# Air Quality Monitoring Network for November 2006

Prepared by

FOCUS
AMBIENT AIR MONITORING

**Airshed Zone Association – November 2006 PASZA Ambient Air Report** ..... **2**
**PASZA Monthly Continuous Data Summary** ..... 9
**PASZA - Henry Pirker - AQI Monthly Summary** ..... 16
**PASZA - Henry Pirker - Sulphur Dioxide Monthly Summary** ..... 17
**PASZA - Henry Pirker - Nitrogen Dioxide Monthly Summary** ..... 22
**PASZA - Henry Pirker - Nitric Oxide Monthly Summary** ..... 27
**PASZA - Henry Pirker - Oxides of Nitrogen Monthly Summary** ..... 28
**PASZA - Henry Pirker - Ozone Monthly Summary** ..... 33
**PASZA - Henry Pirker - Ozone Monthly Summary** ..... 38
**PASZA - Henry Pirker - Carbon Monoxide Monthly Summary** ..... 39
**PASZA - Henry Pirker - Carbon Monoxide Monthly Summary** ..... 44
**PASZA - Henry Pirker - Total Hydrocarbons Monthly Summary** ..... 45
**PASZA - Henry Pirker - Total Reduced Sulphur Monthly Summary** ..... 50
**PASZA - Henry Pirker - Particulate Matter (less than 2.5 microns) Monthly Summary** ..... 55
**PASZA - Henry Pirker - Relative Humidity Monthly Summary** ..... 60
**PASZA - Henry Pirker - Temperature Monthly Summary** ..... 62
**PASZA - Henry Pirker - Solar Radiation Monthly Summary** ..... 64
**PASZA - Henry Pirker - Scalar Wind Speed Monthly Summary** ..... 66
**PASZA - Henry Pirker - Vector Wind Speed Monthly Summary** ..... 67
**PASZA - Henry Pirker - Wind Direction Monthly Summary** ..... 68
**PASZA - Henry Pirker - Standard Deviation of Wind Direction Monthly Summary** ..... 69
**PASZA - Evergreen Park - Sulphur Dioxide Monthly Summary** ..... 72
**PASZA - Evergreen Park - Total Reduced Sulphur Monthly Summary** ..... 77
**PASZA - Evergreen Park - Particulate Matter (less than 2.5 microns) Monthly Summary** ..... 82
**PASZA - Evergreen Park - Temperature Monthly Summary** ..... 87
**PASZA - Evergreen Park - Scalar Wind Speed Monthly Summary** ..... 89
**PASZA - Evergreen Park - Vector Wind Speed Monthly Summary** ..... 90
**PASZA - Evergreen Park - Wind Direction Monthly Summary** ..... 91
**PASZA - Evergreen Park - Standard Deviation of Wind Direction Monthly Summary** ..... 92
**PASZA - Smoky Heights - Sulphur Dioxide Monthly Summary** ..... 95
**PASZA - Smoky Heights - Total Reduced Sulphur Monthly Summary** ..... 100
**PASZA - Smoky Heights - Particulate Matter (less than 2.5 microns) Monthly Summary** ..... 105
**PASZA - Smoky Heights - Temperature Monthly Summary** ..... 110
**PASZA - Smoky Heights - Scalar Wind Speed Monthly Summary** ..... 112
**PASZA - Smoky Heights - Vector Wind Speed Monthly Summary** ..... 113
**PASZA - Smoky Heights - Wind Direction Monthly Summary** ..... 114
**PASZA - Smoky Heights - Standard Deviation of Wind Direction Monthly Summary** ..... 115
**PASZA - Beaverlodge - AQI Monthly Summary** ..... 118
**PASZA - Beaverlodge - Sulphur Dioxide Monthly Summary** ..... 119
**PASZA - Beaverlodge - Nitrogen Dioxide Monthly Summary** ..... 124
**PASZA – Beaverlodge - Nitric Oxide Monthly Summary** ..... 129
**PASZA - Beaverlodge - Oxides of Nitrogen Monthly Summary** ..... 130
**PASZA - Beaverlodge - Ozone Monthly Summary** ..... 135
**PASZA – Beaverlodge - Ozone Monthly Summary** ..... 140
**PASZA - Beaverlodge - Particulate Matter (less than 2.5 microns) Monthly Summary** ..... 141
**PASZA – Beaverlodge - Relative Humidity Monthly Summary** ..... 146
**PASZA – Beaverlodge - Temperature Monthly Summary** ..... 148
**PASZA - Beaverlodge - Scalar Wind Speed Monthly Summary** ..... 150

**PASZA - Beaverlodge - Vector Wind Speed Monthly Summary** ..... 151
**PASZA - Beaverlodge - Wind Direction Monthly Summary** ..... 152
**PASZA - Beaverlodge - Standard Deviation of Wind Direction Monthly Summary** ..... 153
**PASZA - Portable-Fahler - Sulphur Dioxide Monthly Summary** ..... 156
**PASZA - Portable-Fahler - Ozone Monthly Summary** ..... 161
**PASZA - Portable-Fahler - Ozone Monthly Summary** ..... 166
**PASZA - Portable-Fahler - Total Reduced Sulphur Monthly Summary** ..... 167
**PASZA - Portable-Fahler - Relative Humidity Monthly Summary** ..... 172
**PASZA - Portable-Fahler - Temperature Monthly Summary** ..... 174
**PASZA - Portable-Fahler - Scalar Wind Speed Monthly Summary** ..... 176
**PASZA - Portable-Fahler - Vector Wind Speed Monthly Summary** ..... 177
**PASZA - Portable-Fahler - Wind Direction Monthly Summary** ..... 178
**PASZA - Portable-Fahler - Standard Deviation of Wind Direction Monthly Summary** ..... 179
**PASZA - Valleyview - Sulphur Dioxide Monthly Summary** ..... 182
**PASZA - Valleyview - Hydrogen Sulphide Monthly Summary** ..... 187
**PASZA – Valleyview - Relative Humidity Monthly Summary** ..... 192
**PASZA - Valleyview - Temperature Monthly Summary** ..... 194
**PASZA - Valleyview - Scalar Wind Speed Monthly Summary** ..... 196
**PASZA - Valleyview - Vector Wind Speed Monthly Summary** ..... 197
**PASZA - Valleyview - Wind Direction Monthly Summary** ..... 198
**PASZA - Valleyview - Standard Deviation of Wind Direction Monthly Summary** ..... 199
**PASZA Passive Stations for November 2006** ..... 202
**November 2006 Calibration Reports** ..... 213

January 15, 2007

Environmental Service Response Centre
Alberta Environment
#111 Twin Atria Building
4999-98th Avenue
Edmonton, Alberta T6B 2X3

**RE: Peace Airshed Zone Association (PASZA) – November Ambient Air Report**

Enclosed is the PASZA Ambient Monitoring Network Report for the month of **November 2006**.

**Continuous Monitoring:** **Six (6) Stations including Henry Pirker (Grande Prairie), Evergreen Park, Smoky Heights, Beaverlodge, Falher (portable) and Valleyview.**

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 Summary" and "Continuous Monitoring" pages of the report. The measured ambient air quality was within the Provincial and Federal objectives.

During the month of November the following events were noted:

**Henry Pirker Station:**

- Temperature fluctuations in the station appear to have continued affect on the spans of many of the analyzers in the station (TRS, THC, CO and $O_3$):
  - There were no THC and CO spans until November 6th.
  - From November 8th to 13th the THC analyzer span cylinder pressure was low.
  - TRS spans unstable throughout month, investigation of problem ongoing.
  - $O_3$ span unstable until November 17th, (station temperature became stable after the 17th).
- Air conditioner contractor was involved in repairs and adjustments throughout several periods of November.
- Maintenance activity at the staton resulted in one (1) hour of invalid data on November 20th for the $NO_X$ analyzer.
- The wind speed and wind direction sensors were down for one (1) hour on November 20th for maintenance.
- The TEOM analyzer had nine (9) hours of data invalidated on November 10th (the station temperature reached 50°C on November 10th).
- All analyzers / sensors at the Henry Pirker station were above 90% uptime.
- The AQI for the month resulted in 675 hours of Good readings.

**Evergreen Park Station:**

- Ten (10) hours data were invalidated on November 1st (a continuation from October, when the power bar at the station tripped due to a power surge, which resulted in the pumps from the $SO_2$, TRS and TEOM to fail - AENV reference #179107).

- The TRS analyzer had an additional four (4) hours of data removed on November 1st as the analyzer was slow to respond after the power was restored and the spans were triggered.
- The spans on the $SO_2$ analyzer slowly declined throughout the month.
- All analyzers / sensors at the Evergreen Park station were above 90% uptime.

**Smoky Heights Station:**

- On November 8th there was an instantaneous (30 seond) reading of 24 ppb (hour average of 5 ppb) at 14:00. The wind direction was from the west-southwest (WSW) at 11 km/hr.
- The wind speed sensor was frozen from November 15th to November 19th. An attempt was made on November 17 to try and get the sensor working again but to no avail. The non-compliance of less than 90% has been assigned AENV reference number 181686.
- There was an elevated TRS reading (5 ppb) on November 8th with winds coming from the west-southwest.
- All analyzers / sensors (except the wind sensor) at the Smoky Heights station were above 90% uptime.

**Beaverlodge Station:**

- All analyzers / sensors at the Beaverlodge station were above 90% uptime.
- The AQI for the month resulted in 684 hours of Good readings.

**Portable - Falher Station:**

- Data capture was extremely intermittent during the month of November; the PC was infected with viruses. In addition, the original modem that was commissioned with the station was utilized to replace the problematic modem at Beaverlodge and Telus was unable to provide a new modem in a timely fashion. The original Beaverlodge modem did not operate to transmit data regularily from the Falher station. Both the PC and the modem have been replaced in order to ensure ongoing real-time communication with modified security access.
- On November 6th a power spike caused the ultrasonic wind sensor to freeze up. This problem was rectified when the technician was on site on November 17th and the system was reset. This situation would have been caught earlier had continuous communications been available. The non-compliance of less than 90% has been assigned AENV reference number 181588. The ultrasonic has since then been powered through the uninterruptible power supply (UPS) at the station.
- A number of events transpired which resulted in the non-compliance of less than 90% uptime for all parameters ($SO_2$, TRS, $O_3$, wind speed, wind direction and temperature). On November 21st a transformer went down just outside the station, creating a power failure at the station (the transformer has since been repaired by ATCO Electric). When power was restored all the equipment restarted except the DACS. Thus the data was not being recorded. This issue was not caught due to the modem being disconnected and communication was not available to indicate an issue. A new modem was installed on November 27th, and the DACS / PC were repaired and operating by November 28th. A new UPS backup has been incorporated to prevent future occurance. The non-compliance has been assigned AENV reference number 181549.

**Valleyview Station:**

- The $SO_2$ internal span system remained affected by station temperature until November 9th when new perm tube was installed, along with other maintenance activities, and the analyzer was allowed to stabilize over night. By evening of November 10th the analyzer was operating better, however the spans were offscale. On November 17th a calibration along with further adjustment was brought the spans to scale. All $SO_2$ functions since then have been consistent and stable.
- The $SO_2$ data was reported to the nearest 0.01 ppm due to the condition of the analyzer. This analyzer will be replaced with a new one (with a target of early February, 2007).
- A new perm tube was installed on November 9th in the $H_2S$ analyzer.
- All analyzers / sensors at the Valleyview station were above 90% uptime.

**Passive Monitoring: 43 Stations throughout the PASZA zone:**

There were two sample sites, Sylvester and Karr Creek, where the passive samples were not retrieved in the month of October due to road closures, these samples were retrieved in November. The results for these two samples were over a two month period.

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

- Monthly average concentrations for $SO_2$ passives ranged from 0.2 ppb to 1.0 ppb, with a mean of 0.6 ppb.
- Monthly average concentrations for $NO_2$ passives ranged from 1.1 ppb to 13.5 ppb, with a mean of 3.0 ppb.
- Monthly average concentrations for $O_3$ passives ranged from 20.6 ppb to 42.7 ppb, with a mean of 34.6 ppb.

If you have any questions, please contact the Focus office at 1-888-869-2252 (Gary Cross) or 1-888-466-6555 (Kevin McCullum).

On Behalf of the,
Peace Airshed Zone Association

Kevin Warren
PASZA Technical Program Manager

Kevin McCullum, Ph.D., P.Eng.
AQM Environmental Engineer

December 21, 2006

Alberta Environment
Environmental Service Response Centre
111, Twin Atria Building
4999 - 98 Avenue
Edmonton, Alberta, T6B 2X3

**RE: PASZA Air Monitoring Directive Non-compliance Report Ref # 181549**

A non-compliance of the Alberta Air Monitoring Directive was recently reported by FOCUS to Alberta Environment (AENV) on behalf of the Peace Airshed Zone Association (PASZA). A number of events transpired which resulted in the non-compliance of less than 90% uptime for all parameters ($SO_2$, TRS, $O_3$, wind speed, wind direction and temperature) at the Falher (portable) air monitoring station. On November 21st a transformer went down just outside the station, creating a power failure at the station (the transformer has since been repaired by ATCO Electric). When power was restored all the equipment restarted except the DACS. Thus the data was not being recorded. This issue was not caught due to the modem being disconnected and communication was not available to indicate an issue. A new modem had been ordered and was to be installed upon arrival; it was at this time that the issue was caught. The new modem was installed on November 27th, and the DACS was repaired and operating by November 28th. This station is owned by PASZA and operated on their behalf by FOCUS. The non-compliance has been assigned AENV reference number 181549.

If there are any questions or concerns please call Sharon Whiteley or Kelly Baragar at your convenience at (403) 269-2252.

Sincerely,

THE FOCUS CORPORATION

Sharon Whiteley, B.Sc.
AQM Data Specialist

December 21, 2006

Alberta Environment
Environmental Service Response Centre
111, Twin Atria Building
4999 - 98 Avenue
Edmonton, Alberta, T6B 2X3

**RE: PASZA Air Monitoring Directive Non-compliance Report Ref # 181588**

A non-compliance of the Alberta Air Monitoring Directive was recently reported by FOCUS to Alberta Environment (AENV) on behalf of the Peace Airshed Zone Association (PASZA). A number of events transpired which resulted in the non-compliance of less than 90% uptime for the wind speed and wind direction sensors at the Falher (portable) air monitoring station. On November 6th a power spike caused the ultrasonic wind sensor to freeze up. This problem was rectified when the technician was on site on November 17th and the system was reset. It was at this time that it was discovered that the DACS (Data Acquisition System) had problems with viruses, compounded with a faulty modem. This situation would have been caught earlier had continuous communications been available. Both the DACS and the modem have been replaced in order to ensure ongoing communication. This station is owned by PASZA and operated on their behalf by FOCUS. The non-compliance has been assigned AENV reference number 181588.

If there are any questions or concerns please call Sharon Whiteley or Kelly Baragar at your convenience at (403) 269-2252.

Sincerely,

THE FOCUS CORPORATION

Sharon E. Whiteley

Sharon Whiteley, B.Sc.
AQM Data Specialist

January 4, 2007

Alberta Environment
Environmental Service Response Centre
111, Twin Atria Building
4999 - 98 Avenue
Edmonton, Alberta, T6B 2X3

**RE: PASZA Air Monitoring Directive Non-compliance Report Ref # 181686**

A non-compliance of the Alberta Air Monitoring Directive was recently reported by FOCUS to Alberta Environment (AENV) on behalf of the Peace Airshed Zone Association (PASZA). The non-compliance was less than ninety (90%) percent uptime for the month of November 2006 for the wind speed parameter. This situation occurred at the Smoky Heights air monitoring station (located NE of Teepee Creek) from November 15th to November 19th. The wind speed sensor at this location became frozen due to rain, snow and freezing temperatures. An attempt was made on November 17th to free the anemometer but it was met with no success, it was eventually freed on November 19th. The station is owned by PASZA and operated on their behalf by Focus. The non-compliance has been assigned AENV reference number 181686.

If there are any questions or concerns please call Sharon Whiteley or Kelly Baragar at your convenience at (403) 269-2252.

Sincerely,

THE FOCUS CORPORATION

Sharon E Whiteley

Sharon Whiteley, B.Sc.
AQM Data Specialist

# PASZA Monthly Continuous Data Summary

| Nov-2006 | Peace Airshed Zone Assocation | | | | | | Maximum Recorded Values | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1-hr | | | | 24-hr / 8-hr | | |
| Pollutant | Objectives | | Station | Monthly | Exceedence | | Conc | Day | WSPD | WDIR | Conc | Day | Operational |
| (units) | 1-hr | 24-hr | | Average | 1-hr | 24-hr | | | (km/hr ) | (Sector) | | | Time (%) |
| $SO_2$ (ppb) | 172 | 57 | Henry Pirker | 0.8 | 0 | 0 | 5.6 | Nov-15 03:00 | 12.4 | SW | 1.6 | Nov-30 | 100.0% |
| $SO_2$ (ppb) | 172 | 57 | Evergreen Park | 1.1 | 0 | 0 | 8.6 | Nov-10 12:00 | 3.9 | SW | 2.0 | Nov-10 | 98.6% |
| $SO_2$ (ppb) | 172 | 57 | Smoky Heights | 0.6 | 0 | 0 | 13.9 | Nov-08 14:00 | 11.4 | WSW | 2.3 | Nov-29 | 100.0% |
| $SO_2$ (ppb) | 172 | 57 | Beaverlodge | 1.1 | 0 | 0 | 9.1 | Nov-04 22:00 | 7.8 | NNE | 2.2 | Nov-13 | 100.0% |
| $SO_2$ (ppb) | 172 | 57 | Portable-Fahler | 0.4 | 0 | 0 | 2.8 | Nov-04 10:00 | 11.3 | NE | 0.8 | Nov-29 | 76.4% |
| $SO_2$ (ppm) | 0.172 | 0.057 | Valleyview | 0.00 | 0 | 0 | 0.01 | Nov-19 20:00 | 18.9 | W | 0.00 | Nov-19 | 96.4% |
| NO (ppb) | | | Henry Pirker | 15.8 | - | - | 219.3 | Nov-20 18:00 | 6.6 | NNE | 62.0 | Nov-17 | 99.9% |
| $NO_2$ (ppb) | 212 | 106 | Henry Pirker | 17.2 | 0 | 0 | 57.6 | Nov-20 16:00 | 6.0 | E | 35.7 | Nov-20 | 99.9% |
| $NO_X$ (ppb) | | | Henry Pirker | 33.1 | - | - | 276.6 | Nov-20 18:00 | 6.6 | NNE | 93.1 | Nov-20 | 99.9% |
| NO (ppb) | | | Beaverlodge | 3.3 | - | - | 84.9 | Nov-29 14:00 | 1.5 | SW | 15.0 | Nov-29 | 100.0% |
| $NO_2$ (ppb) | 212 | 106 | Beaverlodge | 8.8 | 0 | 0 | 38.8 | Nov-29 14:00 | 1.5 | SW | 21.1 | Nov-29 | 100.0% |
| $NO_X$ (ppb) | | | Beaverlodge | 12.4 | - | - | 124.5 | Nov-29 14:00 | 1.5 | SW | 36.7 | Nov-29 | 100.0% |
| $O_3$ (ppb) | 82 | | Henry Pirker | 14.4 | 0 | - | 39.1 | Nov-19 21:00 | 26.2 | E | 25.8 | Nov-22 | 99.9% |
| $O_3$ (ppb) - 8-hr | 65 | | Henry Pirker | | 0 | | | | | | 37.3 | Nov-20 | |
| $O_3$ (ppb) | 82 | | Beaverlodge | 22.6 | 0 | - | 45.9 | Nov-19 20:00 | 40.3 | W | 37.8 | Nov-20 | 100.0% |
| $O_3$ (ppb) - 8-hr | 65 | | Beaverlodge | | 0 | | | | | | 44.3 | Nov-20 | |
| $O_3$ (ppb) | 82 | | Portable-Fahler | 21.9 | 0 | - | 44.0 | Nov-19 23:00 | 31.7 | SW | 33.7 | Nov-20 | 76.4% |
| $O_3$ (ppb) - 8-hr | 65 | | Portable-Fahler | | 0 | | | | | | 42.1 | Nov-20 | |
| CO (ppm) | 13 | | Henry Pirker | 0.26 | 0 | - | 2.0 | Nov-17 08:00 | 6.1 | W | 0.8 | Nov-20 | 99.9% |
| CO (ppm) - 8-hr | 5 | | Henry Pirker | | 0 | | | | | | 1.3 | Nov-20 | |
| THC (ppm) | | | Henry Pirker | 2.29 | - | - | 3.6 | Nov-29 12:00 | 6.1 | WNW | 3.1 | Nov-29 | 100.0% |
| TRS (ppb) | | | Henry Pirker | 0.3 | - | - | 1.4 | Nov-26 03:00 | 6.4 | WNW | 0.6 | Nov-17 | 100.0% |
| TRS (ppb) | | | Evergreen Park | 0.8 | - | - | 2.8 | Nov-01 12:00 | 3.6 | NW | 1.4 | Nov-09 | 98.6% |
| TRS (ppb) | | | Smoky Heights | 0.4 | - | - | 4.5 | Nov-08 14:00 | 11.4 | WSW | 0.8 | Nov-12 | 100.0% |
| TRS (ppb) | | | Portable-Fahler | 0.3 | - | - | 0.5 | Nov-28 19:00 | 10.0 | SE | 0.4 | Nov-30 | 76.4% |
| $H_2S$ (ppb) | 10 | 3 | Valleyview | 0.2 | 0 | 0 | 1.2 | Nov-05 21:00 | 2.3 | N | 0.5 | Nov-06 | 100.0% |
| $PM_{2.5}$ ($\mu g/m^3$) | | 30 a | Henry Pirker | 4.8 | 0 | 0 | 25.6 | Nov-12 11:00 | 6.1 | NE | 15.0 | Nov-12 | 98.8% |
| $PM_{2.5}$ ($\mu g/m^3$) | | 30 a | Evergreen Park | 5.1 | 0 | 0 | 29.8 | Nov-29 11:00 | 3.7 | WSW | 14.6 | Nov-12 | 97.2% |
| $PM_{2.5}$ ($\mu g/m^3$) | | 30 a | Smoky Heights | 5.4 | 0 | 0 | 51.2 | Nov-20 16:00 | 3.1 | NW | 16.2 | Nov-12 | 99.9% |
| $PM_{2.5}$ ($\mu g/m^3$) | | 30 a | Beaverlodge | 4.1 | 0 | 0 | 26.9 | Nov-10 23:00 | 14.5 | NNW | 13.1 | Nov-12 | 99.7% |

# PASZA Monthly Continuous Data Summary - continued

| Nov-2006 | Peace Airshed Zone Assocation | | | | | | Maximum Recorded Values | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1-hr | | | | 24-hr / 8-hr | | |
| RH (%) | | | Henry Pirker | 73.8 | - | - | - | - | - | - | - | - | 100.0% |
| RH (%) | | | Beaverlodge | 77.3 | - | - | - | - | - | - | - | - | 100.0% |
| RH (%) | | | Portable-Fahler | 81.5 | - | - | - | - | - | - | - | - | 76.3% |
| RH (%) | | | Valleyview | 77.7 | - | - | - | - | - | - | - | - | 100.0% |
| SR ($W/m^2$) | | | Henry Pirker | 29.5 | - | - | - | - | - | - | - | - | 100.0% |
| Temp (°C) | | | Henry Pirker | -14.2 | - | - | - | - | - | - | - | - | 100.0% |
| Temp (°C) | | | Evergreen Park | -14.6 | - | - | - | - | - | - | - | - | 100.0% |
| Temp (°C) | | | Smoky Heights | -14.0 | - | - | - | - | - | - | - | - | 100.0% |
| Temp (°C) | | | Beaverlodge | -14.0 | - | - | - | - | - | - | - | - | 100.0% |
| Temp (°C) | | | Portable-Fahler | -10.6 | - | - | - | - | - | - | - | - | 76.3% |
| Temp (°C) | | | Valleyview | -13.1 | - | - | - | - | - | - | - | - | 100.0% |
| WSPD v (km/hr) | | | Henry Pirker | 9.4 | - | - | 35.2 | Nov-15 22:00 | 35.2 | NE | 16.1 | Nov-24 | 99.9% |
| WSPD v (km/hr) | | | Evergreen Park | 5.4 | - | - | 24.2 | Nov-19 00:00 | 24.2 | WSW | 9.3 | Nov-24 | 100.0% |
| WSPD v (km/hr) | | | Smoky Heights | 9.3 | - | - | 39.9 | Nov-19 19:00 | 39.9 | WSW | 14.9 | Nov-06 | 100.0% |
| WSPD v (km/hr) | | | Beaverlodge | 6.8 | - | - | 40.2 | Nov-19 20:00 | 40.2 | W | 9.8 | Nov-24 | 100.0% |
| WSPD v (km/hr) | | | Portable-Fahler | 15.1 | - | - | 41.9 | Nov-19 08:00 | 41.9 | SE | 25.5 | Nov-19 | 40.6% |
| WSPD v (km/hr) | | | Valleyview | 6.1 | - | - | 23.2 | Nov-16 01:00 | 23.2 | WNW | 11.8 | Nov-15 | 100.0% |
| WSPD s (km/hr) | | | Henry Pirker | 10.1 | - | - | 35.3 | Nov-15 22:00 | 35.3 | NE | 16.3 | Nov-24 | 99.9% |
| WSPD s (km/hr) | | | Evergreen Park | 5.8 | - | - | 24.3 | Nov-19 00:00 | 24.3 | WSW | 9.6 | Nov-24 | 100.0% |
| WSPD s (km/hr) | | | Smoky Heights | 9.5 | - | - | 40.1 | Nov-19 19:00 | 40.1 | WSW | 15.4 | Nov-15 | 100.0% |
| WSPD s (km/hr) | | | Beaverlodge | 7.0 | - | - | 40.3 | Nov-19 20:00 | 40.3 | W | 14.0 | Nov-19 | 100.0% |
| WSPD s (km/hr) | | | Portable-Fahler | 15.3 | - | - | 41.9 | Nov-19 08:00 | 41.9 | SE | 33.5 | Nov-19 | 40.6% |
| WSPD s (km/hr) | | | Valleyview | 6.4 | - | - | 23.4 | Nov-16 01:00 | 23.4 | WNW | 13.1 | Nov-19 | 100.0% |
| WDIR | | | Henry Pirker | NNW | - | - | - | - | - | - | - | - | 99.9% |
| WDIR | | | Evergreen Park | NNW | - | - | - | - | - | - | - | - | 100.0% |
| WDIR | | | Smoky Heights | NNW | - | - | - | - | - | - | - | - | 100.0% |
| WDIR | | | Beaverlodge | N | - | - | - | - | - | - | - | - | 100.0% |
| WDIR | | | Portable-Fahler | ESE | - | - | - | - | - | - | - | - | 40.6% |
| WDIR | | | Valleyview | NW | - | - | - | - | - | - | - | - | 100.0% |

