  | 2  | 12 | 2  | 2  | 2  | 2  | A                                                                                                                                                           | 2  | 13 | 4  | 3               | 4.1                       | 12.6          |
| 5-Apr                                                                                                        | 2                             | 2  | 2  | 3  | 1  | 1  | 6  | 2 | 3  | 4  | 4  | 4  | 9  | 6  | 2  | 7  | 2  | 1  | A  | 2                                                                                                                                                           | 2  | 2  | 1  | 1               | 2.9                       | 8.8           |
| 6-Apr                                                                                                        | 1                             | 2  | 3  | 12 | 12 | 9  | 4  | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1  | 1                                                                                                                                                           | 1  | 1  | 5  | 7               | 3.0                       | 12.3          |
| 7-Apr                                                                                                        | 1                             | 1  | 1  | 1  | 4  | 2  | 7  | 7 | 2  | 1  | 8  | 4  | 3  | 1  | 1  | 1  | A  | 6  | 7  | 3                                                                                                                                                           | 8  | 14 | 8  | 7               | 4.2                       | 13.6          |
| 8-Apr                                                                                                        | 9                             | 4  | 4  | 7  | 8  | 7  | 11 | 5 | 7  | 8  | 2  | 4  | 5  | 1  | 1  | A  | 1  | 1  | 1  | 1                                                                                                                                                           | 2  | 1  | 1  | 1               | 4.0                       | 11.1          |
| 9-Apr                                                                                                        | 1                             | 1  | 1  | 1  | 1  | 1  | 8  | 1 | 1  | 2  | 4  | 1  | 1  | 1  | A  | 1  | 1  | 1  | 1  | 2                                                                                                                                                           | 1  | 1  | 1  | 1               | 1.5                       | 8.4           |
| 10-Apr                                                                                                       | 2                             | 1  | 2  | 7  | 7  | 4  | 5  | 1 | 1  | 1  | 1  | 1  | 1  | A  | 2  | 2  | 1  | 1  | 1  | 1                                                                                                                                                           | 1  | 1  | 1  | 10              | 2.3                       | 9.5           |
| 11-Apr                                                                                                       | 1                             | 1  | 2  | 3  | 5  | 4  | 2  | 7 | 2  | 1  | 1  | 1  | A  | 1  | 2  | 1  | 1  | 1  | 2  | 2                                                                                                                                                           | 1  | 0  | 1  | 1               | 1.9                       | 7.3           |
| 12-Apr                                                                                                       | 1                             | 9  | 12 | 10 | 12 | 2  | 1  | 6 | 11 | 2  | 1  | A  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2                                                                                                                                                           | 1  | 1  | 1  | 2               | 3.6                       | 12.4          |
| 13-Apr                                                                                                       | 2                             | 1  | 1  | 1  | 1  | 2  | 1  | 1 | 0  | 1  | A  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                           | 1  | 1  | 1  | 1               | 0.9                       | 1.7           |
| 14-Apr                                                                                                       | 1                             | 1  | 1  | 11 | 9  | 1  | 1  | 1 | 1  | A  | 3  | 3  | 4  | 2  | 2  | 5  | 2  | 2  | 4  | 3                                                                                                                                                           | 2  | 3  | 4  | 2               | 2.9                       | 10.7          |
| 15-Apr                                                                                                       | 1                             | 1  | 3  | 1  | 1  | 1  | 1  | 1 | A  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 1  | 1  | 1  | 1                                                                                                                                                           | 1  | 1  | 1  | 6               | 1.4                       | 5.7           |
| 16-Apr                                                                                                       | 1                             | 1  | 3  | 1  | 1  | 1  | 1  | A | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                           | 1  | 1  | 1  | 1               | 1.0                       | 2.6           |
| 17-Apr                                                                                                       | 2                             | 1  | 8  | 1  | 1  | 2  | A  | 2 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 2  | 2                                                                                                                                                           | 2  | 4  | 2  | 1               | 1.8                       | 7.7           |
| 18-Apr                                                                                                       | 1                             | 1  | 1  | 1  | 1  | A  | 2  | 2 | 1  | 1  | 1  | 1  | 2  | 2  | 2  | 3  | 2  | 3  | 2  | 2                                                                                                                                                           | 11 | 9  | 3  | 2               | 2.6                       | 11.3          |
| 19-Apr                                                                                                       | 2                             | 2  | 2  | 6  | A  | 2  | 2  | 5 | 2  | 2  | 2  | 3  | 2  | 2  | 2  | 1  | 1  | 1  | 1  | 1                                                                                                                                                           | 1  | 1  | 2  | 1               | 2.0                       | 5.6           |
| 20-Apr                                                                                                       | 1                             | 26 | 12 | A  | 2  | 12 | 5  | 6 | 11 | 5  | 2  | 1  | 2  | 1  | 1  | 1  | 1  | 1  | 2  | 1                                                                                                                                                           | 8  | 9  | 9  | 10              | 5.6                       | 25.8          |
| 21-Apr                                                                                                       | 8                             | 9  | A  | 2  | 3  | 2  | 2  | 2 | 5  | 5  | 4  | 3  | 2  | 2  | 3  | 1  | 1  | 2  | 1  | 3                                                                                                                                                           | 4  | 22 | 22 | 2               | 4.8                       | 22.0          |
| 22-Apr                                                                                                       | 1                             | A  | 2  | 1  | 1  | 2  | 2  | 2 | 1  | 13 | 17 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2                                                                                                                                                           | 1  | 1  | 1  | 1               | 2.5                       | 17.0          |
| 23-Apr                                                                                                       | A                             | 1  | 1  | 1  | 1  | 1  | 2  | 1 | C  | C  | C  | C  | C  | C  | 1  | 3  | 4  | 4  | 5  | 3                                                                                                                                                           | 3  | 3  | 4  | A               | --                        | 4.6           |
| 24-Apr                                                                                                       | 2                             | 3  | 2  | 3  | 3  | 2  | 3  | 2 | 2  | 1  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2                                                                                                                                                           | 1  | 3  | A  | 1               | 1.7                       | 3.2           |
| 25-Apr                                                                                                       | 1                             | 1  | 0  | 0  | 1  | 1  | 1  | 1 | 0  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 1  | 1                                                                                                                                                           | 1  | A  | 2  | 1               | 0.8                       | 2.0           |
| 26-Apr                                                                                                       | 2                             | 2  | 1  | 1  | 1  | 1  | 1  | 1 | 1  | 1  | 1  | 1  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                           | A  | 1  | 1  | 1               | 1.0                       | 2.1           |
| 27-Apr                                                                                                       | 4                             | 1  | 1  | 1  | 1  | 1  | 1  | 1 | 1  | 1  | 1  | 1  | 2  | 2  | 2  | 2  | 1  | 1  | 1  | A                                                                                                                                                           | 3  | 1  | 1  | 1               | 1.4                       | 4.1           |
| 28-Apr                                                                                                       | 2                             | 1  | 1  | 3  | 3  | 2  | 6  | 6 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 3                                                                                                                                                           | 2  | 1  | 2  | 7               | 2.0                       | 6.8           |
| 29-Apr                                                                                                       | 4                             | 6  | 5  | 5  | 8  | 5  | 4  | 4 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 2  | 3                                                                                                                                                           | 2  | 2  | 1  | 1               | 2.6                       | 7.5           |
| 30-Apr                                                                                                       | 1                             | 1  | 2  | 3  | 2  | 2  | 2  | 2 | 3  | 3  | 2  | 1  | 1  | 1  | 1  | 1  | A  | 3  | 3  | 3                                                                                                                                                           | 4  | 3  | 1  | 1               | 2.1                       | 4.4           |
| 2.3 3.1 2.8 3.6 4.2 2.9 3.3 2.9 2.7 2.7 2.8 2.0 2.0 1.6 1.8 1.8 1.7 2.0 1.9 1.9 2.4 4.0 3.0 2.8              |                               |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    | Diurnal Average |                           |               |
| 9.4 25.8 12.4 13.5 15.1 11.7 11.1 8.3 11.2 12.6 17.0 5.0 8.8 6.1 11.5 6.9 7.7 8.5 7.1 3.5 11.3 22.0 21.6 9.9 |                               |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    | Diurnal Maximum |                           |               |
| C - Calibration A - Automated Daily Zero Span                                                                |                               |    |    |    |    |    |    |   |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                             |    |    |    |                 |                           |               |

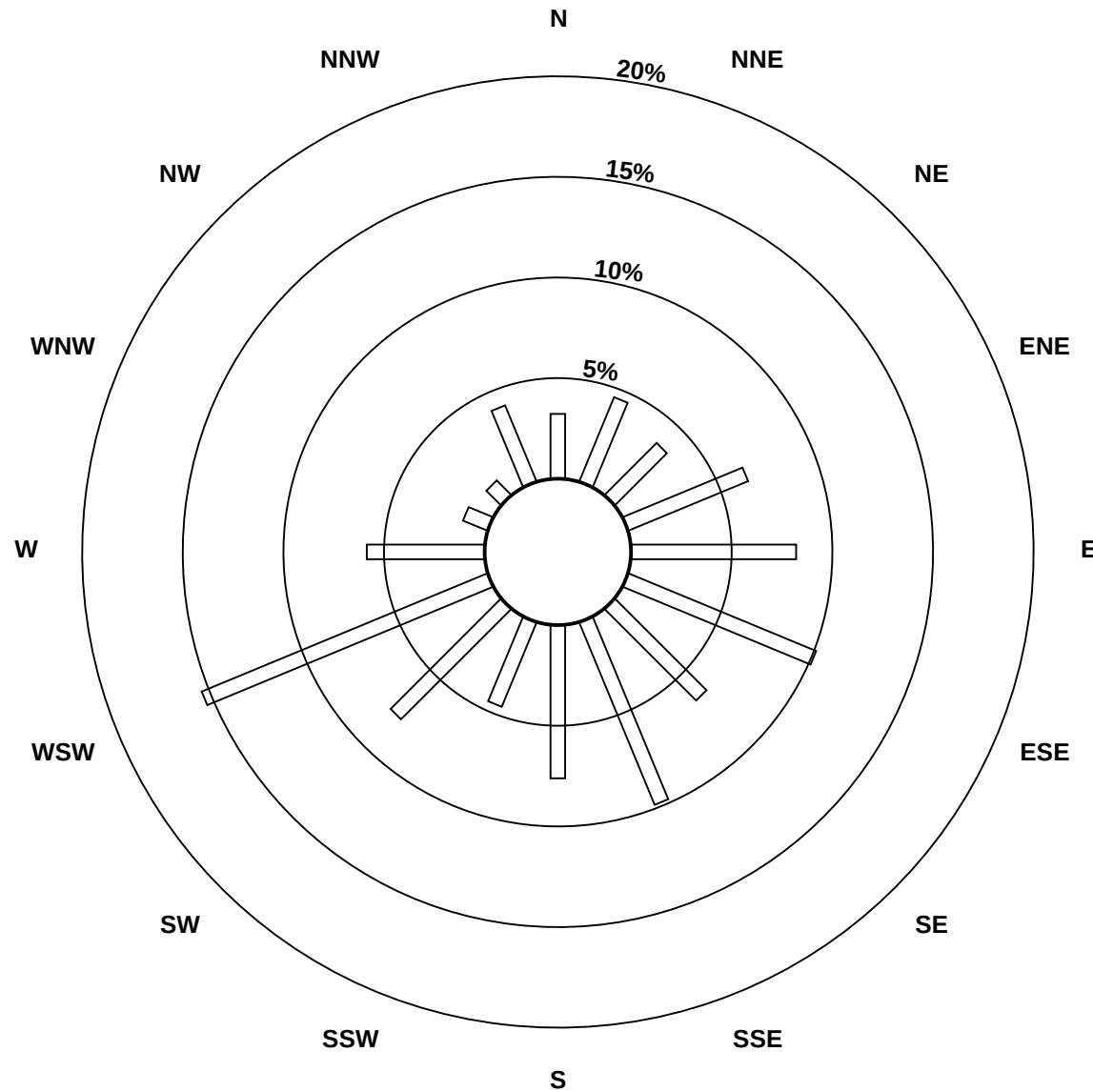
## Hourly Maximums

Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
Portable Reno - April 2014

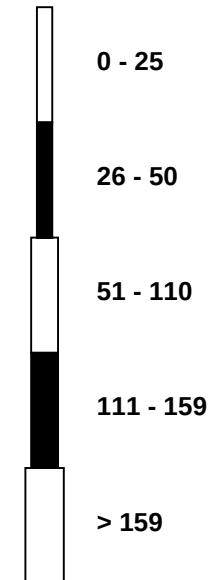


## Pollutant Rose

Nitrogen Dioxide (NO<sub>2</sub>) - ppb  
Portable Reno - April 2014

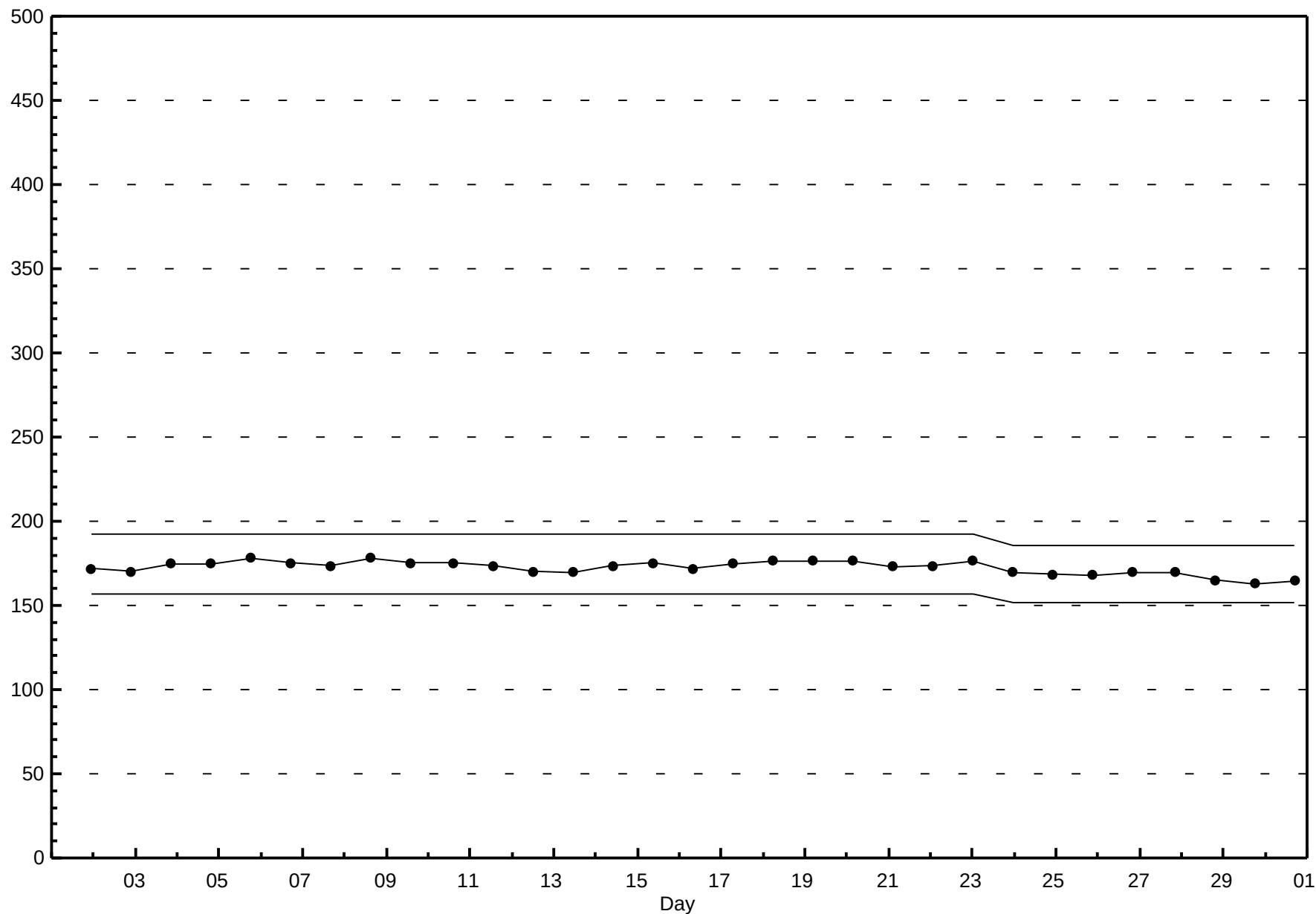


## Pollutant Classes (ppb)



## Span Responses

Nitrogen Dioxide (NO<sub>2</sub>)  
Portable Reno - April 2014



## Hourly Averages

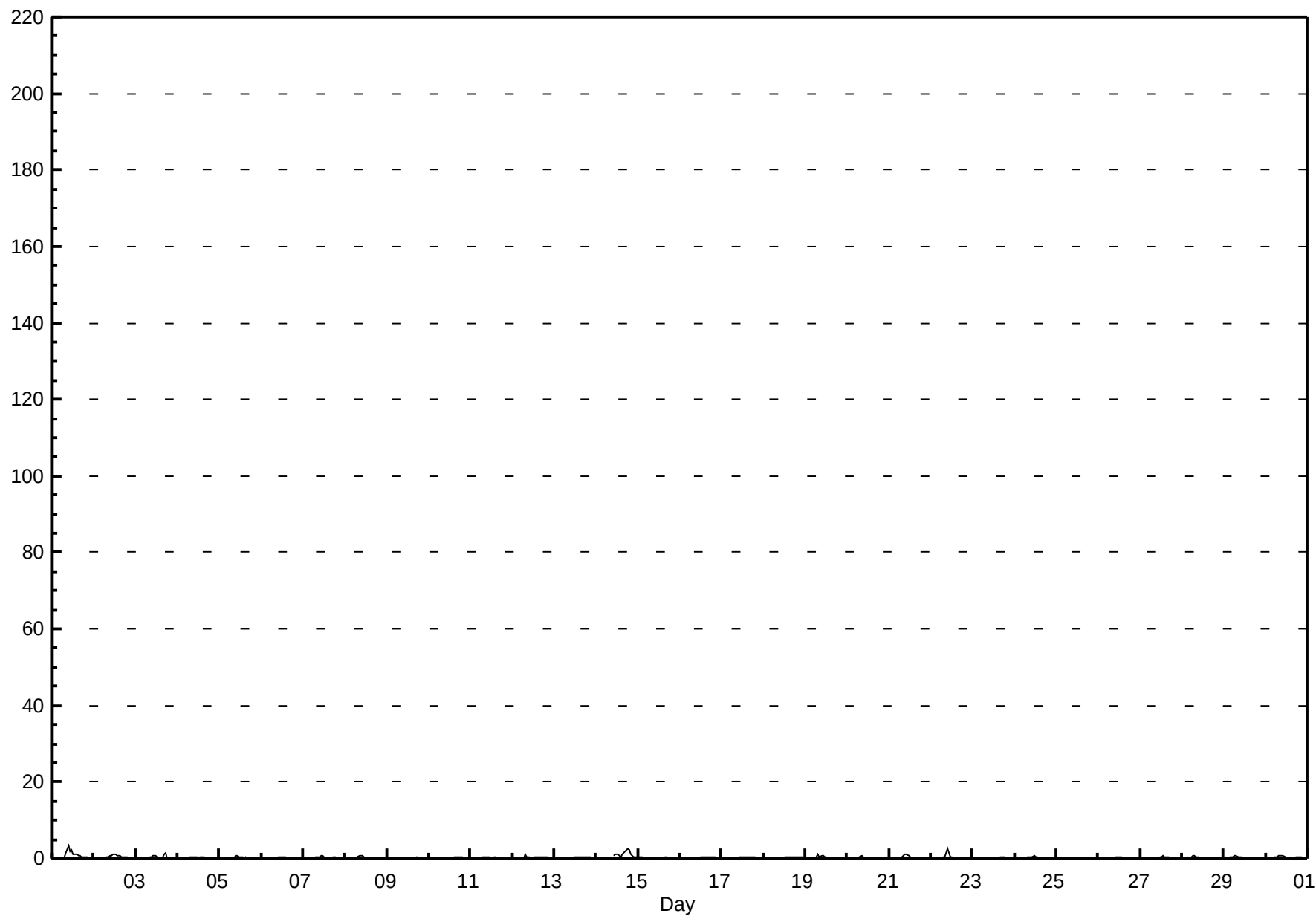
Nitrogen Oxide (NO) - ppb

Portable Reno - April 2014

| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0                                                                                                                                      |                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | Hours in Service: 720           |   |   |   |   |                 |               |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------------------------------|---|---|---|---|-----------------|---------------|---------------|
| Maximum Value: 3.4 ppb on Apr 1 10:00 Maximum Daily Average: 0.7 ppb on Apr 14                                                                                                       |                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | Hours of Data: 683              |   |   |   |   |                 |               |               |
| Minimum Value: 0 ppb on Apr 2 23:00 Minimum Daily Average: 0.0 ppb on Apr 25                                                                                                         |                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | Hours of Missing Data: 37       |   |   |   |   |                 |               |               |
| Maximum Diurnal Average: 0.6 ppb at hour 10 Minimum Diurnal Average: 0.0 ppb at hour 1                                                                                               |                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | Hours of Calibration: 37        |   |   |   |   |                 |               |               |
| Monthly Average: 0.21 ppb Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.1 Q <sub>3</sub> = 0.2 P <sub>90</sub> = 0.5 P <sub>99</sub> = 2.0 |                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | Percent Operational Time: 100.0 |   |   |   |   |                 |               |               |
| Day                                                                                                                                                                                  | Hourly Period Ending At (MST) |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                                 |   |   |   |   |                 | Daily Average | Daily Maximum |
| 1-Apr                                                                                                                                                                                | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 0 | 0                               | 0 | 0 | 0 | A | 0               | 0.7           | 3.4           |
| 2-Apr                                                                                                                                                                                | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0                               | 0 | 0 | A | 0 | 0               | 0.4           | 1.1           |
| 3-Apr                                                                                                                                                                                | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0                               | 0 | 0 | A | 0 | 0               | 0.3           | 1.4           |
| 4-Apr                                                                                                                                                                                | 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-Apr                                                                                                                                                                                | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A                               | 0 | 0 | 0 | 0 | 0               | 0.2           | 0.8           |
| 6-Apr                                                                                                                                                                                | 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-Apr                                                                                                                                                                                | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | A | 0                               | 0 | 0 | 0 | 0 | 0               | 0.2           | 0.8           |
| 8-Apr                                                                                                                                                                                | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | A | 0 | 0                               | 0 | 0 | 0 | 0 | 0               | 0.2           | 0.8           |
| 9-Apr                                                                                                                                                                                | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0                               | 0 | 0 | 0 | 0 | 0               | 0.1           | 0.2           |
| 10-Apr                                                                                                                                                                               | 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           |
| 11-Apr                                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | A | 0 | 0 | 0 | 0 | 0 | 0                               | 0 | 0 | 0 | 0 | 0               | 0.2           | 0.5           |
| 12-Apr                                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0                               | 0 | 0 | 0 | 0 | 0               | 0.2           | 1.0           |
| 13-Apr                                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                               | 0 | 0 | 0 | 0 | 0               | 0.1           | 0.3           |
| 14-Apr                                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2                               | 3 | 2 | 1 | 1 | 0               | 0.7           | 2.8           |
| 15-Apr                                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                               | 0 | 0 | 0 | 0 | 0               | 0.1           | 0.3           |
| 16-Apr                                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                               | 0 | 0 | 0 | 0 | 0               | 0.1           | 0.3           |
| 17-Apr                                                                                                                                                                               | 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           |
| 18-Apr                                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0                               | 0 | 0 | 0 | 0 | 0               | 0.2           | 0.5           |
| 19-Apr                                                                                                                                                                               | 0                             | 0 | 0 | 0 | A | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0                               | 0 | 0 | 0 | 0 | 0               | 0.2           | 1.2           |
| 20-Apr                                                                                                                                                                               | 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           |
| 21-Apr                                                                                                                                                                               | 0                             | 0 | A | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0                               | 0 | 0 | 0 | 0 | 0               | 0.2           | 1.2           |
| 22-Apr                                                                                                                                                                               | 0                             | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                               | 0 | 0 | 0 | 0 | 0               | 0.3           | 2.7           |
| 23-Apr                                                                                                                                                                               | A                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C | C | C | C | C | C | 0 | 0 | 1 | 1 | 0                               | 0 | 0 | 0 | 0 | 0               | --            | 0.5           |
| 24-Apr                                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0                               | 0 | 0 | 0 | A | 0               | 0.1           | 0.6           |
| 25-Apr                                                                                                                                                                               | 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           |
| 26-Apr                                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                               | 0 | A | 0 | 0 | 0               | 0.1           | 0.3           |
| 27-Apr                                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0                               | A | 0 | 0 | 0 | 0               | 0.2           | 0.6           |
| 28-Apr                                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A                               | 0 | 0 | 0 | 0 | 0               | 0.2           | 0.8           |
| 29-Apr                                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0                               | 0 | 0 | 0 | 0 | 0               | 0.2           | 0.8           |
| 30-Apr                                                                                                                                                                               | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0                               | 0 | 0 | 0 | 0 | 0               | 0.3           | 0.9           |
| 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.3 0.3 0.6 0.5 0.4 0.3 0.3 0.3 0.2 0.3 0.3 0.3 0.2 0.1 0.1 0.1 0.1                                                                                      |                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                                 |   |   |   |   | Diurnal Average |               |               |
| 0.2 0.2 0.3 0.2 0.3 0.3 0.8 1.2 1.4 3.4 2.0 2.1 1.3 1.1 1.0 1.0 1.0 1.5 2.2 2.8 2.2 1.3 0.5 0.3 0.2                                                                                  |                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                                 |   |   |   |   | Diurnal Maximum |               |               |
| C - Calibration A - Automated Daily Zero Span                                                                                                                                        |                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                                 |   |   |   |   |                 |               |               |

## Hourly Averages

Nitrogen Oxide (NO) - ppb  
Portable Reno - April 2014



# Hourly Maximums

Nitrogen Oxide (NO) - ppb

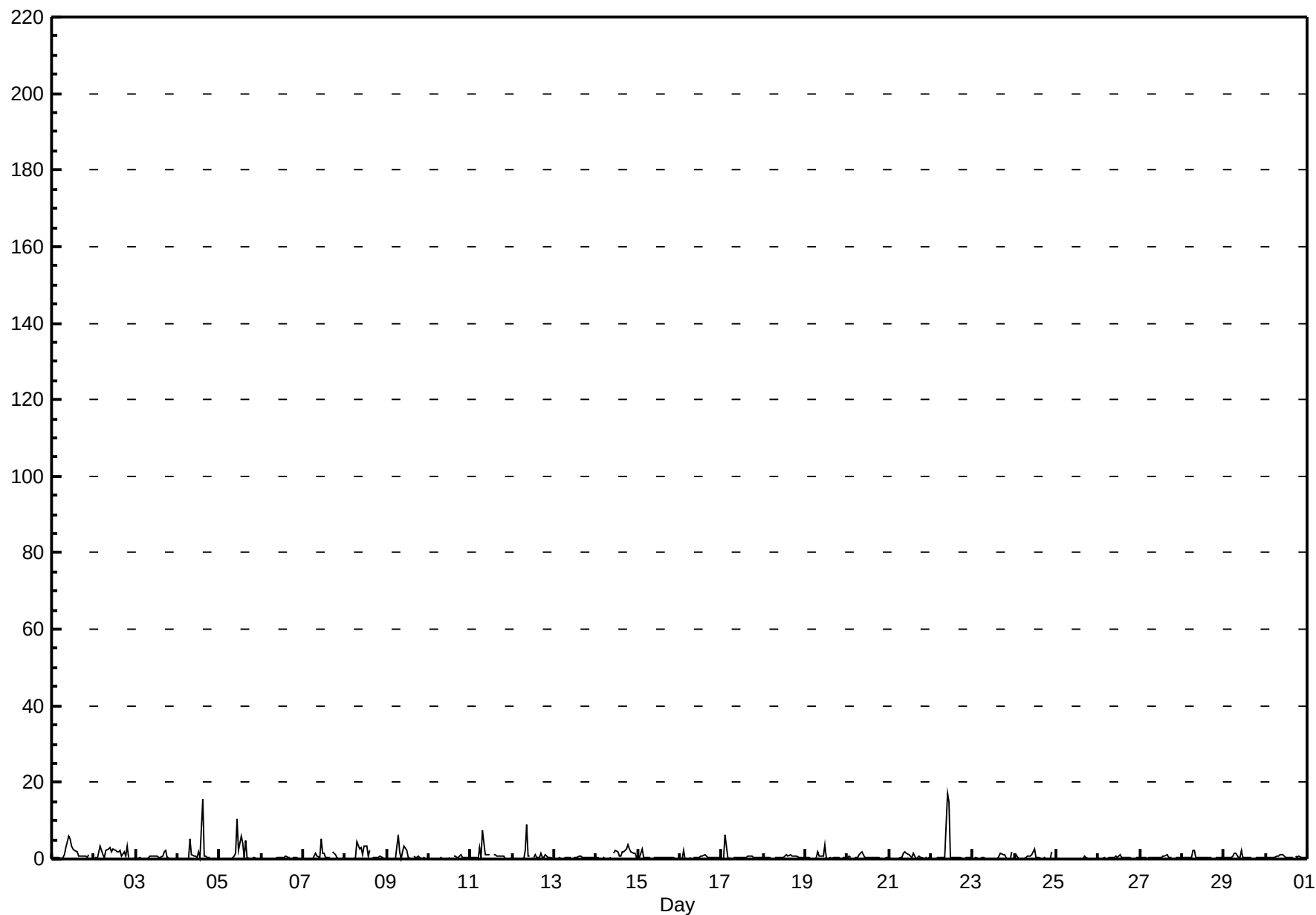
Portable Reno - April 2014

| Maximum Value: 17.0 ppb on Apr 22 10:00                                                            |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 1.6 ppb on Apr 22                                                                                                                   |    |    |    |    |                               |               |  |  |  | Hours in Service: 720           |  |
|----------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-------------------------------|---------------|--|--|--|---------------------------------|--|
| Minimum Value: 0 ppb on Apr 4 05:00                                                                |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.2 ppb on Apr 25                                                                                                                   |    |    |    |    |                               |               |  |  |  | Hours of Data: 683              |  |
| Maximum Diurnal Average: 2.0 ppb at hour 11                                                        |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 0.2 ppb at hour 1                                                                                                                 |    |    |    |    |                               |               |  |  |  | Hours of Missing Data: 37       |  |
| Monthly Average: 0.70 ppb                                                                          |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.3 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 1.7 P <sub>99</sub> = 6.0 |    |    |    |    |                               |               |  |  |  | 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-Apr                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 6  | 5  | 3  | 3  | 2  | 2  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 0  | 1  | A  | 0  | 1.4                           | 6.0           |  |  |  |                                 |  |
| 2-Apr                                                                                              | 0                             | 0 | 0 | 3 | 2 | 1 | 0 | 2 | 2 | 3  | 2  | 3  | 2  | 2  | 2  | 2  | 1  | 2  | 1  | 3                                                                                                                                                          | 0  | A  | 0  | 0  | 1.5                           | 3.4           |  |  |  |                                 |  |
| 3-Apr                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1  | 1  | 1  | 1  | 0  | 0  | 1  | 2  | 2  | 0  | 0                                                                                                                                                          | A  | 0  | 0  | 0  | 0.5                           | 2.2           |  |  |  |                                 |  |
| 4-Apr                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 1  | 1  | 0  | 2  | 0  | 16 | 1  | 1  | 0  | 1  | A                                                                                                                                                          | 0  | 0  | 0  | 0  | 1.2                           | 15.7          |  |  |  |                                 |  |
| 5-Apr                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1  | 11 | 2  | 6  | 4  | 0  | 5  | 0  | 0  | A  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 1.4                           | 10.6          |  |  |  |                                 |  |
| 6-Apr                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 1  | 1  | 0  | 1  | 0  | 0  | A  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.2                           | 0.7           |  |  |  |                                 |  |
| 7-Apr                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0  | 5  | 2  | 1  | 0  | 0  | 0  | A  | 2  | 1  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.7                           | 5.1           |  |  |  |                                 |  |
| 8-Apr                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 3 | 3  | 1  | 3  | 3  | 1  | 2  | A  | 0  | 0  | 0  | 0                                                                                                                                                          | 1  | 0  | 0  | 0  | 1.0                           | 4.3           |  |  |  |                                 |  |
| 9-Apr                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 6 | 2 | 0 | 2  | 3  | 2  | 0  | 0  | A  | A  | 1  | 1  | 0  | 1                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.9                           | 6.4           |  |  |  |                                 |  |
| 10-Apr                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | A  | 1  | 1  | 0  | 0  | 1  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.3                           | 1.1           |  |  |  |                                 |  |
| 11-Apr                                                                                             | 0                             | 0 | 0 | 0 | 0 | 3 | 0 | 7 | 1 | 1  | 1  | 1  | A  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 0  | 0  | 0  | 0  | 1.0                           | 7.5           |  |  |  |                                 |  |
| 12-Apr                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 9 | 1  | 1  | A  | 0  | 1  | 0  | 0  | 2  | 0  | 0  | 1                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.9                           | 8.8           |  |  |  |                                 |  |
| 13-Apr                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | A  | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.3                           | 0.7           |  |  |  |                                 |  |
| 14-Apr                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A  | 2  | 2  | 2  | 1  | 1  | 2  | 2  | 3  | 4  | 3                                                                                                                                                          | 2  | 1  | 1  | 1  | 1.2                           | 3.6           |  |  |  |                                 |  |
| 15-Apr                                                                                             | 0                             | 0 | 3 | 0 | 0 | 0 | 0 | 0 | A | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.4                           | 2.7           |  |  |  |                                 |  |
| 16-Apr                                                                                             | 0                             | 0 | 2 | 0 | 0 | 0 | 0 | A | 0 | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.4                           | 2.1           |  |  |  |                                 |  |
| 17-Apr                                                                                             | 0                             | 0 | 6 | 0 | 0 | 0 | A | 0 | 0 | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 1  | 1  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.6                           | 6.3           |  |  |  |                                 |  |
| 18-Apr                                                                                             | 0                             | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 0  | 0  | 0  | 0.4                           | 1.0           |  |  |  |                                 |  |
| 19-Apr                                                                                             | 0                             | 0 | 0 | 0 | A | 0 | 0 | 2 | 1 | 1  | 1  | 4  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.5                           | 3.6           |  |  |  |                                 |  |
| 20-Apr                                                                                             | 0                             | 1 | 0 | A | 0 | 0 | 0 | 1 | 2 | 1  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.4                           | 1.9           |  |  |  |                                 |  |
| 21-Apr                                                                                             | 0                             | 0 | A | 0 | 0 | 0 | 0 | 0 | 2 | 2  | 2  | 1  | 1  | 0  | 1  | 0  | 0  | 1  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.6                           | 1.7           |  |  |  |                                 |  |
| 22-Apr                                                                                             | 0                             | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 15 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 1.6                           | 17.0          |  |  |  |                                 |  |
| 23-Apr                                                                                             | A                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C | C  | C  | C  | C  | C  | 0  | 1  | 1  | 1  | 1  | 0                                                                                                                                                          | 0  | 0  | 2  | A  | --                            | 1.9           |  |  |  |                                 |  |
| 24-Apr                                                                                             | 0                             | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1  | 1  | 2  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 2  | A  | 0  | 0.5                           | 2.5           |  |  |  |                                 |  |
| 25-Apr                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 0  | 0                                                                                                                                                          | 0  | A  | 0  | 0  | 0.2                           | 0.9           |  |  |  |                                 |  |
| 26-Apr                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 1  | 0  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | A  | 0  | 0  | 0  | 0.3                           | 1.0           |  |  |  |                                 |  |
| 27-Apr                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | A                                                                                                                                                          | 1  | 0  | 0  | 0  | 0.4                           | 1.0           |  |  |  |                                 |  |
| 28-Apr                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 1                                                                                                                                                          | 0  | 0  | 0  | 1  | 0.5                           | 2.2           |  |  |  |                                 |  |
| 29-Apr                                                                                             | 0                             | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1  | 2  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.5                           | 2.1           |  |  |  |                                 |  |
| 30-Apr                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1  | 1  | 1  | 0  | 0  | 1  | 0  | A  | 1  | 1  | 1                                                                                                                                                          | 0  | 0  | 0  | 0  | 0.5                           | 1.1           |  |  |  |                                 |  |
| 0.2 0.2 0.5 0.3 0.2 0.3 0.6 1.3 1.1 1.6 2.0 1.2 1.0 0.7 1.2 0.8 0.6 0.7 0.6 0.5 0.3 0.4 0.3 0.2    |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    | Diurnal Average               |               |  |  |  |                                 |  |
| 0.5 1.0 6.3 3.4 2.3 3.0 6.4 7.5 8.8 17.0 14.9 3.6 6.1 4.2 15.7 5.0 2.0 2.5 3.6 3.3 1.9 1.9 1.9 0.5 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    | Diurnal Maximum               |               |  |  |  |                                 |  |
| C - Calibration                                                                                    |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    | A - Automated Daily Zero Span |               |  |  |  |                                 |  |



## Hourly Maximums

Nitrogen Oxide (NO) - ppb  
Portable Reno - April 2014



# Hourly Averages

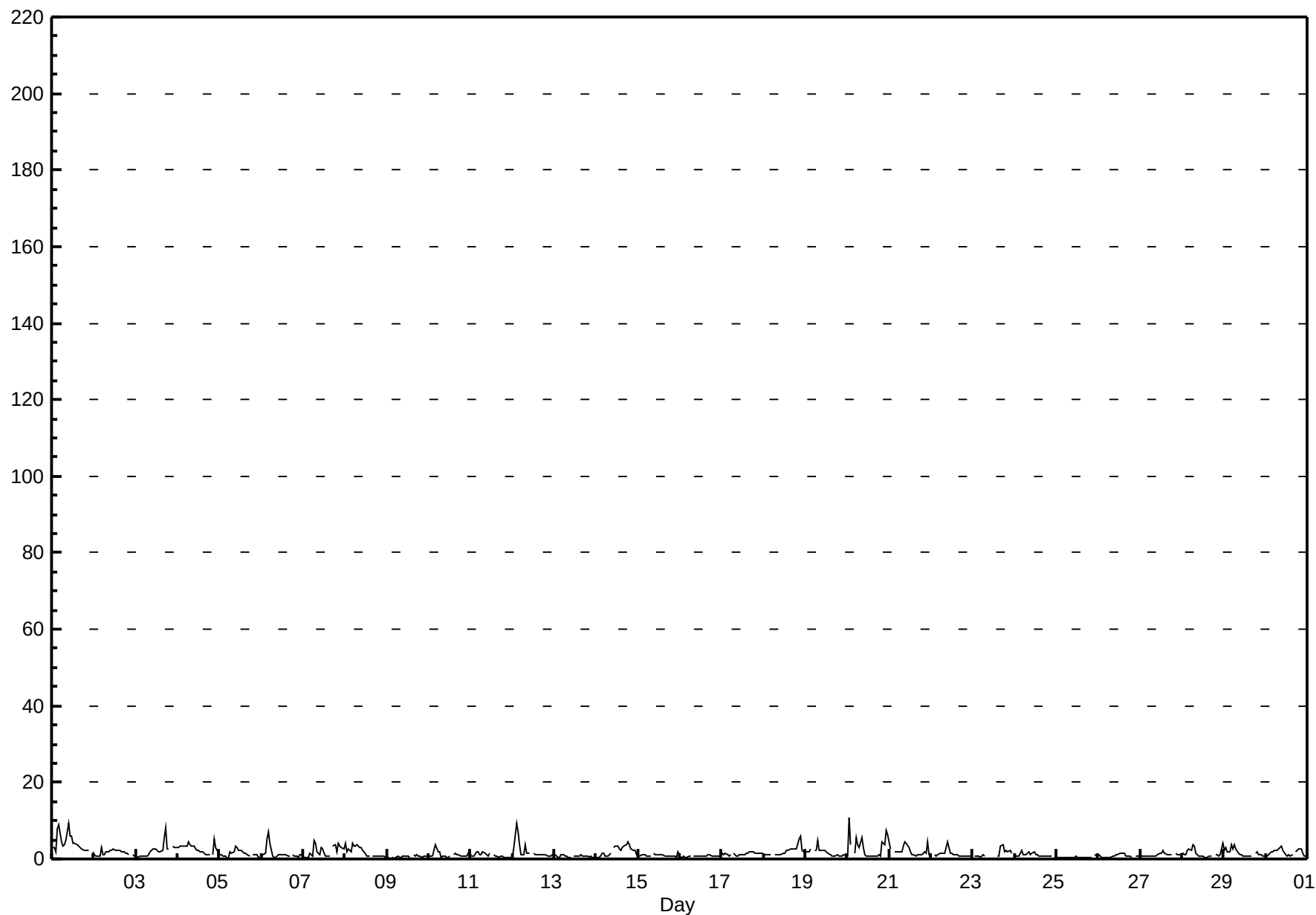
Oxides of Nitrogen (NO<sub>x</sub>) - ppb

Portable Reno - April 2014

| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 10.9 ppb on Apr 20 02:00 Maximum Daily Average: 4.1 ppb on Apr 1                                                                                                                                                                                                                             |                               |    |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 683<br>Hours of Missing Data: 37<br>Hours of Calibration: 37<br>Percent Operational Time: 100.0 |    |    |    |    |                 |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|-----------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-----------------|---------------|
| Minimum Value: 0 ppb on Apr 5 05:00 Minimum Daily Average: 0.5 ppb on Apr 25<br>Maximum Diurnal Average: 2.1 ppb at hour 5 Minimum Diurnal Average: 1.2 ppb at hour 16<br>Monthly Average: 1.59 ppb Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 0.7 Median = 1.1 Q <sub>3</sub> = 2.0 P <sub>90</sub> = 3.3 P <sub>99</sub> = 7.2 |                               |    |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |    |                 |               |
| Day                                                                                                                                                                                                                                                                                                                                                            | Hourly Period Ending At (MST) |    |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |    | Daily Average   | Daily Maximum |
|                                                                                                                                                                                                                                                                                                                                                                | 1                             | 2  | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20                                                                                                                                      | 21 | 22 | 23 | 24 |                 |               |
| 1-Apr                                                                                                                                                                                                                                                                                                                                                          | 3                             | 3  | 2 | 8 | 9 | 4 | 3 | 4 | 5 | 9  | 6  | 6  | 4  | 4  | 4  | 3  | 3  | 3  | 2  | 2                                                                                                                                       | 2  | 2  | A  | 2  | 4.1             | 9.3           |
| 2-Apr                                                                                                                                                                                                                                                                                                                                                          | 1                             | 1  | 1 | 1 | 3 | 1 | 1 | 2 | 2 | 2  | 2  | 3  | 2  | 2  | 2  | 2  | 2  | 2  | 1  | 1                                                                                                                                       | 1  | A  | 1  | 1  | 1.7             | 3.0           |
| 3-Apr                                                                                                                                                                                                                                                                                                                                                          | 1                             | 1  | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2  | 2  | 3  | 2  | 2  | 2  | 2  | 5  | 8  | 3  | 3                                                                                                                                       | A  | 3  | 3  | 3  | 2.2             | 8.2           |
| 4-Apr                                                                                                                                                                                                                                                                                                                                                          | 3                             | 3  | 3 | 3 | 3 | 3 | 5 | 4 | 3 | 3  | 3  | 2  | 2  | 2  | 2  | 1  | 1  | 1  | 1  | A                                                                                                                                       | 1  | 5  | 3  | 1  | 2.6             | 5.4           |
| 5-Apr                                                                                                                                                                                                                                                                                                                                                          | 1                             | 1  | 1 | 1 | 0 | 0 | 2 | 1 | 2 | 3  | 3  | 2  | 2  | 2  | 2  | 2  | 1  | 1  | A  | 1                                                                                                                                       | 1  | 1  | 1  | 0  | 1.4             | 3.4           |
| 6-Apr                                                                                                                                                                                                                                                                                                                                                          | 0                             | 1  | 1 | 5 | 7 | 4 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1  | 1                                                                                                                                       | 1  | 0  | 1  | 1  | 1.5             | 7.0           |
| 7-Apr                                                                                                                                                                                                                                                                                                                                                          | 0                             | 0  | 0 | 0 | 1 | 1 | 5 | 4 | 2 | 1  | 3  | 2  | 1  | 1  | 1  | 1  | A  | 3  | 4  | 2                                                                                                                                       | 4  | 4  | 3  | 3  | 2.0             | 4.9           |
| 8-Apr                                                                                                                                                                                                                                                                                                                                                          | 4                             | 2  | 3 | 2 | 4 | 3 | 3 | 4 | 3 | 3  | 2  | 2  | 1  | 1  | 1  | A  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | 1  | 1  | 1  | 1.8             | 4.3           |
| 9-Apr                                                                                                                                                                                                                                                                                                                                                          | 0                             | 0  | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1  | 1  | 1  | 1  | 1  | A  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 0  | 1  | 1  | 1  | 0.6             | 1.1           |
| 10-Apr                                                                                                                                                                                                                                                                                                                                                         | 1                             | 1  | 1 | 2 | 4 | 2 | 2 | 0 | 1 | 1  | 0  | 0  | 1  | A  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | 1  | 1  | 2  | 1.1             | 3.9           |
| 11-Apr                                                                                                                                                                                                                                                                                                                                                         | 1                             | 1  | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 1  | 1  | 1  | A  | 1  | 1  | 1  | 0  | 1  | 1  | 0                                                                                                                                       | 0  | 0  | 0  | 0  | 0.9             | 2.0           |
| 12-Apr                                                                                                                                                                                                                                                                                                                                                         | 0                             | 3  | 9 | 7 | 4 | 1 | 1 | 4 | 2 | 2  | 2  | A  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | 1  | 1  | 1  | 2.0             | 9.4           |
| 13-Apr                                                                                                                                                                                                                                                                                                                                                         | 1                             | 1  | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0  | A  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | 1  | 1  | 0  | 0.7             | 1.1           |
| 14-Apr                                                                                                                                                                                                                                                                                                                                                         | 0                             | 0  | 0 | 1 | 1 | 1 | 1 | 1 | 1 | A  | 3  | 3  | 4  | 3  | 2  | 3  | 3  | 4  | 5  | 4                                                                                                                                       | 3  | 2  | 2  | 1  | 2.2             | 4.5           |
| 15-Apr                                                                                                                                                                                                                                                                                                                                                         | 1                             | 1  | 1 | 1 | 1 | 1 | 1 | 1 | A | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | 1  | 1  | 2  | 0.9             | 1.8           |
| 16-Apr                                                                                                                                                                                                                                                                                                                                                         | 1                             | 1  | 1 | 0 | 1 | 1 | 1 | A | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | 1  | 1  | 1  | 0.8             | 0.9           |
| 17-Apr                                                                                                                                                                                                                                                                                                                                                         | 1                             | 1  | 2 | 1 | 1 | 1 | A | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 2  | 2  | 2  | 2  | 2                                                                                                                                       | 2  | 1  | 2  | 1  | 1.3             | 1.9           |
| 18-Apr                                                                                                                                                                                                                                                                                                                                                         | 1                             | 1  | 1 | 1 | 1 | 1 | A | 1 | 1 | 1  | 1  | 1  | 2  | 2  | 2  | 2  | 3  | 3  | 3  | 2                                                                                                                                       | 5  | 6  | 2  | 2  | 2.1             | 5.9           |
| 19-Apr                                                                                                                                                                                                                                                                                                                                                         | 2                             | 2  | 2 | 3 | A | 2 | 2 | 5 | 2 | 2  | 2  | 2  | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | 1  | 1  | 1  | 1.6             | 4.8           |
| 20-Apr                                                                                                                                                                                                                                                                                                                                                         | 1                             | 11 | 4 | A | 1 | 6 | 4 | 3 | 6 | 3  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 5  | 4  | 7  | 6  | 3.0             | 10.9          |
| 21-Apr                                                                                                                                                                                                                                                                                                                                                         | 4                             | 3  | A | 2 | 2 | 2 | 2 | 2 | 3 | 5  | 4  | 3  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 2  | 1  | 5  | 1  | 2.2             | 4.6           |
| 22-Apr                                                                                                                                                                                                                                                                                                                                                         | 1                             | A  | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 5  | 3  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | 1  | 1  | 1  | 1.3             | 4.5           |
| 23-Apr                                                                                                                                                                                                                                                                                                                                                         | A                             | 1  | 1 | 1 | 1 | 1 | 1 | 1 | C | C  | C  | C  | C  | C  | 1  | 1  | 3  | 4  | 2  | 2                                                                                                                                       | 2  | 2  | 2  | A  | --              | 3.8           |
| 24-Apr                                                                                                                                                                                                                                                                                                                                                         | 1                             | 1  | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 1  | 1  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | 1  | 1  | A  | 1  | 1.0             | 2.1           |
| 25-Apr                                                                                                                                                                                                                                                                                                                                                         | 0                             | 0  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 1  | 1  | 0  | 0  | 0  | 1  | 0  | 1  | 0                                                                                                                                       | 0  | A  | 1  | 1  | 0.5             | 1.1           |
| 26-Apr                                                                                                                                                                                                                                                                                                                                                         | 1                             | 1  | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1  | 1  | 1  | 1  | 2  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                       | A  | 1  | 1  | 1  | 0.8             | 1.5           |
| 27-Apr                                                                                                                                                                                                                                                                                                                                                         | 1                             | 1  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 2  | 2  | 2  | 1  | 1  | 1  | 1  | A                                                                                                                                       | 2  | 1  | 1  | 1  | 1.1             | 2.2           |
| 28-Apr                                                                                                                                                                                                                                                                                                                                                         | 1                             | 1  | 1 | 2 | 2 | 2 | 4 | 3 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1                                                                                                                                       | 1  | 1  | 1  | 4  | 1.4             | 4.2           |
| 29-Apr                                                                                                                                                                                                                                                                                                                                                         | 2                             | 3  | 2 | 2 | 4 | 3 | 4 | 3 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A  | 1  | 2                                                                                                                                       | 1  | 1  | 1  | 1  | 1.6             | 3.9           |
| 30-Apr                                                                                                                                                                                                                                                                                                                                                         | 1                             | 1  | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3  | 2  | 1  | 1  | 1  | 1  | 1  | A  | 2  | 2  | 3                                                                                                                                       | 3  | 1  | 1  | 1  | 1.7             | 3.3           |
|                                                                                                                                                                                                                                                                                                                                                                |                               |    |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |    | Diurnal Average |               |
|                                                                                                                                                                                                                                                                                                                                                                |                               |    |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |    | Diurnal Maximum |               |
| C - Calibration A - Automated Daily Zero Span                                                                                                                                                                                                                                                                                                                  |                               |    |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |                                                                                                                                         |    |    |    |    |                 |               |

## Hourly Averages

Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
Portable Reno - April 2014



# Hourly Maximums

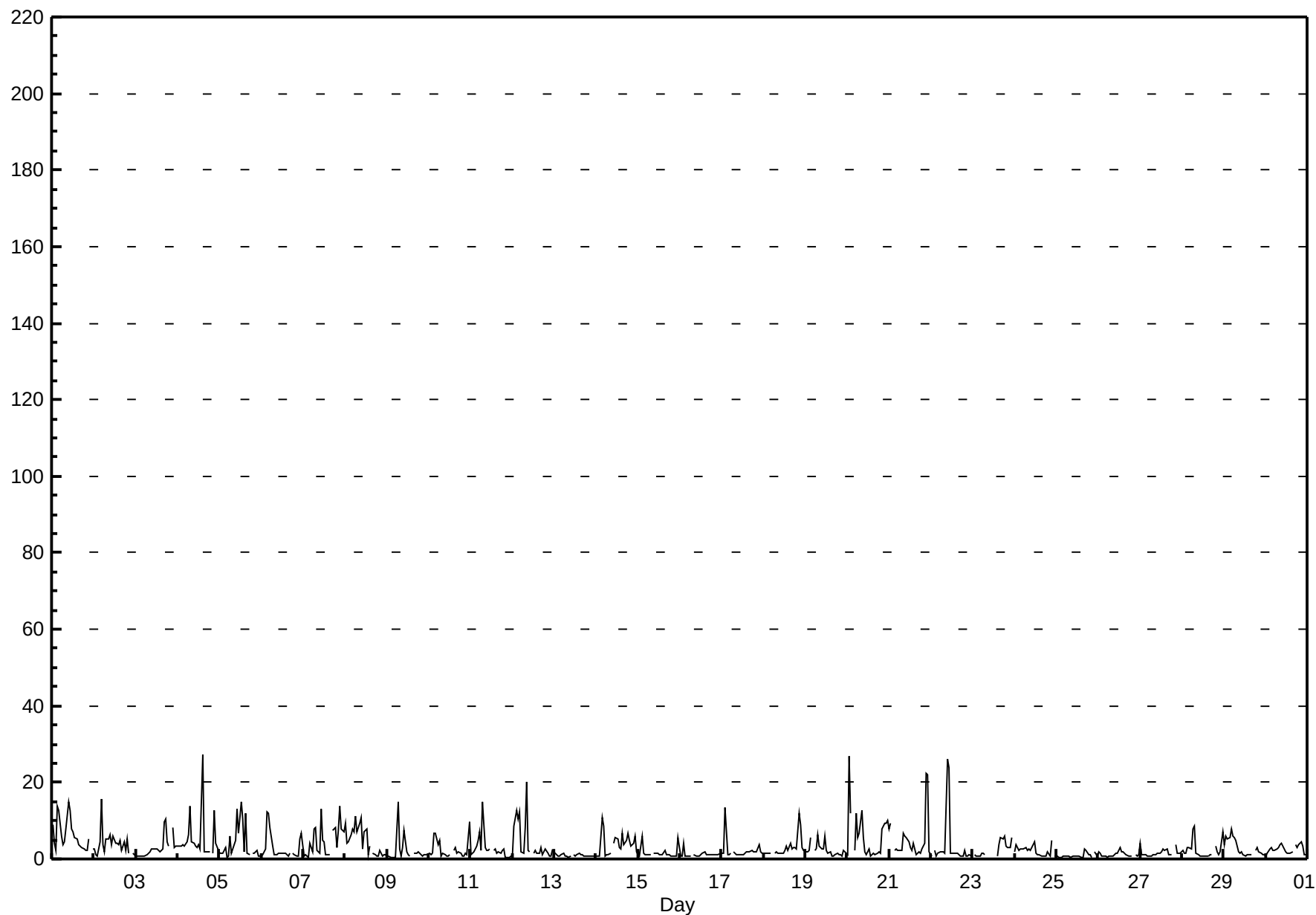
Oxides of Nitrogen (NO<sub>x</sub>) - ppb

Portable Reno - April 2014

| Maximum Value: 27.2 ppb on Apr 4 15:00      |                               |                               |      |      |      |      |      |      |      |      |      |     |      |      |      |      |     |      | Maximum Daily Average: 6.2 ppb on Apr 1                                                                                                                     |     |      |      |      |      |                 |               |  |  | Hours in Service: 720           |  |
|---------------------------------------------|-------------------------------|-------------------------------|------|------|------|------|------|------|------|------|------|-----|------|------|------|------|-----|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|------|------|------|-----------------|---------------|--|--|---------------------------------|--|
| Minimum Value: 0 ppb on Apr 5 05:00         |                               |                               |      |      |      |      |      |      |      |      |      |     |      |      |      |      |     |      | Minimum Daily Average: 0.9 ppb on Apr 25                                                                                                                    |     |      |      |      |      |                 |               |  |  | Hours of Data: 683              |  |
| Maximum Diurnal Average: 4.3 ppb at hour 11 |                               |                               |      |      |      |      |      |      |      |      |      |     |      |      |      |      |     |      | Minimum Diurnal Average: 2.1 ppb at hour 17                                                                                                                 |     |      |      |      |      |                 |               |  |  | Hours of Missing Data: 37       |  |
| Monthly Average: 3.08 ppb                   |                               |                               |      |      |      |      |      |      |      |      |      |     |      |      |      |      |     |      | Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 0.8 Q <sub>1</sub> = 1.0 Median = 1.7 Q <sub>3</sub> = 3.5 P <sub>90</sub> = 7.2 P <sub>99</sub> = 19.4 |     |      |      |      |      |                 |               |  |  | 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-Apr                                       | 9                             | 4                             | 2    | 14   | 13   | 6    | 4    | 4    | 8    | 15   | 13   | 8   | 7    | 6    | 5    | 4    | 3   | 3    | 3                                                                                                                                                           | 2   | 2    | 5    | A    | 3    | 6.2             | 15.0          |  |  |                                 |  |
| 2-Apr                                       | 2                             | 1                             | 1    | 4    | 16   | 4    | 2    | 5    | 5    | 6    | 4    | 6   | 4    | 4    | 4    | 5    | 2   | 5    | 2                                                                                                                                                           | 5   | 2    | A    | 2    | 1    | 4.0             | 15.8          |  |  |                                 |  |
| 3-Apr                                       | 1                             | 1                             | 1    | 1    | 1    | 1    | 1    | 2    | 2    | 2    | 3    | 3   | 3    | 2    | 2    | 3    | 10  | 11   | 4                                                                                                                                                           | 3   | A    | 8    | 3    | 3    | 3.0             | 10.6          |  |  |                                 |  |
| 4-Apr                                       | 3                             | 3                             | 3    | 4    | 4    | 5    | 6    | 14   | 4    | 4    | 3    | 3   | 4    | 2    | 27   | 2    | 2   | 2    | 2                                                                                                                                                           | A   | 2    | 13   | 4    | 2    | 5.2             | 27.2          |  |  |                                 |  |
| 5-Apr                                       | 1                             | 2                             | 1    | 3    | 0    | 1    | 6    | 2    | 4    | 5    | 13   | 7   | 15   | 10   | 2    | 12   | 2   | 1    | A                                                                                                                                                           | 2   | 1    | 2    | 1    | 1    | 4.1             | 15.0          |  |  |                                 |  |
| 6-Apr                                       | 1                             | 1                             | 2    | 12   | 12   | 8    | 3    | 1    | 1    | 1    | 2    | 2   | 2    | 2    | 2    | 1    | 1   | A    | 1                                                                                                                                                           | 1   | 1    | 1    | 5    | 7    | 3.0             | 12.3          |  |  |                                 |  |
| 7-Apr                                       | 1                             | 1                             | 1    | 0    | 4    | 2    | 8    | 8    | 2    | 2    | 13   | 5   | 5    | 1    | 1    | 1    | A   | 7    | 8                                                                                                                                                           | 3   | 8    | 14   | 8    | 7    | 4.8             | 13.8          |  |  |                                 |  |
| 8-Apr                                       | 10                            | 4                             | 4    | 6    | 8    | 7    | 11   | 7    | 9    | 11   | 3    | 7   | 8    | 1    | 3    | A    | 1   | 1    | 1                                                                                                                                                           | 1   | 2    | 1    | 1    | 1    | 4.8             | 11.2          |  |  |                                 |  |
| 9-Apr                                       | 1                             | 1                             | 0    | 0    | 0    | 1    | 15   | 3    | 1    | 3    | 7    | 2   | 1    | 1    | A    | 1    | 1   | 1    | 2                                                                                                                                                           | 1   | 1    | 1    | 1    | 1    | 2.0             | 14.9          |  |  |                                 |  |
| 10-Apr                                      | 2                             | 1                             | 1    | 7    | 7    | 4    | 5    | 1    | 1    | 1    | 1    | 1   | 1    | A    | 2    | 3    | 1   | 2    | 1                                                                                                                                                           | 1   | 1    | 1    | 1    | 10   | 2.4             | 9.5           |  |  |                                 |  |
| 11-Apr                                      | 1                             | 2                             | 2    | 3    | 5    | 7    | 2    | 15   | 3    | 2    | 2    | 3   | A    | 2    | 3    | 1    | 2   | 2    | 2                                                                                                                                                           | 2   | 0    | 0    | 0    | 1    | 2.8             | 14.8          |  |  |                                 |  |
| 12-Apr                                      | 1                             | 9                             | 13   | 10   | 12   | 2    | 1    | 8    | 20   | 2    | 2    | A   | 2    | 2    | 1    | 1    | 3   | 1    | 2                                                                                                                                                           | 3   | 1    | 1    | 1    | 2    | 4.4             | 20.1          |  |  |                                 |  |
| 13-Apr                                      | 2                             | 1                             | 1    | 1    | 1    | 2    | 1    | 1    | 0    | 1    | A    | 1   | 1    | 1    | 2    | 1    | 1   | 1    | 1                                                                                                                                                           | 1   | 1    | 1    | 1    | 1    | 1.0             | 1.7           |  |  |                                 |  |
| 14-Apr                                      | 1                             | 1                             | 1    | 11   | 9    | 1    | 1    | 1    | 2    | A    | 4    | 6   | 5    | 3    | 3    | 7    | 4   | 5    | 7                                                                                                                                                           | 5   | 3    | 4    | 6    | 2    | 3.8             | 10.8          |  |  |                                 |  |
| 15-Apr                                      | 1                             | 1                             | 6    | 1    | 1    | 1    | 1    | 1    | A    | 2    | 1    | 1   | 1    | 1    | 1    | 2    | 1   | 1    | 1                                                                                                                                                           | 1   | 1    | 1    | 1    | 6    | 1.6             | 6.0           |  |  |                                 |  |
| 16-Apr                                      | 1                             | 1                             | 4    | 1    | 1    | 1    | 1    | A    | 1    | 1    | 1    | 1   | 1    | 1    | 2    | 1    | 1   | 1    | 1                                                                                                                                                           | 1   | 1    | 1    | 1    | 1    | 1.2             | 4.2           |  |  |                                 |  |
| 17-Apr                                      | 2                             | 1                             | 13   | 1    | 1    | 2    | A    | 2    | 1    | 1    | 1    | 1   | 1    | 1    | 2    | 2    | 2   | 2    | 2                                                                                                                                                           | 2   | 2    | 4    | 2    | 2    | 2.2             | 13.3          |  |  |                                 |  |
| 18-Apr                                      | 2                             | 1                             | 1    | 1    | 1    | A    | 2    | 2    | 1    | 1    | 1    | 2   | 2    | 3    | 2    | 4    | 3   | 3    | 3                                                                                                                                                           | 3   | 12   | 9    | 3    | 2    | 2.8             | 11.8          |  |  |                                 |  |
| 19-Apr                                      | 2                             | 2                             | 2    | 6    | A    | 2    | 3    | 6    | 3    | 3    | 3    | 6   | 2    | 2    | 2    | 1    | 1   | 1    | 2                                                                                                                                                           | 1   | 1    | 1    | 2    | 1    | 2.3             | 6.5           |  |  |                                 |  |
| 20-Apr                                      | 1                             | 27                            | 12   | A    | 2    | 12   | 6    | 7    | 13   | 6    | 2    | 1   | 2    | 1    | 1    | 2    | 1   | 1    | 2                                                                                                                                                           | 1   | 8    | 9    | 9    | 10   | 5.9             | 26.7          |  |  |                                 |  |
| 21-Apr                                      | 8                             | 9                             | A    | 2    | 3    | 2    | 2    | 2    | 7    | 6    | 6    | 5   | 3    | 2    | 4    | 1    | 1   | 2    | 1                                                                                                                                                           | 3   | 4    | 22   | 22   | 2    | 5.2             | 22.4          |  |  |                                 |  |
| 22-Apr                                      | 1                             | A                             | 2    | 1    | 1    | 2    | 2    | 2    | 2    | 26   | 24   | 2   | 2    | 1    | 1    | 1    | 1   | 1    | 1                                                                                                                                                           | 2   | 1    | 1    | 1    | 1    | 3.4             | 26.3          |  |  |                                 |  |
| 23-Apr                                      | A                             | 1                             | 1    | 1    | 1    | 1    | 2    | 1    | C    | C    | C    | C   | C    | C    | 1    | 4    | 6   | 5    | 6                                                                                                                                                           | 3   | 3    | 3    | 6    | A    | --              | 5.8           |  |  |                                 |  |
| 24-Apr                                      | 2                             | 4                             | 2    | 3    | 3    | 2    | 3    | 2    | 3    | 2    | 3    | 4   | 1    | 1    | 1    | 1    | 1   | 1    | 1                                                                                                                                                           | 2   | 1    | 5    | A    | 1    | 2.1             | 5.0           |  |  |                                 |  |
| 25-Apr                                      | 1                             | 1                             | 0    | 0    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1   | 1    | 1    | 1    | 1    | 3   | 2    | 1                                                                                                                                                           | 1   | 1    | A    | 2    | 1    | 0.9             | 2.5           |  |  |                                 |  |
| 26-Apr                                      | 2                             | 2                             | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 2    | 2   | 3    | 2    | 2    | 2    | 1   | 1    | 1                                                                                                                                                           | 1   | A    | 1    | 1    | 1    | 1.1             | 3.0           |  |  |                                 |  |
| 27-Apr                                      | 4                             | 1                             | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1   | 2    | 3    | 2    | 3    | 1   | 1    | 1                                                                                                                                                           | A   | 4    | 1    | 2    | 1    | 1.6             | 4.2           |  |  |                                 |  |
| 28-Apr                                      | 2                             | 1                             | 2    | 3    | 3    | 3    | 8    | 9    | 2    | 1    | 1    | 1   | 1    | 1    | 1    | 1    | 1   | 1    | A                                                                                                                                                           | 3   | 2    | 1    | 2    | 7    | 2.4             | 8.6           |  |  |                                 |  |
| 29-Apr                                      | 4                             | 6                             | 5    | 6    | 8    | 6    | 6    | 5    | 2    | 2    | 2    | 1   | 1    | 1    | 1    | 1    | 1   | A    | 2                                                                                                                                                           | 3   | 2    | 2    | 1    | 1    | 2.9             | 7.9           |  |  |                                 |  |
| 30-Apr                                      | 1                             | 2                             | 3    | 3    | 2    | 2    | 3    | 3    | 4    | 4    | 3    | 2   | 1    | 1    | 1    | 2    | A   | 4    | 3                                                                                                                                                           | 4   | 5    | 4    | 1    | 1    | 2.5             | 4.6           |  |  |                                 |  |
| 2.3                                         |                               | 3.1                           | 3.1  | 3.7  | 4.2  | 3.0  | 3.6  | 4.0  | 3.7  | 4.0  | 4.3  | 2.9 | 2.9  | 2.2  | 2.8  | 2.4  | 2.1 | 2.5  | 2.2                                                                                                                                                         | 2.2 | 2.5  | 4.2  | 3.2  | 2.7  | Diurnal Average |               |  |  |                                 |  |
| 9.5                                         |                               | 26.7                          | 13.3 | 13.7 | 15.8 | 12.0 | 14.9 | 14.8 | 20.1 | 26.3 | 23.8 | 7.8 | 15.0 | 10.3 | 27.2 | 12.0 | 9.8 | 10.6 | 8.2                                                                                                                                                         | 5.3 | 11.8 | 22.4 | 22.1 | 10.0 | Diurnal Maximum |               |  |  |                                 |  |
| C - Calibration                             |                               | A - Automated Daily Zero Span |      |      |      |      |      |      |      |      |      |     |      |      |      |      |     |      |                                                                                                                                                             |     |      |      |      |      |                 |               |  |  |                                 |  |

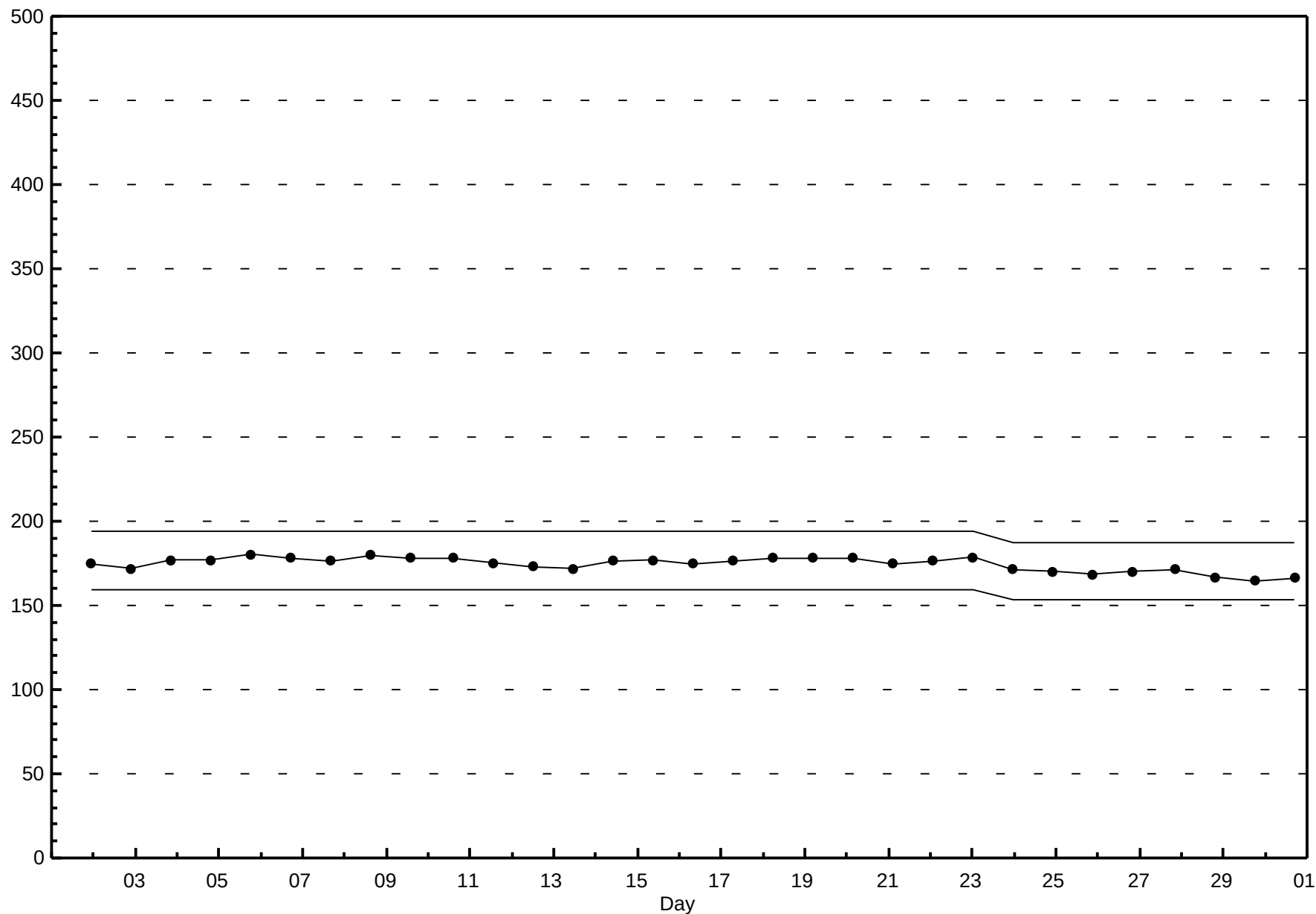
## Hourly Maximums

Oxides of Nitrogen (NO<sub>x</sub>) - ppb  
Portable Reno - April 2014



## Span Responses

Oxides of Nitrogen (NO<sub>x</sub>)  
Portable Reno - April 2014



# Hourly Averages

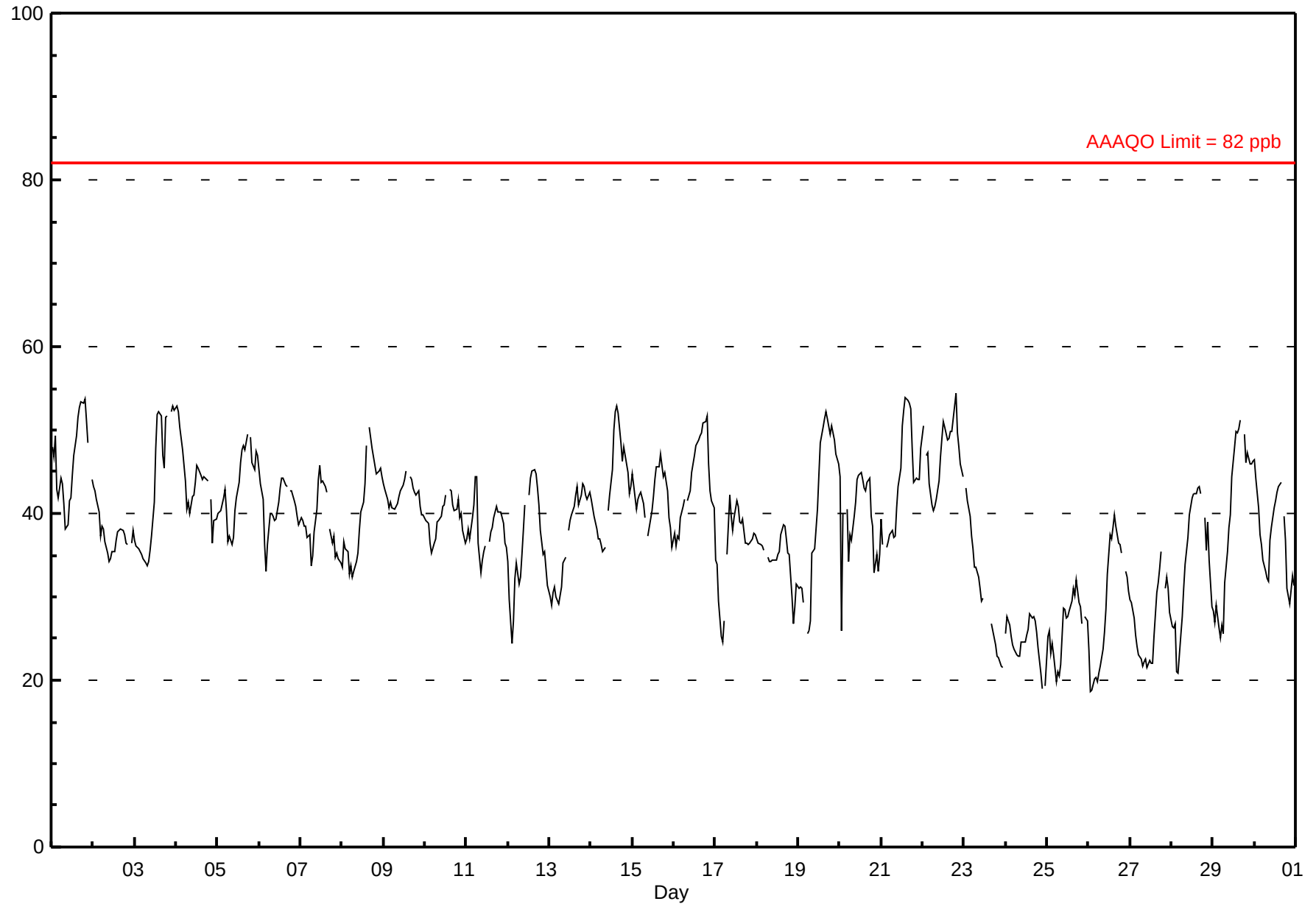
Ozone (O<sub>3</sub>) - ppb

Portable Reno - April 2014

| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 54.3 ppb on Apr 22 20:00<br>Maximum Daily Average: 47.2 ppb on Apr 22 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 685<br>Hours of Missing Data: 35<br>Hours of Calibration: 35<br>Percent Operational Time: 100.0                                                                                                                       |    |    |      |                 |               |
|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|------|-----------------|---------------|
| Minimum Value: 19 ppb on Apr 26 02:00<br>Maximum Diurnal Average: 43.6 ppb at hour 16<br>Monthly Average: 38.30 ppb                     |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 24.6 ppb on Apr 24<br>Minimum Diurnal Average: 33.8 ppb at hour 8<br>Percentiles: P <sub>1</sub> = 20.3 P <sub>10</sub> = 26.6 Q <sub>1</sub> = 34.2 Median = 39.2 Q <sub>3</sub> = 43.7 P <sub>90</sub> = 48.1 P <sub>99</sub> = 53.2 |    |    |      |                 |               |
| 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-Apr                                                                                                                                   | 48                            | 47 | 49 | 43 | 42 | 44 | 44 | 41 | 38 | 39 | 42 | 42 | 45 | 47 | 49 | 51 | 53 | 53 | 53 | 54 | 51                                                                                                                                                                                                                                                            | 48 | A  | 44   | 46.4            | 53.7          |
| 2-Apr                                                                                                                                   | 43                            | 43 | 42 | 40 | 37 | 38 | 38 | 37 | 35 | 34 | 35 | 36 | 35 | 37 | 38 | 38 | 38 | 37 | 36 | 36 | A                                                                                                                                                                                                                                                             | 36 | 38 | 37.7 | 43.3            |               |
| 3-Apr                                                                                                                                   | 37                            | 36 | 36 | 35 | 35 | 35 | 34 | 34 | 34 | 36 | 37 | 41 | 48 | 52 | 52 | 52 | 47 | 45 | 52 | 52 | A                                                                                                                                                                                                                                                             | 52 | 53 | 52   | 42.9            | 52.9          |
| 4-Apr                                                                                                                                   | 53                            | 52 | 50 | 49 | 48 | 44 | 41 | 41 | 40 | 42 | 42 | 44 | 46 | 45 | 45 | 44 | 44 | 44 | 44 | A  | 42                                                                                                                                                                                                                                                            | 36 | 39 | 39   | 44.1            | 52.9          |
| 5-Apr                                                                                                                                   | 40                            | 40 | 40 | 42 | 43 | 40 | 37 | 37 | 36 | 37 | 40 | 42 | 44 | 46 | 48 | 48 | 48 | 50 | A  | 49 | 46                                                                                                                                                                                                                                                            | 45 | 47 | 47   | 43.2            | 49.5          |
| 6-Apr                                                                                                                                   | 45                            | 44 | 42 | 36 | 33 | 36 | 40 | 40 | 40 | 39 | 39 | 41 | 43 | 44 | 44 | 43 | 43 | A  | 43 | 43 | 42                                                                                                                                                                                                                                                            | 41 | 40 | 39   | 40.9            | 45.3          |
| 7-Apr                                                                                                                                   | 40                            | 39 | 39 | 38 | 37 | 37 | 34 | 35 | 38 | 40 | 44 | 46 | 44 | 44 | 43 | 43 | A  | 38 | 36 | 37 | 35                                                                                                                                                                                                                                                            | 35 | 35 | 34   | 38.7            | 45.8          |
| 8-Apr                                                                                                                                   | 34                            | 37 | 36 | 35 | 33 | 34 | 32 | 33 | 34 | 35 | 38 | 40 | 41 | 44 | 48 | A  | 50 | 48 | 47 | 46 | 45                                                                                                                                                                                                                                                            | 45 | 45 | 44   | 40.2            | 50.3          |
| 9-Apr                                                                                                                                   | 43                            | 43 | 42 | 41 | 41 | 41 | 40 | 41 | 41 | 42 | 43 | 43 | 44 | 45 | A  | 44 | 44 | 43 | 43 | 42 | 43                                                                                                                                                                                                                                                            | 41 | 40 | 40   | 42.2            | 45.1          |
| 10-Apr                                                                                                                                  | 39                            | 39 | 39 | 36 | 35 | 37 | 37 | 39 | 39 | 40 | 41 | 41 | 42 | A  | 43 | 43 | 41 | 40 | 41 | 42 | 40                                                                                                                                                                                                                                                            | 40 | 38 | 36   | 39.4            | 43.0          |
| 11-Apr                                                                                                                                  | 37                            | 38 | 37 | 39 | 41 | 44 | 44 | 36 | 33 | 34 | 35 | 36 | A  | 37 | 38 | 38 | 40 | 41 | 40 | 40 | 40                                                                                                                                                                                                                                                            | 39 | 37 | 36   | 38.3            | 44.4          |
| 12-Apr                                                                                                                                  | 34                            | 30 | 24 | 27 | 32 | 34 | 32 | 32 | 35 | 38 | 41 | A  | 42 | 44 | 45 | 45 | 45 | 43 | 41 | 38 | 35                                                                                                                                                                                                                                                            | 35 | 33 | 31   | 36.4            | 45.3          |
| 13-Apr                                                                                                                                  | 30                            | 29 | 31 | 31 | 30 | 29 | 30 | 31 | 34 | 35 | A  | 38 | 39 | 40 | 41 | 42 | 43 | 41 | 42 | 44 | 43                                                                                                                                                                                                                                                            | 42 | 42 | 43   | 36.9            | 43.5          |
| 14-Apr                                                                                                                                  | 42                            | 41 | 40 | 38 | 37 | 37 | 36 | 35 | 36 | A  | 40 | 42 | 45 | 50 | 52 | 53 | 52 | 48 | 46 | 48 | 47                                                                                                                                                                                                                                                            | 45 | 42 | 43   | 43.4            | 52.9          |
| 15-Apr                                                                                                                                  | 45                            | 43 | 41 | 42 | 42 | 43 | 41 | 39 | A  | 37 | 38 | 40 | 42 | 44 | 46 | 46 | 47 | 46 | 44 | 45 | 43                                                                                                                                                                                                                                                            | 40 | 38 | 36   | 42.1            | 47.1          |
| 16-Apr                                                                                                                                  | 38                            | 36 | 37 | 37 | 40 | 41 | 42 | A  | 42 | 43 | 45 | 46 | 47 | 48 | 49 | 49 | 50 | 51 | 51 | 52 | 46                                                                                                                                                                                                                                                            | 43 | 42 | 41   | 44.0            | 51.7          |
| 17-Apr                                                                                                                                  | 34                            | 34 | 29 | 25 | 25 | 27 | A  | 35 | 42 | 40 | 38 | 40 | 41 | 41 | 39 | 39 | 39 | 37 | 36 | 36 | 36                                                                                                                                                                                                                                                            | 37 | 38 | 37   | 35.9            | 42.2          |
| 18-Apr                                                                                                                                  | 37                            | 37 | 36 | 36 | 36 | A  | 35 | 34 | 34 | 34 | 34 | 34 | 35 | 35 | 38 | 39 | 38 | 37 | 35 | 35 | 30                                                                                                                                                                                                                                                            | 27 | 29 | 32   | 34.7            | 38.6          |
| 19-Apr                                                                                                                                  | 31                            | 31 | 31 | 29 | A  | 26 | 26 | 27 | 35 | 36 | 38 | 40 | 45 | 48 | 50 | 51 | 52 | 51 | 50 | 51 | 50                                                                                                                                                                                                                                                            | 49 | 47 | 46   | 40.9            | 52.2          |
| 20-Apr                                                                                                                                  | 44                            | 26 | 40 | A  | 40 | 34 | 37 | 37 | 40 | 41 | 44 | 45 | 45 | 44 | 43 | 43 | 44 | 44 | 40 | 38 | 33                                                                                                                                                                                                                                                            | 35 | 33 | 35   | 39.4            | 45.0          |
| 21-Apr                                                                                                                                  | 39                            | 36 | A  | 36 | 37 | 37 | 38 | 37 | 37 | 41 | 43 | 45 | 50 | 52 | 54 | 54 | 53 | 53 | 48 | 44 | 44                                                                                                                                                                                                                                                            | 44 | 44 | 48   | 44.1            | 54.0          |
| 22-Apr                                                                                                                                  | 51                            | A  | 47 | 47 | 44 | 41 | 40 | 41 | 42 | 44 | 47 | 49 | 51 | 50 | 49 | 49 | 50 | 50 | 53 | 54 | 50                                                                                                                                                                                                                                                            | 48 | 46 | 44   | 47.2            | 54.3          |
| 23-Apr                                                                                                                                  | A                             | 43 | 41 | 40 | 37 | 36 | 34 | 34 | 32 | 31 | 30 | 30 | C  | C  | C  | C  | 27 | 25 | 24 | 23 | 23                                                                                                                                                                                                                                                            | 22 | 22 | A    | 30.7            | 43.0          |
| 24-Apr                                                                                                                                  | 26                            | 28 | 27 | 25 | 24 | 24 | 23 | 23 | 23 | 25 | 25 | 25 | 25 | 26 | 28 | 28 | 28 | 27 | 26 | 24 | 21                                                                                                                                                                                                                                                            | 19 | A  | 19   | 24.6            | 27.9          |
| 25-Apr                                                                                                                                  | 25                            | 26 | 23 | 24 | 23 | 20 | 21 | 20 | 22 | 29 | 29 | 27 | 28 | 28 | 30 | 31 | 30 | 32 | 29 | 29 | 27                                                                                                                                                                                                                                                            | A  | 28 | 27   | 26.4            | 32.0          |
| 26-Apr                                                                                                                                  | 24                            | 19 | 19 | 20 | 20 | 20 | 21 | 22 | 24 | 26 | 28 | 33 | 38 | 37 | 38 | 40 | 39 | 37 | 36 | 35 | A                                                                                                                                                                                                                                                             | 33 | 32 | 31   | 29.1            | 39.8          |
| 27-Apr                                                                                                                                  | 30                            | 29 | 28 | 25 | 24 | 23 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 22 | 25 | 31 | 32 | 33 | 35 | A  | 31                                                                                                                                                                                                                                                            | 32 | 31 | 28   | 26.7            | 35.4          |
| 28-Apr                                                                                                                                  | 26                            | 26 | 27 | 21 | 21 | 25 | 28 | 31 | 34 | 37 | 40 | 41 | 42 | 42 | 42 | 43 | 43 | 42 | A  | 39 | 36                                                                                                                                                                                                                                                            | 39 | 34 | 29   | 34.3            | 43.2          |
| 29-Apr                                                                                                                                  | 28                            | 27 | 29 | 26 | 25 | 27 | 26 | 32 | 35 | 38 | 40 | 44 | 48 | 50 | 50 | 50 | 51 | A  | 50 | 46 | 47                                                                                                                                                                                                                                                            | 46 | 46 | 46   | 39.4            | 51.2          |
| 30-Apr                                                                                                                                  | 46                            | 44 | 41 | 37 | 36 | 34 | 33 | 32 | 32 | 37 | 38 | 41 | 42 | 43 | 43 | 44 | A  | 40 | 37 | 31 | 29                                                                                                                                                                                                                                                            | 31 | 32 | 31   | 37.2            | 46.4          |
| Diurnal Average                                                                                                                         |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                               |    |    |      | Diurnal Maximum |               |
| C - Calibration A - Automated Daily Zero Span<br>Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82 ppb 24-hr na                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                               |    |    |      |                 |               |