Note: [a] the draft 24-hr Alberta Ambient Air Quality Objective

# Continuous Network Equipment Summary

**PASZA – Henry Pirker Station**

**General Station Issues**

Calibrations were performed on November 6th (THC, $SO_2$, TRS & CO), November 7th ($NO_X$) and November 13th (THC, $O_3$ and TEOM). From November 1st to 17th temperatures in the station continued to fluctuate with station temperature reaching a high of 50°C on November 10th. Maintenance was performed on wind sensor on November 20th.

| Parameter | Make | Model | Notes |
|---|---|---|---|
| $SO_2$ | TECO | 43 | No operational problems observed. |
| NOx/NO/$NO_2$ | TECO | 42C | One (1) hour was flagged due to the maintenance activity on November 20th. |
| $O_3$ | API | 400 | $O_3$ spans unstable until November 17th, after the 17th the station temperature is more stable. The $O_3$ analyzer had one (1) hour of excessive baseline drift on November 18th. |
| CO | TECO | 48C | No CO spans until November 6th. The CO analyzer had one (1) hour of excessive baseline drift on November 10th. |
| THC | TEI | 51-CLT | No THC spans until November 6th. |
| TRS | TEI | 42C | TRS spans unstable throughout the month. |
| $PM_{2.5}$ | R&P | 1400AB | Nine (9) hours of data was invalidated on November 10th (possibly due to high station temperature). |
| RH | Met One | 083D | No operational problems observed. |
| AT | Met One | 083D | No operational problems observed. |
| SR | Met One | 096-1 | No operational problems observed. |
| WS | Met One | 010C | One (1) hour was flagged due to the maintenance activity on November 20th. |
| WD | Met One | 020C | One (1) hour was flagged due to the maintenance activity on November 20th. |

**PASZA – Evergreen Park Station**

**General Station Issues**

Calibrations were performed on November 2nd ($SO_2$, TRS and $PM_{2.5}$).

| Parameter | Make | Model | Notes |
|---|---|---|---|
| $SO_2$ | API | 100 | Ten (10) hours data were invalidated on November 1st (a continuation from October, when the power bar at the station tripped due to a power surge, which resulted in the pumps from the $SO_2$, TRS and TEOM to fail - AENV reference #179107). |
| TRS | TEI | 42C | Ten (10) hours data were invalidated on November 1st (a continuation from October, when the power bar at the station tripped due to a power surge, which resulted in the pumps from the $SO_2$, TRS and TEOM to fail - AENV reference #179107). Four (4) hours of data were invalidated after spans on November 1st as the analyzer was slow to respond after the power was restored and the spans were triggered |
| $PM_{2.5}$ | R&P | 1400AB | Seven (7) hours were removed due to baseline drift. A total of thirteen (13) hours data were invalidated on November 1st (a continuation from October, when the power bar at the station tripped due to a power surge, which resulted in the pumps from the $SO_2$, TRS and TEOM to fail - AENV reference #179107). Two of the thirteen hours were for maintenance – the filter was changed out on the TEOM. |
| AT | Met One | 083D | No operational problems observed. |
| WS | Met One | 010C | No operational problems observed. |
| WD | Met One | 020C | No operational problems observed. |

**PASZA – Smoky Heights Station**

**General Station Issues**

Calibrations were performed on November 29th ($SO_2$, TRS and $PM_{2.5}$).

| Parameter | Make | Model | Notes |
|---|---|---|---|
| $SO_2$ | API | 100A | No operational problems observed. |
| TRS | TEI | 42C | No operational problems observed. |
| $PM_{2.5}$ | R&P | 1400AB | One (1) hour was removed due to baseline drift. |
| AT | Met One | 083D | No operational problems observed. |
| WS | Met One | 010C | Wind speed sensor frozen, eighty-six (86) hours flagged invalid. (AENV reference # 181686) |
| WD | Met One | 020C | No operational problems observed. |

**PASZA – Beaverlodge Station**

**General Station Issues**

Calibrations were performed on November 1st ($SO_2$), November 21st ($NO_X$, and $PM_{2.5}$) and November 24th ($O_3$).

| Parameter | Make | Model | Notes |
|---|---|---|---|
| $SO_2$ | TECO | 43CTL | No operational problems observed. |
| NOx/NO/$NO_2$ | TECO | 42C | No operational problems observed. |
| $O_3$ | API | 400 | No operational problems observed. |
| $PM_{2.5}$ | R&P | 1400AB | Two (2) hours were removed due to baseline drift. |
| AT | n/a | n/a | No operational problems observed. |
| RH | n/a | n/a | No operational problems observed. |
| WS | Blue Sky | 857 | No operational problems observed. Fourteen (14) hours of calm were observed. |
| WD | Blue Sky | 857 | No operational problems observed. |

**PASZA – Falher (Portable) Station**

**General Station Issues**

Calibrations were performed on November 17th ($SO_2$, TRS and $O_3$). An attempt to install a new modem on November 17th ended unsuccessfully due to a faulty modem, a new modem was sent out and was successfully installed on November 27th.

| Parameter | Make | Model | Notes |
|---|---|---|---|
| $SO_2$ | TEI | 43C | A power failure and an unresponsive DACS resulted in one hundred and seventy hours (170) of invalid data for month of November. (AENV reference # 181549) |
| TRS | TEI | 43C | A power failure and an unresponsive DACS resulted in one hundred and seventy hours (170) of invalid data for month of November. (AENV reference # 181549) |
| $O_3$ | TEI | 49C | A power failure and an unresponsive DACS resulted in one hundred and seventy hours (170) of invalid data for month of November. (AENV reference # 181549) |
| AT | Gill Met Pak 3 | | A power failure and an unresponsive DACS resulted in one hundred and seventy hours (170) of invalid data for month of November. (AENV reference # 181549) |
| RH | Gill Met Pak 3 | | A power failure and an unresponsive DACS resulted in one hundred and seventy hours (170) of invalid data for month of November. (AENV reference # 181549) |
| WS | Gill Met Pak 3 | | On November 6th a power spike caused the ultrasonic wind sensor to electronically freeze up, compounded with the DACS failure to record the wind data – two hundred and fifty-eight (258) hours were flagged invalid. (AENV reference # 181588). A power failure on November 21st and an unresponsive DACS resulted in another one hundred and seventy hours (170) of invalid data (AENV reference # 181549) for a combined total of four hundred and twenty-eght (428) hours of invalid data for month of November. |
| WD | Gill Met Pak 3 | | On November 6th a power spike caused the ultrasonic wind sensor to electronically freeze up, compounded with the DACS failure to record the wind data – two hundred and fifty-eight (258) hours were flagged invalid. (AENV reference # 181588). A power failure on November 21st and an unresponsive DACS resulted in another one hundred and seventy hours (170) of invalid data (AENV reference # 181549) for a combined total of four hundred and twenty-eght (428) hours of invalid data for month of November. |

## PASZA – Valleyview Station

**General Station Issues**

Calibrations were performed on November 17th ($SO_2$, $H_2S$).

| Parameter | Make | Model | Notes |
|---|---|---|---|
| $SO_2$ | ML | 332 | A new perm tube installed and maintenance on November 9th, analyzer allowed to stabilize overnight: two (2) hours attributed to maintenance and twenty-four (24) hours of invalid data. |
| $H_2S$ | TEI | 43C | A new perm tube installed on November 9th. |
| AT | Gill Met Pak 3 | | No operational problems observed. |
| RH | Gill Met Pak 3 | | No operational problems observed. |
| WS | Gill Met Pak 3 | | No operational problems observed. |
| WD | Gill Met Pak 3 | | No operational problems observed. |

# PASZA – Henry Pirker Station

## Monthly Summary Tables, Graphs, and Roses

# PASZA - Henry Pirker - AQI Monthly Summary

Station: Henry Pirker
Station Owner: PASZA

## Air Quality Index (AQI)

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Alberta's Air Quality Index**

| | | | | |
|---|---|---|---|---|
| Good | 1 | to | 25 |
| Fair | 26 | to | 50 |
| Poor | 51 | to | 100 |
| Very Poor | | > | 100 |

**Summary**

| | |
|---|---|
| Number of 1-hr Good Readings: | 675 |
| Number of 1-hr Fair Readings: | 0 |
| Number of 1-hr Poor Readings: | 0 |
| Number of 1-hr Very Poor Readings: | 0 |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 7 | 6 | 8 | 7 | 6 | 5 | 8 | 9 | 10 | 12 | 12 | 12 | 9 | 14 | 15 | 11 | 9 | N | 7 | 6 | 8 | 9 | 11 | 13 |
| 2-Nov-06 | 14 | 14 | 14 | 15 | 14 | 14 | 13 | 10 | 10 | 11 | 13 | 13 | 13 | 14 | 12 | 11 | N | 12 | 11 | 13 | 12 | 12 | 11 | 11 |
| 3-Nov-06 | 12 | 11 | 12 | 13 | 13 | 12 | 10 | 8 | 7 | 9 | 11 | 11 | 11 | 10 | 8 | N | 8 | 9 | 9 | 8 | 8 | 8 | 7 | 5 |
| 4-Nov-06 | 6 | 7 | 8 | 8 | 9 | 9 | 7 | 7 | 7 | 7 | 9 | 9 | 9 | 10 | N | 10 | 8 | 8 | 7 | 8 | 8 | 8 | 8 | 9 |
| 5-Nov-06 | 10 | 11 | 11 | 11 | 11 | 10 | 9 | 10 | 10 | 11 | 11 | 11 | 11 | N | 11 | 11 | 10 | 9 | 8 | 7 | 6 | 6 | 5 | 9 |
| 6-Nov-06 | 9 | 10 | 10 | 10 | 10 | 10 | 9 | 7 | 7 | 9 | 9 | 10 | 10 | N | N | N | N | 7 | 8 | 8 | 8 | 6 | 8 | 8 |
| 7-Nov-06 | 7 | 8 | 7 | 6 | 6 | N | 8 | 7 | 8 | 10 | N | N | 9 | 8 | 9 | 9 | 8 | 15 | 14 | 11 | 11 | 9 | 10 | 10 |
| 8-Nov-06 | 11 | 12 | 12 | 12 | 13 | N | 12 | 11 | 11 | 12 | 13 | 14 | 13 | 13 | 13 | 12 | 11 | 6 | 6 | 6 | 6 | 5 | 6 | 5 |
| 9-Nov-06 | 5 | 4 | 4 | 5 | N | 5 | 6 | 6 | 6 | 5 | 7 | 7 | 7 | 8 | 9 | 16 | 6 | 8 | 9 | 8 | 7 | 6 | 6 | 6 |
| 10-Nov-06 | 6 | 8 | 6 | N | 7 | 8 | 9 | 8 | 12 | 11 | 15 | 15 | 10 | 11 | 7 | N | N | N | N | N | N | N | N | N |
| 11-Nov-06 | 13 | 9 | N | 8 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 10 | 11 | 11 | 10 | 9 | 12 | 13 | 14 | 10 | 7 | 8 | 13 | 12 |
| 12-Nov-06 | 16 | N | 10 | 8 | 10 | 8 | 8 | 10 | 13 | 15 | 20 | 21 | 17 | 9 | 12 | 13 | 12 | 10 | 10 | 10 | 15 | 13 | 13 | 13 |
| 13-Nov-06 | N | 14 | 12 | 13 | 14 | 12 | 13 | 13 | 8 | 9 | 10 | 11 | 8 | 10 | 9 | 10 | 7 | 6 | 6 | 7 | 7 | 7 | 5 | 6 |
| 14-Nov-06 | 5 | 5 | 6 | 5 | 5 | N | 8 | 7 | 6 | 5 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | 7 | 9 |
| 15-Nov-06 | 10 | 8 | 9 | 10 | N | 13 | 12 | 11 | 11 | 13 | 14 | 13 | 13 | 9 | 11 | 11 | 11 | 9 | 10 | 10 | 7 | 6 | 9 | 10 |
| 16-Nov-06 | 11 | 11 | 11 | N | 12 | 11 | 7 | 5 | 5 | 6 | 8 | 7 | 10 | 9 | 9 | 8 | 5 | 8 | 11 | 8 | 7 | 7 | 7 | 10 |
| 17-Nov-06 | 7 | 6 | N | 5 | 4 | 6 | 6 | 9 | 15 | 15 | 10 | 17 | 17 | 6 | 7 | 10 | 9 | 10 | 10 | 9 | 11 | 10 | 19 | 11 |
| 18-Nov-06 | 7 | N | 8 | 6 | 7 | 6 | 5 | 7 | 9 | 9 | 9 | 10 | 11 | 12 | 11 | 9 | 6 | 5 | 8 | 9 | 8 | 7 | 6 | 7 |
| 19-Nov-06 | N | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 9 | 10 | 11 | 10 | 10 | 11 | 11 | 10 | 8 | 11 | 18 | 19 | 20 | 18 | N |
| 20-Nov-06 | 19 | 19 | 17 | 18 | 14 | 7 | 11 | 12 | 12 | 9 | 12 | 12 | 9 | 10 | 9 | 13 | 14 | 13 | 14 | 12 | 10 | 9 | 7 | 8 |
| 21-Nov-06 | 14 | 10 | 8 | 14 | 15 | N | 14 | 14 | 10 | 9 | 8 | 11 | 13 | 13 | 12 | 11 | 12 | 11 | 10 | 12 | 12 | 14 | 15 | 14 |
| 22-Nov-06 | 15 | 15 | 15 | 15 | N | 14 | 14 | 13 | 12 | 14 | 13 | 14 | 14 | 14 | 14 | 12 | 11 | 10 | 11 | 11 | 11 | 12 | 12 | 11 |
| 23-Nov-06 | 12 | 11 | 12 | N | 11 | 9 | 8 | 10 | 8 | 10 | 12 | 13 | 13 | 13 | 13 | 12 | 11 | 7 | 7 | 7 | 10 | 12 | 12 | 12 |
| 24-Nov-06 | 12 | 12 | N | 13 | 13 | 13 | 13 | 13 | 14 | 15 | 15 | 16 | 17 | 16 | 16 | 16 | 12 | 11 | 9 | 7 | 8 | 9 | 8 | 7 |
| 25-Nov-06 | 7 | N | 10 | 13 | 11 | 10 | 9 | 10 | 10 | 11 | 13 | 14 | 14 | 13 | 15 | 14 | 13 | 12 | 12 | 9 | 8 | 8 | 6 | 5 |
| 26-Nov-06 | N | 5 | 8 | 9 | 6 | 8 | 7 | 7 | 8 | 6 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 8 | 7 | 6 | 6 | 8 | 11 | N |
| 27-Nov-06 | 13 | 13 | 14 | 14 | 14 | 13 | 12 | 12 | 10 | 10 | 11 | 13 | 13 | 12 | 12 | 10 | 6 | 6 | 9 | 7 | 6 | 11 | N | 6 |
| 28-Nov-06 | 7 | 7 | 6 | 6 | 8 | 7 | 7 | 7 | 9 | 8 | 10 | 7 | 9 | 9 | 9 | 6 | 8 | 9 | 8 | 9 | 7 | N | 8 | 7 |
| 29-Nov-06 | 7 | 6 | 5 | 5 | 7 | 8 | 9 | 11 | 9 | 8 | 5 | 6 | 6 | 6 | 8 | 12 | 14 | 11 | 14 | 9 | N | 8 | 8 | 7 |
| 30-Nov-06 | 6 | 6 | 8 | 6 | 7 | 9 | 11 | 10 | 7 | 8 | 13 | 16 | 17 | 16 | 15 | 15 | 15 | 15 | 17 | N | 17 | 17 | 17 | 14 |

# PASZA - Henry Pirker - Sulphur Dioxide Monthly Summary

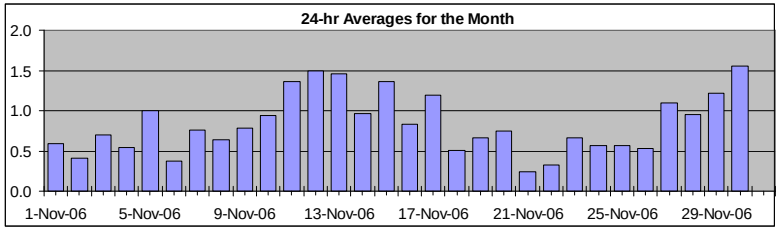
Station: Henry Pirker
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Sulphur Dioxide ($SO_2$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr 172 ppb | 24-hr 57 ppb




**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 1-hr Exceedances: | 0 | | | |
| Number of 24-hr Exceedances: | 0 | | | |
| Maximum 1-hr Average: | 5.6 | ppb | 15-Nov | 3:00 4:00 |
| Maximum 24-hr Average: | 1.6 | ppb | 30-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 686 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 2.8 | 1.9 | 1.1 | 0.7 | 0.4 | 0.2 | 0.0 | 0.8 ppb | 0.7 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 | 1.4 |
| 2-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | A | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0.4 | 1.0 |
| 3-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0.7 | 1.2 |
| 4-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | A | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0.5 | 1.3 |
| 5-Nov-06 | 0 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | A | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1.0 | 2.9 |
| 6-Nov-06 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C | C | C | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 1.3 |
| 7-Nov-06 | 0 | 1 | 1 | 0 | 0 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.3 |
| 8-Nov-06 | 0 | 0 | 0 | 0 | 0 | A | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0.6 | 1.0 |
| 9-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 2.1 |
| 10-Nov-06 | 1 | 1 | 1 | A | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 0.9 | 1.8 |
| 11-Nov-06 | 2 | 2 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1.4 | 1.9 |
| 12-Nov-06 | 3 | A | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 1.5 | 2.8 |
| 13-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1.5 | 2.8 |
| 14-Nov-06 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 2 | 1.0 | 2.7 |
| 15-Nov-06 | 2 | 4 | 5 | 6 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.4 | 5.6 |
| 16-Nov-06 | 0 | 0 | 1 | A | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.5 |
| 17-Nov-06 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1.2 | 2.5 |
| 18-Nov-06 | 1 | A | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0.5 | 0.8 |
| 19-Nov-06 | A | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | A | 0.7 | 1.1 |
| 20-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0.7 | 1.8 |
| 21-Nov-06 | 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 | 0.4 |
| 22-Nov-06 | 0 | 0 | 0 | 1 | A | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.9 |
| 23-Nov-06 | 0 | 0 | 1 | A | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0.7 | 1.6 |
| 24-Nov-06 | 0 | 1 | A | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 | 1.8 |
| 25-Nov-06 | 0 | A | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 | 1.5 |
| 26-Nov-06 | A | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | A | 0.5 | 0.8 |
| 27-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | A | 1 | 1.1 | 2.5 |
| 28-Nov-06 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1.0 | 3.3 |
| 29-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | A | 2 | 2 | 2 | 1.2 | 2.3 |
| 30-Nov-06 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1.6 | 2.5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 0.8 | 0.8 | 0.9 | 0.9 | 0.7 | 0.8 | 0.7 | 0.7 | 0.8 | 0.8 | 0.9 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | | |
| Hourly Max | 2.8 | 3.7 | 5.1 | 5.6 | 1.8 | 2.3 | 1.7 | 1.7 | 1.6 | 1.7 | 2.9 | 2.5 | 2.4 | 3.3 | 2.8 | 2.8 | 2.5 | 1.8 | 2.3 | 1.7 | 1.9 | 2.2 | 2.7 | 2.3 | | |

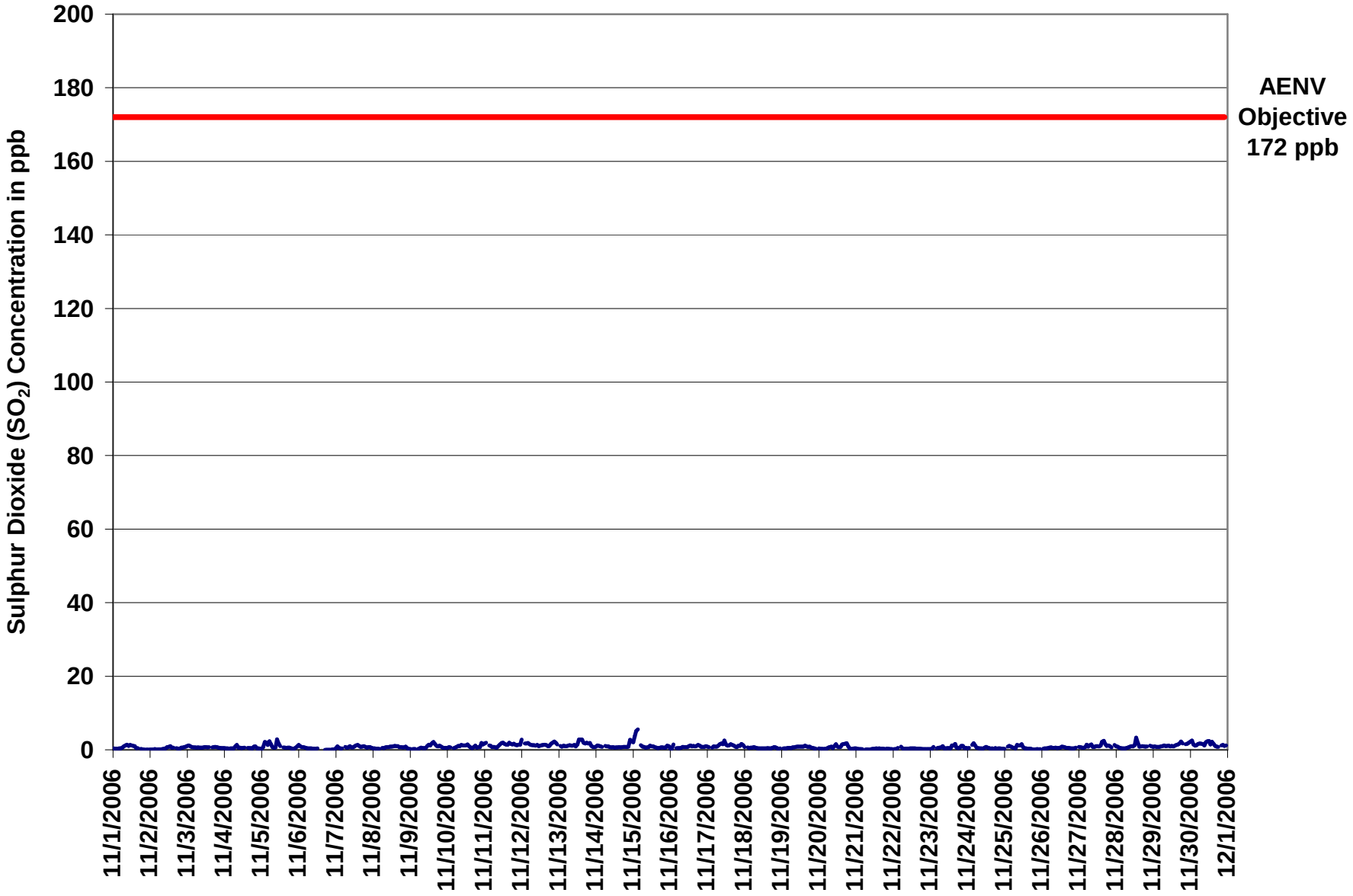


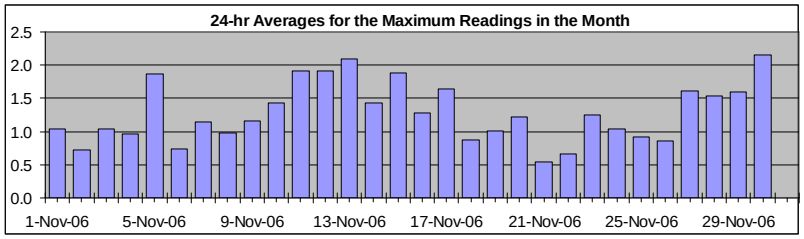

**Figure 1. PASZA - Henry Pirker Sulphur Dioxide 1-hr Average Monthly Trend**

Station: Henry Pirker
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

## Sulphur Dioxide ($SO_2$)

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 7.1 | ppb | 15-Nov | 3:00 4:00 |
| Maximum 24-hr Value: | 2.2 | ppb | 30-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 686 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 4.9 | 2.7 | 1.5 | 1.1 | 0.8 | 0.5 | 0.3 | 1.3 ppb | 1.1 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | A | 1 | 0 | 0 | 0 | 0 | 0 | 1.0 | 2.1 |
| 2-Nov-06 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.7 | 1.3 |
| 3-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.0 | 1.5 |
| 4-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1.0 | 2.5 |
| 5-Nov-06 | 1 | 3 | 4 | 3 | 2 | 6 | 2 | 1 | 1 | 1 | 5 | 4 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.9 | 5.8 |
| 6-Nov-06 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | C | C | C | A | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0.7 | 2.2 |
| 7-Nov-06 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1.2 | 1.8 |
| 8-Nov-06 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.0 | 1.5 |
| 9-Nov-06 | 0 | 0 | 1 | 1 | A | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1.2 | 2.5 |
| 10-Nov-06 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 4 | 2 | 1.4 | 3.6 |
| 11-Nov-06 | 3 | 3 | A | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1.9 | 3.5 |
| 12-Nov-06 | 3 | A | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 3 | 2 | 2 | 1.9 | 3.4 |
| 13-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 3 | 3 | 4 | 5 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2.1 | 5.2 |
| 14-Nov-06 | 1 | 2 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 4 | 4 | 1.4 | 4.4 |
| 15-Nov-06 | 3 | 5 | 6 | 7 | A | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1.9 | 7.1 |
| 16-Nov-06 | 1 | 1 | 4 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1.3 | 4.2 |
| 17-Nov-06 | 2 | 1 | A | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 1.6 | 3.5 |
| 18-Nov-06 | 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 | 1.4 |
| 19-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | A | 1.0 | 1.7 |
| 20-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1.2 | 2.7 |
| 21-Nov-06 | 1 | 1 | 0 | 1 | 1 | A | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0.5 | 0.8 |
| 22-Nov-06 | 1 | 0 | 0 | 1 | A | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0.7 | 1.6 |
| 23-Nov-06 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 4 | 2 | 3 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1.3 | 3.7 |
| 24-Nov-06 | 1 | 1 | A | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.0 | 2.1 |
| 25-Nov-06 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0.9 | 2.1 |
| 26-Nov-06 | 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 | 1.2 |
| 27-Nov-06 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 4 | 3 | 2 | 1 | 2 | 2 | 1 | A | 2 | 1.6 | 3.7 |
| 28-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 6 | 5 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1.5 | 5.7 |
| 29-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 3 | 2 | A | 2 | 2 | 2 | 1.6 | 2.7 |
| 30-Nov-06 | 3 | 3 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 2 | 3 | 2 | 2 | 1 | 1 | A | 2 | 3 | 2 | 2 | 2.2 | 3.8 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 1.2 | 1.3 | 1.4 | 1.3 | 1.1 | 1.3 | 1.1 | 1.1 | 1.3 | 1.2 | 1.4 | 1.5 | 1.4 | 1.5 | 1.7 | 1.5 | 1.4 | 1.2 | 1.2 | 1.1 | 1.1 | 1.1 | 1.3 | 1.2 | | |
| Hourly Max | 3.4 | 4.8 | 6.0 | 7.1 | 2.2 | 5.8 | 2.1 | 2.3 | 2.5 | 2.3 | 5.4 | 3.6 | 3.8 | 5.7 | 5.4 | 5.2 | 3.4 | 2.7 | 2.7 | 2.2 | 2.4 | 2.6 | 4.4 | 3.7 | | |

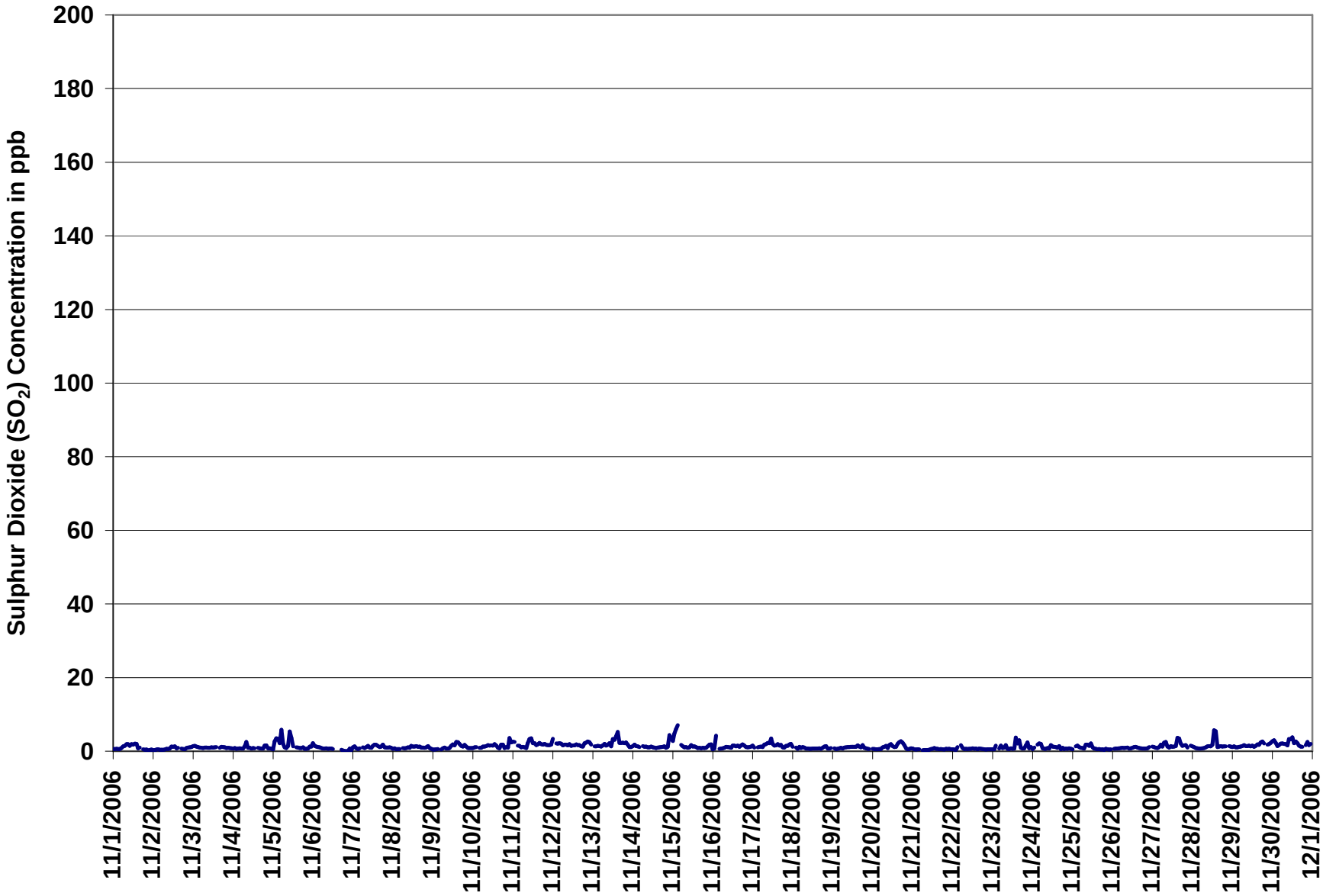
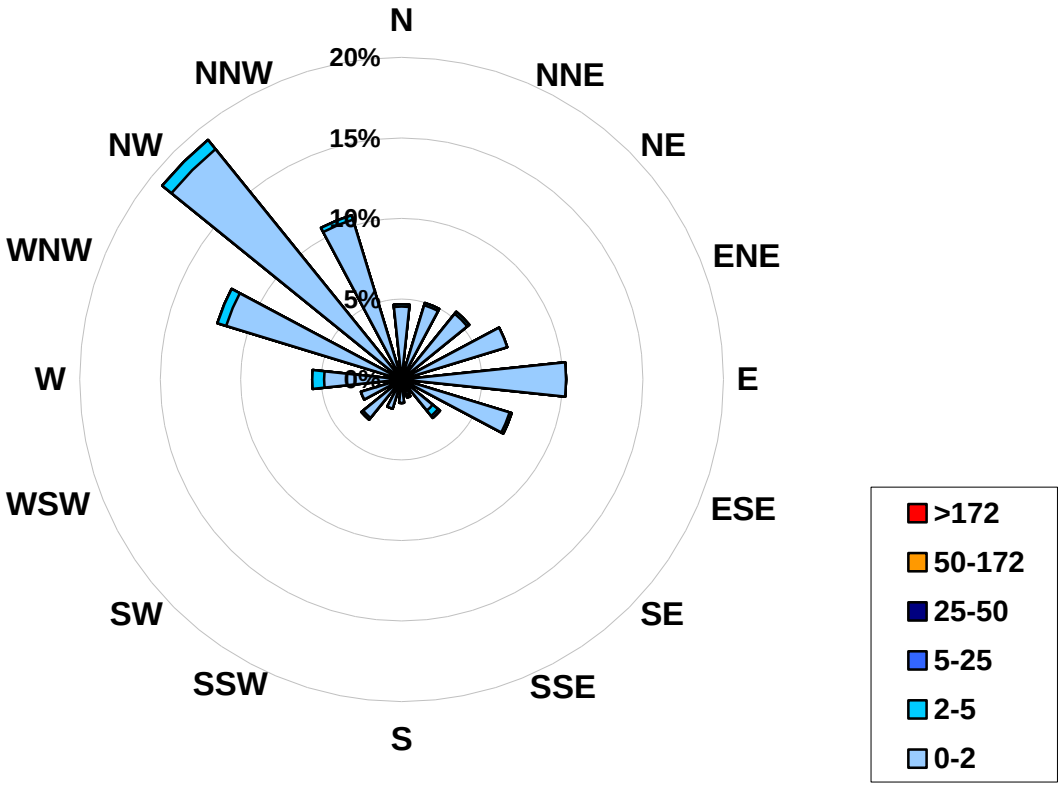



**Figure 2. PASZA - Henry Pirker Sulphur Dioxide Instantaneous (30 Second) Maximum Value Monthly Trend**

## 1-hr Average Concentration Rose for Sulphur Dioxide (in ppb) Located at the Henry Pirker Site for November 2006




| Calms: | 0% |
|---|---|

| Frequency Distribution of $SO_2$ in ppb | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.0 | < | 2 | 660 |
| 2 | to | 5 | 24 |
| 5 | to | 25 | 2 |
| 25 | to | 50 | 0 |
| 50 | to | 172 | 0 |
| | > | 172 | 0 |
| Total Non-Zero Values | | | 686 |

# PASZA - Henry Pirker - Nitrogen Dioxide Monthly Summary

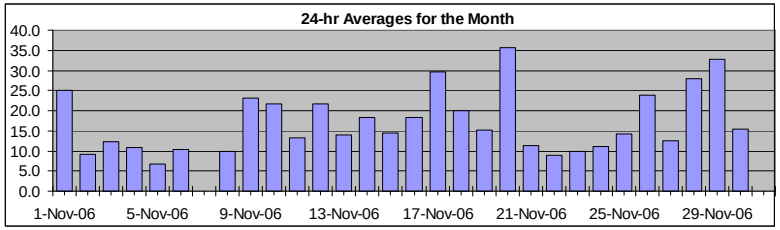
## HOURLY AVERAGE TABLE

**Nitrogen Dioxide ($NO_2$)**

Station: Henry Pirker
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr 212 ppb | 24-hr 106 ppb




**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 1-hr Exceedances: | 0 | | | |
| Number of 24-hr Exceedances: | 0 | | | |
| Maximum 1-hr Average: | 57.6 | ppb | 20-Nov | 16:00 17:00 |
| Maximum 24-hr Average: | 35.7 | ppb | 20-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 682 hrs |
| Calibration Time: | 6 hrs | AMD Operational Uptime: | 99.9% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 49.1 | 36.3 | 25.0 | 14.8 | 8.2 | 3.2 | 1.9 | 17.2 ppb | 14.8 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 30 | 26 | 13 | 17 | 19 | 23 | 36 | 39 | 44 | 48 | 36 | 43 | 27 | 11 | 8 | 15 | 21 | A | 28 | 27 | 23 | 19 | 13 | 8 | 25.0 | 47.5 |
| 2-Nov-06 | 7 | 6 | 5 | 5 | 6 | 5 | 8 | 13 | 15 | 10 | 8 | 7 | 8 | 8 | 9 | 12 | A | 13 | 12 | 9 | 10 | 10 | 11 | 10 | 9.1 | 15.0 |
| 3-Nov-06 | 9 | 8 | 6 | 6 | 6 | 7 | 12 | 17 | 19 | 15 | 11 | 10 | 8 | 13 | 17 | A | 17 | 14 | 14 | 15 | 15 | 13 | 14 | 19 | 12.4 | 19.2 |
| 4-Nov-06 | 15 | 12 | 10 | 12 | 9 | 10 | 14 | 14 | 13 | 12 | 10 | 10 | 9 | 11 | A | 10 | 11 | 11 | 11 | 11 | 9 | 10 | 9 | 7 | 10.9 | 14.8 |
| 5-Nov-06 | 5 | 3 | 3 | 3 | 3 | 5 | 8 | 5 | 4 | 3 | 3 | 2 | 3 | A | 4 | 4 | 5 | 8 | 11 | 14 | 17 | 15 | 17 | 9 | 6.8 | 17.4 |
| 6-Nov-06 | 9 | 7 | 6 | 6 | 6 | 7 | 10 | 13 | 15 | 10 | 9 | 7 | 9 | 8 | 7 | 10 | 11 | 17 | 14 | 13 | 13 | 17 | 10 | 11 | 10.3 | 17.0 |
| 7-Nov-06 | 14 | 12 | 13 | 14 | 24 | A | 35 | 31 | 31 | 31 | C | C | C | C | C | C | A | 31 | 30 | 26 | 18 | 8 | 5 | 3 | N | 35.2 |
| 8-Nov-06 | 2 | 2 | 2 | 2 | 1 | A | 5 | 5 | 7 | 5 | 4 | 4 | 4 | 4 | 5 | 6 | 9 | 19 | 25 | 25 | 25 | 22 | 26 | 22 | 10.0 | 26.4 |
| 9-Nov-06 | 21 | 18 | 18 | 15 | A | 21 | 25 | 27 | 26 | 20 | 13 | 20 | 20 | 15 | 21 | 29 | 27 | 31 | 30 | 30 | 28 | 26 | 26 | 26 | 23.2 | 31.4 |
| 10-Nov-06 | 26 | 27 | 26 | A | 24 | 25 | 25 | 24 | 24 | 22 | 22 | 21 | 21 | 34 | 29 | 27 | 19 | 19 | 19 | 18 | 16 | 12 | 10 | 10 | 21.6 | 33.8 |
| 11-Nov-06 | 10 | 8 | A | 7 | 6 | 5 | 6 | 5 | 6 | 6 | 5 | 5 | 3 | 6 | 9 | 13 | 27 | 31 | 31 | 23 | 18 | 19 | 27 | 27 | 13.2 | 31.1 |
| 12-Nov-06 | 27 | A | 17 | 19 | 23 | 21 | 23 | 25 | 26 | 25 | 28 | 21 | 18 | 11 | 11 | 16 | 22 | 23 | 21 | 21 | 23 | 25 | 25 | 25 | 21.6 | 28.4 |
| 13-Nov-06 | A | 24 | 22 | 23 | 21 | 21 | 23 | 23 | 19 | 17 | 12 | 9 | 8 | 8 | 7 | 7 | 8 | 7 | 7 | 6 | 5 | 5 | 17 | 20 | 13.9 | 24.2 |
| 14-Nov-06 | 18 | 14 | 13 | 21 | 19 | A | 30 | 21 | 22 | 16 | 11 | 10 | 10 | 11 | 13 | 14 | 19 | 25 | 27 | 23 | 18 | 19 | 29 | 19 | 18.2 | 29.8 |
| 15-Nov-06 | 16 | 19 | 17 | 16 | A | 9 | 13 | 14 | 12 | 9 | 9 | 15 | 14 | 24 | 17 | 16 | 17 | 20 | 16 | 15 | 20 | 20 | 3 | 2 | 14.5 | 23.5 |
| 16-Nov-06 | 2 | 1 | 1 | A | 2 | 4 | 12 | 20 | 22 | 25 | 22 | 19 | 10 | 15 | 14 | 13 | 21 | 32 | 38 | 32 | 28 | 28 | 28 | 32 | 18.3 | 37.8 |
| 17-Nov-06 | 31 | 26 | A | 21 | 16 | 25 | 27 | 34 | 40 | 40 | 27 | 36 | 31 | 17 | 21 | 30 | 30 | 31 | 28 | 28 | 32 | 33 | 40 | 35 | 29.5 | 40.4 |
| 18-Nov-06 | 28 | A | 32 | 25 | 31 | 27 | 12 | 9 | 8 | 8 | 8 | 7 | 7 | 6 | 9 | 14 | 23 | 22 | 32 | 36 | 34 | 31 | 23 | 28 | 20.1 | 36.3 |
| 19-Nov-06 | A | 29 | 28 | 25 | 13 | 14 | 28 | 31 | 15 | 11 | 10 | 10 | 11 | 13 | 13 | 13 | 15 | 20 | 17 | 4 | 3 | 3 | 6 | A | 15.1 | 31.1 |
| 20-Nov-06 | 4 | 3 | 6 | 6 | 13 | 31 | 45 | 49 | 49 | 39 | 51 | M | 39 | 41 | 39 | 55 | 58 | 54 | 57 | 49 | 41 | 36 | 26 | 33 | 35.7 | 57.6 |
| 21-Nov-06 | 10 | 16 | 17 | 3 | 2 | A | 9 | 9 | 17 | 19 | 21 | 15 | 9 | 8 | 12 | 15 | 11 | 14 | 14 | 10 | 10 | 7 | 6 | 6 | 11.3 | 21.4 |
| 22-Nov-06 | 6 | 6 | 5 | 5 | A | 8 | 8 | 10 | 11 | 8 | 8 | 7 | 6 | 6 | 7 | 11 | 13 | 14 | 13 | 11 | 12 | 10 | 10 | 11 | 8.9 | 14.2 |
| 23-Nov-06 | 9 | 9 | 7 | A | 10 | 14 | 18 | 11 | 17 | 12 | 7 | 6 | 5 | 5 | 5 | 8 | 10 | 18 | 17 | 17 | 9 | 5 | 3 | 3 | 9.9 | 17.8 |
| 24-Nov-06 | 3 | 2 | A | 3 | 3 | 3 | 3 | 4 | 5 | 4 | 3 | 3 | 2 | 3 | 4 | 4 | 12 | 15 | 19 | 28 | 32 | 38 | 33 | 30 | 11.2 | 37.8 |
| 25-Nov-06 | 29 | A | 14 | 8 | 10 | 12 | 16 | 14 | 13 | 12 | 8 | 6 | 8 | 9 | 5 | 5 | 8 | 9 | 11 | 18 | 32 | 34 | 25 | 23 | 14.3 | 34.2 |
| 26-Nov-06 | A | 20 | 14 | 11 | 24 | 32 | 31 | 31 | 32 | 27 | 21 | 21 | 24 | 29 | 25 | 25 | 30 | 33 | 30 | 26 | 19 | 14 | 9 | A | 23.8 | 32.7 |
| 27-Nov-06 | 7 | 6 | 5 | 5 | 5 | 6 | 9 | 9 | 14 | 13 | 12 | 8 | 6 | 10 | 8 | 13 | 24 | 26 | 14 | 29 | 25 | 9 | A | 27 | 12.6 | 29.1 |
| 28-Nov-06 | 31 | 28 | 25 | 23 | 17 | 21 | 20 | 29 | 38 | 33 | 34 | 26 | 23 | 17 | 18 | 25 | 35 | 36 | 35 | 36 | 31 | A | 32 | 29 | 27.9 | 37.6 |
| 29-Nov-06 | 29 | 26 | 23 | 22 | 30 | 34 | 38 | 44 | 38 | 33 | 23 | 19 | 24 | 24 | 32 | 42 | 46 | 45 | 49 | 36 | A | 32 | 33 | 29 | 32.7 | 49.5 |
| 30-Nov-06 | 17 | 17 | 32 | 27 | 29 | 36 | 45 | 41 | 28 | 17 | 5 | 4 | 3 | 4 | 6 | 5 | 5 | 8 | 4 | A | 5 | 4 | 4 | 10 | 15.5 | 44.6 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 15.3 | 13.9 | 14.1 | 12.9 | 13.8 | 16.3 | 19.7 | 20.8 | 20.9 | 18.3 | 15.2 | 13.3 | 12.8 | 13.1 | 13.4 | 16.4 | 19.8 | 22.3 | 22.6 | 21.9 | 19.7 | 18.1 | 17.9 | 18.3 | | |
| Hourly Max | 31.2 | 28.9 | 31.7 | 26.9 | 31.4 | 36.0 | 45.3 | 49.0 | 49.3 | 47.5 | 51.0 | 43.3 | 38.9 | 40.6 | 38.8 | 54.7 | 57.6 | 54.5 | 57.4 | 48.5 | 40.9 | 37.8 | 39.7 | 34.8 | | |