## Hourly Averages

Ozone (O<sub>3</sub>) - ppb  
Portable Reno - April 2014





# Hourly Maximums

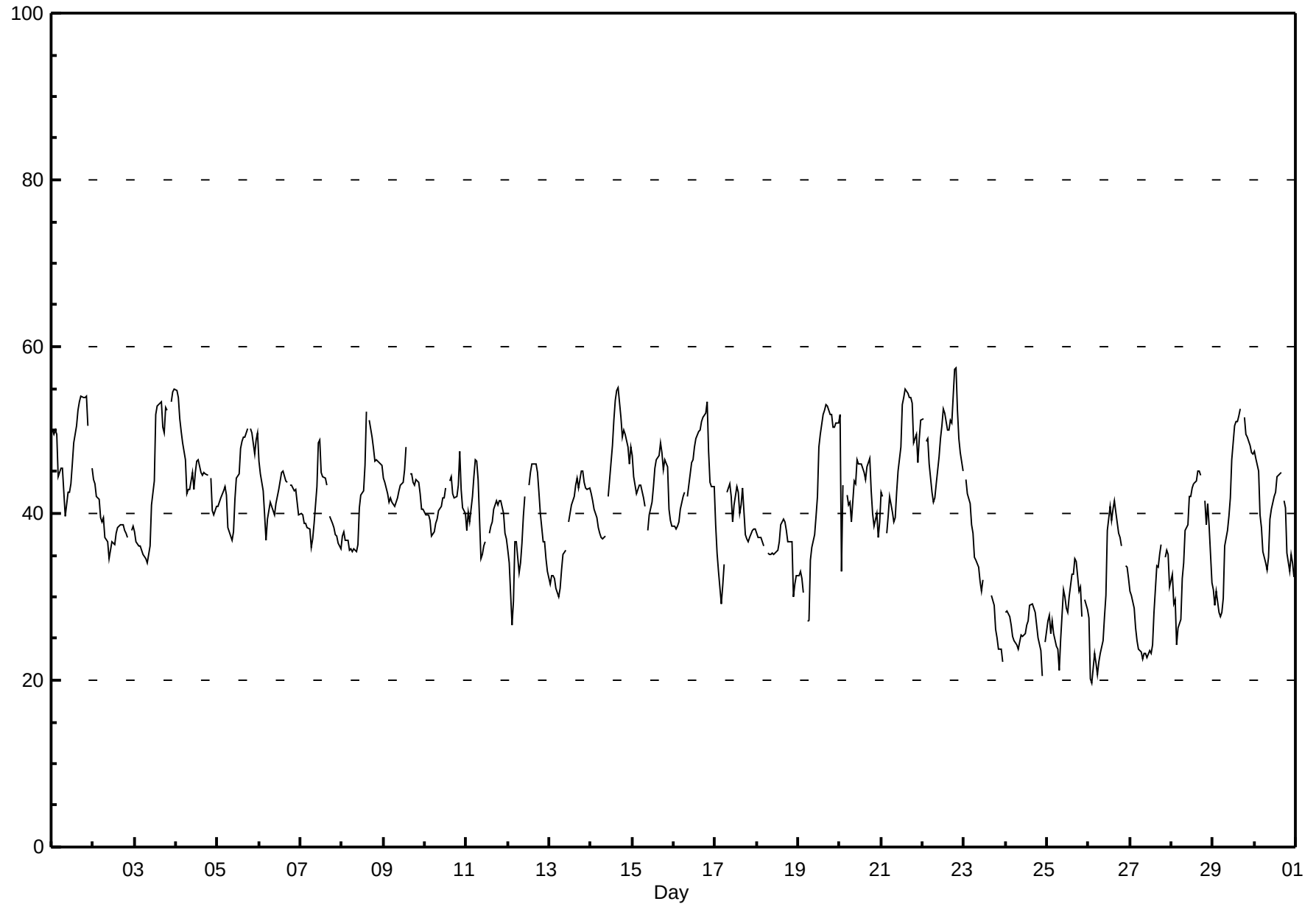
Ozone (O<sub>3</sub>) - ppb

Portable Reno - April 2014

| Maximum Value: 57.5 ppb on Apr 22 20:00                                                                                 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 48.9 ppb on Apr 22                                                                                                                         |    |    |    |    |                 |               |  |  |  | Hours in Service: 720     |  |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-----------------|---------------|--|--|--|---------------------------|--|
| Minimum Value: 20 ppb on Apr 26 03:00                                                                                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 26.0 ppb on Apr 24                                                                                                                         |    |    |    |    |                 |               |  |  |  | Hours of Data: 685        |  |
| Maximum Diurnal Average: 44.8 ppb at hour 17                                                                            |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 35.7 ppb at hour 7                                                                                                                       |    |    |    |    |                 |               |  |  |  | Hours of Missing Data: 35 |  |
| Monthly Average: 40.06 ppb                                                                                              |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 22.0 P <sub>10</sub> = 28.6 Q <sub>1</sub> = 35.6 Median = 40.8 Q <sub>3</sub> = 45.0 P <sub>90</sub> = 50.0 P <sub>99</sub> = 54.7 |    |    |    |    |                 |               |  |  |  | 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-Apr                                                                                                                   | 50                            | 49 | 50 | 49 | 44 | 45 | 45 | 42 | 40 | 42 | 42 | 43 | 46 | 48 | 50 | 52 | 53 | 54 | 54 | 54                                                                                                                                                                | 54 | 50 | A  | 45 | 48.2            | 54.1          |  |  |  |                           |  |
| 2-Apr                                                                                                                   | 44                            | 43 | 42 | 42 | 40 | 39 | 40 | 37 | 37 | 35 | 36 | 37 | 36 | 38 | 38 | 39 | 39 | 39 | 38 | 38                                                                                                                                                                | 37 | A  | 38 | 39 | 38.6            | 44.0          |  |  |  |                           |  |
| 3-Apr                                                                                                                   | 38                            | 37 | 36 | 36 | 36 | 35 | 35 | 34 | 35 | 36 | 41 | 44 | 52 | 53 | 53 | 53 | 50 | 50 | 53 | 52                                                                                                                                                                | A  | 53 | 55 | 55 | 44.4            | 54.9          |  |  |  |                           |  |
| 4-Apr                                                                                                                   | 55                            | 54 | 51 | 50 | 49 | 46 | 42 | 43 | 43 | 45 | 43 | 45 | 46 | 46 | 45 | 45 | 45 | 45 | 45 | A                                                                                                                                                                 | 44 | 40 | 40 | 41 | 45.5            | 54.8          |  |  |  |                           |  |
| 5-Apr                                                                                                                   | 41                            | 41 | 42 | 43 | 43 | 42 | 38 | 38 | 37 | 38 | 42 | 44 | 45 | 48 | 49 | 49 | 49 | 50 | A  | 50                                                                                                                                                                | 50 | 47 | 49 | 50 | 44.5            | 50.2          |  |  |  |                           |  |
| 6-Apr                                                                                                                   | 46                            | 45 | 43 | 40 | 37 | 39 | 41 | 41 | 40 | 40 | 41 | 43 | 44 | 45 | 45 | 44 | 44 | A  | 43 | 43                                                                                                                                                                | 43 | 43 | 41 | 40 | 42.2            | 46.2          |  |  |  |                           |  |
| 7-Apr                                                                                                                   | 40                            | 40 | 39 | 39 | 38 | 38 | 36 | 37 | 39 | 43 | 48 | 49 | 45 | 44 | 44 | 43 | A  | 40 | 39 | 38                                                                                                                                                                | 38 | 37 | 36 | 36 | 40.3            | 48.8          |  |  |  |                           |  |
| 8-Apr                                                                                                                   | 37                            | 38 | 37 | 37 | 36 | 36 | 35 | 36 | 35 | 36 | 41 | 42 | 43 | 46 | 52 | A  | 51 | 49 | 48 | 46                                                                                                                                                                | 46 | 46 | 46 | 46 | 42.0            | 52.2          |  |  |  |                           |  |
| 9-Apr                                                                                                                   | 44                            | 44 | 42 | 41 | 42 | 41 | 41 | 41 | 42 | 43 | 43 | 44 | 45 | 48 | A  | 45 | 45 | 44 | 43 | 44                                                                                                                                                                | 44 | 42 | 41 | 41 | 43.0            | 47.9          |  |  |  |                           |  |
| 10-Apr                                                                                                                  | 40                            | 40 | 40 | 39 | 37 | 38 | 39 | 39 | 40 | 41 | 42 | 42 | 43 | A  | 44 | 44 | 42 | 42 | 42 | 43                                                                                                                                                                | 47 | 43 | 41 | 40 | 41.2            | 47.4          |  |  |  |                           |  |
| 11-Apr                                                                                                                  | 38                            | 40 | 39 | 42 | 44 | 46 | 46 | 44 | 35 | 35 | 36 | 37 | A  | 38 | 39 | 39 | 41 | 42 | 41 | 42                                                                                                                                                                | 42 | 40 | 38 | 37 | 39.9            | 46.4          |  |  |  |                           |  |
| 12-Apr                                                                                                                  | 36                            | 34 | 27 | 30 | 37 | 37 | 33 | 34 | 37 | 40 | 42 | A  | 43 | 45 | 46 | 46 | 46 | 45 | 43 | 40                                                                                                                                                                | 37 | 37 | 35 | 33 | 38.2            | 46.0          |  |  |  |                           |  |
| 13-Apr                                                                                                                  | 32                            | 33 | 33 | 32 | 31 | 30 | 31 | 33 | 35 | 36 | A  | 39 | 40 | 41 | 42 | 43 | 44 | 43 | 45 | 45                                                                                                                                                                | 44 | 43 | 43 | 43 | 38.3            | 45.0          |  |  |  |                           |  |
| 14-Apr                                                                                                                  | 42                            | 42 | 41 | 40 | 38 | 38 | 37 | 37 | 37 | A  | 42 | 44 | 48 | 51 | 53 | 55 | 55 | 51 | 49 | 50                                                                                                                                                                | 49 | 48 | 46 | 48 | 45.3            | 55.1          |  |  |  |                           |  |
| 15-Apr                                                                                                                  | 47                            | 44 | 42 | 43 | 43 | 43 | 42 | 41 | A  | 38 | 40 | 41 | 43 | 45 | 46 | 47 | 48 | 47 | 45 | 46                                                                                                                                                                | 46 | 40 | 39 | 38 | 43.4            | 48.4          |  |  |  |                           |  |
| 16-Apr                                                                                                                  | 39                            | 38 | 39 | 39 | 41 | 42 | 43 | A  | 42 | 45 | 46 | 47 | 48 | 49 | 50 | 50 | 51 | 51 | 52 | 53                                                                                                                                                                | 48 | 44 | 43 | 43 | 45.3            | 53.4          |  |  |  |                           |  |
| 17-Apr                                                                                                                  | 39                            | 35 | 33 | 29 | 31 | 34 | A  | 43 | 44 | 42 | 39 | 41 | 43 | 43 | 40 | 41 | 43 | 37 | 37 | 37                                                                                                                                                                | 37 | 38 | 38 | 38 | 38.3            | 43.5          |  |  |  |                           |  |
| 18-Apr                                                                                                                  | 38                            | 37 | 37 | 37 | 36 | A  | 35 | 35 | 35 | 35 | 35 | 35 | 36 | 37 | 39 | 39 | 39 | 38 | 37 | 37                                                                                                                                                                | 37 | 30 | 31 | 33 | 35.9            | 39.4          |  |  |  |                           |  |
| 19-Apr                                                                                                                  | 33                            | 33 | 32 | 31 | A  | 27 | 27 | 34 | 36 | 37 | 40 | 42 | 48 | 49 | 52 | 52 | 53 | 53 | 52 | 52                                                                                                                                                                | 50 | 50 | 51 | 51 | 42.9            | 53.1          |  |  |  |                           |  |
| 20-Apr                                                                                                                  | 52                            | 33 | 43 | A  | 42 | 41 | 41 | 39 | 44 | 43 | 46 | 46 | 46 | 45 | 45 | 44 | 46 | 47 | 43 | 40                                                                                                                                                                | 38 | 40 | 37 | 39 | 42.7            | 51.9          |  |  |  |                           |  |
| 21-Apr                                                                                                                  | 42                            | 42 | A  | 38 | 40 | 42 | 40 | 39 | 39 | 43 | 45 | 48 | 53 | 54 | 55 | 54 | 54 | 54 | 53 | 48                                                                                                                                                                | 49 | 46 | 49 | 51 | 46.9            | 54.9          |  |  |  |                           |  |
| 22-Apr                                                                                                                  | 51                            | A  | 49 | 49 | 46 | 42 | 41 | 42 | 43 | 47 | 49 | 50 | 52 | 52 | 50 | 50 | 51 | 51 | 57 | 57                                                                                                                                                                | 52 | 49 | 47 | 45 | 48.9            | 57.5          |  |  |  |                           |  |
| 23-Apr                                                                                                                  | A                             | 44 | 42 | 41 | 39 | 38 | 35 | 34 | 34 | 32 | 31 | 32 | C  | C  | C  | C  | 30 | 29 | 26 | 25                                                                                                                                                                | 24 | 24 | 22 | A  | 32.3            | 44.0          |  |  |  |                           |  |
| 24-Apr                                                                                                                  | 28                            | 28 | 28 | 27 | 25 | 25 | 24 | 24 | 25 | 25 | 25 | 26 | 27 | 27 | 29 | 29 | 29 | 28 | 27 | 25                                                                                                                                                                | 24 | 20 | A  | 25 | 26.0            | 29.1          |  |  |  |                           |  |
| 25-Apr                                                                                                                  | 27                            | 28 | 26 | 27 | 26 | 24 | 24 | 21 | 25 | 31 | 30 | 29 | 28 | 30 | 33 | 33 | 35 | 34 | 31 | 31                                                                                                                                                                | 28 | A  | 30 | 29 | 28.6            | 34.5          |  |  |  |                           |  |
| 26-Apr                                                                                                                  | 27                            | 20 | 20 | 23 | 22 | 21 | 22 | 23 | 25 | 28 | 30 | 38 | 41 | 39 | 41 | 41 | 40 | 38 | 37 | 36                                                                                                                                                                | A  | 34 | 34 | 32 | 31.0            | 41.5          |  |  |  |                           |  |
| 27-Apr                                                                                                                  | 31                            | 30 | 29 | 26 | 25 | 24 | 23 | 23 | 23 | 23 | 24 | 23 | 24 | 28 | 34 | 34 | 34 | 35 | 36 | A                                                                                                                                                                 | 35 | 36 | 35 | 31 | 28.4            | 36.3          |  |  |  |                           |  |
| 28-Apr                                                                                                                  | 33                            | 29 | 30 | 24 | 26 | 27 | 32 | 34 | 38 | 39 | 42 | 42 | 43 | 44 | 44 | 45 | 45 | 45 | A  | 42                                                                                                                                                                | 39 | 41 | 39 | 32 | 37.1            | 45.1          |  |  |  |                           |  |
| 29-Apr                                                                                                                  | 31                            | 29 | 31 | 28 | 28 | 28 | 30 | 36 | 38 | 40 | 42 | 47 | 51 | 51 | 51 | 52 | 53 | A  | 52 | 49                                                                                                                                                                | 49 | 48 | 47 | 47 | 41.6            | 52.6          |  |  |  |                           |  |
| 30-Apr                                                                                                                  | 48                            | 47 | 45 | 40 | 38 | 35 | 34 | 33 | 35 | 39 | 41 | 42 | 43 | 44 | 44 | 45 | A  | 42 | 41 | 35                                                                                                                                                                | 33 | 35 | 34 | 32 | 39.4            | 47.5          |  |  |  |                           |  |
| 39.5 37.8 37.4 36.6 36.5 36.0 35.7 35.8 36.4 37.8 39.4 40.7 42.9 43.7 44.5 44.8 44.8 43.6 43.1 42.9 41.5 40.9 40.1 39.9 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                   |    |    |    |    | Diurnal Average |               |  |  |  |                           |  |
| 54.8 53.9 51.4 49.9 48.6 46.4 46.3 44.0 46.8 49.0 50.4 53.0 53.9 54.9 54.7 55.1 54.0 57.3 57.5 54.1 53.4 54.6 54.9      |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                   |    |    |    |    | Diurnal Maximum |               |  |  |  |                           |  |
| C - Calibration A - Automated Daily Zero Span                                                                           |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                   |    |    |    |    |                 |               |  |  |  |                           |  |

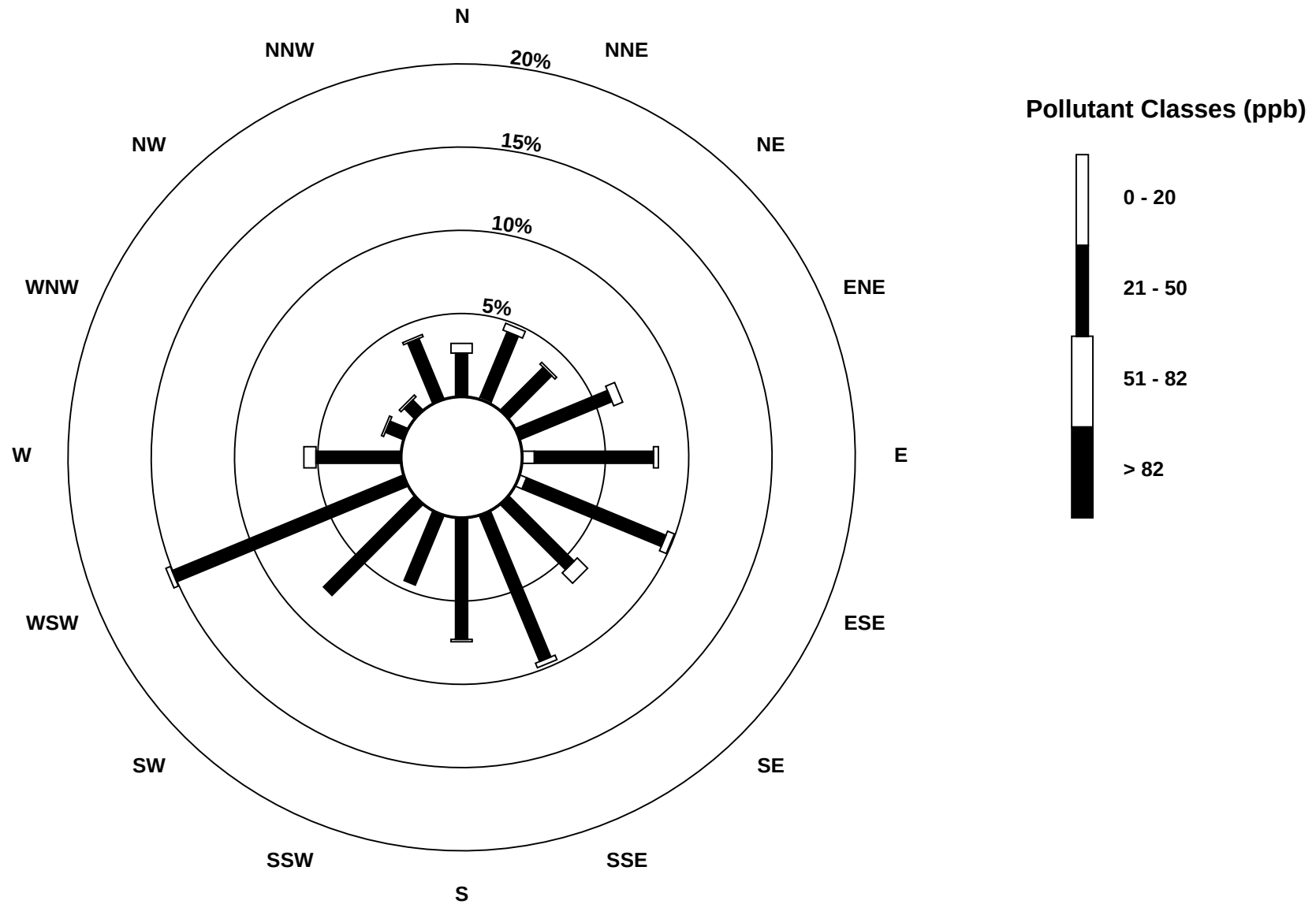
## Hourly Maximums

Ozone (O<sub>3</sub>) - ppb  
Portable Reno - April 2014



## Pollutant Rose

Ozone ( $O_3$ ) - ppb  
Portable Reno - April 2014



# Eight Hour Running Averages

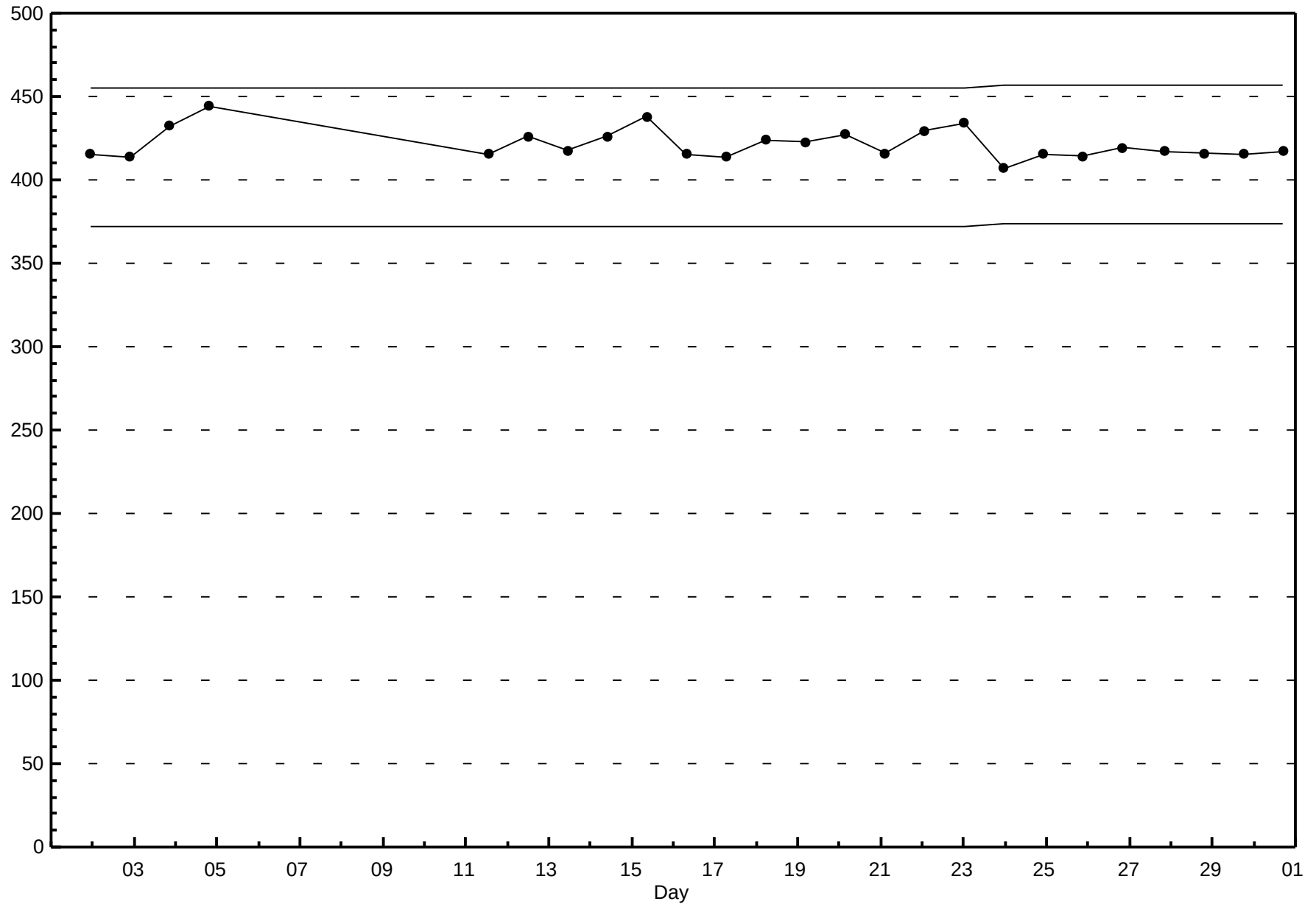
Ozone (O<sub>3</sub>) - ppb

Portable Reno - April 2014

| Maximum Value: 52.3 ppb on Apr 4 02:00                                                                                                                            |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720           |                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---------------------------------|------------------|
| Minimum Value: 20.5 ppb on Apr 26 08:00                                                                                                                           |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Data: 713              |                  |
|                                                                                                                                                                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Missing Data: 7        |                  |
| Percentiles: P <sub>1</sub> = 22.3 P <sub>10</sub> = 27.0 Q <sub>1</sub> = 34.9 Median = 39.2 Q <sub>3</sub> = 43.1 P <sub>90</sub> = 47.4 P <sub>99</sub> = 51.2 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 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-Apr                                                                                                                                                             | 47                            | 47 | 47 | 46 | 45 | 45 | 45 | 45 | 44 | 42 | 42 | 41 | 42 | 42 | 43 | 44 | 46 | 48 | 49 | 51 | 51 | 52 | 52 | 51                              | 52.0             |
| 2-Apr                                                                                                                                                             | 50                            | 48 | 46 | 45 | 43 | 41 | 41 | 40 | 39 | 38 | 37 | 36 | 36 | 36 | 36 | 36 | 36 | 37 | 37 | 37 | 37 | 37 | 37 | 37                              | 49.6             |
| 3-Apr                                                                                                                                                             | 37                            | 37 | 37 | 36 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 36 | 37 | 40 | 42 | 44 | 46 | 47 | 49 | 50 | 50 | 50 | 50 | 50                              | 50.5             |
| 4-Apr                                                                                                                                                             | 51                            | 52 | 52 | 52 | 51 | 50 | 49 | 47 | 46 | 44 | 43 | 43 | 42 | 43 | 43 | 43 | 44 | 44 | 45 | 45 | 44 | 43 | 42 | 41                              | 52.3             |
| 5-Apr                                                                                                                                                             | 41                            | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 39 | 39 | 39 | 39 | 39 | 40 | 41 | 43 | 44 | 46 | 46 | 47 | 48 | 48 | 48 | 47                              | 47.8             |
| 6-Apr                                                                                                                                                             | 47                            | 46 | 46 | 44 | 42 | 41 | 40 | 40 | 39 | 38 | 38 | 39 | 40 | 41 | 41 | 42 | 42 | 43 | 43 | 43 | 43 | 43 | 42 | 41                              | 47.1             |
| 7-Apr                                                                                                                                                             | 41                            | 41 | 40 | 40 | 39 | 39 | 38 | 37 | 37 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 43 | 43 | 42 | 41 | 39 | 38 | 37 | 36                              | 43.4             |
| 8-Apr                                                                                                                                                             | 36                            | 35 | 35 | 35 | 35 | 35 | 34 | 34 | 34 | 34 | 34 | 35 | 36 | 37 | 39 | 40 | 42 | 44 | 45 | 46 | 47 | 47 | 47 | 46                              | 47.0             |
| 9-Apr                                                                                                                                                             | 45                            | 45 | 44 | 44 | 43 | 43 | 42 | 42 | 41 | 41 | 41 | 42 | 42 | 42 | 43 | 43 | 44 | 44 | 44 | 44 | 43 | 43 | 42 | 42                              | 45.4             |
| 10-Apr                                                                                                                                                            | 41                            | 41 | 40 | 40 | 39 | 38 | 38 | 38 | 38 | 38 | 38 | 39 | 39 | 40 | 41 | 41 | 41 | 42 | 42 | 42 | 42 | 41 | 41 | 40                              | 41.6             |
| 11-Apr                                                                                                                                                            | 39                            | 39 | 38 | 38 | 38 | 39 | 40 | 40 | 39 | 39 | 39 | 38 | 38 | 37 | 36 | 36 | 37 | 38 | 38 | 39 | 39 | 39 | 39 | 39                              | 39.7             |
| 12-Apr                                                                                                                                                            | 38                            | 37 | 35 | 33 | 32 | 32 | 31 | 31 | 31 | 32 | 34 | 35 | 36 | 38 | 40 | 42 | 43 | 44 | 44 | 43 | 42 | 41 | 39 | 38                              | 43.6             |
| 13-Apr                                                                                                                                                            | 36                            | 34 | 33 | 32 | 31 | 31 | 30 | 30 | 31 | 31 | 31 | 32 | 34 | 35 | 37 | 38 | 40 | 41 | 41 | 42 | 42 | 42 | 42 | 42                              | 42.5             |
| 14-Apr                                                                                                                                                            | 42                            | 42 | 42 | 41 | 40 | 40 | 39 | 38 | 38 | 37 | 37 | 38 | 39 | 41 | 43 | 46 | 48 | 48 | 49 | 49 | 50 | 49 | 48 | 47                              | 49.6             |
| 15-Apr                                                                                                                                                            | 46                            | 45 | 44 | 43 | 43 | 43 | 42 | 42 | 42 | 41 | 40 | 40 | 40 | 40 | 41 | 42 | 43 | 44 | 44 | 45 | 45 | 44 | 44 | 42                              | 45.6             |
| 16-Apr                                                                                                                                                            | 41                            | 40 | 39 | 38 | 38 | 38 | 38 | 39 | 39 | 40 | 41 | 42 | 44 | 45 | 46 | 46 | 47 | 48 | 49 | 50 | 49 | 49 | 48 | 47                              | 49.5             |
| 17-Apr                                                                                                                                                            | 45                            | 43 | 40 | 37 | 34 | 32 | 31 | 30 | 31 | 32 | 33 | 35 | 38 | 40 | 39 | 40 | 40 | 39 | 39 | 39 | 38 | 37 | 37 | 37                              | 44.9             |
| 18-Apr                                                                                                                                                            | 37                            | 37 | 37 | 37 | 37 | 37 | 36 | 36 | 35 | 35 | 35 | 35 | 34 | 35 | 35 | 36 | 36 | 36 | 36 | 37 | 36 | 35 | 34 | 33                              | 36.8             |
| 19-Apr                                                                                                                                                            | 32                            | 31 | 31 | 30 | 30 | 30 | 29 | 29 | 29 | 30 | 31 | 33 | 34 | 37 | 40 | 43 | 45 | 47 | 49 | 50 | 50 | 50 | 50 | 49                              | 50.5             |
| 20-Apr                                                                                                                                                            | 48                            | 45 | 44 | 43 | 42 | 40 | 38 | 37 | 36 | 39 | 39 | 40 | 40 | 42 | 42 | 43 | 44 | 44 | 43 | 43 | 41 | 40 | 39 | 38                              | 48.4             |
| 21-Apr                                                                                                                                                            | 37                            | 36 | 36 | 35 | 36 | 36 | 37 | 37 | 37 | 38 | 38 | 39 | 41 | 43 | 45 | 47 | 49 | 51 | 51 | 51 | 50 | 49 | 48 | 47                              | 51.1             |
| 22-Apr                                                                                                                                                            | 47                            | 46 | 46 | 46 | 46 | 46 | 45 | 44 | 43 | 43 | 43 | 43 | 44 | 46 | 47 | 48 | 49 | 49 | 50 | 51 | 51 | 50 | 50 | 49                              | 50.7             |
| 23-Apr                                                                                                                                                            | 49                            | 48 | 47 | 45 | 43 | 41 | 39 | 38 | 37 | 36 | 34 | 33 | 32 | 32 | N  | N  | N  | N  | N  | N  | N  | 24 | 24 | 24                              | 49.3             |
| 24-Apr                                                                                                                                                            | 23                            | 24 | 24 | 24 | 25 | 25 | 25 | 25 | 25 | 24 | 24 | 24 | 24 | 24 | 25 | 25 | 26 | 26 | 27 | 26 | 26 | 25 | 25 | 23                              | 26.5             |
| 25-Apr                                                                                                                                                            | 23                            | 23 | 22 | 23 | 23 | 23 | 23 | 23 | 22 | 23 | 23 | 24 | 24 | 25 | 27 | 28 | 29 | 29 | 29 | 30 | 29 | 30 | 29 | 29                              | 29.7             |
| 26-Apr                                                                                                                                                            | 28                            | 26 | 24 | 23 | 22 | 22 | 21 | 20 | 20 | 21 | 23 | 24 | 26 | 28 | 31 | 33 | 35 | 36 | 37 | 37 | 37 | 37 | 36 | 35                              | 37.4             |
| 27-Apr                                                                                                                                                            | 33                            | 32 | 31 | 30 | 29 | 28 | 27 | 25 | 24 | 24 | 23 | 23 | 22 | 22 | 22 | 24 | 25 | 26 | 28 | 29 | 30 | 31 | 32 | 32                              | 33.4             |
| 28-Apr                                                                                                                                                            | 31                            | 30 | 29 | 28 | 27 | 26 | 25 | 26 | 27 | 28 | 30 | 32 | 35 | 37 | 39 | 40 | 41 | 42 | 42 | 42 | 41 | 41 | 40 | 38                              | 42.3             |
| 29-Apr                                                                                                                                                            | 35                            | 33 | 33 | 31 | 30 | 28 | 27 | 27 | 28 | 30 | 31 | 33 | 36 | 39 | 42 | 44 | 46 | 48 | 49 | 49 | 49 | 49 | 48 | 47                              | 49.2             |
| 30-Apr                                                                                                                                                            | 47                            | 46 | 45 | 44 | 43 | 41 | 40 | 38 | 36 | 35 | 35 | 35 | 36 | 37 | 38 | 40 | 41 | 41 | 41 | 40 | 38 | 36 | 35 | 33                              | 46.8             |
| 51.3 52.3 52.1 51.7 51.2 50.1 48.6 47.2 45.6 44.3 43.3 43.4 44.3 45.5 46.5 47.6 49.1 50.6 51.1 50.9 51.5 51.7 52.0 51.0                                           |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                 | Diurnal Maximums |
| N - Not Valid                                                                                                                                                     |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                 |                  |

## Span Responses

Ozone (O<sub>3</sub>)  
Portable Reno - April 2014



# Hourly Averages

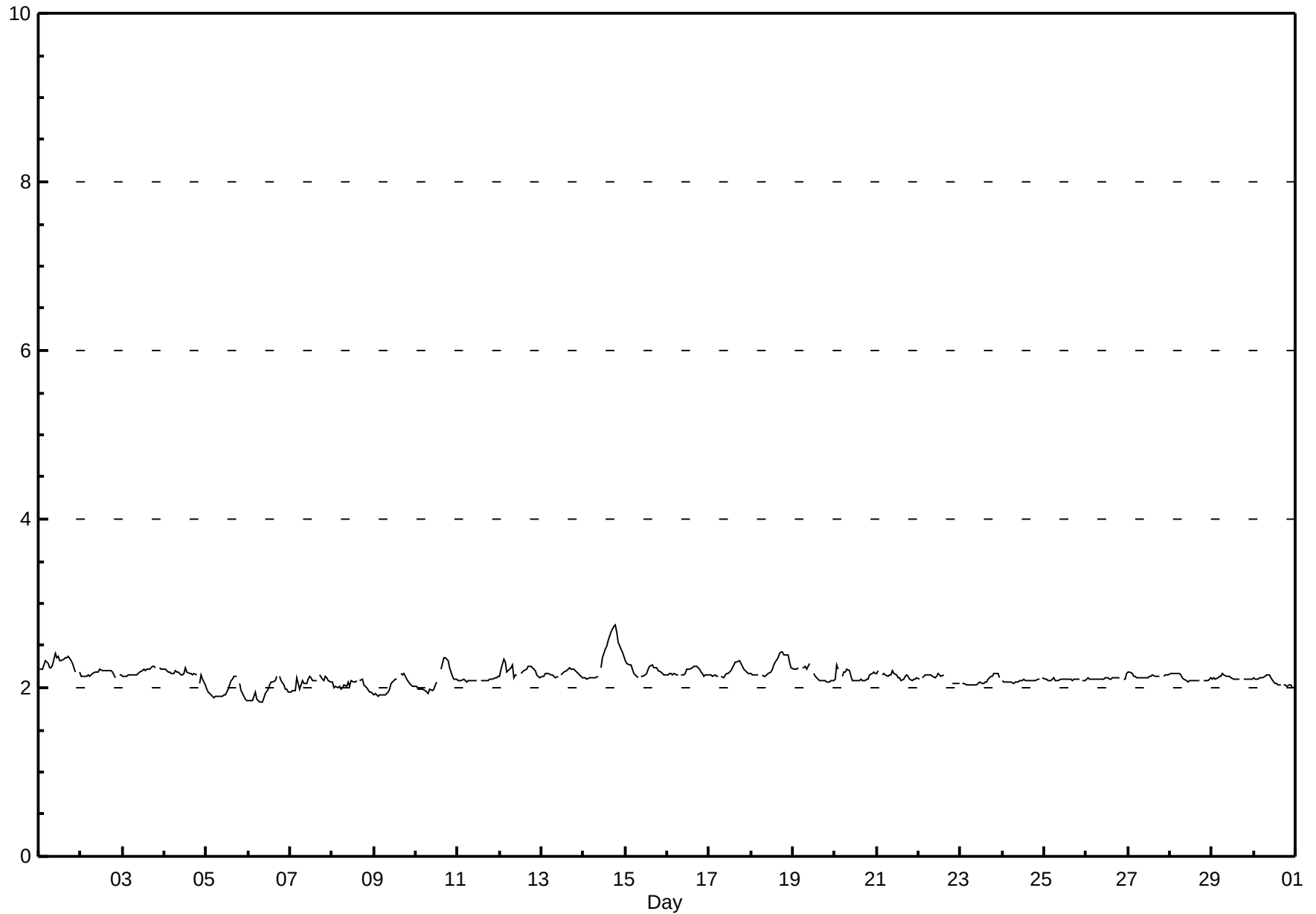
Total Hydrocarbons (THC) - ppm

Portable Reno - April 2014

| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 2.74 ppm on Apr 14 19:00 Maximum Daily Average: 2.36 ppm on Apr 14                                                                                                                                                                                                                                       |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Hours in Service: 720          |               |               |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------------------------------|---------------|---------------|------|
| Minimum Value: 1.8 ppm on Apr 6 07:00 Minimum Daily Average: 1.96 ppm on Apr 5<br>Maximum Diurnal Average: 2.20 ppm at hour 18 Minimum Diurnal Average: 2.10 ppm at hour 7<br>Monthly Average: 2.133 ppm Percentiles: P <sub>1</sub> = 1.86 P <sub>10</sub> = 2.01 Q <sub>1</sub> = 2.08 Median = 2.13 Q <sub>3</sub> = 2.17 P <sub>90</sub> = 2.25 P <sub>99</sub> = 2.54 |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Hours of Data: 683             |               |               |      |
|                                                                                                                                                                                                                                                                                                                                                                            |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Hours of Missing Data: 37      |               |               |      |
|                                                                                                                                                                                                                                                                                                                                                                            |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Hours of Calibration: 35       |               |               |      |
|                                                                                                                                                                                                                                                                                                                                                                            |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 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-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.2                           | 2.2 | 2.2 | 2.3 | 2.3 | 2.3 | 2.2 | 2.2 | 2.3 | 2.4 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 | 2.4 | 2.4 | 2.4 | 2.3 | 2.3 | 2.2 | 2.2 | A   | 2.2                            | 2.29          | 2.41          |      |
| 2-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.1                           | 2.1 | 2.1 | 2.1 | 2.2 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | A   | 2.2 | 2.1                            | 2.17          | 2.21          |      |
| 3-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.1                           | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.2 | 2.2 | A   | 2.2 | 2.2 | 2.2                            | 2.19          | 2.26          |      |
| 4-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.2                           | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | A   | 2.1 | 2.2 | 2.1 | 2.0                            | 2.16          | 2.23          |      |
| 5-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.0                           | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.1 | 2.0 | 1.9 | 1.9 | 1.8                            | 1.96          | 2.14          |      |
| 6-Apr                                                                                                                                                                                                                                                                                                                                                                      | 1.8                           | 1.8 | 1.9 | 1.9 | 1.9 | 1.9 | 1.8 | 1.8 | 1.8 | 1.9 | 1.9 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0                            | 1.96          | 2.14          |      |
| 7-Apr                                                                                                                                                                                                                                                                                                                                                                      | 1.9                           | 2.0 | 2.0 | 2.0 | 2.1 | 2.0 | 2.0 | 2.1 | 2.1 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1                            | 2.07          | 2.15          |      |
| 8-Apr                                                                                                                                                                                                                                                                                                                                                                      | 2.1                           | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 | 1.9                            | 2.03          | 2.11          |      |
| 9-Apr                                                                                                                                                                                                                                                                                                                                                                      | 1.9                           | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.2 | 2.2 | 2.2 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0                            | 2.02          | 2.16          |      |
| 10-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.0                           | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 | 1.9 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | A   | 2.2 | 2.3 | 2.4 | 2.3 | 2.3 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1                            | 2.09          | 2.35          |      |
| 11-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1                            | 2.09          | 2.13          |      |
| 12-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 2.2 | 2.3 | 2.3 | 2.2 | 2.2 | 2.2 | 2.3 | 2.1 | 2.2 | 2.2 | A   | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.3 | 2.2 | 2.2 | 2.2 | 2.1 | 2.1                            | 2.21          | 2.33          |      |
| 13-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.1                            | 2.17          | 2.23          |      |
| 14-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.2 | 2.4 | 2.5 | 2.5 | 2.6 | 2.6 | 2.7 | 2.7 | 2.7 | 2.7 | 2.5 | 2.5 | 2.4 | 2.4                            | 2.36          | 2.74          |      |
| 15-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.3                           | 2.3 | 2.3 | 2.3 | 2.2 | 2.2 | 2.1 | 2.1 | A   | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2                            | 2.21          | 2.33          |      |
| 16-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.2                           | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | A   | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1                            | 2.19          | 2.26          |      |
| 17-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.2 | 2.2 | 2.2 | 2.2                            | 2.20          | 2.33          |      |
| 18-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.2                           | 2.2 | 2.2 | 2.1 | 2.2 | A   | 2.2 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.3 | 2.2                            | 2.25          | 2.42          |      |
| 19-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.2                           | 2.2 | 2.2 | 2.2 | A   | 2.2 | 2.2 | 2.3 | 2.2 | 2.3 | M   | M   | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1                            | 2.16          | 2.28          |      |
| 20-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 2.3 | 2.2 | A   | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2                            | 2.14          | 2.26          |      |
| 21-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.2                           | 2.2 | A   | 2.2 | 2.2 | 2.2 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1                            | 2.14          | 2.20          |      |
| 22-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | A   | 2.1 | 2.1 | 2.1 | 2.2 | 2.1 | 2.2 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.1 | 2.1 | C   | C   | C   | C   | 2.1 | 2.1 | 2.1 | 2.1 | 2.0                            | 2.12          | 2.16          |      |
| 23-Apr                                                                                                                                                                                                                                                                                                                                                                     | A                             | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | C   | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.1                            | A             | 2.08          | 2.17 |
| 24-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.1                            | 2.08          | 2.12          |      |
| 25-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.1 | 2.1                            | 2.09          | 2.12          |      |
| 26-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.1 | 2.1 | 2.2                            | 2.11          | 2.18          |      |
| 27-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.2                           | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.1 | 2.2 | 2.2                            | 2.14          | 2.19          |      |
| 28-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.2                           | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.1 | 2.1 | 2.1 | 2.1                            | 2.11          | 2.18          |      |
| 29-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 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                            | 2.12          | 2.17          |      |
| 30-Apr                                                                                                                                                                                                                                                                                                                                                                     | 2.1                           | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | A   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0                            | 2.08          | 2.16          |      |
|                                                                                                                                                                                                                                                                                                                                                                            |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Diurnal Average                |               |               |      |
|                                                                                                                                                                                                                                                                                                                                                                            |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Diurnal Maximum                |               |               |      |
| C - Calibration M - Maintenance A - Automated Daily Zero Span                                                                                                                                                                                                                                                                                                              |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                |               |               |      |

## Hourly Averages

Total Hydrocarbons (THC) - ppm  
Portable Reno - April 2014



# Hourly Maximums

Total Hydrocarbons (THC) - ppm

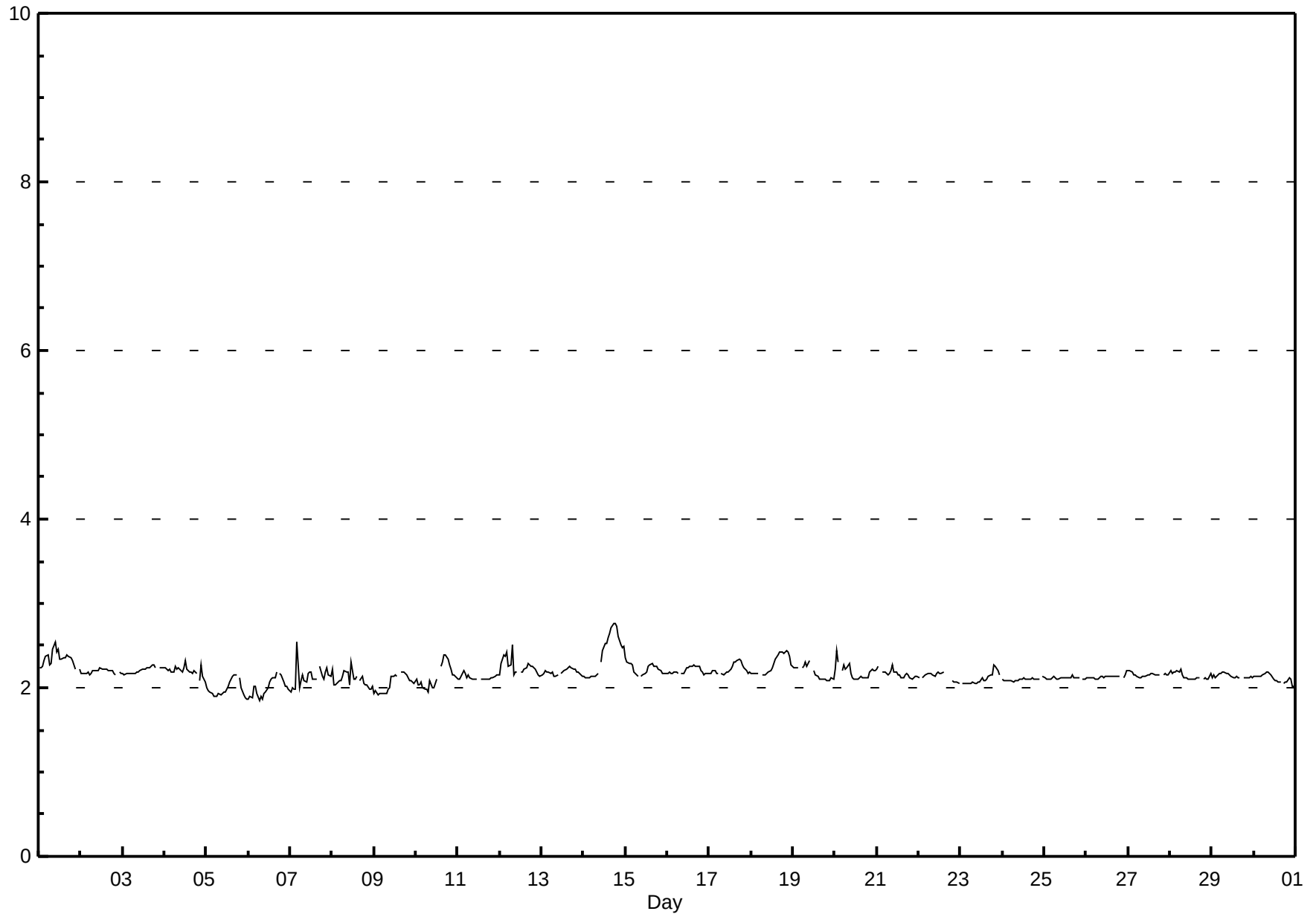
Portable Reno - April 2014

| Maximum Value: 2.77 ppm on Apr 14 19:00                                                                                 |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Maximum Daily Average: 2.40 ppm on Apr 14                                                                                                                         |     |     |     | Hours in Service: 720          |               |      |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|--------------------------------|---------------|------|
| Minimum Value: 1.9 ppm on Apr 6 07:00                                                                                   |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Minimum Daily Average: 1.98 ppm on Apr 5                                                                                                                          |     |     |     | Hours of Data: 683             |               |      |
| Maximum Diurnal Average: 2.22 ppm at hour 18                                                                            |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Minimum Diurnal Average: 2.13 ppm at hour 6                                                                                                                       |     |     |     | Hours of Missing Data: 37      |               |      |
| Monthly Average: 2.163 ppm                                                                                              |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Percentiles: P <sub>1</sub> = 1.89 P <sub>10</sub> = 2.05 Q <sub>1</sub> = 2.11 Median = 2.15 Q <sub>3</sub> = 2.21 P <sub>90</sub> = 2.28 P <sub>99</sub> = 2.59 |     |     |     | Hours of Calibration: 35       |               |      |
|                                                                                                                         |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                   |     |     |     | 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-Apr                                                                                                                   | 2.2                           | 2.2 | 2.3 | 2.3 | 2.4 | 2.4 | 2.3 | 2.3 | 2.5 | 2.6 | 2.4 | 2.5 | 2.3 | 2.3 | 2.4 | 2.4 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3                                                                                                                                                               | 2.1 | A   | A   | 2.2                            | 2.34          | 2.55 |
| 2-Apr                                                                                                                   | 2.2                           | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1                                                                                                                                                               | A   | A   | 2.2 | 2.19                           | 2.24          |      |
| 3-Apr                                                                                                                   | 2.2                           | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.3 | 2.2 | A                                                                                                                                                                 | A   | 2.2 | 2.2 | 2.21                           | 2.27          |      |
| 4-Apr                                                                                                                   | 2.2                           | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | A   | 2.1                                                                                                                                                               | 2.3 | 2.1 | 2.1 | 2.20                           | 2.33          |      |
| 5-Apr                                                                                                                   | 2.0                           | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.2 | 2.1 | A   | 2.1 | 2.0                                                                                                                                                               | 1.9 | 1.9 | 1.9 | 1.98                           | 2.15          |      |
| 6-Apr                                                                                                                   | 1.9                           | 1.9 | 1.9 | 2.0 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | A   | 2.2 | 2.1 | 2.1                                                                                                                                                               | 2.0 | 2.0 | 2.0 | 2.00                           | 2.19          |      |
| 7-Apr                                                                                                                   | 2.0                           | 2.0 | 2.0 | 2.0 | 2.5 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | A   | 2.2 | 2.1 | 2.1 | 2.2                                                                                                                                                               | 2.2 | 2.2 | 2.1 | 2.13                           | 2.54          |      |
| 8-Apr                                                                                                                   | 2.2                           | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.0 | 2.3 | 2.1 | 2.1 | 2.1 | A   | 2.1 | 2.1 | 2.1 | 2.0 | 2.0                                                                                                                                                               | 2.0 | 2.0 | 2.0 | 2.10                           | 2.30          |      |
| 9-Apr                                                                                                                   | 1.9                           | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 2.0 | 2.0 | 2.1 | 2.1 | 2.2 | 2.1 | A   | A   | 2.2 | 2.2 | 2.2 | 2.1 | 2.1                                                                                                                                                               | 2.1 | 2.1 | 2.0 | 2.05                           | 2.19          |      |
| 10-Apr                                                                                                                  | 2.1                           | 2.0 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.0 | 2.0 | 2.1 | 2.1 | A   | 2.3 | 2.3 | 2.4 | 2.4 | 2.3 | 2.3 | 2.2                                                                                                                                                               | 2.2 | 2.1 | 2.1 | 2.13                           | 2.39          |      |
| 11-Apr                                                                                                                  | 2.1                           | 2.1 | 2.1 | 2.2 | 2.2 | 2.1 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1                                                                                                                                                               | 2.1 | 2.2 | 2.2 | 2.12                           | 2.20          |      |
| 12-Apr                                                                                                                  | 2.2                           | 2.3 | 2.4 | 2.4 | 2.4 | 2.3 | 2.3 | 2.5 | 2.2 | 2.2 | 2.2 | A   | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.3 | 2.3 | 2.2                                                                                                                                                               | 2.2 | 2.1 | 2.1 | 2.25                           | 2.50          |      |
| 13-Apr                                                                                                                  | 2.2                           | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.1 | 2.2 | A   | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.2 | 2.2 | 2.2 | 2.2                                                                                                                                                               | 2.2 | 2.2 | 2.1 | 2.19                           | 2.25          |      |
| 14-Apr                                                                                                                  | 2.1                           | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | A   | 2.3 | 2.4 | 2.5 | 2.5 | 2.6 | 2.6 | 2.7 | 2.8 | 2.8 | 2.7 | 2.6                                                                                                                                                               | 2.5 | 2.5 | 2.5 | 2.40                           | 2.77          |      |
| 15-Apr                                                                                                                  | 2.4                           | 2.3 | 2.3 | 2.3 | 2.3 | 2.2 | 2.2 | 2.1 | A   | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.3 | 2.3 | 2.2 | 2.2 | 2.2                                                                                                                                                               | 2.2 | 2.2 | 2.2 | 2.22                           | 2.36          |      |
| 16-Apr                                                                                                                  | 2.2                           | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | A   | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.3 | 2.3 | 2.2 | 2.2 | 2.2                                                                                                                                                               | 2.2 | 2.2 | 2.2 | 2.20                           | 2.27          |      |
| 17-Apr                                                                                                                  | 2.2                           | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | A   | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.2                                                                                                                                                               | 2.2 | 2.2 | 2.2 | 2.22                           | 2.34          |      |
| 18-Apr                                                                                                                  | 2.2                           | 2.2 | 2.2 | 2.2 | 2.2 | A   | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4                                                                                                                                                               | 2.4 | 2.4 | 2.3 | 2.27                           | 2.44          |      |
| 19-Apr                                                                                                                  | 2.2                           | 2.2 | 2.2 | 2.2 | A   | 2.2 | 2.3 | 2.3 | 2.3 | 2.3 | M   | M   | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1                                                                                                                                                               | 2.1 | 2.1 | 2.1 | 2.18                           | 2.32          |      |
| 20-Apr                                                                                                                  | 2.2                           | 2.4 | 2.3 | A   | 2.2 | 2.3 | 2.2 | 2.2 | 2.3 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2                                                                                                                                                               | 2.2 | 2.2 | 2.2 | 2.19                           | 2.44          |      |
| 21-Apr                                                                                                                  | 2.2                           | 2.3 | A   | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.1 | 2.1 | 2.1                                                                                                                                                               | 2.1 | 2.1 | 2.1 | 2.16                           | 2.26          |      |
| 22-Apr                                                                                                                  | 2.1                           | A   | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | C   | C   | C   | C   | 2.1 | 2.1                                                                                                                                                               | 2.1 | 2.1 | 2.1 | 2.13                           | 2.19          |      |
| 23-Apr                                                                                                                  | A                             | 2.1 | 2.1 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | C   | 2.1 | 2.1 | 2.2 | 2.3                                                                                                                                                               | 2.3 | 2.2 | 2.2 | A                              | 2.11          | 2.26 |
| 24-Apr                                                                                                                  | 2.1                           | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1                                                                                                                                                               | 2.1 | A   | 2.1 | 2.10                           | 2.13          |      |
| 25-Apr                                                                                                                  | 2.1                           | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1                                                                                                                                                               | A   | 2.1 | 2.1 | 2.12                           | 2.15          |      |
| 26-Apr                                                                                                                  | 2.1                           | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | A                                                                                                                                                                 | 2.1 | 2.1 | 2.2 | 2.13                           | 2.21          |      |
| 27-Apr                                                                                                                  | 2.2                           | 2.2 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.2 | A   | 2.2                                                                                                                                                               | 2.2 | 2.2 | 2.2 | 2.16                           | 2.21          |      |
| 28-Apr                                                                                                                  | 2.2                           | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.1 | 2.1                                                                                                                                                               | 2.1 | 2.1 | 2.2 | 2.14                           | 2.23          |      |
| 29-Apr                                                                                                                  | 2.1                           | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 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 | 2.14                           | 2.19          |      |
| 30-Apr                                                                                                                  | 2.1                           | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | A   | 2.0 | 2.1 | 2.1 | 2.1                                                                                                                                                               | 2.1 | 2.0 | 2.0 | 2.11                           | 2.19          |      |
| 2.14 2.14 2.13 2.14 2.16 2.13 2.13 2.14 2.14 2.15 2.14 2.17 2.18 2.17 2.19 2.20 2.22 2.22 2.21 2.19 2.17 2.16 2.14 2.14 |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                   |     |     |     | Diurnal Average                |               |      |
| 2.36 2.44 2.39 2.38 2.54 2.39 2.28 2.50 2.46 2.55 2.43 2.46 2.52 2.52 2.60 2.64 2.71 2.76 2.77 2.72 2.61 2.50 2.47 2.48 |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                   |     |     |     | Diurnal Maximum                |               |      |
| C - Calibration M - Maintenance A - Automated Daily Zero Span                                                           |                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |                                                                                                                                                                   |     |     |     |                                |               |      |



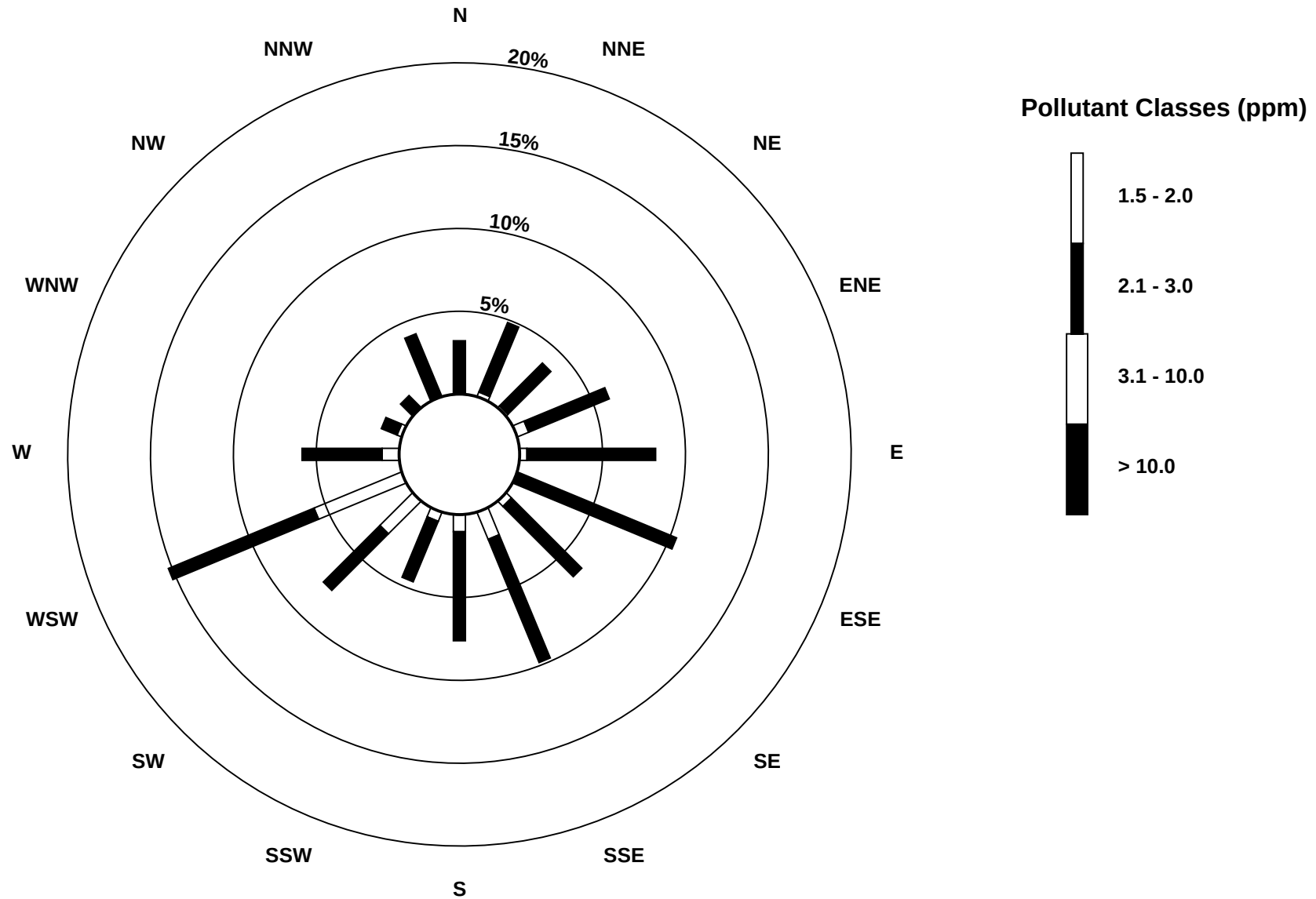
## Hourly Maximums

Total Hydrocarbons (THC) - ppm  
Portable Reno - April 2014



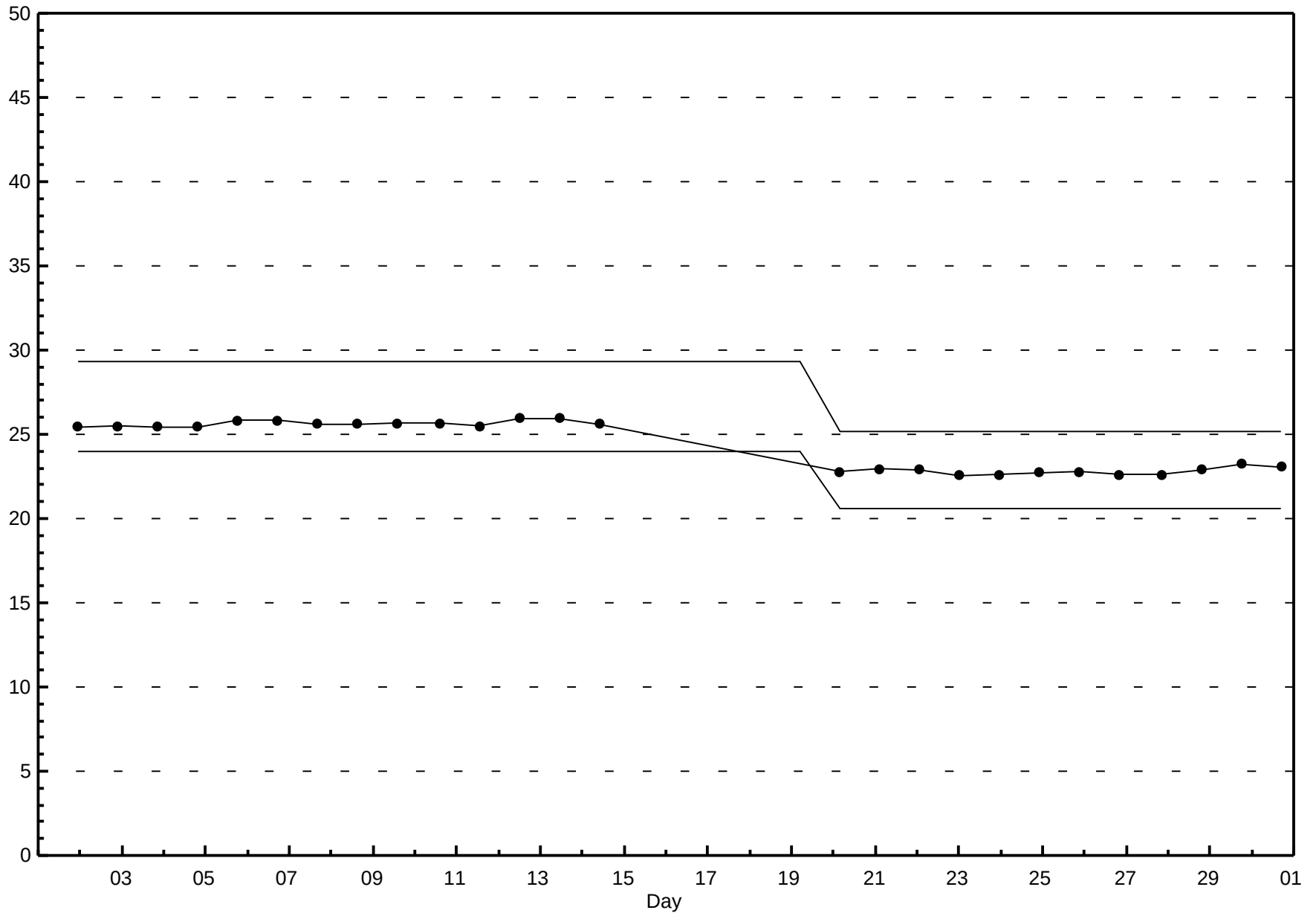
# Pollutant Rose

Total Hydrocarbons (THC) - ppm  
Portable Reno - April 2014



## Span Responses

Total Hydrocarbons (THC)  
Portable Reno - April 2014



# Hourly Averages

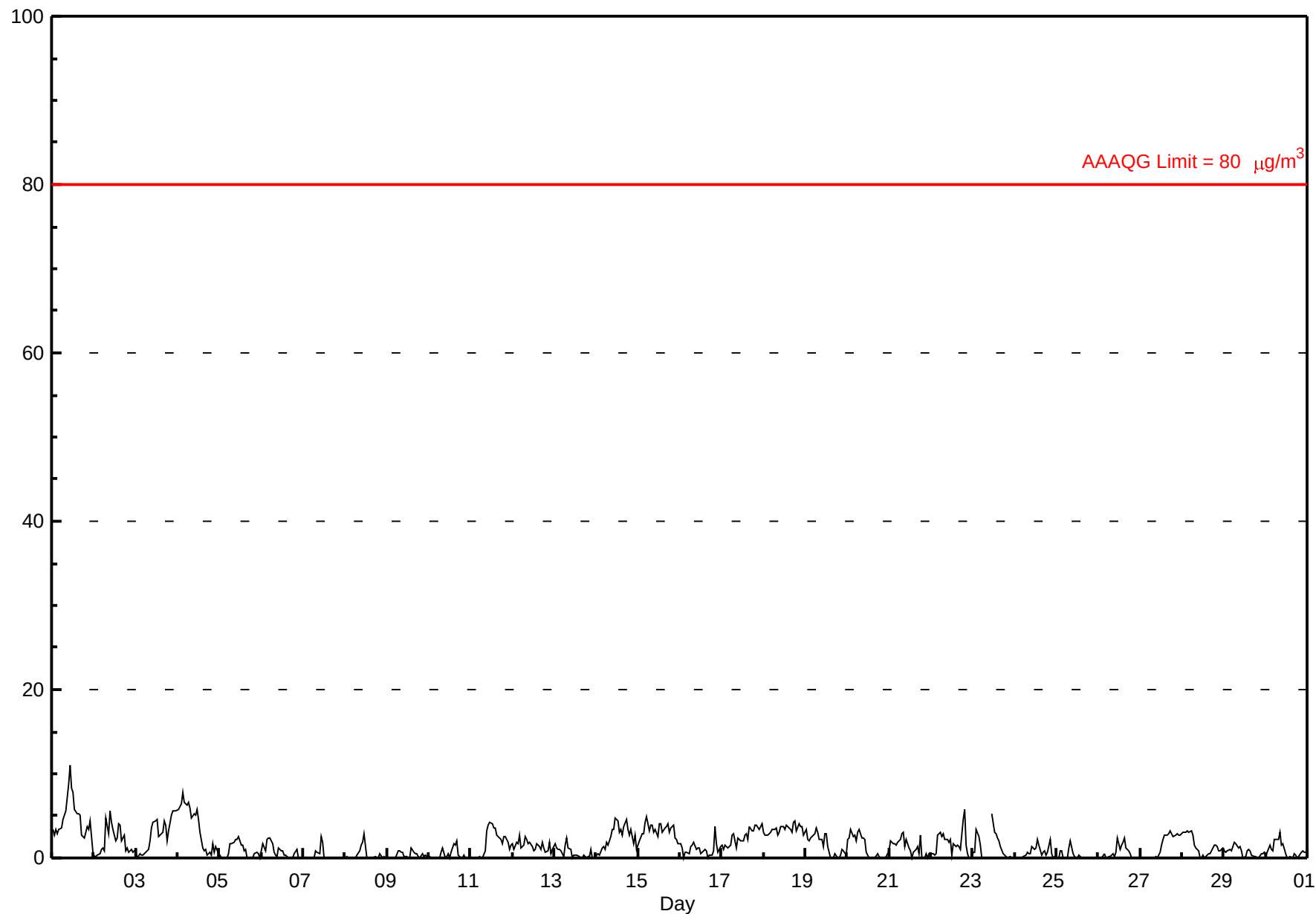
PM2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

Portable Reno - April 2014

| Number of Exceedences: 1-hr: 0 24-hr: 0<br>Maximum Value: 11.1 µg/m³ on Apr 1 11:00<br>Maximum Daily Average: 4.7 µg/m³ on Apr 1                                                                                                                                                                                                                                                   |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 718<br>Hours of Missing Data: 2<br>Hours of Calibration: 0<br>Percent Operational Time: 99.7 |               |               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|
| Minimum Value: 0 µg/m³ on Apr 5 02:00<br>Maximum Diurnal Average: 2.3 µg/m³ at hour 12<br>Monthly Average: 1.52 µg/m³<br>Minimum Daily Average: 0.2 µg/m³ on Apr 25<br>Minimum Diurnal Average: 0.9 µg/m³ at hour 24<br>Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 1.0 Q <sub>3</sub> = 2.5 P <sub>90</sub> = 3.7 P <sub>99</sub> = 6.4 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                      |               |               |
| 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-Apr                                                                                                                                                                                                                                                                                                                                                                              | 3                             | 3 | 3 | 3 | 3 | 3 | 5 | 5 | 6 | 9  | 11 | 8  | 8  | 6  | 5  | 5  | 5  | 3  | 2  | 3  | 4  | 3  | 4  | 1                                                                                                                                    | 4.7           | 11.1          |
| 2-Apr                                                                                                                                                                                                                                                                                                                                                                              | 0                             | 0 | 0 | 1 | 1 | 1 | 1 | 5 | 3 | 6  | 4  | 3  | 2  | 2  | 4  | 4  | 2  | 3  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                    | 2.0           | 5.6           |
| 3-Apr                                                                                                                                                                                                                                                                                                                                                                              | 1                             | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 4  | 4  | 4  | 4  | 3  | 3  | 3  | 4  | 4  | 2  | 3  | 5  | 6  | 6  | 6                                                                                                                                    | 2.8           | 5.6           |
| 4-Apr                                                                                                                                                                                                                                                                                                                                                                              | 6                             | 6 | 6 | 8 | 7 | 6 | 7 | 6 | 5 | 5  | 5  | 6  | 5  | 3  | 1  | 1  | 1  | 0  | 1  | 0  | 2  | 1  | 1  | 0                                                                                                                                    | 3.7           | 7.8           |
| 5-Apr                                                                                                                                                                                                                                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 2  | 2  | 2  | 2  | 2  | 1  | 1  | 0  | 0  | 0  | 0  | 1  | 1  | 0  | 0                                                                                                                                    | 0.8           | 2.5           |
| 6-Apr                                                                                                                                                                                                                                                                                                                                                                              | 1                             | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 0 | 0  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0                                                                                                                                    | 0.8           | 2.4           |
| 7-Apr                                                                                                                                                                                                                                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1  | 3  | 2  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                    | 0.3           | 2.6           |
| 8-Apr                                                                                                                                                                                                                                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1  | 2  | 3  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0                                                                                                                                    | 0.3           | 2.8           |
| 9-Apr                                                                                                                                                                                                                                                                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1  | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 0  | 0  | 0  | 1  | 0  | 0  | 0                                                                                                                                    | 0.3           | 1.3           |
| 10-Apr                                                                                                                                                                                                                                                                                                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0  | 0  | 1  | 0  | 1  | 2  | 1  | 2  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                    | 0.4           | 2.1           |
| 11-Apr                                                                                                                                                                                                                                                                                                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3  | 4  | 4  | 4  | 4  | 4  | 3  | 3  | 2  | 2  | 3  | 3  | 2  | 1  | 2                                                                                                                                    | 1.8           | 4.3           |
| 12-Apr                                                                                                                                                                                                                                                                                                                                                                             | 2                             | 1 | 2 | 2 | 3 | 1 | 2 | 3 | 2 | 2  | 2  | 1  | 1  | 1  | 2  | 1  | 1  | 2  | 1  | 1  | 1  | 2  | 0  | 1                                                                                                                                    | 1.5           | 2.7           |
| 13-Apr                                                                                                                                                                                                                                                                                                                                                                             | 2                             | 1 | 1 | 1 | 1 | 0 | 2 | 2 | 1 | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0                                                                                                                                    | 0.6           | 2.3           |
| 14-Apr                                                                                                                                                                                                                                                                                                                                                                             | 0                             | 1 | 0 | 1 | 1 | 1 | 2 | 1 | 3 | 3  | 3  | 5  | 4  | 3  | 3  | 3  | 4  | 5  | 3  | 3  | 3  | 2  | 3  | 1                                                                                                                                    | 2.4           | 4.7           |
| 15-Apr                                                                                                                                                                                                                                                                                                                                                                             | 2                             | 2 | 3 | 3 | 4 | 5 | 3 | 4 | 4 | 3  | 3  | 2  | 4  | 4  | 3  | 4  | 4  | 4  | 3  | 3  | 4  | 2  | 2  | 2                                                                                                                                    | 3.2           | 4.9           |
| 16-Apr                                                                                                                                                                                                                                                                                                                                                                             | 2                             | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 2 | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 1  | 4  | 2  | 1  | 1  | 1                                                                                                                                    | 1.0           | 3.7           |
| 17-Apr                                                                                                                                                                                                                                                                                                                                                                             | 2                             | 1 | 2 | 1 | 1 | 2 | 3 | 3 | 1 | 2  | 2  | 2  | 2  | 3  | 3  | 2  | 4  | 3  | 3  | 4  | 4  | 3  | 4  | 4                                                                                                                                    | 2.5           | 4.1           |
| 18-Apr                                                                                                                                                                                                                                                                                                                                                                             | 3                             | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3  | 4  | 4  | 3  | 4  | 4  | 3  | 3  | 4  | 4  | 3  | 4  | 4  | 4  | 3                                                                                                                                    | 3.4           | 4.4           |
| 19-Apr                                                                                                                                                                                                                                                                                                                                                                             | 3                             | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2  | 1  | 3  | 3  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 1  | 0                                                                                                                                    | 1.6           | 3.5           |
| 20-Apr                                                                                                                                                                                                                                                                                                                                                                             | 2                             | 2 | 3 | 2 | 3 | 2 | 3 | 3 | 2 | 2  | 2  | 1  | 0  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                    | 1.3           | 3.4           |
| 21-Apr                                                                                                                                                                                                                                                                                                                                                                             | 1                             | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 1  | 2  | 1  | 1  | 0  | 1  | 1  | 1  | 1  | 3  | 0  | 0  | 1  | 0  | 1                                                                                                                                    | 1.3           | 3.1           |
| 22-Apr                                                                                                                                                                                                                                                                                                                                                                             | 0                             | 1 | 0 | 1 | 3 | 3 | 3 | 3 | 2 | 2  | 2  | 2  | 0  | 2  | 1  | 2  | 1  | 1  | 5  | 6  | 1  | 1  | 0  | 0                                                                                                                                    | 1.7           | 5.7           |
| 23-Apr                                                                                                                                                                                                                                                                                                                                                                             | 1                             | 1 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | M  | M  | 5  | 3  | 3  | 2  | 2  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                    | 1.2           | 5.2           |
| 24-Apr                                                                                                                                                                                                                                                                                                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0  | 1  | 1  | 1  | 2  | 2  | 0  | 1  | 1  | 0  | 1  | 2  | 0  | 0  | 0                                                                                                                                    | 0.6           | 2.3           |
| 25-Apr                                                                                                                                                                                                                                                                                                                                                                             | 0                             | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                    | 0.2           | 2.0           |
| 26-Apr                                                                                                                                                                                                                                                                                                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0  | 1  | 2  | 1  | 2  | 2  | 2  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0                                                                                                                                    | 0.6           | 2.4           |
| 27-Apr                                                                                                                                                                                                                                                                                                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 1  | 2  | 2  | 3  | 3  | 3  | 3  | 3  | 3  | 3  | 3  | 3  | 3                                                                                                                                    | 1.4           | 3.2           |
| 28-Apr                                                                                                                                                                                                                                                                                                                                                                             | 3                             | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 1 | 1  | 0  | 0  | 0  | 0  | 1  | 1  | 1  | 1  | 2  | 2  | 1  | 1  | 1  | 1                                                                                                                                    | 1.5           | 3.3           |
| 29-Apr                                                                                                                                                                                                                                                                                                                                                                             | 1                             | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1  | 1  | 0  | 0  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1                                                                                                                                    | 0.7           | 1.8           |
| 30-Apr                                                                                                                                                                                                                                                                                                                                                                             | 0                             | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 2  | 2  | 1  | 0  | 0  | 0  | 0  | 1  | 0  | 0  | 0  | 1  | 1  | 1  | 1                                                                                                                                    | 0.9           | 3.1           |
|                                                                                                                                                                                                                                                                                                                                                                                    |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Diurnal Average                                                                                                                      |               |               |
|                                                                                                                                                                                                                                                                                                                                                                                    |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Diurnal Maximum                                                                                                                      |               |               |
|                                                                                                                                                                                                                                                                                                                                                                                    |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                      |               |               |
| M - Maintenance                                                                                                                                                                                                                                                                                                                                                                    |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                      |               |               |
| Alberta Ambient Air Quality Guideline (AAQG): 1-hr 80 µg/m³ Alberta Ambient Air Quality Objective (AAQO): 24-hr 30 µg/m³                                                                                                                                                                                                                                                           |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                      |               |               |

## Hourly Averages

PM2.5 (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$   
Portable Reno - April 2014



# Hourly Maximums

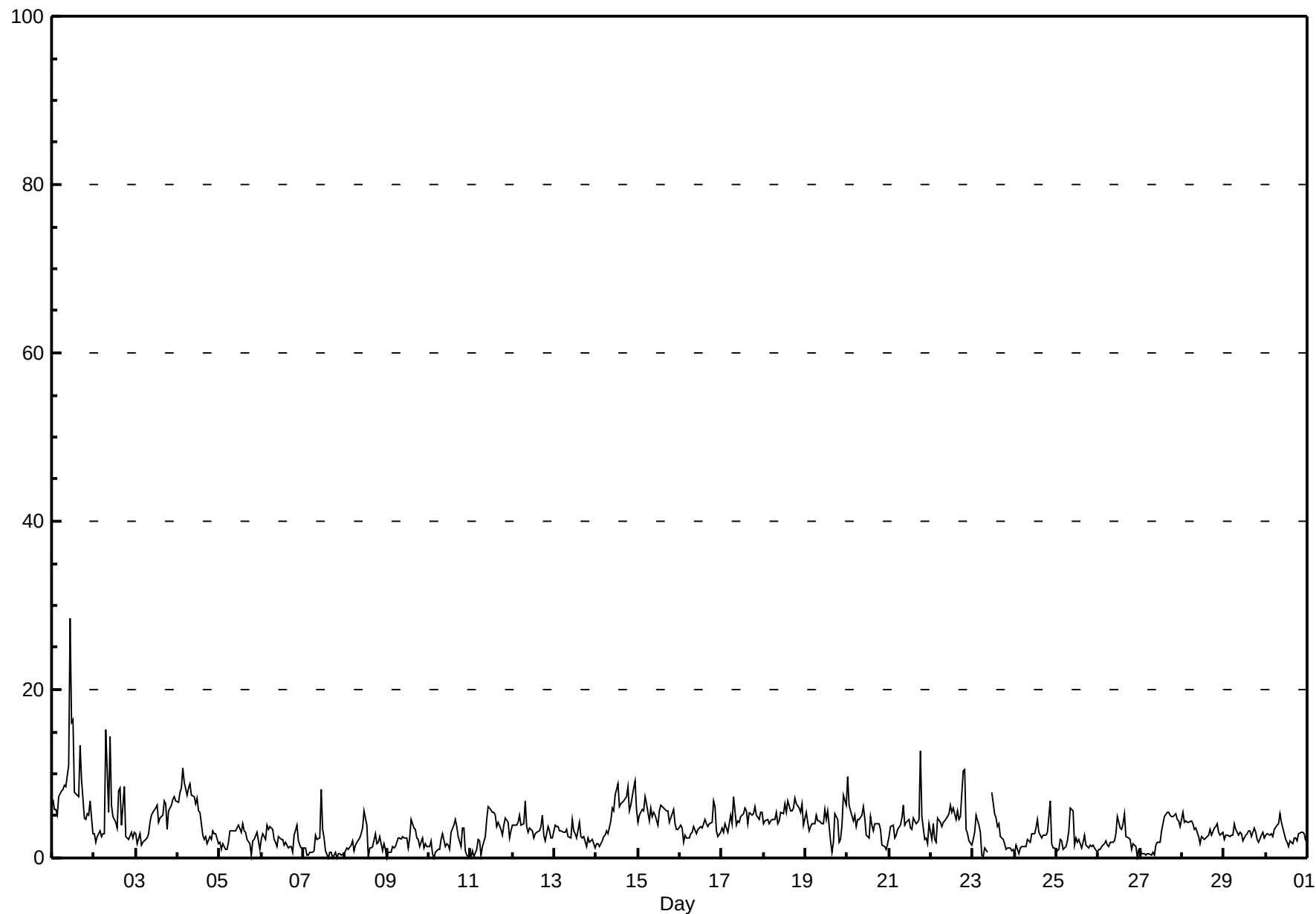
PM2.5 (PM<sub>2.5</sub>) - µg/m<sup>3</sup>