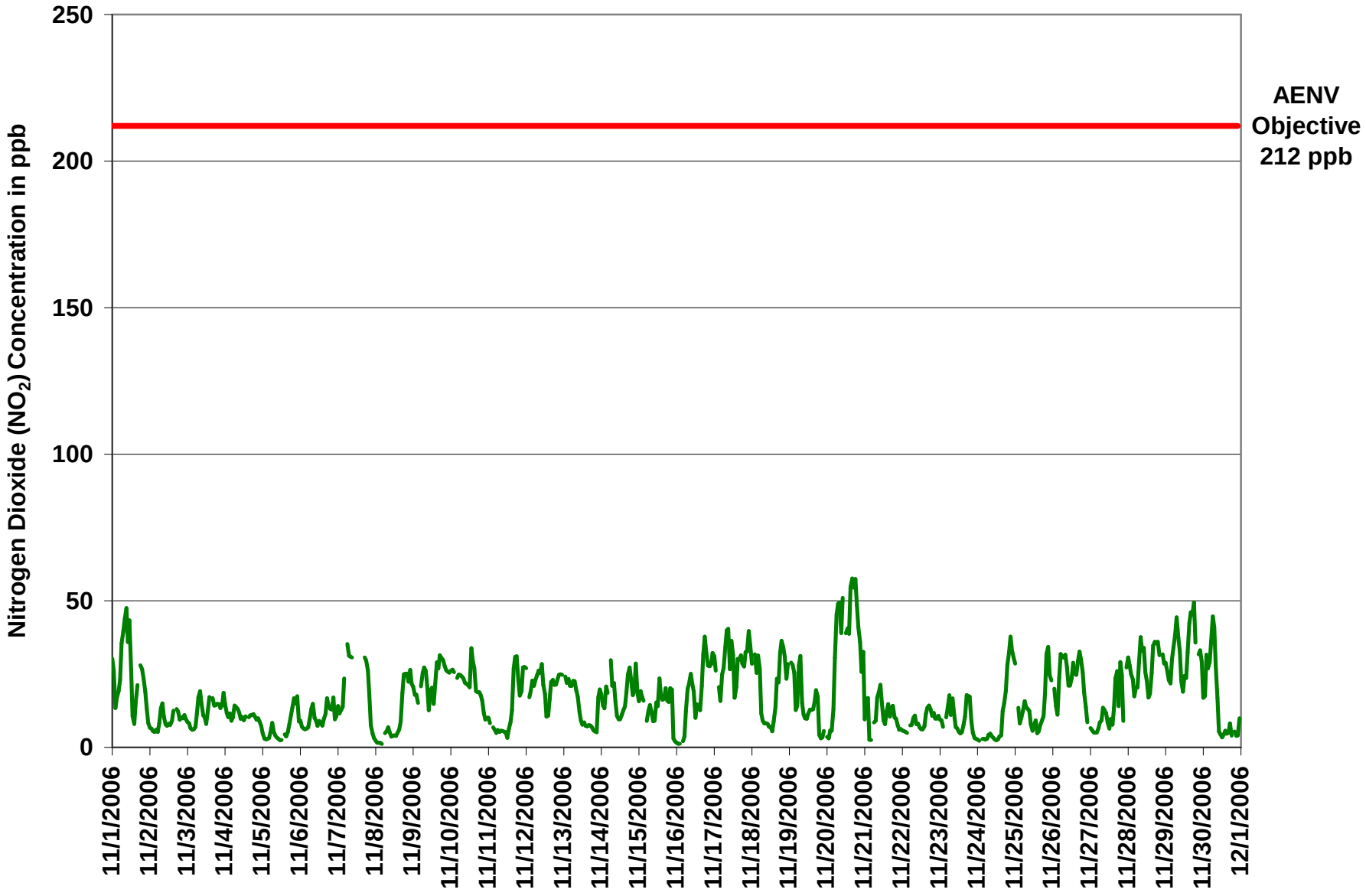


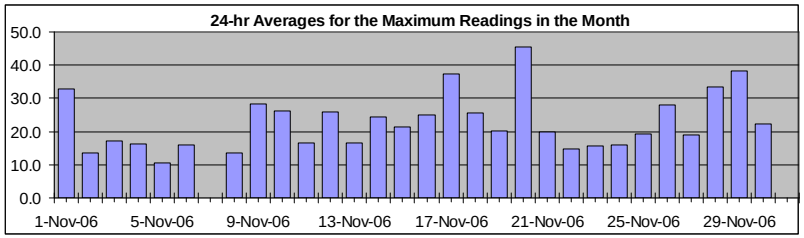

**Figure 3. PASZA - Henry Pirker Nitrogen Dioxide 1-hr Average Monthly Trend**

Station: Henry Pirker
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

## Nitrogen Dioxide ($NO_2$)

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 77.8 | ppb | 20-Nov | 17:00 18:00 |
| Maximum 24-hr Value: | 45.5 | ppb | 20-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 682 hrs |
| Calibration Time: | 6 hrs | AMD Operational Uptime: | 99.9% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 60.3 | 44.4 | 30.5 | 21.8 | 12.6 | 5.2 | 2.5 | 22.8 ppb | 21.8 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 34 | 34 | 21 | 26 | 30 | 36 | 43 | 48 | 58 | 53 | 43 | 50 | 47 | 19 | 11 | 25 | 30 | A | 34 | 31 | 28 | 25 | 21 | 11 | 32.9 | 58.0 |
| 2-Nov-06 | 9 | 8 | 7 | 12 | 11 | 7 | 12 | 20 | 22 | 13 | 17 | 11 | 13 | 12 | 15 | 18 | A | 20 | 17 | 15 | 16 | 14 | 13 | 13 | 13.6 | 21.9 |
| 3-Nov-06 | 11 | 10 | 8 | 9 | 10 | 12 | 21 | 23 | 24 | 22 | 16 | 16 | 13 | 18 | 22 | A | 21 | 19 | 21 | 20 | 19 | 19 | 19 | 23 | 17.1 | 23.8 |
| 4-Nov-06 | 19 | 18 | 15 | 15 | 14 | 18 | 19 | 18 | 22 | 20 | 16 | 17 | 15 | 17 | A | 14 | 16 | 15 | 17 | 15 | 13 | 16 | 12 | 11 | 16.2 | 21.8 |
| 5-Nov-06 | 7 | 4 | 4 | 4 | 4 | 8 | 20 | 10 | 6 | 5 | 5 | 4 | 4 | A | 7 | 5 | 9 | 14 | 16 | 23 | 22 | 19 | 29 | 12 | 10.5 | 29.0 |
| 6-Nov-06 | 14 | 11 | 12 | 11 | 12 | 11 | 15 | 20 | 20 | 15 | 14 | 14 | 14 | 13 | 12 | 14 | 19 | 24 | 23 | 19 | 16 | 27 | 16 | 18 | 16.0 | 27.0 |
| 7-Nov-06 | 22 | 17 | 23 | 22 | 29 | A | 42 | 35 | 37 | 37 | C | C | C | C | C | C | A | 37 | 38 | 31 | 23 | 11 | 6 | 5 | N | 42.0 |
| 8-Nov-06 | 4 | 2 | 2 | 2 | 2 | A | 6 | 9 | 14 | 9 | 6 | 5 | 6 | 5 | 8 | 8 | 16 | 24 | 33 | 30 | 30 | 30 | 30 | 30 | 13.7 | 33.2 |
| 9-Nov-06 | 25 | 20 | 22 | 22 | A | 24 | 27 | 30 | 31 | 26 | 16 | 28 | 26 | 24 | 42 | 42 | 34 | 35 | 32 | 33 | 31 | 28 | 27 | 26 | 28.4 | 41.9 |
| 10-Nov-06 | 28 | 29 | 31 | A | 26 | 28 | 37 | 27 | 27 | 25 | 25 | 34 | 28 | 40 | 34 | 30 | 29 | 22 | 23 | 23 | 20 | 17 | 11 | 11 | 26.3 | 39.7 |
| 11-Nov-06 | 11 | 10 | A | 9 | 9 | 10 | 10 | 8 | 8 | 8 | 7 | 9 | 5 | 9 | 12 | 26 | 31 | 35 | 35 | 27 | 21 | 27 | 29 | 29 | 16.7 | 35.2 |
| 12-Nov-06 | 30 | A | 26 | 25 | 25 | 23 | 24 | 26 | 32 | 32 | 37 | 27 | 27 | 14 | 16 | 21 | 26 | 26 | 24 | 24 | 26 | 27 | 28 | 27 | 25.9 | 36.7 |
| 13-Nov-06 | A | 26 | 26 | 25 | 23 | 23 | 27 | 25 | 29 | 22 | 17 | 12 | 11 | 10 | 9 | 9 | 9 | 8 | 8 | 7 | 6 | 8 | 21 | 23 | 16.6 | 28.7 |
| 14-Nov-06 | 21 | 19 | 19 | 23 | 22 | A | 37 | 25 | 28 | 23 | 20 | 27 | 31 | 15 | 17 | 20 | 23 | 27 | 30 | 28 | 20 | 26 | 33 | 27 | 24.5 | 36.8 |
| 15-Nov-06 | 19 | 26 | 25 | 25 | A | 13 | 23 | 20 | 15 | 12 | 12 | 31 | 22 | 37 | 28 | 23 | 22 | 25 | 25 | 18 | 31 | 34 | 4 | 3 | 21.5 | 36.8 |
| 16-Nov-06 | 2 | 2 | 2 | A | 3 | 11 | 43 | 32 | 31 | 32 | 24 | 29 | 15 | 28 | 29 | 18 | 25 | 37 | 45 | 37 | 32 | 30 | 32 | 36 | 25.0 | 44.9 |
| 17-Nov-06 | 44 | 30 | A | 26 | 28 | 27 | 29 | 68 | 47 | 44 | 40 | 52 | 50 | 20 | 24 | 36 | 33 | 35 | 32 | 31 | 37 | 40 | 44 | 44 | 37.5 | 68.1 |
| 18-Nov-06 | 32 | A | 35 | 33 | 40 | 38 | 20 | 13 | 11 | 14 | 10 | 9 | 10 | 8 | 12 | 19 | 33 | 30 | 36 | 43 | 45 | 35 | 30 | 33 | 25.6 | 44.5 |
| 19-Nov-06 | A | 32 | 30 | 28 | 26 | 27 | 30 | 34 | 24 | 14 | 13 | 12 | 15 | 17 | 15 | 20 | 28 | 26 | 30 | 7 | 5 | 6 | 8 | A | 20.2 | 34.4 |
| 20-Nov-06 | 6 | 4 | 9 | 9 | 22 | 46 | 52 | 52 | 56 | 47 | 61 | M | 61 | 60 | 56 | 65 | 64 | 78 | 63 | 60 | 48 | 40 | 44 | 42 | 45.5 | 77.8 |
| 21-Nov-06 | 17 | 37 | 36 | 6 | 8 | A | 12 | 17 | 23 | 34 | 28 | 25 | 16 | 16 | 24 | 33 | 19 | 19 | 22 | 16 | 16 | 11 | 11 | 12 | 19.8 | 36.8 |
| 22-Nov-06 | 12 | 11 | 8 | 11 | A | 19 | 12 | 22 | 17 | 15 | 14 | 9 | 12 | 11 | 12 | 17 | 21 | 21 | 20 | 14 | 17 | 13 | 16 | 12 | 14.7 | 22.1 |
| 23-Nov-06 | 14 | 14 | 10 | A | 22 | 24 | 24 | 19 | 36 | 19 | 12 | 11 | 9 | 9 | 8 | 13 | 17 | 20 | 23 | 23 | 14 | 8 | 4 | 4 | 15.6 | 36.0 |
| 24-Nov-06 | 4 | 3 | A | 4 | 4 | 4 | 5 | 7 | 8 | 19 | 6 | 4 | 4 | 5 | 6 | 6 | 29 | 29 | 31 | 36 | 37 | 40 | 37 | 36 | 15.9 | 40.4 |
| 25-Nov-06 | 35 | A | 17 | 10 | 14 | 16 | 21 | 20 | 21 | 19 | 11 | 7 | 12 | 13 | 8 | 8 | 13 | 17 | 15 | 32 | 39 | 38 | 30 | 26 | 19.3 | 39.2 |
| 26-Nov-06 | A | 27 | 18 | 13 | 31 | 34 | 36 | 34 | 34 | 32 | 24 | 24 | 27 | 32 | 30 | 31 | 35 | 34 | 33 | 29 | 24 | 17 | 17 | A | 28.0 | 35.9 |
| 27-Nov-06 | 11 | 10 | 9 | 9 | 9 | 11 | 16 | 14 | 19 | 17 | 16 | 18 | 14 | 18 | 14 | 18 | 34 | 34 | 23 | 38 | 37 | 13 | A | 36 | 19.1 | 37.8 |
| 28-Nov-06 | 34 | 34 | 29 | 27 | 21 | 28 | 26 | 37 | 42 | 40 | 40 | 34 | 29 | 25 | 26 | 31 | 39 | 41 | 42 | 40 | 34 | A | 36 | 33 | 33.3 | 41.8 |
| 29-Nov-06 | 32 | 32 | 28 | 26 | 34 | 40 | 46 | 52 | 44 | 41 | 29 | 30 | 30 | 29 | 38 | 48 | 49 | 49 | 60 | 38 | A | 36 | 35 | 34 | 38.3 | 59.9 |
| 30-Nov-06 | 21 | 29 | 35 | 31 | 34 | 42 | 53 | 50 | 37 | 29 | 11 | 9 | 5 | 7 | 10 | 7 | 10 | 19 | 8 | A | 17 | 7 | 10 | 27 | 22.2 | 53.3 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 19.2 | 18.5 | 18.8 | 17.2 | 19.1 | 22.3 | 26.3 | 27.2 | 27.4 | 24.5 | 20.3 | 19.9 | 19.8 | 19.0 | 19.5 | 22.4 | 26.3 | 28.3 | 28.6 | 27.2 | 25.0 | 22.8 | 22.5 | 23.0 | | |
| Hourly Max | 43.6 | 36.8 | 35.5 | 32.9 | 39.7 | 46.2 | 53.3 | 68.1 | 58.0 | 52.5 | 60.5 | 52.2 | 61.2 | 59.7 | 55.5 | 65.2 | 64.4 | 77.8 | 62.9 | 60.2 | 48.3 | 40.4 | 44.4 | 43.6 | | |

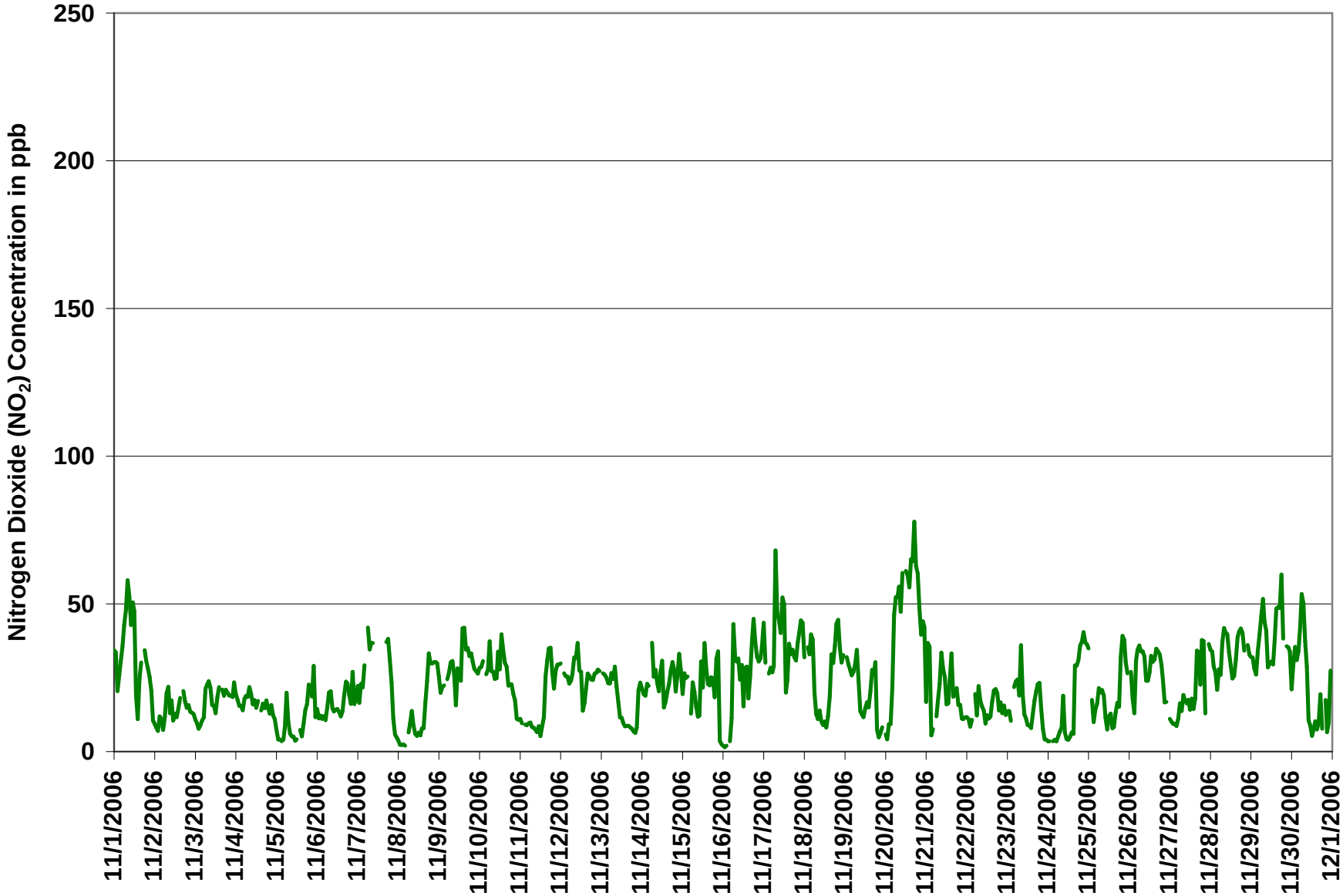
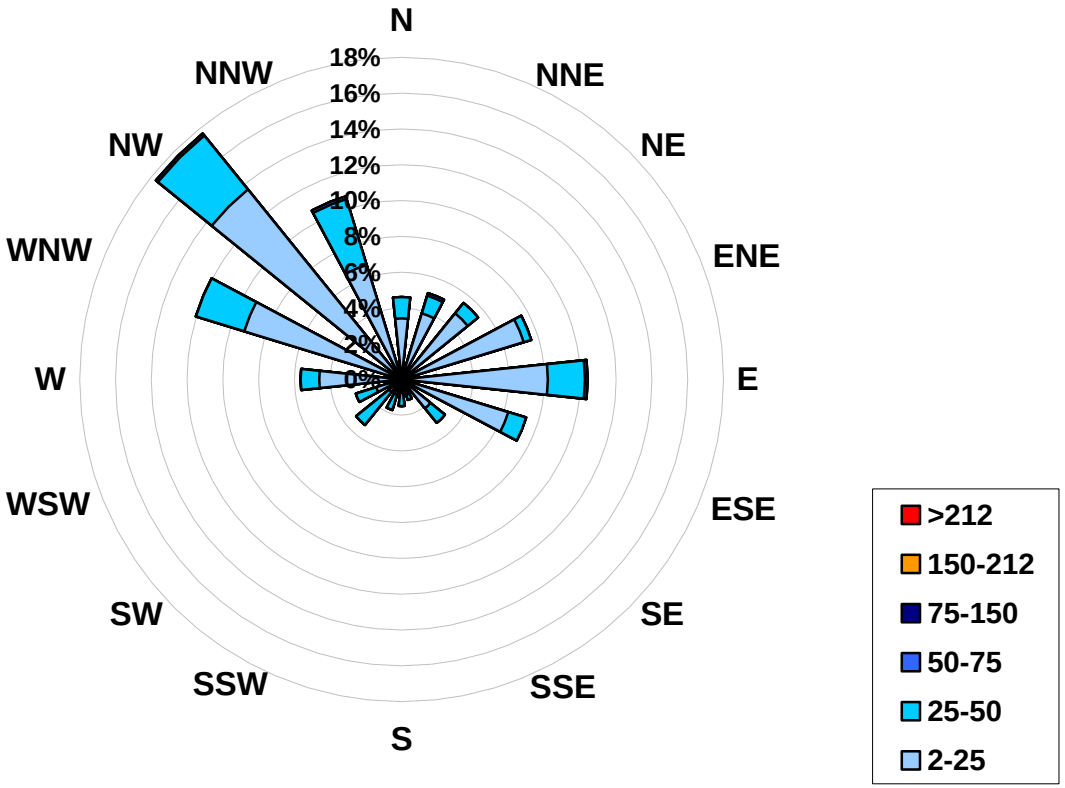



**Figure 4. PASZA - Henry Pirker Nitrogen Dioxide Instantaneous (30 Second) Maximum Value Monthly Trend**

## 1-hr Average Concentration Rose for Nitrogen Dioxide (in ppb) Located at the Henry Pirker Site for November 2006




| Calms: | 0% |
|---|---|

| Frequency Distribution of $NO_2$ in ppb | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 2.0 | < | 25 | 544 |
| 25 | to | 50 | 75 |
| 50 | to | 75 | 29 |
| 75 | to | 150 | 31 |
| 150 | to | 212 | 2 |
| | > | 212 | 1 |
| Total Non-Zero Values | | | 682 |

# PASZA - Henry Pirker - Nitric Oxide Monthly Summary

## HOURLY AVERAGE TABLE

**Nitric Oxide (NO)**

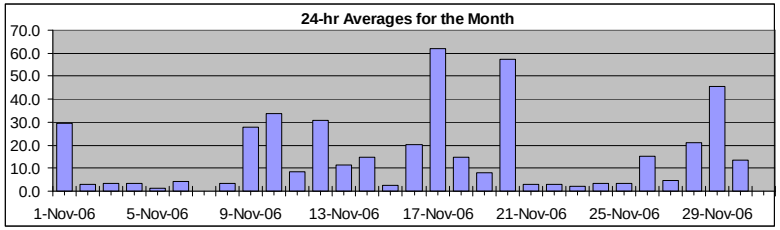
Station: Henry Pirker
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Guideline Limit:** 1-hr na ppb | 24-hr na ppb

**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 219.3 | ppb | 20-Nov | 18:00 19:00 |
| Maximum 24-hr Average: | 62.0 | ppb | 17-Nov | |




| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 682 hrs |
| Calibration Time: | 6 hrs | AMD Operational Uptime: | 99.9% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 138.1 | 73.1 | 16.7 | 4.3 | 1.7 | 0.3 | 0.1 | 15.8 ppb | 4.3 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 6 | 4 | 0 | 1 | 1 | 3 | 35 | 80 | 144 | 144 | 76 | 94 | 47 | 7 | 4 | 7 | 7 | A | 5 | 4 | 3 | 4 | 2 | 1 | 29.5 | 144.2 |
| 2-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 5 | 4 | 5 | 5 | 6 | 5 | 6 | 7 | A | 4 | 3 | 2 | 2 | 2 | 1 | 1 | 2.9 | 6.9 |
| 3-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 4 | 7 | 6 | 6 | 8 | 5 | 9 | 12 | A | 2 | 1 | 3 | 2 | 1 | 2 | 1 | 1 | 3.4 | 11.9 |
| 4-Nov-06 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 3 | 4 | 6 | 7 | 7 | 8 | 7 | A | 5 | 6 | 4 | 4 | 3 | 2 | 3 | 1 | 1 | 3.3 | 7.6 |
| 5-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 2 | 2 | 2 | A | 2 | 1 | 1 | 1 | 2 | 3 | 3 | 2 | 3 | 1 | 1.3 | 3.2 |
| 6-Nov-06 | 1 | 2 | 3 | 2 | 3 | 3 | 4 | 7 | 9 | 7 | 7 | 6 | 7 | 6 | 5 | 5 | 4 | 5 | 4 | 3 | 1 | 3 | 1 | 1 | 4.2 | 8.9 |
| 7-Nov-06 | 1 | 0 | 0 | 0 | 3 | A | 47 | 33 | 68 | 106 | C | C | C | C | C | C | A | 42 | 41 | 14 | 5 | 1 | 0 | 0 | N | 106.1 |
| 8-Nov-06 | 0 | 0 | 0 | 0 | 0 | A | 0 | 1 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 6 | 6 | 6 | 4 | 18 | 10 | 3.2 | 17.5 |
| 9-Nov-06 | 3 | 2 | 2 | 2 | A | 9 | 27 | 30 | 30 | 31 | 15 | 38 | 37 | 19 | 35 | 52 | 29 | 58 | 54 | 52 | 42 | 32 | 23 | 18 | 27.8 | 58.2 |
| 10-Nov-06 | 16 | 27 | 35 | A | 8 | 21 | 33 | 31 | 39 | 46 | 57 | 55 | 47 | 99 | 79 | 60 | 31 | 24 | 22 | 16 | 11 | 8 | 5 | 4 | 33.7 | 99.0 |
| 11-Nov-06 | 2 | 1 | A | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 4 | 4 | 2 | 5 | 7 | 10 | 21 | 23 | 32 | 8 | 4 | 7 | 19 | 35 | 8.2 | 34.6 |
| 12-Nov-06 | 36 | A | 3 | 6 | 11 | 6 | 13 | 27 | 63 | 63 | 86 | 53 | 36 | 12 | 11 | 17 | 26 | 16 | 11 | 10 | 31 | 56 | 58 | 57 | 30.7 | 85.7 |
| 13-Nov-06 | A | 42 | 37 | 40 | 11 | 9 | 14 | 16 | 14 | 14 | 11 | 7 | 6 | 8 | 5 | 4 | 2 | 1 | 1 | 1 | 1 | 1 | 8 | 10 | 11.4 | 42.0 |
| 14-Nov-06 | 6 | 4 | 3 | 10 | 4 | A | 61 | 21 | 34 | 19 | 16 | 20 | 13 | 13 | 14 | 11 | 12 | 28 | 37 | 7 | 2 | 2 | 5 | 2 | 14.9 | 61.0 |
| 15-Nov-06 | 1 | 1 | 0 | 1 | A | 1 | 2 | 2 | 2 | 2 | 2 | 4 | 4 | 11 | 5 | 4 | 3 | 4 | 2 | 2 | 2 | 3 | 0 | 0 | 2.5 | 11.2 |
| 16-Nov-06 | 0 | 0 | 0 | A | 0 | 0 | 3 | 10 | 13 | 30 | 27 | 27 | 10 | 16 | 14 | 7 | 10 | 35 | 101 | 46 | 19 | 15 | 20 | 57 | 20.1 | 100.9 |
| 17-Nov-06 | 58 | 18 | A | 3 | 5 | 10 | 21 | 84 | 139 | 147 | 57 | 95 | 76 | 26 | 32 | 67 | 63 | 60 | 36 | 25 | 91 | 90 | 138 | 86 | 62.0 | 147.0 |
| 18-Nov-06 | 16 | A | 12 | 2 | 12 | 8 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 5 | 12 | 6 | 27 | 71 | 63 | 49 | 6 | 30 | 14.9 | 71.2 |
| 19-Nov-06 | A | 33 | 26 | 16 | 2 | 1 | 25 | 41 | 1 | 1 | 3 | 3 | 3 | 4 | 3 | 4 | 3 | 2 | 2 | 0 | 0 | 0 | 0 | A | 7.9 | 41.0 |
| 20-Nov-06 | 0 | 0 | 0 | 0 | 1 | 5 | 46 | 52 | 79 | 26 | 97 | M | 54 | 42 | 38 | 130 | 172 | 208 | 219 | 98 | 31 | 10 | 5 | 9 | 57.5 | 219.3 |
| 21-Nov-06 | 0 | 1 | 2 | 1 | 1 | A | 2 | 2 | 1 | 4 | 8 | 7 | 4 | 3 | 5 | 8 | 2 | 3 | 3 | 2 | 1 | 3 | 2 | 2 | 2.9 | 8.1 |
| 22-Nov-06 | 2 | 2 | 1 | 1 | A | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 4 | 5 | 3 | 3 | 2 | 2 | 1 | 3.1 | 5.3 |
| 23-Nov-06 | 1 | 1 | 1 | A | 1 | 2 | 4 | 2 | 6 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 1 | 3 | 1 | 1 | 0 | 0 | 2.0 | 5.6 |
| 24-Nov-06 | 0 | 0 | A | 0 | 0 | 0 | 1 | 1 | 1 | 6 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 4 | 8 | 11 | 17 | 8 | 5 | 3.5 | 16.7 |
| 25-Nov-06 | 5 | A | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 4 | 5 | 2 | 1 | 1 | 1 | 2 | 2 | 13 | 24 | 5 | 2 | 3.5 | 23.8 |
| 26-Nov-06 | A | 2 | 0 | 0 | 3 | 13 | 13 | 11 | 12 | 18 | 20 | 25 | 35 | 50 | 34 | 24 | 24 | 26 | 14 | 6 | 2 | 0 | 1 | A | 15.2 | 50.0 |
| 27-Nov-06 | 2 | 2 | 1 | 1 | 2 | 2 | 4 | 3 | 4 | 4 | 6 | 6 | 7 | 8 | 4 | 6 | 10 | 10 | 1 | 10 | 9 | 1 | A | 6 | 4.7 | 10.5 |
| 28-Nov-06 | 8 | 5 | 4 | 4 | 2 | 4 | 5 | 10 | 27 | 28 | 48 | 36 | 31 | 20 | 19 | 24 | 38 | 39 | 36 | 52 | 19 | A | 16 | 11 | 21.1 | 52.0 |
| 29-Nov-06 | 13 | 5 | 2 | 2 | 12 | 37 | 73 | 109 | 88 | 72 | 28 | 27 | 46 | 43 | 67 | 99 | 98 | 79 | 103 | 19 | A | 10 | 12 | 3 | 45.5 | 109.5 |
| 30-Nov-06 | 0 | 2 | 19 | 9 | 11 | 33 | 97 | 99 | 18 | 6 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | A | 1 | 0 | 0 | 0 | 13.4 | 99.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 6.7 | 5.8 | 5.7 | 3.8 | 3.7 | 6.7 | 18.1 | 22.9 | 27.3 | 26.9 | 20.8 | 19.6 | 17.4 | 15.5 | 15.0 | 20.4 | 21.2 | 23.9 | 26.0 | 16.4 | 13.1 | 12.1 | 12.5 | 12.7 | | |
| Hourly Max | 58.0 | 42.0 | 37.0 | 39.5 | 12.3 | 36.5 | 96.8 | 109.5 | 144.2 | 147.0 | 96.9 | 95.4 | 75.7 | 99.0 | 78.8 | 129.8 | 172.5 | 208.2 | 219.3 | 97.8 | 91.2 | 90.5 | 137.9 | 86.1 | | |

# PASZA - Henry Pirker - Oxides of Nitrogen Monthly Summary

## HOURLY AVERAGE TABLE

**Oxides of Nitrogen ($NO_x$)**

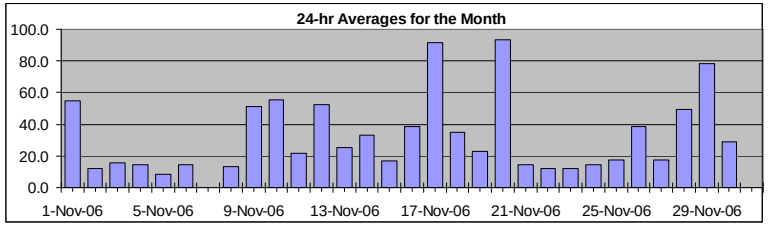
Station: Henry Pirker
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Guideline Limit:** **Alberta Environment:** 1-hr na ppb | 24-hr na ppb

**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 276.6 | ppb | 20-Nov | 18:00 19:00 |
| Maximum 24-hr Average: | 93.1 | ppb | 20-Nov | |




| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 682 hrs |
| Calibration Time: | 6 hrs | AMD Operational Uptime: | 99.9% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 180.0 | 107.5 | 43.2 | 19.0 | 10.6 | 4.4 | 1.9 | 33.1 ppb | 19.0 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 37 | 31 | 14 | 18 | 21 | 26 | 70 | 120 | 188 | 192 | 113 | 137 | 74 | 18 | 12 | 22 | 28 | A | 33 | 31 | 26 | 23 | 15 | 9 | 54.7 | 191.7 |
| 2-Nov-06 | 7 | 7 | 6 | 7 | 8 | 6 | 10 | 17 | 20 | 15 | 13 | 13 | 14 | 13 | 15 | 20 | A | 17 | 16 | 12 | 12 | 12 | 12 | 11 | 12.3 | 19.9 |
| 3-Nov-06 | 9 | 9 | 7 | 7 | 7 | 8 | 14 | 21 | 26 | 21 | 17 | 18 | 13 | 22 | 29 | A | 19 | 16 | 17 | 17 | 16 | 15 | 15 | 20 | 15.8 | 29.0 |
| 4-Nov-06 | 15 | 12 | 11 | 12 | 10 | 11 | 16 | 17 | 17 | 18 | 17 | 18 | 17 | 18 | A | 15 | 17 | 15 | 16 | 14 | 12 | 13 | 10 | 8 | 14.2 | 18.0 |
| 5-Nov-06 | 5 | 3 | 3 | 3 | 3 | 6 | 9 | 6 | 5 | 5 | 5 | 5 | 5 | A | 7 | 6 | 7 | 9 | 13 | 17 | 20 | 17 | 21 | 10 | 8.3 | 20.9 |
| 6-Nov-06 | 11 | 9 | 9 | 9 | 9 | 10 | 14 | 21 | 24 | 18 | 17 | 13 | 16 | 15 | 13 | 15 | 15 | 22 | 18 | 16 | 14 | 20 | 11 | 11 | 14.6 | 23.9 |
| 7-Nov-06 | 16 | 12 | 13 | 14 | 27 | A | 82 | 64 | 99 | 137 | C | C | C | C | C | C | A | 73 | 71 | 41 | 22 | 9 | 5 | 4 | N | 137.0 |
| 8-Nov-06 | 3 | 2 | 2 | 2 | 1 | A | 5 | 6 | 10 | 8 | 6 | 6 | 7 | 6 | 7 | 9 | 11 | 21 | 31 | 31 | 31 | 26 | 44 | 32 | 13.2 | 43.9 |
| 9-Nov-06 | 24 | 20 | 19 | 17 | A | 30 | 52 | 57 | 56 | 51 | 27 | 58 | 58 | 34 | 57 | 81 | 56 | 90 | 85 | 82 | 70 | 59 | 49 | 43 | 51.0 | 89.6 |
| 10-Nov-06 | 42 | 54 | 61 | A | 32 | 46 | 58 | 55 | 63 | 68 | 79 | 76 | 68 | 133 | 108 | 88 | 51 | 44 | 41 | 34 | 28 | 20 | 15 | 14 | 55.5 | 133.0 |
| 11-Nov-06 | 13 | 9 | A | 7 | 6 | 5 | 7 | 6 | 7 | 8 | 9 | 10 | 6 | 12 | 16 | 23 | 48 | 54 | 63 | 31 | 22 | 26 | 47 | 62 | 21.7 | 63.4 |
| 12-Nov-06 | 64 | A | 20 | 25 | 34 | 27 | 37 | 52 | 90 | 88 | 114 | 75 | 54 | 23 | 22 | 33 | 49 | 40 | 32 | 31 | 54 | 81 | 83 | 81 | 52.6 | 114.4 |
| 13-Nov-06 | A | 66 | 59 | 63 | 32 | 30 | 37 | 38 | 33 | 32 | 23 | 16 | 14 | 16 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 6 | 25 | 30 | 25.3 | 66.2 |
| 14-Nov-06 | 24 | 18 | 16 | 30 | 22 | A | 91 | 42 | 56 | 34 | 27 | 30 | 22 | 24 | 26 | 25 | 31 | 53 | 64 | 30 | 20 | 21 | 33 | 20 | 33.0 | 90.6 |
| 15-Nov-06 | 17 | 20 | 18 | 17 | A | 10 | 14 | 17 | 14 | 10 | 11 | 19 | 18 | 35 | 22 | 20 | 20 | 24 | 18 | 17 | 22 | 22 | 3 | 2 | 16.9 | 34.6 |
| 16-Nov-06 | 1 | 1 | 1 | A | 2 | 4 | 15 | 30 | 35 | 55 | 49 | 46 | 20 | 31 | 28 | 20 | 31 | 67 | 139 | 78 | 47 | 43 | 49 | 90 | 38.4 | 138.8 |
| 17-Nov-06 | 90 | 44 | A | 24 | 21 | 35 | 48 | 118 | 179 | 188 | 84 | 132 | 107 | 43 | 53 | 97 | 93 | 92 | 64 | 52 | 124 | 123 | 178 | 121 | 91.7 | 187.6 |
| 18-Nov-06 | 45 | A | 43 | 27 | 43 | 35 | 13 | 11 | 10 | 11 | 11 | 10 | 10 | 8 | 13 | 19 | 36 | 28 | 59 | 108 | 97 | 80 | 29 | 58 | 35.0 | 107.5 |
| 19-Nov-06 | A | 62 | 54 | 42 | 15 | 15 | 53 | 72 | 16 | 13 | 12 | 12 | 15 | 17 | 16 | 17 | 18 | 21 | 19 | 4 | 3 | 3 | 6 | A | 23.0 | 72.1 |
| 20-Nov-06 | 4 | 3 | 6 | 6 | 13 | 35 | 91 | 101 | 128 | 65 | 148 | M | 93 | 82 | 77 | 184 | 230 | 263 | 277 | 146 | 72 | 46 | 31 | 41 | 93.1 | 276.6 |
| 21-Nov-06 | 10 | 17 | 19 | 4 | 4 | A | 10 | 11 | 18 | 23 | 30 | 22 | 13 | 11 | 18 | 22 | 13 | 16 | 17 | 12 | 11 | 10 | 8 | 8 | 14.2 | 29.5 |
| 22-Nov-06 | 8 | 8 | 6 | 6 | A | 10 | 10 | 14 | 14 | 11 | 11 | 10 | 10 | 10 | 11 | 17 | 18 | 18 | 18 | 14 | 15 | 12 | 12 | 12 | 11.9 | 18.4 |
| 23-Nov-06 | 11 | 11 | 8 | A | 12 | 16 | 21 | 13 | 22 | 15 | 9 | 9 | 8 | 7 | 7 | 11 | 13 | 20 | 19 | 20 | 10 | 6 | 4 | 3 | 11.9 | 22.4 |
| 24-Nov-06 | 3 | 3 | A | 3 | 3 | 3 | 4 | 5 | 6 | 10 | 5 | 4 | 4 | 4 | 5 | 5 | 16 | 18 | 23 | 36 | 43 | 54 | 41 | 35 | 14.5 | 54.3 |
| 25-Nov-06 | 33 | A | 14 | 8 | 10 | 13 | 16 | 14 | 14 | 15 | 10 | 8 | 12 | 14 | 7 | 7 | 9 | 10 | 12 | 21 | 45 | 58 | 30 | 25 | 17.5 | 57.9 |
| 26-Nov-06 | A | 21 | 14 | 11 | 27 | 44 | 44 | 42 | 44 | 45 | 41 | 46 | 58 | 79 | 59 | 49 | 53 | 58 | 44 | 31 | 20 | 14 | 9 | A | 38.8 | 78.6 |
| 27-Nov-06 | 8 | 7 | 6 | 6 | 6 | 8 | 12 | 12 | 17 | 17 | 18 | 14 | 13 | 18 | 12 | 19 | 34 | 36 | 15 | 39 | 34 | 10 | A | 34 | 17.3 | 39.3 |
| 28-Nov-06 | 39 | 34 | 29 | 27 | 20 | 25 | 26 | 39 | 64 | 62 | 82 | 62 | 54 | 38 | 38 | 50 | 73 | 75 | 72 | 88 | 50 | A | 48 | 40 | 49.3 | 88.4 |
| 29-Nov-06 | 42 | 31 | 25 | 24 | 43 | 71 | 112 | 154 | 126 | 106 | 51 | 46 | 71 | 66 | 99 | 141 | 144 | 124 | 153 | 55 | A | 42 | 45 | 32 | 78.4 | 154.0 |
| 30-Nov-06 | 17 | 19 | 50 | 36 | 40 | 69 | 142 | 140 | 46 | 23 | 8 | 6 | 5 | 6 | 8 | 6 | 6 | 10 | 5 | A | 6 | 4 | 5 | 10 | 29.0 | 141.5 |
| Hourly Avg | 22.0 | 19.7 | 19.8 | 16.8 | 17.5 | 23.1 | 37.9 | 43.8 | 48.2 | 45.3 | 36.0 | 32.9 | 30.3 | 28.6 | 28.5 | 36.8 | 41.0 | 46.3 | 48.7 | 38.4 | 32.8 | 30.2 | 30.4 | 31.0 | | |
| Hourly Max | 89.5 | 66.2 | 60.9 | 62.8 | 43.2 | 70.8 | 141.5 | 154.0 | 188.3 | 191.7 | 147.8 | 137.5 | 107.2 | 133.0 | 108.5 | 184.4 | 230.0 | 262.6 | 276.6 | 146.3 | 123.7 | 123.2 | 177.5 | 120.8 | | |

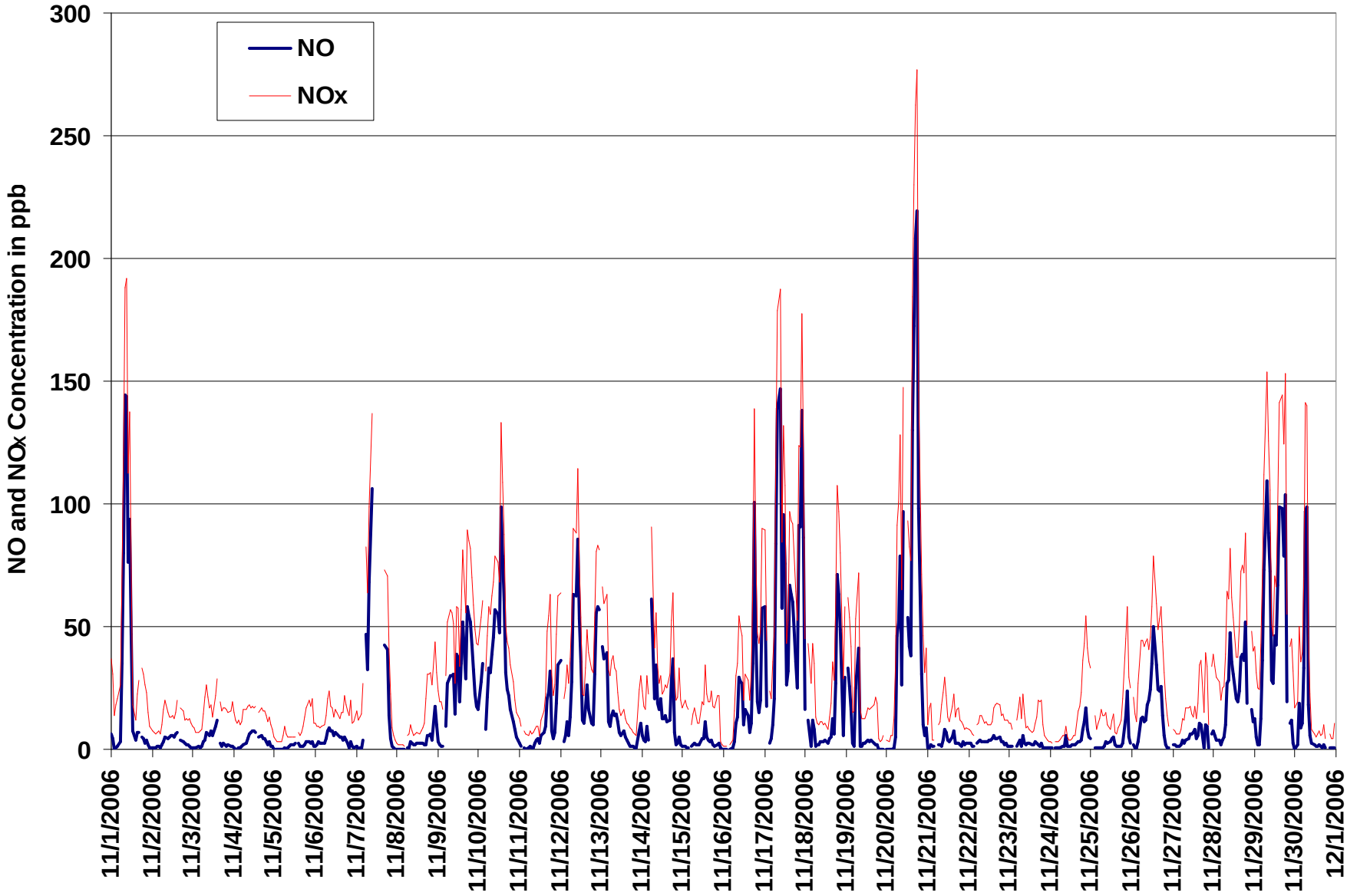


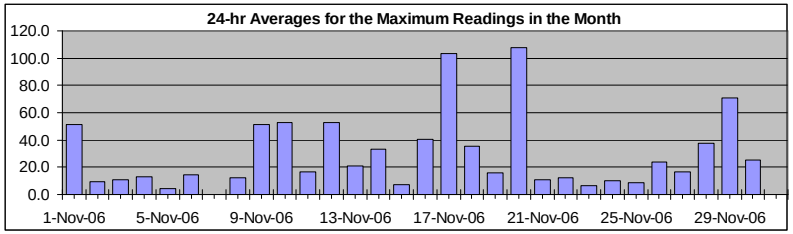

**Figure 5. PASZA - Henry Pirker Oxides of Nitrogen 1-hr Average Monthly Trend**

Station: Henry Pirker
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

**Nitric Oxide (NO)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 367.7 | ppb | 20-Nov | 17:00 18:00 |
| Maximum 24-hr Value: | 107.9 | ppb | 20-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 682 hrs |
| Calibration Time: | 6 hrs | AMD Operational Uptime: | 99.9% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 180.8 | 123.9 | 36.6 | 13.4 | 4.9 | 0.9 | 0.3 | 30.6 ppb | 13.4 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

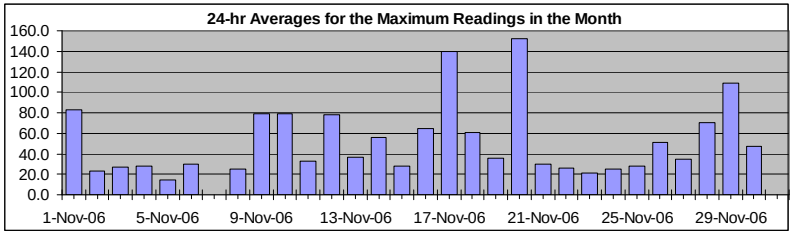
| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 24 | 15 | 1 | 3 | 10 | 38 | 83 | 148 | 212 | 176 | 105 | 121 | 106 | 18 | 6 | 25 | 17 | A | 14 | 14 | 12 | 17 | 11 | 2 | 51.1 | 211.7 |
| 2-Nov-06 | 1 | 1 | 5 | 13 | 8 | 3 | 4 | 5 | 7 | 7 | 27 | 8 | 17 | 13 | 16 | 24 | A | 15 | 14 | 11 | 4 | 8 | 5 | 3 | 9.5 | 27.4 |
| 3-Nov-06 | 1 | 2 | 2 | 8 | 4 | 11 | 24 | 14 | 21 | 19 | 14 | 16 | 19 | 17 | 20 | A | 5 | 4 | 9 | 13 | 3 | 8 | 6 | 9 | 10.9 | 24.1 |
| 4-Nov-06 | 3 | 1 | 2 | 3 | 13 | 13 | 5 | 13 | 23 | 24 | 28 | 17 | 18 | 20 | A | 12 | 20 | 18 | 19 | 12 | 9 | 12 | 4 | 16 | 13.2 | 27.9 |
| 5-Nov-06 | 2 | 1 | 1 | 0 | 1 | 1 | 8 | 1 | 2 | 4 | 5 | 3 | 4 | A | 5 | 2 | 3 | 3 | 7 | 9 | 8 | 6 | 15 | 6 | 4.2 | 15.3 |
| 6-Nov-06 | 14 | 12 | 16 | 14 | 11 | 12 | 17 | 21 | 25 | 19 | 19 | 21 | 15 | 16 | 13 | 16 | 9 | 13 | 21 | 13 | 5 | 16 | 4 | 8 | 14.5 | 25.3 |
| 7-Nov-06 | 7 | 1 | 4 | 2 | 11 | A | 89 | 60 | 114 | 159 | C | C | C | C | C | C | A | 108 | 122 | 34 | 9 | 3 | 1 | 1 | N | 158.5 |
| 8-Nov-06 | 1 | 1 | 1 | 1 | 0 | A | 1 | 2 | 33 | 6 | 27 | 3 | 5 | 4 | 4 | 4 | 4 | 3 | 17 | 16 | 17 | 33 | 49 | 46 | 12.0 | 48.5 |
| 9-Nov-06 | 7 | 4 | 5 | 7 | A | 27 | 68 | 67 | 50 | 56 | 20 | 72 | 55 | 32 | 107 | 107 | 57 | 79 | 67 | 101 | 69 | 54 | 33 | 30 | 51.1 | 107.5 |
| 10-Nov-06 | 29 | 45 | 59 | A | 19 | 40 | 80 | 48 | 64 | 62 | 77 | 114 | 75 | 124 | 103 | 75 | 65 | 40 | 33 | 25 | 20 | 14 | 6 | 5 | 53.1 | 124.0 |
| 11-Nov-06 | 3 | 3 | A | 1 | 1 | 2 | 3 | 2 | 2 | 4 | 5 | 8 | 4 | 8 | 11 | 33 | 34 | 53 | 60 | 19 | 8 | 26 | 37 | 54 | 16.6 | 59.8 |
| 12-Nov-06 | 56 | A | 24 | 18 | 23 | 15 | 20 | 36 | 124 | 112 | 115 | 72 | 90 | 20 | 21 | 28 | 47 | 38 | 32 | 27 | 68 | 86 | 78 | 70 | 53.0 | 124.1 |
| 13-Nov-06 | A | 76 | 57 | 52 | 28 | 20 | 36 | 33 | 47 | 20 | 18 | 16 | 10 | 10 | 7 | 6 | 4 | 3 | 2 | 3 | 2 | 2 | 12 | 16 | 20.8 | 76.1 |
| 14-Nov-06 | 12 | 8 | 8 | 17 | 13 | A | 74 | 40 | 63 | 45 | 55 | 110 | 85 | 24 | 27 | 31 | 19 | 46 | 62 | 15 | 4 | 5 | 8 | 3 | 33.6 | 110.4 |
| 15-Nov-06 | 3 | 3 | 1 | 2 | A | 3 | 6 | 8 | 3 | 3 | 3 | 13 | 9 | 28 | 12 | 7 | 9 | 15 | 6 | 7 | 5 | 13 | 1 | 1 | 7.0 | 28.0 |
| 16-Nov-06 | 1 | 0 | 1 | A | 1 | 2 | 43 | 58 | 29 | 53 | 34 | 54 | 18 | 45 | 46 | 12 | 17 | 70 | 159 | 83 | 48 | 28 | 34 | 99 | 40.7 | 159.3 |
| 17-Nov-06 | 145 | 39 | A | 15 | 44 | 23 | 34 | 155 | 172 | 184 | 139 | 180 | 140 | 37 | 52 | 118 | 94 | 78 | 62 | 55 | 132 | 127 | 179 | 168 | 103.2 | 184.0 |
| 18-Nov-06 | 52 | A | 23 | 10 | 51 | 36 | 3 | 4 | 10 | 12 | 4 | 5 | 6 | 5 | 6 | 7 | 31 | 32 | 51 | 141 | 157 | 79 | 40 | 53 | 35.6 | 157.1 |
| 19-Nov-06 | A | 53 | 35 | 30 | 16 | 9 | 81 | 65 | 8 | 4 | 4 | 5 | 5 | 6 | 5 | 9 | 11 | 5 | 5 | 1 | 0 | 1 | 0 | A | 16.2 | 81.4 |
| 20-Nov-06 | 0 | 0 | 0 | 0 | 6 | 25 | 108 | 75 | 155 | 57 | 180 | M | 146 | 93 | 93 | 216 | 308 | 368 | 296 | 197 | 78 | 26 | 29 | 26 | 107.9 | 367.7 |
| 21-Nov-06 | 1 | 4 | 8 | 8 | 8 | A | 10 | 12 | 5 | 17 | 20 | 17 | 7 | 15 | 17 | 30 | 8 | 9 | 7 | 5 | 4 | 11 | 10 | 12 | 10.7 | 29.7 |
| 22-Nov-06 | 14 | 16 | 6 | 6 | A | 16 | 14 | 18 | 12 | 20 | 5 | 5 | 11 | 9 | 16 | 15 | 24 | 13 | 15 | 13 | 11 | 7 | 9 | 3 | 12.1 | 23.8 |
| 23-Nov-06 | 7 | 9 | 9 | A | 5 | 5 | 15 | 5 | 28 | 9 | 5 | 8 | 5 | 5 | 4 | 6 | 7 | 7 | 5 | 5 | 1 | 3 | 2 | 1 | 6.7 | 28.3 |
| 24-Nov-06 | 1 | 1 | A | 0 | 1 | 1 | 2 | 3 | 3 | 92 | 3 | 2 | 2 | 4 | 3 | 3 | 11 | 12 | 10 | 17 | 17 | 26 | 14 | 11 | 10.4 | 92.0 |
| 25-Nov-06 | 12 | A | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 5 | 5 | 5 | 8 | 11 | 4 | 3 | 11 | 10 | 8 | 9 | 44 | 42 | 12 | 5 | 9.0 | 44.2 |
| 26-Nov-06 | A | 9 | 1 | 1 | 8 | 21 | 29 | 18 | 20 | 25 | 30 | 31 | 47 | 64 | 53 | 42 | 40 | 38 | 31 | 12 | 4 | 1 | 5 | A | 23.9 | 63.6 |
| 27-Nov-06 | 8 | 8 | 12 | 6 | 7 | 10 | 17 | 9 | 7 | 13 | 11 | 18 | 82 | 24 | 13 | 9 | 25 | 28 | 4 | 32 | 29 | 2 | A | 15 | 16.8 | 81.7 |
| 28-Nov-06 | 14 | 11 | 7 | 6 | 3 | 8 | 10 | 19 | 39 | 57 | 60 | 56 | 42 | 38 | 33 | 39 | 62 | 66 | 102 | 95 | 38 | A | 42 | 19 | 37.7 | 101.6 |
| 29-Nov-06 | 26 | 11 | 5 | 6 | 29 | 50 | 118 | 144 | 142 | 126 | 46 | 53 | 76 | 72 | 91 | 136 | 116 | 117 | 178 | 28 | A | 23 | 30 | 11 | 71.0 | 177.9 |
| 30-Nov-06 | 1 | 8 | 33 | 20 | 23 | 71 | 140 | 149 | 80 | 12 | 7 | 8 | 3 | 3 | 4 | 3 | 2 | 7 | 2 | A | 3 | 1 | 3 | 4 | 25.5 | 149.3 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 16.4 | 12.6 | 12.0 | 9.2 | 12.7 | 17.8 | 38.1 | 41.2 | 50.1 | 46.8 | 36.9 | 37.2 | 38.3 | 27.3 | 28.3 | 36.3 | 37.9 | 44.8 | 47.3 | 34.9 | 28.0 | 23.5 | 23.5 | 24.8 | | |
| Hourly Max | 144.6 | 76.1 | 58.9 | 52.3 | 50.7 | 71.5 | 140.3 | 155.2 | 211.7 | 184.0 | 180.1 | 179.7 | 145.6 | 124.0 | 107.5 | 216.2 | 308.2 | 367.7 | 295.9 | 196.9 | 157.1 | 126.7 | 179.4 | 168.4 | | |