Portable Reno - April 2014

| Maximum Value: 28.5 μg/m³ on Apr 1 11:00                                                                                                                    |                               |   |   |    |   |   |   |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720          |               |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---|---|----|---|---|---|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------------------------------|---------------|---------------|
| Maximum Daily Average: 8.8 μg/m³ on Apr 1                                                                                                                   |                               |   |   |    |   |   |   |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Data: 718             |               |               |
| Minimum Value: 0 μg/m³ on Apr 7 15:00                                                                                                                       |                               |   |   |    |   |   |   |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Missing Data: 2       |               |               |
| Maximum Diurnal Average: 4.9 μg/m³ at hour 11                                                                                                               |                               |   |   |    |   |   |   |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Calibration: 0        |               |               |
| Monthly Average: 3.56 μg/m³                                                                                                                                 |                               |   |   |    |   |   |   |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percent Operational Time: 99.7 |               |               |
| Minimum Daily Average: 1.3 μg/m³ on Apr 7                                                                                                                   |                               |   |   |    |   |   |   |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                |               |               |
| Minimum Diurnal Average: 2.5 μg/m³ at hour 24                                                                                                               |                               |   |   |    |   |   |   |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                |               |               |
| Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 1.1 Q <sub>1</sub> = 2.0 Median = 3.1 Q <sub>3</sub> = 4.6 P <sub>90</sub> = 6.2 P <sub>99</sub> = 12.3 |                               |   |   |    |   |   |   |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                |               |               |
| 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-Apr                                                                                                                                                       | 7                             | 6 | 6 | 5  | 7 | 8 | 8 | 9  | 8 | 11 | 29 | 16 | 16 | 8  | 8  | 7  | 13 | 9  | 5  | 5  | 5  | 5  | 7  | 3                              | 8.8           | 28.5          |
| 2-Apr                                                                                                                                                       | 3                             | 2 | 2 | 3  | 2 | 3 | 3 | 15 | 5 | 14 | 6  | 5  | 4  | 4  | 8  | 8  | 4  | 9  | 2  | 2  | 2  | 3  | 2  | 3                              | 4.9           | 15.2          |
| 3-Apr                                                                                                                                                       | 3                             | 2 | 3 | 2  | 2 | 2 | 2 | 3  | 4 | 5  | 5  | 6  | 6  | 4  | 5  | 5  | 7  | 6  | 3  | 6  | 6  | 7  | 7  | 7                              | 4.5           | 7.3           |
| 4-Apr                                                                                                                                                       | 7                             | 8 | 8 | 11 | 9 | 7 | 8 | 9  | 7 | 7  | 6  | 7  | 6  | 5  | 3  | 2  | 2  | 2  | 3  | 2  | 3  | 3  | 3  | 2                              | 5.4           | 10.7          |
| 5-Apr                                                                                                                                                       | 2                             | 1 | 2 | 1  | 1 | 2 | 3 | 3  | 3 | 3  | 4  | 4  | 3  | 4  | 3  | 3  | 2  | 2  | 0  | 2  | 2  | 3  | 2  | 1                              | 2.4           | 4.1           |
| 6-Apr                                                                                                                                                       | 2                             | 3 | 2 | 4  | 3 | 4 | 3 | 2  | 2 | 1  | 3  | 2  | 2  | 2  | 2  | 1  | 1  | 1  | 1  | 3  | 4  | 2  | 1  | 1                              | 2.2           | 3.9           |
| 7-Apr                                                                                                                                                       | 1                             | 1 | 0 | 0  | 1 | 1 | 1 | 3  | 2 | 2  | 8  | 3  | 2  | 1  | 0  | 1  | 1  | 0  | 1  | 0  | 1  | 0  | 0  | 0                              | 1.3           | 8.1           |
| 8-Apr                                                                                                                                                       | 1                             | 1 | 1 | 2  | 2 | 1 | 2 | 2  | 2 | 3  | 4  | 6  | 4  | 0  | 1  | 1  | 1  | 3  | 2  | 2  | 2  | 1  | 2  | 1                              | 1.9           | 5.6           |
| 9-Apr                                                                                                                                                       | 0                             | 1 | 1 | 1  | 1 | 1 | 2 | 2  | 2 | 3  | 2  | 2  | 1  | 2  | 5  | 4  | 3  | 2  | 2  | 1  | 2  | 1  | 2  | 1                              | 1.9           | 4.6           |
| 10-Apr                                                                                                                                                      | 1                             | 2 | 0 | 0  | 1 | 1 | 1 | 2  | 3 | 1  | 2  | 2  | 1  | 3  | 4  | 5  | 4  | 3  | 1  | 4  | 4  | 1  | 0  | 0                              | 1.9           | 4.6           |
| 11-Apr                                                                                                                                                      | 0                             | 1 | 0 | 1  | 2 | 2 | 0 | 1  | 3 | 5  | 6  | 6  | 5  | 5  | 5  | 4  | 4  | 3  | 3  | 4  | 5  | 4  | 2  | 3                              | 3.2           | 6.1           |
| 12-Apr                                                                                                                                                      | 4                             | 4 | 4 | 4  | 5 | 4 | 4 | 7  | 4 | 3  | 4  | 3  | 2  | 3  | 3  | 3  | 4  | 5  | 3  | 2  | 4  | 3  | 2  | 2                              | 3.6           | 6.8           |
| 13-Apr                                                                                                                                                      | 4                             | 4 | 4 | 3  | 3 | 3 | 3 | 3  | 3 | 2  | 5  | 3  | 3  | 2  | 4  | 2  | 2  | 3  | 1  | 2  | 2  | 2  | 2  | 1                              | 2.8           | 4.5           |
| 14-Apr                                                                                                                                                      | 2                             | 2 | 1 | 2  | 3 | 3 | 3 | 3  | 4 | 6  | 6  | 7  | 9  | 6  | 6  | 7  | 7  | 7  | 8  | 6  | 6  | 8  | 9  | 6                              | 5.3           | 9.1           |
| 15-Apr                                                                                                                                                      | 4                             | 5 | 6 | 6  | 7 | 6 | 4 | 6  | 5 | 5  | 5  | 4  | 6  | 6  | 6  | 6  | 6  | 6  | 4  | 5  | 6  | 4  | 3  | 3                              | 5.2           | 7.4           |
| 16-Apr                                                                                                                                                      | 4                             | 4 | 2 | 3  | 2 | 2 | 3 | 3  | 4 | 3  | 3  | 4  | 4  | 4  | 5  | 4  | 4  | 4  | 4  | 7  | 6  | 3  | 3  | 3                              | 3.6           | 6.8           |
| 17-Apr                                                                                                                                                      | 4                             | 3 | 4 | 3  | 4 | 5 | 4 | 7  | 4 | 4  | 4  | 5  | 5  | 6  | 6  | 4  | 5  | 5  | 5  | 6  | 5  | 5  | 5  | 5                              | 4.8           | 7.3           |
| 18-Apr                                                                                                                                                      | 4                             | 4 | 5 | 4  | 4 | 5 | 5 | 5  | 4 | 4  | 5  | 5  | 6  | 5  | 7  | 6  | 6  | 6  | 7  | 6  | 6  | 5  | 6  | 4                              | 5.3           | 7.1           |
| 19-Apr                                                                                                                                                      | 6                             | 4 | 3 | 4  | 4 | 4 | 5 | 4  | 4 | 4  | 4  | 6  | 5  | 6  | 2  | 1  | 2  | 5  | 5  | 2  | 2  | 4  | 7  | 6                              | 4.1           | 7.5           |
| 20-Apr                                                                                                                                                      | 10                            | 6 | 6 | 4  | 5 | 4 | 5 | 5  | 5 | 6  | 5  | 3  | 2  | 5  | 4  | 3  | 4  | 4  | 4  | 3  | 2  | 1  | 1  | 2                              | 4.1           | 9.7           |
| 21-Apr                                                                                                                                                      | 3                             | 4 | 4 | 2  | 3 | 3 | 4 | 5  | 6 | 4  | 4  | 5  | 4  | 3  | 5  | 4  | 4  | 5  | 13 | 5  | 2  | 2  | 2  | 4                              | 4.1           | 12.7          |
| 22-Apr                                                                                                                                                      | 2                             | 4 | 2 | 2  | 5 | 4 | 4 | 4  | 4 | 5  | 5  | 6  | 5  | 6  | 5  | 6  | 4  | 5  | 10 | 11 | 3  | 3  | 2  | 2                              | 4.6           | 10.6          |
| 23-Apr                                                                                                                                                      | 2                             | 3 | 5 | 4  | 3 | 0 | 0 | 1  | 1 | M  | M  | 8  | 5  | 5  | 4  | 4  | 3  | 2  | 2  | 1  | 1  | 1  | 1  | 1                              | 2.6           | 7.8           |
| 24-Apr                                                                                                                                                      | 1                             | 2 | 0 | 1  | 1 | 1 | 1 | 2  | 2 | 2  | 3  | 3  | 4  | 5  | 3  | 2  | 3  | 3  | 3  | 3  | 7  | 2  | 1  | 1                              | 2.3           | 6.8           |
| 25-Apr                                                                                                                                                      | 1                             | 1 | 2 | 2  | 1 | 1 | 2 | 3  | 6 | 6  | 2  | 2  | 2  | 2  | 1  | 2  | 3  | 2  | 1  | 1  | 1  | 2  | 1  | 1                              | 2.0           | 5.9           |
| 26-Apr                                                                                                                                                      | 1                             | 1 | 1 | 2  | 2 | 2 | 1 | 2  | 2 | 2  | 3  | 5  | 4  | 3  | 4  | 5  | 3  | 2  | 2  | 1  | 2  | 1  | 0  | 1                              | 2.2           | 5.3           |
| 27-Apr                                                                                                                                                      | 1                             | 1 | 0 | 0  | 0 | 1 | 0 | 1  | 0 | 2  | 2  | 2  | 3  | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 5  | 4  | 4                              | 2.8           | 5.5           |
| 28-Apr                                                                                                                                                      | 5                             | 4 | 4 | 4  | 4 | 4 | 4 | 3  | 4 | 3  | 2  | 2  | 2  | 2  | 3  | 3  | 3  | 3  | 4  | 4  | 4  | 3  | 3  | 3                              | 3.4           | 5.5           |
| 29-Apr                                                                                                                                                      | 2                             | 3 | 3 | 2  | 3 | 3 | 4 | 3  | 3 | 3  | 3  | 2  | 3  | 3  | 3  | 3  | 2  | 4  | 3  | 2  | 2  | 3  | 3  | 2                              | 2.8           | 4.1           |
| 30-Apr                                                                                                                                                      | 3                             | 3 | 3 | 3  | 3 | 3 | 4 | 4  | 5 | 4  | 4  | 2  | 2  | 1  | 2  | 2  | 2  | 2  | 2  | 3  | 3  | 3  | 3  | 2                              | 2.8           | 5.3           |
| 2.9 2.9 2.8 2.9 3.2 3.0 3.2 4.1 3.8 4.3 4.9 4.6 4.2 3.9 4.0 3.8 3.8 3.9 3.6 3.5 3.5 3.0 3.0 2.5                                                             |                               |   |   |    |   |   |   |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Diurnal Average                |               |               |
| 9.7 7.9 8.3 10.7 9.0 8.0 8.3 15.2 8.5 14.4 28.5 16.1 16.4 7.7 8.0 8.4 13.4 9.2 12.7 10.6 6.8 8.3 9.1 6.8                                                    |                               |   |   |    |   |   |   |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Diurnal Maximum                |               |               |
| M - Maintenance                                                                                                                                             |                               |   |   |    |   |   |   |    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                |               |               |

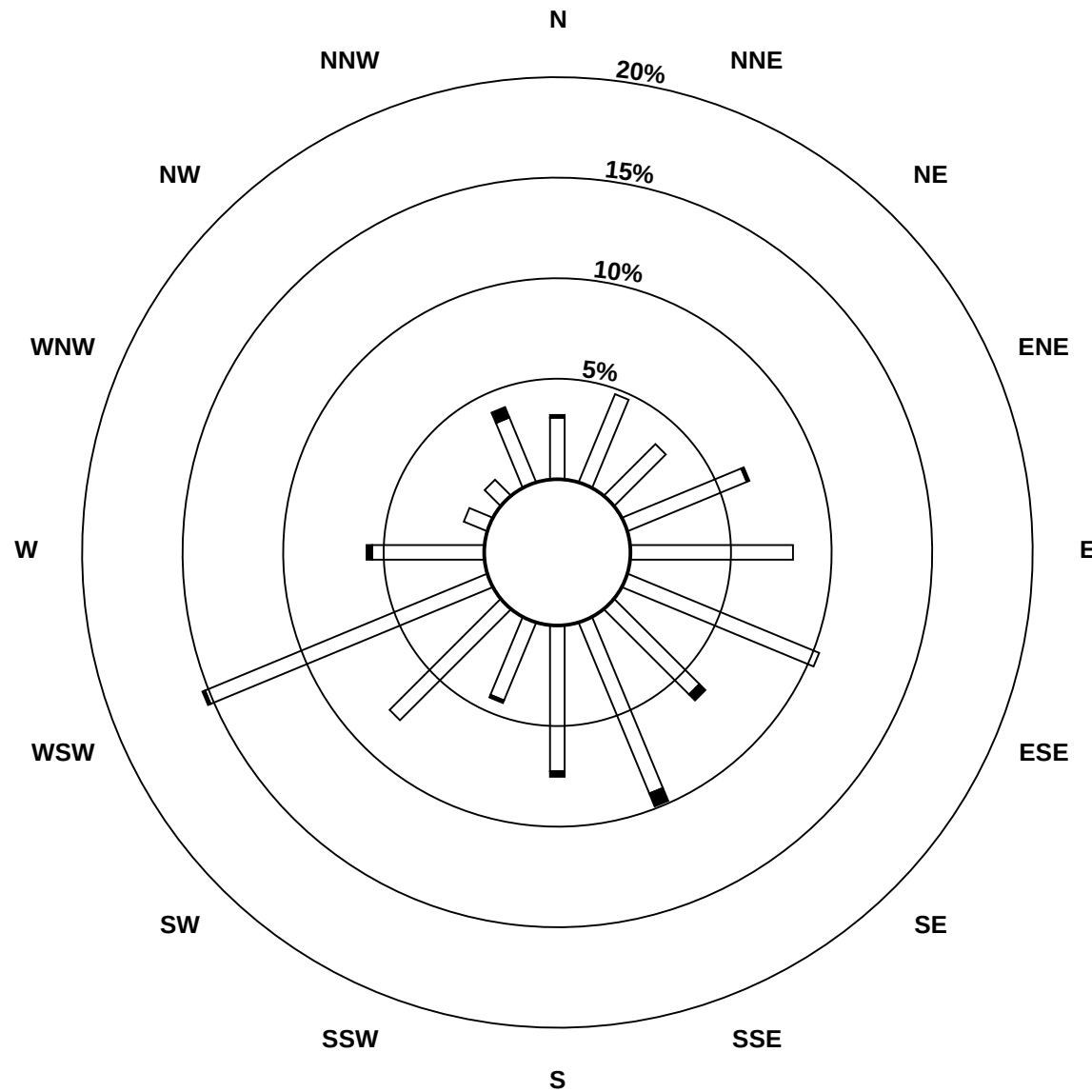
## Hourly Maximums

PM<sub>2.5</sub> (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$   
Portable Reno - April 2014

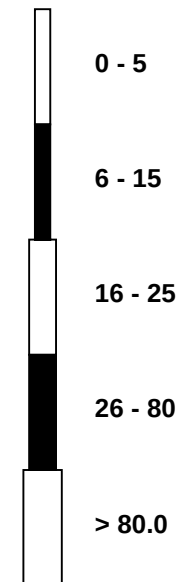


## Pollutant Rose

PM<sub>2.5</sub> (PM<sub>2.5</sub>) -  $\mu\text{g}/\text{m}^3$   
Portable Reno - April 2014



### Pollutant Classes ( $\mu\text{g}/\text{m}^3$ )





# Hourly Averages

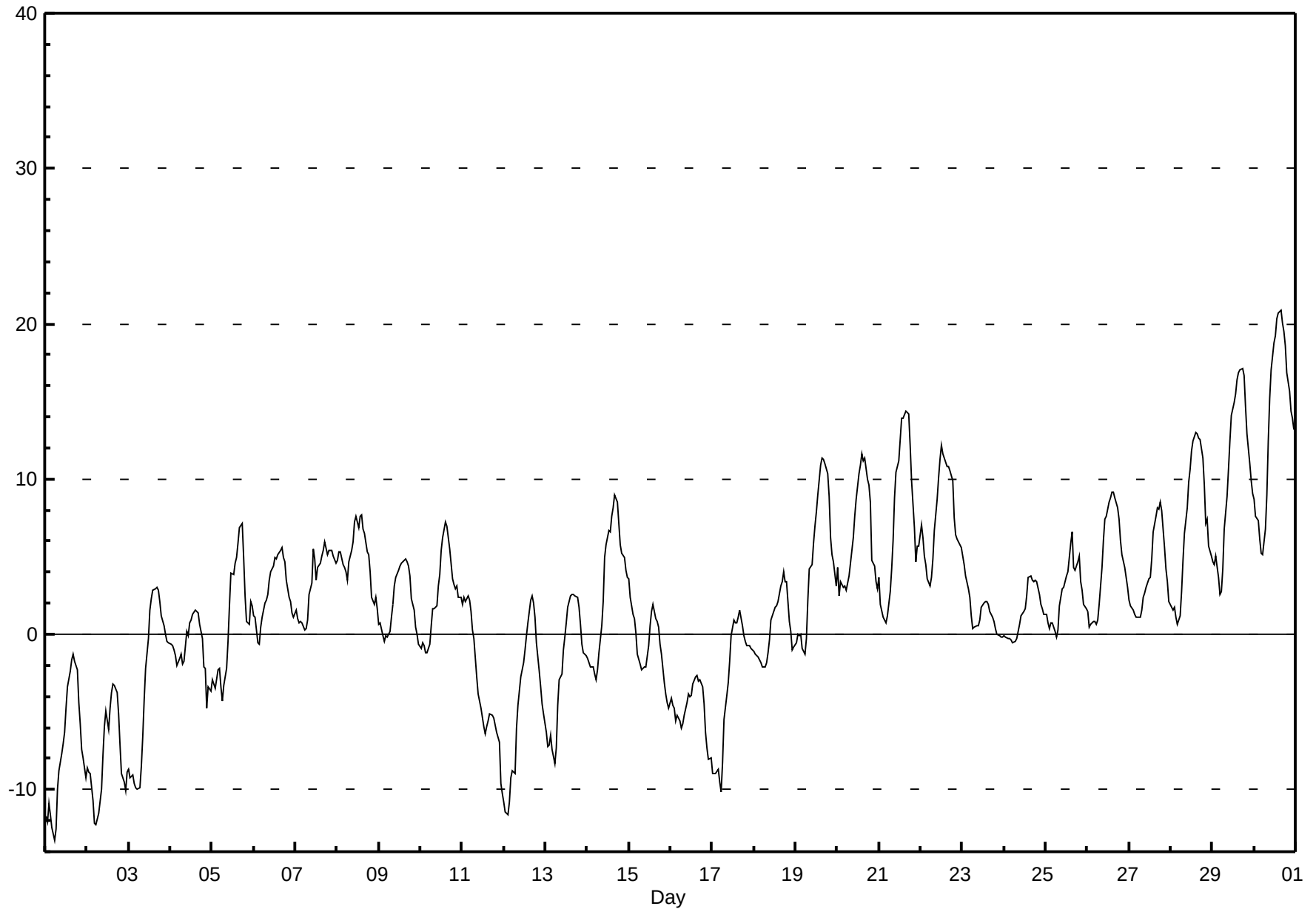
External Temperature (ET) - °C

Portable Reno - April 2014

| Number of Exceedences (AAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 20.9 °C on Apr 30 16:00 Maximum Daily Average: 13.9 °C on Apr 30 |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Hours in Service: 720<br>Hours of Data: 720<br>Hours of Missing Data: 0<br>Hours of Calibration: 0<br>Percent Operational Time: 100.0                                                                                                                    |                 |               |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------|
| Minimum Value: -13 °C on Apr 1 06:00<br>Maximum Diurnal Average: 5.7 °C at hour 16<br>Monthly Average: 1.86 °C                    |                               |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      | Minimum Daily Average: -7.8 °C on Apr 2<br>Minimum Diurnal Average: -1.9 °C at hour 6<br>Percentiles: P <sub>1</sub> = -11.7 P <sub>10</sub> = -6.0 Q <sub>1</sub> = -1.2 Median = 1.7 Q <sub>3</sub> = 5.0 P <sub>90</sub> = 8.9 P <sub>99</sub> = 18.4 |                 |               |
| Day                                                                                                                               | Hourly Period Ending At (MST) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |                                                                                                                                                                                                                                                          | Daily Average   | Daily Maximum |
| 1-Apr                                                                                                                             | -12                           | -12  | -11  | -12  | -12  | -13  | -13  | -10  | -9   | -8   | -7   | -6   | -5   | -3   | -2   | -2   | -1   | -2   | -2   | -4   | -6   | -7   | -8   | -9                                                                                                                                                                                                                                                       | -7.4            | -1.2          |
| 2-Apr                                                                                                                             | -9                            | -9   | -9   | -11  | -12  | -12  | -12  | -12  | -10  | -8   | -6   | -5   | -6   | -5   | -4   | -3   | -3   | -4   | -5   | -7   | -9   | -10  | -10  | -9                                                                                                                                                                                                                                                       | -7.8            | -3.2          |
| 3-Apr                                                                                                                             | -9                            | -9   | -9   | -10  | -10  | -10  | -10  | -9   | -7   | -4   | -2   | 0    | 2    | 2    | 3    | 3    | 3    | 3    | 2    | 1    | 1    | 0    | 0    | -1                                                                                                                                                                                                                                                       | -2.9            | 3.0           |
| 4-Apr                                                                                                                             | -1                            | -1   | -1   | -1   | -2   | -2   | -1   | -2   | -2   | 0    | 0    | 1    | 1    | 1    | 2    | 1    | 1    | 1    | 0    | -2   | -2   | -5   | -3   | -4                                                                                                                                                                                                                                                       | -0.8            | 1.6           |
| 5-Apr                                                                                                                             | -3                            | -3   | -3   | -2   | -2   | -3   | -4   | -3   | -2   | 0    | 2    | 4    | 4    | 5    | 5    | 6    | 7    | 7    | 5    | 2    | 1    | 1    | 2    | 2                                                                                                                                                                                                                                                        | 1.0             | 7.1           |
| 6-Apr                                                                                                                             | 1                             | 1    | -1   | -1   | 0    | 1    | 2    | 2    | 3    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 6    | 5    | 5    | 4    | 2    | 2    | 1    | 1                                                                                                                                                                                                                                                        | 2.8             | 5.6           |
| 7-Apr                                                                                                                             | 2                             | 1    | 1    | 1    | 1    | 0    | 0    | 1    | 3    | 3    | 5    | 5    | 3    | 4    | 5    | 5    | 5    | 6    | 5    | 5    | 5    | 5    | 5    | 5                                                                                                                                                                                                                                                        | 3.4             | 5.9           |
| 8-Apr                                                                                                                             | 5                             | 5    | 5    | 4    | 4    | 4    | 3    | 5    | 5    | 6    | 7    | 8    | 7    | 8    | 8    | 7    | 7    | 5    | 5    | 4    | 2    | 2    | 2    | 2                                                                                                                                                                                                                                                        | 5.0             | 7.7           |
| 9-Apr                                                                                                                             | 1                             | 1    | 0    | 0    | 0    | 0    | 0    | 1    | 2    | 3    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 4    | 4    | 2    | 2    | 0    | 0    | -1                                                                                                                                                                                                                                                       | 2.1             | 4.8           |
| 10-Apr                                                                                                                            | -1                            | -1   | -1   | -1   | -1   | -1   | 1    | 2    | 2    | 2    | 3    | 4    | 5    | 6    | 7    | 7    | 6    | 5    | 4    | 3    | 3    | 3    | 2    | 2                                                                                                                                                                                                                                                        | 2.6             | 7.3           |
| 11-Apr                                                                                                                            | 2                             | 2    | 2    | 2    | 2    | 1    | 0    | 0    | -3   | -4   | -4   | -5   | -6   | -6   | -6   | -6   | -5   | -5   | -5   | -6   | -6   | -7   | -10  | -10                                                                                                                                                                                                                                                      | -3.4            | 2.5           |
| 12-Apr                                                                                                                            | -11                           | -11  | -12  | -11  | -9   | -9   | -9   | -6   | -5   | -4   | -3   | -2   | -1   | 0    | 1    | 2    | 2    | 2    | 1    | -1   | -2   | -3   | -5   | -5                                                                                                                                                                                                                                                       | -4.1            | 2.5           |
| 13-Apr                                                                                                                            | -6                            | -7   | -7   | -7   | -7   | -8   | -7   | -5   | -3   | -3   | -1   | 0    | 1    | 2    | 3    | 3    | 3    | 2    | 2    | 2    | 1    | -1   | -1   | -1                                                                                                                                                                                                                                                       | -2.0            | 2.6           |
| 14-Apr                                                                                                                            | -2                            | -2   | -2   | -2   | -3   | -3   | -2   | -1   | 1    | 2    | 5    | 6    | 7    | 7    | 8    | 8    | 9    | 9    | 7    | 6    | 5    | 5    | 4    | 4                                                                                                                                                                                                                                                        | 3.1             | 8.9           |
| 15-Apr                                                                                                                            | 4                             | 2    | 1    | 1    | 0    | -1   | -2   | -2   | -2   | -2   | -2   | -1   | 1    | 1    | 2    | 1    | 1    | 0    | -1   | -1   | -3   | -4   | -4   | -5                                                                                                                                                                                                                                                       | -0.7            | 3.5           |
| 16-Apr                                                                                                                            | -4                            | -5   | -5   | -6   | -5   | -6   | -6   | -6   | -5   | -4   | -4   | -4   | -4   | -3   | -3   | -3   | -3   | -3   | -3   | -4   | -6   | -7   | -8   | -8                                                                                                                                                                                                                                                       | -4.8            | -2.7          |
| 17-Apr                                                                                                                            | -9                            | -9   | -9   | -9   | -10  | -10  | -8   | -6   | -4   | -3   | -2   | 0    | 1    | 1    | 1    | 1    | 2    | 1    | 0    | 0    | -1   | -1   | -1   | -1                                                                                                                                                                                                                                                       | -3.2            | 1.6           |
| 18-Apr                                                                                                                            | -1                            | -1   | -1   | -2   | -2   | -2   | -2   | -2   | -1   | 0    | 1    | 1    | 2    | 2    | 2    | 3    | 3    | 4    | 3    | 3    | 1    | 0    | -1   | -1                                                                                                                                                                                                                                                       | 0.4             | 4.0           |
| 19-Apr                                                                                                                            | -1                            | 0    | 0    | 0    | -1   | -1   | 0    | 2    | 4    | 4    | 6    | 7    | 8    | 9    | 11   | 11   | 11   | 11   | 10   | 9    | 6    | 5    | 5    | 3                                                                                                                                                                                                                                                        | 5.0             | 11.3          |
| 20-Apr                                                                                                                            | 4                             | 2    | 3    | 3    | 3    | 3    | 3    | 4    | 5    | 6    | 8    | 9    | 10   | 11   | 12   | 11   | 11   | 10   | 10   | 8    | 5    | 4    | 3    | 3                                                                                                                                                                                                                                                        | 6.4             | 11.6          |
| 21-Apr                                                                                                                            | 4                             | 2    | 1    | 1    | 1    | 1    | 3    | 4    | 6    | 9    | 10   | 11   | 13   | 14   | 14   | 14   | 14   | 14   | 12   | 10   | 7    | 5    | 6    | 6                                                                                                                                                                                                                                                        | 7.5             | 14.4          |
| 22-Apr                                                                                                                            | 7                             | 6    | 5    | 4    | 4    | 3    | 4    | 5    | 7    | 9    | 10   | 11   | 12   | 12   | 11   | 11   | 11   | 11   | 10   | 8    | 6    | 6    | 6    | 6                                                                                                                                                                                                                                                        | 7.6             | 12.2          |
| 23-Apr                                                                                                                            | 5                             | 4    | 4    | 3    | 2    | 1    | 0    | 0    | 1    | 1    | 1    | 2    | 2    | 2    | 2    | 2    | 1    | 1    | 1    | 0    | 0    | 0    | 0    | 0                                                                                                                                                                                                                                                        | 1.5             | 5.1           |
| 24-Apr                                                                                                                            | 0                             | 0    | 0    | 0    | 0    | -1   | 0    | 0    | 0    | 1    | 1    | 1    | 2    | 2    | 4    | 4    | 3    | 3    | 3    | 3    | 3    | 2    | 2    | 1                                                                                                                                                                                                                                                        | 1.4             | 3.8           |
| 25-Apr                                                                                                                            | 1                             | 1    | 0    | 1    | 1    | 0    | 0    | 0    | 2    | 3    | 3    | 3    | 4    | 4    | 6    | 7    | 4    | 4    | 5    | 5    | 3    | 3    | 2    | 2                                                                                                                                                                                                                                                        | 2.6             | 6.6           |
| 26-Apr                                                                                                                            | 1                             | 0    | 1    | 1    | 1    | 1    | 1    | 2    | 4    | 6    | 7    | 8    | 8    | 9    | 9    | 9    | 9    | 8    | 7    | 6    | 5    | 4    | 4    | 3                                                                                                                                                                                                                                                        | 4.8             | 9.1           |
| 27-Apr                                                                                                                            | 2                             | 2    | 2    | 1    | 1    | 1    | 1    | 2    | 2    | 3    | 3    | 4    | 4    | 5    | 7    | 8    | 8    | 8    | 9    | 8    | 6    | 4    | 3    | 2                                                                                                                                                                                                                                                        | 3.9             | 8.5           |
| 28-Apr                                                                                                                            | 2                             | 2    | 2    | 1    | 1    | 1    | 3    | 5    | 7    | 8    | 10   | 11   | 12   | 12   | 13   | 13   | 13   | 13   | 11   | 10   | 7    | 7    | 6    | 5                                                                                                                                                                                                                                                        | 7.2             | 13.0          |
| 29-Apr                                                                                                                            | 5                             | 5    | 5    | 4    | 3    | 3    | 4    | 7    | 9    | 11   | 12   | 14   | 15   | 16   | 16   | 17   | 17   | 17   | 17   | 15   | 13   | 11   | 10   | 9                                                                                                                                                                                                                                                        | 10.5            | 17.1          |
| 30-Apr                                                                                                                            | 9                             | 8    | 7    | 6    | 5    | 5    | 7    | 9    | 12   | 15   | 17   | 19   | 19   | 20   | 21   | 21   | 20   | 19   | 19   | 17   | 16   | 14   | 14   | 13                                                                                                                                                                                                                                                       | 13.9            | 20.9          |
|                                                                                                                                   | -0.4                          | -0.8 | -1.0 | -1.3 | -1.6 | -1.9 | -1.5 | -0.4 | 0.7  | 1.8  | 3.0  | 3.8  | 4.3  | 4.9  | 5.5  | 5.7  | 5.7  | 5.4  | 4.7  | 3.5  | 2.1  | 1.3  | 0.8  | 0.4                                                                                                                                                                                                                                                      | Diurnal Average |               |
|                                                                                                                                   | 8.7                           | 7.6  | 7.4  | 6.1  | 5.3  | 5.1  | 6.7  | 9.0  | 12.4 | 15.2 | 17.0 | 18.8 | 19.3 | 20.3 | 20.7 | 20.9 | 20.1 | 19.5 | 18.6 | 16.8 | 15.6 | 14.4 | 13.9 | 13.2                                                                                                                                                                                                                                                     | Diurnal Maximum |               |

## Hourly Averages

External Temperature (ET) - °C  
Portable Reno - April 2014



## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Portable Reno - April 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                             | 8   | 5   | 1   | 5   | 8   | 5   | 4   | 5   | 3   | 5   | 5   | 4   | 5   | 4   | 4   | 4   | 3   | 3   | 3   | 4   | 3   | 11  | 14  | 1.1           | 14.3          |
| Dir    | 143                           | 155 | 155 | 179 | 169 | 167 | 170 | 177 | 186 | 267 | 338 | 333 | 346 | 331 | 322 | 357 | 353 | 21  | 348 | 11  | 19  | 18  | 70  | 76  | 75.7          | 75.7          |
| 2 Spd  | 15                            | 18  | 19  | 6   | 5   | 5   | 7   | 5   | 5   | 6   | 8   | 9   | 16  | 15  | 14  | 14  | 13  | 11  | 8   | 5   | 3   | 3   | 12  | 19  | 7.0           | 19.2          |
| Dir    | 73                            | 65  | 72  | 356 | 5   | 1   | 14  | 352 | 349 | 351 | 344 | 340 | 325 | 323 | 329 | 333 | 334 | 335 | 340 | 345 | 2   | 13  | 78  | 87  | 9.7           | 86.8          |
| 3 Spd  | 21                            | 21  | 21  | 22  | 22  | 23  | 23  | 23  | 21  | 20  | 20  | 20  | 20  | 24  | 27  | 29  | 29  | 25  | 24  | 23  | 27  | 26  | 24  | 24  | 22.3          | 28.9          |
| Dir    | 90                            | 92  | 95  | 93  | 94  | 95  | 95  | 99  | 109 | 115 | 124 | 129 | 138 | 132 | 132 | 128 | 132 | 126 | 119 | 122 | 129 | 133 | 134 | 137 | 117.3         | 131.9         |
| 4 Spd  | 24                            | 22  | 25  | 20  | 18  | 18  | 16  | 16  | 19  | 19  | 19  | 21  | 26  | 24  | 24  | 25  | 23  | 19  | 16  | 3   | 2   | 10  | 8   | 10  | 10.4          | 25.6          |
| Dir    | 147                           | 148 | 157 | 166 | 166 | 182 | 206 | 243 | 263 | 276 | 279 | 278 | 263 | 262 | 264 | 273 | 283 | 289 | 297 | 325 | 91  | 172 | 159 | 157 | 234.2         | 263.4         |
| 5 Spd  | 8                             | 9   | 12  | 17  | 19  | 19  | 16  | 16  | 14  | 11  | 9   | 7   | 10  | 11  | 10  | 6   | 3   | 2   | 4   | 6   | 10  | 9   | 13  | 16  | 8.7           | 18.7          |
| Dir    | 144                           | 133 | 146 | 147 | 151 | 159 | 164 | 167 | 170 | 180 | 224 | 227 | 249 | 266 | 255 | 240 | 198 | 157 | 155 | 150 | 157 | 149 | 152 | 160 | 170.6         | 150.5         |
| 6 Spd  | 16                            | 13  | 12  | 11  | 13  | 15  | 18  | 17  | 18  | 23  | 25  | 28  | 26  | 24  | 23  | 21  | 18  | 17  | 21  | 23  | 21  | 22  | 19  | 19  | 17.1          | 27.5          |
| Dir    | 166                           | 169 | 172 | 183 | 206 | 216 | 237 | 239 | 247 | 264 | 267 | 271 | 262 | 261 | 261 | 254 | 257 | 252 | 253 | 252 | 246 | 248 | 234 | 228 | 243.5         | 271.0         |
| 7 Spd  | 19                            | 17  | 12  | 12  | 10  | 10  | 9   | 10  | 13  | 14  | 14  | 19  | 14  | 19  | 22  | 21  | 17  | 16  | 16  | 17  | 16  | 15  | 15  | 15  | 13.5          | 22.0          |
| Dir    | 237                           | 241 | 238 | 231 | 208 | 226 | 186 | 173 | 166 | 165 | 194 | 203 | 165 | 146 | 155 | 165 | 183 | 186 | 178 | 180 | 190 | 186 | 182 | 179 | 187.8         | 155.3         |
| 8 Spd  | 19                            | 25  | 26  | 20  | 20  | 21  | 13  | 15  | 13  | 12  | 15  | 18  | 28  | 29  | 28  | 29  | 25  | 20  | 20  | 19  | 14  | 14  | 23  | 20  | 19.3          | 28.9          |
| Dir    | 211                           | 224 | 225 | 225 | 210 | 218 | 177 | 194 | 196 | 207 | 234 | 249 | 249 | 235 | 233 | 225 | 237 | 245 | 237 | 235 | 243 | 242 | 251 | 245 | 229.3         | 224.8         |
| 9 Spd  | 20                            | 22  | 21  | 22  | 25  | 26  | 21  | 21  | 21  | 26  | 26  | 32  | 34  | 37  | 34  | 31  | 24  | 24  | 22  | 18  | 18  | 16  | 17  | 17  | 23.6          | 37.2          |
| Dir    | 235                           | 245 | 248 | 248 | 250 | 247 | 246 | 251 | 252 | 257 | 259 | 268 | 268 | 271 | 261 | 259 | 255 | 256 | 266 | 252 | 251 | 235 | 239 | 242 | 254.5         | 270.6         |
| 10 Spd | 15                            | 20  | 18  | 15  | 18  | 15  | 17  | 20  | 18  | 15  | 17  | 14  | 13  | 13  | 13  | 11  | 7   | 3   | 13  | 9   | 11  | 9   | 8   | 11  | 8.7           | 20.4          |
| Dir    | 243                           | 243 | 242 | 223 | 219 | 216 | 227 | 237 | 260 | 243 | 254 | 254 | 258 | 270 | 257 | 276 | 4   | 8   | 40  | 104 | 171 | 145 | 108 | 120 | 236.7         | 237.3         |
| 11 Spd | 17                            | 15  | 13  | 11  | 15  | 12  | 7   | 7   | 14  | 22  | 23  | 29  | 34  | 29  | 25  | 24  | 19  | 15  | 12  | 11  | 10  | 8   | 3   | 1   | 9.6           | 33.6          |
| Dir    | 126                           | 161 | 167 | 207 | 233 | 251 | 242 | 325 | 339 | 333 | 336 | 332 | 330 | 333 | 335 | 335 | 337 | 342 | 344 | 347 | 12  | 16  | 17  | 263 | 328.8         | 329.7         |
| 12 Spd | 3                             | 6   | 6   | 6   | 11  | 11  | 12  | 12  | 13  | 13  | 16  | 17  | 18  | 17  | 15  | 10  | 10  | 9   | 4   | 5   | 11  | 18  | 13  | 10  | 4.3           | 18.5          |
| Dir    | 171                           | 169 | 172 | 177 | 161 | 168 | 170 | 209 | 237 | 245 | 247 | 252 | 250 | 253 | 244 | 238 | 259 | 336 | 354 | 356 | 21  | 36  | 44  | 41  | 238.1         | 36.1          |
| 13 Spd | 7                             | 3   | 7   | 9   | 9   | 11  | 13  | 12  | 11  | 13  | 14  | 15  | 16  | 15  | 15  | 17  | 17  | 16  | 15  | 13  | 18  | 17  | 20  | 20  | 10.9          | 20.4          |
| Dir    | 59                            | 135 | 104 | 114 | 105 | 116 | 120 | 130 | 165 | 170 | 191 | 194 | 200 | 200 | 203 | 180 | 168 | 165 | 143 | 117 | 117 | 124 | 122 | 115 | 148.4         | 115.0         |
| 14 Spd | 20                            | 21  | 21  | 20  | 17  | 16  | 15  | 14  | 13  | 10  | 3   | 5   | 7   | 7   | 4   | 3   | 1   | 2   | 1   | 0   | 4   | 5   | 2   | 13  | 6.2           | 20.9          |
| Dir    | 111                           | 114 | 116 | 121 | 132 | 128 | 141 | 165 | 163 | 166 | 167 | 224 | 236 | 259 | 266 | 288 | 359 | 353 | 357 | 273 | 15  | 43  | 28  | 67  | 131.2         | 116.3         |
| 15 Spd | 24                            | 18  | 9   | 19  | 21  | 19  | 20  | 20  | 12  | 9   | 9   | 9   | 11  | 9   | 12  | 19  | 15  | 17  | 19  | 16  | 13  | 11  | 10  | 13  | 13.6          | 23.6          |
| Dir    | 76                            | 64  | 38  | 50  | 39  | 29  | 32  | 32  | 30  | 11  | 11  | 13  | 12  | 12  | 22  | 36  | 30  | 56  | 66  | 69  | 74  | 83  | 83  | 74  | 45.5          | 76.2          |
| 16 Spd | 12                            | 3   | 6   | 9   | 13  | 16  | 15  | 18  | 17  | 12  | 10  | 12  | 13  | 10  | 10  | 12  | 14  | 11  | 10  | 9   | 13  | 10  | 5   | 2   | 10.2          | 17.8          |
| Dir    | 64                            | 43  | 34  | 34  | 36  | 48  | 53  | 61  | 65  | 46  | 17  | 21  | 19  | 9   | 11  | 16  | 38  | 51  | 78  | 68  | 60  | 76  | 78  | 346 | 44.3          | 60.8          |
| 17 Spd | 2                             | 2   | 3   | 1   | 3   | 5   | 6   | 5   | 8   | 15  | 19  | 20  | 18  | 22  | 23  | 21  | 22  | 25  | 24  | 23  | 21  | 23  | 21  | 21  | 14.0          | 25.4          |
| Dir    | 2                             | 8   | 2   | 23  | 144 | 146 | 120 | 98  | 85  | 109 | 131 | 124 | 111 | 85  | 96  | 105 | 115 | 117 | 113 | 112 | 113 | 112 | 115 | 116 | 110.2         | 117.1         |
| 18 Spd | 22                            | 19  | 17  | 17  | 16  | 11  | 12  | 12  | 13  | 12  | 8   | 8   | 5   | 6   | 7   | 4   | 4   | 3   | 1   | 2   | 6   | 7   | 9   | 11  | 6.8           | 22.3          |
| Dir    | 117                           | 114 | 112 | 111 | 113 | 106 | 105 | 112 | 123 | 123 | 143 | 199 | 263 | 297 | 291 | 319 | 280 | 234 | 235 | 189 | 156 | 149 | 150 | 138 | 127.0         | 117.3         |
| 19 Spd | 13                            | 13  | 14  | 15  | 15  | 14  | 12  | 8   | 9   | 9   | 6   | 7   | 8   | 8   | 5   | 5   | 4   | 5   | 3   | 2   | 8   | 7   | 7   | 5   | 5.0           | 15.3          |
| Dir    | 153                           | 148 | 146 | 153 | 164 | 163 | 164 | 179 | 237 | 244 | 236 | 244 | 245 | 251 | 237 | 246 | 307 | 267 | 279 | 19  | 65  | 89  | 110 | 141 | 178.8         | 164.0         |
| 20 Spd | 4                             | 5   | 10  | 12  | 11  | 8   | 8   | 9   | 9   | 11  | 13  | 14  | 14  | 13  | 18  | 13  | 12  | 13  | 9   | 7   | 7   | 7   | 6   | 7   | 8.6           | 18.3          |
| Dir    | 124                           | 196 | 245 | 252 | 229 | 177 | 177 | 169 | 194 | 209 | 231 | 245 | 252 | 240 | 262 | 263 | 251 | 247 | 236 | 221 | 191 | 214 | 181 | 183 | 227.5         | 262.3         |
| 21 Spd | 6                             | 12  | 13  | 13  | 12  | 13  | 12  | 10  | 9   | 6   | 6   | 7   | 6   | 5   | 2   | 5   | 6   | 5   | 8   | 10  | 10  | 14  | 14  | 15  | 4.6           | 14.5          |
| Dir    | 207                           | 166 | 162 | 165 | 167 | 166 | 169 | 167 | 179 | 178 | 183 | 174 | 188 | 269 | 122 | 249 | 261 | 269 | 26  | 31  | 56  | 65  | 80  | 86  | 148.4         | 85.9          |
| 22 Spd | 17                            | 15  | 21  | 22  | 23  | 24  | 26  | 26  | 24  | 24  | 26  | 28  | 31  | 32  | 33  | 32  | 37  | 32  | 35  | 33  | 34  | 37  | 39  | 43  | 28.6          | 43.0          |
| Dir    | 95                            | 93  | 86  | 89  | 89  | 91  | 90  | 88  | 90  | 91  | 88  | 84  | 86  | 80  | 73  | 77  | 66  | 63  | 72  | 74  | 69  | 67  | 74  | 79  | 79.5          | 79.0          |

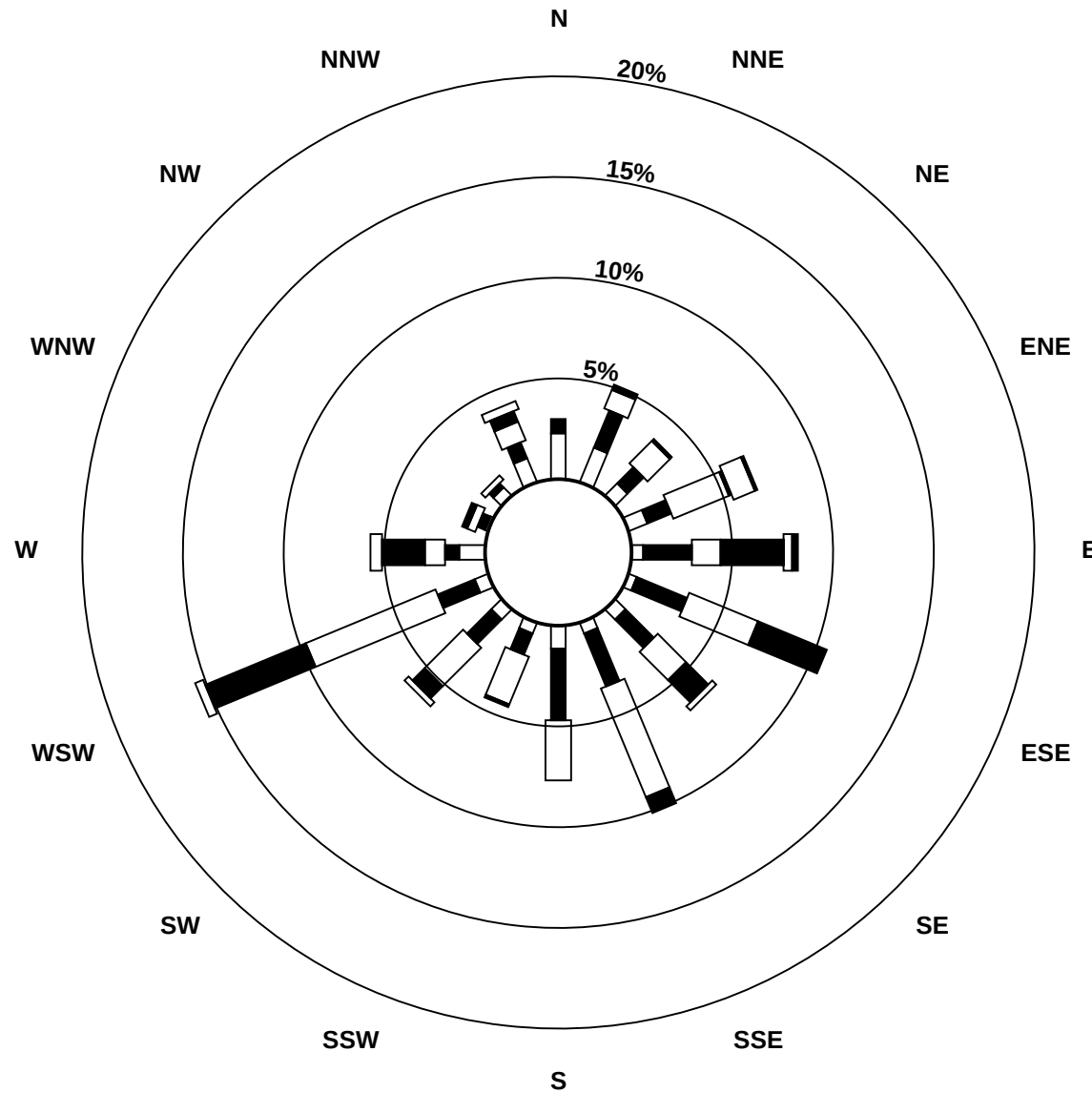
## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Portable Reno - April 2014

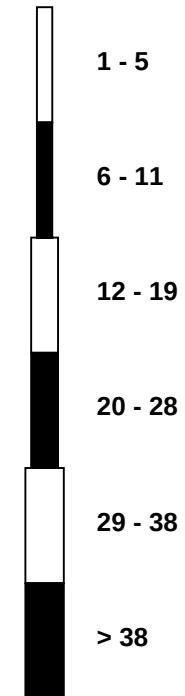
| Day                                                                                                                                                                  | Hourly Period Ending At (MST) |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 | 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                                                                                                                                                               | 38                            | 39    | 22      | 15    | 13       | 17    | 18       | 15    | 10       | 7     | 5     | 4     | 7     | 9     | 8     | 2     | 1     | 1     | 2     | 3     | 5     | 0     | 0     | 0                               | 8.5             | 39.0          |
| Dir                                                                                                                                                                  | 82                            | 83    | 79      | 78    | 78       | 73    | 67       | 60    | 52       | 27    | 26    | 57    | 106   | 124   | 121   | 170   | 237   | 257   | 209   | 219   | 227   | 229   | 229   | 226                             | 79.4            | 82.6          |
| 24 Spd                                                                                                                                                               | 0                             | 0     | 0       | 0     | 0        | 0     | 0        | 0     | 0        | 8     | 9     | 7     | 8     | 7     | 6     | 4     | 5     | 7     | 6     | 8     | 8     | 4     | 4     | 8                               | 1.4             | 8.6           |
| Dir                                                                                                                                                                  | 223                           | 224   | 223     | 220   | 218      | 217   | 219      | 218   | 217      | 228   | 219   | 190   | 163   | 167   | 172   | 81    | 67    | 76    | 62    | 36    | 41    | 25    | 12    | 82                              | 109.3           | 218.8         |
| 25 Spd                                                                                                                                                               | 14                            | 14    | 5       | 5     | 5        | 7     | 7        | 5     | 4        | 4     | 6     | 4     | 4     | 4     | 7     | 2     | 5     | 5     | 6     | 7     | 9     | 11    | 10    | 7                               | 5.4             | 14.0          |
| Dir                                                                                                                                                                  | 93                            | 93    | 87      | 72    | 54       | 85    | 86       | 120   | 143      | 42    | 70    | 71    | 41    | 59    | 136   | 257   | 336   | 46    | 87    | 99    | 93    | 129   | 130   | 105                             | 91.9            | 92.8          |
| 26 Spd                                                                                                                                                               | 11                            | 10    | 8       | 7     | 7        | 13    | 13       | 11    | 11       | 11    | 8     | 15    | 16    | 16    | 13    | 18    | 24    | 22    | 28    | 22    | 17    | 16    | 17    | 21                              | 13.9            | 28.3          |
| Dir                                                                                                                                                                  | 95                            | 96    | 111     | 112   | 96       | 91    | 96       | 101   | 108      | 127   | 133   | 167   | 166   | 171   | 126   | 108   | 116   | 111   | 114   | 108   | 113   | 117   | 123   | 133                             | 118.9           | 114.4         |
| 27 Spd                                                                                                                                                               | 17                            | 17    | 19      | 19    | 20       | 18    | 18       | 17    | 18       | 15    | 11    | 8     | 10    | 5     | 3     | 7     | 8     | 5     | 2     | 2     | 5     | 8     | 8     | 9                               | 8.4             | 19.6          |
| Dir                                                                                                                                                                  | 121                           | 110   | 108     | 101   | 96       | 99    | 104      | 108   | 119      | 126   | 142   | 164   | 187   | 204   | 270   | 284   | 322   | 14    | 6     | 1     | 73    | 93    | 97    | 100                             | 111.1           | 95.7          |
| 28 Spd                                                                                                                                                               | 9                             | 10    | 9       | 12    | 13       | 12    | 11       | 11    | 16       | 22    | 25    | 31    | 29    | 25    | 24    | 25    | 22    | 23    | 24    | 18    | 16    | 22    | 16    | 14                              | 14.9            | 30.7          |
| Dir                                                                                                                                                                  | 128                           | 134   | 150     | 162   | 166      | 165   | 172      | 203   | 239      | 252   | 257   | 258   | 257   | 254   | 251   | 249   | 259   | 255   | 244   | 240   | 245   | 238   | 224   | 210                             | 234.8           | 258.1         |
| 29 Spd                                                                                                                                                               | 15                            | 16    | 16      | 13    | 13       | 12    | 12       | 12    | 13       | 12    | 11    | 16    | 17    | 16    | 11    | 8     | 6     | 7     | 6     | 7     | 9     | 14    | 17    | 19                              | 8.5             | 19.2          |
| Dir                                                                                                                                                                  | 226                           | 218   | 229     | 220   | 202      | 213   | 173      | 211   | 239      | 242   | 236   | 247   | 242   | 258   | 245   | 249   | 185   | 218   | 197   | 123   | 110   | 113   | 116   | 125                             | 209.1           | 124.7         |
| 30 Spd                                                                                                                                                               | 21                            | 18    | 15      | 13    | 17       | 17    | 18       | 17    | 16       | 17    | 17    | 21    | 22    | 20    | 19    | 23    | 23    | 21    | 19    | 18    | 18    | 16    | 22    | 24                              | 12.5            | 24.3          |
| Dir                                                                                                                                                                  | 123                           | 130   | 156     | 163   | 158      | 162   | 163      | 163   | 178      | 201   | 214   | 242   | 251   | 245   | 249   | 255   | 252   | 246   | 247   | 252   | 257   | 286   | 282   | 275                             | 222.9           | 275.2         |
| Spd                                                                                                                                                                  | 8.7                           | 8.0   | 7.0     | 6.4   | 6.9      | 6.8   | 6.9      | 5.5   | 4.5      | 4.3   | 5.0   | 6.4   | 6.9   | 6.2   | 5.1   | 4.0   | 2.2   | 1.4   | 1.6   | 2.7   | 3.8   | 4.8   | 5.9   | 7.4                             | Diurnal Average |               |
| Dir                                                                                                                                                                  | 126.4                         | 135.6 | 143.6   | 147.7 | 150.2    | 149.1 | 142.5    | 154.5 | 177.9    | 206.7 | 230.2 | 242.9 | 247.6 | 250.0 | 242.5 | 245.4 | 250.0 | 227.7 | 141.2 | 127.5 | 118.9 | 122.8 | 127.5 | 126.8                           | Diurnal Maximum |               |
| Spd                                                                                                                                                                  | 38.3                          | 39.0  | 25.5    | 22.2  | 24.8     | 25.6  | 26.0     | 26.1  | 24.3     | 26.0  | 26.3  | 31.9  | 33.6  | 37.2  | 33.6  | 32.4  | 37.2  | 31.6  | 35.0  | 32.9  | 34.1  | 36.8  | 39.1  | 43.0                            | Diurnal Maximum |               |
| Dir                                                                                                                                                                  | 82.3                          | 82.6  | 224.7   | 93.3  | 250.2    | 246.5 | 89.6     | 88.2  | 89.8     | 257.1 | 259.0 | 268.1 | 329.7 | 270.6 | 261.4 | 76.7  | 66.4  | 62.8  | 71.9  | 74.1  | 68.7  | 66.8  | 73.8  | 79.0                            |                 |               |
| Maximum Speed Value: 43 km/h on Apr 23 00:00                                                                                                                         |                               |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Hours in Service: 720           |                 |               |
| Maximum Daily Speed Average: 28.6 km/h on Apr 22                                                                                                                     |                               |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Hours of Data: 720              |                 |               |
| Maximum Diurnal Speed Average: 8.7 km/h at hour 1                                                                                                                    |                               |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Hours of Missing Data: 0        |                 |               |
| Minimum Speed Value: 0 km/h on Apr 24 06:00                                                                                                                          |                               |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       | Percent Operational Time: 100.0 |                 |               |
| Minimum Daily Speed Average: 1.1 km/h on Apr 24                                                                                                                      |                               |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 |                 |               |
| Minimum Diurnal Speed Average: 1.4 km/h at hour 18                                                                                                                   |                               |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 |                 |               |
| Monthly Average Velocity: 3.62 km/h 166.60 deg                                                                                                                       |                               |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 |                 |               |
| Speed Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 4.1 Q <sub>1</sub> = 7.5 Median = 13.1 Q <sub>3</sub> = 19.0 P <sub>90</sub> = 23.8 P <sub>99</sub> = 36.5 |                               |       |         |       |          |       |          |       |          |       |       |       |       |       |       |       |       |       |       |       |       |       |       |                                 |                 |               |
| 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                                                                                                                                                                | 30                            |       | 21      |       | 8        |       | 0        |       | 0        |       | 0     |       | 59    |       |       |       |       |       |       |       |       |       |       |                                 |                 |               |
| NorthEast                                                                                                                                                            | 10                            |       | 18      |       | 24       |       | 4        |       | 3        |       | 0     |       | 59    |       |       |       |       |       |       |       |       |       |       |                                 |                 |               |
| East                                                                                                                                                                 | 7                             |       | 32      |       | 34       |       | 31       |       | 8        |       | 4     |       | 116   |       |       |       |       |       |       |       |       |       |       |                                 |                 |               |
| SouthEast                                                                                                                                                            | 9                             |       | 29      |       | 37       |       | 35       |       | 3        |       | 0     |       | 113   |       |       |       |       |       |       |       |       |       |       |                                 |                 |               |
| South                                                                                                                                                                | 11                            |       | 35      |       | 66       |       | 2        |       | 0        |       | 0     |       | 114   |       |       |       |       |       |       |       |       |       |       |                                 |                 |               |
| SouthWest                                                                                                                                                            | 18                            |       | 27      |       | 58       |       | 26       |       | 2        |       | 0     |       | 131   |       |       |       |       |       |       |       |       |       |       |                                 |                 |               |
| West                                                                                                                                                                 | 13                            |       | 13      |       | 24       |       | 45       |       | 7        |       | 0     |       | 102   |       |       |       |       |       |       |       |       |       |       |                                 |                 |               |
| NorthWest                                                                                                                                                            | 5                             |       | 7       |       | 6        |       | 5        |       | 3        |       | 0     |       | 26    |       |       |       |       |       |       |       |       |       |       |                                 |                 |               |
| Total                                                                                                                                                                | 103                           |       | 182     |       | 257      |       | 148      |       | 26       |       | 4     |       | 720   |       |       |       |       |       |       |       |       |       |       |                                 |                 |               |

## Wind Rose

Wind Speed (WS) (km/h)  
Portable Reno - April 2014



## Wind Speed Classes (km/h)



## Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Portable Reno - April 2014

| Maximum Speed: 43 km/h on Apr 23 00:00                                                                                  |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Speed Average: 29.1 km/h on Apr 22                                                                                                               |    |    |    |                 |               |               |  |  |  | Hours in Service: 720           |  |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|-----------------|---------------|---------------|--|--|--|---------------------------------|--|
| Minimum Speed: 0 km/h on Apr 24 06:00                                                                                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Speed Average: 4.2 km/h on Apr 24                                                                                                                |    |    |    |                 |               |               |  |  |  | Hours of Data: 720              |  |
| Maximum Diurnal Speed Average: 16.3 km/h at hour 13                                                                     |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Speed Average: 11.7 km/h at hour 20                                                                                                            |    |    |    |                 |               |               |  |  |  | Hours of Missing Data: 0        |  |
| Monthly Average Speed: 13.95 km/h                                                                                       |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 4.6 Q <sub>1</sub> = 7.8 Median = 13.2 Q <sub>3</sub> = 19.2 P <sub>90</sub> = 23.9 P <sub>99</sub> = 36.7 |    |    |    |                 |               |               |  |  |  | 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-Apr                                                                                                                   | 6                             | 8  | 5  | 2  | 5  | 8  | 5  | 4  | 5  | 4  | 5  | 5  | 4  | 5  | 4  | 4  | 4  | 3  | 3  | 3                                                                                                                                                              | 4  | 3  | 11 | 14              | 5.3           | 14.3          |  |  |  |                                 |  |
| 2-Apr                                                                                                                   | 15                            | 18 | 19 | 6  | 5  | 5  | 7  | 5  | 5  | 7  | 8  | 9  | 16 | 15 | 14 | 14 | 13 | 11 | 8  | 5                                                                                                                                                              | 3  | 3  | 12 | 19              | 10.1          | 19.2          |  |  |  |                                 |  |
| 3-Apr                                                                                                                   | 21                            | 21 | 21 | 22 | 22 | 23 | 23 | 23 | 22 | 20 | 20 | 20 | 21 | 25 | 28 | 29 | 29 | 25 | 24 | 23                                                                                                                                                             | 27 | 26 | 24 | 24              | 23.4          | 29.1          |  |  |  |                                 |  |
| 4-Apr                                                                                                                   | 24                            | 22 | 25 | 21 | 18 | 18 | 17 | 16 | 20 | 20 | 20 | 21 | 26 | 24 | 24 | 25 | 23 | 20 | 16 | 6                                                                                                                                                              | 4  | 10 | 8  | 10              | 18.1          | 25.7          |  |  |  |                                 |  |
| 5-Apr                                                                                                                   | 8                             | 9  | 12 | 17 | 19 | 19 | 17 | 16 | 14 | 12 | 10 | 7  | 10 | 11 | 10 | 6  | 3  | 2  | 4  | 6                                                                                                                                                              | 10 | 9  | 13 | 17              | 10.8          | 18.8          |  |  |  |                                 |  |
| 6-Apr                                                                                                                   | 16                            | 13 | 12 | 11 | 13 | 15 | 19 | 17 | 18 | 23 | 25 | 28 | 26 | 24 | 24 | 21 | 18 | 17 | 21 | 24                                                                                                                                                             | 21 | 22 | 19 | 19              | 19.4          | 27.6          |  |  |  |                                 |  |
| 7-Apr                                                                                                                   | 19                            | 17 | 12 | 12 | 10 | 10 | 9  | 10 | 14 | 14 | 15 | 19 | 15 | 19 | 22 | 21 | 17 | 16 | 16 | 17                                                                                                                                                             | 16 | 15 | 16 | 15              | 15.3          | 22.0          |  |  |  |                                 |  |
| 8-Apr                                                                                                                   | 19                            | 25 | 26 | 21 | 20 | 21 | 13 | 15 | 13 | 12 | 15 | 18 | 28 | 29 | 28 | 29 | 25 | 21 | 20 | 19                                                                                                                                                             | 14 | 14 | 23 | 21              | 20.3          | 29.0          |  |  |  |                                 |  |
| 9-Apr                                                                                                                   | 20                            | 22 | 21 | 22 | 25 | 26 | 21 | 22 | 21 | 26 | 26 | 32 | 34 | 37 | 34 | 31 | 24 | 25 | 23 | 18                                                                                                                                                             | 18 | 16 | 17 | 17              | 24.0          | 37.3          |  |  |  |                                 |  |
| 10-Apr                                                                                                                  | 15                            | 20 | 18 | 15 | 18 | 15 | 17 | 20 | 18 | 15 | 17 | 14 | 13 | 14 | 13 | 11 | 7  | 4  | 13 | 10                                                                                                                                                             | 11 | 10 | 9  | 12              | 13.7          | 20.5          |  |  |  |                                 |  |
| 11-Apr                                                                                                                  | 17                            | 16 | 13 | 11 | 15 | 12 | 7  | 8  | 14 | 22 | 23 | 29 | 34 | 29 | 25 | 24 | 19 | 15 | 12 | 12                                                                                                                                                             | 10 | 8  | 3  | 2               | 16.0          | 33.7          |  |  |  |                                 |  |
| 12-Apr                                                                                                                  | 3                             | 6  | 6  | 6  | 11 | 11 | 12 | 12 | 14 | 13 | 16 | 17 | 18 | 17 | 15 | 10 | 11 | 9  | 4  | 5                                                                                                                                                              | 11 | 19 | 13 | 10              | 11.2          | 18.6          |  |  |  |                                 |  |
| 13-Apr                                                                                                                  | 7                             | 4  | 7  | 9  | 9  | 11 | 13 | 12 | 11 | 13 | 14 | 16 | 16 | 15 | 15 | 17 | 17 | 16 | 15 | 13                                                                                                                                                             | 18 | 17 | 20 | 20              | 13.6          | 20.4          |  |  |  |                                 |  |
| 14-Apr                                                                                                                  | 20                            | 21 | 21 | 20 | 17 | 16 | 16 | 14 | 13 | 10 | 5  | 6  | 7  | 7  | 5  | 3  | 1  | 2  | 1  | 0                                                                                                                                                              | 4  | 7  | 5  | 14              | 9.8           | 20.9          |  |  |  |                                 |  |
| 15-Apr                                                                                                                  | 24                            | 18 | 10 | 19 | 22 | 19 | 20 | 20 | 12 | 9  | 9  | 9  | 11 | 9  | 12 | 19 | 15 | 18 | 19 | 16                                                                                                                                                             | 13 | 11 | 10 | 13              | 14.9          | 23.7          |  |  |  |                                 |  |
| 16-Apr                                                                                                                  | 12                            | 5  | 7  | 9  | 13 | 16 | 15 | 18 | 17 | 12 | 11 | 13 | 13 | 10 | 11 | 12 | 15 | 12 | 11 | 10                                                                                                                                                             | 13 | 10 | 5  | 2               | 11.3          | 18.0          |  |  |  |                                 |  |
| 17-Apr                                                                                                                  | 2                             | 2  | 3  | 2  | 3  | 5  | 6  | 5  | 8  | 16 | 19 | 20 | 19 | 23 | 24 | 21 | 23 | 26 | 24 | 23                                                                                                                                                             | 21 | 23 | 22 | 21              | 15.1          | 25.8          |  |  |  |                                 |  |
| 18-Apr                                                                                                                  | 22                            | 19 | 18 | 17 | 16 | 12 | 12 | 12 | 13 | 12 | 9  | 6  | 6  | 7  | 5  | 5  | 5  | 3  | 2  | 2                                                                                                                                                              | 6  | 8  | 9  | 11              | 10.0          | 22.3          |  |  |  |                                 |  |
| 19-Apr                                                                                                                  | 13                            | 14 | 14 | 15 | 15 | 14 | 12 | 8  | 9  | 10 | 6  | 7  | 8  | 8  | 5  | 5  | 4  | 5  | 3  | 3                                                                                                                                                              | 8  | 8  | 8  | 5               | 8.6           | 15.4          |  |  |  |                                 |  |
| 20-Apr                                                                                                                  | 6                             | 5  | 10 | 13 | 12 | 9  | 8  | 9  | 9  | 11 | 13 | 15 | 14 | 14 | 19 | 14 | 12 | 13 | 9  | 7                                                                                                                                                              | 7  | 8  | 6  | 7               | 10.3          | 18.7          |  |  |  |                                 |  |
| 21-Apr                                                                                                                  | 6                             | 12 | 13 | 13 | 12 | 13 | 12 | 10 | 9  | 6  | 6  | 7  | 6  | 6  | 4  | 6  | 7  | 6  | 8  | 10                                                                                                                                                             | 10 | 14 | 14 | 15              | 9.4           | 14.6          |  |  |  |                                 |  |
| 22-Apr                                                                                                                  | 17                            | 15 | 21 | 22 | 23 | 24 | 26 | 26 | 24 | 24 | 26 | 29 | 31 | 32 | 34 | 33 | 37 | 32 | 35 | 33                                                                                                                                                             | 34 | 37 | 39 | 43              | 29.1          | 43.2          |  |  |  |                                 |  |
| 23-Apr                                                                                                                  | 38                            | 39 | 23 | 16 | 13 | 17 | 18 | 15 | 10 | 7  | 5  | 5  | 7  | 9  | 8  | 3  | 1  | 1  | 2  | 3                                                                                                                                                              | 5  | 0  | 0  | 0               | 10.3          | 39.2          |  |  |  |                                 |  |
| 24-Apr                                                                                                                  | 0                             | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 8  | 9  | 7  | 8  | 7  | 7  | 5  | 5  | 7  | 6  | 8                                                                                                                                                              | 8  | 4  | 4  | 8               | 4.2           | 8.7           |  |  |  |                                 |  |
| 25-Apr                                                                                                                  | 14                            | 14 | 5  | 5  | 5  | 7  | 7  | 5  | 4  | 4  | 7  | 5  | 5  | 5  | 7  | 7  | 7  | 6  | 6  | 7                                                                                                                                                              | 9  | 11 | 10 | 7               | 7.1           | 14.1          |  |  |  |                                 |  |
| 26-Apr                                                                                                                  | 11                            | 10 | 8  | 7  | 8  | 13 | 13 | 11 | 12 | 11 | 10 | 15 | 16 | 16 | 13 | 19 | 24 | 23 | 28 | 22                                                                                                                                                             | 17 | 16 | 17 | 22              | 15.1          | 28.5          |  |  |  |                                 |  |
| 27-Apr                                                                                                                  | 17                            | 17 | 19 | 19 | 20 | 18 | 18 | 17 | 18 | 15 | 11 | 9  | 10 | 6  | 5  | 7  | 8  | 6  | 3  | 3                                                                                                                                                              | 5  | 8  | 8  | 9               | 11.5          | 19.6          |  |  |  |                                 |  |
| 28-Apr                                                                                                                  | 10                            | 10 | 9  | 12 | 13 | 12 | 11 | 11 | 16 | 22 | 25 | 31 | 29 | 25 | 24 | 25 | 23 | 23 | 24 | 18                                                                                                                                                             | 16 | 22 | 16 | 14              | 18.5          | 31.0          |  |  |  |                                 |  |
| 29-Apr                                                                                                                  | 15                            | 16 | 16 | 13 | 13 | 13 | 12 | 13 | 14 | 13 | 11 | 16 | 17 | 17 | 12 | 9  | 7  | 9  | 8  | 8                                                                                                                                                              | 9  | 14 | 17 | 19              | 12.8          | 19.2          |  |  |  |                                 |  |
| 30-Apr                                                                                                                  | 21                            | 18 | 15 | 13 | 17 | 17 | 18 | 18 | 17 | 17 | 17 | 21 | 23 | 21 | 20 | 23 | 24 | 22 | 19 | 18                                                                                                                                                             | 18 | 16 | 22 | 24              | 19.1          | 24.4          |  |  |  |                                 |  |
| 14.7 14.6 13.6 13.0 13.7 13.9 13.5 13.1 13.2 13.6 13.8 15.3 16.3 16.1 15.7 15.4 14.3 13.2 12.9 11.7 12.4 13.0 13.3 14.4 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                |    |    |    | Diurnal Average |               |               |  |  |  |                                 |  |
| 38.4 39.2 25.5 22.2 24.8 25.6 26.0 26.1 24.3 26.1 26.4 32.0 33.7 37.3 34.1 32.7 37.4 31.8 35.5 33.1 34.2 37.0 39.2 43.2 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                |    |    |    | Diurnal Maximum |               |               |  |  |  |                                 |  |
| All monthly, daily, and diurnal averages have been calculated using scalar methods                                      |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                |    |    |    |                 |               |               |  |  |  |                                 |  |

# Hourly Standard Deviations

Wind Direction (WD) - deg

Portable Reno - April 2014

| Maximum Value: 87.1 deg on Apr 25 16:00                                                                                                                       |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720           |    |    |    |    |    |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---------------------------------|----|----|----|----|----|---------------|
| Minimum Value: 0.4 deg on Apr 23 23:00                                                                                                                        |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Data: 720              |    |    |    |    |    |               |
| Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 3.3 Q <sub>1</sub> = 5.0 Median = 7.8 Q <sub>3</sub> = 13.3 P <sub>90</sub> = 24.0 P <sub>99</sub> = 72.2 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | 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-Apr                                                                                                                                                         | 8                             | 7  | 12 | 20 | 8  | 7  | 12 | 26 | 10 | 48 | 12 | 16 | 17 | 15 | 13 | 22 | 21 | 13 | 14                              | 10 | 9  | 18 | 4  | 4  | 47.8          |
| 2-Apr                                                                                                                                                         | 9                             | 2  | 4  | 16 | 8  | 8  | 9  | 7  | 10 | 12 | 11 | 12 | 5  | 4  | 4  | 6  | 6  | 6  | 8                               | 8  | 19 | 21 | 8  | 2  | 21.0          |
| 3-Apr                                                                                                                                                         | 2                             | 2  | 2  | 2  | 2  | 3  | 3  | 4  | 7  | 7  | 7  | 10 | 12 | 10 | 10 | 7  | 7  | 7  | 4                               | 3  | 3  | 3  | 3  | 3  | 11.8          |
| 4-Apr                                                                                                                                                         | 4                             | 5  | 4  | 7  | 4  | 5  | 20 | 8  | 9  | 6  | 9  | 7  | 6  | 4  | 4  | 6  | 4  | 8  | 6                               | 75 | 69 | 9  | 9  | 7  | 74.7          |
| 5-Apr                                                                                                                                                         | 7                             | 4  | 8  | 4  | 3  | 8  | 5  | 3  | 6  | 6  | 19 | 13 | 6  | 7  | 6  | 10 | 14 | 17 | 7                               | 13 | 4  | 5  | 7  | 9  | 19.3          |
| 6-Apr                                                                                                                                                         | 7                             | 5  | 3  | 5  | 8  | 7  | 7  | 5  | 10 | 6  | 4  | 3  | 3  | 4  | 5  | 3  | 5  | 4  | 6                               | 4  | 4  | 3  | 7  | 4  | 9.8           |
| 7-Apr                                                                                                                                                         | 3                             | 2  | 3  | 5  | 12 | 5  | 21 | 4  | 4  | 4  | 13 | 11 | 14 | 5  | 3  | 12 | 7  | 14 | 6                               | 4  | 8  | 4  | 6  | 12 | 20.8          |
| 8-Apr                                                                                                                                                         | 5                             | 4  | 3  | 9  | 10 | 5  | 15 | 11 | 9  | 13 | 6  | 8  | 6  | 6  | 6  | 3  | 5  | 7  | 4                               | 5  | 7  | 10 | 5  | 8  | 15.1          |
| 9-Apr                                                                                                                                                         | 4                             | 3  | 3  | 3  | 3  | 2  | 3  | 3  | 5  | 5  | 6  | 5  | 5  | 4  | 4  | 3  | 4  | 3  | 9                               | 6  | 4  | 7  | 5  | 3  | 8.7           |
| 10-Apr                                                                                                                                                        | 3                             | 2  | 3  | 6  | 2  | 3  | 5  | 4  | 10 | 7  | 5  | 4  | 9  | 13 | 7  | 30 | 13 | 43 | 18                              | 33 | 16 | 23 | 16 | 11 | 43.3          |
| 11-Apr                                                                                                                                                        | 4                             | 22 | 6  | 13 | 23 | 9  | 15 | 40 | 10 | 7  | 8  | 6  | 5  | 4  | 7  | 7  | 7  | 10 | 11                              | 14 | 10 | 8  | 7  | 65 | 65.3          |
| 12-Apr                                                                                                                                                        | 9                             | 5  | 5  | 13 | 5  | 4  | 5  | 10 | 9  | 4  | 5  | 6  | 6  | 5  | 5  | 9  | 22 | 14 | 14                              | 12 | 15 | 5  | 3  | 6  | 21.7          |
| 13-Apr                                                                                                                                                        | 11                            | 39 | 11 | 5  | 5  | 5  | 4  | 6  | 11 | 3  | 12 | 13 | 8  | 8  | 6  | 14 | 4  | 3  | 17                              | 7  | 6  | 3  | 3  | 4  | 39.0          |
| 14-Apr                                                                                                                                                        | 3                             | 4  | 3  | 3  | 7  | 3  | 14 | 4  | 5  | 4  | 54 | 30 | 17 | 15 | 22 | 41 | 83 | 36 | 66                              | 52 | 22 | 47 | 77 | 57 | 82.7          |
| 15-Apr                                                                                                                                                        | 6                             | 8  | 24 | 7  | 7  | 5  | 5  | 6  | 10 | 7  | 8  | 8  | 12 | 10 | 12 | 13 | 10 | 16 | 8                               | 8  | 7  | 3  | 4  | 6  | 24.3          |
| 16-Apr                                                                                                                                                        | 5                             | 81 | 12 | 8  | 6  | 5  | 6  | 8  | 9  | 20 | 12 | 16 | 13 | 13 | 16 | 16 | 19 | 35 | 26                              | 23 | 8  | 8  | 7  | 27 | 80.7          |
| 17-Apr                                                                                                                                                        | 16                            | 30 | 22 | 73 | 49 | 24 | 11 | 21 | 14 | 19 | 15 | 13 | 14 | 15 | 15 | 13 | 12 | 10 | 8                               | 6  | 6  | 6  | 6  | 6  | 73.2          |
| 18-Apr                                                                                                                                                        | 5                             | 6  | 6  | 8  | 7  | 7  | 9  | 7  | 8  | 8  | 14 | 17 | 36 | 14 | 10 | 26 | 44 | 17 | 60                              | 37 | 22 | 11 | 10 | 4  | 60.4          |
| 19-Apr                                                                                                                                                        | 8                             | 9  | 3  | 5  | 4  | 6  | 7  | 13 | 13 | 7  | 19 | 9  | 7  | 16 | 22 | 35 | 16 | 18 | 18                              | 46 | 8  | 15 | 24 | 25 | 46.4          |
| 20-Apr                                                                                                                                                        | 56                            | 22 | 12 | 13 | 9  | 20 | 13 | 8  | 5  | 8  | 7  | 5  | 12 | 7  | 12 | 13 | 7  | 8  | 10                              | 6  | 17 | 24 | 9  | 8  | 56.5          |
| 21-Apr                                                                                                                                                        | 12                            | 11 | 2  | 2  | 3  | 5  | 6  | 5  | 10 | 14 | 23 | 14 | 24 | 31 | 59 | 37 | 35 | 34 | 16                              | 5  | 7  | 3  | 3  | 6  | 58.7          |
| 22-Apr                                                                                                                                                        | 3                             | 15 | 4  | 2  | 3  | 3  | 3  | 3  | 4  | 6  | 7  | 8  | 8  | 8  | 11 | 8  | 5  | 7  | 9                               | 6  | 6  | 5  | 5  | 5  | 14.9          |
| 23-Apr                                                                                                                                                        | 5                             | 5  | 11 | 11 | 8  | 6  | 4  | 4  | 8  | 8  | 8  | 29 | 12 | 12 | 8  | 48 | 21 | 19 | 8                               | 13 | 4  | 1  | 0  | 1  | 47.6          |
| 24-Apr                                                                                                                                                        | 1                             | 1  | 1  | 1  | 1  | 0  | 1  | 2  | 6  | 7  | 8  | 15 | 10 | 9  | 15 | 43 | 16 | 11 | 15                              | 10 | 15 | 29 | 28 | 7  | 43.1          |
| 25-Apr                                                                                                                                                        | 6                             | 4  | 24 | 17 | 10 | 6  | 16 | 14 | 44 | 70 | 34 | 35 | 32 | 59 | 20 | 87 | 45 | 49 | 12                              | 21 | 6  | 14 | 5  | 5  | 87.1          |
| 26-Apr                                                                                                                                                        | 9                             | 5  | 6  | 10 | 11 | 7  | 5  | 8  | 9  | 14 | 33 | 14 | 14 | 15 | 19 | 13 | 10 | 9  | 7                               | 7  | 6  | 6  | 9  | 6  | 33.5          |
| 27-Apr                                                                                                                                                        | 8                             | 5  | 5  | 6  | 4  | 5  | 6  | 6  | 7  | 6  | 14 | 24 | 13 | 27 | 65 | 31 | 28 | 41 | 78                              | 27 | 14 | 11 | 6  | 5  | 77.8          |
| 28-Apr                                                                                                                                                        | 16                            | 11 | 13 | 4  | 3  | 3  | 7  | 19 | 8  | 7  | 11 | 8  | 9  | 14 | 15 | 10 | 12 | 8  | 6                               | 3  | 8  | 7  | 3  | 5  | 19.1          |
| 29-Apr                                                                                                                                                        | 6                             | 3  | 6  | 5  | 10 | 10 | 16 | 15 | 13 | 14 | 13 | 13 | 12 | 19 | 21 | 31 | 59 | 31 | 41                              | 11 | 5  | 3  | 4  | 2  | 59.2          |
| 30-Apr                                                                                                                                                        | 3                             | 8  | 9  | 13 | 5  | 2  | 3  | 5  | 9  | 10 | 14 | 11 | 11 | 14 | 13 | 10 | 8  | 7  | 9                               | 5  | 8  | 5  | 5  | 5  | 14.2          |
| 56.5 80.7 24.3 73.2 48.6 24.1 20.8 40.2 44.2 70.1 53.8 35.1 35.8 58.8 65.3 87.1 82.7 49.1 77.8 74.7 68.7 47.2 77.5 65.3                                       |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                 |    |    |    |    |    |               |