Station: Henry Pirker
Station Owner: PASZA

## INSTANTANEOUS (30 Second) MAXIMUM TABLE

**Oxides of Nitrogen ($NO_x$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 445.3 | ppb | 20-Nov | 17:00 18:00 |
| Maximum 24-hr Value: | 152.0 | ppb | 20-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 682 hrs |
| Calibration Time: | 6 hrs | AMD Operational Uptime: | 99.9% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 237.4 | 165.5 | 66.7 | 33.3 | 19.1 | 7.5 | 3.1 | 52.6 ppb | 33.3 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 56 | 48 | 21 | 29 | 40 | 73 | 126 | 195 | 269 | 227 | 146 | 171 | 154 | 36 | 16 | 47 | 39 | A | 48 | 45 | 40 | 36 | 32 | 12 | 82.8 | 269.2 |
| 2-Nov-06 | 11 | 9 | 12 | 25 | 19 | 10 | 16 | 25 | 28 | 20 | 44 | 19 | 29 | 24 | 31 | 40 | A | 36 | 30 | 25 | 20 | 20 | 17 | 14 | 22.7 | 43.8 |
| 3-Nov-06 | 12 | 11 | 9 | 16 | 14 | 19 | 46 | 37 | 42 | 41 | 30 | 31 | 32 | 33 | 40 | A | 23 | 22 | 30 | 31 | 22 | 23 | 22 | 32 | 26.9 | 45.6 |
| 4-Nov-06 | 22 | 18 | 16 | 16 | 27 | 30 | 23 | 29 | 44 | 43 | 44 | 33 | 28 | 36 | A | 25 | 31 | 32 | 36 | 25 | 18 | 28 | 16 | 27 | 28.3 | 44.5 |
| 5-Nov-06 | 9 | 5 | 5 | 4 | 4 | 9 | 28 | 12 | 7 | 8 | 10 | 7 | 8 | A | 13 | 7 | 12 | 17 | 21 | 32 | 28 | 24 | 42 | 16 | 14.2 | 41.7 |
| 6-Nov-06 | 26 | 23 | 28 | 25 | 21 | 20 | 32 | 39 | 46 | 33 | 31 | 35 | 29 | 30 | 25 | 28 | 28 | 36 | 44 | 32 | 20 | 43 | 20 | 21 | 29.8 | 45.9 |
| 7-Nov-06 | 30 | 17 | 25 | 24 | 40 | A | 127 | 93 | 149 | 195 | C | C | C | C | C | C | A | 144 | 161 | 62 | 32 | 14 | 7 | 6 | N | 194.5 |
| 8-Nov-06 | 5 | 3 | 3 | 3 | 2 | A | 8 | 12 | 47 | 15 | 31 | 8 | 11 | 9 | 12 | 12 | 20 | 27 | 50 | 45 | 47 | 63 | 78 | 76 | 25.5 | 78.1 |
| 9-Nov-06 | 32 | 24 | 26 | 30 | A | 51 | 95 | 95 | 80 | 81 | 36 | 99 | 80 | 56 | 149 | 149 | 91 | 111 | 97 | 134 | 98 | 81 | 59 | 56 | 78.7 | 149.2 |
| 10-Nov-06 | 55 | 74 | 90 | A | 46 | 68 | 118 | 73 | 91 | 86 | 101 | 148 | 103 | 164 | 137 | 104 | 93 | 58 | 56 | 48 | 39 | 31 | 17 | 15 | 78.9 | 163.8 |
| 11-Nov-06 | 14 | 12 | A | 11 | 10 | 12 | 13 | 11 | 10 | 10 | 12 | 17 | 10 | 17 | 23 | 58 | 63 | 88 | 95 | 45 | 30 | 54 | 66 | 83 | 33.2 | 94.7 |
| 12-Nov-06 | 86 | A | 50 | 44 | 48 | 38 | 44 | 62 | 156 | 142 | 151 | 99 | 117 | 34 | 38 | 49 | 73 | 63 | 57 | 50 | 95 | 110 | 103 | 97 | 78.5 | 155.7 |
| 13-Nov-06 | A | 99 | 82 | 77 | 51 | 42 | 62 | 57 | 76 | 41 | 35 | 27 | 22 | 19 | 16 | 14 | 12 | 11 | 10 | 9 | 8 | 10 | 32 | 39 | 37.0 | 99.2 |
| 14-Nov-06 | 33 | 27 | 27 | 39 | 35 | A | 105 | 65 | 89 | 68 | 71 | 111 | 108 | 38 | 42 | 51 | 42 | 73 | 91 | 40 | 24 | 30 | 40 | 29 | 55.5 | 110.9 |
| 15-Nov-06 | 22 | 29 | 25 | 27 | A | 15 | 29 | 25 | 17 | 15 | 15 | 44 | 30 | 64 | 40 | 30 | 30 | 40 | 30 | 25 | 36 | 40 | 4 | 3 | 27.6 | 64.5 |
| 16-Nov-06 | 2 | 2 | 2 | A | 4 | 12 | 83 | 77 | 58 | 83 | 58 | 83 | 34 | 74 | 75 | 29 | 41 | 105 | 202 | 119 | 78 | 58 | 66 | 134 | 64.3 | 202.3 |
| 17-Nov-06 | 187 | 65 | A | 42 | 73 | 50 | 63 | 212 | 219 | 228 | 179 | 232 | 186 | 57 | 76 | 153 | 127 | 110 | 94 | 85 | 168 | 166 | 224 | 211 | 139.4 | 231.8 |
| 18-Nov-06 | 83 | A | 54 | 43 | 90 | 74 | 22 | 17 | 20 | 26 | 14 | 14 | 15 | 13 | 17 | 26 | 64 | 59 | 87 | 182 | 202 | 113 | 70 | 86 | 60.5 | 201.6 |
| 19-Nov-06 | A | 85 | 64 | 58 | 41 | 36 | 109 | 98 | 32 | 17 | 16 | 17 | 20 | 23 | 20 | 29 | 38 | 31 | 34 | 8 | 5 | 6 | 8 | A | 36.1 | 109.4 |
| 20-Nov-06 | 6 | 4 | 9 | 9 | 22 | 66 | 160 | 125 | 208 | 103 | 239 | M | 203 | 153 | 148 | 281 | 368 | 445 | 358 | 256 | 124 | 66 | 73 | 68 | 152.0 | 445.3 |
| 21-Nov-06 | 18 | 41 | 44 | 13 | 16 | A | 21 | 29 | 27 | 51 | 48 | 42 | 23 | 32 | 41 | 63 | 22 | 25 | 28 | 18 | 18 | 21 | 21 | 21 | 29.7 | 62.8 |
| 22-Nov-06 | 24 | 26 | 13 | 16 | A | 35 | 23 | 41 | 28 | 35 | 19 | 15 | 23 | 20 | 25 | 30 | 43 | 32 | 29 | 26 | 26 | 19 | 23 | 16 | 25.6 | 42.8 |
| 23-Nov-06 | 18 | 22 | 19 | A | 26 | 28 | 36 | 22 | 63 | 26 | 17 | 19 | 14 | 14 | 12 | 18 | 22 | 25 | 27 | 29 | 16 | 9 | 6 | 5 | 21.4 | 63.4 |
| 24-Nov-06 | 4 | 4 | A | 4 | 4 | 4 | 7 | 9 | 11 | 98 | 9 | 6 | 6 | 8 | 9 | 8 | 40 | 41 | 41 | 52 | 54 | 66 | 50 | 46 | 25.4 | 98.2 |
| 25-Nov-06 | 46 | A | 19 | 10 | 15 | 17 | 22 | 21 | 22 | 24 | 16 | 12 | 20 | 21 | 12 | 10 | 24 | 27 | 22 | 41 | 83 | 78 | 41 | 31 | 27.6 | 82.6 |
| 26-Nov-06 | A | 35 | 19 | 14 | 39 | 54 | 64 | 51 | 54 | 57 | 53 | 53 | 74 | 96 | 83 | 69 | 74 | 72 | 64 | 41 | 28 | 17 | 18 | A | 51.3 | 95.9 |
| 27-Nov-06 | 16 | 16 | 20 | 14 | 15 | 21 | 33 | 23 | 26 | 29 | 26 | 35 | 79 | 41 | 27 | 27 | 58 | 62 | 26 | 69 | 67 | 15 | A | 51 | 34.6 | 78.9 |
| 28-Nov-06 | 48 | 45 | 35 | 33 | 24 | 35 | 36 | 57 | 80 | 98 | 100 | 90 | 72 | 63 | 57 | 68 | 97 | 105 | 143 | 135 | 72 | A | 78 | 53 | 70.7 | 143.4 |
| 29-Nov-06 | 58 | 43 | 32 | 32 | 61 | 88 | 162 | 189 | 183 | 167 | 75 | 83 | 106 | 102 | 129 | 184 | 163 | 166 | 237 | 67 | A | 59 | 65 | 45 | 108.5 | 237.0 |
| 30-Nov-06 | 21 | 38 | 68 | 50 | 56 | 114 | 189 | 198 | 117 | 41 | 17 | 17 | 8 | 11 | 14 | 10 | 12 | 26 | 10 | A | 21 | 7 | 13 | 31 | 47.4 | 198.1 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 35.0 | 30.6 | 30.3 | 26.2 | 31.3 | 39.3 | 63.5 | 66.6 | 76.7 | 70.3 | 56.6 | 56.0 | 56.7 | 46.0 | 47.3 | 57.9 | 62.7 | 72.0 | 75.3 | 61.2 | 52.3 | 45.1 | 45.3 | 47.2 | | |
| Hourly Max | 187.0 | 99.2 | 89.5 | 77.3 | 89.9 | 114.1 | 188.8 | 212.3 | 269.2 | 228.2 | 239.4 | 231.8 | 203.2 | 163.8 | 149.2 | 281.3 | 368.3 | 445.3 | 358.5 | 255.9 | 201.6 | 165.6 | 223.5 | 211.3 | | |

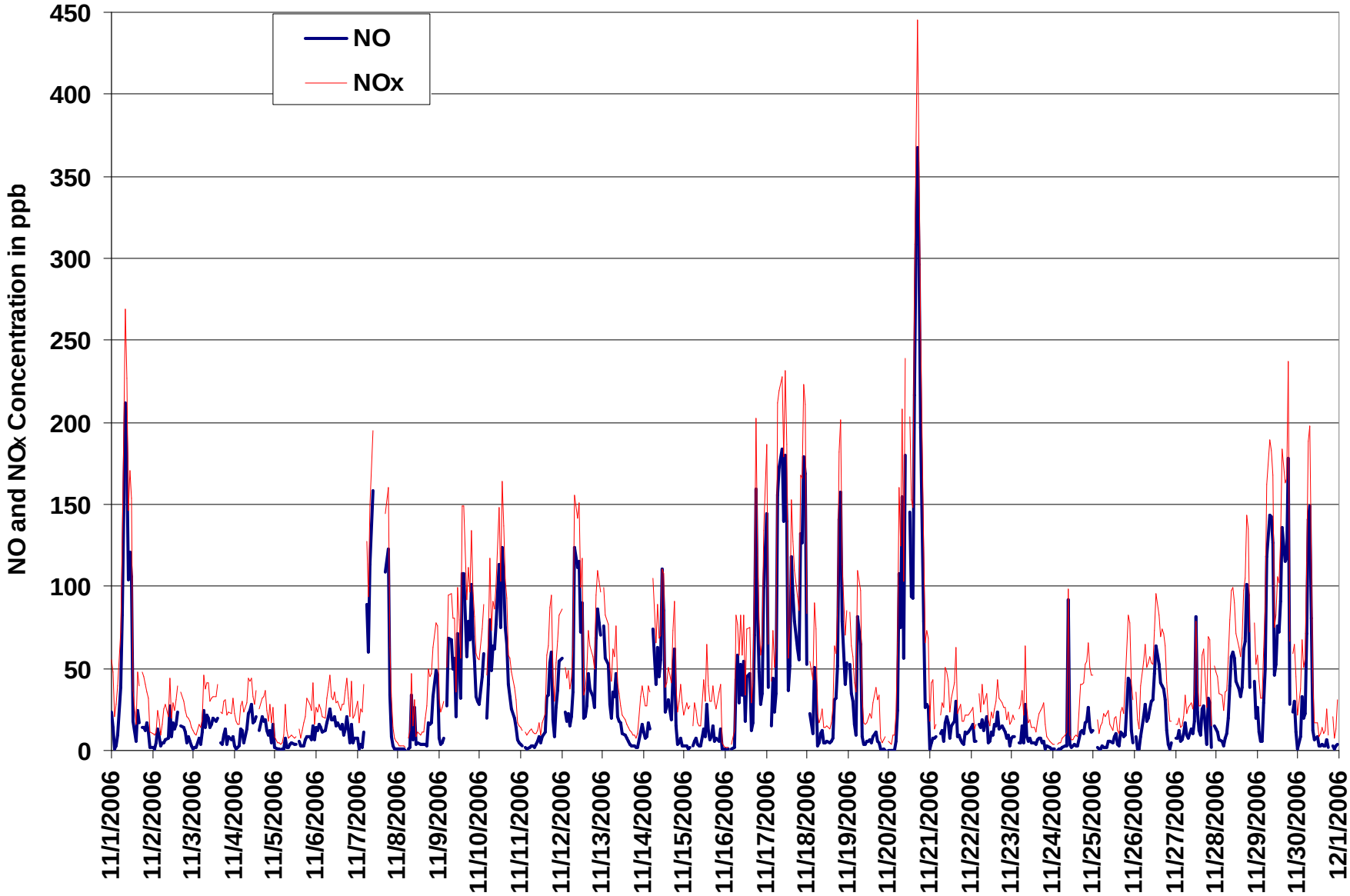



**Figure 6. PASZA - Henry Pirker Oxides of Nitrogen Instantaneous (30 Second) Maximum Value Monthly Trend**

# PASZA - Henry Pirker - Ozone Monthly Summary

## HOURLY AVERAGE TABLE

**Ozone ($O_3$)**

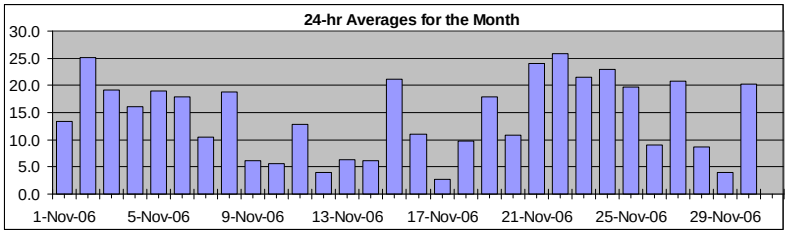
Station: Henry Pirker
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr 82 ppb | 24-hr na ppb

**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 1-hr Exceedances: | 0 | | | |
| Maximum 1-hr Average: | 39.1 | ppb | 19-Nov | 21:00 22:00 |
| Maximum 24-hr Average: | 25.8 | ppb | 22-Nov | |




| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 684 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 99.9% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 34.9 | 29.2 | 22.2 | 15.3 | 5.6 | 0.4 | 0.0 | 14.4 ppb | 15.3 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 3 | 6 | 17 | 14 | 11 | 8 | 1 | 1 | 2 | 3 | 7 | 9 | 17 | 28 | 30 | 22 | 18 | A | 13 | 13 | 16 | 19 | 23 | 26 | 13.3 | 29.7 |
| 2-Nov-06 | 28 | 28 | 28 | 29 | 28 | 29 | 25 | 20 | 19 | 23 | 26 | 27 | 27 | 28 | 25 | 22 | A | 23 | 23 | 25 | 24 | 24 | 22 | 23 | 25.1 | 29.2 |
| 3-Nov-06 | 23 | 23 | 25 | 25 | 25 | 24 | 21 | 16 | 14 | 18 | 21 | 22 | 23 | 19 | 16 | A | 17 | 18 | 18 | 16 | 16 | 17 | 15 | 10 | 19.2 | 25.3 |
| 4-Nov-06 | 12 | 15 | 16 | 16 | 19 | 17 | 13 | 13 | 14 | 14 | 18 | 18 | 19 | 20 | A | 20 | 16 | 15 | 15 | 15 | 16 | 16 | 16 | 18 | 16.2 | 20.3 |
| 5-Nov-06 | 20 | 22 | 23 | 23 | 22 | 21 | 18 | 20 | 21 | 21 | 21 | 21 | 21 | A | 22 | 22 | 20 | 18 | 17 | 15 | 11 | 12 | 10 | 17 | 19.1 | 22.6 |
| 6-Nov-06 | 19 | 21 | 21 | 20 | 20 | 19 | 17 | 14 | 13 | 17 | 19 | 21 | 21 | 22 | 22 | 20 | 19 | 15 | 15 | 15 | 15 | 11 | 17 | 16 | 17.9 | 22.2 |
| 7-Nov-06 | 14 | 16 | 14 | 12 | 5 | A | 1 | 1 | 2 | 4 | 8 | 14 | 18 | 17 | 18 | 16 | 12 | 2 | 2 | 3 | 8 | 18 | 20 | 20 | 10.5 | 19.8 |
| 8-Nov-06 | 21 | 23 | 24 | 25 | 26 | A | 23 | 22 | 21 | 23 | 26 | 28 | 26 | 26 | 26 | 25 | 22 | 13 | 6 | 6 | 5 | 7 | 2 | 6 | 18.8 | 27.6 |
| 9-Nov-06 | 6 | 7 | 7 | 10 | A | 3 | 1 | 1 | 3 | 7 | 14 | 13 | 14 | 17 | 14 | 8 | 6 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 6.2 | 16.9 |
| 10-Nov-06 | 2 | 2 | 2 | A | 3 | 2 | 2 | 2 | 3 | 5 | 6 | 8 | 8 | 6 | 5 | 4 | 7 | 6 | 7 | 7 | 7 | 10 | 12 | 12 | 5.6 | 12.3 |
| 11-Nov-06 | 11 | 12 | A | 17 | 17 | 18 | 17 | 18 | 17 | 18 | 19 | 20 | 22 | 21 | 20 | 17 | 6 | 2 | 2 | 5 | 8 | 6 | 2 | 2 | 12.9 | 22.1 |
| 12-Nov-06 | 2 | A | 7 | 5 | 2 | 2 | 1 | 1 | 2 | 4 | 5 | 7 | 9 | 13 | 12 | 9 | 3 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 4.0 | 12.6 |
| 13-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 5 | 7 | 11 | C | C | C | C | A | 14 | 13 | 13 | 13 | 13 | 14 | 4 | 1 | 6.3 | 13.7 |
| 14-Nov-06 | 2 | 6 | 6 | 1 | 1 | A | 0 | 2 | 0 | 5 | 9 | 10 | 10 | 9 | 8 | 8 | 4 | 0 | 0 | 6 | 14 | 15 | 9 | 17 | 6.1 | 17.1 |
| 15-Nov-06 | 19 | 17 | 18 | 20 | A | 27 | 24 | 22 | 23 | 26 | 28 | 25 | 27 | 19 | 23 | 23 | 22 | 18 | 21 | 20 | 15 | 12 | 18 | 20 | 21.1 | 27.8 |
| 16-Nov-06 | 21 | 22 | 22 | A | 23 | 22 | 14 | 7 | 7 | 6 | 11 | 14 | 20 | 18 | 17 | 17 | 8 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 11.0 | 23.3 |
| 17-Nov-06 | 1 | 0 | A | 4 | 8 | 1 | 0 | 1 | 2 | 2 | 6 | 6 | 7 | 12 | 9 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2.8 | 11.8 |
| 18-Nov-06 | D | A | 1 | 7 | 1 | 2 | 11 | 14 | 17 | 19 | 19 | 21 | 22 | 24 | 22 | 17 | 9 | 8 | 0 | 0 | 0 | 0 | 2 | 0 | 9.8 | 23.8 |
| 19-Nov-06 | A | 0 | 0 | 0 | 14 | 13 | 0 | 0 | 14 | 19 | 21 | 21 | 20 | 20 | 21 | 23 | 21 | 17 | 19 | 36 | 39 | 39 | 36 | A | 17.8 | 39.1 |
| 20-Nov-06 | 38 | 38 | 35 | 35 | 27 | 11 | 0 | 0 | 0 | 7 | 4 | 5 | 13 | 11 | 10 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 7 | 10.8 | 38.2 |
| 21-Nov-06 | 27 | 21 | 17 | 29 | 31 | A | 28 | 27 | 19 | 18 | 17 | 22 | 26 | 27 | 23 | 22 | 24 | 21 | 20 | 24 | 25 | 28 | 29 | 29 | 24.1 | 30.8 |
| 22-Nov-06 | 30 | 30 | 30 | 30 | A | 29 | 28 | 26 | 25 | 27 | 27 | 28 | 28 | 28 | 27 | 24 | 21 | 20 | 22 | 23 | 22 | 24 | 23 | 22 | 25.8 | 30.0 |
| 23-Nov-06 | 23 | 23 | 25 | A | 22 | 19 | 15 | 21 | 17 | 20 | 25 | 25 | 26 | 27 | 27 | 24 | 22 | 14 | 14 | 13 | 21 | 23 | 23 | 25 | 21.4 | 26.9 |
| 24-Nov-06 | 25 | 25 | A | 26 | 26 | 26 | 26 | 26 | 27 | 29 | 31 | 32 | 33 | 33 | 32 | 32 | 24 | 21 | 17 | 11 | 7 | 4 | 6 | 8 | 22.9 | 33.1 |
| 25-Nov-06 | 7 | A | 20 | 25 | 23 | 20 | 17 | 20 | 21 | 22 | 25 | 28 | 27 | 26 | 30 | 29 | 27 | 25 | 24 | 17 | 5 | 1 | 8 | 9 | 19.8 | 29.5 |
| 26-Nov-06 | A | 10 | 15 | 17 | 8 | 1 | 3 | 3 | 2 | 7 | 12 | 14 | 13 | 12 | 11 | 9 | 3 | 1 | 2 | 6 | 12 | 16 | 23 | A | 9.1 | 22.9 |
| 27-Nov-06 | 26 | 26 | 27 | 27 | 27 | 26 | 25 | 24 | 20 | 21 | 22 | 25 | 26 | 24 | 25 | 20 | 11 | 8 | 19 | 7 | 10 | 22 | A | 8 | 20.8 | 27.3 |
| 28-Nov-06 | 5 | 8 | 10 | 12 | 16 | 14 | 13 | 7 | 2 | 7 | 10 | 15 | 17 | 19 | 17 | 11 | 3 | 2 | 2 | 1 | 2 | A | 2 | 4 | 8.6 | 18.9 |
| 29-Nov-06 | 2 | 5 | 6 | 8 | 3 | 2 | 1 | 2 | 1 | 3 | 9 | 12 | 9 | 9 | 6 | 3 | 2 | 1 | 1 | 0 | A | 2 | 0 | 3 | 3.9 | 12.1 |
| 30-Nov-06 | 12 | 12 | 1 | 3 | 2 | 0 | 0 | 0 | 7 | 16 | 27 | 33 | 34 | 33 | 31 | 31 | 31 | 29 | 34 | A | 34 | 35 | 34 | 29 | 20.3 | 34.7 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 15.3 | 15.5 | 15.4 | 16.2 | 15.3 | 13.7 | 11.6 | 11.1 | 11.4 | 13.9 | 16.8 | 18.7 | 20.2 | 20.2 | 19.6 | 17.2 | 13.5 | 10.9 | 11.0 | 10.4 | 12.0 | 13.0 | 12.9 | 11.9 | | |
| Hourly Max | 38.2 | 37.9 | 34.9 | 35.1 | 30.8 | 28.7 | 28.1 | 27.2 | 27.3 | 29.5 | 30.7 | 32.8 | 34.4 | 32.8 | 31.8 | 31.6 | 30.5 | 29.4 | 34.3 | 36.3 | 38.9 | 39.1 | 35.5 | 29.0 | | |

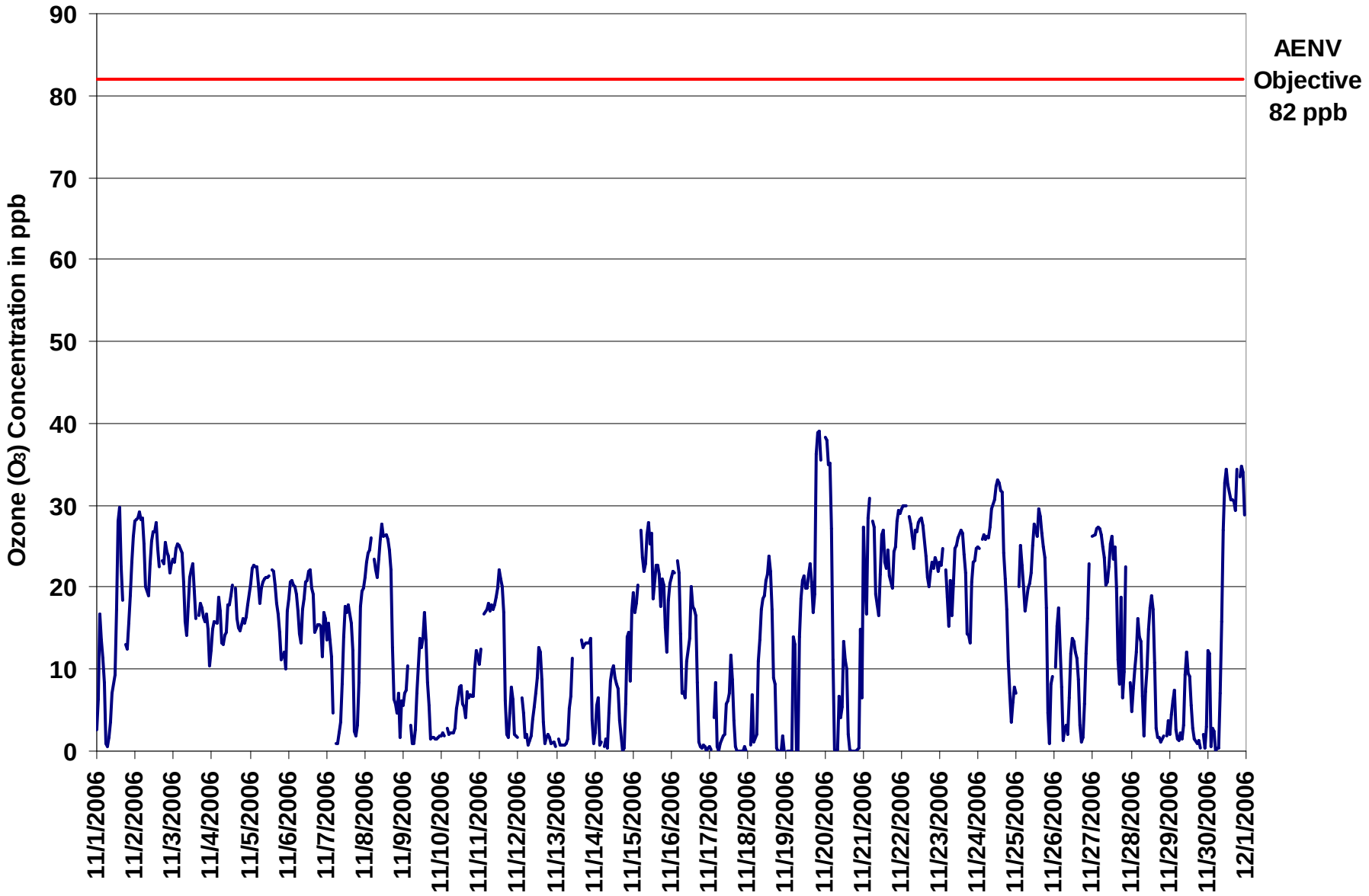


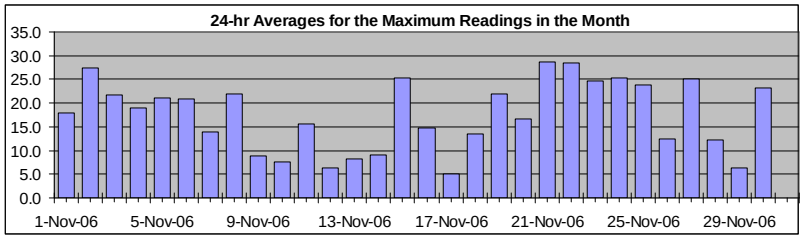

**Figure 7. PASZA - Henry Pirker Ozone 1-hr Average Monthly Trend**

Station: Henry Pirker
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

**Ozone ($O_3$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 41.5 | ppb | 19-Nov | 21:00 22:00 |
| Maximum 24-hr Value: | 28.7 | ppb | 21-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 684 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 99.9% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 37.6 | 31.9 | 25.3 | 18.9 | 9.3 | 1.9 | 0.6 | 17.6 ppb | 18.9 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 7 | 16 | 21 | 18 | 17 | 14 | 6 | 2 | 3 | 6 | 11 | 11 | 30 | 31 | 33 | 28 | 24 | A | 19 | 17 | 20 | 22 | 27 | 28 | 17.9 | 33.2 |
| 2-Nov-06 | 30 | 30 | 30 | 31 | 31 | 30 | 28 | 25 | 22 | 25 | 28 | 28 | 29 | 30 | 28 | 26 | A | 25 | 25 | 27 | 27 | 25 | 25 | 25 | 27.4 | 30.8 |
| 3-Nov-06 | 24 | 25 | 26 | 27 | 27 | 26 | 24 | 20 | 17 | 21 | 24 | 24 | 24 | 23 | 20 | A | 19 | 22 | 22 | 20 | 18 | 19 | 18 | 13 | 21.7 | 26.6 |
| 4-Nov-06 | 15 | 17 | 19 | 22 | 21 | 20 | 16 | 17 | 17 | 17 | 21 | 20 | 21 | 24 | A | 22 | 18 | 17 | 18 | 18 | 18 | 18 | 19 | 20 | 18.9 | 23.7 |
| 5-Nov-06 | 22 | 24 | 24 | 24 | 24 | 22 | 22 | 21 | 22 | 22 | 22 | 22 | 23 | A | 24 | 24 | 22 | 21 | 20 | 20 | 14 | 15 | 15 | 19 | 21.1 | 24.1 |
| 6-Nov-06 | 23 | 23 | 23 | 22 | 21 | 21 | 20 | 17 | 16 | 20 | 22 | 23 | 23 | 24 | 25 | 23 | 23 | 18 | 19 | 20 | 17 | 18 | 22 | 19 | 20.8 | 25.1 |
| 7-Nov-06 | 17 | 19 | 19 | 13 | 13 | A | 2 | 2 | 5 | 8 | 11 | 17 | 20 | 18 | 20 | 19 | 18 | 8 | 7 | 7 | 15 | 19 | 21 | 21 | 13.8 | 20.7 |
| 8-Nov-06 | 22 | 25 | 26 | 25 | 27 | A | 26 | 24 | 23 | 25 | 28 | 30 | 27 | 28 | 27 | 27 | 26 | 19 | 19 | 10 | 10 | 13 | 5 | 12 | 21.9 | 29.9 |
| 9-Nov-06 | 9 | 10 | 10 | 13 | A | 8 | 4 | 2 | 5 | 13 | 16 | 17 | 18 | 19 | 20 | 11 | 10 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 8.8 | 19.6 |
| 10-Nov-06 | 4 | 5 | 3 | A | 5 | 3 | 3 | 3 | 4 | 7 | 7 | 10 | 11 | 6 | 7 | 5 | 11 | 9 | 10 | 10 | 10 | 13 | 15 | 13 | 7.5 | 14.5 |
| 11-Nov-06 | 12 | 14 | A | 18 | 19 | 20 | 19 | 20 | 18 | 19 | 20 | 22 | 23 | 23 | 23 | 22 | 13 | 4 | 4 | 8 | 10 | 10 | 5 | 9 | 15.5 | 23.3 |
| 12-Nov-06 | 5 | A | 10 | 9 | 5 | 3 | 1 | 3 | 3 | 5 | 7 | 8 | 11 | 15 | 16 | 14 | 6 | 2 | 4 | 5 | 5 | 3 | 3 | 2 | 6.4 | 15.7 |
| 13-Nov-06 | A | 2 | 2 | 1 | 1 | 1 | 2 | 5 | 7 | 9 | 14 | C | C | C | C | A | 15 | 14 | 14 | 14 | 14 | 15 | 12 | 3 | 8.2 | 15.1 |
| 14-Nov-06 | 5 | 9 | 10 | 6 | 4 | A | 2 | 3 | 1 | 7 | 11 | 12 | 12 | 12 | 10 | 11 | 5 | 1 | 4 | 10 | 18 | 18 | 13 | 22 | 9.1 | 22.4 |
| 15-Nov-06 | 22 | 21 | 22 | 26 | A | 29 | 27 | 25 | 26 | 29 | 30 | 31 | 30 | 30 | 29 | 26 | 24 | 22 | 25 | 22 | 22 | 21 | 20 | 21 | 25.2 | 31.4 |
| 16-Nov-06 | 22 | 23 | 23 | A | 25 | 24 | 21 | 16 | 13 | 13 | 14 | 18 | 23 | 22 | 22 | 21 | 12 | 6 | 5 | 5 | 4 | 2 | 1 | 3 | 14.7 | 24.6 |
| 17-Nov-06 | 1 | 1 | A | 11 | 14 | 4 | 0 | 5 | 3 | 3 | 8 | 11 | 11 | 14 | 11 | 9 | 3 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 5.0 | 13.7 |
| 18-Nov-06 | D | A | 6 | 12 | 8 | 5 | 14 | 18 | 20 | 20 | 22 | 23 | 24 | 25 | 24 | 22 | 21 | 13 | 4 | 3 | 0 | 2 | 6 | 4 | 13.4 | 25.0 |
| 19-Nov-06 | A | 4 | 1 | 7 | 19 | 18 | 5 | 7 | 17 | 21 | 23 | 22 | 23 | 22 | 23 | 27 | 24 | 24 | 37 | 39 | 40 | 41 | 38 | A | 21.9 | 41.5 |
| 20-Nov-06 | 39 | 39 | 38 | 38 | 35 | 28 | 5 | 2 | 6 | 15 | 11 | 26 | 20 | 16 | 16 | 5 | 1 | 2 | 1 | 0 | 2 | 4 | 29 | 21 | 16.6 | 39.4 |
| 21-Nov-06 | 30 | 30 | 30 | 30 | 33 | A | 31 | 31 | 25 | 29 | 21 | 27 | 32 | 29 | 28 | 28 | 28 | 26 | 24 | 28 | 28 | 30 | 32 | 32 | 28.7 | 32.6 |
| 22-Nov-06 | 32 | 32 | 33 | 32 | A | 31 | 31 | 29 | 28 | 30 | 29 | 30 | 30 | 31 | 31 | 27 | 24 | 24 | 26 | 25 | 25 | 25 | 26 | 24 | 28.5 | 32.6 |
| 23-Nov-06 | 25 | 25 | 26 | A | 26 | 23 | 20 | 26 | 25 | 27 | 28 | 28 | 27 | 28 | 28 | 27 | 25 | 19 | 17 | 18 | 24 | 24 | 24 | 26 | 24.7 | 28.5 |
| 24-Nov-06 | 26 | 25 | A | 27 | 27 | 27 | 27 | 28 | 29 | 31 | 32 | 34 | 35 | 34 | 34 | 33 | 30 | 25 | 24 | 15 | 10 | 5 | 10 | 15 | 25.4 | 34.7 |
| 25-Nov-06 | 16 | A | 25 | 27 | 25 | 24 | 22 | 27 | 25 | 26 | 28 | 30 | 30 | 28 | 32 | 30 | 30 | 28 | 26 | 27 | 10 | 4 | 15 | 13 | 23.8 | 31.5 |
| 26-Nov-06 | A | 16 | 18 | 19 | 17 | 4 | 6 | 6 | 4 | 10 | 14 | 15 | 15 | 14 | 15 | 11 | 9 | 3 | 5 | 10 | 17 | 18 | 27 | A | 12.4 | 26.6 |
| 27-Nov-06 | 28 | 28 | 28 | 29 | 29 | 28 | 27 | 27 | 25 | 24 | 25 | 27 | 28 | 28 | 29 | 25 | 18 | 15 | 27 | 21 | 20 | 25 | A | 19 | 25.2 | 28.9 |
| 28-Nov-06 | 9 | 10 | 14 | 15 | 18 | 18 | 17 | 15 | 7 | 10 | 13 | 17 | 19 | 22 | 23 | 15 | 6 | 4 | 6 | 4 | 6 | A | 6 | 6 | 12.2 | 23.2 |
| 29-Nov-06 | 4 | 8 | 9 | 10 | 9 | 6 | 3 | 4 | 3 | 6 | 11 | 14 | 11 | 12 | 9 | 5 | 5 | 2 | 3 | 1 | A | 3 | 1 | 9 | 6.4 | 14.4 |
| 30-Nov-06 | 14 | 16 | 2 | 5 | 7 | 1 | 1 | 2 | 12 | 24 | 31 | 35 | 36 | 34 | 34 | 32 | 32 | 34 | 36 | A | 36 | 36 | 35 | 34 | 23.1 | 36.5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 17.8 | 18.4 | 18.5 | 19.1 | 18.7 | 16.9 | 14.4 | 14.4 | 14.4 | 17.4 | 19.4 | 21.9 | 23.0 | 22.9 | 22.8 | 20.6 | 17.4 | 14.1 | 15.1 | 14.0 | 15.4 | 15.6 | 16.3 | 15.5 | | |
| Hourly Max | 39.4 | 38.8 | 37.7 | 38.1 | 35.3 | 31.4 | 31.4 | 30.9 | 29.3 | 31.1 | 32.4 | 34.7 | 36.0 | 34.3 | 34.0 | 33.3 | 31.9 | 34.4 | 37.4 | 38.9 | 40.5 | 41.5 | 37.6 | 34.3 | | |

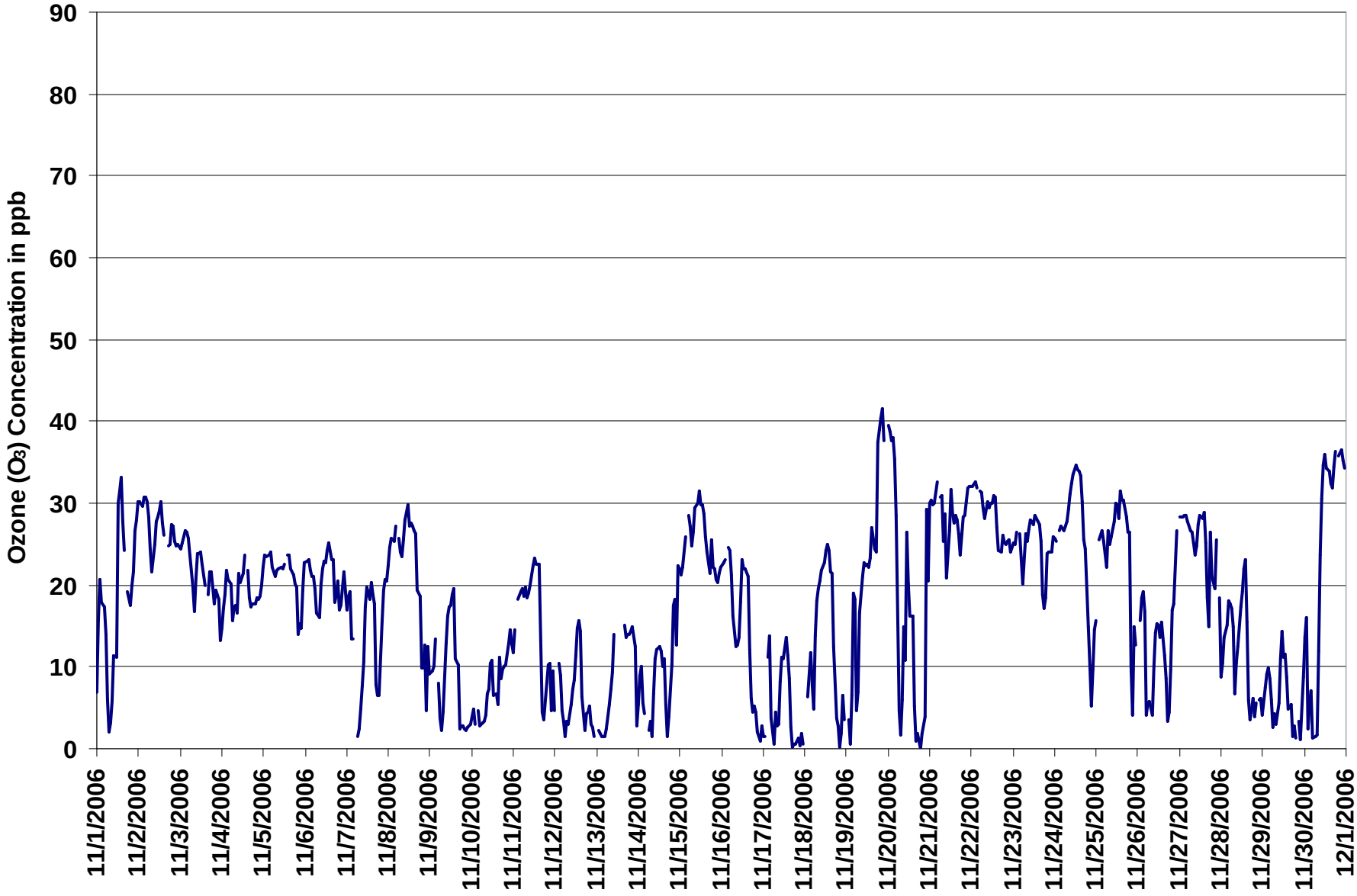
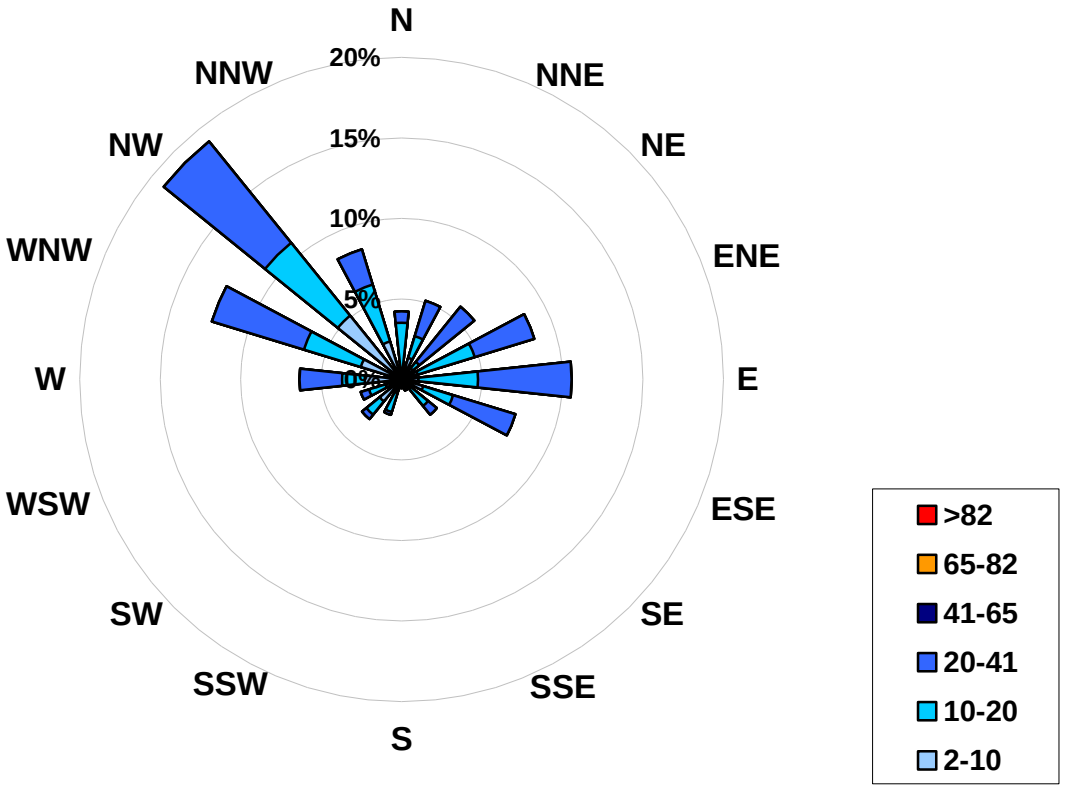



**Figure 8. PASZA - Henry Pirker Ozone Instantaneous (30 Second) Maximum Value Monthly Trend**

## 1-hr Average Concentration Rose for Ozone (in ppb) Located at the Henry Pirker Site for November 2006




**Calms: 0%**

| Frequency Distribution of $O_3$ in ppb | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 2.0 | < | 10 | 252 |
| 10 | to | 20 | 194 |
| 20 | to | 41 | 238 |
| 41 | to | 65 | 0 |
| 65 | to | 82 | 0 |
| | > | 82 | 0 |
| Total Non-Zero Values | | | 684 |

# PASZA - Henry Pirker - Ozone Monthly Summary

## EIGHT HOUR RUNNING AVERAGE TABLE

**Ozone ($O_3$)**

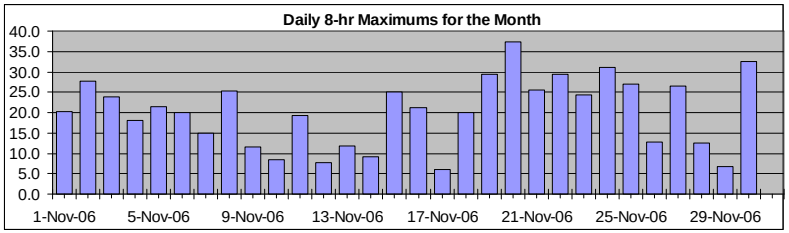
Station: Henry Pirker
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 8-hr 65 ppb