PAZA

Falher Station

Monthly Summary Tables, Graphs and  
Roses



## Hourly Averages

Sulphur Dioxide (SO<sub>2</sub>) - ppb

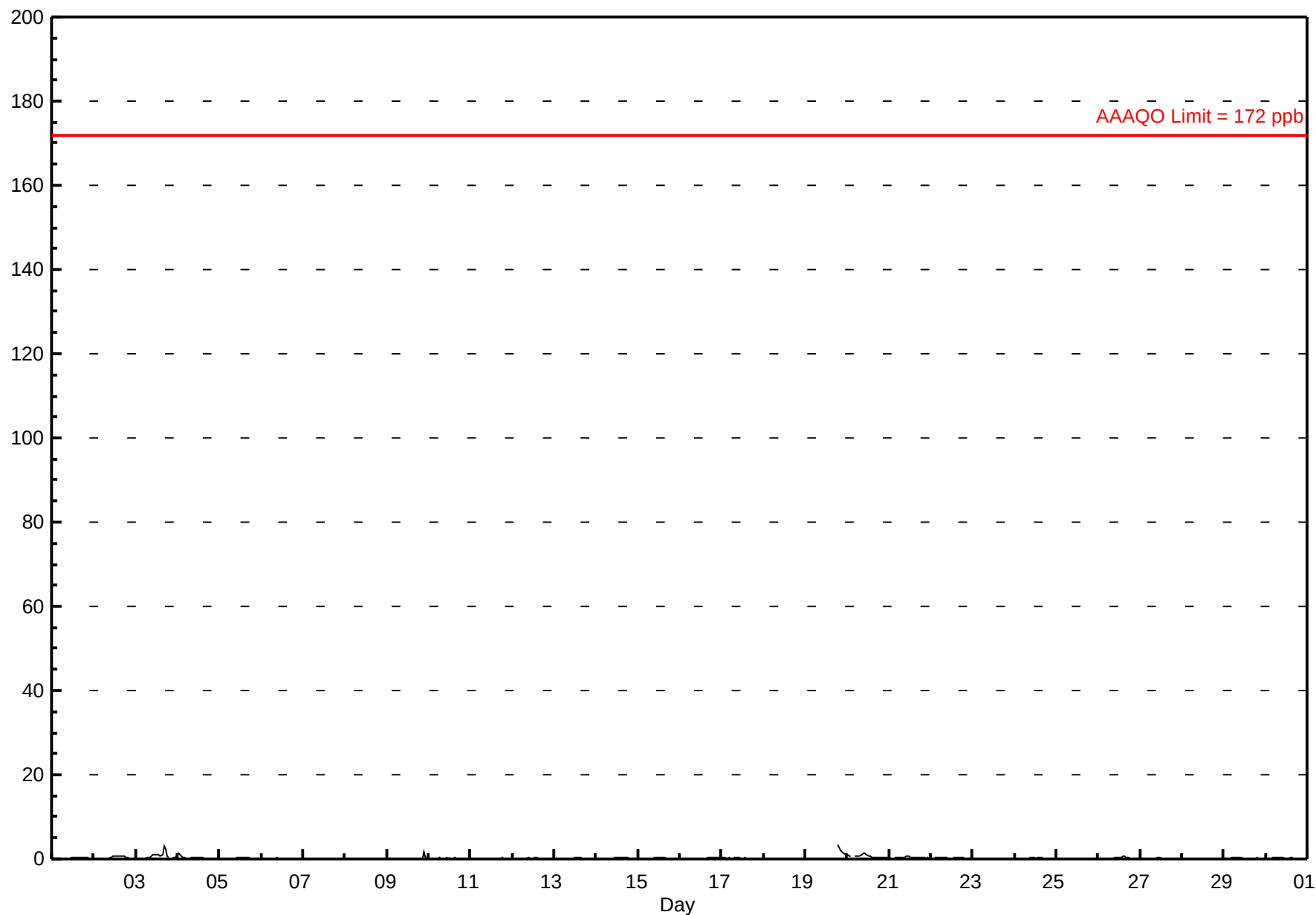
Falher - April 2014

|                                                 |                               |                   |     |     |     |     |     |                 |     |     |     |     |     |               |     |     |     |     |     |                               |     |                                                                                                                                                            |     |                                |                 |                 |     |
|-------------------------------------------------|-------------------------------|-------------------|-----|-----|-----|-----|-----|-----------------|-----|-----|-----|-----|-----|---------------|-----|-----|-----|-----|-----|-------------------------------|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------------------------------|-----------------|-----------------|-----|
| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0 |                               |                   |     |     |     |     |     |                 |     |     |     |     |     |               |     |     |     |     |     |                               |     | Hours in Service: 720                                                                                                                                      |     |                                |                 |                 |     |
| Maximum Value: 3.6 ppb on Apr 19 19:00          |                               |                   |     |     |     |     |     |                 |     |     |     |     |     |               |     |     |     |     |     |                               |     | Maximum Daily Average: 0.7 ppb on Apr 3                                                                                                                    |     | Hours of Data: 639             |                 |                 |     |
| Minimum Value: 0 ppb on Apr 1 05:00             |                               |                   |     |     |     |     |     |                 |     |     |     |     |     |               |     |     |     |     |     |                               |     | Minimum Daily Average: 0.0 ppb on Apr 8                                                                                                                    |     | Hours of Missing Data: 81      |                 |                 |     |
| Maximum Diurnal Average: 0.3 ppb at hour 19     |                               |                   |     |     |     |     |     |                 |     |     |     |     |     |               |     |     |     |     |     |                               |     | Minimum Diurnal Average: 0.1 ppb at hour 4                                                                                                                 |     | Hours of Calibration: 32       |                 |                 |     |
| Monthly Average: 0.19 ppb                       |                               |                   |     |     |     |     |     |                 |     |     |     |     |     |               |     |     |     |     |     |                               |     | Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.1 Q <sub>3</sub> = 0.2 P <sub>90</sub> = 0.4 P <sub>99</sub> = 1.4 |     | Percent Operational Time: 93.2 |                 |                 |     |
| 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-Apr                                           | 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             |     |
| 2-Apr                                           | 0                             | 0                 | 0   | 0   | 0   | 0   | 0   | 0               | 0   | 0   | 0   | 1   | 1   | 1             | 1   | 1   | 1   | 1   | 0   | 0                             | 0   | A                                                                                                                                                          | 0   | 0                              | 0.3             | 0.7             |     |
| 3-Apr                                           | 0                             | 0                 | 0   | 0   | 0   | 0   | 0   | 0               | 0   | 1   | 1   | 1   | 1   | 1             | 1   | 1   | 3   | 2   | 1   | 0                             | A   | 0                                                                                                                                                          | 0   | 0                              | 0.7             | 2.9             |     |
| 4-Apr                                           | 1                             | 1                 | 1   | 0   | 0   | 0   | 0   | 0               | 0   | 0   | 0   | 0   | 0   | 0             | 0   | 0   | 0   | 0   | 0   | A                             | 0   | 0                                                                                                                                                          | 0   | 0                              | 0.2             | 1.4             |     |
| 5-Apr                                           | 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             |     |
| 6-Apr                                           | 0                             | 0                 | 0   | 0   | 0   | 0   | 0   | 0               | 0   | 0   | 0   | 0   | 0   | 0             | 0   | 0   | 0   | A   | 0   | 0                             | 0   | 0                                                                                                                                                          | 0   | 0                              | 0.1             | 0.2             |     |
| 7-Apr                                           | 0                             | 0                 | 0   | 0   | 0   | 0   | 0   | 0               | 0   | 0   | 0   | 0   | 0   | 0             | 0   | 0   | A   | 0   | 0   | 0                             | 0   | 0                                                                                                                                                          | 0   | 0                              | 0.0             | 0.1             |     |
| 8-Apr                                           | 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             |     |
| 9-Apr                                           | 0                             | 0                 | 0   | 0   | 0   | 0   | 0   | 0               | 0   | 0   | 0   | 0   | 0   | 0             | A   | 0   | 0   | 0   | 0   | 0                             | 0   | 2                                                                                                                                                          | 0   | 0                              | 0.1             | 1.7             |     |
| 10-Apr                                          | 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-Apr                                          | 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             |     |
| 12-Apr                                          | 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             |     |
| 13-Apr                                          | 0                             | 0                 | 0   | 0   | 0   | 0   | 0   | 0               | 0   | 0   | A   | 0   | 0   | 0             | 0   | 0   | 0   | 0   | 0   | 0                             | 0   | 0                                                                                                                                                          | 0   | 0                              | 0.1             | 0.5             |     |
| 14-Apr                                          | 0                             | 0                 | 0   | 0   | 0   | 0   | 0   | 0               | 0   | A   | 0   | 0   | 0   | 0             | 0   | 0   | 0   | 0   | 0   | 0                             | 0   | 0                                                                                                                                                          | 0   | 0                              | 0.1             | 0.3             |     |
| 15-Apr                                          | 0                             | 0                 | 0   | 0   | 0   | 0   | 0   | 0               | A   | 0   | 0   | 0   | 0   | 0             | 0   | 0   | 0   | 0   | 0   | 0                             | 0   | 0                                                                                                                                                          | 0   | 0                              | 0.2             | 0.4             |     |
| 16-Apr                                          | 0                             | 0                 | 0   | 0   | 0   | 0   | 0   | A               | 0   | 0   | 0   | 0   | 0   | 0             | 0   | 0   | 0   | 0   | 0   | 0                             | 0   | 0                                                                                                                                                          | 0   | 0                              | 0.2             | 0.4             |     |
| 17-Apr                                          | 0                             | 0                 | 0   | 0   | 0   | 0   | 0   | 0               | 0   | 0   | 0   | 0   | 0   | 0             | 0   | 0   | 0   | 0   | P   | P                             | P   | P                                                                                                                                                          | P   | P                              | --              | 0.3             |     |
| 18-Apr                                          | P                             | P                 | P   | P   | P   | P   | P   | P               | P   | P   | P   | P   | P   | P             | P   | P   | P   | P   | P   | P                             | P   | P                                                                                                                                                          | P   | P                              | --              | --              |     |
| 19-Apr                                          | N                             | N                 | N   | N   | N   | N   | N   | N               | N   | N   | N   | N   | N   | N             | N   | N   | N   | N   | M   | 4                             | 3   | 2                                                                                                                                                          | 2   | 1                              | 1               | --              | 3.6 |
| 20-Apr                                          | 1                             | 1                 | 1   | A   | 1   | 1   | 1   | 1               | 1   | 2   | 1   | 1   | 1   | 1             | 0   | 0   | 0   | 0   | 0   | 0                             | 0   | 0                                                                                                                                                          | 0   | 0                              | 0               | 0.7             | 1.5 |
| 21-Apr                                          | 0                             | 0                 | A   | 0   | 0   | 0   | 0   | 0               | 0   | 0   | 1   | 1   | 0   | 0             | 0   | 0   | 0   | 0   | 0   | 0                             | 0   | 0                                                                                                                                                          | 0   | 0                              | 0.3             | 0.5             |     |
| 22-Apr                                          | 0                             | A                 | 0   | 0   | 0   | 0   | 0   | 0               | 0   | 0   | C   | C   | C   | 0             | 0   | 0   | 0   | 0   | 0   | 0                             | 0   | 0                                                                                                                                                          | 0   | 0                              | 0.2             | 0.4             |     |
| 23-Apr                                          | A                             | 0                 | 0   | 0   | 0   | 0   | 0   | 0               | 0   | 0   | 0   | 0   | 0   | 0             | 0   | 0   | 0   | 0   | 0   | 0                             | 0   | 0                                                                                                                                                          | 0   | A                              | 0.0             | 0.0             |     |
| 24-Apr                                          | 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             |     |
| 25-Apr                                          | 0                             | 0                 | 0   | 0   | 0   | 0   | 0   | 0               | 0   | 0   | 0   | 0   | 0   | 0             | 0   | 0   | 0   | 0   | 0   | 0                             | 0   | A                                                                                                                                                          | 0   | 0                              | 0.1             | 0.1             |     |
| 26-Apr                                          | 0                             | 0                 | 0   | 0   | 0   | 0   | 0   | 0               | 0   | 0   | 0   | 1   | 0   | 0             | 1   | 1   | 0   | 0   | 0   | 0                             | A   | 0                                                                                                                                                          | 0   | 0                              | 0.2             | 0.7             |     |
| 27-Apr                                          | 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             | 0.5             |     |
| 28-Apr                                          | 0                             | 0                 | 0   | 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             |     |
| 29-Apr                                          | 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             | 0.5             |     |
| 30-Apr                                          | 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               | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1             | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 | 0.3           | 0.2 | 0.2 | 0.3 | 0.2 | 0.3 | 0.2                           | 0.2 | 0.2                                                                                                                                                        | 0.2 | 0.1                            | Diurnal Average |                 |     |
|                                                 |                               | 1.4               | 0.9 | 0.7 | 0.4 | 0.7 | 0.7 | 0.7             | 0.8 | 0.9 | 1.5 | 1.3 | 1.1 | 1.0           | 0.9 | 0.7 | 0.9 | 2.9 | 2.2 | 3.6                           | 2.6 | 1.9                                                                                                                                                        | 1.7 | 1.2                            | 1.1             | Diurnal Maximum |     |
| C - Calibration                                 |                               | P - Power Failure |     |     |     |     |     | M - Maintenance |     |     |     |     |     | N - Not Valid |     |     |     |     |     | A - Automated Daily Zero Span |     |                                                                                                                                                            |     |                                |                 |                 |     |
| Alberta Ambient Air Quality Objectives (AAAQO): |                               | 1-hr 172 ppb      |     |     |     |     |     | 24-hr 48 ppb    |     |     |     |     |     | 30-day 11 ppb |     |     |     |     |     |                               |     |                                                                                                                                                            |     |                                |                 |                 |     |

## Hourly Averages

Sulphur Dioxide (SO<sub>2</sub>) - ppb

Falher - April 2014



## Hourly Maximums

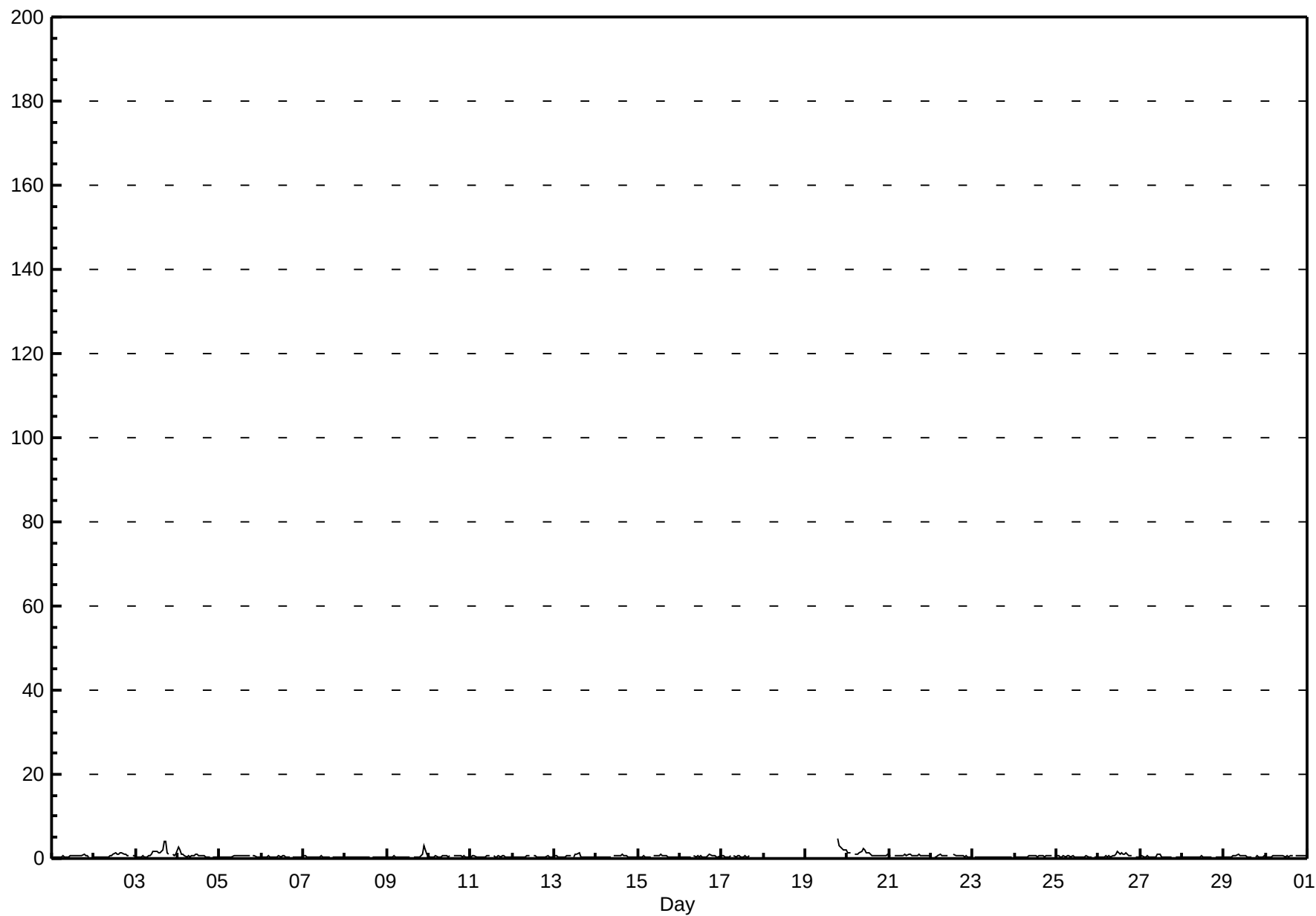
Sulphur Dioxide (SO<sub>2</sub>) - ppb

Falher - April 2014

| Maximum Value: 4.6 ppb on Apr 19 19:00      |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Maximum Daily Average: 1.2 ppb on Apr 3                                                                                                                    |    |    |    |    |    |                               |               |     |  |  |  |  |  |  |  |  |  |  | Hours in Service: 720          |  |  |  |
|---------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|-------------------------------|---------------|-----|--|--|--|--|--|--|--|--|--|--|--------------------------------|--|--|--|
| Minimum Value: 0 ppb on Apr 8 13:00         |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Minimum Daily Average: 0.3 ppb on Apr 8                                                                                                                    |    |    |    |    |    |                               |               |     |  |  |  |  |  |  |  |  |  |  | Hours of Data: 639             |  |  |  |
| Maximum Diurnal Average: 0.7 ppb at hour 12 |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Minimum Diurnal Average: 0.4 ppb at hour 4                                                                                                                 |    |    |    |    |    |                               |               |     |  |  |  |  |  |  |  |  |  |  | Hours of Missing Data: 81      |  |  |  |
| Monthly Average: 0.60 ppb                   |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 0.2 P <sub>10</sub> = 0.3 Q <sub>1</sub> = 0.4 Median = 0.5 Q <sub>3</sub> = 0.6 P <sub>90</sub> = 0.9 P <sub>99</sub> = 2.5 |    |    |    |    |    |                               |               |     |  |  |  |  |  |  |  |  |  |  | Hours of Calibration: 32       |  |  |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    |    |                               |               |     |  |  |  |  |  |  |  |  |  |  | Percent Operational Time: 93.2 |  |  |  |
| 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-Apr                                       | 0                             | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 0  | A  | 0  | 0.5                           | 0.9           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 2-Apr                                       | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | A  | 1  | 1  | 0.7                           | 1.2           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 3-Apr                                       | 0                             | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1  | 2  | 2  | 2  | 1  | 1  | 2  | 4  | 4  | 1                                                                                                                                                          | 1  | A  | 1  | 1  | 1  | 1.2                           | 4.0           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 4-Apr                                       | 3                             | 2 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 0  | 0                                                                                                                                                          | A  | 0  | 0  | 0  | 0  | 0.7                           | 2.8           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 5-Apr                                       | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | A                                                                                                                                                          | 1  | 1  | 0  | 0  | 0  | 0.5                           | 0.8           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 6-Apr                                       | 0                             | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0  | 1  | 0  | 1  | 1  | 0  | 0  | 0  | A  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.4                           | 0.7           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 7-Apr                                       | 1                             | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 1  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.4                           | 0.5           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 8-Apr                                       | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.3                           | 0.4           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 9-Apr                                       | 0                             | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 1  | 3  | 2  | 1  | 0.6                           | 3.2           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 10-Apr                                      | 0                             | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1  | 1  | 0  | 1  | A  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 0  | 1  | 0  | 0  | 0  | 0.5                           | 0.7           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 11-Apr                                      | 0                             | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1  | 1  | 1  | A  | 1  | 1  | 0  | 1  | 0  | 1                                                                                                                                                          | 1  | 0  | 0  | 0  | 0  | 0.5                           | 0.6           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 12-Apr                                      | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1  | 1  | A  | 1  | 1  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 1  | 0  | 0  | 1  | 0.5                           | 0.7           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 13-Apr                                      | 1                             | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1  | A  | 0  | 1  | 1  | 1  | 1  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.5                           | 1.3           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 14-Apr                                      | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.5                           | 0.9           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 15-Apr                                      | 0                             | 0 | 0 | 1 | 0 | 1 | 0 | 0 | A | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 1                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.5                           | 0.9           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 16-Apr                                      | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | A | 1 | 0  | 1  | 0  | 1  | 0  | 0  | 0  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 0  | 0  | 1  | 0.5                           | 0.9           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 17-Apr                                      | 1                             | 1 | 0 | 0 | 0 | 1 | A | 1 | 0 | 1  | 1  | 0  | 0  | 0  | 1  | 0  | 1  | P  | P                                                                                                                                                          | P  | P  | P  | P  | P  | --                            | 0.8           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 18-Apr                                      | P                             | P | P | P | P | P | P | P | P | P  | P  | P  | P  | P  | P  | P  | P  | P  | P                                                                                                                                                          | P  | P  | P  | P  | P  | --                            | --            |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 19-Apr                                      | N                             | N | N | N | N | N | N | N | N | N  | N  | N  | N  | N  | N  | N  | N  | N  | M                                                                                                                                                          | 5  | 3  | 3  | 2  | 2  | 2                             | --            | 4.6 |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 20-Apr                                      | 2                             | 1 | 1 | A | 1 | 1 | 1 | 1 | 2 | 2  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 1.1                           | 2.4           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 21-Apr                                      | 1                             | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 0.7                           | 1.1           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 22-Apr                                      | 1                             | A | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1  | C  | C  | C  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 0  | 1  | 0  | 0  | 0  | 0.6                           | 0.9           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 23-Apr                                      | A                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | 0  | 0  | 0  | 0  | A  | 0.4                           | 0.5           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 24-Apr                                      | 0                             | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 0  | 1                                                                                                                                                          | 1  | 1  | 1  | A  | 1  | 0.5                           | 0.8           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 25-Apr                                      | 1                             | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 1  | 0                                                                                                                                                          | 1  | 0  | A  | 0  | 1  | 0.5                           | 0.6           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 26-Apr                                      | 0                             | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1  | 1  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1                                                                                                                                                          | 1  | A  | 0  | 0  | 0  | 0.7                           | 1.6           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 27-Apr                                      | 0                             | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0  | 1  | 1  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                                          | A  | 0  | 0  | 0  | 0  | 0.5                           | 1.1           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 28-Apr                                      | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | 0  | 1  | 0  | 0  | 0  | 0  | 1  | 0  | A                                                                                                                                                          | 0  | 0  | 0  | 0  | 0  | 0.4                           | 0.6           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 29-Apr                                      | 0                             | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1  | 1  | 1  | 1  | 0  | 0  | 0  | 0  | A  | 0                                                                                                                                                          | 1  | 0  | 0  | 0  | 1  | 0.5                           | 1.0           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| 30-Apr                                      | 0                             | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1  | 1  | 0  | 1  | 1  | 1  | 1  | A  | 1  | 1                                                                                                                                                          | 1  | 1  | 1  | 1  | 1  | 0.5                           | 0.7           |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    |    | Diurnal Average               |               |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    |    | Diurnal Maximum               |               |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
| C - Calibration                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    |    | P - Power Failure             |               |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    |    | M - Maintenance               |               |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    |    | N - Not Valid                 |               |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |
|                                             |                               |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |                                                                                                                                                            |    |    |    |    |    | A - Automated Daily Zero Span |               |     |  |  |  |  |  |  |  |  |  |  |                                |  |  |  |

## Hourly Maximums

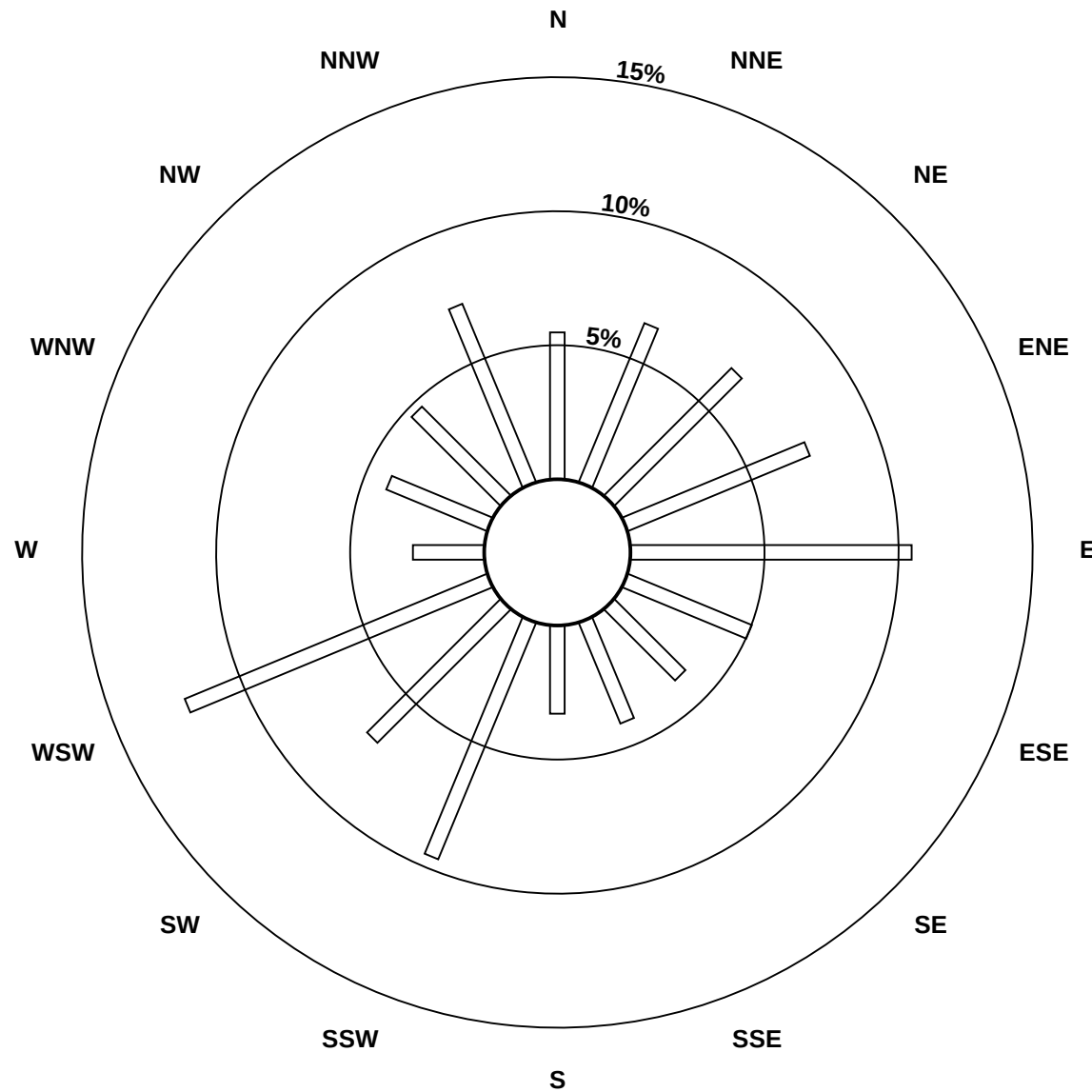
Sulphur Dioxide (SO<sub>2</sub>) - ppb  
Falher - April 2014



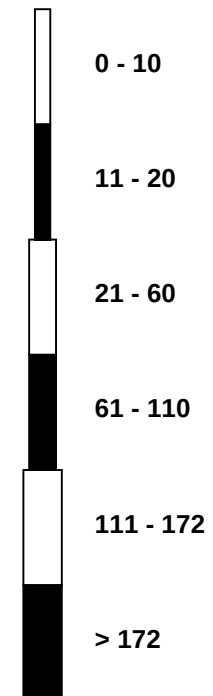
## Pollutant Rose

Sulphur Dioxide (SO<sub>2</sub>) - ppb

Falher - April 2014



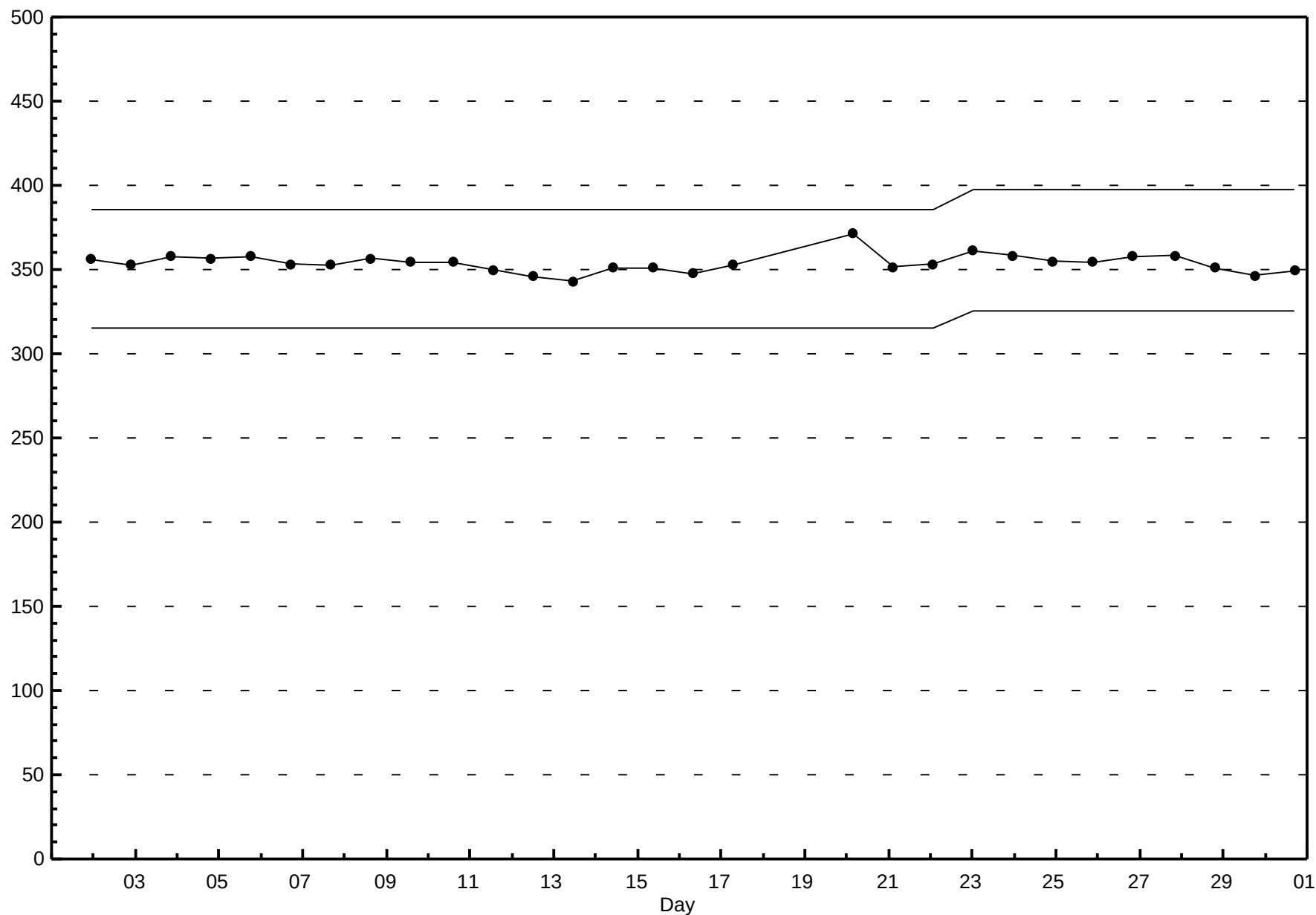
## Pollutant Classes (ppb)



## Span Responses

Sulphur Dioxide (SO<sub>2</sub>)

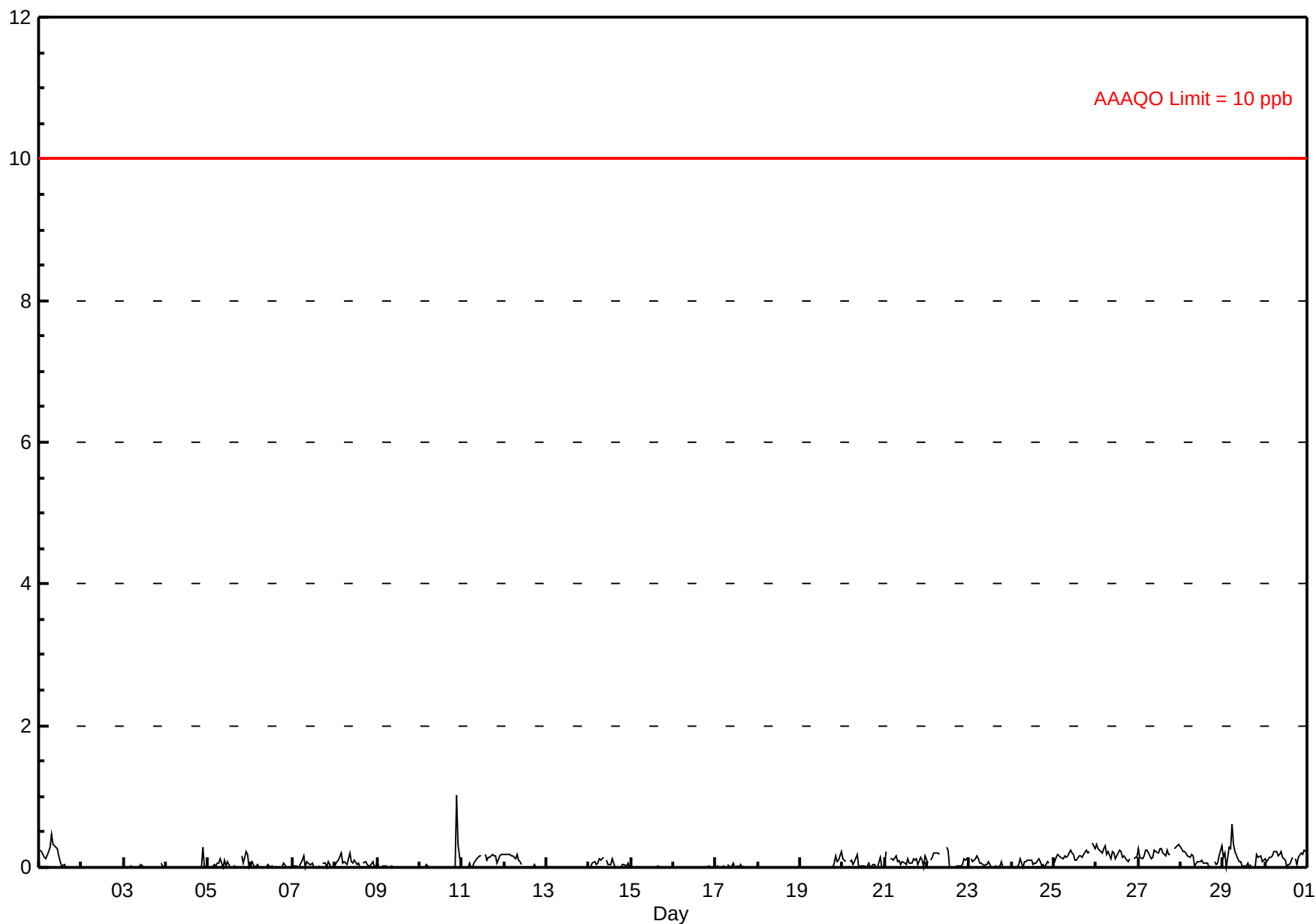
Falher - April 2014



|                                                                                                                                    |                               |   |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                      |    |    |    |    |    |    |    |    |    |                                                                                                                                        |    |    |    |    |                 |               |     |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---|---|---|---|---|---|---|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|----|----|----|----|----|----------------------------------------------------------------------------------------------------------------------------------------|----|----|----|----|-----------------|---------------|-----|
| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 1.0 ppb on Apr 10 22:00 Maximum Daily Average: 0.2 ppb on Apr 27 |                               |   |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                      |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 639<br>Hours of Missing Data: 81<br>Hours of Calibration: 32<br>Percent Operational Time: 93.2 |    |    |    |    |                 |               |     |
| Minimum Value: 0 ppb on Apr 1 16:00<br>Maximum Diurnal Average: 0.1 ppb at hour 22<br>Monthly Average: 0.07 ppb                    |                               |   |   |   |   |   |   |   |   | Minimum Daily Average: 0.0 ppb on Apr 2<br>Minimum Diurnal Average: 0.0 ppb at hour 17<br>Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.0 Median = 0.0 Q <sub>3</sub> = 0.1 P <sub>90</sub> = 0.2 P <sub>99</sub> = 0.3 |    |    |    |    |    |    |    |    |    |                                                                                                                                        |    |    |    |    |                 |               |     |
| Day                                                                                                                                | Hourly Period Ending At (MST) |   |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                      |    |    |    |    |    |    |    |    |    |                                                                                                                                        |    |    |    |    | Daily Average   | Daily Maximum |     |
|                                                                                                                                    | 1                             | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10                                                                                                                                                                                                                                                   | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20                                                                                                                                     | 21 | 22 | 23 | 24 |                 |               |     |
| 1-Apr                                                                                                                              | 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           |     |
| 2-Apr                                                                                                                              | 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           |     |
| 3-Apr                                                                                                                              | 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           |     |
| 4-Apr                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A                                                                                                                                      | 0  | 0  | 0  | 0  | 0.0             | 0.3           |     |
| 5-Apr                                                                                                                              | 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           |     |
| 6-Apr                                                                                                                              | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0                                                                                                                                      | 0  | 0  | 0  | 0  | 0.0             | 0.1           |     |
| 7-Apr                                                                                                                              | 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           |     |
| 8-Apr                                                                                                                              | 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           |     |
| 9-Apr                                                                                                                              | 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           |     |
| 10-Apr                                                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                      | 0  | 1  | 0  | 0  | 0.1             | 1.0           |     |
| 11-Apr                                                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                      | 0  | 0  | 0  | 0  | 0.1             | 0.2           |     |
| 12-Apr                                                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | A  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                      | 0  | 0  | 0  | 0  | 0.1             | 0.2           |     |
| 13-Apr                                                                                                                             | 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           |     |
| 14-Apr                                                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                      | 0  | 0  | 0  | 0  | 0.1             | 0.1           |     |
| 15-Apr                                                                                                                             | 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           |     |
| 16-Apr                                                                                                                             | 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           |     |
| 17-Apr                                                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0  | 0  | P  | P  | P                                                                                                                                      | P  | P  | P  | P  | --              | 0.1           |     |
| 18-Apr                                                                                                                             | P                             | P | P | P | P | P | P | P | P | P                                                                                                                                                                                                                                                    | P  | P  | P  | P  | P  | P  | P  | P  | P  | P                                                                                                                                      | P  | P  | P  | P  | --              | --            |     |
| 19-Apr                                                                                                                             | N                             | N | N | N | N | N | N | N | N | N                                                                                                                                                                                                                                                    | N  | N  | N  | N  | N  | N  | N  | N  | N  | 0                                                                                                                                      | 0  | 0  | 0  | 0  | 0               | --            | 0.2 |
| 20-Apr                                                                                                                             | 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           |     |
| 21-Apr                                                                                                                             | 0                             | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                      | 0  | 0  | 0  | 0  | 0.1             | 0.2           |     |
| 22-Apr                                                                                                                             | 0                             | A | 0 | 0 | 0 | 0 | 0 | 0 | C | C                                                                                                                                                                                                                                                    | C  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                      | 0  | 0  | 0  | 0  | 0.1             | 0.3           |     |
| 23-Apr                                                                                                                             | 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           |     |
| 24-Apr                                                                                                                             | 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             | 0.1           |     |
| 25-Apr                                                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                      | 0  | A  | 0  | 0  | 0.2             | 0.3           |     |
| 26-Apr                                                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0                                                                                                                                      | A  | 0  | 0  | 0  | 0.2             | 0.3           |     |
| 27-Apr                                                                                                                             | 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           |     |
| 28-Apr                                                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0                                                                                                                                      | 0  | 0  | 0  | 0  | 0.1             | 0.3           |     |
| 29-Apr                                                                                                                             | 0                             | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0                                                                                                                                      | 0  | 0  | 0  | 0  | 0.1             | 0.6           |     |
| 30-Apr                                                                                                                             | 0                             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                                                                                                                                                                                                                                                    | 0  | 0  | 0  | 0  | 0  | 0  | A  | 0  | 0  | 0                                                                                                                                      | 0  | 0  | 0  | 0  | 0.1             | 0.2           |     |
| 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.1 0.1 0.1 0.1                                    |                               |   |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                      |    |    |    |    |    |    |    |    |    |                                                                                                                                        |    |    |    |    | Diurnal Average |               |     |
| 0.3 0.3 0.2 0.3 0.3 0.6 0.3 0.5 0.3 0.3 0.3 0.3 0.3 0.3 0.2 0.2 0.3 0.2 0.2 0.2 0.3 1.0 0.3 0.3                                    |                               |   |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                      |    |    |    |    |    |    |    |    |    |                                                                                                                                        |    |    |    |    | Diurnal Maximum |               |     |
| C - Calibration P - Power Failure N - Not Valid A - Automated Daily Zero Span                                                      |                               |   |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                      |    |    |    |    |    |    |    |    |    |                                                                                                                                        |    |    |    |    |                 |               |     |
| Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb                                                            |                               |   |   |   |   |   |   |   |   |                                                                                                                                                                                                                                                      |    |    |    |    |    |    |    |    |    |                                                                                                                                        |    |    |    |    |                 |               |     |

## Hourly Averages

Hydrogen Sulphide (H<sub>2</sub>S) - ppb  
Falher - April 2014



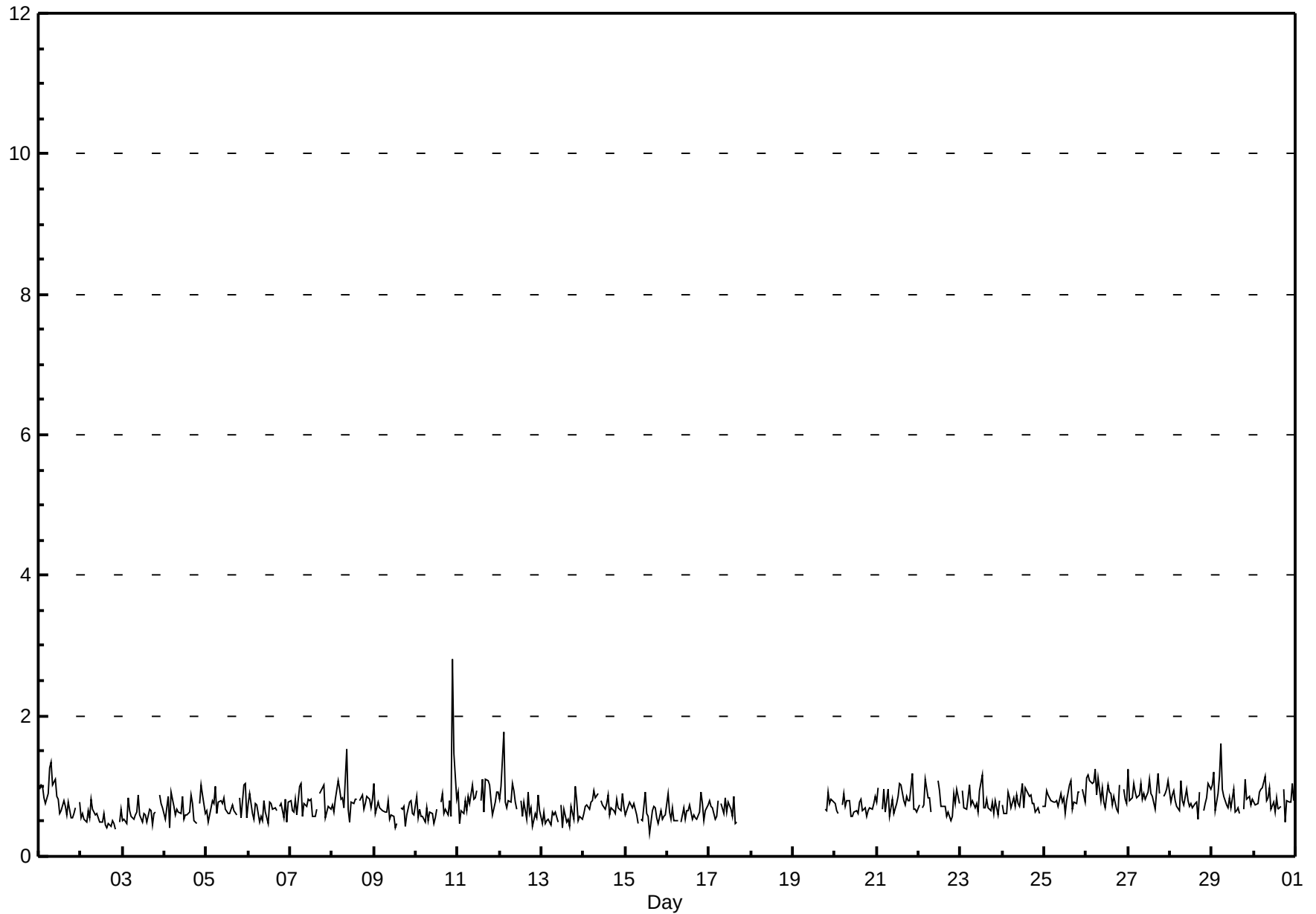




## Hourly Maximums

Hydrogen Sulphide (H<sub>2</sub>S) - ppb

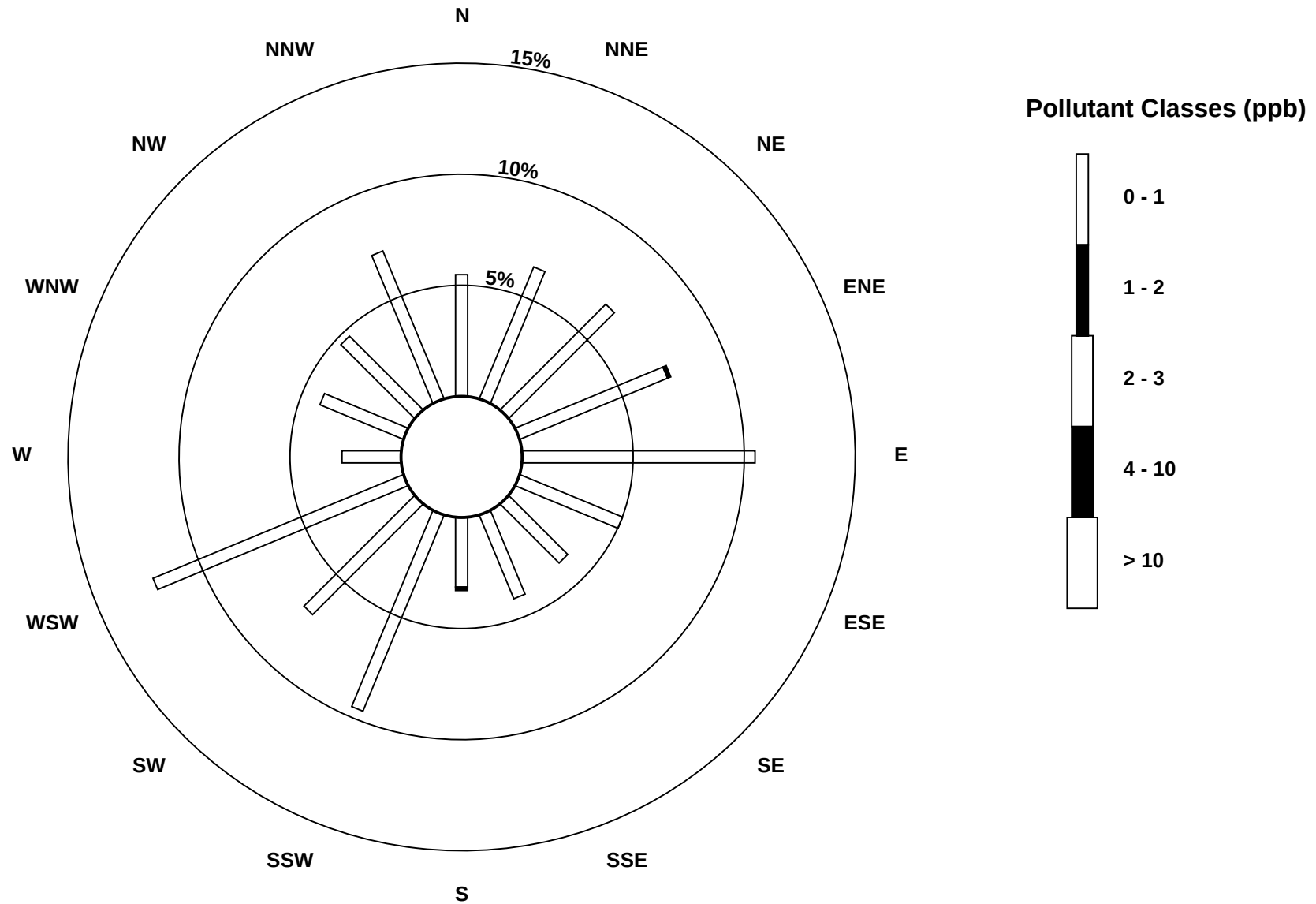
Falher - April 2014



# Pollutant Rose

Hydrogen Sulphide (H<sub>2</sub>S) - ppb

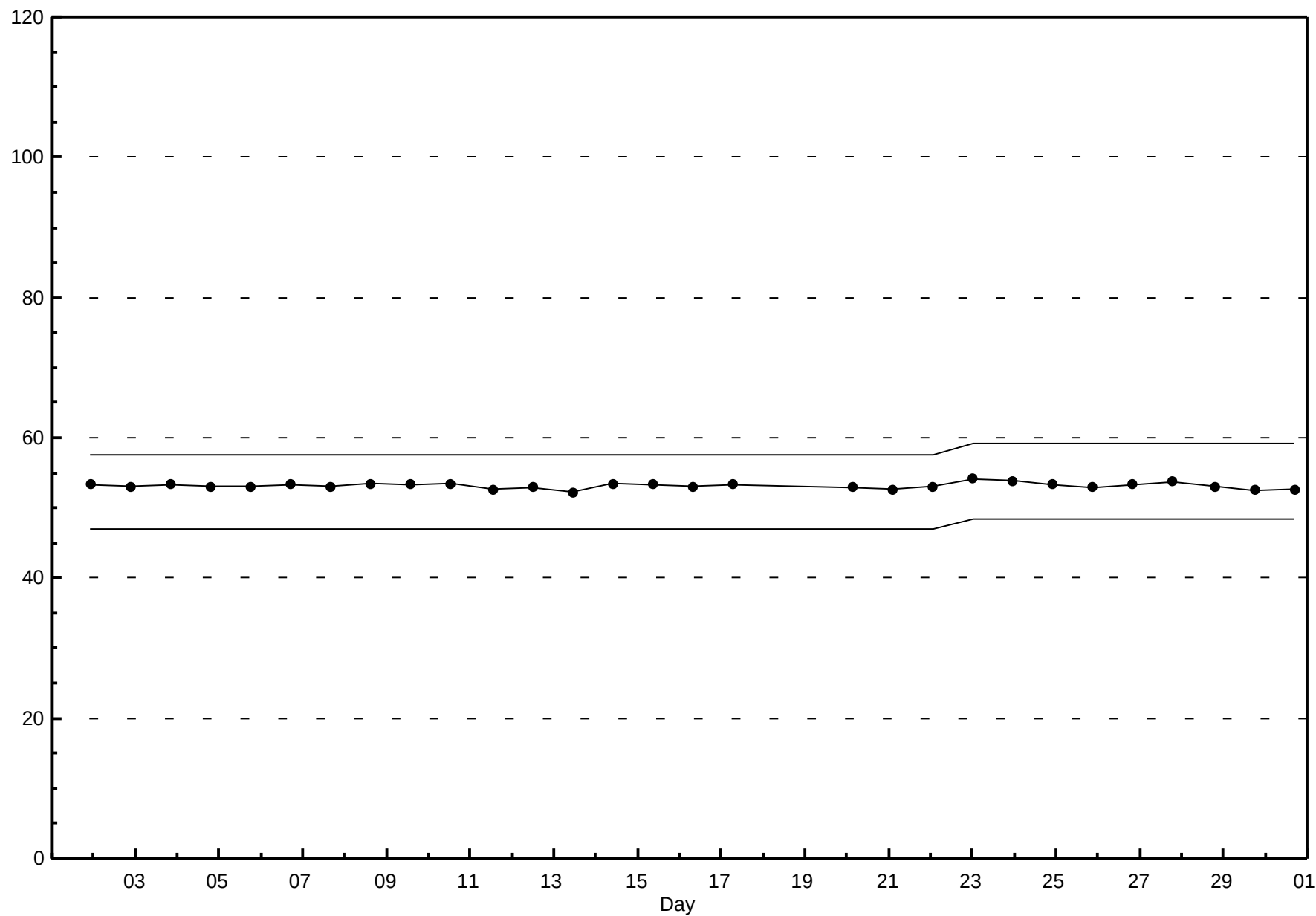
Falher - April 2014



## Span Responses

Hydrogen Sulphide (H<sub>2</sub>S)

Falher - April 2014



## Hourly Averages

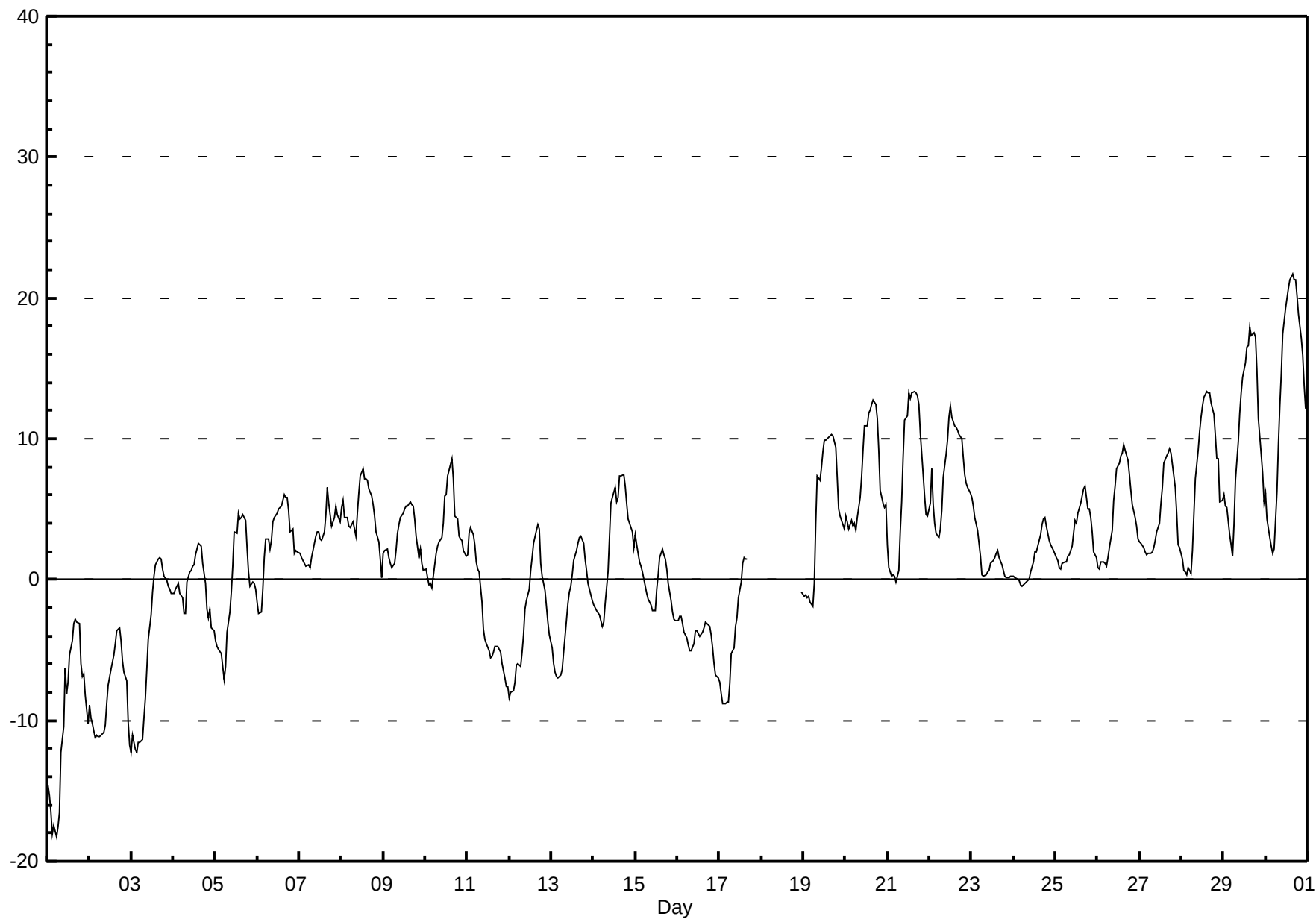
External Temperature (ET) - °C

Falher - April 2014

| Number of Exceedences (AAAQO): 1-hr: 0 24-hr: 0<br>Maximum Value: 21.7 °C on Apr 30 16:00 Maximum Daily Average: 13.5 °C on Apr 30 |                               |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720<br>Hours of Data: 690<br>Hours of Missing Data: 30<br>Hours of Calibration: 0<br>Percent Operational Time: 95.8                                                                                                                    |    |     |     |                 |               |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----|-----|-----------------|---------------|
| Minimum Value: -18 °C on Apr 1 06:00<br>Maximum Diurnal Average: 5.9 °C at hour 17<br>Monthly Average: 1.96 °C                     |                               |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    | Minimum Daily Average: -9.9 °C on Apr 1<br>Minimum Diurnal Average: -1.8 °C at hour 6<br>Percentiles: P <sub>1</sub> = -15.9 P <sub>10</sub> = -6.1 Q <sub>1</sub> = -1.4 Median = 1.9 Q <sub>3</sub> = 5.3 P <sub>90</sub> = 9.9 P <sub>99</sub> = 19.9 |    |     |     |                 |               |
| Day                                                                                                                                | Hourly Period Ending At (MST) |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                          |    |     |     | Daily Average   | Daily Maximum |
| 1-Apr                                                                                                                              | -15                           | -15 | -16 | -18 | -17 | -18 | -18 | -17 | -12 | -10 | -6 | -8 | -7 | -5 | -4 | -3 | -3 | -3 | -3 | -6 | -7                                                                                                                                                                                                                                                       | -7 | -8  | -10 | -9.9            | -2.8          |
| 2-Apr                                                                                                                              | -9                            | -10 | -10 | -11 | -11 | -11 | -11 | -11 | -11 | -10 | -9 | -7 | -6 | -6 | -5 | -5 | -4 | -3 | -4 | -6 | -7                                                                                                                                                                                                                                                       | -7 | -10 | -12 | -8.2            | -3.4          |
| 3-Apr                                                                                                                              | -12                           | -11 | -12 | -12 | -12 | -12 | -11 | -10 | -8  | -6  | -4 | -2 | -1 | 0  | 1  | 1  | 2  | 2  | 1  | 0  | 0                                                                                                                                                                                                                                                        | 0  | -1  | -1  | -4.6            | 1.6           |
| 4-Apr                                                                                                                              | -1                            | -1  | 0   | 0   | -1  | -1  | -2  | -2  | 0   | 1   | 1  | 1  | 1  | 2  | 3  | 2  | 2  | 1  | 0  | -2 | -3                                                                                                                                                                                                                                                       | -2 | -3  | -4  | -0.4            | 2.6           |
| 5-Apr                                                                                                                              | -4                            | -5  | -5  | -5  | -6  | -7  | -6  | -4  | -2  | -1  | 1  | 3  | 3  | 5  | 4  | 4  | 5  | 4  | 2  | 1  | 0                                                                                                                                                                                                                                                        | 0  | 0   | -1  | -0.6            | 4.7           |
| 6-Apr                                                                                                                              | -2                            | -2  | -2  | -1  | 2   | 3   | 3   | 2   | 3   | 4   | 4  | 5  | 5  | 5  | 5  | 6  | 6  | 6  | 5  | 3  | 4                                                                                                                                                                                                                                                        | 2  | 2   | 2   | 2.9             | 6.0           |
| 7-Apr                                                                                                                              | 2                             | 2   | 1   | 1   | 1   | 1   | 1   | 2   | 2   | 3   | 3  | 3  | 3  | 3  | 3  | 5  | 7  | 5  | 4  | 4  | 4                                                                                                                                                                                                                                                        | 5  | 5   | 4   | 3.1             | 6.6           |
| 8-Apr                                                                                                                              | 5                             | 6   | 4   | 4   | 4   | 4   | 4   | 4   | 3   | 5   | 6  | 7  | 8  | 7  | 7  | 7  | 6  | 6  | 5  | 4  | 3                                                                                                                                                                                                                                                        | 3  | 1   | 0   | 4.8             | 7.9           |
| 9-Apr                                                                                                                              | 2                             | 2   | 2   | 2   | 1   | 1   | 1   | 2   | 3   | 4   | 4  | 5  | 5  | 5  | 5  | 5  | 5  | 4  | 3  | 2  | 2                                                                                                                                                                                                                                                        | 1  | 1   | 1   | 3.1             | 5.5           |
| 10-Apr                                                                                                                             | 1                             | 0   | 0   | 0   | -1  | 1   | 2   | 2   | 3   | 3   | 4  | 6  | 6  | 7  | 8  | 9  | 7  | 4  | 4  | 3  | 3                                                                                                                                                                                                                                                        | 3  | 2   | 2   | 3.3             | 8.6           |
| 11-Apr                                                                                                                             | 2                             | 3   | 4   | 3   | 2   | 1   | 1   | 1   | -2  | -4  | -4 | -5 | -5 | -6 | -5 | -5 | -5 | -5 | -5 | -5 | -6                                                                                                                                                                                                                                                       | -7 | -8  | -8  | -2.7            | 3.7           |
| 12-Apr                                                                                                                             | -8                            | -8  | -8  | -7  | -6  | -6  | -6  | -5  | -4  | -2  | -1 | -1 | 1  | 2  | 3  | 3  | 4  | 4  | 1  | 0  | -1                                                                                                                                                                                                                                                       | -2 | -3  | -4  | -2.3            | 3.9           |
| 13-Apr                                                                                                                             | -5                            | -6  | -7  | -7  | -7  | -7  | -6  | -5  | -4  | -2  | -1 | 0  | 0  | 1  | 2  | 3  | 3  | 3  | 3  | 1  | 1                                                                                                                                                                                                                                                        | 0  | -1  | -1  | -1.7            | 3.1           |
| 14-Apr                                                                                                                             | -2                            | -2  | -2  | -2  | -3  | -3  | -3  | -2  | 1   | 3   | 5  | 6  | 7  | 6  | 6  | 7  | 7  | 7  | 7  | 5  | 4                                                                                                                                                                                                                                                        | 4  | 3   | 2   | 2.5             | 7.4           |
| 15-Apr                                                                                                                             | 3                             | 2   | 1   | 1   | 1   | 0   | -1  | -1  | -2  | -2  | -2 | -2 | -1 | 0  | 2  | 2  | 2  | 1  | 1  | 0  | -1                                                                                                                                                                                                                                                       | -2 | -3  | -3  | -0.2            | 3.1           |
| 16-Apr                                                                                                                             | -3                            | -3  | -3  | -3  | -4  | -4  | -5  | -5  | -5  | -5  | -4 | -4 | -4 | -4 | -4 | -3 | -3 | -3 | -3 | -4 | -5                                                                                                                                                                                                                                                       | -6 | -7  | -7  | -4.1            | -2.6          |
| 17-Apr                                                                                                                             | -7                            | -8  | -9  | -9  | -9  | -9  | -7  | -5  | -5  | -3  | -3 | -1 | 0  | 1  | 2  | 1  | 1  | P  | P  | P  | P                                                                                                                                                                                                                                                        | P  | P   | P   | --              | 1.6           |
| 18-Apr                                                                                                                             | P                             | P   | P   | P   | P   | P   | P   | P   | P   | P   | P  | P  | P  | P  | P  | P  | P  | P  | P  | P  | P                                                                                                                                                                                                                                                        | P  | P   | -1  | --              | -0.8          |
| 19-Apr                                                                                                                             | -1                            | -1  | -1  | -1  | -2  | -2  | 0   | 4   | 7   | 7   | 8  | 9  | 10 | 10 | 10 | 10 | 10 | 10 | 9  | 7  | 5                                                                                                                                                                                                                                                        | 5  | 4   | 4   | 5.1             | 10.3          |
| 20-Apr                                                                                                                             | 4                             | 4   | 4   | 4   | 4   | 4   | 3   | 4   | 6   | 7   | 9  | 11 | 11 | 12 | 12 | 12 | 13 | 12 | 11 | 9  | 6                                                                                                                                                                                                                                                        | 5  | 5   | 5   | 7.5             | 12.7          |
| 21-Apr                                                                                                                             | 2                             | 1   | 0   | 0   | 0   | 0   | 1   | 3   | 6   | 9   | 11 | 12 | 13 | 13 | 13 | 13 | 13 | 13 | 12 | 10 | 8                                                                                                                                                                                                                                                        | 6  | 5   | 5   | 7.1             | 13.4          |
| 22-Apr                                                                                                                             | 5                             | 8   | 5   | 4   | 3   | 3   | 4   | 5   | 7   | 9   | 10 | 11 | 12 | 12 | 11 | 11 | 11 | 10 | 10 | 9  | 7                                                                                                                                                                                                                                                        | 7  | 7   | 6   | 7.8             | 12.3          |
| 23-Apr                                                                                                                             | 6                             | 5   | 4   | 3   | 3   | 2   | 0   | 0   | 0   | 0   | 1  | 1  | 1  | 2  | 2  | 2  | 2  | 1  | 1  | 0  | 0                                                                                                                                                                                                                                                        | 0  | 0   | 0   | 1.6             | 5.8           |
| 24-Apr                                                                                                                             | 0                             | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 0   | 1  | 1  | 2  | 2  | 2  | 3  | 4  | 4  | 4  | 4  | 3                                                                                                                                                                                                                                                        | 3  | 2   | 2   | 1.5             | 4.4           |
| 25-Apr                                                                                                                             | 2                             | 1   | 1   | 1   | 1   | 1   | 1   | 2   | 2   | 2   | 3  | 4  | 4  | 5  | 5  | 6  | 6  | 7  | 5  | 5  | 4                                                                                                                                                                                                                                                        | 3  | 2   | 2   | 3.2             | 6.6           |
| 26-Apr                                                                                                                             | 1                             | 1   | 1   | 1   | 1   | 1   | 2   | 2   | 4   | 6   | 7  | 8  | 8  | 9  | 9  | 10 | 9  | 8  | 7  | 6  | 5                                                                                                                                                                                                                                                        | 4  | 4   | 3   | 4.9             | 9.5           |
| 27-Apr                                                                                                                             | 3                             | 3   | 2   | 2   | 2   | 2   | 2   | 2   | 2   | 3   | 3  | 4  | 5  | 7  | 8  | 9  | 9  | 9  | 9  | 8  | 7                                                                                                                                                                                                                                                        | 5  | 2   | 2   | 4.6             | 9.2           |
| 28-Apr                                                                                                                             | 1                             | 1   | 1   | 0   | 1   | 0   | 2   | 5   | 7   | 9   | 11 | 11 | 12 | 13 | 13 | 13 | 13 | 13 | 12 | 10 | 9                                                                                                                                                                                                                                                        | 9  | 6   | 6   | 7.4             | 13.4          |
| 29-Apr                                                                                                                             | 6                             | 5   | 5   | 3   | 2   | 2   | 4   | 7   | 10  | 12  | 13 | 14 | 15 | 16 | 17 | 18 | 17 | 18 | 17 | 15 | 11                                                                                                                                                                                                                                                       | 9  | 8   | 6   | 10.5            | 17.9          |
| 30-Apr                                                                                                                             | 6                             | 4   | 3   | 2   | 2   | 2   | 6   | 10  | 12  | 15  | 17 | 19 | 20 | 21 | 21 | 22 | 21 | 21 | 20 | 19 | 17                                                                                                                                                                                                                                                       | 16 | 14  | 12  | 13.5            | 21.7          |
|                                                                                                                                    |                               |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                          |    |     |     | Diurnal Average |               |
|                                                                                                                                    |                               |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                          |    |     |     | Diurnal Maximum |               |
| P - Power Failure                                                                                                                  |                               |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                                                                                                          |    |     |     |                 |               |

## Hourly Averages

External Temperature (ET) - °C  
Falher - April 2014



## Hourly Averages

Wind Speed (km/h)  
Wind Direction (deg)  
Falher - April 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  | 4                             | 5   | 5   | 2   | 3   | 5   | 3   | 4   | 3   | 3   | 2   | 6   | 8   | 7   | 7   | 5   | 6   | 5   | 4   | 7   | 11  | 12  | 8   | 12  | 5.1           | 12.1          |
| Dir    | 317                           | 341 | 25  | 298 | 358 | 18  | 31  | 32  | 87  | 189 | 273 | 328 | 327 | 324 | 336 | 13  | 346 | 359 | 344 | 336 | 338 | 338 | 335 | 342 | 344           | 338           |
| 2 Spd  | 14                            | 13  | 10  | 12  | 15  | 16  | 17  | 19  | 17  | 19  | 19  | 18  | 15  | 19  | 19  | 17  | 13  | 10  | 9   | 5   | 8   | 11  | 9   | 5   | 12.7          | 18.9          |
| Dir    | 352                           | 334 | 327 | 271 | 293 | 285 | 285 | 286 | 284 | 294 | 296 | 294 | 284 | 271 | 271 | 276 | 281 | 272 | 257 | 274 | 286 | 273 | 298 | 327 | 289           | 286           |
| 3 Spd  | 3                             | 8   | 3   | 4   | 11  | 19  | 21  | 19  | 22  | 24  | 27  | 26  | 25  | 27  | 29  | 26  | 27  | 26  | 23  | 23  | 21  | 21  | 21  | 17  | 17.7          | 29.0          |
| Dir    | 4                             | 16  | 317 | 31  | 18  | 13  | 15  | 44  | 60  | 66  | 78  | 80  | 82  | 84  | 87  | 89  | 90  | 86  | 82  | 83  | 91  | 89  | 94  | 96  | 73            | 87            |
| 4 Spd  | 23                            | 26  | 22  | 16  | 15  | 17  | 16  | 14  | 18  | 21  | 26  | 26  | 25  | 24  | 18  | 20  | 15  | 17  | 13  | 8   | 7   | 7   | 7   | 10  | 9.6           | 26.3          |
| Dir    | 102                           | 112 | 117 | 116 | 150 | 149 | 166 | 215 | 248 | 245 | 242 | 242 | 239 | 241 | 248 | 243 | 244 | 263 | 254 | 220 | 166 | 182 | 130 | 125 | 205           | 242           |
| 5 Spd  | 8                             | 11  | 12  | 17  | 14  | 12  | 11  | 10  | 9   | 6   | 3   | 0   | 2   | 5   | 6   | 6   | 7   | 7   | 11  | 13  | 10  | 10  | 10  | 13  | 7.8           | 16.9          |
| Dir    | 79                            | 66  | 55  | 79  | 87  | 99  | 106 | 97  | 114 | 129 | 168 | 128 | 87  | 5   | 6   | 62  | 45  | 72  | 101 | 107 | 109 | 105 | 103 | 124 | 90            | 79            |
| 6 Spd  | 12                            | 9   | 11  | 12  | 15  | 20  | 22  | 19  | 19  | 23  | 23  | 29  | 26  | 23  | 22  | 20  | 16  | 14  | 18  | 17  | 19  | 15  | 19  | 19  | 16.1          | 28.9          |
| Dir    | 128                           | 125 | 157 | 183 | 194 | 212 | 211 | 196 | 217 | 245 | 243 | 244 | 245 | 243 | 241 | 247 | 242 | 236 | 237 | 230 | 221 | 201 | 195 | 195 | 221           | 244           |
| 7 Spd  | 18                            | 16  | 15  | 14  | 15  | 14  | 13  | 14  | 15  | 12  | 16  | 15  | 16  | 15  | 13  | 10  | 6   | 12  | 10  | 13  | 15  | 16  | 13  | 15  | 11.5          | 18.4          |
| Dir    | 198                           | 208 | 207 | 198 | 194 | 194 | 170 | 142 | 140 | 161 | 153 | 175 | 116 | 95  | 96  | 115 | 184 | 137 | 129 | 138 | 136 | 152 | 161 | 181 | 159           | 198           |
| 8 Spd  | 20                            | 16  | 12  | 15  | 17  | 17  | 18  | 13  | 12  | 1   | 4   | 5   | 21  | 26  | 37  | 36  | 30  | 30  | 27  | 24  | 15  | 13  | 11  | 12  | 16.6          | 36.8          |
| Dir    | 199                           | 211 | 210 | 192 | 200 | 181 | 180 | 165 | 140 | 100 | 45  | 211 | 244 | 211 | 212 | 213 | 213 | 212 | 214 | 212 | 235 | 220 | 220 | 212 | 207           | 212           |
| 9 Spd  | 19                            | 24  | 26  | 20  | 19  | 19  | 21  | 22  | 29  | 30  | 39  | 38  | 37  | 35  | 34  | 30  | 28  | 26  | 21  | 19  | 11  | 18  | 19  | 19  | 24.2          | 38.5          |
| Dir    | 216                           | 213 | 214 | 220 | 217 | 215 | 218 | 230 | 240 | 245 | 247 | 246 | 245 | 249 | 251 | 250 | 247 | 247 | 240 | 233 | 222 | 210 | 198 | 196 | 233           | 247           |
| 10 Spd | 18                            | 15  | 14  | 14  | 15  | 15  | 17  | 16  | 16  | 12  | 9   | 9   | 8   | 4   | 4   | 16  | 18  | 15  | 8   | 6   | 10  | 9   | 13  | 15  | 5.9           | 18.1          |
| Dir    | 192                           | 200 | 189 | 185 | 190 | 199 | 209 | 215 | 226 | 231 | 239 | 250 | 269 | 162 | 186 | 259 | 294 | 344 | 11  | 150 | 118 | 68  | 73  | 85  | 209           | 294           |
| 11 Spd | 13                            | 13  | 15  | 13  | 15  | 12  | 3   | 8   | 25  | 29  | 34  | 32  | 32  | 31  | 29  | 30  | 27  | 26  | 24  | 19  | 11  | 6   | 6   | 4   | 14.4          | 33.9          |
| Dir    | 104                           | 166 | 183 | 196 | 196 | 211 | 9   | 324 | 306 | 290 | 282 | 277 | 271 | 276 | 287 | 298 | 298 | 296 | 298 | 305 | 303 | 281 | 280 | 295 | 280           | 282           |
| 12 Spd | 3                             | 5   | 6   | 3   | 9   | 10  | 12  | 11  | 11  | 13  | 15  | 16  | 15  | 17  | 17  | 17  | 16  | 15  | 11  | 11  | 16  | 16  | 13  | 9   | 5.6           | 16.9          |
| Dir    | 179                           | 152 | 149 | 97  | 128 | 116 | 135 | 192 | 221 | 243 | 237 | 233 | 242 | 247 | 252 | 247 | 247 | 270 | 352 | 337 | 326 | 329 | 344 | 352 | 255           | 247           |
| 13 Spd | 3                             | 3   | 6   | 7   | 8   | 10  | 9   | 11  | 9   | 10  | 14  | 15  | 16  | 14  | 12  | 15  | 16  | 19  | 20  | 19  | 23  | 19  | 19  | 18  | 11.5          | 23.5          |
| Dir    | 342                           | 314 | 340 | 16  | 42  | 48  | 58  | 76  | 89  | 114 | 122 | 122 | 107 | 111 | 104 | 94  | 97  | 92  | 87  | 83  | 81  | 85  | 78  | 78  | 86            | 81            |
| 14 Spd | 18                            | 20  | 19  | 17  | 15  | 11  | 10  | 11  | 6   | 3   | 2   | 3   | 3   | 9   | 9   | 7   | 7   | 6   | 2   | 3   | 6   | 8   | 4   | 2   | 6.1           | 20.2          |
| Dir    | 74                            | 71  | 73  | 68  | 75  | 80  | 82  | 88  | 108 | 189 | 198 | 64  | 50  | 7   | 351 | 11  | 8   | 13  | 333 | 322 | 322 | 346 | 349 | 320 | 54            | 71            |
| 15 Spd | 13                            | 10  | 15  | 14  | 15  | 13  | 18  | 18  | 18  | 20  | 23  | 23  | 22  | 20  | 15  | 10  | 17  | 15  | 15  | 13  | 12  | 12  | 13  | 9   | 13.8          | 23.4          |
| Dir    | 14                            | 10  | 337 | 349 | 353 | 341 | 333 | 337 | 332 | 334 | 324 | 323 | 331 | 328 | 318 | 300 | 2   | 358 | 38  | 42  | 34  | 31  | 38  | 24  | 348           | 323           |
| 16 Spd | 9                             | 11  | 10  | 9   | 11  | 13  | 14  | 16  | 16  | 14  | 8   | 13  | 20  | 22  | 20  | 19  | 17  | 19  | 14  | 6   | 6   | 10  | 10  | 9   | 12.3          | 21.8          |
| Dir    | 346                           | 348 | 353 | 334 | 332 | 345 | 347 | 2   | 5   | 10  | 24  | 318 | 321 | 321 | 325 | 319 | 312 | 319 | 319 | 17  | 318 | 312 | 340 | 342 | 335           | 321           |
| 17 Spd | 7                             | 3   | 6   | 4   | 3   | 2   | 4   | 3   | 6   | 7   | 13  | 19  | 22  | 25  | 26  | 25  | 30  | P   | P   | P   | P   | P   | P   | P   | --            | 30.5          |
| Dir    | 334                           | 316 | 287 | 301 | 162 | 228 | 5   | 55  | 33  | 36  | 71  | 78  | 79  | 88  | 86  | 75  | 89  | P   | P   | P   | P   | P   | P   | P   | --            | 89            |
| 18 Spd | P                             | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | --            | 9.4           |
| Dir    | P                             | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | P   | 98            | 98            |
| 19 Spd | 10                            | 9   | 10  | 10  | 8   | 9   | 7   | 3   | 1   | 7   | 11  | 9   | 3   | 6   | 8   | 12  | 12  | 12  | 9   | 9   | 6   | 6   | 2   | 5   | 3.2           | 12.1          |
| Dir    | 99                            | 94  | 104 | 113 | 104 | 103 | 151 | 217 | 249 | 260 | 258 | 252 | 328 | 16  | 5   | 27  | 28  | 30  | 21  | 19  | 21  | 89  | 242 | 356 | 50            | 27            |
| 20 Spd | 3                             | 6   | 8   | 10  | 9   | 10  | 10  | 9   | 12  | 12  | 15  | 13  | 15  | 20  | 24  | 25  | 23  | 21  | 17  | 12  | 13  | 10  | 8   | 7   | 11.5          | 24.6          |
| Dir    | 43                            | 206 | 239 | 230 | 201 | 178 | 164 | 169 | 198 | 222 | 247 | 258 | 274 | 252 | 240 | 241 | 245 | 237 | 240 | 236 | 203 | 225 | 219 | 250 | 231           | 241           |
| 21 Spd | 11                            | 14  | 13  | 14  | 14  | 9   | 7   | 7   | 8   | 4   | 2   | 4   | 7   | 11  | 13  | 15  | 14  | 15  | 12  | 10  | 10  | 10  | 10  | 11  | 4.6           | 15.0          |
| Dir    | 163                           | 148 | 139 | 152 | 149 | 133 | 113 | 139 | 159 | 169 | 237 | 350 | 2   | 15  | 21  | 26  | 20  | 5   | 7   | 15  | 17  | 26  | 38  | 38  | 62            | 26            |
| 22 Spd | 15                            | 13  | 16  | 21  | 22  | 22  | 24  | 26  | 26  | 29  | 27  | 32  | 33  | 32  | 34  | 35  | 32  | 30  | 29  | 32  | 37  | 29  | 34  | 31  | 27.2          | 37.4          |
| Dir    | 70                            | 64  | 54  | 55  | 59  | 58  | 61  | 64  | 73  | 74  | 69  | 72  | 68  | 61  | 68  | 67  | 55  | 56  | 59  | 44  | 48  | 42  | 46  | 52  | 60            | 48            |

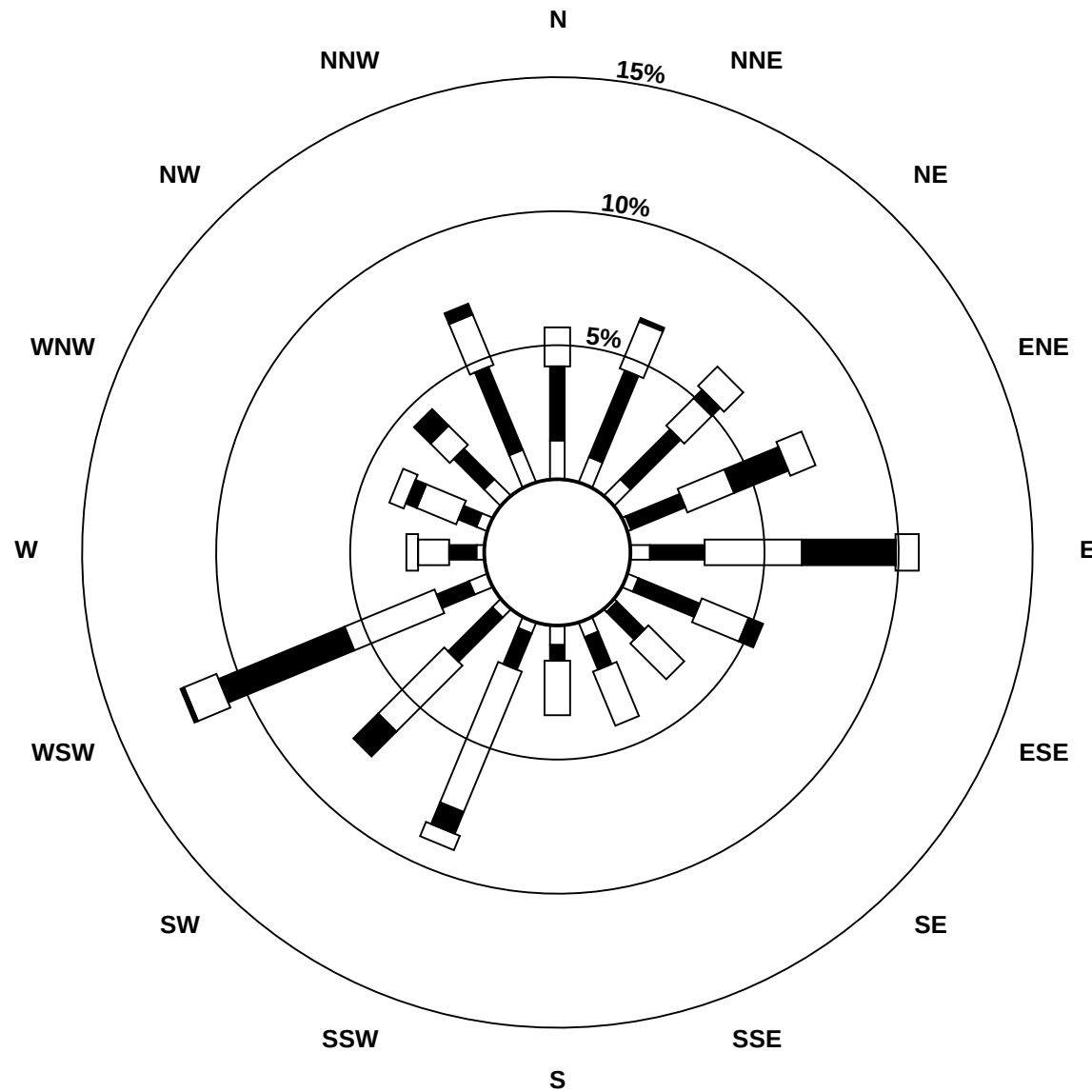
**FOCUS**  
AIR QUALITY MONITORING



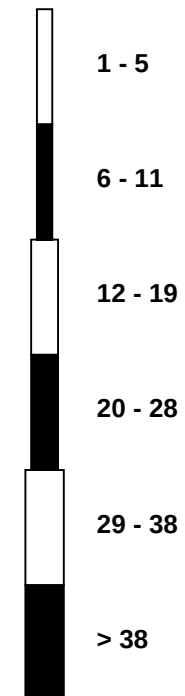
## Wind Rose

Wind Speed (WS) (km/h)

Falher - April 2014



## Wind Speed Classes (km/h)



# Hourly Averages - Wind Speed (Scalar)

Wind Speed (km/h)

Falher - April 2014

| Maximum Speed: 39 km/h on Apr 9 11:00                                                                                   |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Maximum Daily Speed Average: 27.7 km/h on Apr 22                                                                                                               |    |    |    |      |                 |               |      |  |  | Hours in Service: 720          |  |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|------|-----------------|---------------|------|--|--|--------------------------------|--|
| Minimum Speed: 2 km/h on Apr 5 12:00                                                                                    |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Daily Speed Average: 6.1 km/h on Apr 1                                                                                                                 |    |    |    |      |                 |               |      |  |  | Hours of Data: 690             |  |
| Maximum Diurnal Speed Average: 17.7 km/h at hour 16                                                                     |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Minimum Diurnal Speed Average: 12.2 km/h at hour 24                                                                                                            |    |    |    |      |                 |               |      |  |  | Hours of Missing Data: 30      |  |
| Monthly Average Speed: 14.45 km/h                                                                                       |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percentiles: P <sub>1</sub> = 2.5 P <sub>10</sub> = 5.8 Q <sub>1</sub> = 9.0 Median = 13.3 Q <sub>3</sub> = 18.9 P <sub>90</sub> = 25.2 P <sub>99</sub> = 36.2 |    |    |    |      |                 |               |      |  |  | Percent Operational Time: 95.8 |  |
| Day                                                                                                                     | Hourly Period Ending At (MST) |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                |    |    |    |      | Daily Average   | Daily Maximum |      |  |  |                                |  |
|                                                                                                                         | 1                             | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20                                                                                                                                                             | 21 | 22 | 23 | 24   |                 |               |      |  |  |                                |  |
| 1-Apr                                                                                                                   | 5                             | 5  | 5  | 3  | 4  | 6  | 4  | 5  | 4  | 3  | 6  | 8  | 7  | 7  | 5  | 6  | 5  | 5  | 7  | 11                                                                                                                                                             | 12 | 8  | 12 | 6.1  | 12.4            |               |      |  |  |                                |  |
| 2-Apr                                                                                                                   | 15                            | 13 | 10 | 13 | 15 | 16 | 17 | 19 | 17 | 19 | 18 | 15 | 19 | 19 | 17 | 13 | 10 | 9  | 5  | 8                                                                                                                                                              | 11 | 9  | 6  | 13.8 | 18.9            |               |      |  |  |                                |  |
| 3-Apr                                                                                                                   | 3                             | 8  | 3  | 4  | 11 | 19 | 21 | 19 | 22 | 24 | 27 | 26 | 25 | 27 | 29 | 26 | 27 | 26 | 23 | 23                                                                                                                                                             | 21 | 21 | 21 | 17   | 19.7            | 29.0          |      |  |  |                                |  |
| 4-Apr                                                                                                                   | 23                            | 26 | 22 | 16 | 15 | 17 | 16 | 15 | 18 | 21 | 26 | 26 | 25 | 24 | 19 | 20 | 15 | 17 | 13 | 8                                                                                                                                                              | 7  | 8  | 7  | 10   | 17.3            | 26.4          |      |  |  |                                |  |
| 5-Apr                                                                                                                   | 9                             | 11 | 12 | 17 | 14 | 12 | 11 | 10 | 9  | 6  | 4  | 2  | 2  | 5  | 7  | 6  | 7  | 7  | 11 | 13                                                                                                                                                             | 11 | 10 | 10 | 13   | 9.1             | 17.0          |      |  |  |                                |  |
| 6-Apr                                                                                                                   | 12                            | 9  | 11 | 13 | 15 | 21 | 22 | 19 | 19 | 23 | 23 | 29 | 26 | 23 | 22 | 20 | 16 | 14 | 18 | 17                                                                                                                                                             | 19 | 15 | 19 | 19   | 18.5            | 28.9          |      |  |  |                                |  |
| 7-Apr                                                                                                                   | 18                            | 16 | 15 | 14 | 15 | 14 | 13 | 14 | 15 | 12 | 16 | 16 | 16 | 15 | 13 | 12 | 6  | 12 | 10 | 13                                                                                                                                                             | 15 | 17 | 14 | 15   | 14.0            | 18.4          |      |  |  |                                |  |
| 8-Apr                                                                                                                   | 20                            | 16 | 12 | 16 | 17 | 17 | 18 | 13 | 12 | 5  | 5  | 7  | 21 | 26 | 37 | 36 | 30 | 30 | 27 | 24                                                                                                                                                             | 16 | 13 | 11 | 12   | 18.3            | 36.8          |      |  |  |                                |  |
| 9-Apr                                                                                                                   | 19                            | 24 | 26 | 20 | 19 | 19 | 21 | 22 | 29 | 31 | 39 | 38 | 37 | 35 | 34 | 30 | 28 | 26 | 21 | 19                                                                                                                                                             | 12 | 18 | 19 | 19   | 25.3            | 38.6          |      |  |  |                                |  |
| 10-Apr                                                                                                                  | 18                            | 15 | 14 | 14 | 15 | 15 | 17 | 16 | 16 | 12 | 9  | 9  | 9  | 4  | 8  | 16 | 19 | 15 | 9  | 10                                                                                                                                                             | 10 | 10 | 13 | 15   | 12.8            | 19.2          |      |  |  |                                |  |
| 11-Apr                                                                                                                  | 14                            | 13 | 16 | 13 | 15 | 12 | 5  | 9  | 25 | 29 | 34 | 33 | 33 | 31 | 29 | 30 | 27 | 26 | 24 | 19                                                                                                                                                             | 11 | 6  | 6  | 4    | 19.3            | 34.0          |      |  |  |                                |  |
| 12-Apr                                                                                                                  | 3                             | 5  | 6  | 4  | 9  | 11 | 12 | 12 | 11 | 13 | 15 | 16 | 15 | 17 | 17 | 17 | 16 | 17 | 11 | 11                                                                                                                                                             | 16 | 16 | 13 | 9    | 12.2            | 17.4          |      |  |  |                                |  |
| 13-Apr                                                                                                                  | 4                             | 4  | 6  | 7  | 8  | 10 | 9  | 11 | 10 | 10 | 14 | 16 | 16 | 14 | 12 | 15 | 17 | 19 | 20 | 19                                                                                                                                                             | 23 | 19 | 19 | 18   | 13.2            | 23.5          |      |  |  |                                |  |
| 14-Apr                                                                                                                  | 18                            | 20 | 19 | 17 | 15 | 11 | 10 | 11 | 6  | 4  | 3  | 3  | 3  | 9  | 9  | 7  | 7  | 6  | 4  | 3                                                                                                                                                              | 6  | 8  | 7  | 4    | 8.8             | 20.2          |      |  |  |                                |  |
| 15-Apr                                                                                                                  | 13                            | 11 | 15 | 14 | 15 | 14 | 18 | 18 | 18 | 20 | 23 | 23 | 22 | 20 | 15 | 10 | 18 | 15 | 16 | 13                                                                                                                                                             | 12 | 12 | 13 | 9    | 15.7            | 23.5          |      |  |  |                                |  |
| 16-Apr                                                                                                                  | 9                             | 11 | 10 | 9  | 11 | 13 | 14 | 16 | 16 | 14 | 9  | 14 | 21 | 22 | 20 | 19 | 17 | 19 | 14 | 6                                                                                                                                                              | 7  | 10 | 10 | 9    | 13.4            | 22.0          |      |  |  |                                |  |
| 17-Apr                                                                                                                  | 7                             | 3  | 6  | 4  | 4  | 3  | 4  | 3  | 6  | 7  | 14 | 19 | 22 | 25 | 26 | 25 | 31 | P  | P  | P                                                                                                                                                              | P  | P  | P  | P    | 9               | --            | 9.5  |  |  |                                |  |
| 19-Apr                                                                                                                  | P                             | P  | P  | P  | P  | P  | P  | P  | P  | P  | P  | P  | P  | P  | P  | P  | P  | P  | P  | P                                                                                                                                                              | P  | P  | P  | P    | 9               | 8.1           | 12.3 |  |  |                                |  |
| 20-Apr                                                                                                                  | 10                            | 9  | 10 | 10 | 8  | 9  | 7  | 3  | 2  | 8  | 11 | 9  | 6  | 7  | 8  | 12 | 12 | 12 | 9  | 9                                                                                                                                                              | 7  | 6  | 6  | 6    | 13.4            | 25.0          |      |  |  |                                |  |
| 21-Apr                                                                                                                  | 6                             | 7  | 8  | 11 | 9  | 10 | 10 | 9  | 12 | 12 | 15 | 13 | 15 | 21 | 25 | 25 | 23 | 21 | 17 | 12                                                                                                                                                             | 13 | 10 | 8  | 7    | 10.4            | 15.4          |      |  |  |                                |  |
| 22-Apr                                                                                                                  | 11                            | 14 | 13 | 14 | 14 | 9  | 7  | 7  | 8  | 4  | 3  | 5  | 7  | 12 | 14 | 15 | 14 | 15 | 12 | 11                                                                                                                                                             | 10 | 10 | 10 | 11   | 27.7            | 37.5          |      |  |  |                                |  |
| 23-Apr                                                                                                                  | 15                            | 14 | 16 | 21 | 22 | 22 | 24 | 26 | 26 | 29 | 27 | 32 | 33 | 32 | 34 | 35 | 32 | 30 | 29 | 32                                                                                                                                                             | 38 | 30 | 34 | 31   | 10.1            | 19.8          |      |  |  |                                |  |
| 24-Apr                                                                                                                  | 18                            | 15 | 14 | 20 | 20 | 17 | 8  | 7  | 9  | 9  | 8  | 7  | 8  | 6  | 3  | 2  | 3  | 8  | 9  | 9                                                                                                                                                              | 9  | 10 | 11 | 13   | 9.8             | 13.7          |      |  |  |                                |  |
| 25-Apr                                                                                                                  | 12                            | 13 | 13 | 13 | 14 | 11 | 11 | 11 | 10 | 10 | 5  | 4  | 2  | 5  | 9  | 12 | 11 | 10 | 12 | 9                                                                                                                                                              | 10 | 11 | 10 | 8    | 8.1             | 14.8          |      |  |  |                                |  |
| 26-Apr                                                                                                                  | 10                            | 6  | 5  | 7  | 8  | 10 | 7  | 10 | 10 | 7  | 5  | 5  | 6  | 8  | 9  | 13 | 6  | 6  | 15 | 9                                                                                                                                                              | 8  | 7  | 9  | 8    | 18.3            | 36.3          |      |  |  |                                |  |
| 27-Apr                                                                                                                  | 9                             | 11 | 11 | 11 | 8  | 7  | 9  | 13 | 17 | 14 | 16 | 16 | 16 | 17 | 20 | 26 | 31 | 31 | 36 | 33                                                                                                                                                             | 25 | 24 | 23 | 19   | 14.2            | 26.7          |      |  |  |                                |  |
| 28-Apr                                                                                                                  | 19                            | 23 | 27 | 24 | 23 | 23 | 24 | 24 | 21 | 17 | 11 | 7  | 7  | 8  | 7  | 9  | 11 | 9  | 9  | 8                                                                                                                                                              | 6  | 10 | 9  | 7    | 18.0            | 30.0          |      |  |  |                                |  |
| 29-Apr                                                                                                                  | 5                             | 9  | 6  | 12 | 15 | 14 | 11 | 13 | 20 | 23 | 26 | 28 | 30 | 26 | 24 | 22 | 22 | 23 | 25 | 18                                                                                                                                                             | 19 | 11 | 13 | 16   | 12.7            | 17.0          |      |  |  |                                |  |
| 30-Apr                                                                                                                  | 17                            | 15 | 13 | 15 | 14 | 12 | 11 | 13 | 14 | 16 | 15 | 14 | 13 | 11 | 10 | 6  | 11 | 8  | 7  | 11                                                                                                                                                             | 13 | 13 | 15 | 17   | 18.0            | 24.6          |      |  |  |                                |  |
| 30-Apr                                                                                                                  | 18                            | 15 | 13 | 12 | 12 | 11 | 14 | 17 | 18 | 18 | 16 | 22 | 19 | 19 | 19 | 22 | 25 | 22 | 21 | 25                                                                                                                                                             | 20 | 22 | 19 | 14   | 18.0            | 24.6          |      |  |  |                                |  |
| 12.3 12.4 12.4 12.7 13.2 13.3 13.0 13.2 14.5 14.5 15.2 15.9 16.5 17.0 17.4 17.7 17.2 16.5 15.6 14.2 13.7 13.2 13.1 12.2 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                |    |    |    |      | Diurnal Average |               |      |  |  |                                |  |
| 22.9 25.6 26.7 24.0 23.5 22.7 24.2 25.8 29.2 30.5 38.6 38.2 36.9 35.3 36.8 36.4 32.2 30.9 36.3 32.6 37.5 29.6 34.0 31.3 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                |    |    |    |      | Diurnal Maximum |               |      |  |  |                                |  |
| P - Power Failure                                                                                                       |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                |    |    |    |      |                 |               |      |  |  |                                |  |
| All monthly, daily, and diurnal averages have been calculated using scalar methods                                      |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                                                                                                                                                |    |    |    |      |                 |               |      |  |  |                                |  |

# Hourly Standard Deviations

Wind Direction (WD) - deg

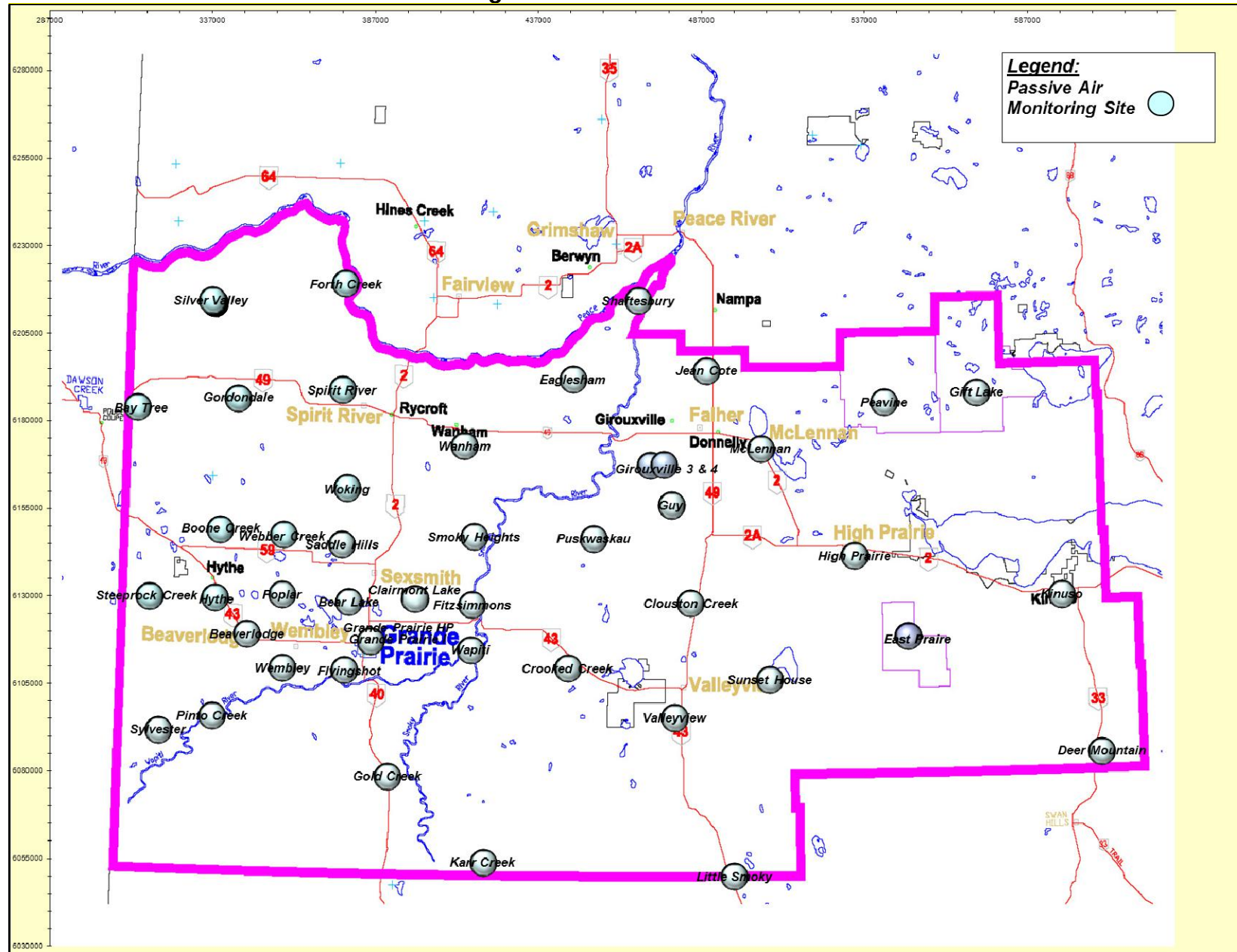
Falher - April 2014

| Maximum Value: 93.5 deg on Apr 5 12:00                                                                                                                        |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours in Service: 720          |    |    |    |    |    |    |               |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--------------------------------|----|----|----|----|----|----|---------------|
| Minimum Value: 0.9 deg on Apr 7 05:00                                                                                                                         |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Data: 690             |    |    |    |    |    |    |               |
| Percentiles: P <sub>1</sub> = 1.7 P <sub>10</sub> = 2.9 Q <sub>1</sub> = 4.3 Median = 7.3 Q <sub>3</sub> = 13.0 P <sub>90</sub> = 26.0 P <sub>99</sub> = 81.0 |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Missing Data: 30      |    |    |    |    |    |    |               |
|                                                                                                                                                               |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Hours of Calibration: 0        |    |    |    |    |    |    |               |
|                                                                                                                                                               |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    | Percent Operational Time: 95.8 |    |    |    |    |    |    |               |
| 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-Apr                                                                                                                                                         | 12                            | 14 | 11 | 34 | 42 | 34 | 16 | 27 | 33 | 12 | 28 | 9  | 5  | 9  | 10 | 19 | 13 | 14                             | 27 | 5  | 4  | 6  | 9  | 20 | 41.7          |
| 2-Apr                                                                                                                                                         | 17                            | 6  | 9  | 18 | 7  | 7  | 4  | 3  | 4  | 4  | 4  | 6  | 10 | 6  | 5  | 7  | 5  | 6                              | 4  | 17 | 9  | 4  | 18 | 11 | 18.5          |
| 3-Apr                                                                                                                                                         | 18                            | 5  | 33 | 11 | 3  | 2  | 5  | 9  | 3  | 4  | 2  | 2  | 2  | 2  | 2  | 2  | 2  | 2                              | 2  | 2  | 4  | 2  | 2  | 3  | 32.8          |
| 4-Apr                                                                                                                                                         | 5                             | 3  | 8  | 13 | 9  | 4  | 9  | 13 | 7  | 6  | 4  | 4  | 3  | 4  | 3  | 4  | 6  | 4                              | 13 | 24 | 6  | 33 | 9  | 4  | 32.6          |
| 5-Apr                                                                                                                                                         | 18                            | 7  | 6  | 7  | 4  | 7  | 4  | 3  | 6  | 7  | 29 | 93 | 10 | 23 | 29 | 10 | 5  | 7                              | 6  | 12 | 15 | 12 | 17 | 4  | 93.5          |
| 6-Apr                                                                                                                                                         | 13                            | 6  | 12 | 6  | 3  | 11 | 7  | 4  | 12 | 2  | 4  | 2  | 2  | 2  | 2  | 3  | 3  | 4                              | 5  | 5  | 3  | 8  | 3  | 2  | 13.0          |
| 7-Apr                                                                                                                                                         | 2                             | 4  | 3  | 4  | 1  | 4  | 7  | 11 | 14 | 9  | 10 | 16 | 12 | 4  | 7  | 32 | 26 | 14                             | 8  | 6  | 5  | 16 | 17 | 11 | 32.2          |
| 8-Apr                                                                                                                                                         | 3                             | 6  | 7  | 5  | 5  | 8  | 4  | 6  | 9  | 81 | 54 | 86 | 8  | 10 | 3  | 3  | 5  | 3                              | 2  | 4  | 13 | 7  | 13 | 4  | 86.0          |
| 9-Apr                                                                                                                                                         | 3                             | 2  | 6  | 2  | 2  | 2  | 2  | 5  | 3  | 5  | 3  | 3  | 2  | 3  | 2  | 4  | 3  | 3                              | 4  | 3  | 13 | 7  | 7  | 7  | 12.5          |
| 10-Apr                                                                                                                                                        | 2                             | 5  | 4  | 3  | 3  | 2  | 2  | 2  | 9  | 6  | 5  | 5  | 24 | 66 | 54 | 6  | 19 | 7                              | 26 | 59 | 24 | 26 | 7  | 6  | 66.0          |
| 11-Apr                                                                                                                                                        | 17                            | 11 | 24 | 5  | 7  | 8  | 60 | 17 | 8  | 6  | 3  | 7  | 5  | 6  | 5  | 4  | 5  | 4                              | 4  | 4  | 10 | 8  | 5  | 12 | 59.7          |
| 12-Apr                                                                                                                                                        | 42                            | 10 | 14 | 43 | 6  | 5  | 15 | 26 | 10 | 6  | 6  | 8  | 6  | 7  | 6  | 7  | 6  | 32                             | 8  | 10 | 4  | 7  | 3  | 6  | 43.3          |
| 13-Apr                                                                                                                                                        | 81                            | 13 | 9  | 15 | 5  | 5  | 4  | 5  | 8  | 15 | 8  | 9  | 6  | 7  | 11 | 5  | 4  | 5                              | 2  | 3  | 2  | 3  | 2  | 2  | 81.1          |
| 14-Apr                                                                                                                                                        | 3                             | 2  | 2  | 8  | 5  | 3  | 9  | 5  | 15 | 22 | 48 | 34 | 18 | 10 | 6  | 9  | 15 | 7                              | 60 | 36 | 12 | 16 | 79 | 61 | 79.3          |
| 15-Apr                                                                                                                                                        | 16                            | 21 | 5  | 5  | 9  | 4  | 5  | 3  | 6  | 5  | 7  | 5  | 5  | 6  | 11 | 10 | 17 | 6                              | 14 | 3  | 7  | 4  | 3  | 11 | 20.9          |
| 16-Apr                                                                                                                                                        | 6                             | 5  | 8  | 8  | 5  | 5  | 5  | 10 | 11 | 19 | 28 | 19 | 7  | 8  | 8  | 9  | 7  | 6                              | 10 | 20 | 30 | 11 | 7  | 4  | 29.6          |
| 17-Apr                                                                                                                                                        | 4                             | 80 | 5  | 38 | 56 | 45 | 23 | 39 | 19 | 21 | 16 | 9  | 9  | 6  | 9  | 9  | 5  | P                              | P  | P  | P  | P  | P  | P  | 80.2          |
| 18-Apr                                                                                                                                                        | P                             | P  | P  | P  | P  | P  | P  | P  | P  | P  | P  | P  | P  | P  | P  | P  | P  | P                              | P  | P  | P  | P  | P  | P  | 5             |
| 19-Apr                                                                                                                                                        | 7                             | 3  | 6  | 7  | 5  | 10 | 20 | 38 | 40 | 14 | 8  | 12 | 63 | 20 | 15 | 10 | 10 | 5                              | 4  | 8  | 13 | 21 | 89 | 22 | 89.2          |
| 20-Apr                                                                                                                                                        | 65                            | 34 | 12 | 11 | 7  | 13 | 2  | 5  | 7  | 10 | 6  | 10 | 10 | 18 | 10 | 10 | 7  | 8                              | 5  | 6  | 12 | 10 | 12 | 8  | 64.6          |
| 21-Apr                                                                                                                                                        | 20                            | 4  | 6  | 6  | 4  | 15 | 14 | 12 | 8  | 34 | 67 | 24 | 28 | 15 | 16 | 13 | 11 | 5                              | 4  | 6  | 3  | 8  | 12 | 5  | 66.7          |
| 22-Apr                                                                                                                                                        | 9                             | 20 | 12 | 4  | 3  | 2  | 4  | 3  | 4  | 5  | 4  | 5  | 4  | 4  | 4  | 5  | 3  | 2                              | 6  | 6  | 3  | 4  | 3  | 3  | 20.4          |
| 23-Apr                                                                                                                                                        | 14                            | 7  | 12 | 3  | 4  | 5  | 10 | 12 | 5  | 3  | 6  | 7  | 4  | 12 | 15 | 42 | 10 | 5                              | 9  | 3  | 4  | 5  | 4  | 3  | 41.9          |
| 24-Apr                                                                                                                                                        | 4                             | 3  | 4  | 4  | 3  | 3  | 5  | 4  | 7  | 5  | 11 | 18 | 73 | 32 | 11 | 12 | 12 | 18                             | 13 | 11 | 4  | 5  | 9  | 12 | 72.9          |
| 25-Apr                                                                                                                                                        | 8                             | 8  | 26 | 19 | 12 | 12 | 27 | 13 | 6  | 14 | 21 | 24 | 62 | 22 | 26 | 16 | 42 | 87                             | 11 | 7  | 18 | 12 | 8  | 7  | 86.7          |
| 26-Apr                                                                                                                                                        | 8                             | 5  | 7  | 8  | 11 | 5  | 10 | 9  | 7  | 11 | 12 | 17 | 15 | 13 | 10 | 7  | 5  | 5                              | 3  | 3  | 3  | 3  | 9  | 7  | 16.6          |
| 27-Apr                                                                                                                                                        | 5                             | 2  | 3  | 3  | 3  | 3  | 3  | 3  | 4  | 6  | 14 | 22 | 36 | 21 | 44 | 25 | 24 | 31                             | 23 | 7  | 10 | 13 | 16 | 47 | 47.5          |
| 28-Apr                                                                                                                                                        | 82                            | 20 | 46 | 15 | 5  | 5  | 4  | 10 | 7  | 8  | 11 | 11 | 8  | 10 | 13 | 13 | 8  | 11                             | 11 | 7  | 29 | 18 | 4  | 6  | 82.2          |
| 29-Apr                                                                                                                                                        | 3                             | 7  | 12 | 4  | 2  | 4  | 5  | 11 | 13 | 10 | 17 | 20 | 27 | 37 | 33 | 71 | 34 | 31                             | 25 | 9  | 7  | 4  | 4  | 5  | 71.0          |
| 30-Apr                                                                                                                                                        | 3                             | 3  | 4  | 5  | 7  | 9  | 14 | 4  | 6  | 15 | 13 | 10 | 16 | 16 | 20 | 15 | 9  | 10                             | 9  | 3  | 4  | 4  | 3  | 3  | 20.2          |
| 82.2 80.2 45.8 43.3 56.3 45.3 59.7 38.7 39.9 81.4 66.7 93.5 72.9 66.0 53.6 71.0 42.1 86.7 59.6 58.5 29.6 32.6 89.2 61.4                                       |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                |    |    |    |    |    |    |               |
| P - Power Failure                                                                                                                                             |                               |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |                                |    |    |    |    |    |    |               |

PAZA

## Monthly Passive Data Summary

# Location of PAZA Passive Monitoring Stations



## PAZA Passive Results for April 2014

| Station Number    | Station Name     | SO2<br>ppb | O3<br>ppb | NO2<br>ppb | H2S<br>ppb | Site<br>Legal    |
|-------------------|------------------|------------|-----------|------------|------------|------------------|
| <b>Duplicates</b> |                  |            |           |            |            |                  |
| 2a                | Bay Tree         | 0.3        | 39.5      | 0.4        |            |                  |
| 2b                | Bay Tree         | 0.3        | 37.6      | 0.3        |            |                  |
| 11a               | Webber Creek     | 0.3        | 42.7      | 0.4        |            |                  |
| 11b               | Webber Creek     | 0.3        | 34.6      | 0.4        |            |                  |
| 20a               | Shaftesbury      | 0.2        | 40.6      | 0.3        |            |                  |
| 20b               | Shaftesbury      | 0.2        | 47.8      | 0.3        |            |                  |
| 41a               | Valleyview       | 0.2        | 43.7      | 0.3        |            |                  |
| 41b               | Valleyview       | 0.3        | 42.2      | 0.3        |            |                  |
| 64a               | Girouxville 4    |            |           |            | 0.2        |                  |
| 64b               | Girouxville 4    |            |           |            | 0.2        |                  |
| 1                 | Silver Valley    | 0.3        | 42.6      | 0.2        |            | 08-27-081-11 W6M |
| 2                 | Bay Tree         | 0.3        | 38.6      | 0.4        |            | 13-16-078-13 W6M |
| 3                 | Fourth Creek     | 0.2        | 43.8      | 0.2        |            | 04-13-082-07 W6M |
| 4                 | Gordondale       | 0.3        | 43.2      | 0.3        |            | 04-34-078-10 W6M |
| 5                 | Boone Creek      | 0.2        | 34.6      | 0.2        |            | 16-36-074-11 W6M |
| 7                 | Steeprock Creek  | 0.2        | 39.8      | 0.3        |            | 09-35-072-13 W6M |
| 9                 | Spirit River     | 0.2        | 49.3      | 0.4        |            | 08-12-079-07 W6M |
| 10                | Woking           | 0.2        | 44.5      | 0.3        |            | 01-13-076-07 W6M |
| 11                | Webber Creek     | 0.3        | 38.7      | BDL        |            | 09-36-074-09 W6M |
| 12                | Hythe            | 0.2        | 36.9      | 0.8        |            | 14-36-072-11 W6M |
| 14                | Sylvester        | 0.1        | 27.4      | 0.6        |            | 08-06-069-12 W6M |
| 16                | Beaverlodge      | 0.5        | 48.1      | 0.6        |            | 15-36-071-10 W6M |
| 17                | Poplar           | 0.2        | 39.4      | 0.5        |            | 13-06-073-08 W6M |
| 18                | Saddle Hills     | 0.2        | 34.2      | 0.2        |            | 04-25-074-07 W6M |
| 19                | Wanham           | 0.2        | 43.7      | 0.3        |            | 16-22-077-03 W6M |
| 20                | Shaftesbury      | 0.2        | 44.2      | 0.3        |            | 04-03-082-23 W5M |
| 21                | Eaglesham        | 0.3        | 37.3      | 0.2        |            | 16-21-079-25 W5M |
| 23                | Bear Lake        | 0.3        | 35.6      | 0.6        |            | 15-31-072-06 W6M |
| 24                | Wembley          | 0.2        | 36.6      | 0.9        |            | 12-31-070-08 W6M |
| 25                | Pinto Creek      | 0.1        | 37.0      | 0.4        |            | 04-24-069-11 W6M |
| 26                | Flyingshot       | 0.2        | 38.2      | 0.9        |            | 15-36-070-07 W6M |
| 27                | Grande Prairie I | 0.2        | 35.8      | 3.2        |            | 08-15-071-06 W6M |

## PAZA Passive Results for April 2014 (Continued)

|    |                   |     |      |     |                      |
|----|-------------------|-----|------|-----|----------------------|
| 28 | Clairmont Lake    | 0.2 | 41.0 | 0.4 | 09-06-073-04 W6M     |
| 29 | Smoky Heights     | 0.3 | 45.2 | 0.4 | 04-06-075-02 W6M     |
| 30 | Fitzsimmons       | 0.1 | 39.7 | 0.3 | 15-36-072-03 W6M     |
| 32 | Gold Creek        | 0.1 | 32.6 | 0.8 | 06-33-067-05 W6M     |
| 33 | Wapiti            | N/S | N/S  | N/S | 02-25-071-03 W6M     |
| 34 | Puskwaskau        | 0.1 | 40.8 | BDL | 15-35-074-25 W5M     |
| 35 | Jean Cote         | 0.1 | 52.2 | 0.3 | 12-35-079-21 W5M     |
| 36 | Guy               | 0.3 | 42.8 | 0.2 | 03-04-076-22 W5M     |
| 37 | Crooked Creek     | 0.2 | 45.2 | 0.2 | 16-01-071-26 W5M     |
| 38 | Karr Creek        | 0.1 | 31.1 | 0.4 | 10-16-065-02 W6M     |
| 39 | Clouston Creek    | 0.2 | 46.2 | 0.3 | 12-01-073-22 W5M     |
| 40 | McLennan          | 0.6 | 47.3 | 0.5 | 03-29-077-19 W5M     |
| 41 | Valleyview        | 0.2 | 42.9 | 0.3 | 09-30-069-22 W5M     |
| 42 | Sunset House      | 0.2 | 46.9 | 0.1 | 05-32-070-19 W5M     |
| 43 | High Prairie      | 0.1 | 43.9 | 0.5 | 16-13-074-17 W5M     |
| 44 | Peavine           | 0.2 | 43.0 | BDL | 03-05-079-15 W5M     |
| 45 | Gift Lake         | 0.1 | 39.3 | 0.1 | BDL 10-07-079-12 W5M |
| 46 | Little Smoky      | 0.4 | 37.7 | 1.0 | 12-01-065-21 W5M     |
| 47 | Kinuso            | 0.2 | 37.9 | BDL | 12-10-073-10 W5M     |
| 48 | Deer Mountain     | 0.2 | 44.0 | 0.2 | 15-22-068-09 W5M     |
| 49 | Grande Prairie HP | 0.2 | 40.5 | 2.9 | 17-26-071-06 W6M     |
| 50 | East Prairie      | 0.2 | 37.9 | 0.4 | 13-02-072-15 W5M     |
| 63 | Girouxville 3     |     |      | 0.2 | 14-02-077-23 W5M     |
| 64 | Girouxville 4     |     |      | 0.2 | 4-08-077-22 W5M      |

\*BDL = Below Detection Level

\*N/S - No sample

## Passive Summary for April 2014

| Stats | Sulphur Dioxide<br>SO <sub>2</sub> | Ozone<br>O <sub>3</sub> | Nitrogen Dioxide<br>NO <sub>2</sub> | Hydrogen Sulphide<br>H <sub>2</sub> S |
|-------|------------------------------------|-------------------------|-------------------------------------|---------------------------------------|
|       | ppb                                | ppb                     | ppb                                 | ppb                                   |

| Passive Summary for April 2014 (PAZA Zone) |                  |                 |                        |                     |
|--------------------------------------------|------------------|-----------------|------------------------|---------------------|
| Mean                                       | 0.2              | 40.6            | 0.5                    | 0.2                 |
| Standard Deviation                         | 0.1              | 5.1             | 0.6                    | 0.0                 |
| Minimum                                    | 0.1              | 27.4            | 0.1                    | 0.2                 |
| Minimum At                                 | Puskwaskau (#34) | Sylvester (#14) | Sunset House (#42)     | Girouxville 4 (#64) |
| Maximum                                    | 0.6              | 52.2            | 3.2                    | 0.2                 |
| Maximum At                                 | McLennan (#40)   | Jean Cote (#35) | Grande Prairie I (#27) | Girouxville 3 (#63) |

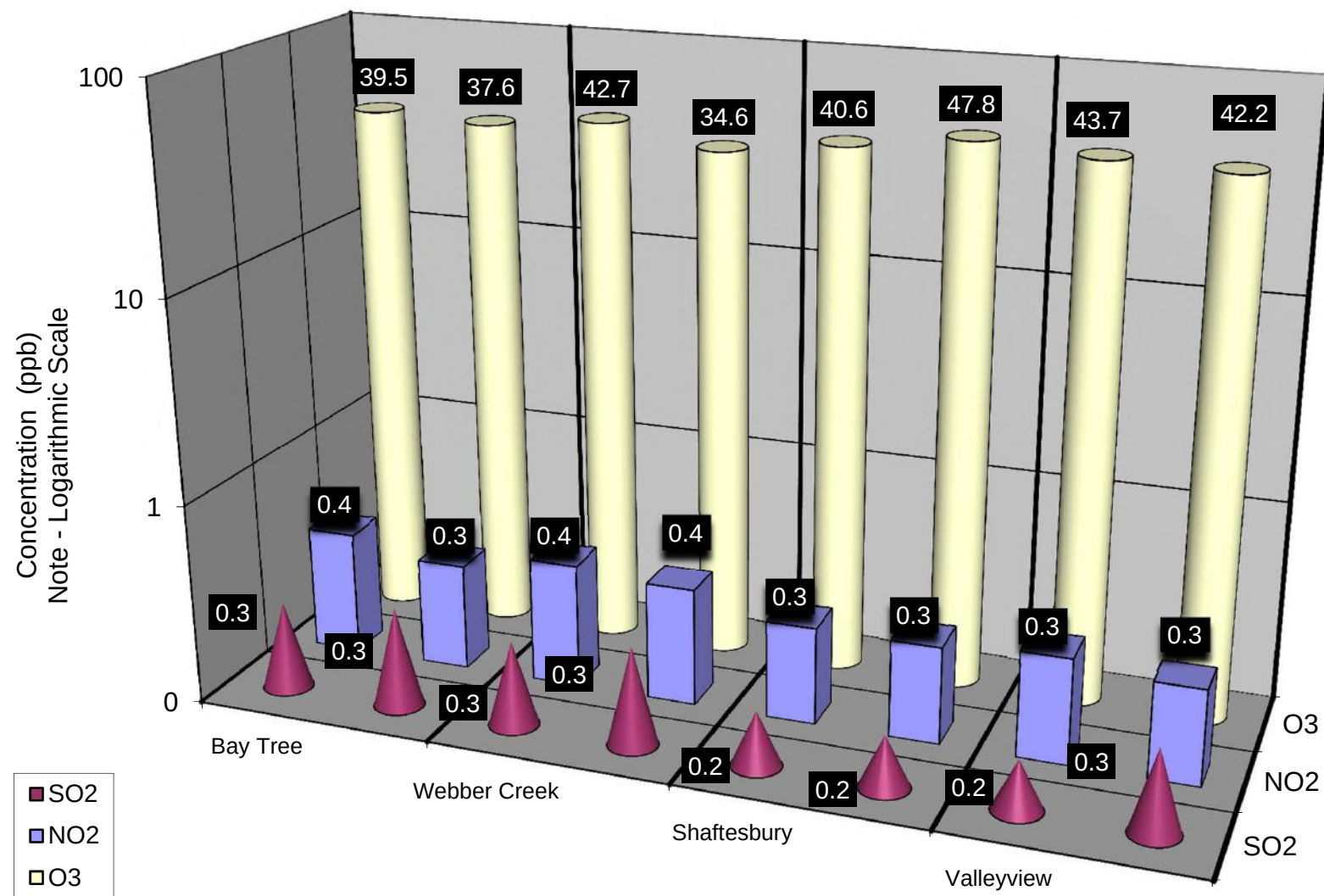
### Comparison between Continuous and Passive monitoring at Beaverlodge (passive #16 Beaverlodge)

|                          | SO <sub>2</sub> | O <sub>3</sub> | NO <sub>2</sub> |
|--------------------------|-----------------|----------------|-----------------|
| PAZA Beaverlodge station | 0.3             | 39.6           | 2.2             |
| PAZA Beaverlodge passive | 0.5             | 48.1           | 0.6             |

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

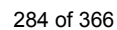
|                             | SO <sub>2</sub> | O <sub>3</sub> | NO <sub>2</sub> |
|-----------------------------|-----------------|----------------|-----------------|
| PAZA Henry Pirker station   | 0.3             | 29.0           | 7.3             |
| PAZA Grande Prairie passive | 0.2             | 40.5           | 2.9             |





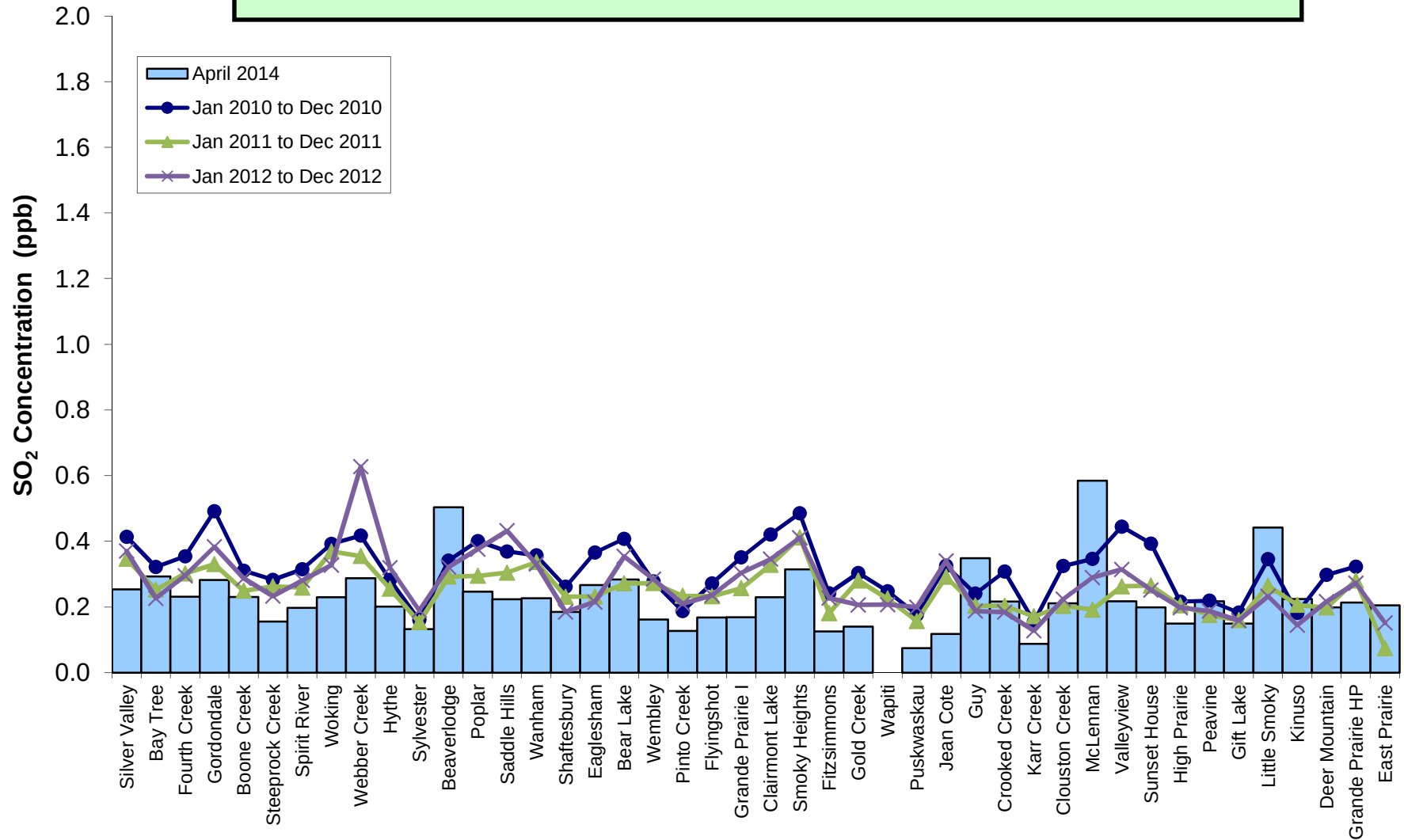
Duplicate Summary Chart

**Average Concentrations in ppb**



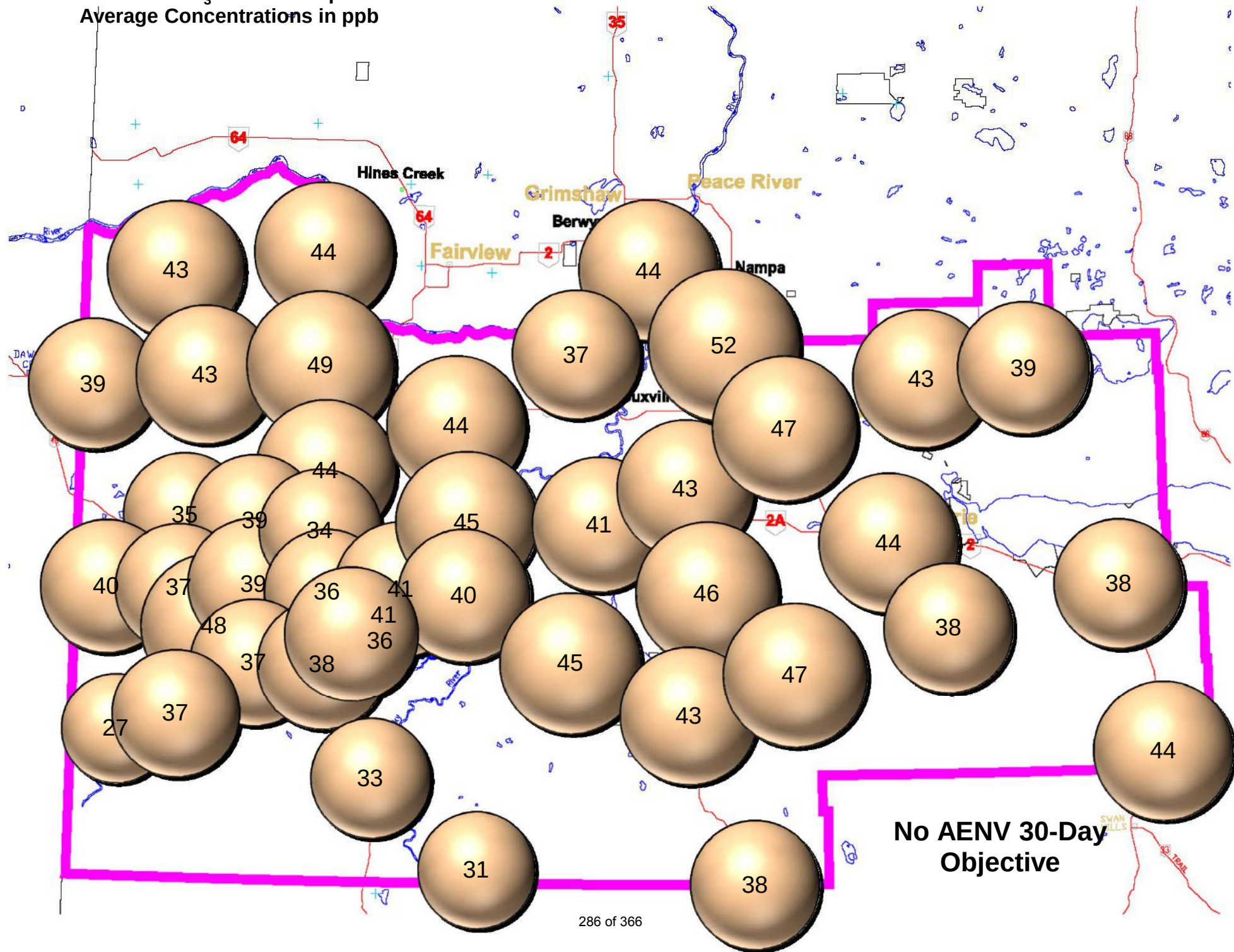
**AENV  
30 - Day  
Objective  
11 ppb**

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

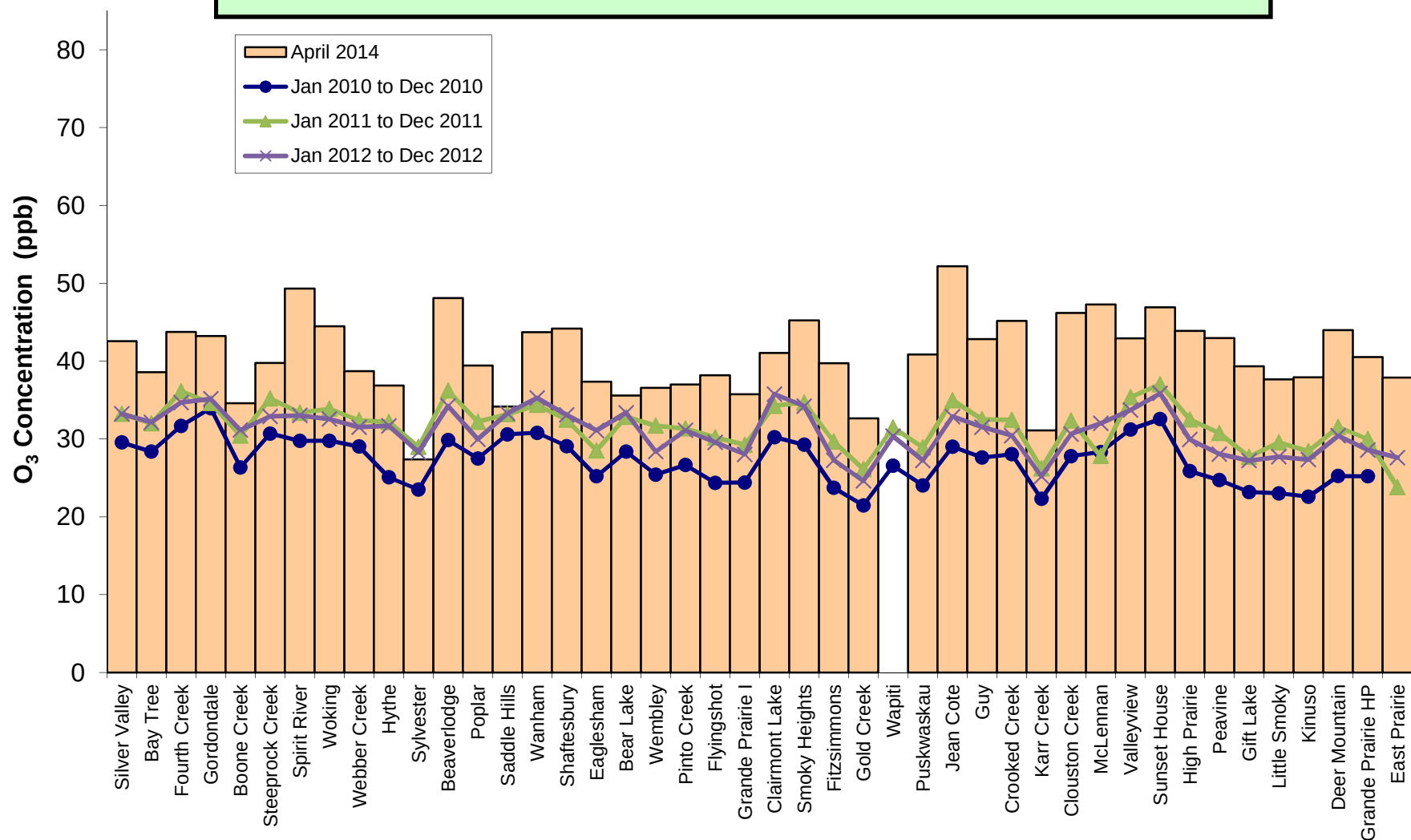




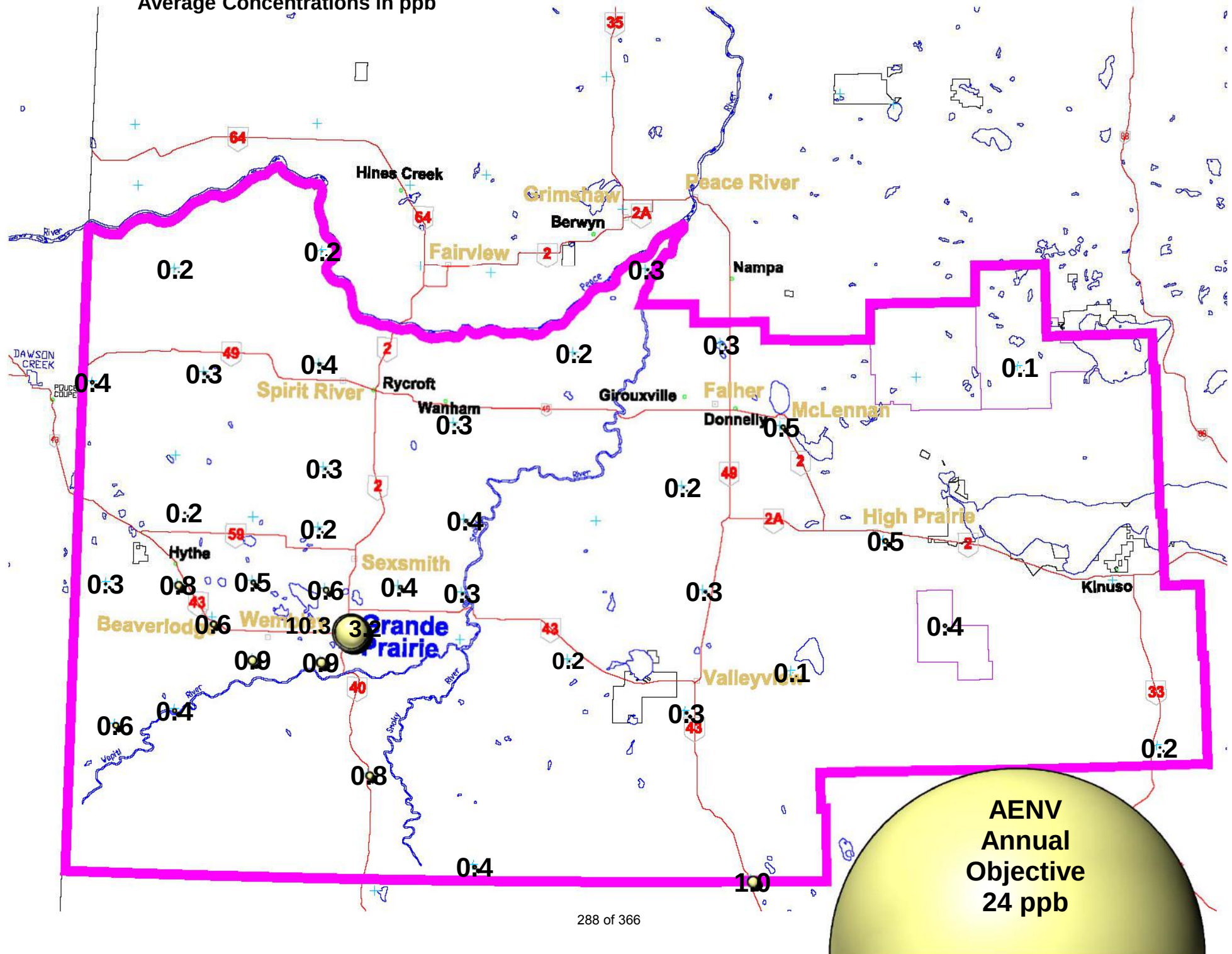
**PAZA Passive O<sub>3</sub> Stations - April 2014**  
**Average Concentrations in ppb**



## Alberta Ambient Air Quality Objective - No Annual O<sub>3</sub> Objective

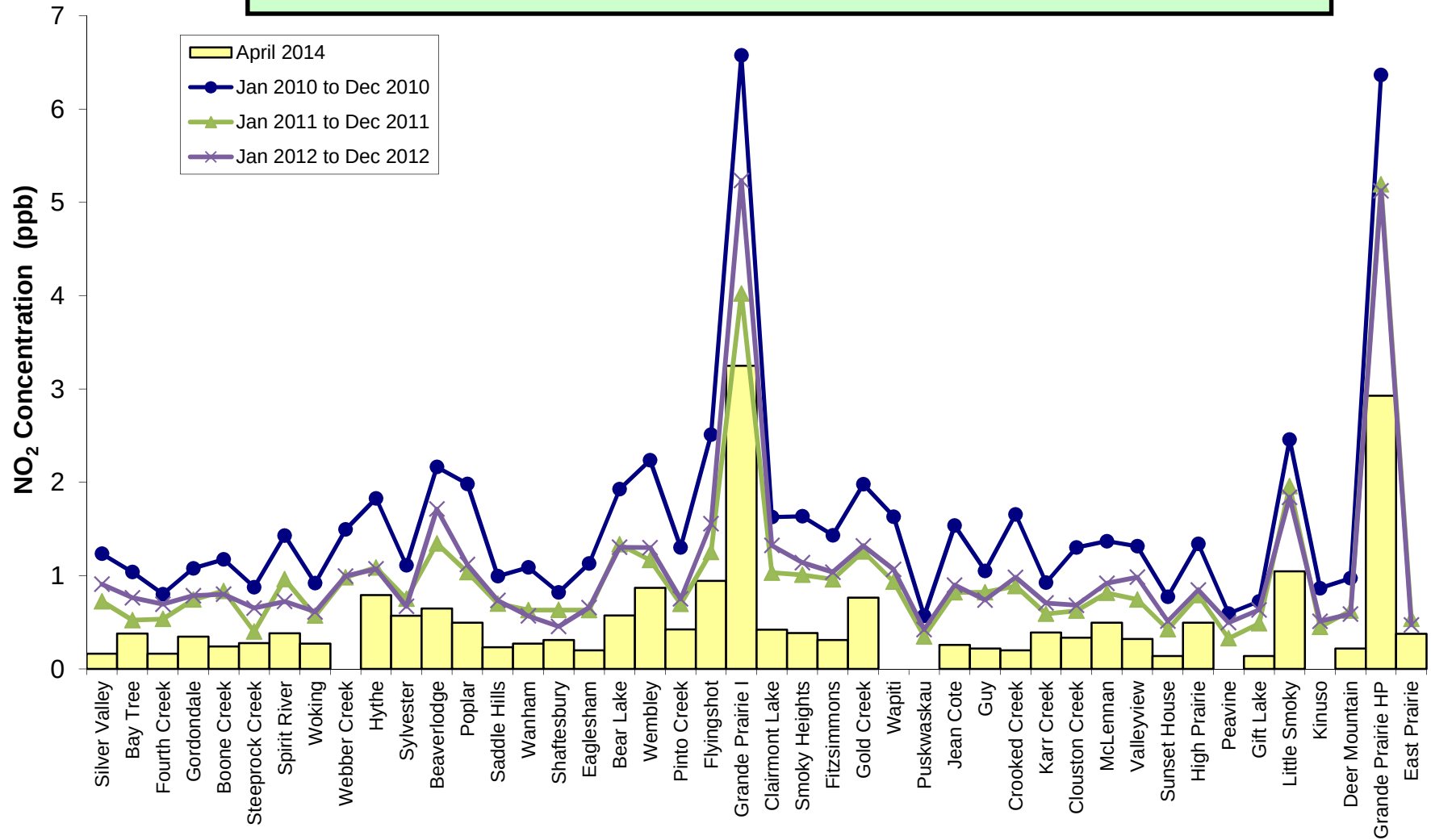


**PAZA Passive NO<sub>2</sub> Stations - April 2014**  
**Average Concentrations in ppb**

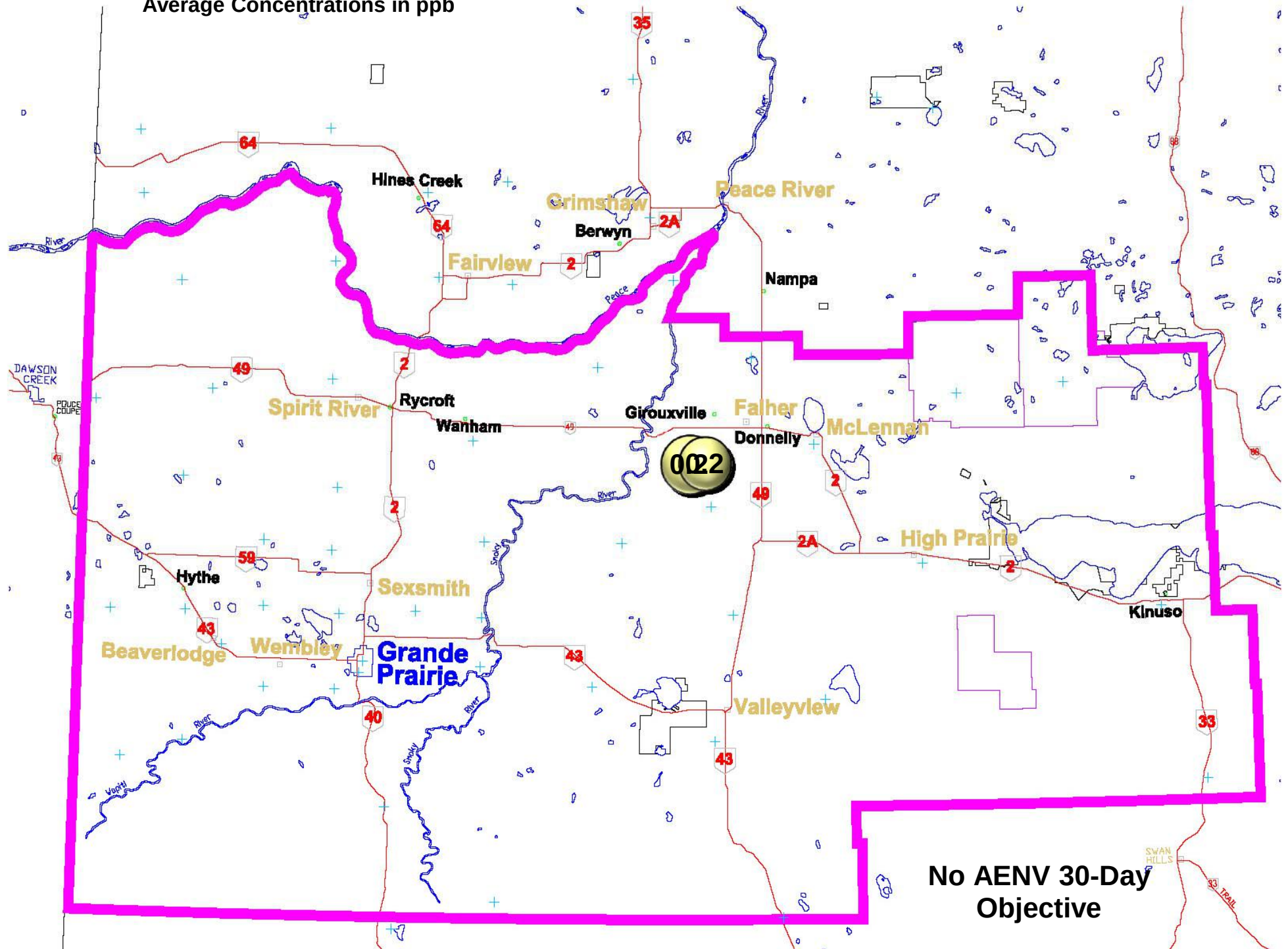




**Alberta Ambient Air Quality Objective - Annual NO<sub>2</sub> Objective is 24 ppb**



PAZA Passive H<sub>2</sub>S Stations - April 2014  
Average Concentrations in ppb





# **April 2014 Calibration Reports**

**PAZA - Henry Pirker Station with the following calibrations:**

**SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, CO, THC, TRS**

**PAZA – Evergreen Park Station with the following calibrations:**

**SO<sub>2</sub>, TRS**

**PAZA – Smoky Heights Station with the following calibrations:**

**SO<sub>2</sub>, TRS**

**PAZA – Beaverlodge Station with the following calibrations:**

**SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>**

**PAZA – Valleyview Station with the following calibrations:**

**SO<sub>2</sub> & H<sub>2</sub>S**

**PAZA – Reno Station with the following calibrations:**

**SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, TRS**

**PAZA – Falher Station with the following calibrations:**

**SO<sub>2</sub> & H<sub>2</sub>S**

# Calibration Report

Parameter SO2

Air Monitoring Network PAZA



## Station Information

|                      |                                             |                                  |                                  |
|----------------------|---------------------------------------------|----------------------------------|----------------------------------|
| Calibration Date     | April 9, 2014                               | Previous Calibration             | March 4, 2014                    |
| Station Number       | 1                                           | Station Location                 | Henry Pirker                     |
| Reason:              | <input checked="" type="checkbox"/> Routine | <input type="checkbox"/> Install | <input type="checkbox"/> Removal |
|                      |                                             | <input type="checkbox"/> Other:  |                                  |
| Start Time (MST)     | 7:50                                        | End Time (MST)                   | 11:55                            |
| Barometric Pressure  | 717.000 mm                                  | Station Temperature              | 20.5 Deg C                       |
| Calibrator           |                                             | Serial Number                    | 3016                             |
| Cal Gas Conc         | 51.5 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     | 1.001416                                    | Calculated slope                 | 1.003625                         |
| Calculated intercept | 1.926454                                    | Calculated intercept             | 1.595514                         |
| 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            | 641.0   | mm Hg | 641.3   | mm Hg |
| Flow                | 0.475   | lpm   | 0.475   | lpm   |
| Lamp intensity      | 43695   | Hz    | 43498   | 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                                 | 0.0                                | N/A                       |
| 4995                            | 39.93                         | 408.4                               | 406.2                              | 1.0055                    |
| 4995                            | 19.97                         | 205.1                               | 201.8                              | 1.0163                    |
| 4995                            | 9.97                          | 102.6                               | 99.2                               | 1.0343                    |
|                                 |                               |                                     |                                    |                           |
| 4995                            | 0.00                          | 0.0                                 | 0.0                                | As Found Zero             |
| 4995                            | 39.93                         | 408.4                               | 406.2                              | As Found Span             |
| Average Correction Factor       |                               |                                     |                                    | 1.0187                    |

Calculated value of As Found Response: 408.7 ppb Percent Change of As Found: -0.1%

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | 0.1                | ppb | 0.1               | ppb |
| Auto span | 250.7              | ppb | 255.5             | ppb |

Notes: No adjustments made.

Calibration Performed By: Dmytro Dolotii

## Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



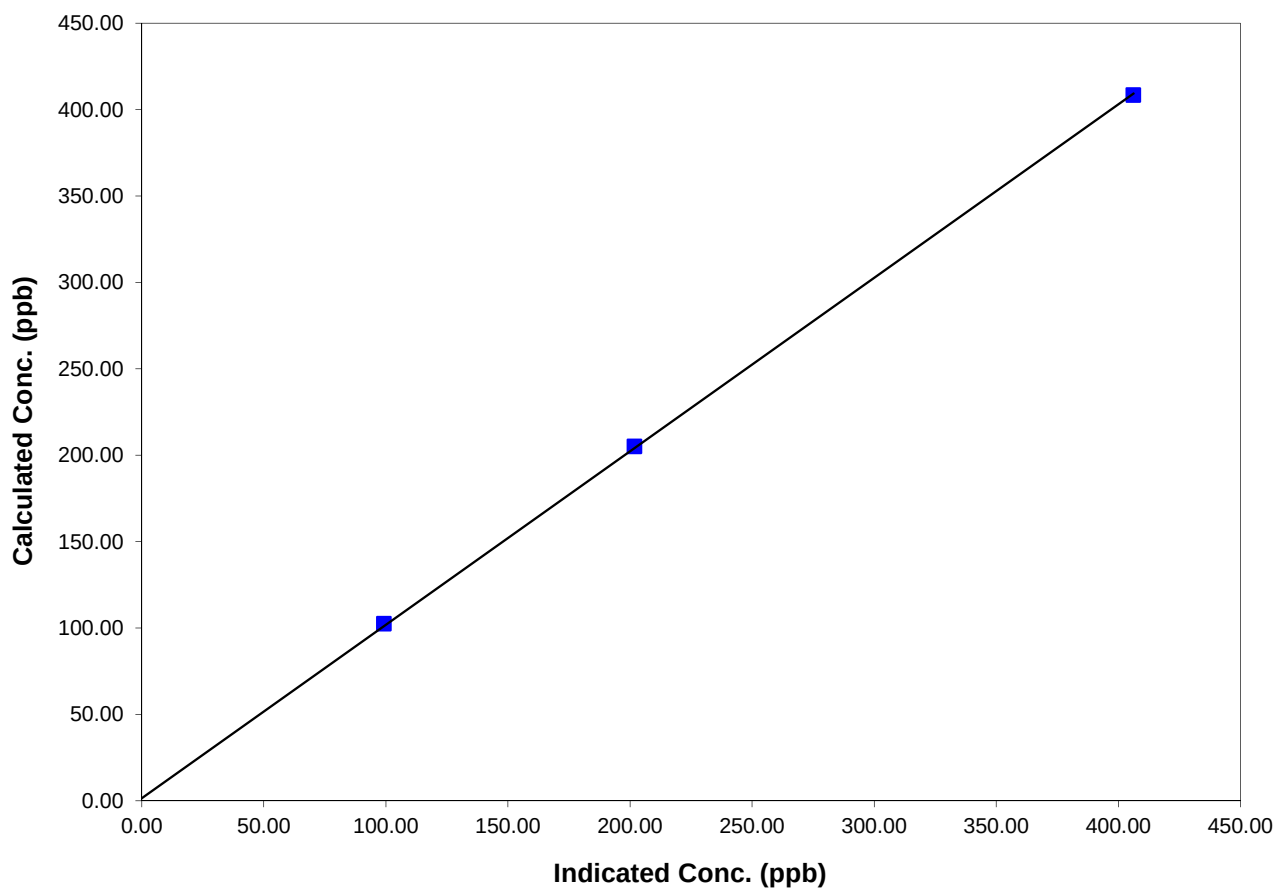
### Station Information

|                     |               |                      |               |
|---------------------|---------------|----------------------|---------------|
| Calibration Date    | April 9, 2014 | Previous Calibration | March 4, 2014 |
| Station Number      | 1             | Station Location     | Henry Pirker  |
| Start Time (MST)    | 7:50          | End Time (MST)       | 11:55         |
| Analyzer make/model | TEI 43C       | Analyzer serial #    | 610816292     |

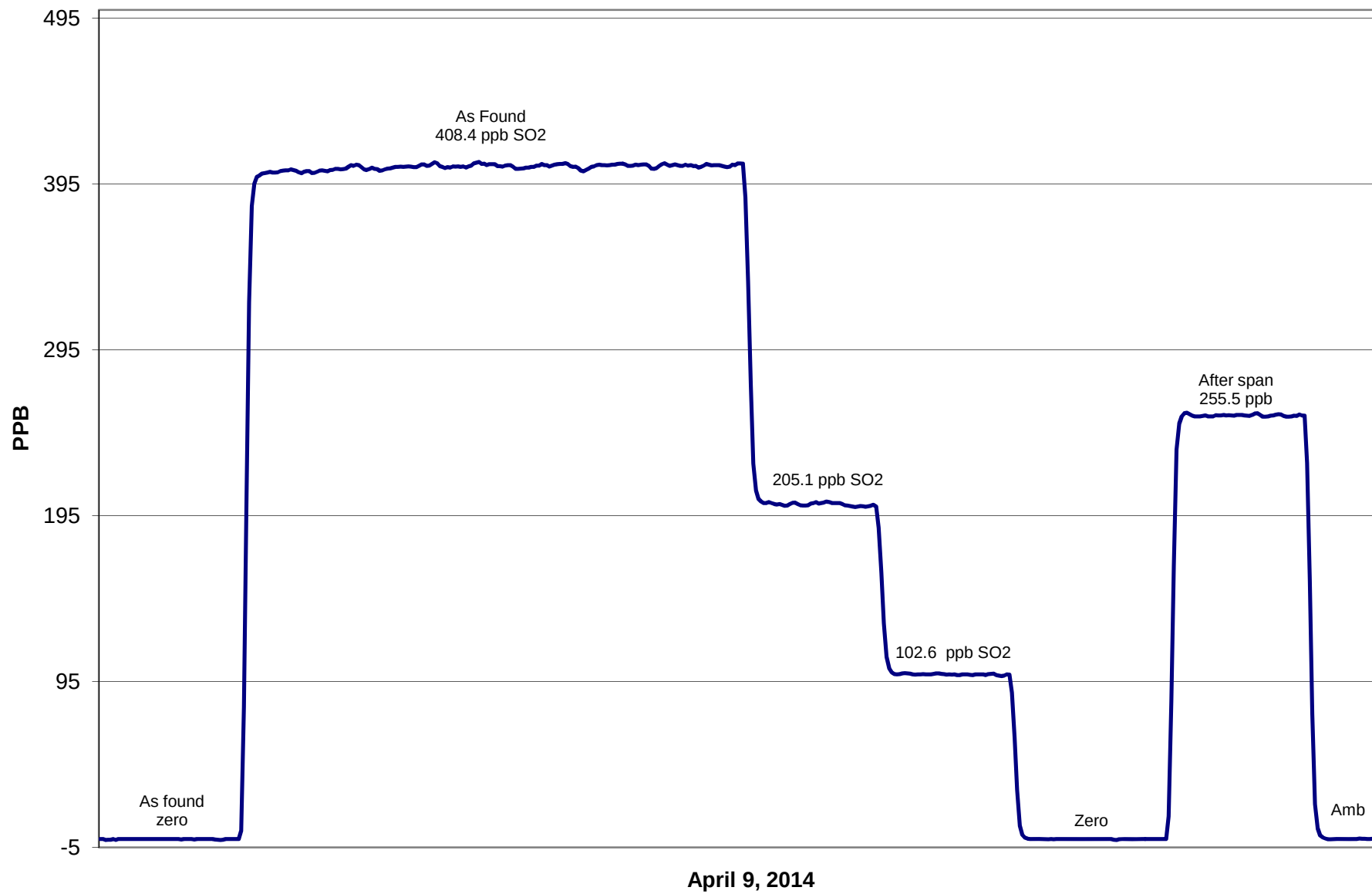
### Calibration Data

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------------|------------------------------------|---------------------------|-------------------------|----------|
| 0.0                                 | 0.0                                | N/A                       | Correlation Coefficient | 0.999932 |
| 408.4                               | 406.2                              | 1.0055                    |                         |          |
| 205.1                               | 201.8                              | 1.0163                    |                         |          |
| 102.6                               | 99.2                               | 1.0343                    | Slope                   | 1.003625 |
|                                     |                                    |                           |                         |          |
|                                     |                                    |                           | Intercept               | 1.595514 |
|                                     |                                    |                           |                         |          |

### SO2 Calibration Curve



## SO2 Calibration



# Calibration Report

Parameter

NO<sub>x</sub>-NO-NO<sub>2</sub>

Air Monitoring Network

PAZA



## Station Information

|                     |                |                      |                |
|---------------------|----------------|----------------------|----------------|
| Calibration Date    | April 9, 2014  | Previous Calibration | March 4, 2014  |
| Station Number      | 1              | Station Location     | Henry Pirker   |
| Reason:             | <b>Routine</b> | Installation         | Removal        |
| Start Time (MST)    | 7:50           | End Time (MST)       | 13:40:00 PM    |
| Barometric Pressure | 717.000 mm     | Station Temperature  | 20.5 Deg C     |
| Calibrator          | EnviroNics     | Serial Number        | 3016           |
| NO Cal Gas Conc     | 51.3 ppm       | Cal Gas Expiry Date  | March 12, 2014 |
| NOx Cal Gas Conc    | 51.4 ppm       | Cal Gas Serial #     | LL105159       |

## DACS Information

|           |        |                 |      |
|-----------|--------|-----------------|------|
| DACS make | CR3000 | DACS serial No. | 5408 |
|-----------|--------|-----------------|------|

| Parameter     | NO2       | NOx       | NO        |
|---------------|-----------|-----------|-----------|
| <b>Before</b> |           |           |           |
| Data Slope    | 1.010383  | 1.002779  | 0.999255  |
| Data Offset   | 0.872505  | 1.698581  | 1.875250  |
| <b>After</b>  |           |           |           |
| Data Slope    | 0.998626  | 0.999166  | 0.999069  |
| Data Offset   | 0.491737  | 1.412593  | 1.412778  |
| Channel #     | 8         | 6         | 7         |
| Voltage Range | 0 - 5 VDC | 0 - 5 VDC | 0 - 5 VDC |

## Analyzer Information

|                     |         |                   |           |
|---------------------|---------|-------------------|-----------|
| Analyzer make/model | TEI 42C | Analyzer serial # | 508011073 |
|---------------------|---------|-------------------|-----------|

| Test Point          | before  |       | after   |       |
|---------------------|---------|-------|---------|-------|
| Concentration range | 0 - 500 | ppb   | 0 - 500 | ppb   |
| NO offset           | 13.2    | mV    | 13.2    | mV    |
| NOx bkgnd           | 13.6    | mV    | 13.6    | mV    |
| NO coefficient      | 1.075   |       | 1.075   |       |
| NOx coefficient     | 1.000   |       | 1.000   |       |
| NO2 conv temp       | 318.0   | Deg C | 319.0   | Deg C |
| Cooler              | -2.5    | Deg C | -2.5    | Deg C |
| PMT Volt            | -774.0  | mV    | -775.0  | mV    |
| R Cell Press        | 197.6   | in Hg | 199.1   | in Hg |

# Calibration Report

Parameter **NOx-NO-NO<sub>2</sub>**  
Air Monitoring Network **PAZA**



Calibration Date: April 9, 2014 Station Location: Henry Pirker

|                           | Dilution flow rate (ccm) | Source gas flow rate (ccm) | Calculated NOx conc (ppb) | Calculated NO conc (ppb) | Calculated NO2 conc (ppb) | Indicated NOx conc (ppb) | Indicated NO conc (ppb) | Indicated NO2 conc (ppb) | NOx Correction factor | NO Correction factor |
|---------------------------|--------------------------|----------------------------|---------------------------|--------------------------|---------------------------|--------------------------|-------------------------|--------------------------|-----------------------|----------------------|
| zero                      | 4995                     | 0.00                       | 0.0                       | 0.0                      | 0.0                       | -0.3                     | -0.1                    | -0.2                     | N/A                   | N/A                  |
| 1                         | 4995                     | 39.93                      | 407.6                     | 406.8                    | 0.8                       | 407.1                    | 406.5                   | 0.5                      | 1.0013                | 1.0008               |
| 2                         | 4995                     | 19.97                      | 204.7                     | 204.3                    | 0.4                       | 202.9                    | 202.3                   | 0.4                      | 1.0089                | 1.0099               |
| 3                         | 4995                     | 9.97                       | 102.4                     | 102.2                    | 0.2                       | 100.0                    | 99.6                    | 0.3                      | 1.0237                | 1.0262               |
| AFZ                       | 4995                     | 0.00                       | 0.0                       | 0.0                      | 0.0                       | -0.3                     | -0.1                    | -0.2                     | 0.0000                | 0.0000               |
| AFS                       | 4995                     | 39.93                      | 407.6                     | 406.8                    | 0.8                       | 407.1                    | 406.5                   | 0.5                      | 1.0013                | 1.0008               |
| Average Correction Factor |                          |                            |                           |                          |                           |                          |                         |                          | 1.0113                | 1.0123               |

As Found Concentrations: NO<sub>x</sub>= 409.1 NO= 408.4 As Found Percent Change NO<sub>x</sub>= 0.4% NO= 0.4%

| 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                       | -0.3                     | -0.1                    | -0.2                     | N/A                   | N/A                  | N/A                   | N/A                  |
| NO point                  | 406.8                         | 406.8                        | 0.0                       | 407.2                    | 406.8                   | 0.3                      | 0.9989                | 1.0000               | N/A                   | N/A                  |
| 300                       | 406.8                         | 98.2                         | 308.6                     | 406.8                    | 98.2                    | 308.8                    | 0.9999                | 1.0000               | 0.9993                | 100.1%               |
| 200                       | 406.8                         | 198.0                        | 208.8                     | 406.1                    | 198.0                   | 208.3                    | 1.0015                | 1.0000               | 1.0024                | 99.8%                |
| 100                       | 406.8                         | 298.2                        | 108.5                     | 406.2                    | 298.2                   | 107.9                    | 1.0014                | 1.0000               | 1.0056                | 99.4%                |
| Average Correction Factor |                               |                              |                           |                          |                         |                          | 1.0009                | 1.0000               | 1.0024                | 99.8%                |

|           | Previous calibration |       |      |     | Current calibration |       |      |     |
|-----------|----------------------|-------|------|-----|---------------------|-------|------|-----|
| Parameter | NOx                  | NO2   | NO   |     | NOx                 | NO2   | NO   |     |
| Auto zero | 0.0                  | 0.0   | -0.1 | ppb | -0.4                | -0.1  | -0.1 | ppb |
| Auto span | 329.9                | 327.5 | 2.4  | ppb | 339.5               | 338.0 | 1.8  | ppb |

Calibration Performed By: Dmytro Dolotii

## Calibration Summary

Parameter NO<sub>2</sub>

Air Monitoring Network PAZA



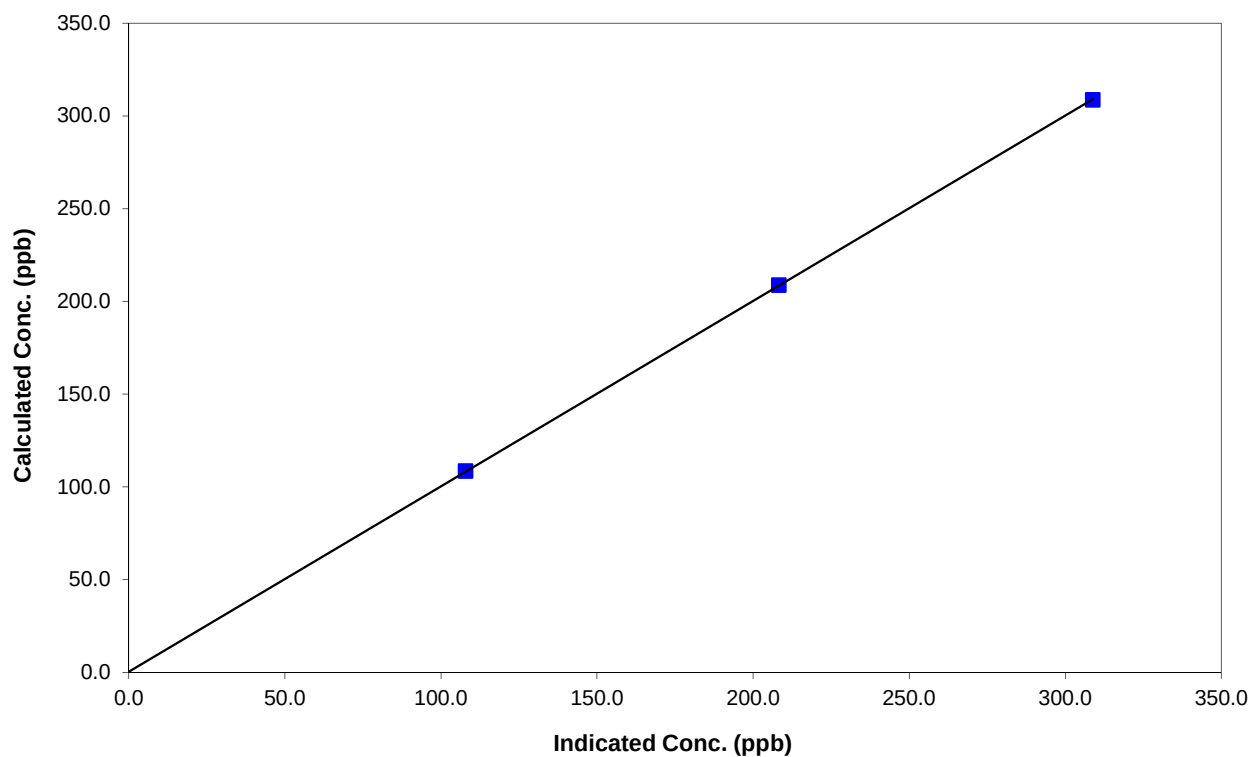
### Station Information

|                  |               |                      |               |
|------------------|---------------|----------------------|---------------|
| Calibration Date | April 9, 2014 | Previous Calibration | March 4, 2014 |
| Station Number   | 1             | Station Location     | Henry Pirker  |
| Start Time (MST) | 7:50          | End Time (MST)       | 13:40:00 PM   |
| Analyzer make    | TEI 42C       | Analyzer serial #    | 508011073     |

### Calibration Data

| Calculated conc (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|----------------------------|------------------------------------|---------------------------|-------------------------|----------|
| 0.0                        | -0.2                               | N/A                       | Correlation Coefficient | 0.999994 |
| 308.6                      | 308.8                              | 0.9993                    |                         |          |
| 208.8                      | 208.3                              | 1.0024                    |                         |          |
| 108.5                      | 107.9                              | 1.0056                    | Slope                   | 0.998626 |
|                            |                                    |                           | Intercept               | 0.491737 |
|                            |                                    |                           |                         |          |
|                            |                                    |                           |                         |          |

### NO<sub>2</sub> Calibration Curve



## Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PAZA



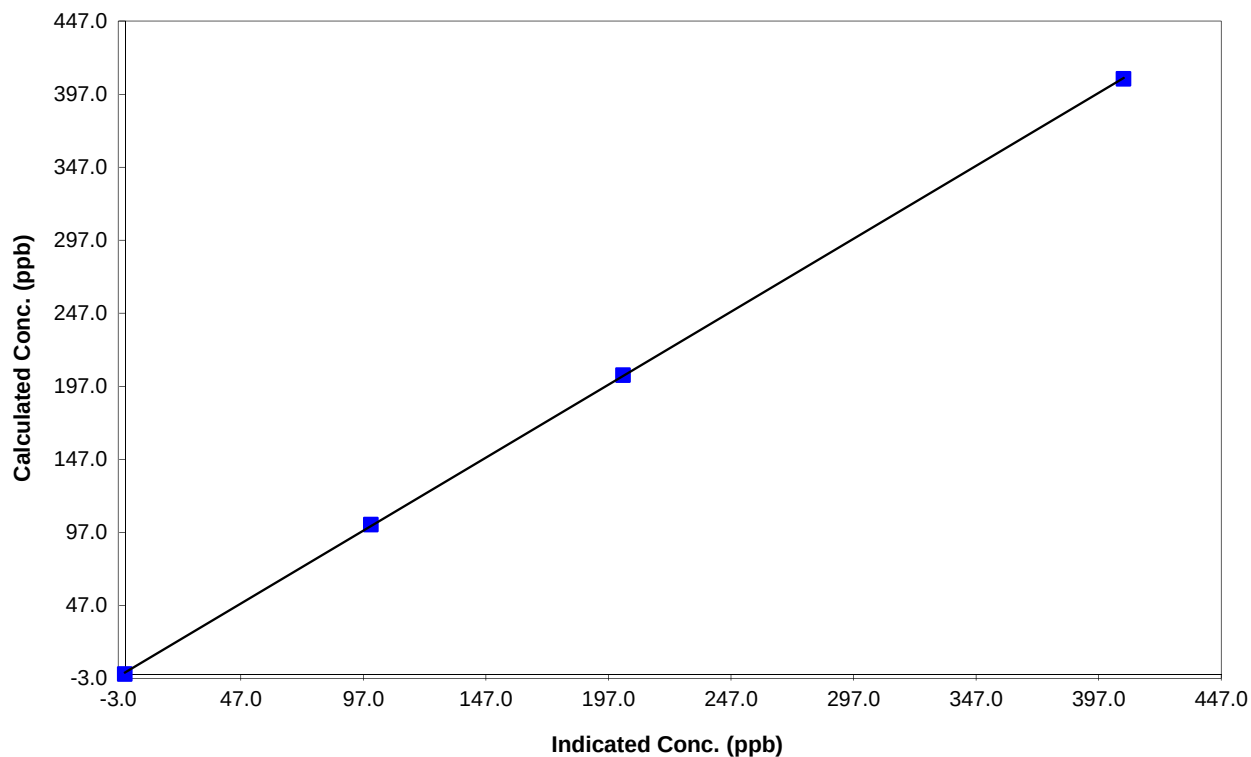
### Station Information

|                  |               |                      |               |
|------------------|---------------|----------------------|---------------|
| Calibration Date | April 9, 2014 | Previous Calibration | March 4, 2014 |
| Station Number   | 1             | Station Location     | Henry Pirker  |
| Start Time (MST) | 7:50          | End Time (MST)       | 13:40:00 PM   |
| Analyzer make    | TEI 42C       | Analyzer serial #    | 508011073     |

### Calibration Data

| Calculated conc (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|----------------------------|------------------------------------|---------------------------|-------------------------|----------|
| 0.0                        | -0.3                               | N/A                       | Correlation Coefficient | 0.999969 |
| 407.6                      | 407.1                              | 1.0013                    |                         |          |
| 204.7                      | 202.9                              | 1.0089                    |                         |          |
| 102.4                      | 100.0                              | 1.0237                    | Slope                   | 0.999166 |
|                            |                                    |                           | Intercept               | 1.412593 |
|                            |                                    |                           |                         |          |
|                            |                                    |                           |                         |          |

### NO<sub>x</sub> Calibration Curve





## Calibration Summary

Parameter NO

Air Monitoring Network PAZA



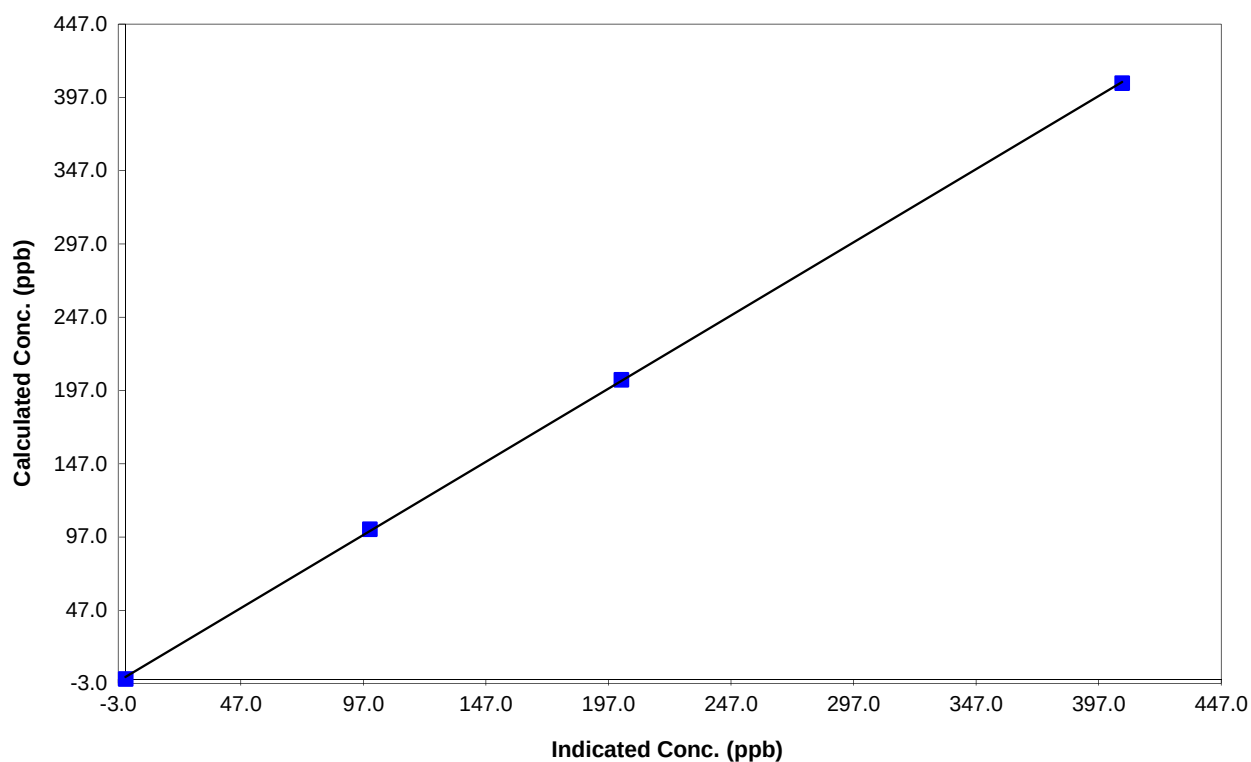
### Station Information

|                  |               |                      |               |
|------------------|---------------|----------------------|---------------|
| Calibration Date | April 9, 2014 | Previous Calibration | March 4, 2014 |
| Station Number   | 1             | Station Location     | Henry Pirker  |
| Start Time (MST) | 7:50          | End Time (MST)       | 13:40:00 PM   |
| Analyzer make    | TEI 42C       | Analyzer serial #    | 508011073     |

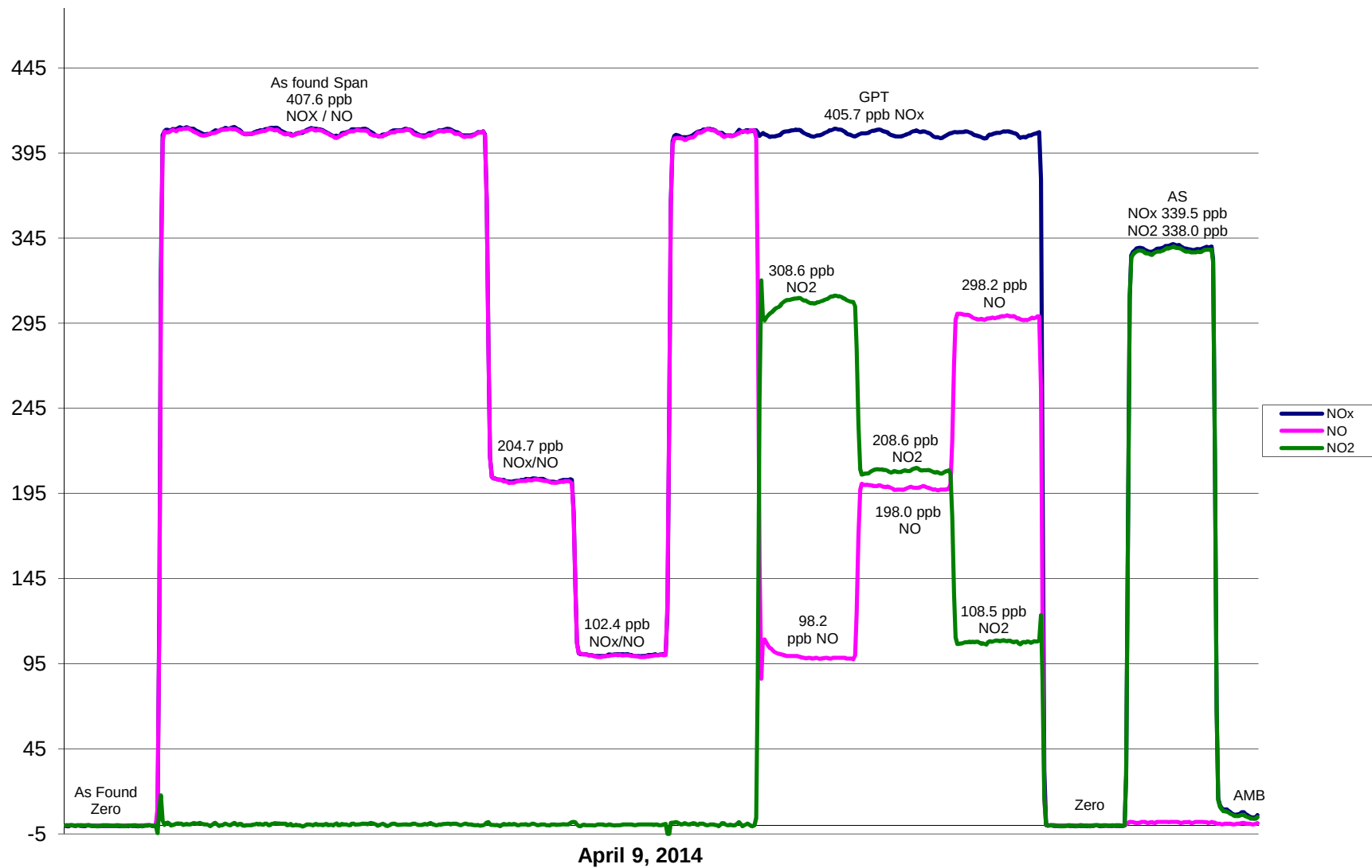
### Calibration Data

| Calculated conc (ppb)<br>(Cc) | Indicated concentration<br>(ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------|---------------------------------------|---------------------------|-------------------------|----------|
| 0.0                           | -0.1                                  | N/A                       | Correlation Coefficient | 0.999949 |
| 406.8                         | 406.5                                 | 1.0008                    |                         |          |
| 204.3                         | 202.3                                 | 1.0099                    |                         |          |
| 102.2                         | 99.6                                  | 1.0262                    | Slope                   | 0.999069 |
|                               |                                       |                           | Intercept               | 1.412778 |
|                               |                                       |                           |                         |          |
|                               |                                       |                           |                         |          |

### NO Calibration Curve



# PAZA NO<sub>x</sub> Calibration



# Calibration Report



Parameter 03

Air Monitoring Network PAZA

## Station Information

|                  |                |                      |               |
|------------------|----------------|----------------------|---------------|
| Calibration Date | April 17, 2014 | Previous Calibration | March 5, 2014 |
| Station Number   | 1              | Station Location     | Henry Pirker  |
| Reason:          | <b>Routine</b> | Install              | Removal       |
|                  |                | Other:               |               |

|                       |            |                     |            |
|-----------------------|------------|---------------------|------------|
| Start Time (MST)      | 8:12       | End Time (MST)      | 11:20      |
| 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     | 1.004245   | Calculated slope     | 0.998058 |
| Calculated intercept | 1.103744   | Calculated intercept | 1.246764 |

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

|                     | before       |       | after       |       |
|---------------------|--------------|-------|-------------|-------|
| Concentration range | 0 - 500      | ppb   | 0 - 500     | ppb   |
| offset              | -0.20        | ppb   | -0.10       | ppb   |
| slope               | 1.052        |       | 0.980       |       |
| Lamp temp           | 56.9         | mV    | 57          | mV    |
| Lamp Intensity A/B  | 103286/93268 | mV    | 89551/82809 | mV    |
| Pressure            | 674          | mm Hg | 678.5       | mm Hg |
| Flow A              | 0.721        | ccm   | 0.72        | ccm   |
| Flow B              | 0.724        | ccm   | 0.723       | 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                           | 308.6                               | 309.1                              | 0.9983                    |
| 5035                            | 0.2                           | 208.8                               | 206.8                              | 1.0097                    |
| 5035                            | 0.1                           | 108.5                               | 106.3                              | 1.0209                    |
|                                 |                               |                                     |                                    |                           |
| 5035                            | 0.0                           | 0.0                                 | -0.1                               | As found zero             |
| 5035                            | 0.3                           | 308.6                               | 312.5                              | As found span             |
| Average Correction Factor       |                               |                                     |                                    | 1.0096                    |

Calculated value of As Found Response: 315.0 ppm Percent Change of As Found: 2.1%

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | 1.0                | ppb | 1.2               | ppb |
| Auto span | 355.0              | ppb | 333.8             | ppb |

Notes: Due to the analyzer issues,calibration wasn't completed on the the 10th of April.  
 April 17th-tried to do the calibration again to replace the analyzer with the spare one.  
 Cal went normal with no issues. Made a decision to not do replacement for now  
 Span adjustment,run adjustment point

Calibration Performed By: Dmytro Dolotii,Grover Christiansen

## Calibration Summary

Parameter 03

Air Monitoring Network PAZA



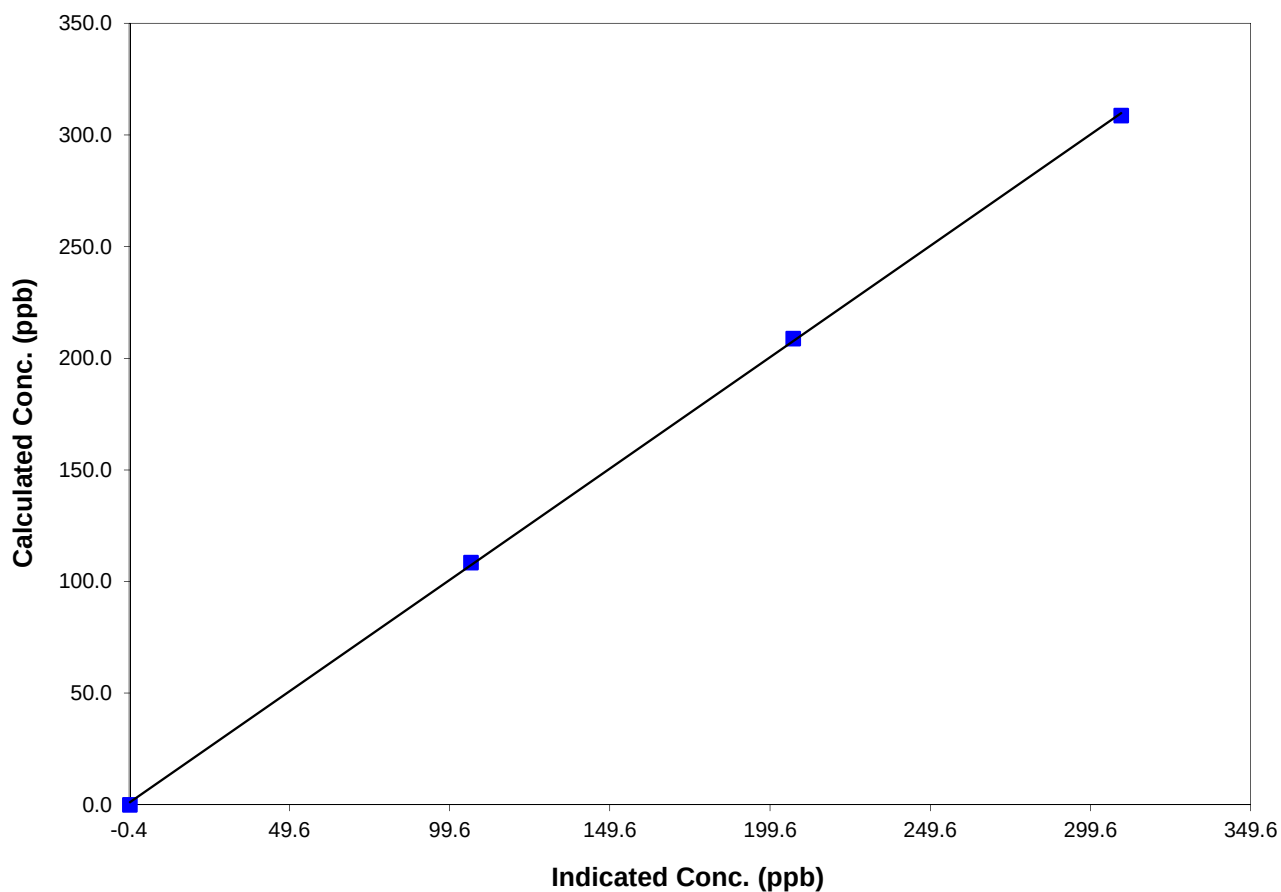
### Station Information

|                     |                |                      |               |
|---------------------|----------------|----------------------|---------------|
| Calibration Date    | April 17, 2014 | Previous Calibration | March 5, 2014 |
| Station Number      | 1              | Station Location     | Henry Pirker  |
| Start Time (MST)    | 8:12           | End Time (MST)       | 11:20         |
| Analyzer make/model | Teco 49C       | Analyzer serial #    | 607415761     |

### Calibration Data

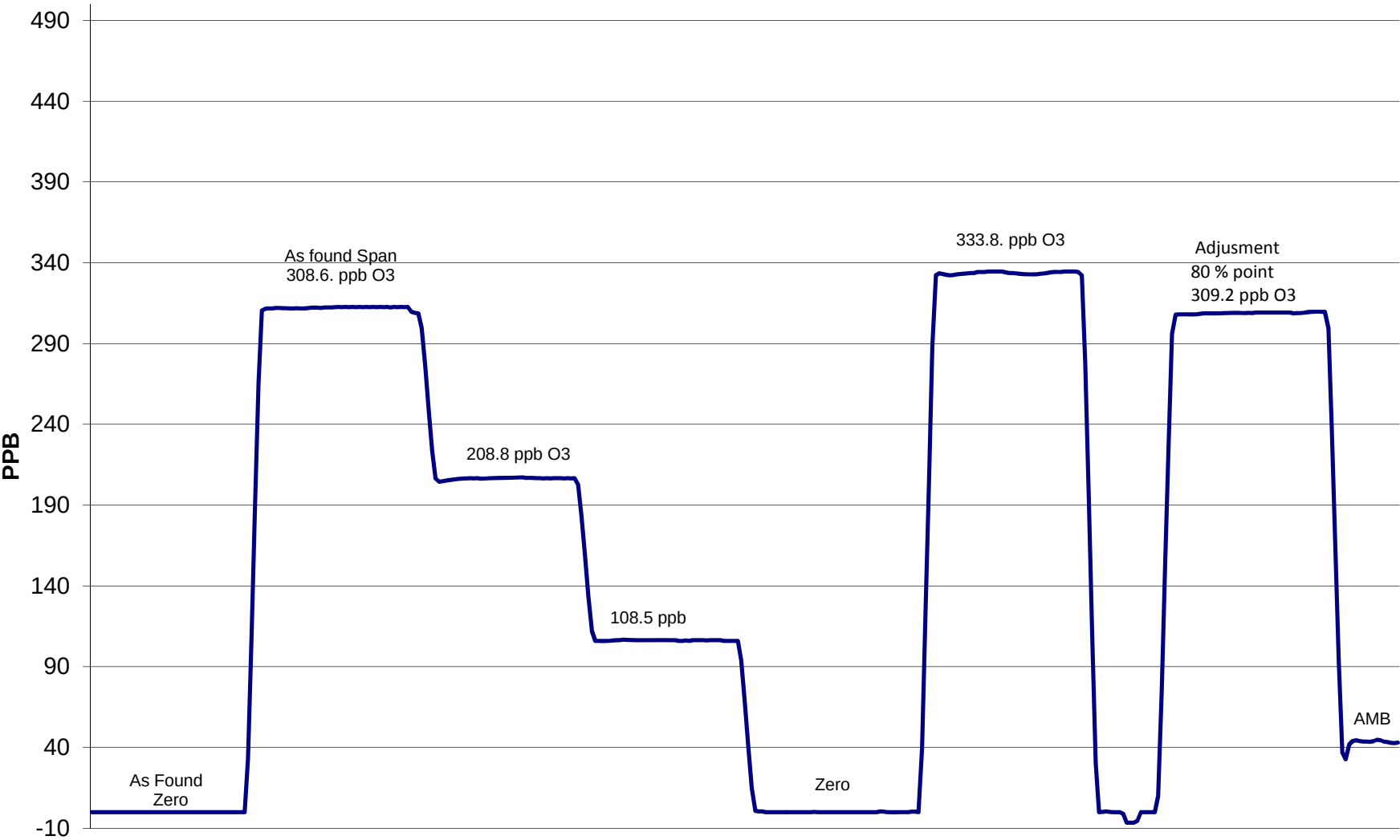
| Calculated concentration (ppm) (Cc) | Indicated concentration (ppm) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------------|------------------------------------|---------------------------|-------------------------|----------|
| 0.0                                 | -0.1                               | NA                        |                         |          |
| 308.6                               | 309.1                              | 0.9983                    | Correlation Coefficient | 0.999896 |
| 208.8                               | 206.8                              | 1.0097                    |                         |          |
| 108.5                               | 106.3                              | 1.0209                    | Slope                   | 0.998058 |
|                                     |                                    |                           |                         |          |
|                                     |                                    |                           | Intercept               | 1.246764 |
|                                     |                                    |                           |                         |          |

### O3 Calibration Curve



As Found  
Zero

O3 Calibration



April 17, 2014

# Calibration Report

Parameter CO

Air Monitoring Network PAZA



## Station Information

|                      |                                             |                                  |                                  |
|----------------------|---------------------------------------------|----------------------------------|----------------------------------|
| Calibration Date     | April 10, 2014                              | Previous Calibration             | March 17, 2014                   |
| Station Number       | 1                                           | Station Location                 | Henry Pirker                     |
| Reason:              | <input checked="" type="checkbox"/> Routine | <input type="checkbox"/> Install | <input type="checkbox"/> Removal |
|                      |                                             | <input type="checkbox"/> Other:  |                                  |
| Start Time (MST)     | 9:00                                        | End Time (MST)                   | 12:15                            |
| 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     | 1.012718                                    | Calculated slope                 | 0.999386                         |
| Calculated intercept | 0.133269                                    | Calculated intercept             | 0.151392                         |
| Analyzer make        | TEI Model 48C                               | Analyzer serial #                | 508011062                        |

|                     | before |       | after  |       |
|---------------------|--------|-------|--------|-------|
| Concentration range | 0 - 50 | ppm   | 0 - 50 | ppm   |
| CO span setting     | 0.660  |       | 0.861  |       |
| CO zero setting     | 1.005  |       | 1.014  |       |
| Sample pressure     | 672.9  | mm Hg | 671.9  | mm Hg |
| Sample Flow         | 1.111  | LPM   | 1.113  | 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                                | 0.02                               | N/A                       |
| 4995                            | 69.94                         | 40.02                               | 39.99                              | 1.0006                    |
| 4995                            | 34.96                         | 20.14                               | 19.87                              | 1.0136                    |
| 4995                            | 17.96                         | 10.38                               | 10.09                              | 1.0287                    |
|                                 |                               |                                     |                                    |                           |
|                                 |                               |                                     |                                    |                           |
| 4995                            | 0.00                          | 0.00                                | 0.21                               | As Found Zero             |
| 4995                            | 69.94                         | 40.02                               | 39.40                              | As Found Span             |
| Average Correction Factor       |                               |                                     |                                    | 1.0143                    |

Calculated value of As Found Response: 39.825 ppm Percent Change of As Found: 0.5%

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | 0.03               | ppm | 0.03              | ppm |
| Auto span | 19.81              | ppm | 20.07             | ppm |

Notes: Adjust zero from 0.159 to 0.001

Span adjustment

Calibration Performed By: Grover Christiansen,Dmytro Dolotii

## Calibration Summary

Parameter CO

Air Monitoring Network PAZA



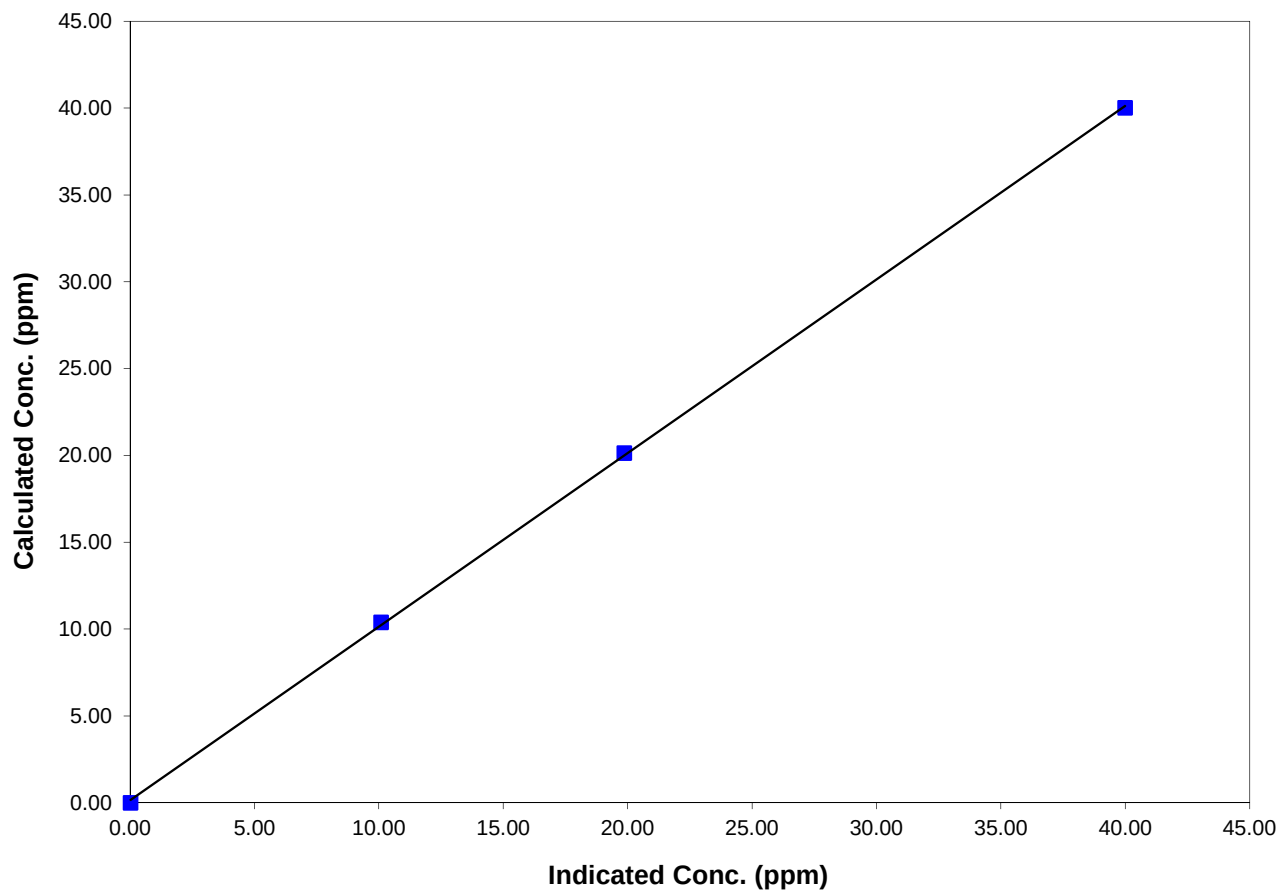
### Station Information

|                     |                |                      |                |
|---------------------|----------------|----------------------|----------------|
| Calibration Date    | April 10, 2014 | Previous Calibration | March 17, 2014 |
| Station Number      | 1              | Station Location     | Henry Pirker   |
| Start Time (MST)    | 9:00           | End Time (MST)       | 12:15          |
| Analyzer make/model | TEI Model 48C  | Analyzer serial #    | 508011062      |

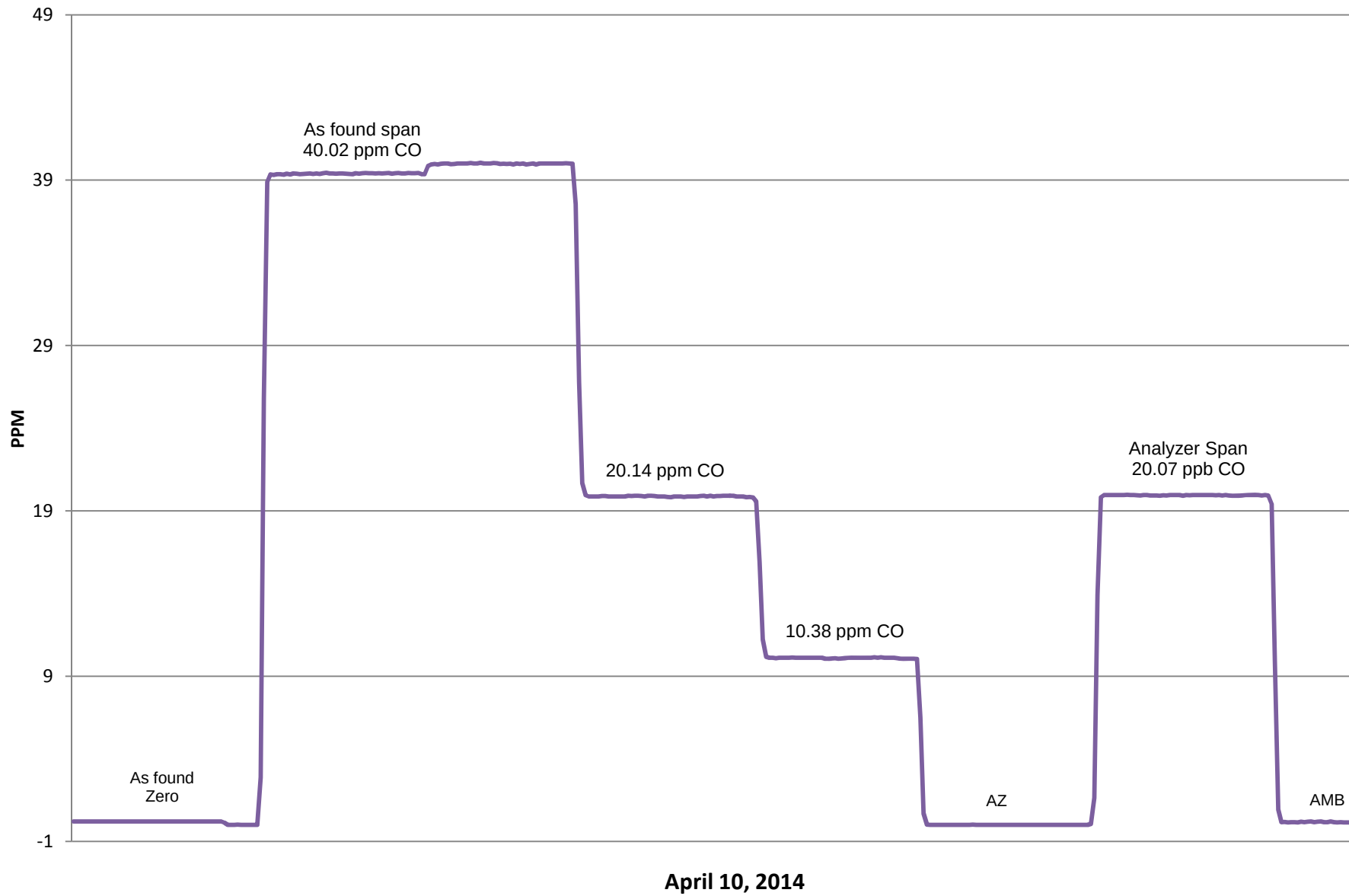
### Calibration Data

| Calculated concentration (ppm) (Cc) | Indicated concentration (ppm) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------------|------------------------------------|---------------------------|-------------------------|----------|
| 0.000                               | 0.023                              | N/A                       | Correlation Coefficient | 0.999910 |
| 40.017                              | 39.992                             | 1.0006                    |                         |          |
| 20.142                              | 19.871                             | 1.0136                    |                         |          |
| 10.383                              | 10.093                             | 1.0287                    | Slope                   | 0.999386 |
|                                     |                                    |                           | Intercept               | 0.151392 |
|                                     |                                    |                           |                         |          |

### CO Calibration Curve



## CO Calibration





# Calibration Report

Parameter CH4 / NMHC / THC

Air Monitoring Network PAZA



## Station Information

|                  |                                  |                                  |                                  |
|------------------|----------------------------------|----------------------------------|----------------------------------|
| Calibration Date | April 10, 2014                   | Previous Calibration             | March 17, 2014                   |
| Station Number   | 1                                | Station Location                 | Henry Pirker                     |
| Reason:          | <input type="checkbox"/> Routine | <input type="checkbox"/> Install | <input type="checkbox"/> Removal |
|                  |                                  |                                  | <input type="checkbox"/> Other:  |

|                     |                    |                     |             |
|---------------------|--------------------|---------------------|-------------|
| Start Time (MST)    | 7:15               | End Time (MST)      | 10:10       |
| Barometric Pressure | NA inches Hg       | Station Temperature | 20.0 Deg C  |
| Calibrator          | EnviroNics         | Serial Number       | 3016        |
| Cal Gas CH4 Conc    | 386 ppm CH4        | Cal Gas Expiry Date | 28/03/2014  |
| Cal Gas C3H8 Conc   | 207 569.25 ppm CH4 | Cal Gas Cylinder #  | LL34318     |
| DACS make           | CR3000             | DACS serial No.     | 5408        |
| DACS voltage range  | 0 - 5 volt         | DACS channel #      | SE 11,12,13 |

|               |         |                   |            |
|---------------|---------|-------------------|------------|
| Analyzer make | TEI 55I | Analyzer serial # | 1134650658 |
|---------------|---------|-------------------|------------|

|                     | before                       |     | after                        |                 |
|---------------------|------------------------------|-----|------------------------------|-----------------|
| Concentration range | 0-20 (CH4, NMHC); 0-40 (THC) | ppm | 0-20 (CH4, NMHC); 0-40 (THC) | ppm             |
| Air pressure        | 27.9                         | PSI | 27.8                         | PSI             |
| Fuel pressure       | 42.3                         | PSI | 42.1                         | PSI             |
| Carrier pressure    | 30.2                         | PSI | 30.3                         | PSI             |
| CH4 cal factor      | 5.68                         |     | 5.68                         | E <sup>-4</sup> |
| NMHC cal factor     | 1.64                         |     | 1.64                         | E <sup>-4</sup> |
| 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                               | 12.78                              | 1.0090                    |
| 1996                            | 40.96                         | 7.76                                | 7.71                               | 1.0071                    |
| 1996                            | 15.99                         | 3.07                                | 3.01                               | 1.0194                    |
|                                 |                               |                                     |                                    |                           |
|                                 |                               |                                     |                                    |                           |
| 1996                            | 0.00                          | 0.00                                | 0.02                               | As Found Zero             |
| 1996                            | 68.93                         | 12.89                               | 12.78                              | As Found Span             |
| Average Correction Factor       |                               |                                     |                                    | 1.0118                    |

Calculated value of As Found Response: 12.736 ppm Percent Change of As Found: 1.2%

|                      | Before   |                      | After     |
|----------------------|----------|----------------------|-----------|
| Calculated slope     | 0.996771 | Calculated slope     | 1.009007  |
| Calculated intercept | 0.020823 | Calculated intercept | -0.000554 |

## Final Zero/Span Data

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | 0.03               | ppm | 0.03              | ppm |
| Auto span | 9.11               | ppm | 8.91              | 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                               | 18.68                              | 1.0177                    |
| 1996                            | 40.96                         | 11.45                               | 11.40                              | 1.0040                    |
| 1996                            | 15.99                         | 4.52                                | 4.45                               | 1.0172                    |
|                                 |                               |                                     |                                    |                           |
|                                 |                               |                                     |                                    |                           |
| 1996                            | 0.00                          | 0.00                                | 0.02                               | As Found Zero             |
| 1996                            | 68.93                         | 19.00                               | 18.68                              | As Found Span             |
| Average Correction Factor       |                               |                                     |                                    | 1.0130                    |

Calculated value of As Found Response: 18.684 ppm      Percent Change of As Found: 1.7%

|                      | Before    |                      | After     |
|----------------------|-----------|----------------------|-----------|
| Calculated slope     | 1.002353  | Calculated slope     | 1.016453  |
| Calculated intercept | -0.020405 | Calculated intercept | -0.033644 |

#### Final Zero/Span Data

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | 0.02               | ppm | 0.02              | ppm |
| Auto span | 12.55              | ppm | 12.23             | 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                               | 31.43                              | 1.0149                    |
| 1996                            | 40.96                         | 19.21                               | 19.09                              | 1.0063                    |
| 1996                            | 15.99                         | 7.59                                | 7.45                               | 1.0196                    |
|                                 |                               |                                     |                                    |                           |
|                                 |                               |                                     |                                    |                           |
| 1996                            | 0.00                          | 0.00                                | 0.03                               | As Found Zero             |
| 1996                            | 68.93                         | 31.89                               | 31.43                              | As Found Span             |
| Average Correction Factor       |                               |                                     |                                    | 1.0136                    |

Calculated value of As Found Response: 31.427 ppm      Percent Change of As Found: 1.4%

|                      | Before   |                      | After     |
|----------------------|----------|----------------------|-----------|
| Calculated slope     | 1.000680 | Calculated slope     | 1.014004  |
| Calculated intercept | 0.006569 | Calculated intercept | -0.027186 |

#### Final Zero/Span Data

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | 0.02               | ppm | 0.02              | ppm |
| Auto span | 21.66              | ppm | 21.14             | ppm |

Notes: No adjustments made

Calibration Performed By: Grover Christiansen, Dmytro Dolotii

## Calibration Summary

Parameter CH4

Air Monitoring Network PAZA



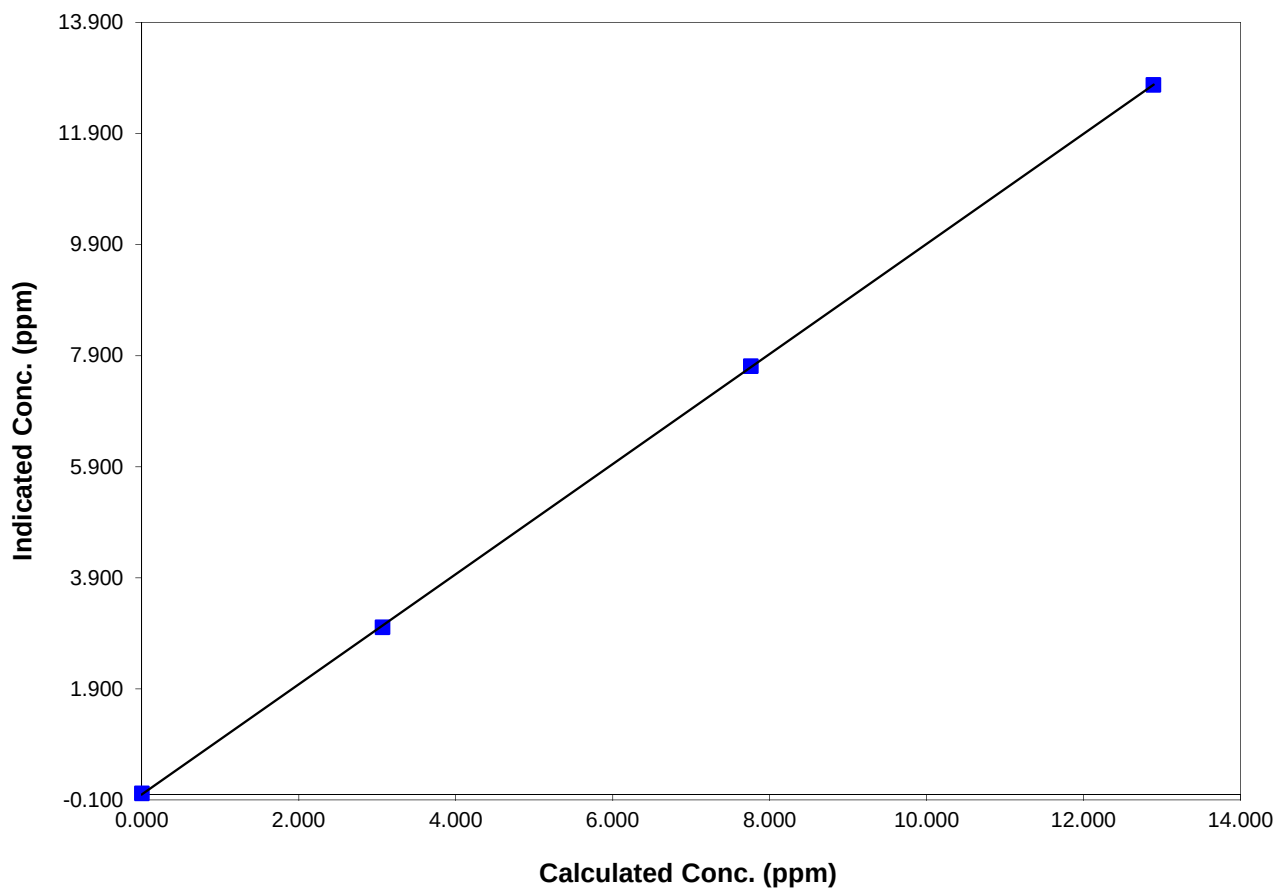
### Station Information

|                     |                |                      |                |
|---------------------|----------------|----------------------|----------------|
| Calibration Date    | April 10, 2014 | Previous Calibration | March 17, 2014 |
| Station Number      | 1              | Station Location     | Henry Pirker   |
| Start Time (MST)    | 7:15           | End Time (MST)       | 10:10          |
| 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 | 0.999984  |
| 12.891                              | 12.775                             | 1.0090                    |                         |           |
| 7.762                               | 7.707                              | 1.0071                    |                         |           |
| 3.068                               | 3.009                              | 1.0194                    | Slope                   | 1.009007  |
|                                     |                                    |                           | Intercept               | -0.000554 |

### CH4 Calibration Data



## Calibration Summary

Parameter NMHC

Air Monitoring Network PAZA



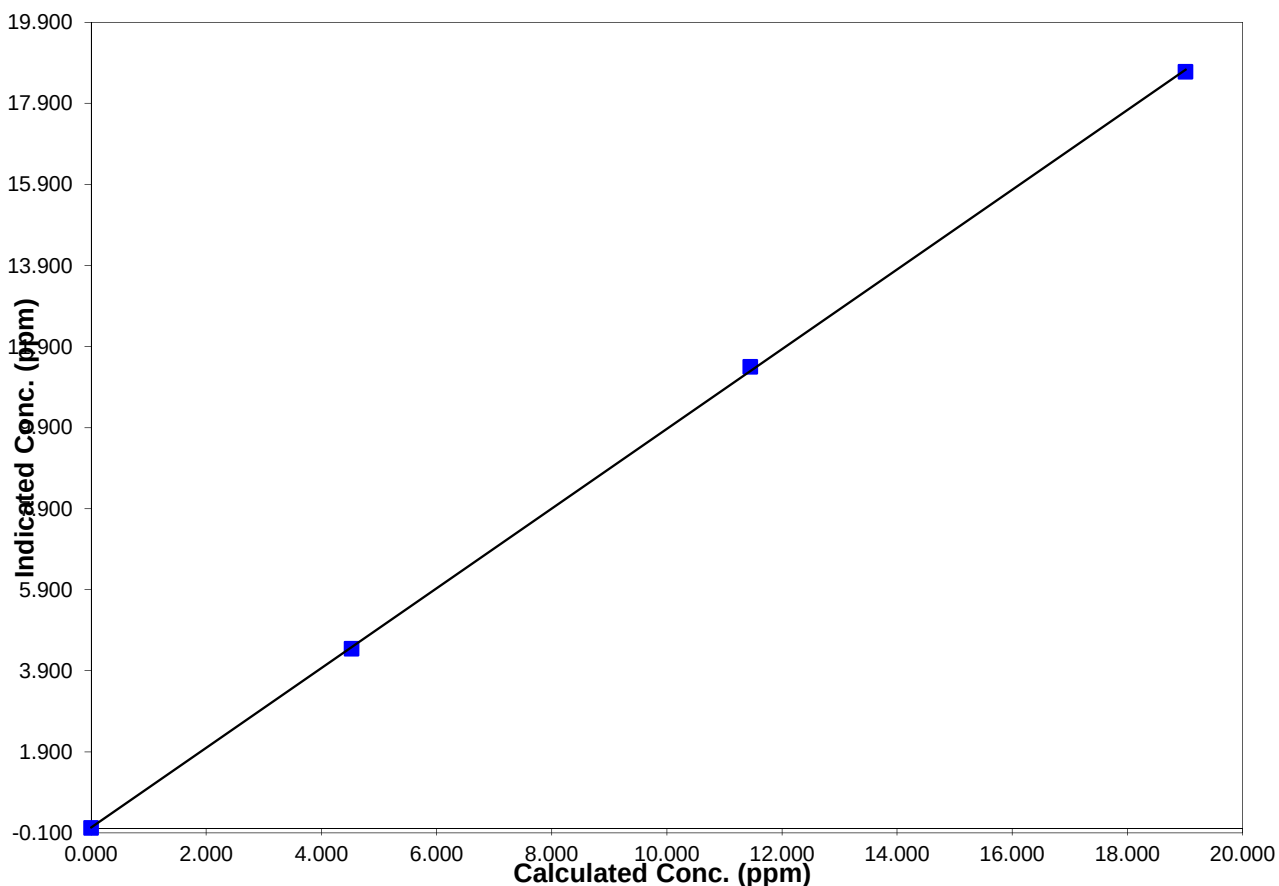
### Station Information

|                     |                |                      |                |
|---------------------|----------------|----------------------|----------------|
| Calibration Date    | April 10, 2014 | Previous Calibration | March 17, 2014 |
| Station Number      | 1              | Station Location     | Henry Pirker   |
| Start Time (MST)    | 7:15           | End Time (MST)       | 10:10          |
| 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 | 0.999920  |
| 19.010                              | 18.679                             | 1.0177                    |                         |           |
| 11.447                              | 11.401                             | 1.0040                    |                         |           |
| 4.524                               | 4.448                              | 1.0172                    | Slope                   | 1.016453  |
|                                     |                                    |                           | Intercept               | -0.033644 |

### NMHC Calibration Data



## Calibration Summary

Parameter THC

Air Monitoring Network PAZA



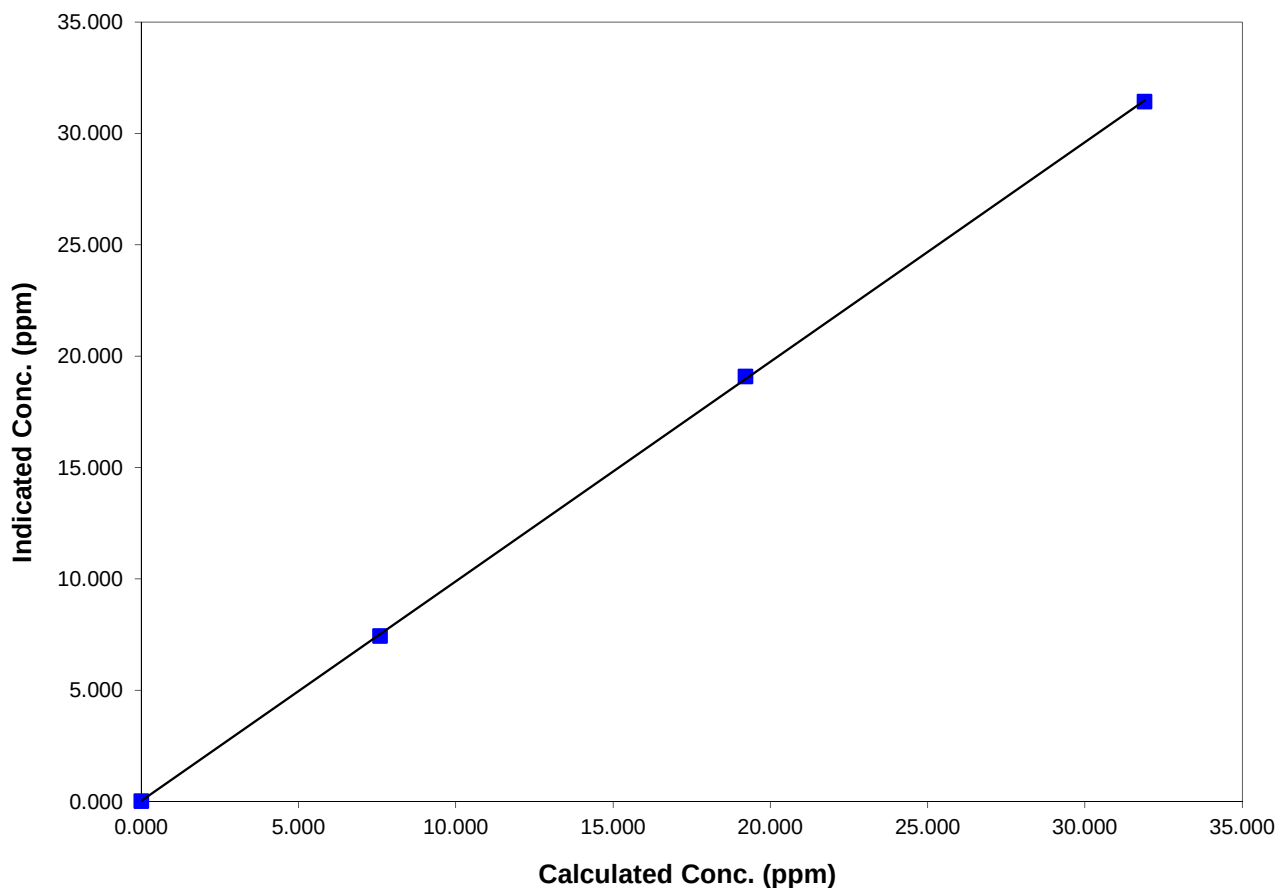
### Station Information

|                     |                |                      |                |
|---------------------|----------------|----------------------|----------------|
| Calibration Date    | April 10, 2014 | Previous Calibration | March 17, 2014 |
| Station Number      | 1              | Station Location     | Henry Pirker   |
| Start Time (MST)    | 7:15           | End Time (MST)       | 10:10          |
| Analyzer make/model | TEI 55I        | Analyzer serial #    | 1134650658     |

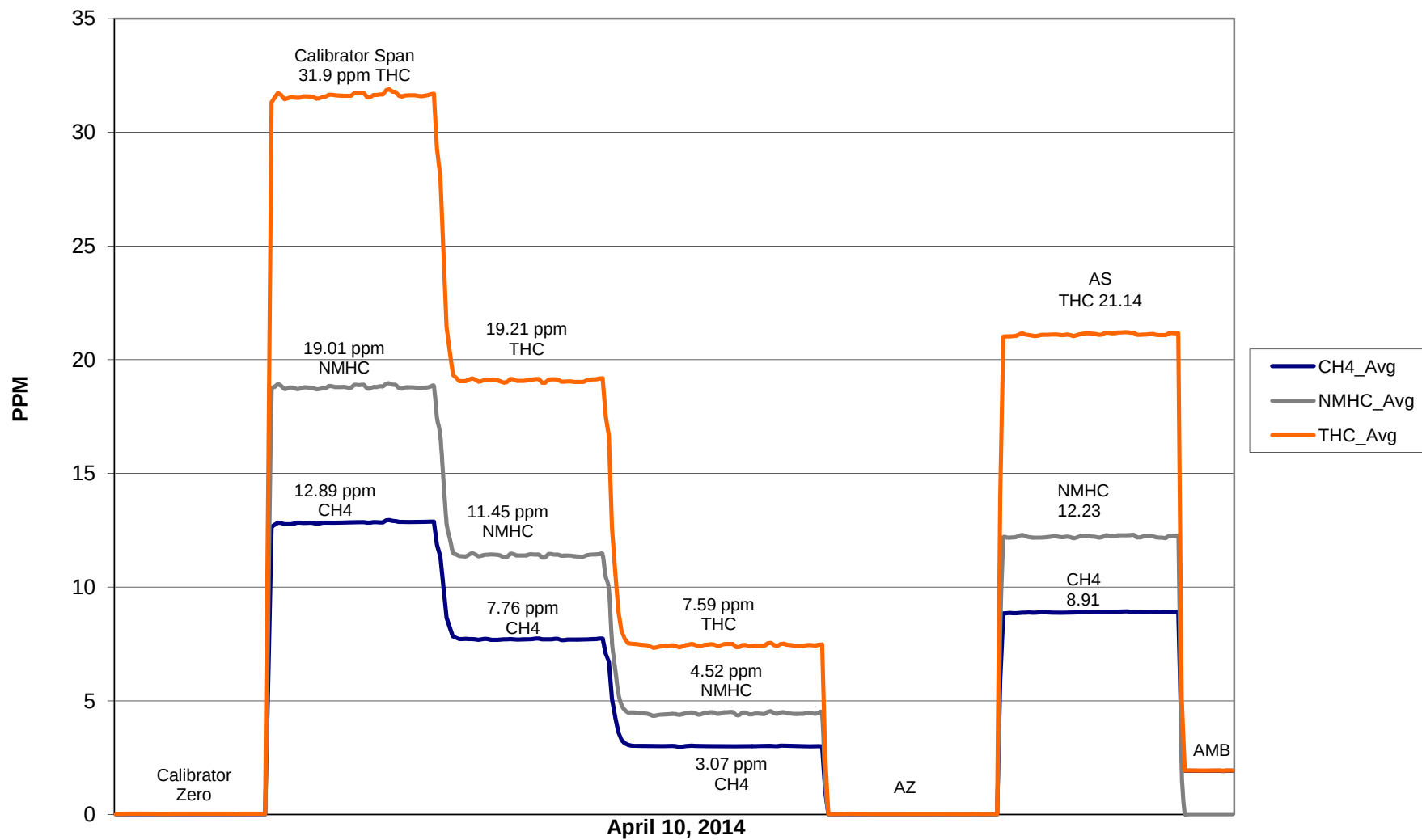
### Calibration Data

| Calculated concentration (ppm) (Cc) | Indicated concentration (ppm) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |           |
|-------------------------------------|------------------------------------|---------------------------|-------------------------|-----------|
| 0.000                               | 0.032                              | N/A                       | Correlation Coefficient | 0.999962  |
| 31.901                              | 31.432                             | 1.0149                    |                         |           |
| 19.209                              | 19.088                             | 1.0063                    |                         |           |
| 7.592                               | 7.446                              | 1.0196                    | Slope                   | 1.014004  |
|                                     |                                    |                           | Intercept               | -0.027186 |

### THC Calibration Data



# THC/CH<sub>4</sub>/NMHC Calibration



# Calibration Report

Parameter TR5

Air Monitoring Network PAZA



## Station Information

|                      |                                                        |                                                       |                                                                                                            |
|----------------------|--------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Calibration Date     | April 9, 2014                                          | Previous Calibration                                  | March 17, 2014                                                                                             |
| Station Number       | 1                                                      | Station Location                                      | Henry Pirker                                                                                               |
| Reason:              | <span style="background-color: yellow;">Routine</span> | <span style="border: 1px solid black;">Install</span> | <span style="border: 1px solid black;">Removal</span> <span style="border: 1px solid black;">Other:</span> |
| Start Time (MST)     | 14:05:00 PM                                            | End Time (MST)                                        | 17:25:00 PM                                                                                                |
| 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     | 1.020112                                               | Calculated slope                                      | 1.017520                                                                                                   |
| Calculated intercept | 0.256412                                               | Calculated intercept                                  | 0.469799                                                                                                   |
| Analyzer make        | TEI 45C                                                | Analyzer serial #                                     | 630718528                                                                                                  |

|                     | before  |       | after   |       |
|---------------------|---------|-------|---------|-------|
| Concentration range | 0 - 100 | ppb   | 0 - 100 | ppb   |
| Coefficient         | 0.988   |       | 0.988   |       |
| Background          | 17.6    |       | 17.7    |       |
| Pressure            | 658.7   | mm Hg | 655.4   | mm Hg |
| Flow                | 0.452   | ccm   | 0.449   | ccm   |
| Lamp Voltage        | 884     | v     | 884     | 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                                | -0.30                              | N/A                       |
| 4995                            | 39.93                         | 82.48                               | 80.69                              | 1.0222                    |
| 4995                            | 19.95                         | 41.37                               | 40.04                              | 1.0334                    |
| 8995                            | 8.95                          | 10.34                               | 9.61                               | 1.0762                    |
|                                 |                               |                                     |                                    |                           |
| 4995                            | 0.00                          | 0.00                                | -0.30                              | As Found Zero             |
| 4995                            | 39.93                         | 82.48                               | 80.69                              | As Found Span             |
| Average Correction Factor       |                               |                                     |                                    | 1.0439                    |

Calculated value of As Found Response: 82.9 ppb      Percent Change of As Found: -0.5%

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | -0.92              | ppb | 0.38              | ppb |
| Auto span | 33.06              | ppb | 40.61             | ppb |

Notes: No adjustments made

Calibration Performed By: Dmytro Dolotii

## Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



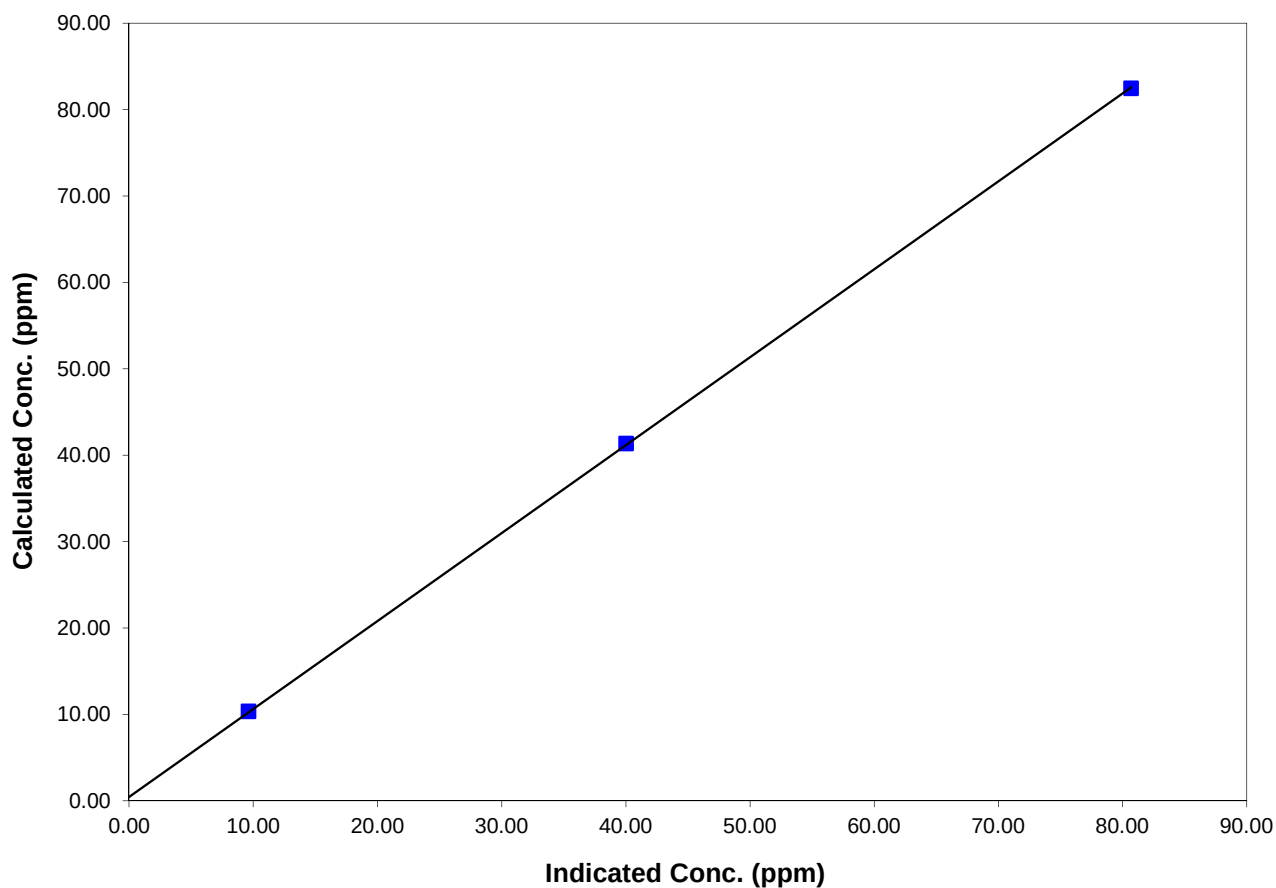
### Station Information

|                     |               |                      |                |
|---------------------|---------------|----------------------|----------------|
| Calibration Date    | April 9, 2014 | Previous Calibration | March 17, 2014 |
| Station Number      | 1             | Station Location     | Henry Pirker   |
| Start Time (MST)    | 14:05:00 PM   | End Time (MST)       | 17:25:00 PM    |
| Analyzer make/model | TEI 45C       | Analyzer serial #    | 630718528      |

### Calibration Data

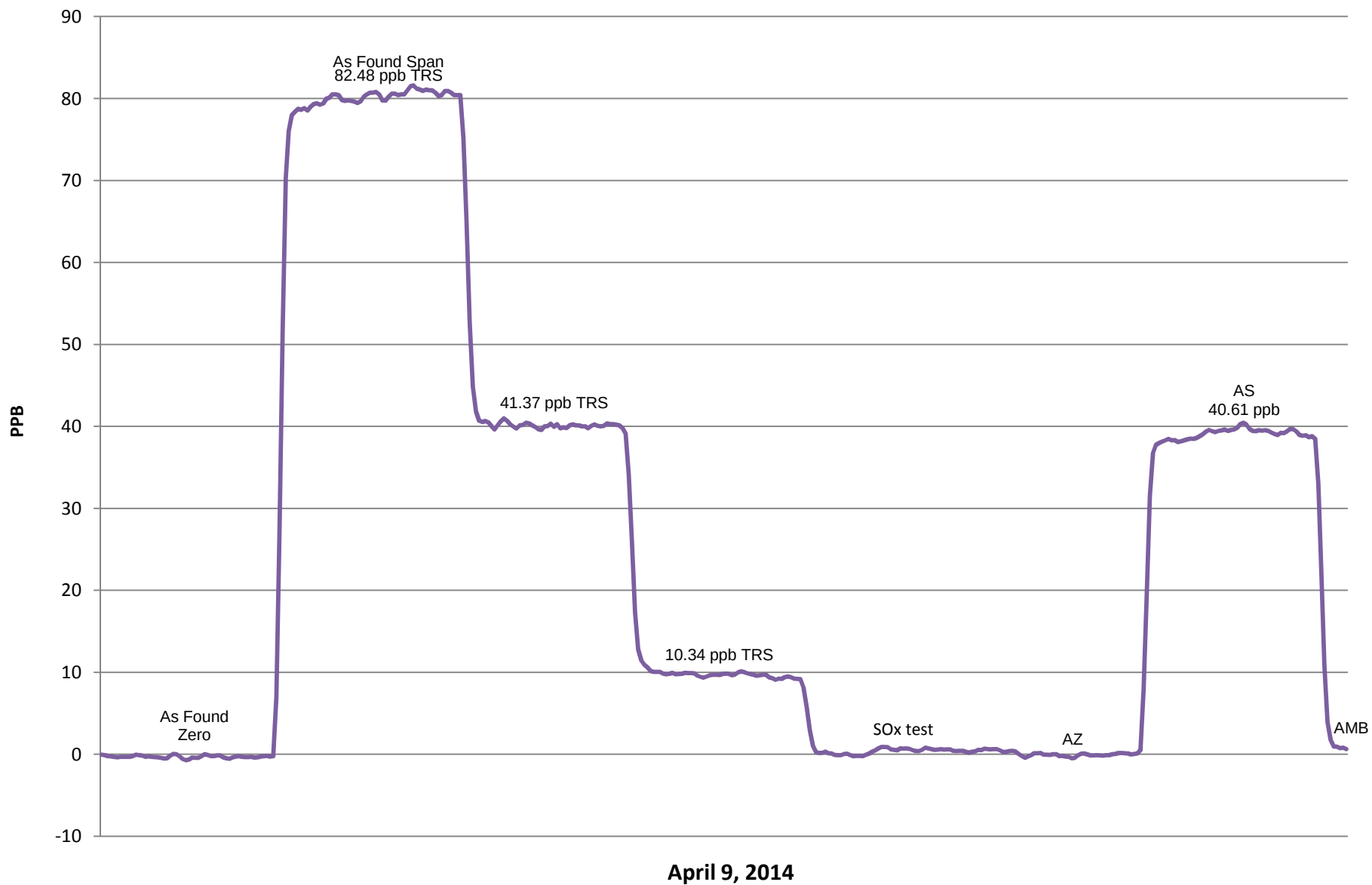
| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------------|------------------------------------|---------------------------|-------------------------|----------|
| 0.000                               | -0.299                             | N/A                       |                         |          |
| 82.478                              | 80.689                             | 1.0222                    | Correlation Coefficient | 0.999982 |
| 41.372                              | 40.035                             | 1.0334                    |                         |          |
| 10.338                              | 9.606                              | 1.0762                    | Slope                   | 1.017520 |
|                                     |                                    |                           |                         |          |
|                                     |                                    |                           | Intercept               | 0.469799 |
|                                     |                                    |                           |                         |          |

### TRS Calibration Curve





## TRS Calibration



# Calibration Report



Parameter SO<sub>2</sub>

Air Monitoring Network PAZA

## Station Information

|                       |                |                      |                |
|-----------------------|----------------|----------------------|----------------|
| Calibration Date      | April 01 2014  | Previous Calibration | March 06 2014  |
| Station Number        | 2              | Station Location     | Evergreen Park |
| Reason:               | <b>Routine</b> | Install              | Removal        |
|                       |                | Other:               |                |
| Start Time (MST)      | 10:50          | End Time (MST)       | 13:25:00 PM    |
| Barometric Pressure   | 0.924 ATM      | Station Temperature  | 20.0 Deg C     |
| Calibrator            | EnviroNics     | Serial Number        | 3016           |
| Cal Gas Concentration | 51.5 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      | 1.001442       | Calculated slope     | 1.003737       |
| Calculated intercept  | 0.509676       | Calculated intercept | 1.132895       |
| Analyzer make         | Teco 43i       | Analyzer serial #    | 701120008      |

|                     | before  |       | after   |       |
|---------------------|---------|-------|---------|-------|
| Concentration range | 0 - 500 | ppb   | 0 - 500 | ppb   |
| Background          | 11.6    |       | 11.7    |       |
| coefficient         | 1.22    |       | 1.22    |       |
| Lamp Voltage        | 830     | volts | 834     | volts |
| Chamber Temp        | 45.2    | Deg C | 45      | Deg C |
| Perm Gas Temp       | 45      | Deg C | 45      | Deg C |
| Pressure            | 668     | mm Hg | 666.8   | mm Hg |
| Sample Flow         | 0.451   | ccm   | 0.449   | ccm   |
| Lamp Intensity      | 89      | %     | 89      | %     |

| Dilution air flow rate (cc/min) | Corrected gas flow rate (cc/min) | Calculated concentration (ppb) (Cc) | Indicated concentration (ppm) (Ic) | Correction factor (Cc/Ic) |
|---------------------------------|----------------------------------|-------------------------------------|------------------------------------|---------------------------|
| 4995                            | 0.0                              | 0.00                                | 0.4                                | N/A                       |
| 4995                            | 39.93                            | 408.4                               | 406.5                              | 1.0047                    |
| 4995                            | 19.97                            | 205.1                               | 202.5                              | 1.0126                    |
| 4995                            | 9.97                             | 102.6                               | 99.5                               | 1.0315                    |
|                                 |                                  |                                     |                                    |                           |
| 4995                            | 0.0                              | 0.0                                 | 0.4                                | As Found Zero             |
| 4995                            | 39.93                            | 408.4                               | 406.5                              | As Found Span             |
| Average Correction Factor       |                                  |                                     |                                    | 1.0163                    |

Calculated value of As Found Response: 407.168 ppm Percent Change of As Found: 0.3%

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | 1.8                | ppm | 0.5               | ppm |
| Auto span | 290.1              | ppm | 277.9             | ppm |

Notes: No adjustments

Calibration Performed By: Grover Christiansen,Dmytro Dolotii

## Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



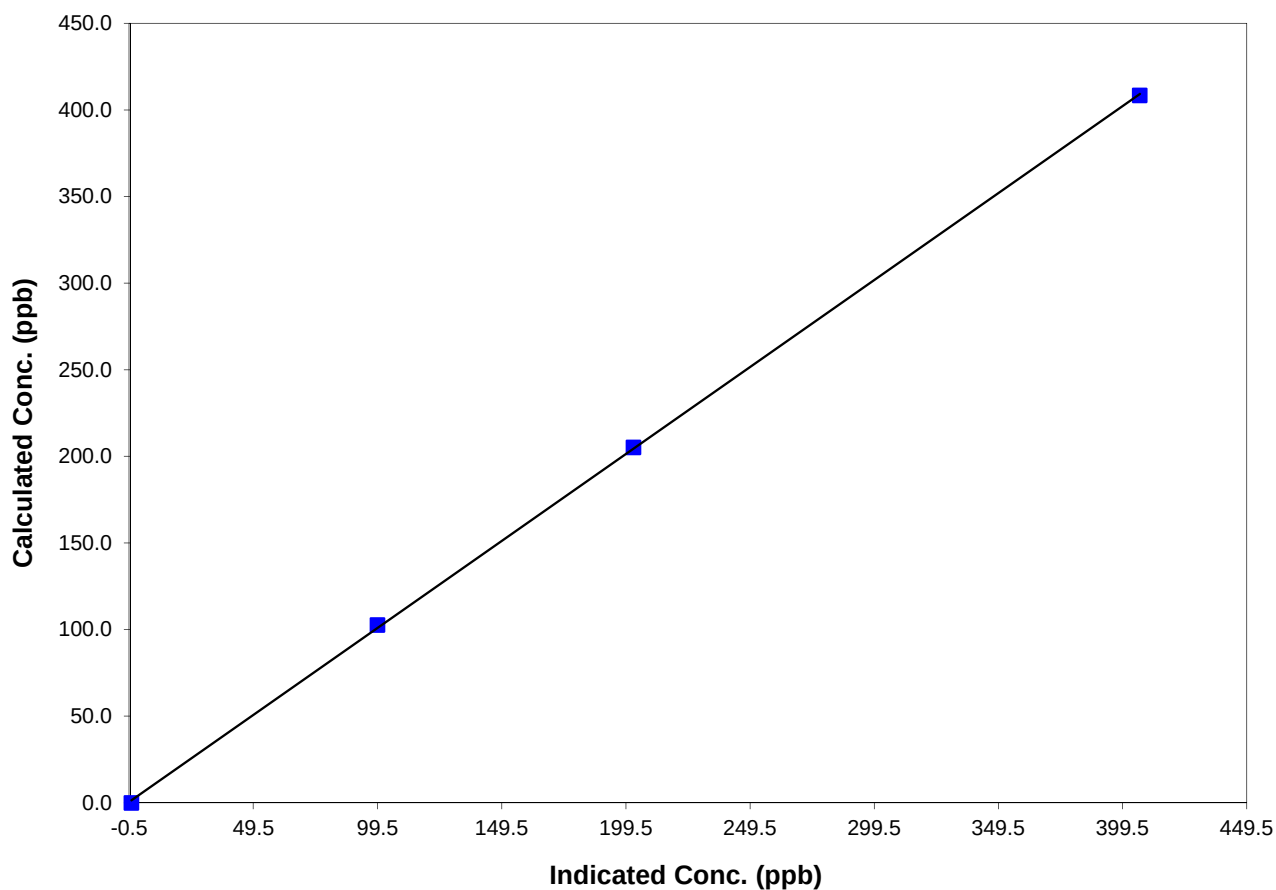
### Station Information

|                     |               |                      |                |
|---------------------|---------------|----------------------|----------------|
| Calibration Date    | April 01 2014 | Previous Calibration | March 06 2014  |
| Station Number      | 2             | Station Location     | Evergreen Park |
| Start Time (MST)    | 10:50         | End Time (MST)       | 13:25:00 PM    |
| Analyzer make/model | Teco 43i      | Analyzer serial #    | 701120008      |

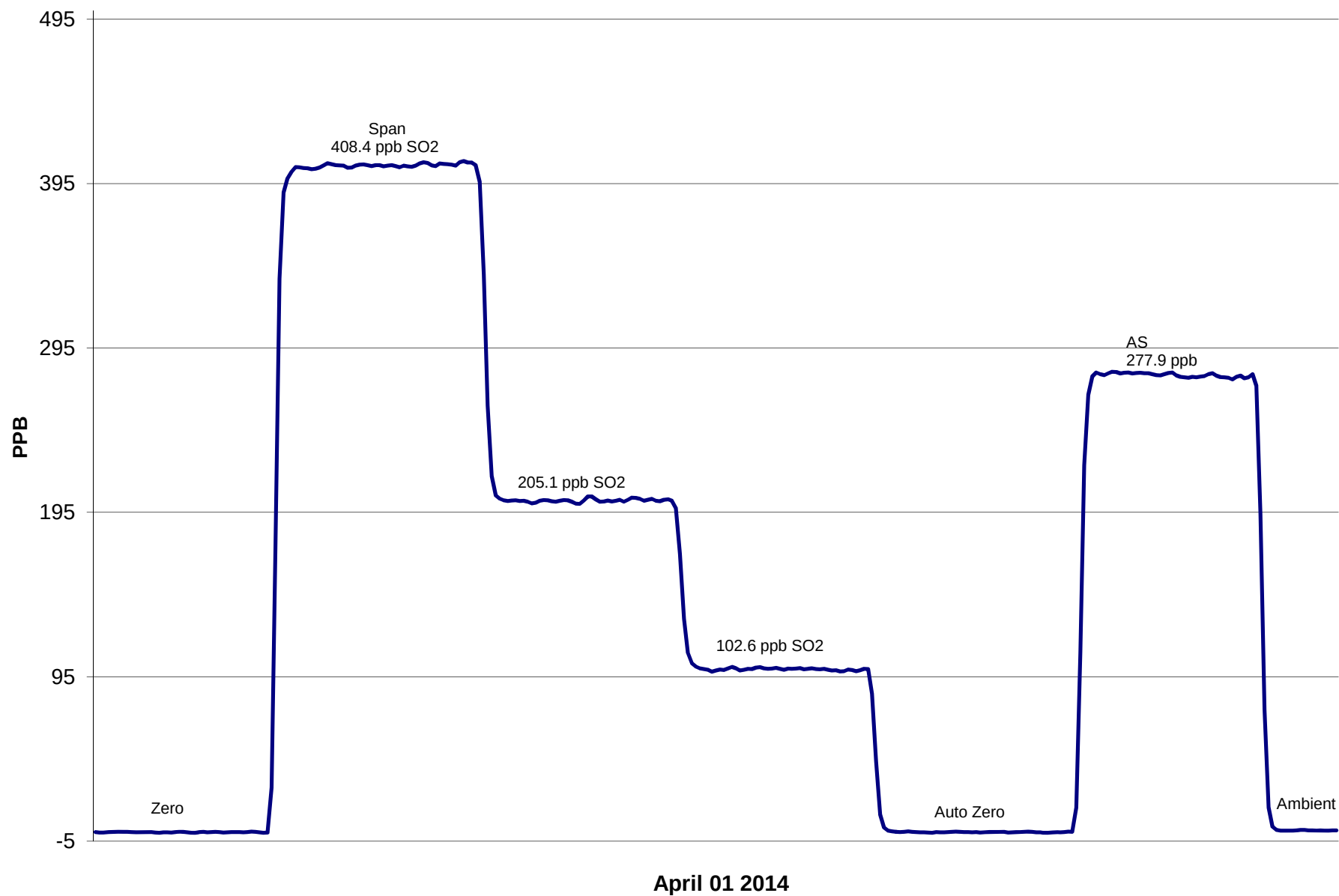
### Calibration Data

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------------|------------------------------------|---------------------------|-------------------------|----------|
| 0.0                                 | 0.4                                | N/A                       | Correlation Coefficient | 0.999934 |
| 408.4                               | 406.5                              | 1.0047                    |                         |          |
| 205.1                               | 202.5                              | 1.0126                    |                         |          |
| 102.6                               | 99.5                               | 1.0315                    | Slope                   | 1.003737 |
|                                     |                                    |                           |                         |          |
|                                     |                                    |                           | Intercept               | 1.132895 |
|                                     |                                    |                           |                         |          |

### SO2 Calibration Curve



## SO2 Calibration



# Calibration Report



Parameter TR5

Air Monitoring Network PAZA

## Station Information

|                      |                |                      |                |
|----------------------|----------------|----------------------|----------------|
| Calibration Date     | April 01 2014  | Previous Calibration | March 06 2014  |
| Station Number       | 2              | Station Location     | Evergreen Park |
| Reason:              | <b>Routine</b> | Install              | Removal        |
|                      |                |                      | Other:         |
| Start Time (MST)     | 8:32           | End Time (MST)       | 12:29          |
| 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     | 1.032504       | Calculated slope     | 1.008260       |
| Calculated intercept | -0.656430      | Calculated intercept | 0.015043       |

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

|                     | before  |       | after   |       |
|---------------------|---------|-------|---------|-------|
| Concentration range | 0 - 100 | ppb   | 0 - 100 | ppb   |
| Background          | 39      | ppb   | 39.2    | ppb   |
| coefficient         | 1.043   |       | 1.043   |       |
| Lamp Voltage        | 1044    | volts | 1045    | volts |
| Chamber Temp        | 44      | Deg C | 44.5    | Deg C |
| Perm Gas Temp       | 45      | Deg C | 45      | Deg C |
| Pressure            | 640.4   | mm Hg | 636.4   | mm Hg |
| Sample Flow         | 0.626   | ccm   | 0.645   | ccm   |
| Lamp Intensity      | 31,486  | mv    | 31,325  | 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                                | 0.1                                | N/A                       |
| 4995                            | 39.93                            | 82.48                               | 81.8                               | 1.0086                    |
| 4995                            | 19.97                            | 41.41                               | 41.1                               | 1.0070                    |
| 8995                            | 8.97                             | 10.36                               | 10.1                               | 1.0293                    |
| 4995                            | 9.97                             | 102.79                              | 0.7                                | Sox Test                  |
| 4995                            | 0.00                             | 0.00                                | 0.1                                | As Found Zero             |
| 4995                            | 39.93                            | 82.48                               | 81.8                               | As Found Span             |
| Average Correction Factor       |                                  |                                     |                                    | 1.0150                    |

Calculated value of As Found Response: 83.65 ppm Percent Change of As Found: **-1.4%**

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | -0.2               | ppm | 0.3               | ppm |
| Auto span | 82.2               | ppm | 73.3              | ppm |

Notes: No adjustments been made  
Sox scrubber check was performed

Calibration Performed By: Grover Christiansen,Dmytro Dolotii

## Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



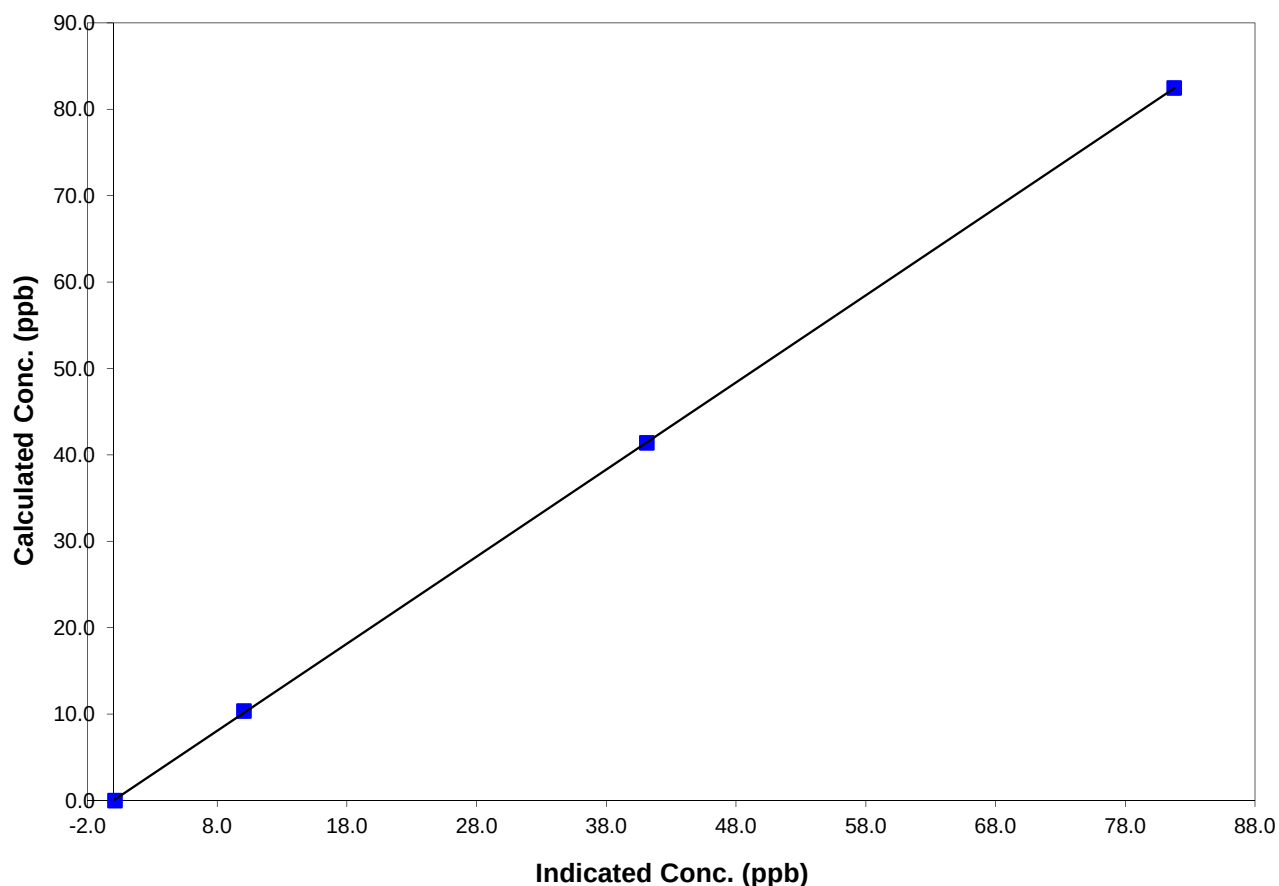
### Station Information

|                     |               |                      |                |
|---------------------|---------------|----------------------|----------------|
| Calibration Date    | April 01 2014 | Previous Calibration | March 06 2014  |
| Station Number      | 2             | Station Location     | Evergreen Park |
| Start Time (MST)    | 8:32          | End Time (MST)       | 12:29          |
| Analyzer make/model | TEI Model 43C | Analyzer serial #    | 31990000000491 |

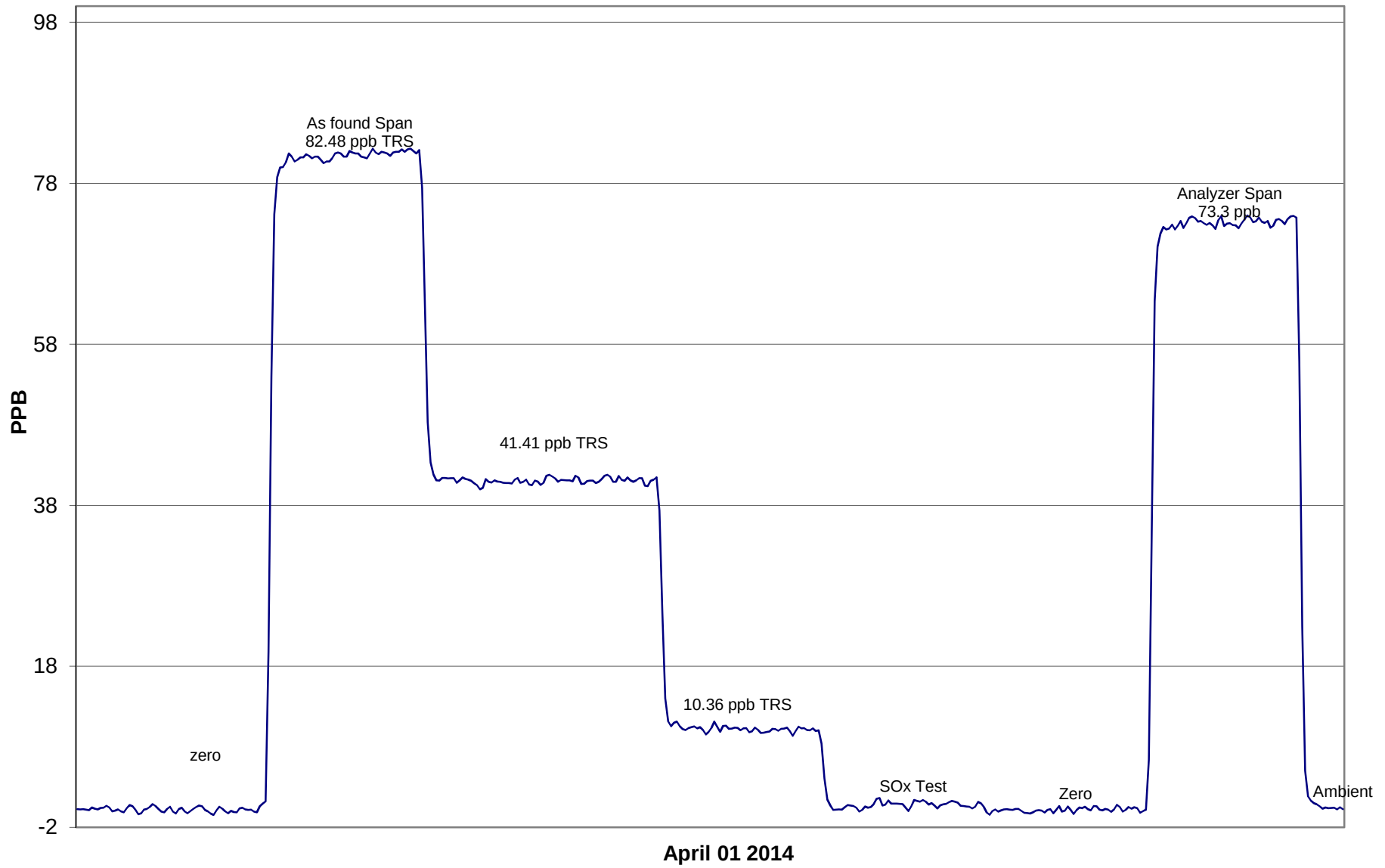
### Calibration Data

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------------|------------------------------------|---------------------------|-------------------------|----------|
| 0.0                                 | 0.1                                | N/A                       | Correlation Coefficient | 0.999985 |
| 82.5                                | 81.8                               | 1.0086                    |                         |          |
| 41.4                                | 41.1                               | 1.0070                    |                         |          |
| 10.4                                | 10.1                               | 1.0293                    | Slope                   | 1.008260 |
|                                     |                                    |                           | Intercept               | 0.015043 |
|                                     |                                    |                           |                         |          |

### TRS Calibration Curve



## TRS Calibration



# Calibration Report



Parameter SO<sub>2</sub>

Air Monitoring Network PAZA

## Station Information

|                       |                                             |                                  |                                  |
|-----------------------|---------------------------------------------|----------------------------------|----------------------------------|
| Calibration Date      | April 2, 2014                               | Previous Calibration             | March 13, 2014                   |
| Station Number        | 3                                           | Station Location                 | Smokey Heights                   |
| Reason:               | <input checked="" type="checkbox"/> Routine | <input type="checkbox"/> Install | <input type="checkbox"/> Removal |
|                       |                                             | <input type="checkbox"/> Other:  |                                  |
| Start Time (MST)      | 11:27                                       | End Time (MST)                   | 14:45:00 PM                      |
| Barometric Pressure   | 0.935 ATM                                   | Station Temperature              | 20.0 Deg C                       |
| Calibrator            | EnviroNics                                  | Serial Number                    | 3016                             |
| Cal Gas Concentration | 51.5 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      | 1.013478                                    | Calculated slope                 | 0.996397                         |
| Calculated intercept  | 1.433417                                    | Calculated intercept             | 1.060784                         |
| Analyzer make         | Teco 43i                                    | Analyzer serial #                | 701120009                        |

|                     | before  |       | after   |       |
|---------------------|---------|-------|---------|-------|
| Concentration range | 0 - 500 | ppb   | 0 - 500 | ppb   |
| Background          | 11.2    |       | 11.2    |       |
| coefficient         | 0.959   |       | 0.975   |       |
| Lamp Voltage        | 930     | volts | 930     | volts |
| Chamber Temp        | 45.1    | Deg C | 45.2    | Deg C |
| Perm Gas Temp       | 45      | Deg C | 45      | Deg C |
| Pressure            | 667.5   | mm Hg | 668.4   | mm Hg |
| Sample Flow         | 0.446   | 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                                | 0.7                                | N/A                       |
| 4995                            | 39.93                            | 408.43                              | 409.7                              | 0.9970                    |
| 4995                            | 19.97                            | 205.08                              | 203.9                              | 1.0056                    |
| 4995                            | 9.97                             | 102.59                              | 100.2                              | 1.0244                    |
|                                 |                                  |                                     |                                    |                           |
| 4995                            | 0.0                              | 0.00                                | 0.7                                | As Found Zero             |
| 4995                            | 39.93                            | 408.43                              | 402.2                              | As Found Span             |
| Average Correction Factor       |                                  |                                     |                                    | 1.0090                    |

Calculated value of As Found Response: 408.382 ppm Percent Change of As Found: 0.0%

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | 1.6                | ppb | 0.8               | ppb |
| Auto span | 248.2              | ppb | 254.1             | ppb |

Notes: Span adjustment made

Calibration Performed By: Dmytro Dolotii



## Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



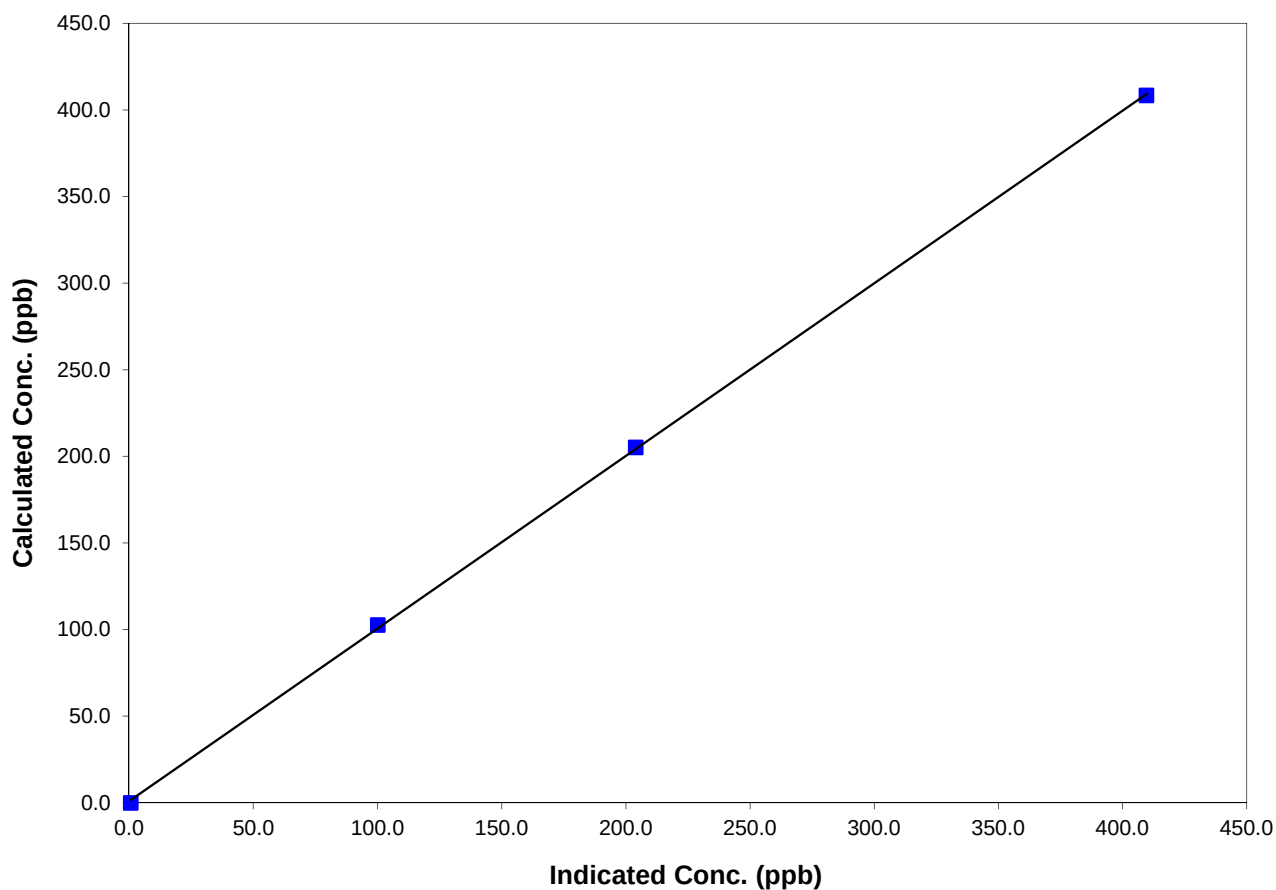
### Station Information

|                     |               |                      |                |
|---------------------|---------------|----------------------|----------------|
| Calibration Date    | April 2, 2014 | Previous Calibration | March 13, 2014 |
| Station Number      | 3             | Station Location     | Smokey Heights |
| Start Time (MST)    | 11:27         | End Time (MST)       | 14:45:00 PM    |
| Analyzer make/model | Teco 43i      | Analyzer serial #    | 701120009      |

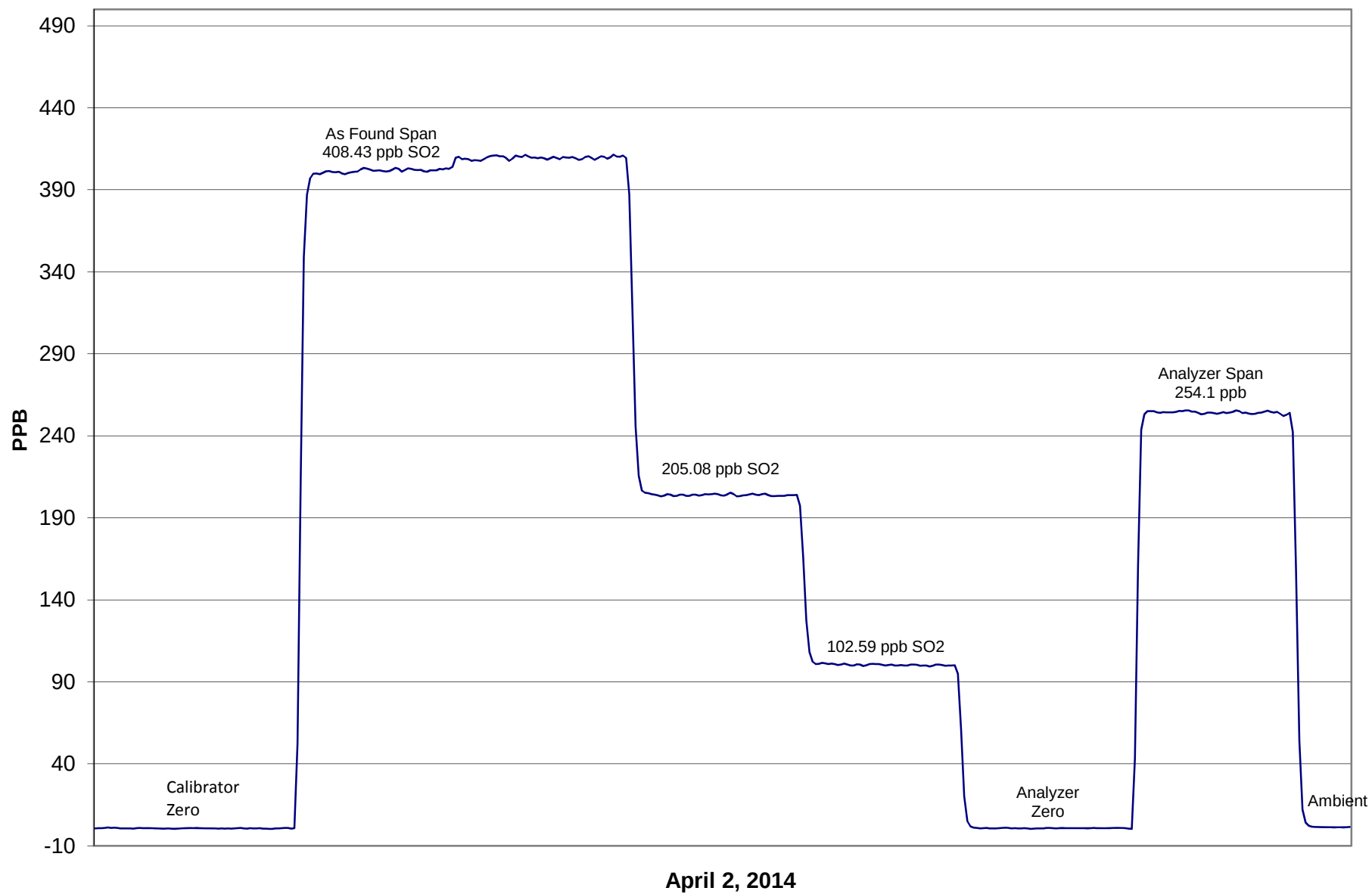
### Calibration Data

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------------|------------------------------------|---------------------------|-------------------------|----------|
| 0.0                                 | 0.7                                | N/A                       | Correlation Coefficient | 0.999919 |
| 408.4                               | 409.7                              | 0.9970                    |                         |          |
| 205.1                               | 203.9                              | 1.0056                    |                         |          |
| 102.6                               | 100.2                              | 1.0244                    | Slope                   | 0.996397 |
|                                     |                                    |                           | Intercept               | 1.060784 |
|                                     |                                    |                           |                         |          |

### SO2 Calibration Curve



## Smokey Heights SO<sub>2</sub> Calibration



# Calibration Report



Parameter TRS

Air Monitoring Network PAZA

## Station Information

|                      |                |                      |                |
|----------------------|----------------|----------------------|----------------|
| Calibration Date     | April 2, 2014  | Previous Calibration | March 13, 2014 |
| Station Number       | 3              | Station Location     | Smokey Heights |
| Reason:              | <b>Routine</b> | Install              | Removal        |
|                      |                |                      | Other:         |
| Start Time (MST)     | 9:10           | End Time (MST)       | 13:40:00 PM    |
| Barometric Pressure  | 0.935 ATM      | Station Temperature  | 20.0 Deg C     |
| Calibrator           | Envionics      | Serial Number        | 3016           |
| 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              |
|                      | Before         |                      | After          |
| Calculated slope     | 1.011887       | Calculated slope     | 0.985833       |
| Calculated intercept | 0.198558       | Calculated intercept | 0.024062       |

Analyzer make TEI Model 43C Analyzer serial # 0436610005

|                     | before |       | after  |       |
|---------------------|--------|-------|--------|-------|
| Concentration range | 100    | ppb   | 100    | ppb   |
| Background          | 18.4   | ppb   | 18.6   | ppb   |
| coefficient         | 0.960  |       | 0.988  |       |
| Lamp Voltage        | 836    | volts | 836    | volts |
| Chamber Temp        | 43.9   | Deg C | 44     | Deg C |
| Perm Gas Temp       | 45     | Deg C | 45     | Deg C |
| Pressure            | 690.4  | mm Hg | 605.2  | mm Hg |
| Sample Flow         | 0.632  | lpm   | 0.642  | lpm   |
| Lamp Intensity      | 35,052 | mv    | 35,026 | 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                            | 39.93                            | 82.48                               | 83.8                               | 0.9842                    |
| 4995                            | 19.97                            | 41.41                               | 41.7                               | 0.9938                    |
| 8995                            | 8.97                             | 10.36                               | 10.4                               | 0.9958                    |
| 4995                            | 9.97                             | 102                                 | 1.4                                | Sox test                  |
| 4995                            | 0.0                              | 0.00                                | 0.2                                | As Found Zero             |
| 4995                            | 39.93                            | 82.48                               | 80.9                               | As Found Span             |
| Average Correction Factor       |                                  |                                     |                                    | 0.9913                    |

Calculated value of As Found Response: 81.83 ppm Percent Change of As Found: 0.8%

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | 0.5                | ppm | 0.5               | ppm |
| Auto span | 29.5               | ppm | 33.2              | ppm |

Notes: Slight span adjustment made

Calibration Performed By: Dmytro Dolotii, Grover Christiansen

## Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



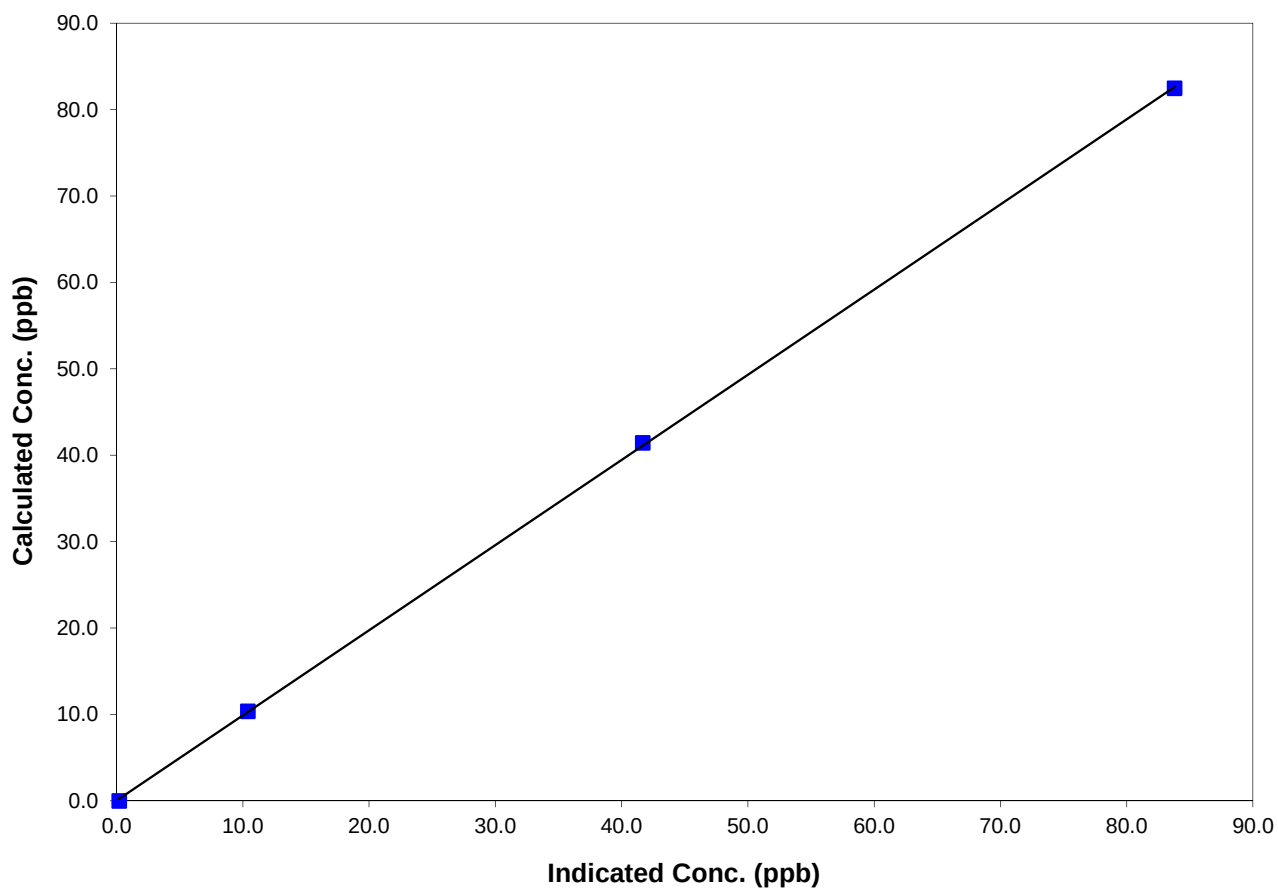
### Station Information

|                     |               |                      |                |
|---------------------|---------------|----------------------|----------------|
| Calibration Date    | April 2, 2014 | Previous Calibration | March 13, 2014 |
| Station Number      | 3             | Station Location     | Smokey Heights |
| Start Time (MST)    | 9:10          | End Time (MST)       | 13:40:00 PM    |
| Analyzer make/model | TEI Model 43C | Analyzer serial #    | 0436610005     |

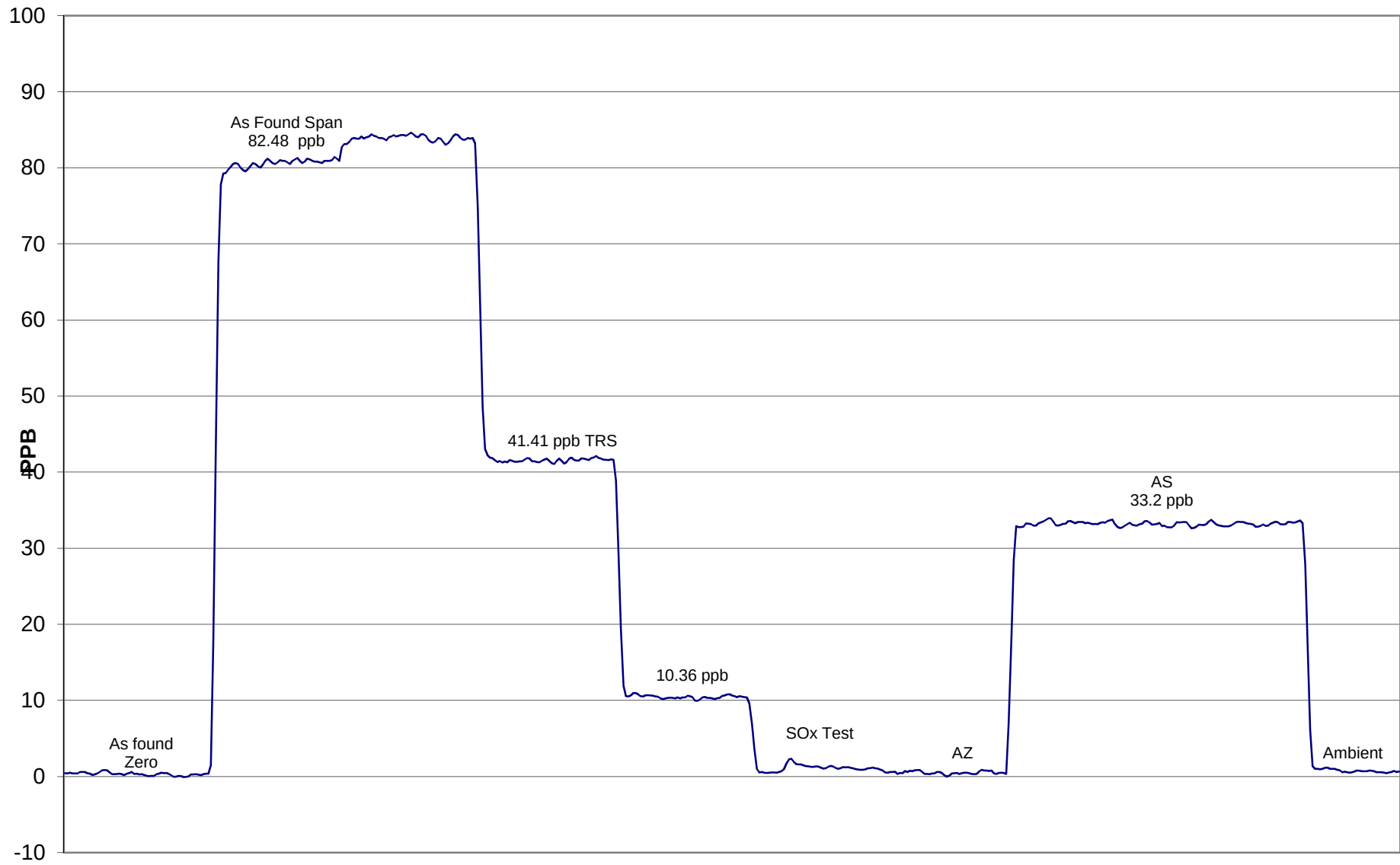
### Calibration Data

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------------|------------------------------------|---------------------------|-------------------------|----------|
| 0.0                                 | 0.2                                | N/A                       | Correlation Coefficient | 0.999957 |
| 82.5                                | 83.8                               | 0.9842                    |                         |          |
| 41.4                                | 41.7                               | 0.9938                    |                         |          |
| 10.4                                | 10.4                               | 0.9958                    | Slope                   | 0.985833 |
|                                     |                                    |                           | Intercept               | 0.024062 |
|                                     |                                    |                           |                         |          |

### TRS Calibration Curve



## Smokey Heights TRS Calibration



April 2, 2014

# Calibration Report

Parameter SO2  
Air Monitoring Network PAZA



## Station Information

|                       |                   |                      |                |
|-----------------------|-------------------|----------------------|----------------|
| Calibration Date      | April 8, 2014     | Previous Calibration | March 12, 2014 |
| Station Number        | 4                 | Station Location     | Beaverlodge    |
| Reason:               | <b>Routine</b>    | Install              | Removal        |
| Start Time (MST)      | 14:40:00 PM       | End Time (MST)       | 17:30:00 PM    |
| Barometric Pressure   | 0.908 atm         | Station Temperature  | 20.0 Deg C     |
| Calibrator            | EnviroNics        | Serial Number        | 3016           |
| Cal Gas Concentration | 10.8 ppm          | Cal Gas Expiry Date  | 28/09/2012     |
| Gas Cert Reference    | FF14871           |                      |                |
| DACS make             | CR3000            | DACS serial No.      | 5237           |
| DACS voltage range    | 0 - 5 volt        | DACS channel #       | 5              |
|                       | Before            |                      | After          |
| DACS Scale High       | 100               | DACS slope           | 100            |
| DACS Scale Low        | 0                 | DACS intercept       | 0              |
| Calculated slope      | 1.017408          | Calculated slope     | 1.014408       |
| Calculated intercept  | 0.035916          | Calculated intercept | 0.139634       |
| Analyzer make         | TEI Model 43i-TLE | Analyzer serial #    | 713021137      |

|                     | before  |       | after   |       |
|---------------------|---------|-------|---------|-------|
| Concentration range | 0 - 100 | ppb   | 0 - 100 | ppb   |
| Background          | 2.74    |       | 2.71    |       |
| Coefficient         | 1.042   |       | 1.042   |       |
| PMT                 | -767.8  | V     | -767.4  | V     |
| UV Lamp Voltage     | 1065    | V     | 1066    | V     |
| Chamber Temp        | 45      | Deg C | 45      | Deg C |
| Pressure            | 653.1   | mm Hg | 665     | mm Hg |
| Sample Flow         | 0.474   | LPM   | 0.476   | LPM   |
| Lamp Intensity      | 96      | %     | 96      | %     |

## Calibration Data

| Dilution air flow rate (cc/min) | Source gas flow rate (cc/min) | Calculated concentration (ppb) (Cc) | Indicated concentration (ppm) (Ic) | Correction factor (Cc/Ic) |
|---------------------------------|-------------------------------|-------------------------------------|------------------------------------|---------------------------|
| 4995                            | 0.00                          | 0.0                                 | 0.0                                | N/A                       |
| 4995                            | 39.93                         | 85.7                                | 84.4                               | 1.0149                    |
| 4995                            | 19.97                         | 43.0                                | 42.1                               | 1.0212                    |
| 4995                            | 9.97                          | 21.5                                | 21.0                               | 1.0267                    |
| 4995                            | 0.00                          | 0.0                                 | 0.0                                | As found zero             |
| 4995                            | 39.93                         | 85.7                                | 84.4                               | As found span             |
| Average Correction Factor       |                               |                                     |                                    | 1.0209                    |

Calculated value of As Found Response: 85.879 ppm Percent Change of As Found: -0.3%

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | 0.2                | ppb | 0.1               | ppb |
| Auto span | 59.9               | ppb | 60.7              | ppb |

Notes: No adjustments made.

Calibration Performed By: Dmytro Dolotii

## Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



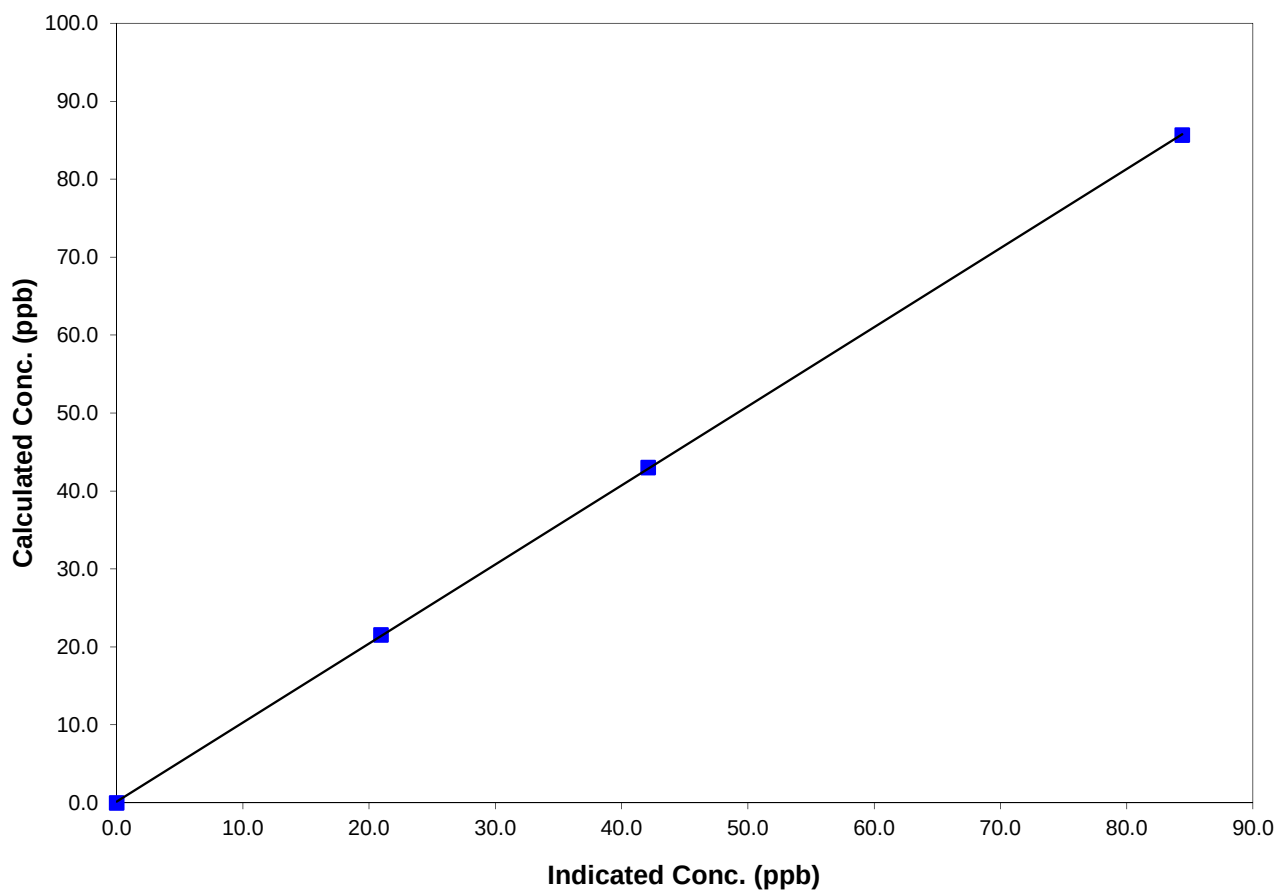
### Station Information

|                     |                   |                      |                |
|---------------------|-------------------|----------------------|----------------|
| Calibration Date    | April 8, 2014     | Previous Calibration | March 12, 2014 |
| Station Number      | 4                 | Station Location     | Beaverlodge    |
| Start Time (MST)    | 14:40:00 PM       | End Time (MST)       | 17:30:00 PM    |
| Analyzer make/model | TEI Model 43i-TLE | Analyzer serial #    | 713021137      |

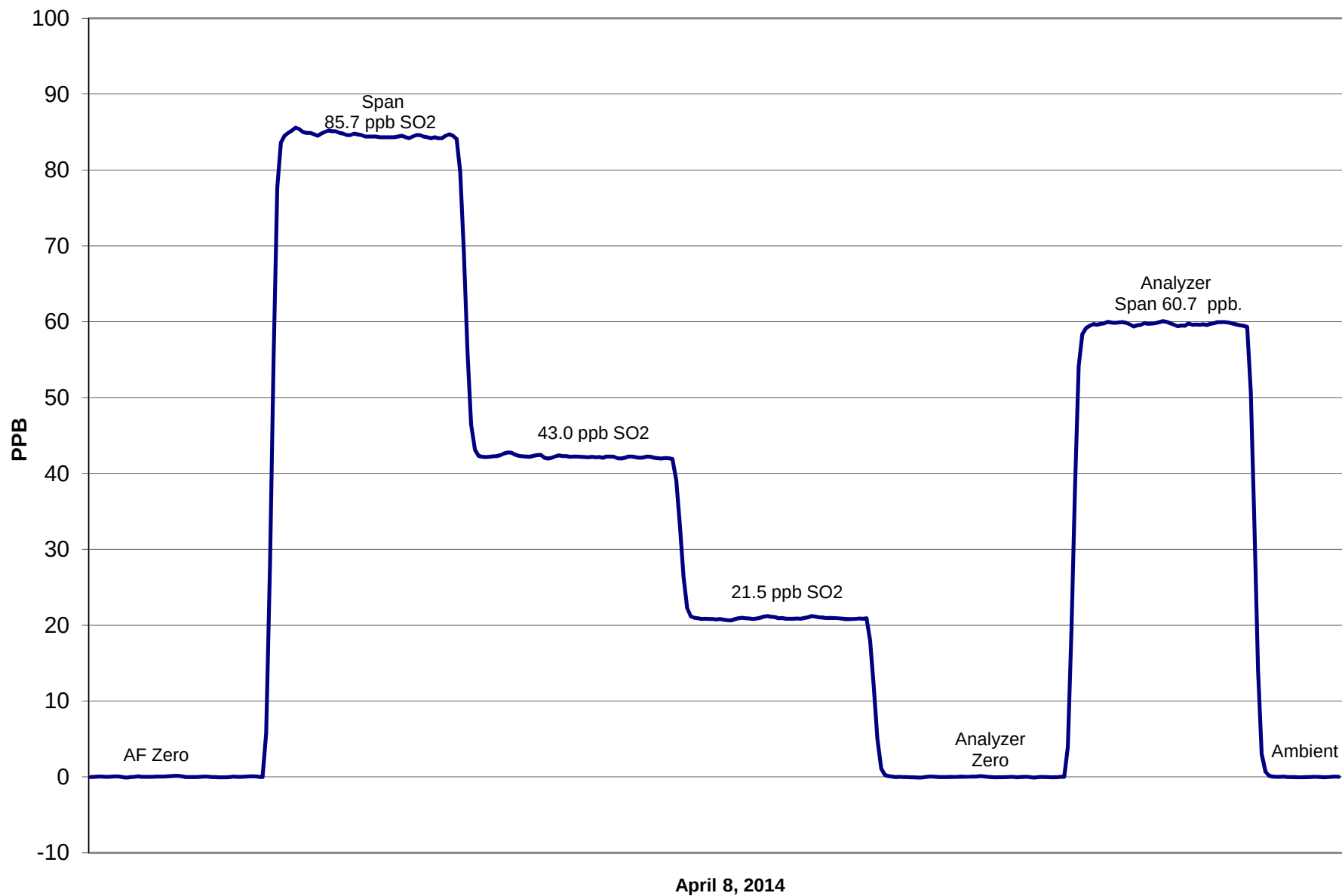
### Calibration Data

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------------|------------------------------------|---------------------------|-------------------------|----------|
| 0.0                                 | 0.0                                | N/A                       |                         |          |
| 85.7                                | 84.4                               | 1.0149                    | Correlation Coefficient | 0.999982 |
| 43.0                                | 42.1                               | 1.0212                    |                         |          |
| 21.5                                | 21.0                               | 1.0267                    | Slope                   | 1.014408 |
|                                     |                                    |                           |                         |          |
|                                     |                                    |                           | Intercept               | 0.139634 |
|                                     |                                    |                           |                         |          |

### SO2 Calibration Curve



## SO2 Calibration





# Calibration Report

Parameter

NO<sub>x</sub>-NO-NO<sub>2</sub>

Air Monitoring Network

PAZA



## Station Information

|                     |                |                      |                     |
|---------------------|----------------|----------------------|---------------------|
| Calibration Date    | April 8, 2014  | Previous Calibration | March 10, 2014      |
| Station Number      | 4              | Station Location     | Beaverlodge         |
| Reason:             | <b>Routine</b> | Installation         | Removal             |
| Start Time (MST)    | 8:25           | End Time (MST)       | 13:35:00 PM         |
| Barometric Pressure | 0.904          | Atm                  | Station Temperature |
| Calibrator          | EnviroNics     | Serial Number        | 3016                |
| NO Cal Gas Conc     | 51.3           | ppm                  | Cal Gas Expiry Date |
| NOx Cal Gas Conc    | 51.4           | ppm                  | Cal Gas Serial #    |
|                     |                |                      | February 25, 2021   |
|                     |                |                      | LL105159            |

## DACS Information

|               |             |                 |           |
|---------------|-------------|-----------------|-----------|
| DACS make     | CR3000      | DACS serial No. | 5237      |
| Parameter     | NO2         | NOx             | NO        |
| Before        | Data Slope  | 1.001238        | 1.003193  |
|               | Data Offset | 0.427803        | 0.653400  |
| After         | Data Slope  | 1.004406        | 0.998230  |
|               | Data Offset | -1.391095       | 2.355347  |
| 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     |
| NO offset           | 2.9     | mV                | 3.0       |
| NOx bkgnd           | 3.1     | mV                | 3.2       |
| NO coefficient      | 1.001   |                   | 0.989     |
| NOx coefficient     | 1.000   |                   | 1.000     |
| NO2 conv temp       | 325.0   | Deg C             | 325.0     |
| PMT Temp            | -3.1    | Deg C             | -2.9      |
| PMT Volt            | -749.0  | mV                | -750.4    |
| R Cell Press        | 206.1   | in Hg             | 208.5     |
| Sample Flow         | 0.684   | LPM               | 0.683     |

Notes: Slight zero adjustment  
Span adjustment, run adjustment point.

# Calibration Report

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



## Station Information

Calibration Date: April 8, 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                       | 0.2                      | 0.1                     | 0.0                      | N/A                   | N/A                  |
| 1                         | 4995                     | 39.93                      | 407.6                     | 406.8                    | 0.8                       | 407.4                    | 406.4                   | 0.2                      | 1.0007                | 1.0011               |
| 2                         | 4995                     | 19.97                      | 204.7                     | 204.3                    | 0.4                       | 201.0                    | 200.0                   | 0.1                      | 1.0182                | 1.0214               |
| 3                         | 4995                     | 9.97                       | 102.4                     | 102.2                    | 0.2                       | 98.0                     | 97.5                    | 0.3                      | 1.0450                | 1.0482               |
| AFZ                       | 4995                     | 0.00                       | 0.0                       | 0.0                      | 0.0                       | 0.5                      | 0.3                     | 0.1                      | 0.0000                | 0.0000               |
| AFS                       | 4995                     | 39.93                      | 407.6                     | 406.8                    | 0.8                       | 413.0                    | 412.3                   | -0.1                     | 0.9871                | 0.9868               |
| Average Correction Factor |                          |                            |                           |                          |                           |                          |                         |                          | 1.0213                | 1.0236               |

As Found Concentrations: NO<sub>x</sub>= 413.1 NO= 413.0 As Found Percent Change NO<sub>x</sub>= 1.4% NO= 1.5%

## GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.93 ccm

| O3 Setpoint (ppb)         | Indicated NO high point (ppb) | Indicated NO drop conc (ppb) | Calculated NO2 conc (ppb) | Indicated NOx conc (ppb) | Indicated NO conc (ppb) | Indicated NO2 conc (ppb) | NOx Correction factor | NO Correction factor | NO2 Correction factor | Converter Efficiency |
|---------------------------|-------------------------------|------------------------------|---------------------------|--------------------------|-------------------------|--------------------------|-----------------------|----------------------|-----------------------|----------------------|
| 0                         | 0.3                           | 0.3                          | 0.0                       | 0.2                      | 0.1                     | 0.0                      | N/A                   | N/A                  | N/A                   | N/A                  |
| NO point                  | 401.7                         | 401.7                        | 0.0                       | 402.1                    | 401.7                   | -0.3                     | 0.9990                | 1.0000               | N/A                   | N/A                  |
| 300                       | 401.7                         | 99.0                         | 302.7                     | 402.0                    | 99.0                    | 302.5                    | 0.9993                | 1.0000               | 1.0007                | 99.9%                |
| 200                       | 401.7                         | 198.4                        | 203.3                     | 402.0                    | 198.4                   | 202.8                    | 0.9993                | 1.0000               | 1.0024                | 99.8%                |
| 100                       | 401.7                         | 299.6                        | 102.1                     | 405.8                    | 299.6                   | 105.6                    | 0.9899                | 1.0000               | 0.9662                | 103.5%               |
| Average Correction Factor |                               |                              |                           |                          |                         |                          | 0.9961                | 1.0000               | 0.9897                | 101.1%               |

## AIC Data

|           | Previous calibration |       |      |     | Current calibration |       |      |     |
|-----------|----------------------|-------|------|-----|---------------------|-------|------|-----|
| Parameter | NOx                  | NO2   | NO   |     | NOx                 | NO2   | NO   |     |
| Auto zero | -0.1                 | -0.1  | -0.1 | ppb | -0.1                | -0.1  | -0.2 | ppb |
| Auto span | 168.3                | 166.9 | 1.1  | ppb | 192.7               | 191.3 | 0.8  | ppb |

Calibration Performed By: Dmytro Dolotii

## Calibration Summary

Parameter NO<sub>2</sub>

Air Monitoring Network PAZA



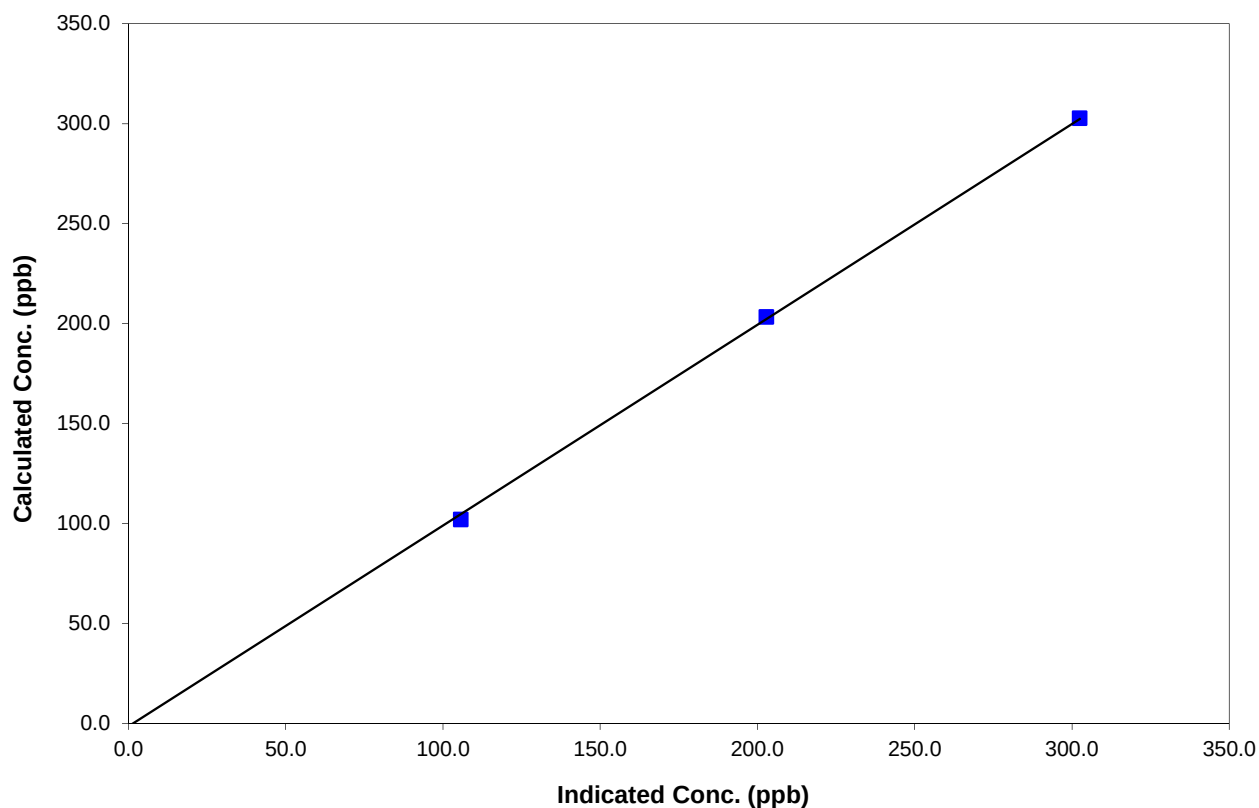
### Station Information

|                  |               |                      |                |
|------------------|---------------|----------------------|----------------|
| Calibration Date | April 8, 2014 | Previous Calibration | March 10, 2014 |
| Station Number   | 4             | Station Location     | Beaverlodge    |
| Start Time (MST) | 8:25          | End Time (MST)       | 13:35:00 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 | 0.999804  |
| 302.7                      | 302.5                              | 1.0007                    |                         |           |
| 203.3                      | 202.8                              | 1.0024                    |                         |           |
| 102.1                      | 105.6                              | 0.9662                    | Slope                   | 1.004406  |
|                            |                                    |                           |                         |           |
|                            |                                    |                           |                         |           |
|                            |                                    |                           | Intercept               | -1.391095 |
|                            |                                    |                           |                         |           |

### NO<sub>2</sub> Calibration Curve



## Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PAZA



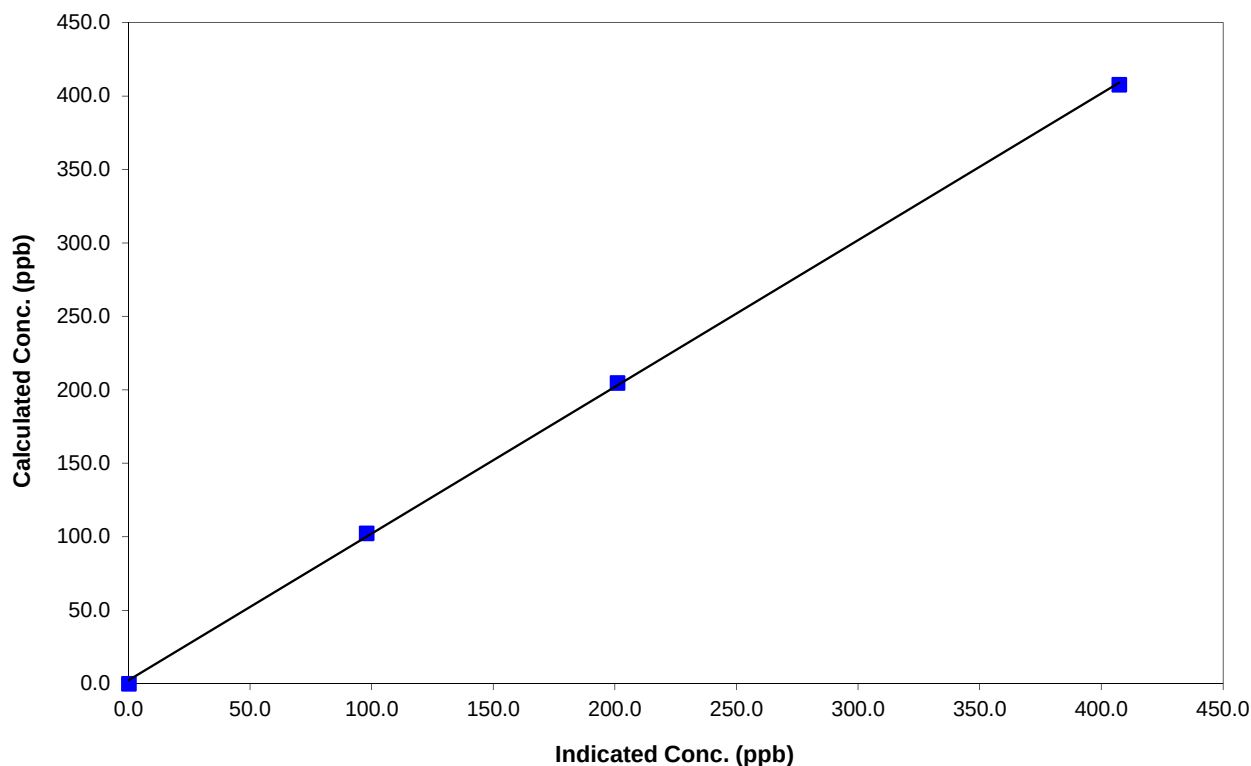
### Station Information

|                  |               |                      |                |
|------------------|---------------|----------------------|----------------|
| Calibration Date | April 8, 2014 | Previous Calibration | March 10, 2014 |
| Station Number   | 4             | Station Location     | Beaverlodge    |
| Start Time (MST) | 8:25          | End Time (MST)       | 13:35:00 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                        | 0.2                                | N/A                       | Correlation Coefficient | 0.999825 |
| 407.6                      | 407.4                              | 1.0007                    |                         |          |
| 204.7                      | 201.0                              | 1.0182                    |                         |          |
| 102.4                      | 98.0                               | 1.0450                    | Slope                   | 0.998230 |
|                            |                                    |                           |                         |          |
|                            |                                    |                           | Intercept               | 2.355347 |
|                            |                                    |                           |                         |          |

### NO<sub>x</sub> Calibration Curve



## Calibration Summary

Parameter NO

Air Monitoring Network PAZA



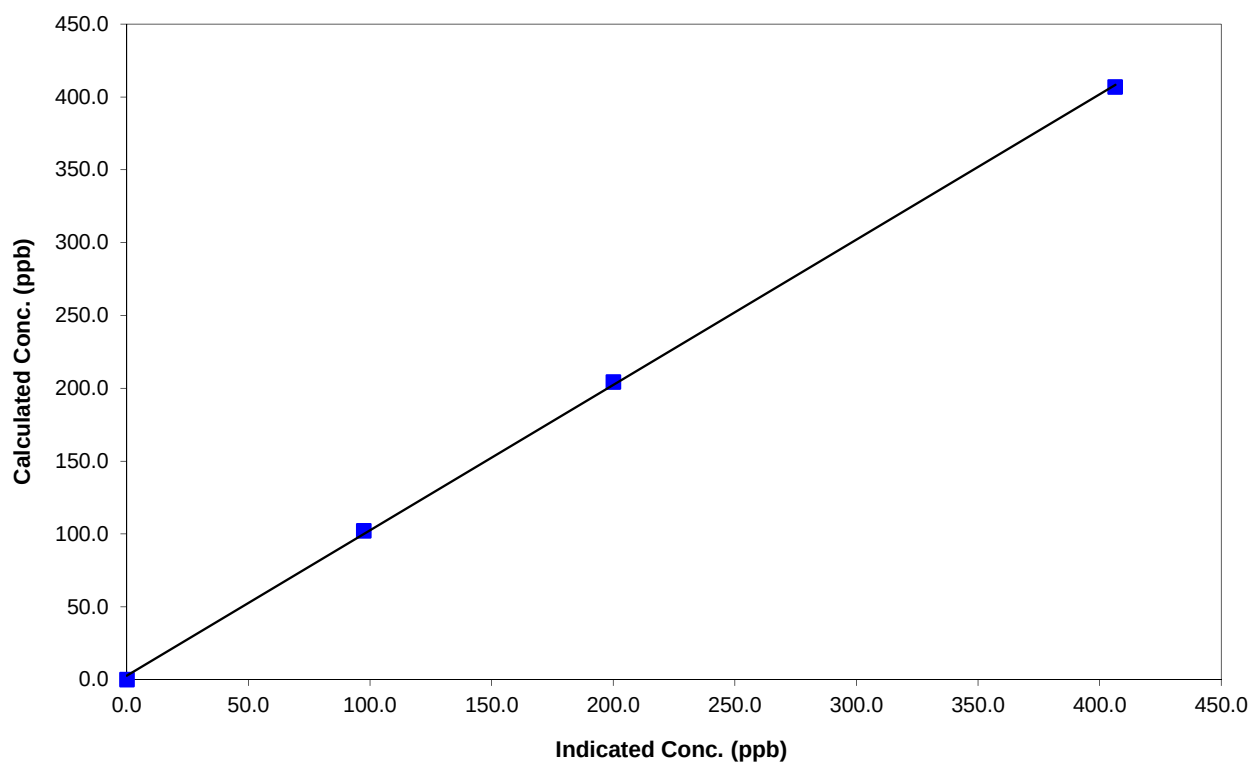
### Station Information

|                  |               |                      |                |
|------------------|---------------|----------------------|----------------|
| Calibration Date | April 8, 2014 | Previous Calibration | March 10, 2014 |
| Station Number   | 4             | Station Location     | Beaverlodge    |
| Start Time (MST) | 8:25          | End Time (MST)       | 13:35:00 PM    |
| Analyzer make    | TEI 42i       | Analyzer serial #    | 906535068      |

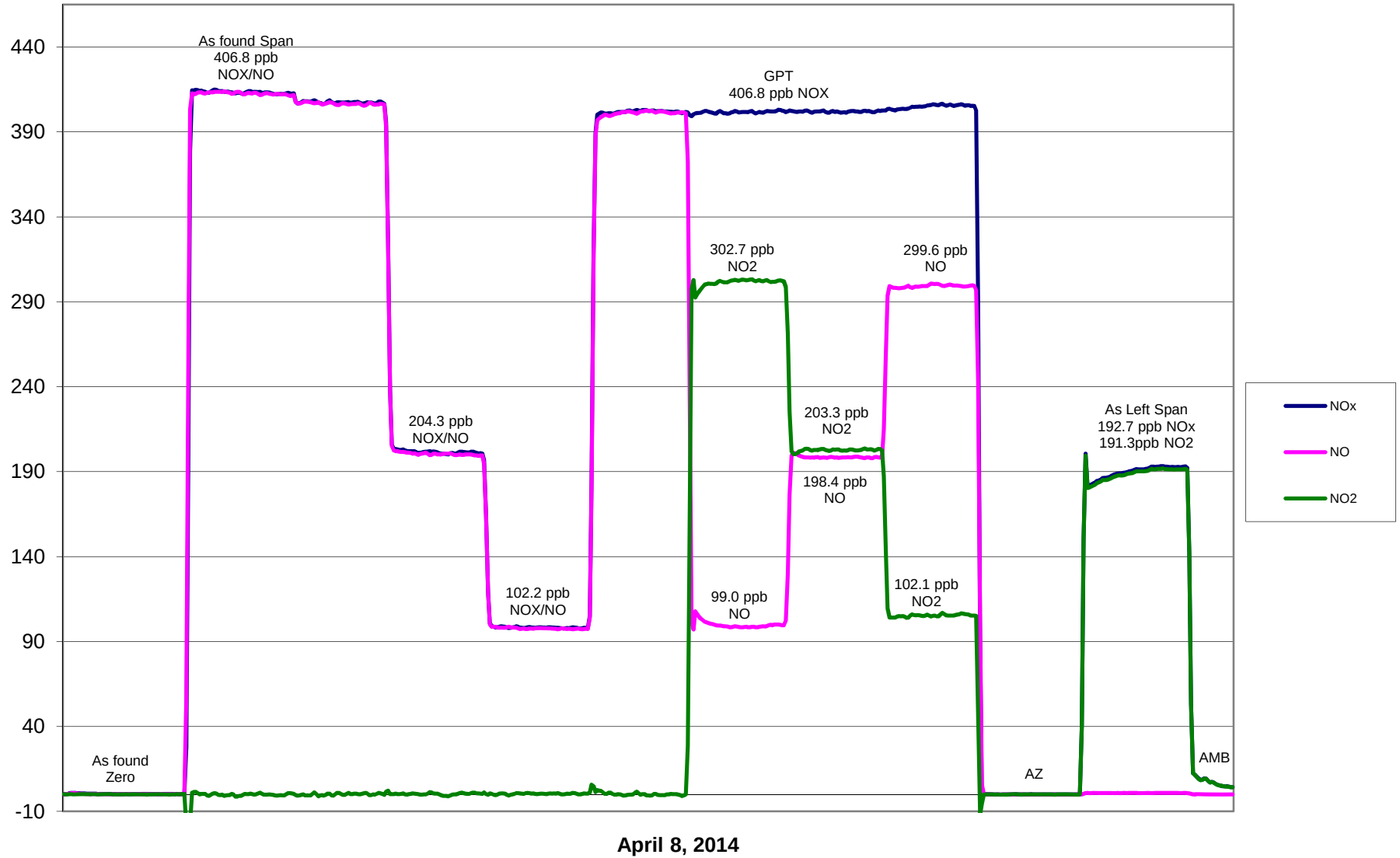
### Calibration Data

| Calculated conc (ppb)<br>(Cc) | Indicated concentration<br>(ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------|---------------------------------------|---------------------------|-------------------------|----------|
| 0.0                           | 0.1                                   | N/A                       | Correlation Coefficient | 0.999797 |
| 406.8                         | 406.4                                 | 1.0011                    |                         |          |
| 204.3                         | 200.0                                 | 1.0214                    |                         |          |
| 102.2                         | 97.5                                  | 1.0482                    | Slope                   | 0.998327 |
|                               |                                       |                           |                         |          |
|                               |                                       |                           | Intercept               | 2.636329 |
|                               |                                       |                           |                         |          |

### NO Calibration Curve



# PAZA Beaverlodge NO<sub>x</sub> Calibration



# Calibration Report



Parameter 03

Air Monitoring Network PAZA

## Station Information

|                  |                |                      |                |
|------------------|----------------|----------------------|----------------|
| Calibration Date | April 8, 2014  | Previous Calibration | March 10, 2014 |
| Station Number   | 4              | Station Location     | Beaverlodge    |
| Reason:          | <b>Routine</b> | Install              | Removal        |
|                  |                | Other:               |                |

|                       |           |                     |             |
|-----------------------|-----------|---------------------|-------------|
| Start Time (MST)      | 12:30     | End Time (MST)      | 15:50:00 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     | 0.987214   | Calculated slope     | 1.005897  |
| Calculated intercept | -0.879746  | Calculated intercept | -0.779930 |

|               |          |                   |            |
|---------------|----------|-------------------|------------|
| Analyzer make | Teco 49i | Analyzer serial # | 1136451236 |
|---------------|----------|-------------------|------------|

|                     | before      |       | after       |       |
|---------------------|-------------|-------|-------------|-------|
| Concentration range | 0 - 500     | ppb   | 0 - 500     | ppb   |
| offset              | 0.00        | ppb   | 0.00        | ppb   |
| slope               | 1.084       |       | 1.061       |       |
| Lamp temp           | 53.9        | mV    | 53.9        | mV    |
| Lamp Intensity A/B  | 86821/89408 | mV    | 86817/89337 | mV    |
| Pressure            | 657.3       | mm Hg | 676.9       | mm Hg |
| Flow A              | 0.738       | LPM   | 0.753       | LPM   |
| Flow B              | 0.724       | LPM   | 0.737       | LPM   |

## Calibration Data

| Dilution air flow rate (cc/min) | Calibrator Setting | Calculated concentration (ppm) (Cc) | Indicated concentration (ppm) (Ic) | Correction factor (Cc/Ic) |
|---------------------------------|--------------------|-------------------------------------|------------------------------------|---------------------------|
| 5035                            | 0.00               | 0.0                                 | 0.3                                | N/A                       |
| 5035                            | 0.30               | 302.7                               | 302.0                              | 1.0024                    |
| 5035                            | 0.20               | 203.3                               | 201.8                              | 1.0076                    |
| 5035                            | 0.10               | 102.1                               | 103.6                              | 0.9851                    |
|                                 |                    |                                     |                                    |                           |
| 5035                            | 0.00               | 0.0                                 | 0.3                                | As found zero             |
| 5035                            | 0.30               | 302.7                               | 309.9                              | As found span             |
| Average Correction Factor       |                    |                                     |                                    | 0.9984                    |

Calculated value of As Found Response: 304.8 ppm Percent Change of As Found: 0.7%

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | -1.2               | ppb | -0.3              | ppb |
| Auto span | 277.9              | ppb | 283.3             | ppb |

Notes: Span adjustment, run adjustment point.

Calibration Performed By: Dmytro Dolotii

## Calibration Summary

Parameter 03

Air Monitoring Network PAZA



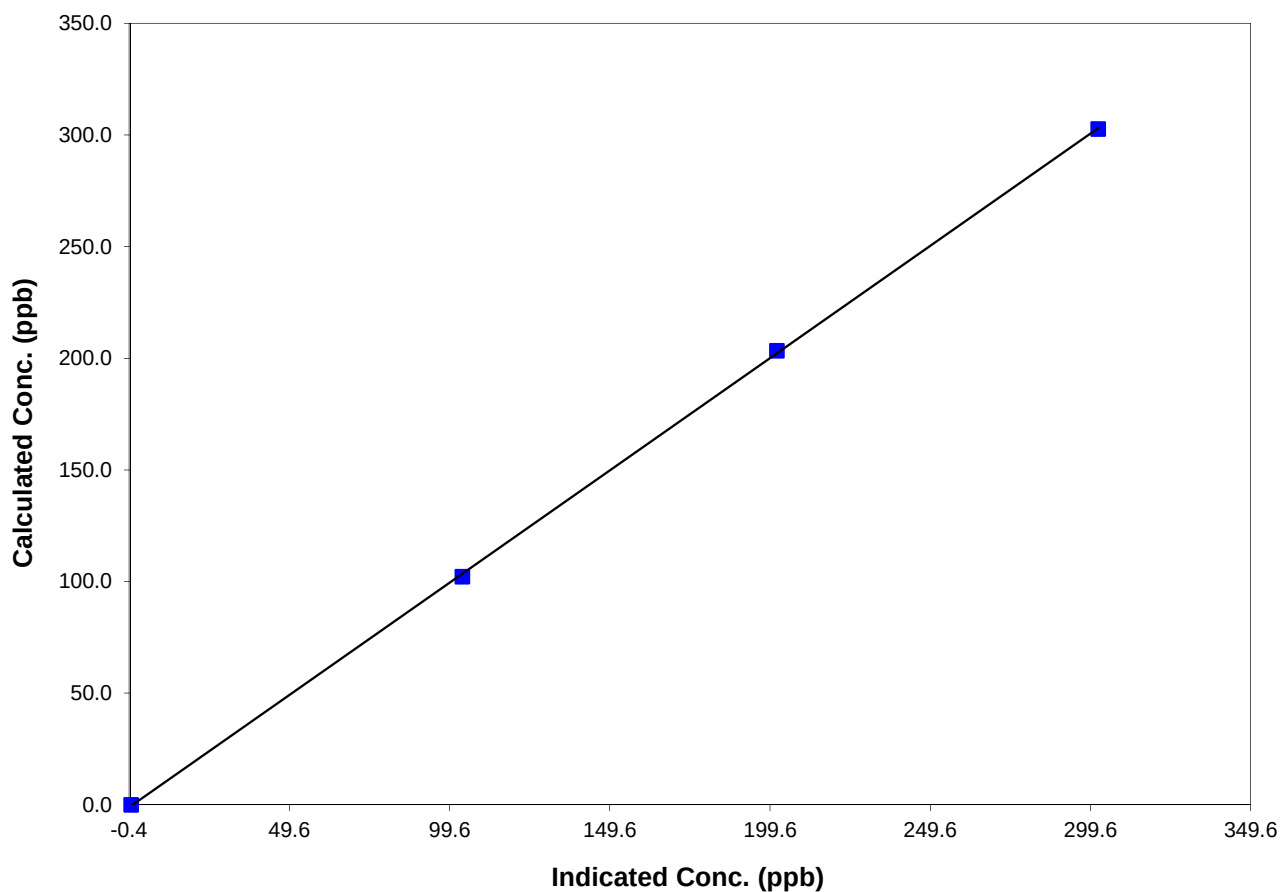
### Station Information

|                     |               |                      |                |
|---------------------|---------------|----------------------|----------------|
| Calibration Date    | April 8, 2014 | Previous Calibration | March 10, 2014 |
| Station Number      | 4             | Station Location     | Beaverlodge    |
| Start Time (MST)    | 12:30         | End Time (MST)       | 15:50:00 PM    |
| Analyzer make/model | Teco 49i      | Analyzer serial #    | 1136451236     |

### Calibration Data

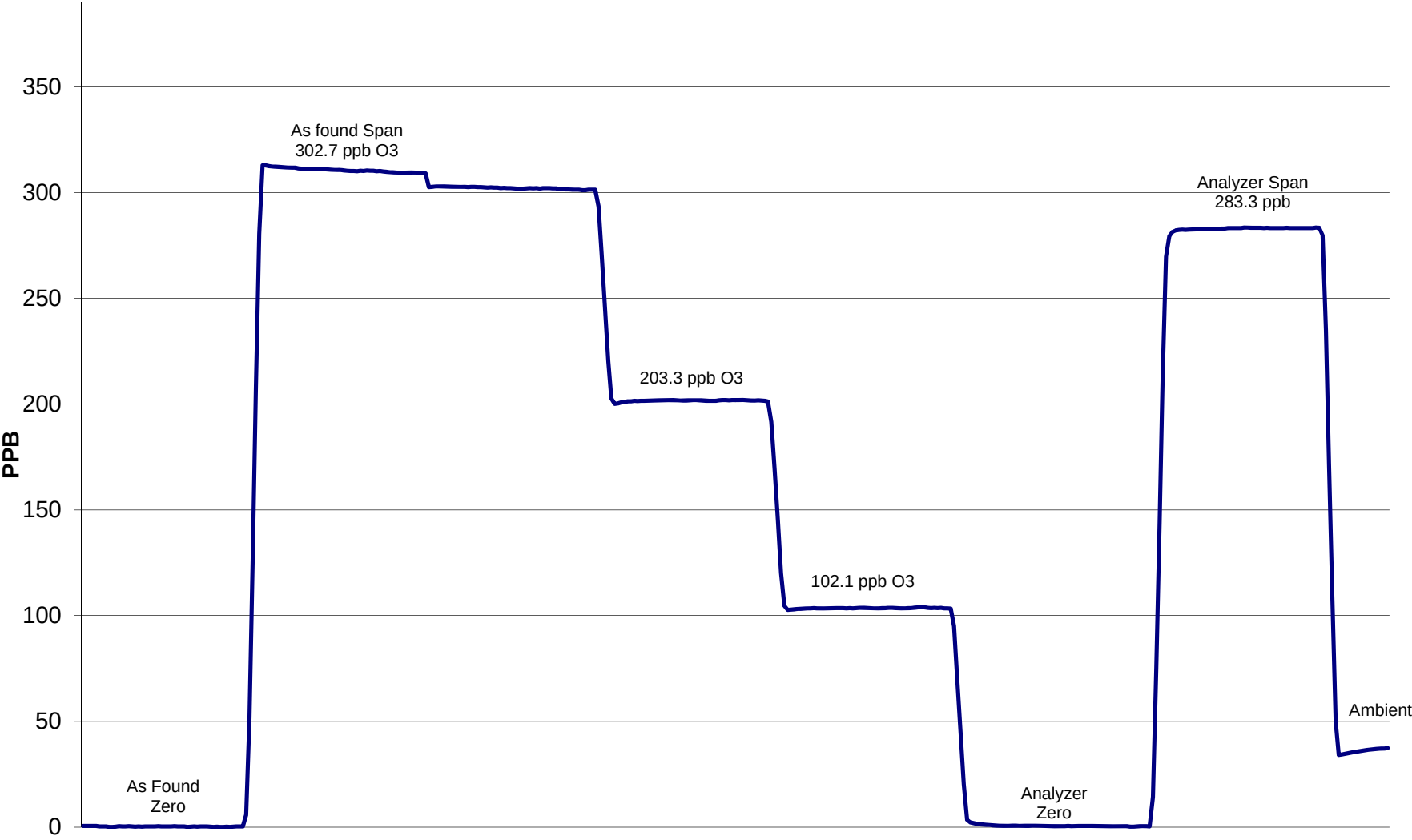
| Calculated concentration (ppm) (Cc) | Indicated concentration (ppm) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |           |
|-------------------------------------|------------------------------------|---------------------------|-------------------------|-----------|
| 0.0                                 | 0.3                                | NA                        | Correlation Coefficient | 0.999931  |
| 302.7                               | 302.0                              | 1.0024                    |                         |           |
| 203.3                               | 201.8                              | 1.0076                    |                         |           |
| 102.1                               | 103.6                              | 0.9851                    | Slope                   | 1.005897  |
|                                     |                                    |                           | Intercept               | -0.779930 |
|                                     |                                    |                           |                         |           |
|                                     |                                    |                           |                         |           |

### O3 Calibration Curve





O3 Calibration



April 8, 2014

# Calibration Report

Parameter SO2

Air Monitoring Network PAZA



## Station Information

|                       |                |                      |                   |
|-----------------------|----------------|----------------------|-------------------|
| Calibration Date      | April 14 2014  | Previous Calibration | March 14 2014     |
| Station Number        | 6              | Station Location     | Valleyview        |
| Reason:               | <b>Routine</b> | Install              | Removal           |
| Start Time (MST)      | 11:35          | End Time (MST)       | 14:15:00 PM       |
| Barometric Pressure   | 702.00 mmHg    | Station Temperature  | 20.0 Deg C        |
| Calibrator            | EnviroNics     | Serial Number        | 3016              |
| Cal Gas Concentration | 51.5 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      | 0.998502       | Calculated slope     | 0.997170          |
| Calculated intercept  | 1.232593       | Calculated intercept | 1.713589          |
| Analyzer make         | TEI 45C        | Analyzer serial #    | 45C-57531-313     |

|                     |        |       |       |       |
|---------------------|--------|-------|-------|-------|
|                     | before |       | after |       |
| Concentration range | 0-500  | ppb   | 0-500 | ppb   |
| Background          | 60.8   |       | 62.5  |       |
| Coefficient         | 1.038  |       | 1.038 |       |
| UV Lamp Voltage     | 833    | LPM   | 834   | LPM   |
| Chamber Temp        | 44.3   | V     | 44.5  | V     |
| Perm Gas Temp       | 37     | C     | 37    | C     |
| Pressure            | 606.4  | in Hg | 602.3 | in Hg |
| Sample Flow         | 0.537  | LPM   | 0.539 | LPM   |
| Lamp Intensity      | 42051  | Hz    | 42101 | 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                         | 408.4                               | 408.9                              | 0.9990                    |
| 4995                            | 19.97                         | 205.1                               | 202.8                              | 1.0112                    |
| 4995                            | 9.97                          | 102.6                               | 99.4                               | 1.0322                    |
| 4995                            | 0.00                          | 0.0                                 | 1.8                                | As found zero             |
| 4995                            | 39.93                         | 408.4                               | 408.9                              | As found span             |
| Average Correction Factor       |                               |                                     |                                    | 1.0141                    |

Calculated value of As Found Response: 407.6 ppm Percent Change of As Found: 0.2%

|           |                    |     |                   |     |
|-----------|--------------------|-----|-------------------|-----|
|           | before calibration |     | after calibration |     |
| Auto zero | 0.0                | ppm | 0.0               | ppm |
| Auto span | 150.2              | ppm | 149.4             | ppm |

Notes: Slight zero adjustment

Calibration Performed By: Dmytro Dolotii.

## Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



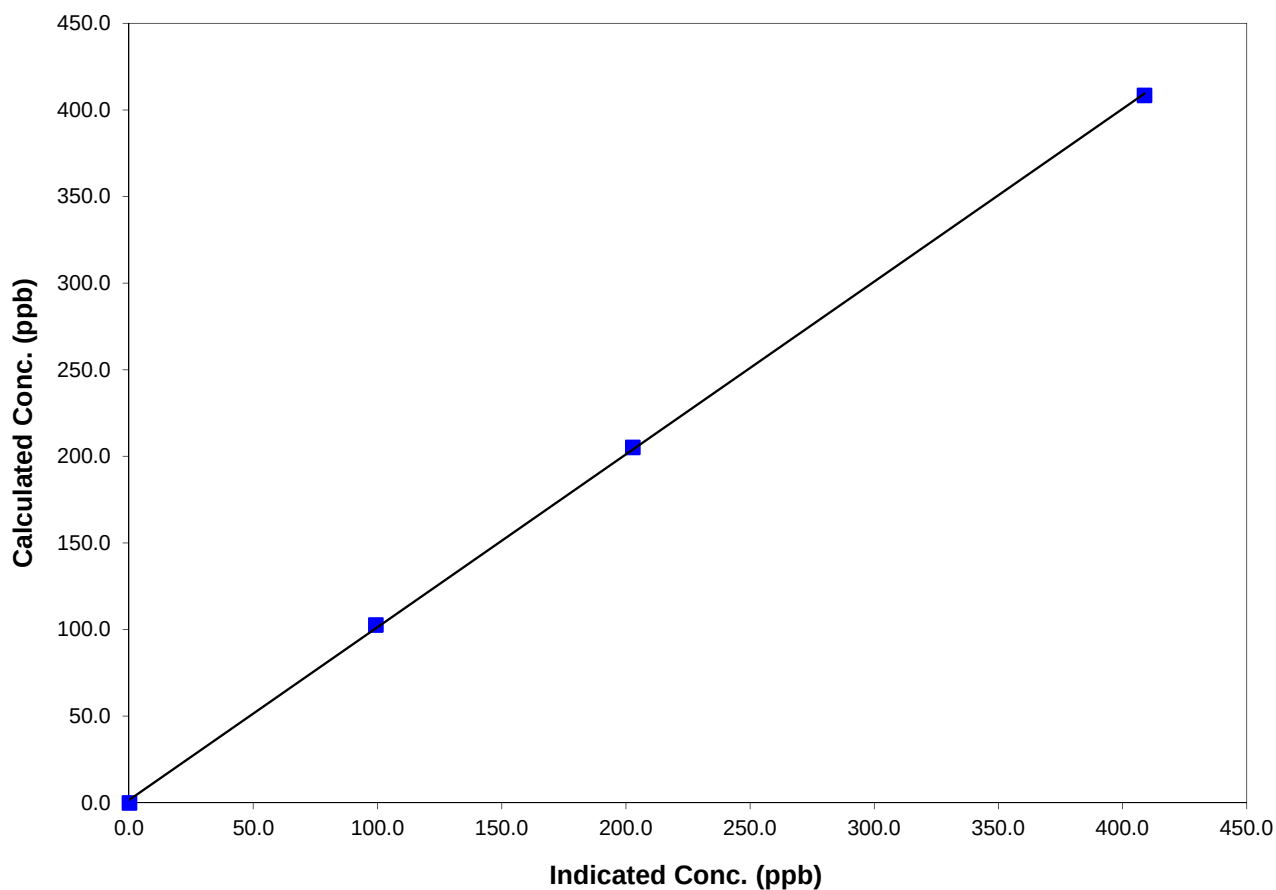
### Station Information

|                     |               |                      |               |
|---------------------|---------------|----------------------|---------------|
| Calibration Date    | April 14 2014 | Previous Calibration | March 14 2014 |
| Station Number      | 6             | Station Location     | Valleyview    |
| Start Time (MST)    | 11:35         | End Time (MST)       | 14:15:00 PM   |
| Analyzer make/model | TEI 45C       | Analyzer serial #    | 45C-57531-313 |

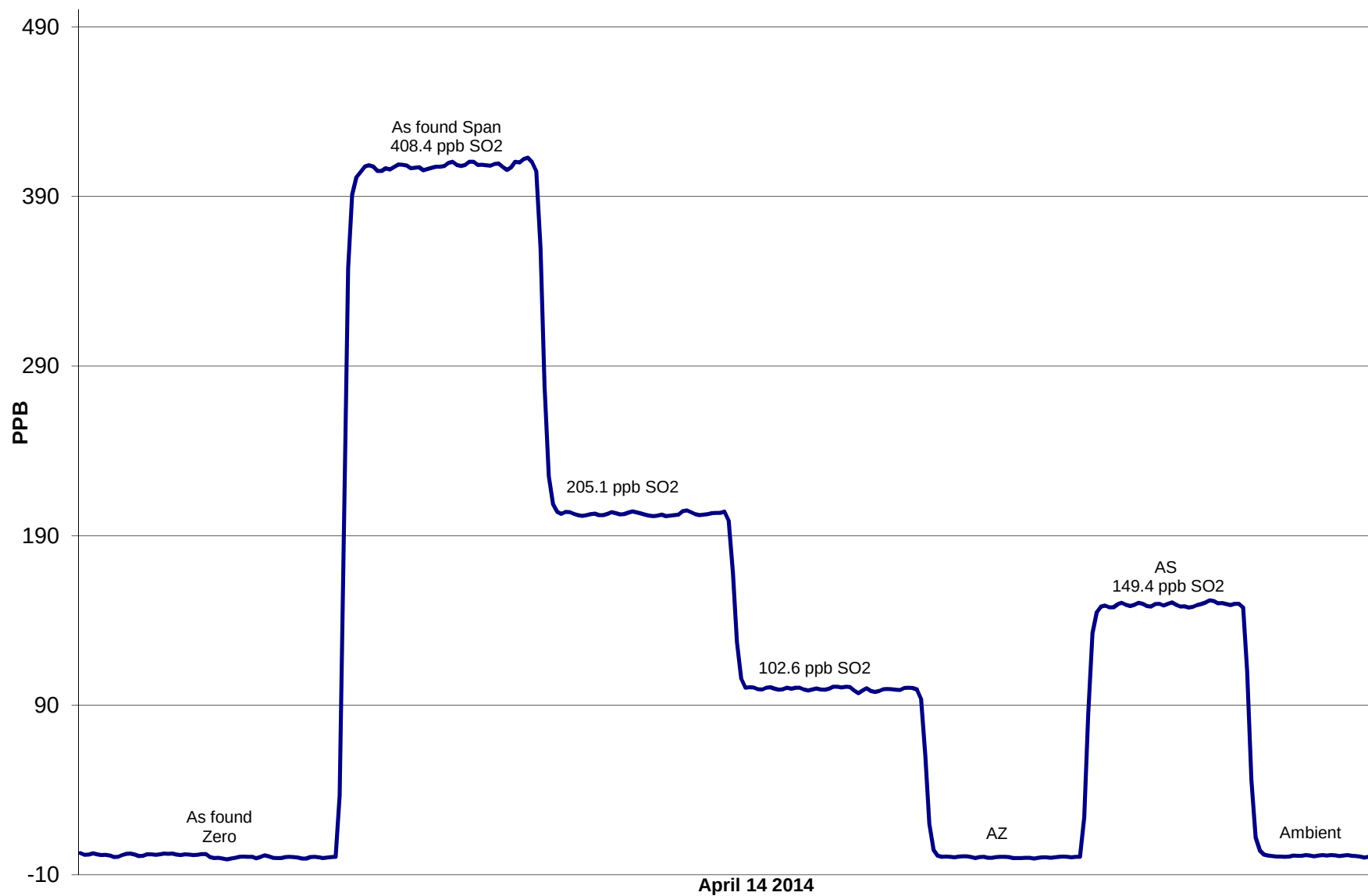
### Calibration Data

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------------|------------------------------------|---------------------------|-------------------------|----------|
| 0.0                                 | 0.2                                | N/A                       | Correlation Coefficient | 0.999902 |
| 408.4                               | 408.9                              | 0.9990                    |                         |          |
| 205.1                               | 202.8                              | 1.0112                    |                         |          |
| 102.6                               | 99.4                               | 1.0322                    | Slope                   | 0.997170 |
|                                     |                                    |                           |                         |          |
|                                     |                                    |                           | Intercept               | 1.713589 |
|                                     |                                    |                           |                         |          |

### SO2 Calibration Curve



## SO2 Calibration



# Calibration Report

Parameter H2S  
Air Monitoring Network PAZA



## Station Information

|                       |                       |                      |               |
|-----------------------|-----------------------|----------------------|---------------|
| Calibration Date      | April 14 2014         | Previous Calibration | March 14 2014 |
| Station Number        | 6                     | Station Location     | Valleyview    |
| Reason:               | <b>Routine</b>        | Install              | Removal       |
| Start Time (MST)      | 9:44                  | End Time (MST)       | 13:00:00 PM   |
| Barometric Pressure   | 702.00 mm             | Station Temperature  | 20.0 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             |
|                       | <u>Before</u>         |                      | <u>After</u>  |
| DACS Scale High       | 100                   | DACS slope           | 100           |
| DACS Scale Low        | 0                     | DACS intercept       | 0             |
| Calculated slope      | 1.023205              | Calculated slope     | 0.991507      |
| Calculated intercept  | 0.637958              | Calculated intercept | 0.594315      |
| Analyzer make         | TEI Model 43i - APSCB | Analyzer serial #    | 701120010     |

|                     | before  |       | after   |       |
|---------------------|---------|-------|---------|-------|
| Concentration range | 0 - 100 | ppb   | 0 - 100 | ppb   |
| Back Ground         | 7.8     | ppb   | 7.7     | ppb   |
| Coefficient         | 0.915   |       | 0.915   |       |
| Lamp Voltage        | 790     | v     | 791     | v     |
| Chamber Temp        | 45.1    | c     | 45.2    | c     |
| Perm Oven Temp      | 44.99   | c     | 45      | c     |
| Pressure            | 586.30  | mm Hg | 586.70  | mm Hg |
| Sample Flow         | 0.400   | ccm   | 0.399   | 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                                 | -0.1                               | N/A                       |
| 4995                            | 39.93                         | 82.5                                | 82.9                               | 0.9955                    |
| 4995                            | 19.97                         | 41.4                                | 40.7                               | 1.0178                    |
| 8995                            | 8.97                          | 10.4                                | 9.6                                | 1.0798                    |
| 4995                            | 9.97                          | 102.5                               | 2.8                                | Sox Test                  |
| 4995                            | 0.00                          | 0.0                                 | -0.1                               | As found zero             |
| 4995                            | 39.93                         | 82.5                                | 82.9                               | As found span             |
| Average Correction Factor       |                               |                                     |                                    | 1.0311                    |

Calculated value of As Found Response: 85.54 ppm Percent Change of As Found: -3.7%

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | 0.5                | ppm | 0.5               | ppm |
| Auto span | 67.3               | ppm | 66.3              | ppm |

Notes: No adjustments made  
Spike on the after span-new orifices will be ordered

Calibration Performed By: Dmytro Dolotii.

## Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



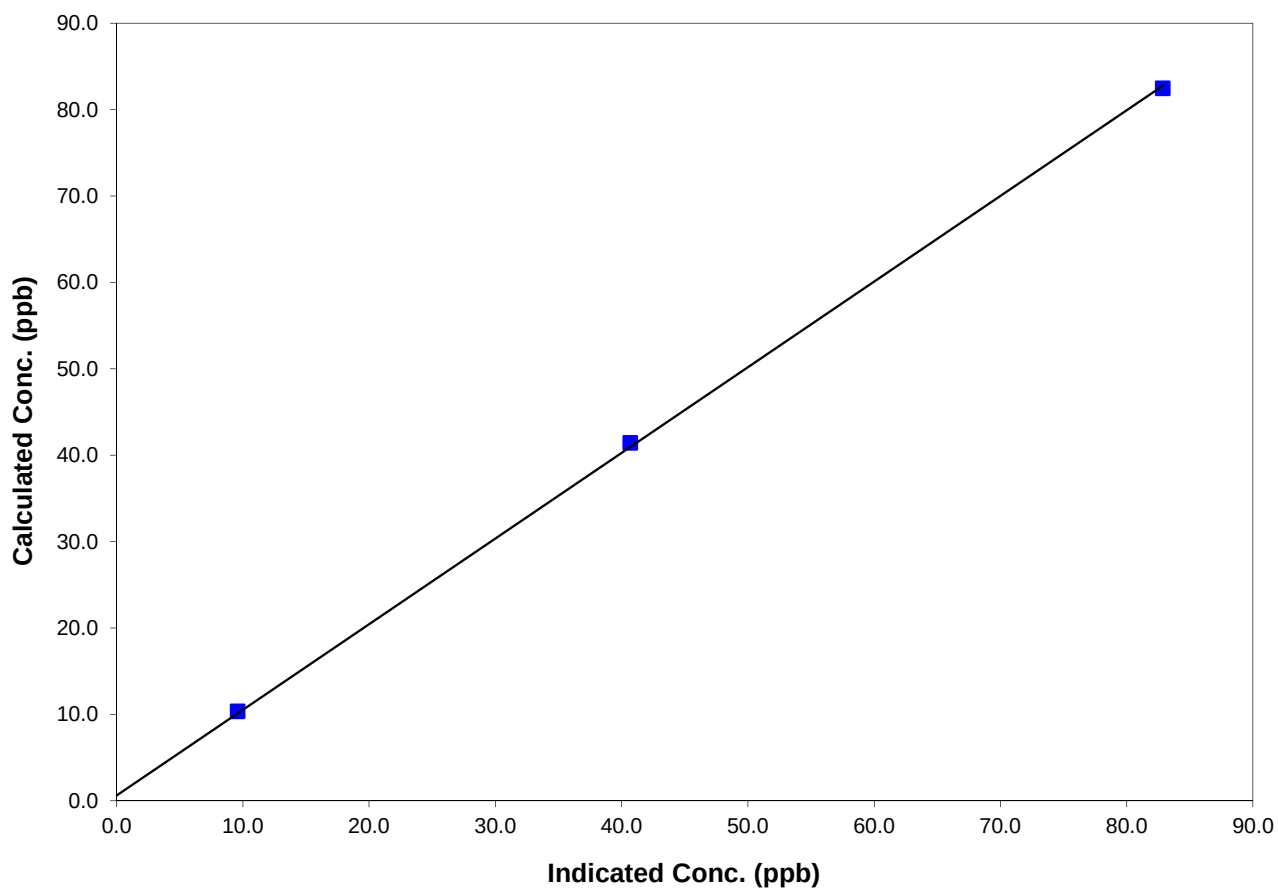
### Station Information

|                     |                       |                      |               |
|---------------------|-----------------------|----------------------|---------------|
| Calibration Date    | April 14 2014         | Previous Calibration | March 14 2014 |
| Station Number      | 6                     | Station Location     | Valleyview    |
| Start Time (MST)    | 9:44                  | End Time (MST)       | 13:00:00 PM   |
| Analyzer make/model | TEI Model 43i - APSCB | Analyzer serial #    | 701120010     |

### Calibration Data

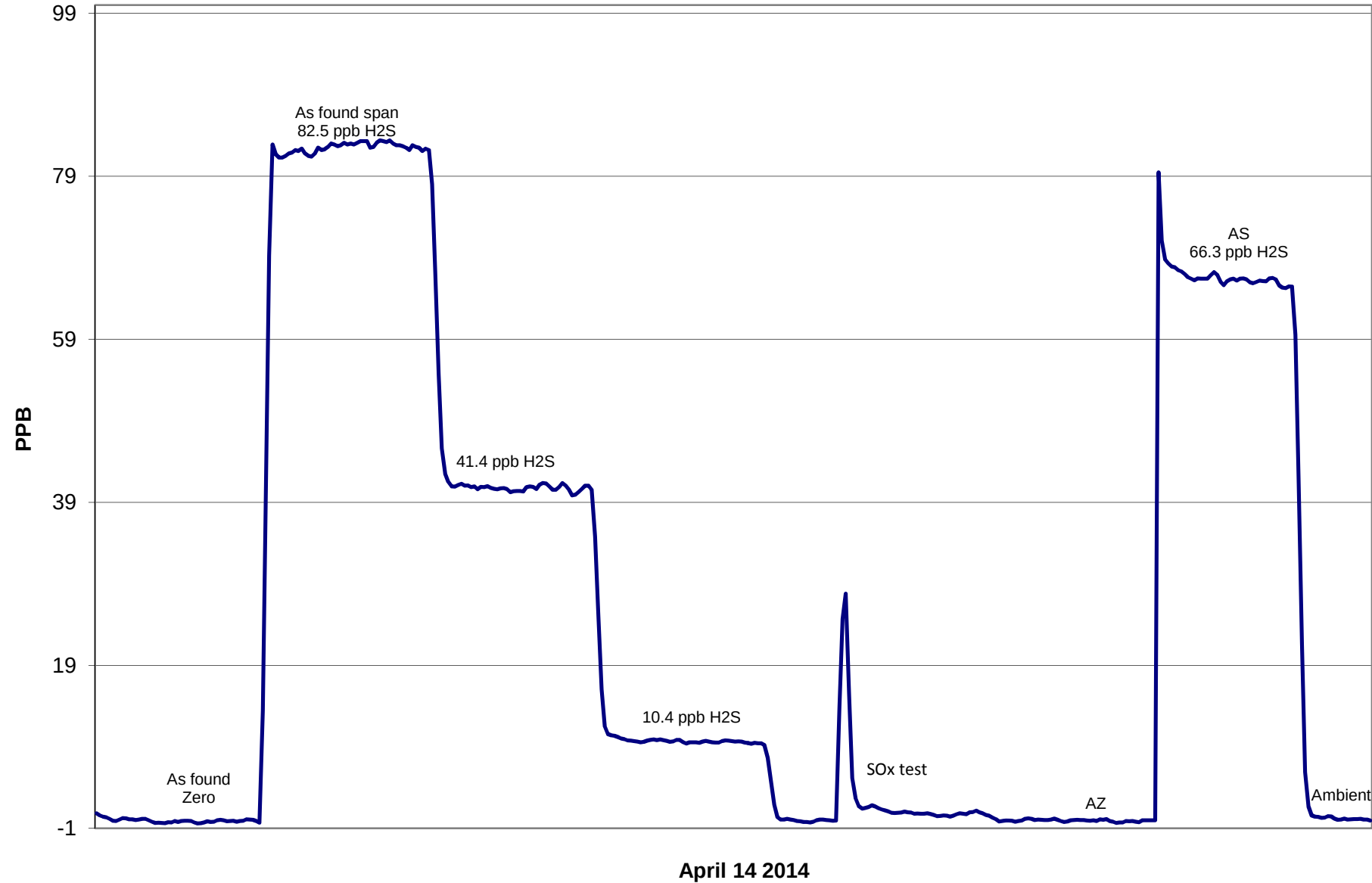
| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------------|------------------------------------|---------------------------|-------------------------|----------|
| 0.0                                 | -0.1                               | N/A                       | Correlation Coefficient | 0.999860 |
| 82.5                                | 82.9                               | 0.9955                    |                         |          |
| 41.4                                | 40.7                               | 1.0178                    |                         |          |
| 10.4                                | 9.6                                | 1.0798                    | Slope                   | 0.991507 |
|                                     |                                    |                           | Intercept               | 0.594315 |
|                                     |                                    |                           |                         |          |
|                                     |                                    |                           |                         |          |

### H2S Calibration Curve



10.4 ppb H2S

H2S Calibration



# Calibration Report

Parameter SO2

Air Monitoring Network PAZA



## Station Information

|                       |                 |                                  |                                  |
|-----------------------|-----------------|----------------------------------|----------------------------------|
| Calibration Date      | April 23, 2014  | Previous Calibration             | March 19, 2014                   |
| Station Number        | 10              | Station Location                 | Reno                             |
| Reason:               | <b>Routine</b>  | <input type="checkbox"/> Install | <input type="checkbox"/> Removal |
|                       |                 | <input type="checkbox"/> Other:  |                                  |
| Start Time (MST)      | 8:10            | End Time (MST)                   | 12:10                            |
| Barometric Pressure   | 0.921 Atm       | Station Temperature              | 20.0 Deg C                       |
| Calibrator            | EnviroNics 6100 | Serial Number                    | 3016                             |
| Cal Gas Concentration | 51.5 ppm        | Cal Gas Expiry Date              | 12/03/2014                       |
| 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      | 1.003438        | Calculated slope                 | 1.001764                         |
| Calculated intercept  | 1.156172        | Calculated intercept             | 1.341068                         |
| Analyzer make         | TEI 43C         | Analyzer serial #                | 436610005                        |

|                     | before |       | after |       |
|---------------------|--------|-------|-------|-------|
| Concentration range | 0-500  | ppb   | 0-500 | ppb   |
| Background          | 20.2   |       | 20.7  |       |
| Coefficient         | 1.059  |       | 1.059 |       |
| UV Lamp Voltage     | 867    | V     | 866   | V     |
| Chamber Temp        | 44.7   | C     | 44.8  | C     |
| Perm Gas Temp       | 45     | C     | 45    | C     |
| Pressure            | 664.6  | mm Hg | 664.3 | mm Hg |
| Sample Flow         | 0.462  | LPM   | 0.462 | LPM   |
| Lamp Intesity       | 30696  | Hz    | 30587 | 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                                 | 0.4                                | N/A                       |
| 4995                            | 39.93                         | 408.4                               | 407.2                              | 1.0031                    |
| 4995                            | 19.97                         | 205.1                               | 202.7                              | 1.0117                    |
| 4995                            | 9.97                          | 102.6                               | 99.2                               | 1.0340                    |
| 4995                            | 0.00                          | 0.0                                 | 0.9                                | As found zero             |
| 4995                            | 39.93                         | 408.4                               | 407.2                              | As found span             |
| Average Correction Factor       |                               |                                     |                                    | 1.0163                    |

Calculated value of As Found Response: 408.809 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 | 243.8             | ppm |

Notes: Slight zero adjustment made.

Calibration Performed By: Grover Christiansen,Dmytro Dolotii.



## Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



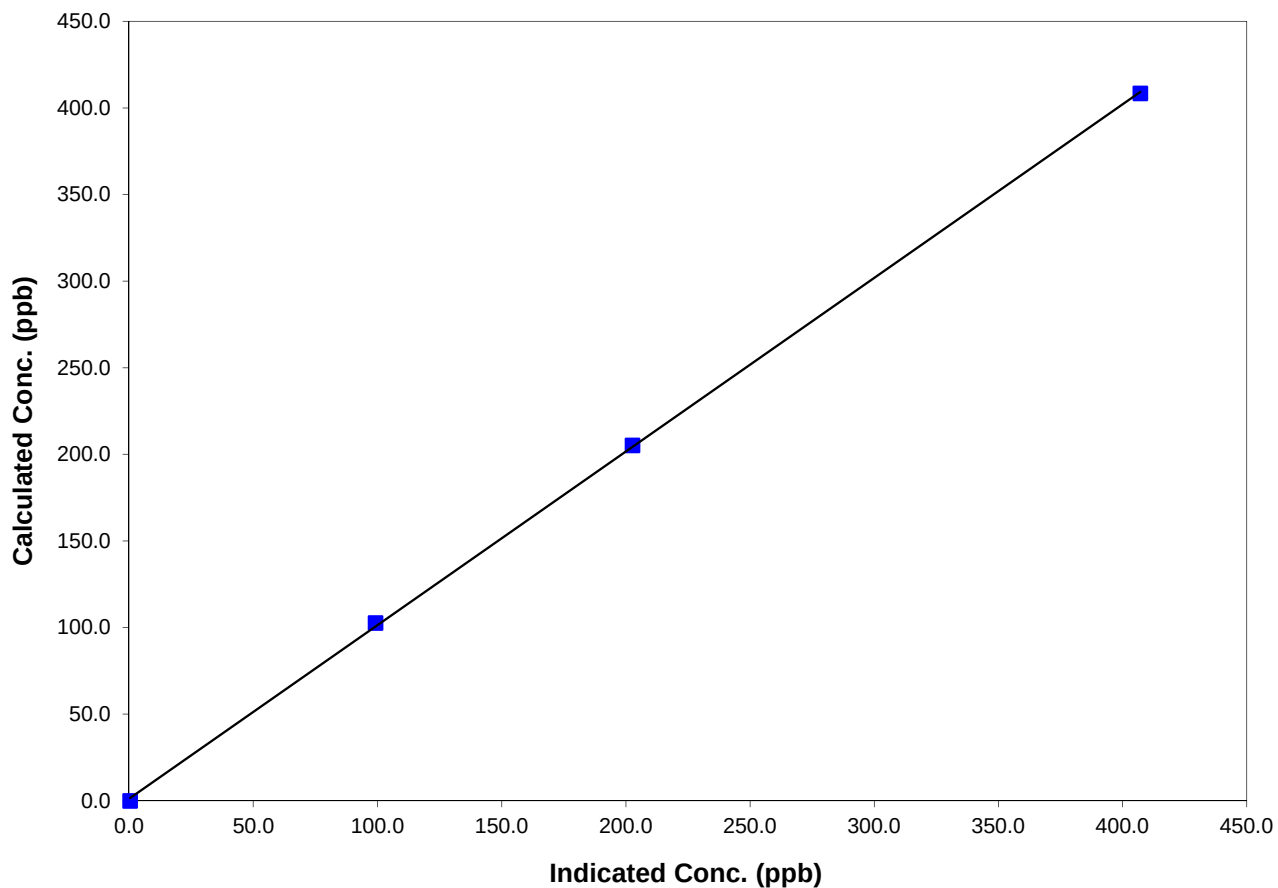
### Station Information

|                     |                |                      |                |
|---------------------|----------------|----------------------|----------------|
| Calibration Date    | April 23, 2014 | Previous Calibration | March 19, 2014 |
| Station Number      | 10             | Station Location     | Reno           |
| Start Time (MST)    | 8:10           | End Time (MST)       | 12:10          |
| Analyzer make/model | TEI 43C        | Analyzer serial #    | 436610005      |

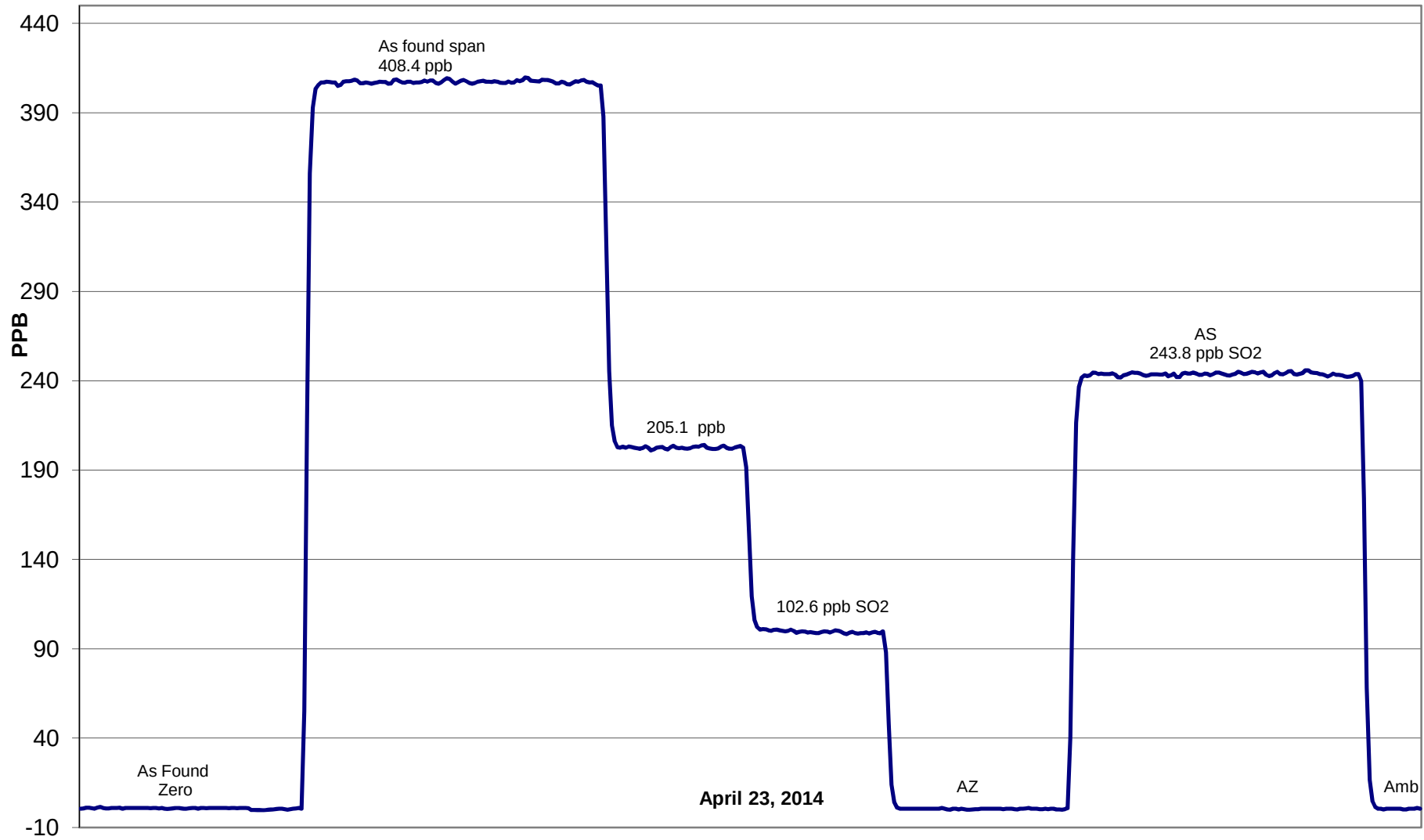
### Calibration Data

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------------|------------------------------------|---------------------------|-------------------------|----------|
| 0.0                                 | 0.4                                | N/A                       | Correlation Coefficient | 0.999916 |
| 408.4                               | 407.2                              | 1.0031                    |                         |          |
| 205.1                               | 202.7                              | 1.0117                    |                         |          |
| 102.6                               | 99.2                               | 1.0340                    | Slope                   | 1.001764 |
|                                     |                                    |                           | Intercept               | 1.341068 |
|                                     |                                    |                           |                         |          |
|                                     |                                    |                           |                         |          |

### SO2 Calibration Curve



## SO2 Calibration



# Calibration Report

Parameter

NO<sub>x</sub>-NO-NO<sub>2</sub>

Air Monitoring Network

PAZA



## Station Information

|                     |                |                      |                |
|---------------------|----------------|----------------------|----------------|
| Calibration Date    | April 23, 2014 | Previous Calibration | March 19, 2014 |
| Station Number      | 10             | Station Location     | Reno           |
| Reason:             | <b>Routine</b> | Install              | Removal        |
| Other:              |                |                      |                |
| Start Time (MST)    | 8:05           | End Time (MST)       |                |
| Barometric Pressure | 0.921 Atm      | Station Temperature  | 20.0 Deg C     |
| Calibrator          | EnviroNics     | Serial Number        | 3016           |
| NO Cal Gas Conc     | 51.3 ppm       | Cal Gas Expiry Date  | March 12, 2014 |
| NOx Cal Gas Conc    | 51.4 ppm       | Cal Gas Serial #     | LL105159       |

## DACS Information

|           |        |                 |      |
|-----------|--------|-----------------|------|
| DACS make | CR3000 | DACS serial No. | 5407 |
|-----------|--------|-----------------|------|

| Parameter     |             | NO2       | NOx       | NO        |
|---------------|-------------|-----------|-----------|-----------|
| Before        | Data Slope  | 1.003473  | 0.997446  | 0.998915  |
|               | Data Offset | 0.442057  | 1.563537  | 1.553933  |
| After         | Data Slope  | 1.002900  | 0.994999  | 0.999479  |
|               | Data Offset | 0.137784  | 1.242109  | 0.935344  |
| Channel #     |             | 5         | 3         | 4         |
| Voltage Range |             | 0 - 5 VDC | 0 - 5 VDC | 0 - 5 VDC |

## Analyzer Information

|                     |         |                   |            |
|---------------------|---------|-------------------|------------|
| Analyzer make/model | TEI 42i | Analyzer serial # | 0701120011 |
|---------------------|---------|-------------------|------------|

| Test Point          | before  |       | after   |       |
|---------------------|---------|-------|---------|-------|
| Concentration range | 0 - 500 | ppb   | 0 - 500 | ppb   |
| NO offset           | 6.3     | mV    | 6.0     | mV    |
| NOx bkgnd           | 6.4     | mV    | 6.2     | mV    |
| NO coefficient      | 1.091   |       | 1.053   |       |
| NOx coefficient     | 0.999   |       | 0.999   |       |
| NO2 conv temp       | 325.8   | Deg C | 326.0   | Deg C |
| Cooler Temp         | -2.8    | Deg C | -2.9    | Deg C |
| PMT Volt            | 845.8   | mV    | 845.8   | mV    |
| R Cell Press        | 196.8   | in Hg | 197.0   | in Hg |
| Sample Flow         | 0.701   | ccm   | 0.707   | ccm   |

NOTES: Slight zero adjustment.  
 Span adjustment made.  
 Converter temp is moving +/-4 C, from 323 C to 326.9C

# Calibration Report

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



## Station Information

Calibration Date: April 23, 2014 Station Location: Reno

## 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                     | 0.0                      | N/A                   | N/A                  |
| 1                         | 4995                     | 39.93                      | 407.6                     | 406.8                    | 0.8                       | 409.0                    | 406.6                   | 0.7                      | 0.9967                | 1.0005               |
| 2                         | 4995                     | 19.97                      | 204.7                     | 204.3                    | 0.4                       | 203.9                    | 202.9                   | 0.2                      | 1.0037                | 1.0069               |
| 3                         | 4995                     | 9.97                       | 102.4                     | 102.2                    | 0.2                       | 100.5                    | 100.4                   | 0.3                      | 1.0192                | 1.0179               |
| AFZ                       | 4995                     | 0.00                       | 0.0                       | 0.0                      | 0.0                       | 0.3                      | 0.1                     | 0.3                      | 0.0000                | 0.0000               |
| AFS                       | 4995                     | 39.93                      | 407.6                     | 406.8                    | 0.8                       | 424.2                    | 422.0                   | 0.5                      | 0.9609                | 0.9641               |
| Average Correction Factor |                          |                            |                           |                          |                           |                          |                         |                          | 1.0065                | 1.0085               |

As Found Concentrations: NO<sub>x</sub>= 425.5 NO= 423.4 As Found Percent Change NO<sub>x</sub>= 4.4% NO= 4.1%

## 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                       | -0.1                     | 0.0                     | 0.0                      | N/A                   | N/A                  | N/A                   | N/A                  |
| NO point                  | 406.2                         | 406.2                        | 0.0                       | 408.3                    | 406.2                   | 0.1                      | 0.9949                | 1.0000               | N/A                   | N/A                  |
| 300                       | 406.2                         | 89.6                         | 316.5                     | 406.8                    | 89.6                    | 315.6                    | 0.9985                | 1.0000               | 1.0029                | 99.7%                |
| 200                       | 406.2                         | 191.5                        | 214.7                     | 407.0                    | 191.5                   | 213.8                    | 0.9980                | 1.0000               | 1.0042                | 99.6%                |
| 100                       | 406.2                         | 293.9                        | 112.3                     | 407.5                    | 293.9                   | 111.7                    | 0.9966                | 1.0000               | 1.0055                | 99.5%                |
| Average Correction Factor |                               |                              |                           |                          |                         |                          | 0.9977                | 1.0000               | 1.0042                | 99.6%                |

## AIC Data

|           | Previous calibration |       |     |     | Current calibration |       |     |     |
|-----------|----------------------|-------|-----|-----|---------------------|-------|-----|-----|
| Parameter | NOx                  | NO2   | NO  |     | NOx                 | NO2   | NO  |     |
| Auto zero | 0.8                  | 0.9   | 0.0 | ppb | 0.2                 | 0.0   | 0.2 | ppb |
| Auto span | 166.3                | 164.3 | 1.4 | ppb | 167.2               | 165.4 | 1.3 | ppb |

Calibration Performed By: Grover Christiansen, Dmytro Dolotii.

## Calibration Summary

Parameter NO<sub>2</sub>

Air Monitoring Network PAZA



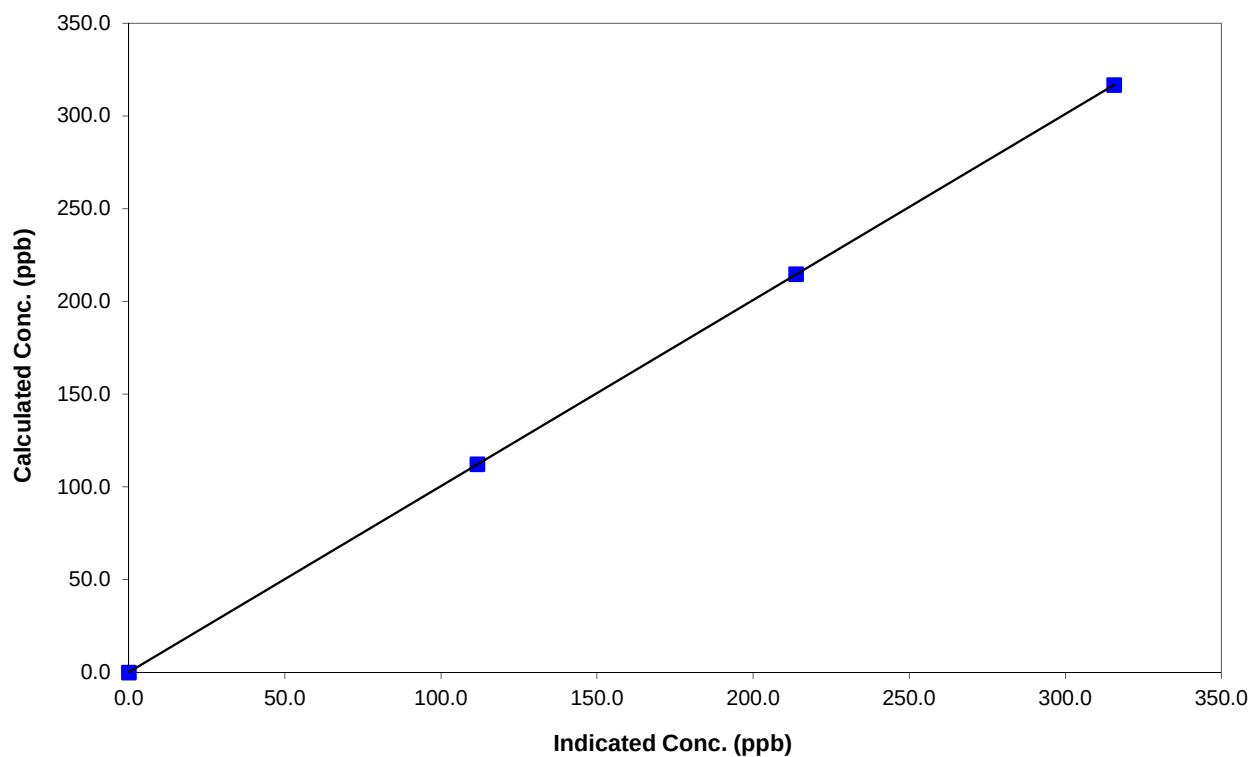
### Station Information

|                  |                |                      |                |
|------------------|----------------|----------------------|----------------|
| Calibration Date | April 23, 2014 | Previous Calibration | March 19, 2014 |
| Station Number   | 10             | Station Location     | Reno           |
| Start Time (MST) | 8:05           | End Time (MST)       | 0:00           |
| Analyzer make    | TEI 42i        | Analyzer serial #    | 0701120011     |

### Calibration Data

| Calculated conc (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|----------------------------|------------------------------------|---------------------------|-------------------------|----------|
| 0.0                        | 0.0                                | N/A                       | Correlation Coefficient | 0.999999 |
| 316.5                      | 315.6                              | 1.0029                    |                         |          |
| 214.7                      | 213.8                              | 1.0042                    |                         |          |
| 112.3                      | 111.7                              | 1.0055                    | Slope                   | 1.002900 |
|                            |                                    |                           | Intercept               | 0.137784 |
|                            |                                    |                           |                         |          |
|                            |                                    |                           |                         |          |

### NO<sub>2</sub> Calibration Curve



## Calibration Summary

Parameter NO<sub>x</sub>

Air Monitoring Network PAZA



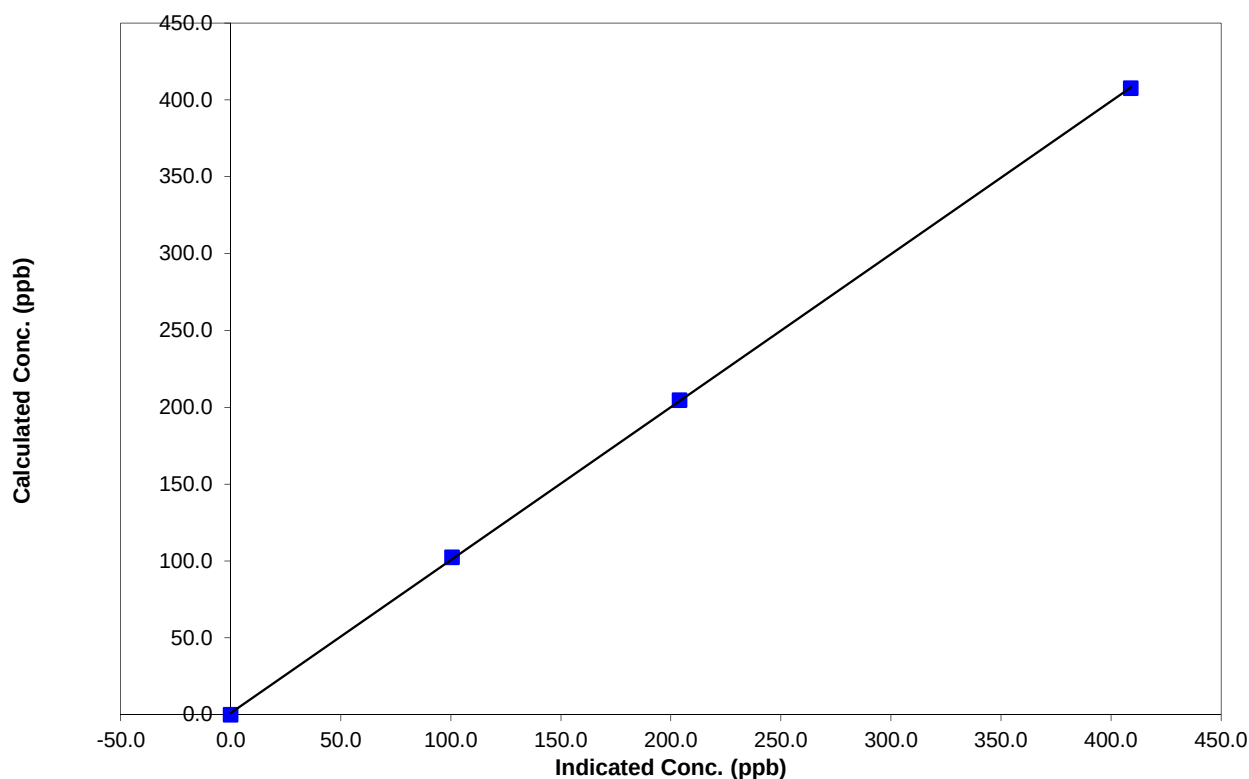
### Station Information

|                  |                |                      |                |
|------------------|----------------|----------------------|----------------|
| Calibration Date | April 23, 2014 | Previous Calibration | March 19, 2014 |
| Station Number   | 10             | Station Location     | Reno           |
| Start Time (MST) | 8:05           | End Time (MST)       | 0:00           |
| Analyzer make    | TEI 42i        | Analyzer serial #    | 0701120011     |

### Calibration Data

| Calculated conc (ppb)<br>(Cc) | Indicated concentration<br>(ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------|---------------------------------------|---------------------------|-------------------------|----------|
| 0.0                           | -0.1                                  | N/A                       | Correlation Coefficient | 0.999963 |
| 407.6                         | 409.0                                 | 0.9967                    |                         |          |
| 204.7                         | 203.9                                 | 1.0037                    |                         |          |
| 102.4                         | 100.5                                 | 1.0192                    | Slope                   | 0.994999 |
|                               |                                       |                           | Intercept               | 1.242109 |
|                               |                                       |                           |                         |          |
|                               |                                       |                           |                         |          |

### NO<sub>x</sub> Calibration Curve



## Calibration Summary

Parameter NO

Air Monitoring Network PAZA



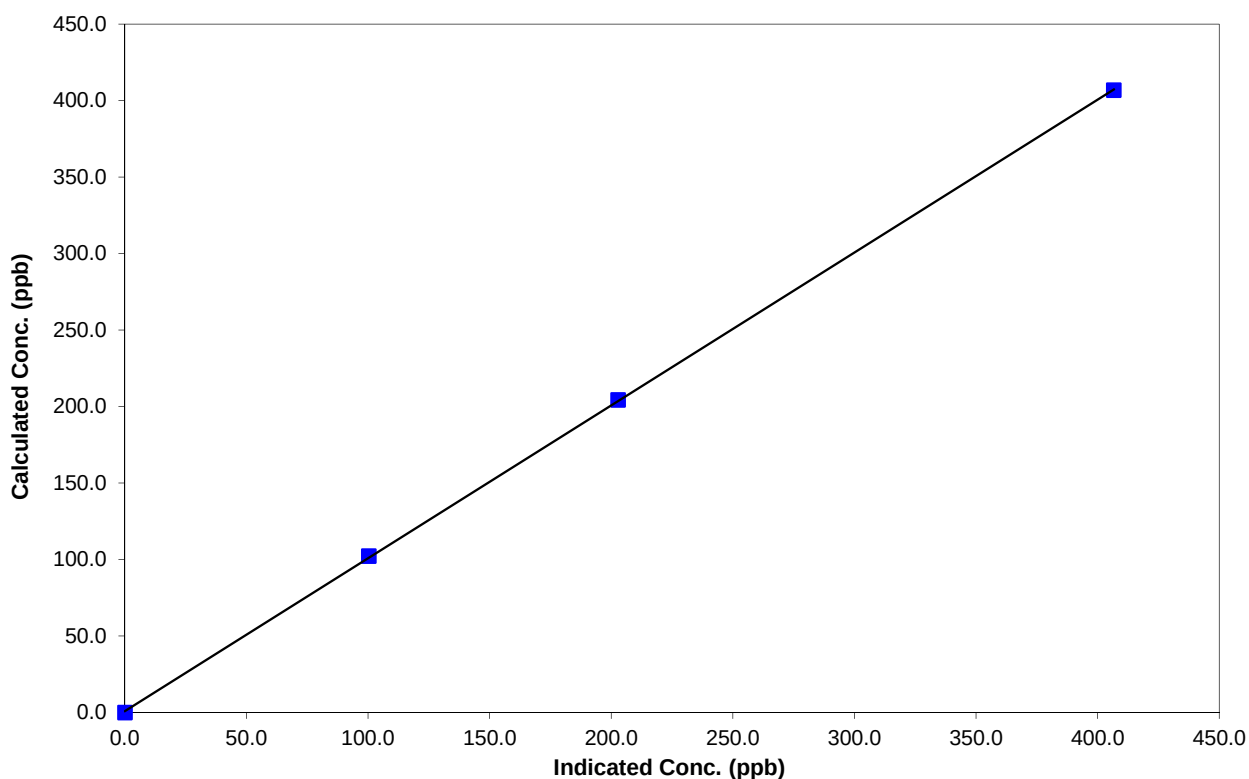
### Station Information

|                  |                |                      |                |
|------------------|----------------|----------------------|----------------|
| Calibration Date | April 23, 2014 | Previous Calibration | March 19, 2014 |
| Station Number   | 10             | Station Location     | Reno           |
| Start Time (MST) | 8:05           | End Time (MST)       | 0:00           |
| Analyzer make    | TEI 42i        | Analyzer serial #    | 0701120011     |

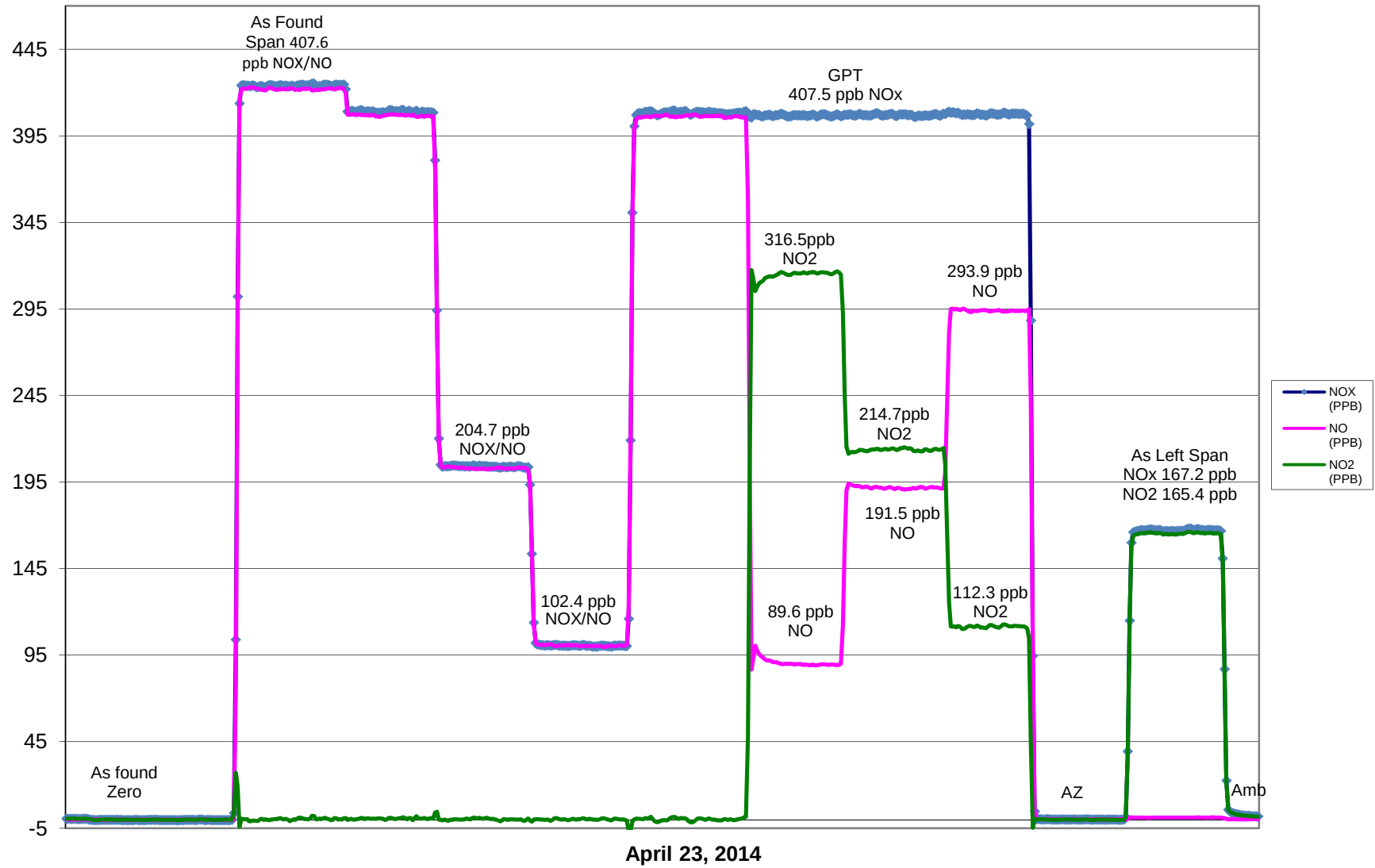
### Calibration Data

| Calculated conc (ppb)<br>(Cc) | Indicated concentration<br>(ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------|---------------------------------------|---------------------------|-------------------------|----------|
| 0.0                           | 0.0                                   | N/A                       | Correlation Coefficient | 0.999974 |
| 406.8                         | 406.6                                 | 1.0005                    |                         |          |
| 204.3                         | 202.9                                 | 1.0069                    |                         |          |
| 102.2                         | 100.4                                 | 1.0179                    | Slope                   | 0.999479 |
|                               |                                       |                           |                         |          |
|                               |                                       |                           | Intercept               | 0.935344 |
|                               |                                       |                           |                         |          |

### NO Calibration Curve



## PAZA Reno NO<sub>x</sub> Calibration





# Calibration Report



Parameter 03

Air Monitoring Network PAZA

## Station Information

|                      |                |                                  |                                                                         |
|----------------------|----------------|----------------------------------|-------------------------------------------------------------------------|
| Calibration Date     | April 23 2014  | Previous Calibration             | March 19 2014                                                           |
| Station Number       | 10             | Station Location                 | Reno                                                                    |
| Reason:              | <b>Routine</b> | <input type="checkbox"/> Install | <input type="checkbox"/> Removal remove <input type="checkbox"/> Other: |
| Start Time (MST)     | 12:21          | End Time (MST)                   | 15:25:00 PM                                                             |
| Barometric Pressure  | 0.921 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     | 1.011276       | Calculated slope                 | 0.996852                                                                |
| Calculated intercept | 1.024588       | Calculated intercept             | 0.745468                                                                |
| Analyzer make        | TEI Model 49C  | Analyzer serial #                | 49C-0609716240                                                          |

|                     | before |       | after  |       |
|---------------------|--------|-------|--------|-------|
| Concentration range | 0-500  | ppb   | 0-500  | ppb   |
| Offset              | 0      | ppb   | 0      | ppb   |
| Span                | 0.988  |       | 0.988  |       |
| Cell A intensity    | 107943 | Hz    | 113584 | Hz    |
| Cell B intensity    | 104497 | Hz    | 109812 | Hz    |
| Pressure            | 664.90 | in Hg | 664.10 | in Hg |
| CellA Flow          | 0.700  | ccm   | 0.699  | ccm   |
| Cell B Flow         | 0.694  | cmm   | 0.693  | 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                                 | 0.0                                | N/A                       |
| 5035                            | 0.30                          | 316.5                               | 317.7                              | 0.9963                    |
| 5035                            | 0.20                          | 214.7                               | 213.7                              | 1.0048                    |
| 5035                            | 0.10                          | 112.3                               | 111.2                              | 1.0102                    |
| 5035                            | 0.00                          | 0.0                                 | 0.0                                | As found zero             |
| 5035                            | 0.30                          | 316.5                               | 317.7                              | As found span             |
| Average Correction Factor       |                               |                                     |                                    | 1.0038                    |

Calculated value of As Found Response: 322.2 ppm Percent Change of As Found: 1.8%

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | -0.1               | ppb | 0.8               | ppb |
| Auto span | 403.2              | ppb | 413.9             | ppb |

Notes: No adjustments made

After zero started dropping from 421ppb to 414ppb. Put it back into internal zero.

By accident press LEVEL 2 button instead of LEVEL 1 which caused the spike

Calibration Performed By: Grover Christiansen, Dmytro Dolotii.

## Calibration Summary

Parameter 03

Air Monitoring Network PAZA



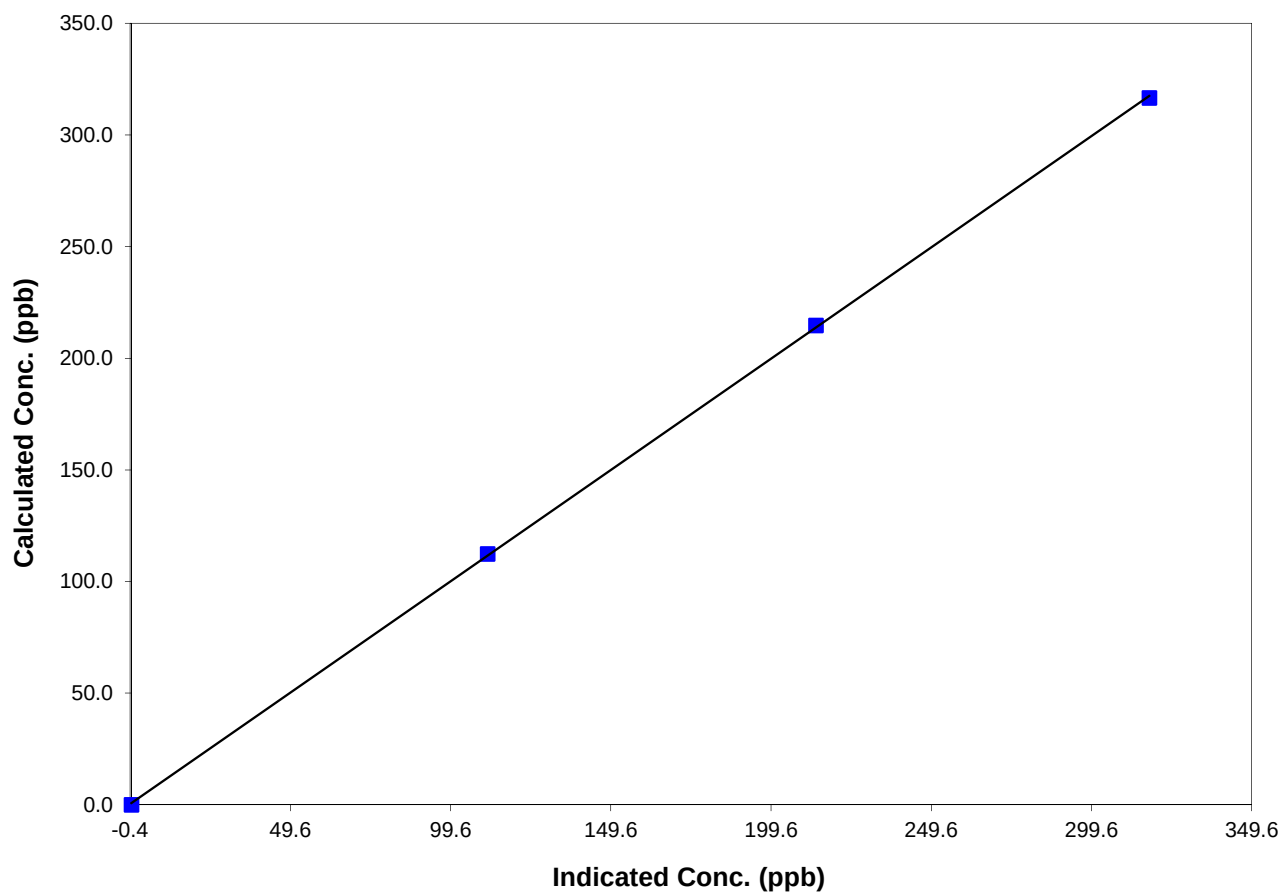
### Station Information

|                     |               |                      |                |
|---------------------|---------------|----------------------|----------------|
| Calibration Date    | April 23 2014 | Previous Calibration | March 19 2014  |
| Station Number      | 10            | Station Location     | Reno           |
| Start Time (MST)    | 12:21         | End Time (MST)       | 15:25:00 PM    |
| Analyzer make/model | TEI Model 49C | Analyzer serial #    | 49C-0609716240 |

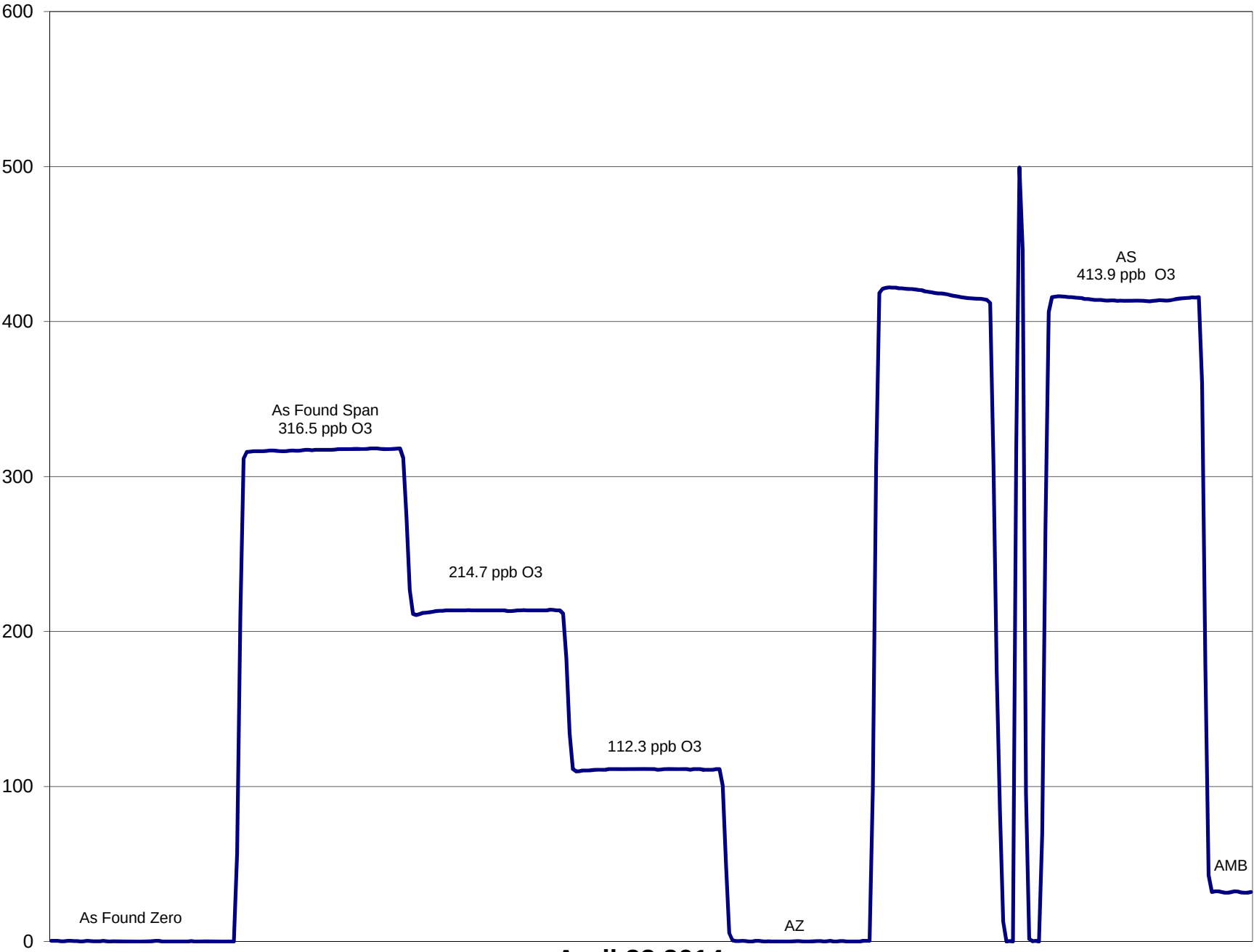
### Calibration Data

| Calculated concentration (ppm) (Cc) | Indicated concentration (ppm) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------------|------------------------------------|---------------------------|-------------------------|----------|
| 0.0                                 | 0.0                                | NA                        | Correlation Coefficient | 0.999947 |
| 316.5                               | 317.7                              | 0.9963                    |                         |          |
| 214.7                               | 213.7                              | 1.0048                    |                         |          |
| 112.3                               | 111.2                              | 1.0102                    | Slope                   | 0.996852 |
|                                     |                                    |                           | Intercept               | 0.745468 |
|                                     |                                    |                           |                         |          |

### O3 Calibration Curve



O3 (PPB)



April 23 2014

# Calibration Report



Parameter TRS

Air Monitoring Network PAZA

## Station Information

|                       |                |                      |               |
|-----------------------|----------------|----------------------|---------------|
| Calibration Date      | April 22 2014  | Previous Calibration | March 19 2014 |
| Station Name          | PAZA Rover     | Station Location     | Reno          |
| Reason:               | <b>Routine</b> | Install              | Removal       |
|                       |                |                      | Other:        |
| Start Time (MST)      | 13:15:00 PM    | End Time (MST)       | 16:30:00 PM   |
| Barometric Pressure   | 0.923 Atm      | Station Temperature  | 20.0 Deg C    |
| Calibrator            | Envionics      | Serial Number        | 3016          |
| Cal Gas Concentration | 10.44 ppm      | Cal Gas Expiry Date  | July/08/2016  |
| Gas Cert Reference    | LL110781       |                      |               |
| DACS make             | CR3000         | DACS serial No.      | 5407          |
| DACS voltage range    | 0 - 5 Volt     | DACS channel #       | 1             |
|                       | <u>Before</u>  |                      | <u>After</u>  |
| DACS Scale High       | 100            | DACS slope           | 100           |
| DACS Scale Low        | 0              | DACS intercept       | 0             |
| Calculated slope      | 1.012795       | Calculated slope     | 1.004377      |
| Calculated intercept  | 0.373808       | Calculated intercept | -0.015737     |
| Analyzer make         | TEI 43C        | Analyzer serial #    | 609716238     |

|                     | before  |      | after   |      |
|---------------------|---------|------|---------|------|
| Concentration range | 0 - 100 | ppb  | 0 - 100 | ppb  |
| Background          | 16.5    | ppb  | 16.6    | ppb  |
| Coefficient         | 1.015   |      | 1.015   |      |
| Lamp Voltage        | 772     | V    | 777     | V    |
| Chamber Temp        | 44      | C    | 43.9    | C    |
| Perm gas Temp       | 45      | C    | 45      | C    |
| Pressure            | 651.6   | mmHg | 648.4   | mmHg |
| Sample Flow         | 0.440   | lpm  | 0.439   | lpm  |
| Lamp Intensity      | 39562   | Hz   | 39151   | Hz   |

## Calibration Data

| Dilution air flow rate (cc/min) | Source gas flow rate (cc/min) | Calculated concentration (ppm) (Cc) | Indicated concentration (ppm) (Ic) | Correction factor (Cc/Ic) |
|---------------------------------|-------------------------------|-------------------------------------|------------------------------------|---------------------------|
| 4995                            | 0.0                           | 0.0                                 | 0.2                                | N/A                       |
| 4995                            | 39.93                         | 82.8                                | 82.5                               | 1.0034                    |
| 4995                            | 19.97                         | 41.6                                | 41.3                               | 1.0060                    |
| 8995                            | 8.97                          | 10.4                                | 10.2                               | 1.0187                    |
| 4995                            | 9.97                          | 102.8                               | 0.8                                | Sox Test                  |
| 4995                            | 0.00                          | 0.0                                 | 0.2                                | As found zero             |
| 4995                            | 39.93                         | 82.8                                | 82.5                               | As found span             |
| Average Correction Factor       |                               |                                     |                                    | 1.0094                    |

Calculated value of As Found Response: 83.74 ppm Percent Change of As Found: -1.1%

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | 0.1                | ppm | 0.3               | ppm |
| Auto span | 65.4               | ppm | 64.6              | ppm |

Notes: No adjustments made, Sox scrubber test performed.

Calibration Performed By: Grover Christiansen, Dmytro Dolotii

## Calibration Summary

Parameter TRS

Air Monitoring Network PAZA



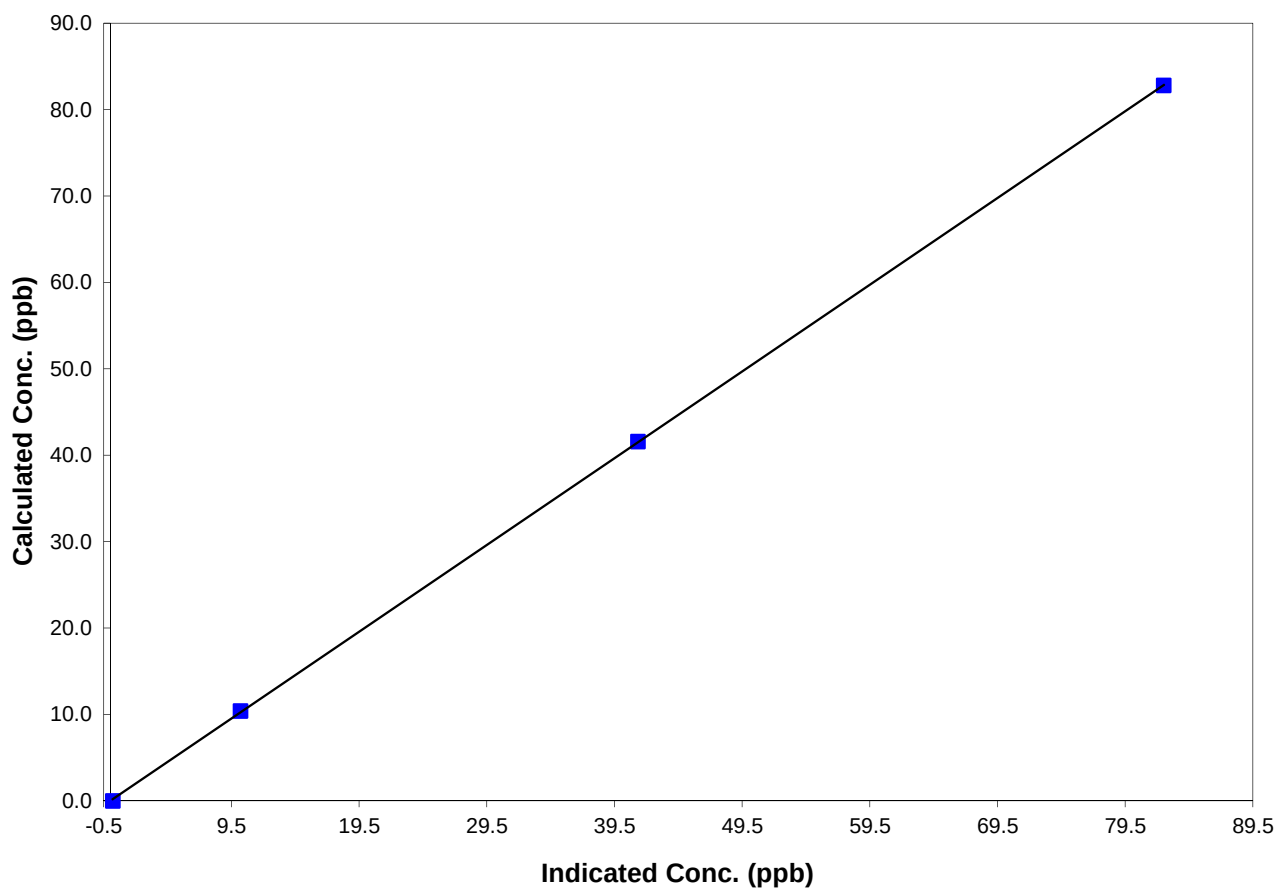
### Station Information

|                     |               |                      |               |
|---------------------|---------------|----------------------|---------------|
| Calibration Date    | April 22 2014 | Previous Calibration | March 19 2014 |
| Station Number      | PAZA Rover    | Station Location     | Reno          |
| Start Time (MST)    | 13:15:00 PM   | End Time (MST)       | 16:30:00 PM   |
| Analyzer make/model | TEI 43C       | Analyzer serial #    | 609716238     |

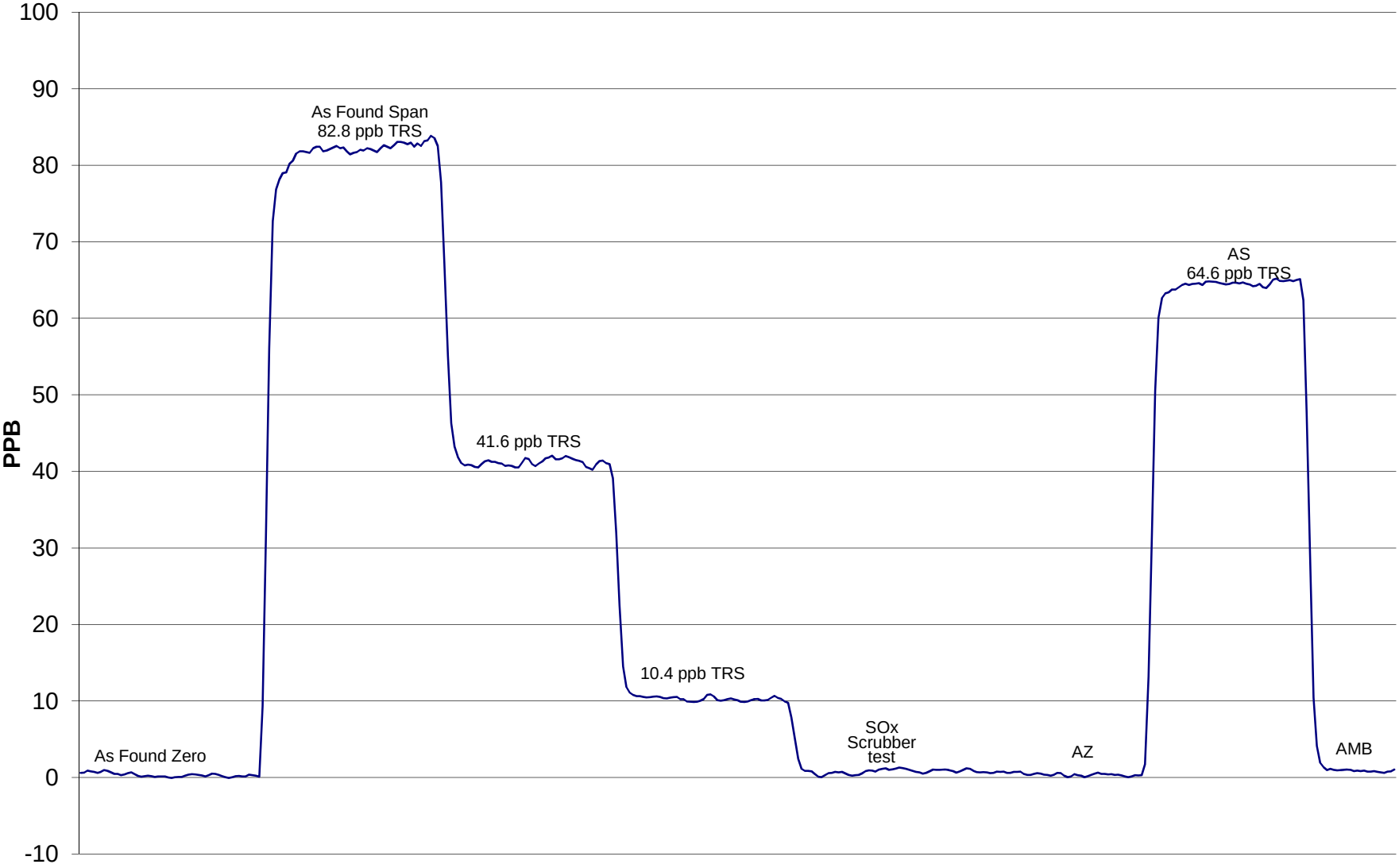
### Calibration Data

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |           |
|-------------------------------------|------------------------------------|---------------------------|-------------------------|-----------|
| 0.0                                 | 0.2                                | N/A                       | Correlation Coefficient | 0.999983  |
| 82.8                                | 82.5                               | 1.0034                    |                         |           |
| 41.6                                | 41.3                               | 1.0060                    |                         |           |
| 10.4                                | 10.2                               | 1.0187                    | Slope                   | 1.004377  |
|                                     |                                    |                           | Intercept               | -0.015737 |

### TRS Calibration Curve



TRS Calibration



April 22 2014

# Calibration Report



Parameter SO<sub>2</sub>

Air Monitoring Network PAZA

## Station Information

|                       |                                             |                                  |                                  |
|-----------------------|---------------------------------------------|----------------------------------|----------------------------------|
| Calibration Date      | April 22, 2014                              | Previous Calibration             | March 18, 2014                   |
| Station Number        | 1                                           | Station Location                 | Falher                           |
| Reason:               | <input checked="" type="checkbox"/> Routine | <input type="checkbox"/> Install | <input type="checkbox"/> Removal |
|                       |                                             | <input type="checkbox"/> Other:  |                                  |
| Start Time (MST)      | 10:00                                       | End Time (MST)                   | 0:40                             |
| Barometric Pressure   | 0.931 ATM                                   | Station Temperature              | 20.0 Deg C                       |
| Calibrator            | EnviroNics                                  | Serial Number                    | 3474                             |
| Cal Gas Concentration | 51.5 ppm                                    | Cal Gas Expiry Date              | 25/02/2025                       |
| 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      | 0.995674                                    | Calculated slope                 | 1.004921                         |
| Calculated intercept  | 0.970044                                    | Calculated intercept             | 1.366471                         |
| Analyzer make         | Teco 43i                                    | Analyzer serial #                | 1207452008                       |

|                     | before  |       | after   |       |
|---------------------|---------|-------|---------|-------|
| Concentration range | 0 - 500 | ppb   | 0 - 500 | ppb   |
| Background          | 7.1     |       | 7.1     |       |
| coefficient         | 0.892   |       | 0.892   |       |
| Lamp Voltage        | 856     | volts | 857     | volts |
| Chamber Temp        | 45.1    | Deg C | 45.2    | Deg C |
| Perm Gas Temp       | 45      | Deg C | 45      | Deg C |
| Pressure            | 672.2   | mm Hg | 674.3   | mm Hg |
| Sample Flow         | 0.410   | ccm   | 0.411   | 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                                | 0.3                                | N/A                       |
| 4995                            | 39.93                            | 408.4                               | 405.8                              | 1.0065                    |
| 4995                            | 19.96                            | 205.0                               | 202.1                              | 1.0144                    |
| 4995                            | 9.97                             | 102.6                               | 98.9                               | 1.0374                    |
|                                 |                                  |                                     |                                    |                           |
| 4995                            | 0.0                              | 0.0                                 | 0.3                                | As Found Zero             |
| 4995                            | 39.93                            | 408.4                               | 405.8                              | As Found Span             |
| Average Correction Factor       |                                  |                                     |                                    | 1.0194                    |

Calculated value of As Found Response: 404.696 ppm Percent Change of As Found: 0.9%

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | 0.5                | ppm | 0.3               | ppm |
| Auto span | 359.4              | ppm | 355.7             | ppm |

Notes: No adjustments made

Calibration Performed By: Grover Christiansen, Dmytro Dolotii

## Calibration Summary

Parameter SO2

Air Monitoring Network PAZA



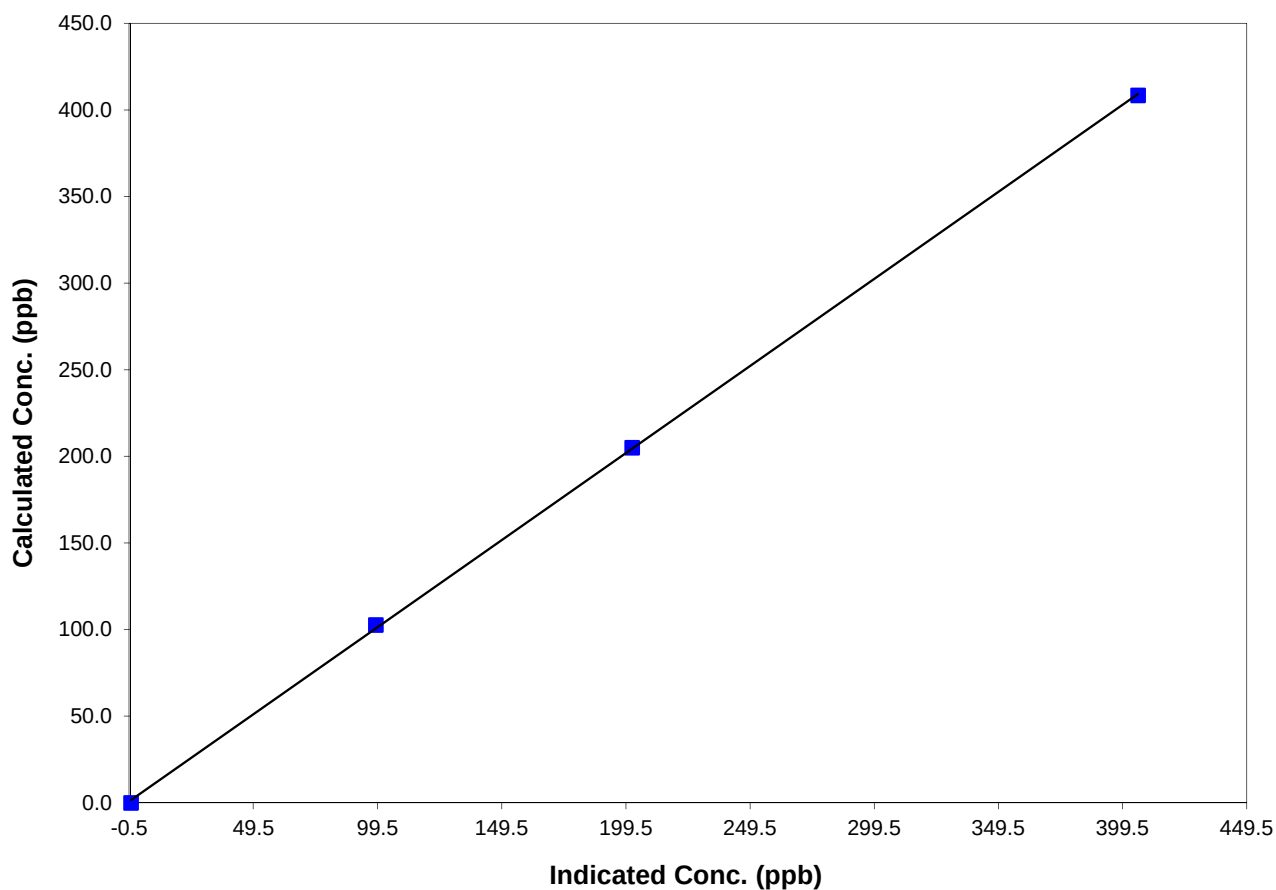
### Station Information

|                     |                |                      |                |
|---------------------|----------------|----------------------|----------------|
| Calibration Date    | April 22, 2014 | Previous Calibration | March 18, 2014 |
| Station Number      | 1              | Station Location     | Falher         |
| Start Time (MST)    | 10:00          | End Time (MST)       | 0:40           |
| Analyzer make/model | Teco 43i       | Analyzer serial #    | 1207452008     |

### Calibration Data

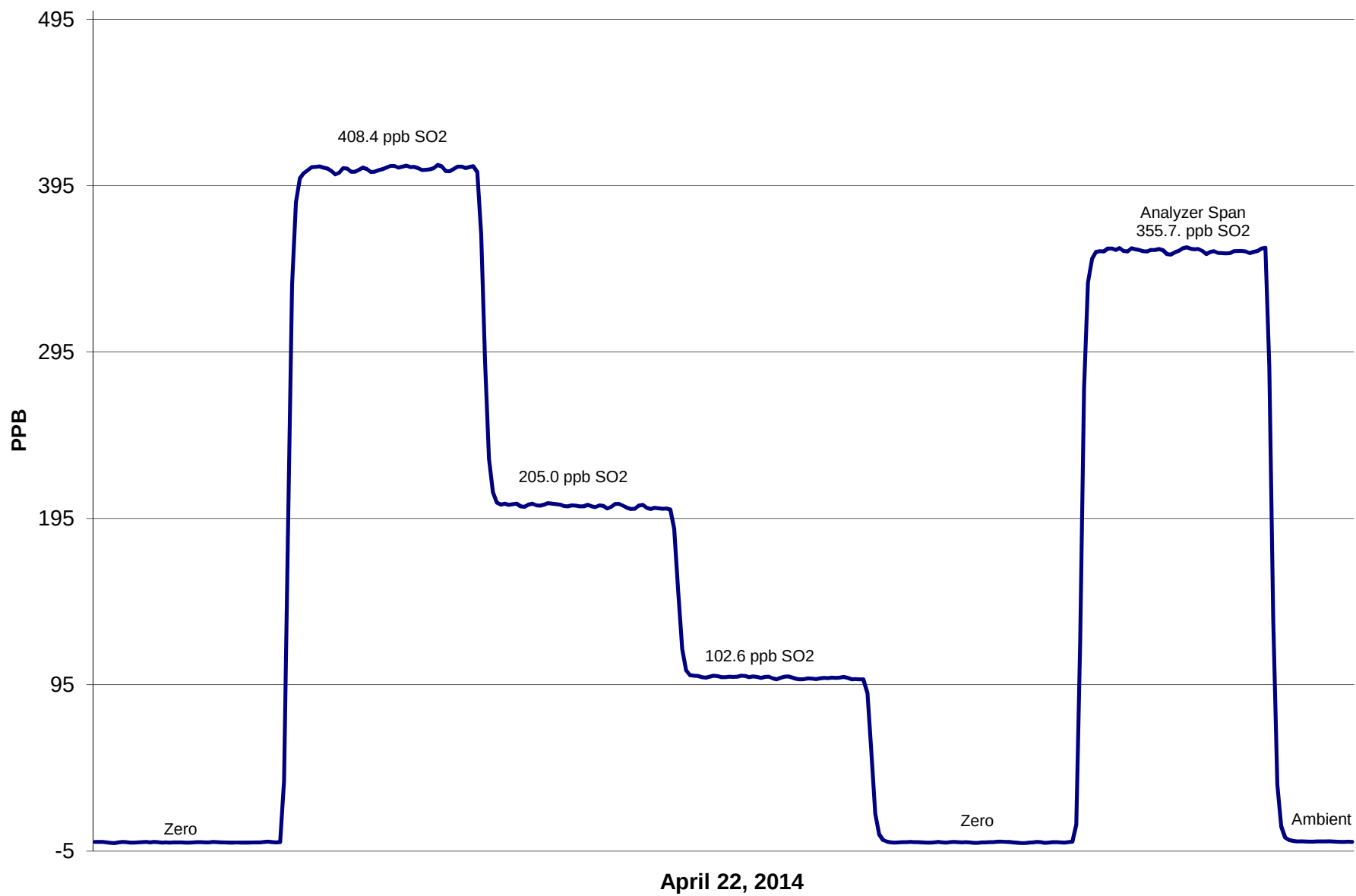
| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation  |          |
|-------------------------------------|------------------------------------|---------------------------|-------------------------|----------|
| 0.0                                 | 0.3                                | N/A                       | Correlation Coefficient | 0.999923 |
| 408.4                               | 405.8                              | 1.0065                    |                         |          |
| 205.0                               | 202.1                              | 1.0144                    |                         |          |
| 102.6                               | 98.9                               | 1.0374                    | Slope                   | 1.004921 |
|                                     |                                    |                           |                         |          |
|                                     |                                    |                           | Intercept               | 1.366471 |
|                                     |                                    |                           |                         |          |

### SO2 Calibration Curve





## SO2 Calibration



# Calibration Report



Parameter H2S

Air Monitoring Network PAZA

## Station Information

|                      |                                             |                                  |                                  |
|----------------------|---------------------------------------------|----------------------------------|----------------------------------|
| Calibration Date     | April 22, 2014                              | Previous Calibration             | March 18, 2014                   |
| Station Number       | 1                                           | Station Location                 | Falher                           |
| Reason:              | <input checked="" type="checkbox"/> Routine | <input type="checkbox"/> Install | <input type="checkbox"/> Removal |
|                      |                                             | <input type="checkbox"/> Other:  |                                  |
| Start Time (MST)     | 7:45                                        | End Time (MST)                   | 12:35                            |
| 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     | 0.965754                                    | Calculated slope                 | 0.972893                         |
| Calculated intercept | -0.303982                                   | Calculated intercept             | -0.629605                        |

Analyzer make Thermo 450i Analyzer serial # 1207452006

|                     | before  |       | after   |       |
|---------------------|---------|-------|---------|-------|
| Concentration range | 0 - 100 | ppb   | 0 - 100 | ppb   |
| Background          | 13.6    | ppb   | 13.6    | ppb   |
| coefficient         | 1.169   |       | 1.169   |       |
| Lamp Voltage        | 806     | volts | 807     | volts |
| Chamber Temp        | 45.1    | Deg C | 45.1    | Deg C |
| Perm Gas Temp       | 45      | Deg C | 45.1    | Deg C |
| Pressure            | 564.3   | mm Hg | 563.4   | mm Hg |
| Sample Flow         | 0.904   | lpm   | 0.902   | lpm   |
| Lamp Intensity      | 90      | mv    | 90      | mv    |

## Calibration Data

| Dilution air flow rate (cc/min) | Corrected gas flow rate (cc/min) | Calculated concentration (ppb) (Cc) | Indicated concentration (ppm) (Ic) | Correction factor (Cc/Ic) |
|---------------------------------|----------------------------------|-------------------------------------|------------------------------------|---------------------------|
| 4995                            | 0.00                             | 0.00                                | 0.8                                | N/A                       |
| 4995                            | 39.93                            | 82.48                               | 85.6                               | 0.9641                    |
| 4995                            | 19.96                            | 41.39                               | 42.9                               | 0.9638                    |
| 8994                            | 8.97                             | 10.36                               | 11.2                               | 0.9218                    |
|                                 |                                  |                                     |                                    |                           |
|                                 |                                  |                                     |                                    |                           |
| 4995                            | 0.00                             | 0.00                                | 0.8                                | As Found Zero             |
| 4995                            | 39.93                            | 82.48                               | 85.6                               | As Found Span             |
| Average Correction Factor       |                                  |                                     |                                    | 0.9499                    |

Calculated value of As Found Response: 81.53 ppm Percent Change of As Found: 1.2%

|           | before calibration |     | after calibration |     |
|-----------|--------------------|-----|-------------------|-----|
| Auto zero | 0.0                | ppm | 0.2               | ppm |
| Auto span | 51.2               | ppm | 55.8              | ppm |

Notes: No adjustments made

Calibration Performed By: Grover Christiansen, Dmytro Dolotii

## Calibration Summary

Parameter H2S

Air Monitoring Network PAZA



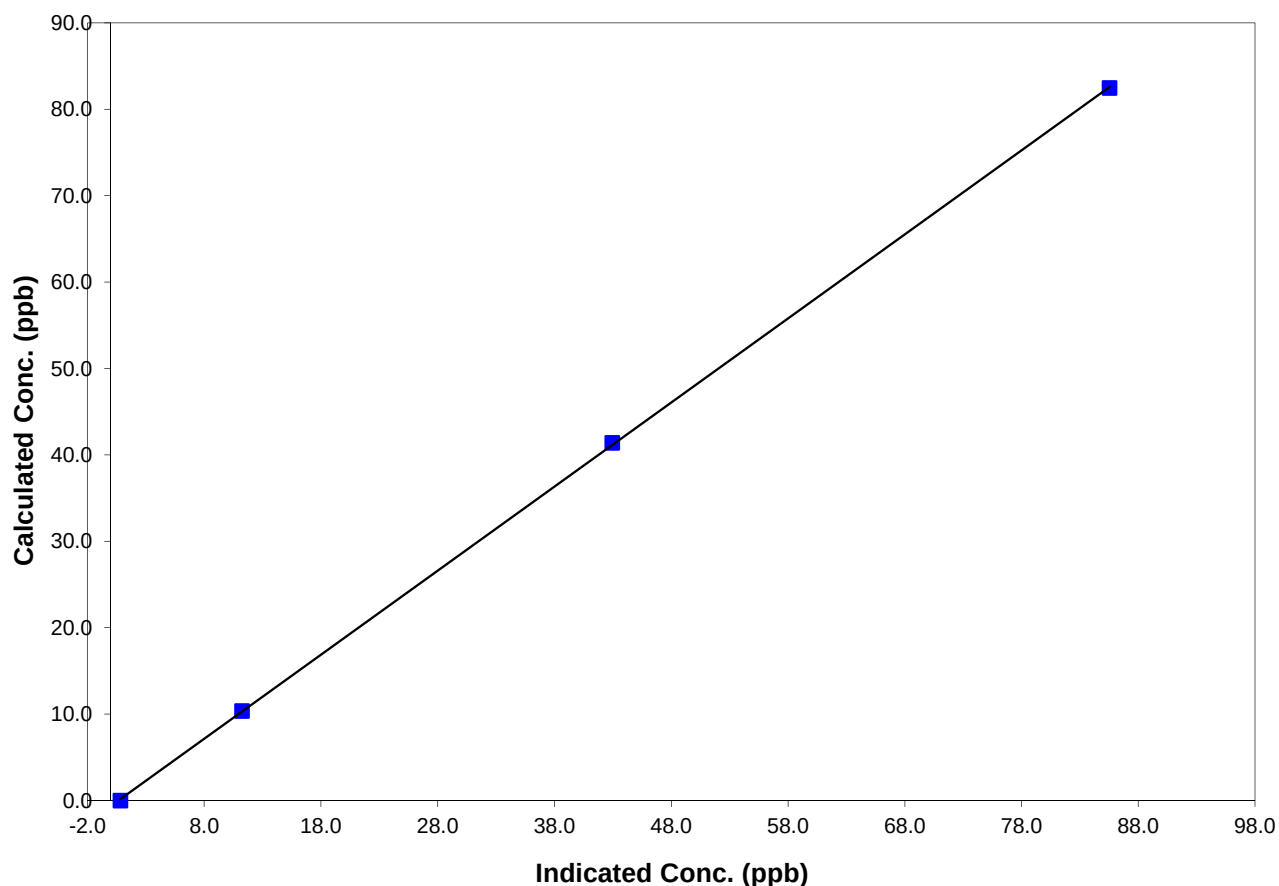
### Station Information

|                     |                |                      |                |
|---------------------|----------------|----------------------|----------------|
| Calibration Date    | April 22, 2014 | Previous Calibration | March 18, 2014 |
| Station Number      | 1              | Station Location     | Falher         |
| Start Time (MST)    | 7:45           | End Time (MST)       | 12:35          |
| 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                                 | 0.8                                | N/A                       | Correlation Coefficient | 0.999975  |
| 82.5                                | 85.6                               | 0.9641                    |                         |           |
| 41.4                                | 42.9                               | 0.9638                    |                         |           |
| 10.4                                | 11.2                               | 0.9218                    | Slope                   | 0.972893  |
|                                     |                                    |                           | Intercept               | -0.629605 |

### TRS Calibration Curve



## H2S Calibration