**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 8-hr Exceedances: | 0 | | | |
| Maximum 8-hr Average: | 37.3 | ppb | 20-Nov | 2:00 3:00 |




| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 |
|---|---|---|---|---|---|---|---|
| | 32.0 | 27.2 | 21.5 | 14.9 | 6.5 | 2.0 | 0.6 |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | N | 8 | 9 | 9 | 8 | 8 | 8 | 8 | 7 | 7 | 6 | 5 | 6 | 9 | 12 | 15 | 17 | 19 | 20 | 20 | 20 | 19 | 18 | 18 | 20.2 |
| 2-Nov-06 | 20 | 21 | 23 | 25 | 26 | 27 | 28 | 27 | 26 | 25 | 25 | 25 | 24 | 24 | 24 | 25 | 25 | 25 | 25 | 25 | 24 | 24 | 23 | 23 | 27.8 |
| 3-Nov-06 | 23 | 23 | 24 | 24 | 24 | 24 | 24 | 23 | 22 | 21 | 20 | 20 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | 18 | 17 | 17 | 17 | 16 | 23.8 |
| 4-Nov-06 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 15 | 16 | 16 | 16 | 16 | 17 | 18 | 18 | 18 | 18 | 17 | 17 | 16 | 16 | 16 | 18.0 |
| 5-Nov-06 | 16 | 17 | 18 | 19 | 20 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 20 | 20 | 21 | 21 | 21 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 21.4 |
| 6-Nov-06 | 15 | 15 | 16 | 16 | 17 | 18 | 19 | 19 | 18 | 18 | 18 | 18 | 18 | 18 | 19 | 19 | 20 | 20 | 19 | 19 | 18 | 17 | 16 | 16 | 20.1 |
| 7-Nov-06 | 15 | 15 | 15 | 14 | 13 | 13 | 11 | 9 | 7 | 5 | 5 | 5 | 7 | 8 | 10 | 12 | 13 | 13 | 12 | 11 | 10 | 10 | 10 | 11 | 15.0 |
| 8-Nov-06 | 12 | 14 | 17 | 20 | 22 | 23 | 23 | 24 | 24 | 24 | 24 | 24 | 24 | 25 | 25 | 25 | 25 | 24 | 21 | 19 | 16 | 14 | 11 | 8 | 25.2 |
| 9-Nov-06 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 5 | 6 | 6 | 7 | 9 | 10 | 11 | 11 | 11 | 9 | 8 | 6 | 4 | 3 | 2 | 11.5 |
| 10-Nov-06 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 8 | 9 | 8.5 |
| 11-Nov-06 | 9 | 10 | 10 | 12 | 13 | 14 | 15 | 16 | 17 | 17 | 18 | 18 | 19 | 19 | 19 | 19 | 18 | 16 | 14 | 12 | 10 | 8 | 6 | 4 | 19.3 |
| 12-Nov-06 | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 5 | 7 | 8 | 8 | 7 | 7 | 6 | 5 | 4 | 3 | 2 | 7.8 |
| 13-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 4 | N | N | N | N | N | N | N | N | N | N | 12 | 11 | 11.9 |
| 14-Nov-06 | 9 | 8 | 7 | 6 | 4 | 3 | 3 | 3 | 2 | 2 | 2 | 4 | 5 | 6 | 7 | 7 | 8 | 7 | 6 | 6 | 6 | 7 | 7 | 8 | 9.1 |
| 15-Nov-06 | 10 | 12 | 14 | 16 | 16 | 18 | 20 | 21 | 21 | 23 | 24 | 25 | 25 | 24 | 24 | 24 | 24 | 23 | 22 | 21 | 20 | 19 | 19 | 18 | 25.2 |
| 16-Nov-06 | 18 | 19 | 19 | 19 | 20 | 21 | 21 | 19 | 17 | 15 | 13 | 13 | 13 | 12 | 13 | 14 | 14 | 13 | 12 | 10 | 8 | 6 | 4 | 2 | 21.2 |
| 17-Nov-06 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 6 | 6 | 6 | 5 | 5 | 4 | 3 | 2 | 1 | 0 | 5.9 |
| 18-Nov-06 | 0 | N | N | N | N | N | N | N | 7 | 9 | 11 | 13 | 15 | 18 | 20 | 20 | 19 | 18 | 15 | 13 | 10 | 7 | 5 | 2 | 20.0 |
| 19-Nov-06 | 1 | 0 | 0 | 0 | 2 | 4 | 4 | 4 | 5 | 7 | 10 | 13 | 13 | 14 | 17 | 20 | 21 | 21 | 20 | 22 | 25 | 27 | 29 | 30 | 29.5 |
| 20-Nov-06 | 32 | 35 | 37 | 37 | 35 | 31 | 26 | 23 | 18 | 14 | 11 | 7 | 5 | 5 | 6 | 7 | 7 | 6 | 5 | 5 | 3 | 2 | 2 | 3 | 37.3 |
| 21-Nov-06 | 6 | 9 | 11 | 14 | 18 | 21 | 23 | 26 | 24 | 24 | 24 | 23 | 22 | 23 | 22 | 22 | 22 | 23 | 23 | 24 | 23 | 24 | 24 | 25 | 25.6 |
| 22-Nov-06 | 26 | 27 | 28 | 29 | 29 | 29 | 29 | 29 | 28 | 28 | 27 | 27 | 27 | 27 | 27 | 27 | 26 | 25 | 25 | 24 | 24 | 23 | 22 | 22 | 29.5 |
| 23-Nov-06 | 22 | 23 | 23 | 23 | 23 | 22 | 21 | 21 | 20 | 20 | 20 | 20 | 21 | 22 | 23 | 24 | 24 | 24 | 22 | 21 | 20 | 20 | 19 | 19 | 24.4 |
| 24-Nov-06 | 20 | 21 | 22 | 24 | 25 | 25 | 26 | 26 | 26 | 27 | 27 | 28 | 29 | 30 | 30 | 31 | 31 | 30 | 28 | 25 | 22 | 18 | 15 | 12 | 31.1 |
| 25-Nov-06 | 10 | 9 | 9 | 11 | 13 | 16 | 17 | 19 | 21 | 21 | 22 | 22 | 22 | 23 | 25 | 26 | 27 | 27 | 27 | 26 | 23 | 20 | 17 | 14 | 27.0 |
| 26-Nov-06 | 13 | 11 | 9 | 9 | 10 | 10 | 9 | 8 | 7 | 7 | 7 | 6 | 7 | 8 | 9 | 10 | 10 | 9 | 8 | 7 | 7 | 7 | 9 | 9 | 12.7 |
| 27-Nov-06 | 12 | 16 | 20 | 23 | 25 | 26 | 27 | 26 | 25 | 25 | 24 | 24 | 24 | 23 | 23 | 23 | 22 | 20 | 20 | 17 | 15 | 15 | 14 | 12 | 26.5 |
| 28-Nov-06 | 11 | 11 | 10 | 11 | 12 | 10 | 11 | 11 | 10 | 10 | 10 | 11 | 11 | 11 | 12 | 12 | 12 | 12 | 11 | 9 | 7 | 5 | 3 | 2 | 12.4 |
| 29-Nov-06 | 2 | 2 | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | 5 | 6 | 7 | 7 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 1 | 6.6 |
| 30-Nov-06 | 3 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 3 | 4 | 7 | 11 | 15 | 19 | 23 | 26 | 29 | 31 | 32 | 32 | 32 | 32 | 32 | 32 | 32.4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Max | 32.0 | 35.0 | 37.3 | 37.1 | 35.4 | 31.4 | 29.2 | 28.8 | 28.1 | 27.7 | 27.3 | 28.0 | 28.9 | 29.7 | 30.5 | 31.1 | 30.7 | 31.0 | 31.9 | 31.8 | 31.7 | 32.0 | 32.4 | 32.2 | |

# PASZA - Henry Pirker - Carbon Monoxide Monthly Summary

## HOURLY AVERAGE TABLE

**Carbon Monoxide (CO)**

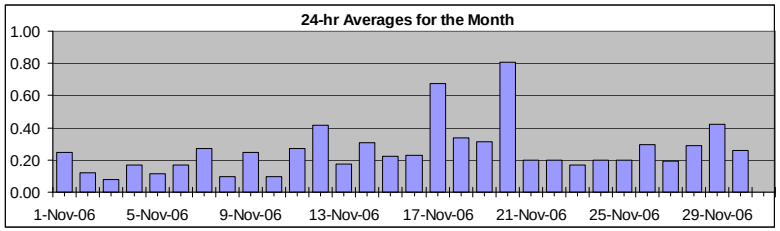
Station: Henry Pirker
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr 13 ppm | 24-hr na ppm

**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 1-hr Exceedances: | 0 | | | |
| Maximum 1-hr Average: | 2.0 | ppm | 17-Nov | 8:00 9:00 |
| Maximum 24-hr Value: | 0.8 | ppm | 20-Nov | |




| | | | |
|---|---|---|---|
| AIC Time: | 33 hrs | Operational Time: | 683 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 99.9% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 1.5 | 0.6 | 0.3 | 0.2 | 0.1 | 0.1 | 0.0 | 0.3 ppm | 0.2 ppm |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.4 | 1.0 | 0.6 | 0.5 | 0.6 | 0.3 | 0.2 | 0.1 | 0.2 | 0.2 | A | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.25 | 1.00 |
| 2-Nov-06 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | A | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.12 | 0.25 |
| 3-Nov-06 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 | A | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.08 | 0.20 |
| 4-Nov-06 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | A | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.17 | 0.27 |
| 5-Nov-06 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | A | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.12 | 0.20 |
| 6-Nov-06 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.3 | 0.2 | 0.1 | 0.2 | 0.2 | C | C | C | A | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.17 | 0.30 |
| 7-Nov-06 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | A | 0.4 | 0.7 | 0.7 | 0.4 | A | A | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.5 | 0.4 | 0.3 | 0.2 | 0.1 | 0.1 | 0.1 | 0.27 | 0.72 |
| 8-Nov-06 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | A | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.10 | 0.21 |
| 9-Nov-06 | 0.1 | 0.1 | 0.1 | 0.1 | A | 0.2 | 0.3 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.25 | 0.44 |
| 10-Nov-06 | 0.2 | 0.3 | 0.2 | A | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | D | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.10 | 0.29 |
| 11-Nov-06 | 0.1 | 0.1 | A | 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 | 0.5 | 0.6 | 0.6 | 0.3 | 0.3 | 0.3 | 0.3 | 0.5 | 0.27 | 0.64 |
| 12-Nov-06 | 0.4 | A | 0.2 | 0.2 | 0.3 | 0.2 | 0.3 | 0.7 | 0.5 | 0.8 | 0.7 | 0.4 | 0.3 | 0.2 | 0.2 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.6 | 0.6 | 0.7 | 0.6 | 0.42 | 0.80 |
| 13-Nov-06 | A | 0.5 | 0.4 | 0.4 | 0.3 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.17 | 0.48 |
| 14-Nov-06 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A | 1.2 | 0.7 | 0.6 | 0.4 | 0.3 | 0.2 | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 | 0.5 | 0.5 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.31 | 1.19 |
| 15-Nov-06 | 0.0 | 0.0 | 0.0 | 0.1 | A | 0.2 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.4 | 0.3 | 0.2 | 0.1 | 0.22 | 0.36 |
| 16-Nov-06 | 0.1 | 0.1 | 0.1 | A | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.5 | 0.6 | 0.3 | 0.3 | 0.3 | 0.3 | 0.5 | 0.23 | 0.60 |
| 17-Nov-06 | 0.4 | 0.3 | A | 0.2 | 0.3 | 0.2 | 0.3 | 1.4 | 2.0 | 1.6 | 0.6 | 0.6 | 0.7 | 0.4 | 0.4 | 0.6 | 0.6 | 0.6 | 0.4 | 0.4 | 0.8 | 0.7 | 1.2 | 0.8 | 0.67 | 1.97 |
| 18-Nov-06 | 0.4 | A | 0.3 | 0.2 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.4 | 0.4 | 0.6 | 0.8 | 0.6 | 0.5 | 0.3 | 0.4 | 0.34 | 0.82 |
| 19-Nov-06 | A | 0.5 | 0.5 | 0.4 | 0.3 | 0.2 | 0.4 | 0.5 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | A | 0.32 | 0.53 |
| 20-Nov-06 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.7 | 1.2 | 1.5 | 0.8 | 1.7 | 1.7 | 0.6 | 0.6 | 0.6 | 1.3 | 1.8 | 1.8 | 1.9 | 0.8 | 0.4 | 0.4 | 0.3 | 0.3 | 0.81 | 1.91 |
| 21-Nov-06 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A | 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 | 0.2 | 0.2 | 0.20 | 0.28 |
| 22-Nov-06 | 0.2 | 0.2 | 0.1 | 0.1 | A | 0.2 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.20 | 0.31 |
| 23-Nov-06 | 0.1 | 0.1 | 0.1 | A | 0.1 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.17 | 0.34 |
| 24-Nov-06 | 0.1 | 0.1 | A | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.20 | 0.38 |
| 25-Nov-06 | 0.3 | A | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 | 0.3 | 0.20 | 0.33 |
| 26-Nov-06 | A | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | A | 0.30 | 0.49 |
| 27-Nov-06 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.3 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | A | 0.2 | 0.19 | 0.30 |
| 28-Nov-06 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 | 0.3 | 0.4 | 0.3 | 0.4 | 0.3 | 0.2 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | A | 0.3 | 0.3 | 0.29 | 0.42 |
| 29-Nov-06 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.6 | 0.8 | 0.5 | 0.4 | 0.3 | 0.3 | 0.4 | 0.4 | 0.5 | 0.8 | 0.7 | 0.5 | 0.7 | 0.4 | A | 0.3 | 0.3 | 0.2 | 0.42 | 0.81 |
| 30-Nov-06 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.6 | 0.6 | 1.1 | 0.4 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | A | 0.2 | 0.2 | 0.2 | 0.2 | 0.26 | 1.08 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 0.17 | 0.17 | 0.16 | 0.16 | 0.17 | 0.19 | 0.27 | 0.40 | 0.40 | 0.31 | 0.28 | 0.28 | 0.23 | 0.23 | 0.22 | 0.28 | 0.32 | 0.36 | 0.35 | 0.27 | 0.25 | 0.24 | 0.25 | 0.24 | | |
| Hourly Max | 0.45 | 0.48 | 0.46 | 0.39 | 0.33 | 0.56 | 1.19 | 1.37 | 1.97 | 1.55 | 1.66 | 1.68 | 0.70 | 0.56 | 0.63 | 1.26 | 1.84 | 1.76 | 1.91 | 0.82 | 0.81 | 0.73 | 1.15 | 0.76 | | |

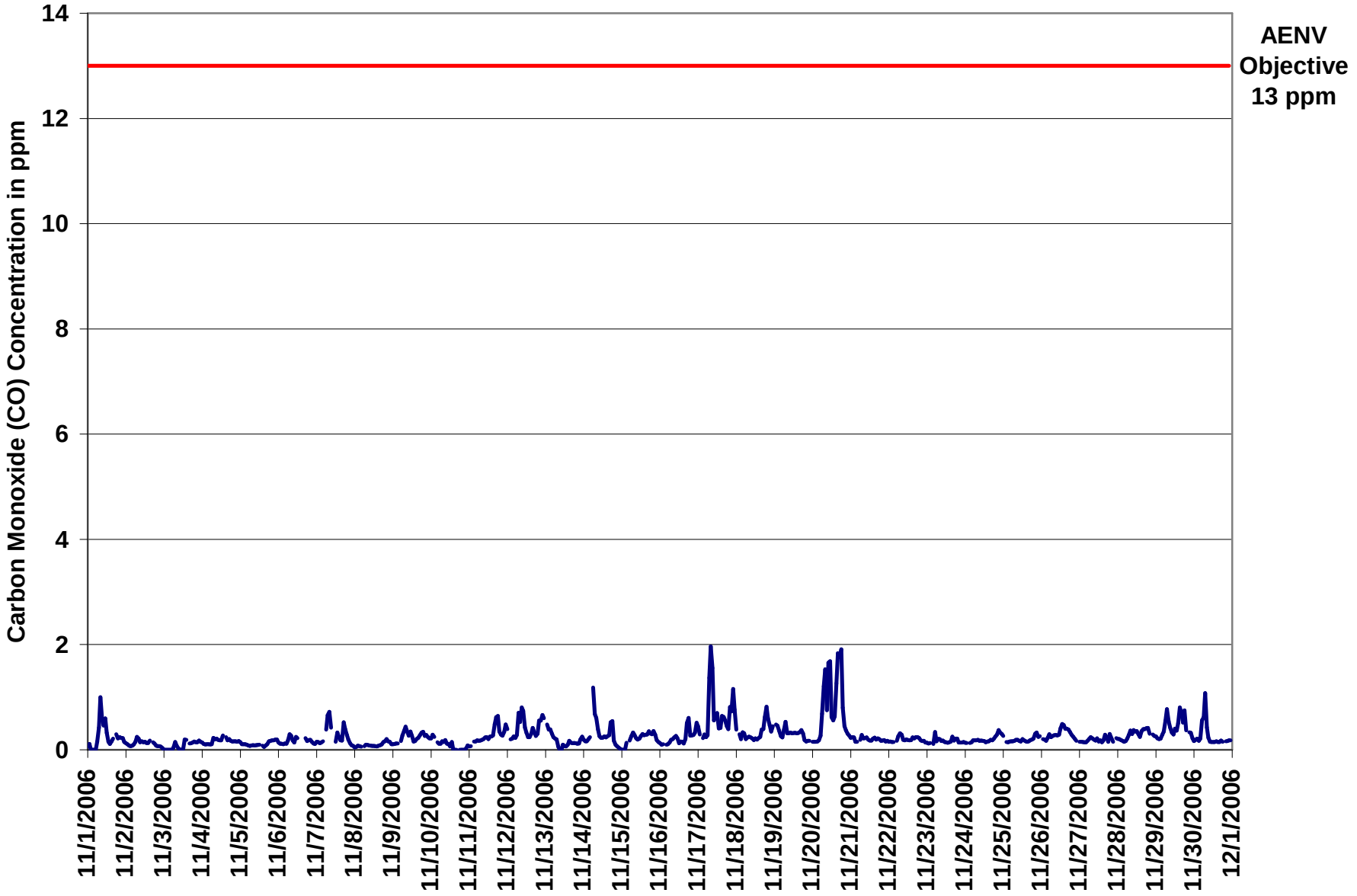


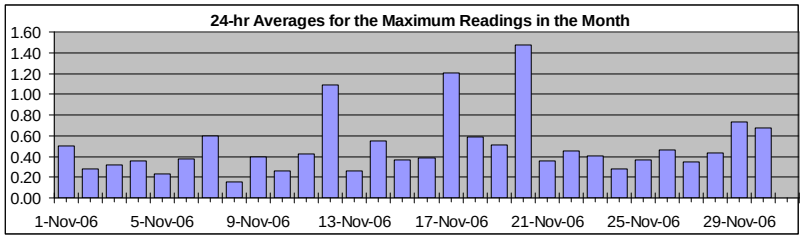

**Figure 9. PASZA - Henry Pirker Carbon Monoxide 1-hr Average Monthly Trend**

Station: Henry Pirker
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

## Carbon Monoxide (CO)

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 6.6 | ppm | 30-Nov | 5:00 6:00 |
| Maximum 24-hr Value: | 1.5 | ppm | 20-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 33 hrs | Operational Time: | 683 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 99.9% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 3.1 | 1.4 | 0.6 | 0.3 | 0.2 | 0.1 | 0.0 | 0.5 ppm | 0.3 ppm |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 0.3 | 0.7 | 0.0 | 0.0 | 0.0 | 0.1 | 0.4 | 1.1 | 1.9 | 1.0 | 0.7 | 0.8 | 0.7 | 0.3 | 0.2 | 0.3 | 0.4 | A | 0.6 | 0.3 | 0.3 | 0.4 | 0.7 | 0.2 | 0.50 | 1.90 |
| 2-Nov-06 | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | 0.3 | 0.3 | 0.6 | 0.6 | 0.2 | 1.1 | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | A | 0.2 | 0.3 | 0.2 | 0.1 | 0.3 | 0.1 | 0.1 | 0.28 | 1.10 |
| 3-Nov-06 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.8 | 0.7 | 0.6 | 0.8 | 0.1 | 0.3 | 0.4 | 0.3 | 0.4 | A | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 | 0.5 | 0.8 | 0.3 | 0.32 | 0.85 |
| 4-Nov-06 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 1.1 | 0.4 | 0.7 | 0.3 | 0.3 | 0.3 | 0.6 | A | 0.6 | 0.2 | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.2 | 0.5 | 0.36 | 1.13 |
| 5-Nov-06 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | A | 0.1 | 0.1 | 0.1 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 1.4 | 0.23 | 1.42 |
| 6-Nov-06 | 0.2 | 0.2 | 0.2 | 0.2 | 0.4 | 0.2 | 0.5 | 0.8 | 0.7 | 0.6 | 0.2 | 0.4 | 0.4 | C | C | C | A | 0.6 | 0.3 | 0.6 | 0.9 | 0.3 | 0.2 | 0.2 | 0.38 | 0.87 |
| 7-Nov-06 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | A | 0.9 | 3.3 | 1.4 | 0.8 | A | A | 0.2 | 0.4 | 0.3 | 0.3 | 0.3 | 1.2 | 1.1 | 0.5 | 0.3 | 0.4 | 0.1 | 0.1 | 0.60 | 3.27 |
| 8-Nov-06 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | A | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.3 | 0.3 | 0.5 | 0.2 | 0.2 | 0.15 | 0.53 |
| 9-Nov-06 | 0.2 | 0.2 | 0.2 | 0.2 | A | 0.2 | 0.5 | 0.7 | 0.7 | 0.4 | 0.3 | 0.6 | 0.4 | 0.5 | 0.4 | 0.5 | 0.4 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.39 | 0.72 |
| 10-Nov-06 | 0.4 | 0.4 | 0.5 | A | 0.2 | 0.2 | 0.7 | 0.4 | 0.6 | 0.6 | 0.3 | 0.4 | 0.5 | 0.4 | 0.1 | 0.0 | 0.0 | D | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.26 | 0.68 |
| 11-Nov-06 | 0.1 | 0.1 | A | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.3 | 0.4 | 0.3 | 0.2 | 0.3 | 0.3 | 0.4 | 0.8 | 1.3 | 1.2 | 0.5 | 0.5 | 0.5 | 0.6 | 0.9 | 0.43 | 1.30 |
| 12-Nov-06 | 0.7 | A | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 5.7 | 0.9 | 4.6 | 1.3 | 0.6 | 0.5 | 0.4 | 0.4 | 0.8 | 0.7 | 0.7 | 0.4 | 0.6 | 1.5 | 0.8 | 1.4 | 1.5 | 1.09 | 5.70 |
| 13-Nov-06 | A | 0.7 | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.3 | 0.4 | 0.26 | 0.70 |
| 14-Nov-06 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | A | 2.7 | 1.6 | 1.0 | 0.6 | 0.4 | 0.3 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.9 | 1.0 | 0.3 | 0.2 | 0.2 | 0.1 | 0.1 | 0.55 | 2.75 |
| 15-Nov-06 | 0.0 | 0.0 | 0.1 | 0.2 | A | 0.4 | 0.7 | 0.6 | 0.5 | 0.6 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.4 | 0.4 | 0.8 | 0.4 | 0.2 | 0.2 | 0.37 | 0.85 |
| 16-Nov-06 | 0.1 | 0.1 | 0.2 | A | 0.1 | 0.2 | 0.2 | 0.3 | 0.4 | 0.3 | 0.4 | 0.4 | 0.2 | 0.3 | 0.4 | 0.2 | 0.4 | 0.8 | 1.1 | 0.5 | 0.4 | 0.6 | 0.5 | 0.7 | 0.38 | 1.06 |
| 17-Nov-06 | 0.7 | 0.6 | A | 0.3 | 1.6 | 0.3 | 0.4 | 4.9 | 2.6 | 2.3 | 1.4 | 1.0 | 1.1 | 0.5 | 0.5 | 1.0 | 1.7 | 0.7 | 0.6 | 0.6 | 1.1 | 1.1 | 1.4 | 1.4 | 1.20 | 4.93 |
| 18-Nov-06 | 0.8 | A | 0.4 | 0.3 | 0.5 | 1.0 | 0.3 | 0.6 | 0.3 | 0.5 | 0.5 | 0.2 | 0.3 | 0.3 | 0.4 | 0.4 | 0.7 | 0.7 | 1.0 | 1.2 | 1.1 | 0.7 | 0.9 | 0.7 | 0.59 | 1.20 |
| 19-Nov-06 | A | 0.7 | 0.6 | 0.5 | 0.4 | 0.3 | 0.8 | 1.1 | 0.5 | 0.8 | 0.6 | 0.5 | 0.5 | 0.5 | 0.4 | 0.5 | 0.6 | 0.7 | 0.4 | 0.2 | 0.2 | 0.2 | 0.2 | A | 0.51 | 1.05 |
| 20-Nov-06 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.5 | 1.9 | 3.3 | 2.8 | 1.5 | 2.5 | 2.6 | 1.2 | 1.1 | 1.2 | 2.7 | 3.1 | 3.5 | 2.7 | 1.5 | 1.0 | 0.7 | 0.8 | 0.4 | 1.48 | 3.48 |
| 21-Nov-06 | 0.4 | 0.3 | 0.4 | 0.2 | 0.2 | A | 0.5 | 0.8 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.4 | 0.4 | 0.4 | 0.3 | 0.4 | 0.3 | 0.4 | 0.2 | 0.7 | 0.2 | 0.6 | 0.36 | 0.82 |
| 22-Nov-06 | 0.2 | 0.2 | 0.2 | 0.2 | A | 0.3 | 1.7 | 0.9 | 0.7 | 0.4 | 0.2 | 0.4 | 0.3 | 0.7 | 0.5 | 0.4 | 0.3 | 0.3 | 0.7 | 0.5 | 0.3 | 0.3 | 0.4 | 0.2 | 0.45 | 1.75 |
| 23-Nov-06 | 0.2 | 0.2 | 0.2 | A | 0.2 | 1.8 | 0.3 | 0.6 | 0.6 | 0.3 | 1.0 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.7 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.40 | 1.85 |
| 24-Nov-06 | 0.2 | 0.1 | A | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 | 0.4 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.4 | 0.4 | 0.3 | 0.4 | 0.4 | 0.5 | 0.4 | 0.4 | 0.28 | 0.46 |
| 25-Nov-06 | 0.5 | A | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.5 | 0.3 | 0.3 | 0.3 | 1.5 | 0.4 | 0.3 | 0.2 | 0.3 | 0.3 | 0.5 | 0.3 | 0.5 | 0.5 | 0.3 | 0.4 | 0.36 | 1.47 |
| 26-Nov-06 | A | 0.3 | 0.3 | 0.2 | 0.4 | 0.5 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.6 | 0.7 | 0.7 | 0.7 | 0.7 | 1.1 | 0.6 | 0.4 | 0.4 | 0.3 | 0.5 | A | 0.46 | 1.15 |
| 27-Nov-06 | 0.2 | 0.2 | 0.2 | 0.1 | 0.2 | 0.6 | 0.4 | 0.5 | 0.5 | 0.4 | 0.4 | 0.7 | 0.2 | 0.2 | 0.2 | 0.2 | 0.8 | 0.5 | 0.2 | 0.5 | 0.4 | 0.2 | A | 0.3 | 0.35 | 0.81 |
| 28-Nov-06 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 | 0.7 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.7 | 0.7 | 0.6 | 0.6 | 0.6 | 0.4 | A | 0.6 | 0.4 | 0.43 | 0.69 |
| 29-Nov-06 | 0.3 | 0.2 | 0.2 | 0.3 | 0.4 | 0.5 | 1.2 | 2.8 | 1.2 | 0.5 | 0.4 | 0.5 | 0.6 | 0.5 | 0.7 | 1.5 | 0.8 | 0.8 | 1.4 | 0.6 | A | 0.5 | 0.5 | 0.3 | 0.74 | 2.80 |
| 30-Nov-06 | 0.2 | 0.4 | 0.3 | 0.2 | 0.3 | 6.6 | 1.2 | 2.2 | 0.9 | 0.4 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | A | 0.3 | 0.2 | 0.3 | 0.3 | 0.68 | 6.62 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 0.27 | 0.26 | 0.22 | 0.20 | 0.28 | 0.62 | 0.63 | 1.22 | 0.75 | 0.68 | 0.51 | 0.46 | 0.43 | 0.39 | 0.36 | 0.50 | 0.57 | 0.66 | 0.59 | 0.45 | 0.45 | 0.41 | 0.44 | 0.46 | | |
| Hourly Max | 0.81 | 0.73 | 0.60 | 0.49 | 1.60 | 6.62 | 2.75 | 5.70 | 2.76 | 4.63 | 2.49 | 2.59 | 1.47 | 1.15 | 1.19 | 2.67 | 3.10 | 3.48 | 2.68 | 1.45 | 1.54 | 1.07 | 1.44 | 1.45 | | |

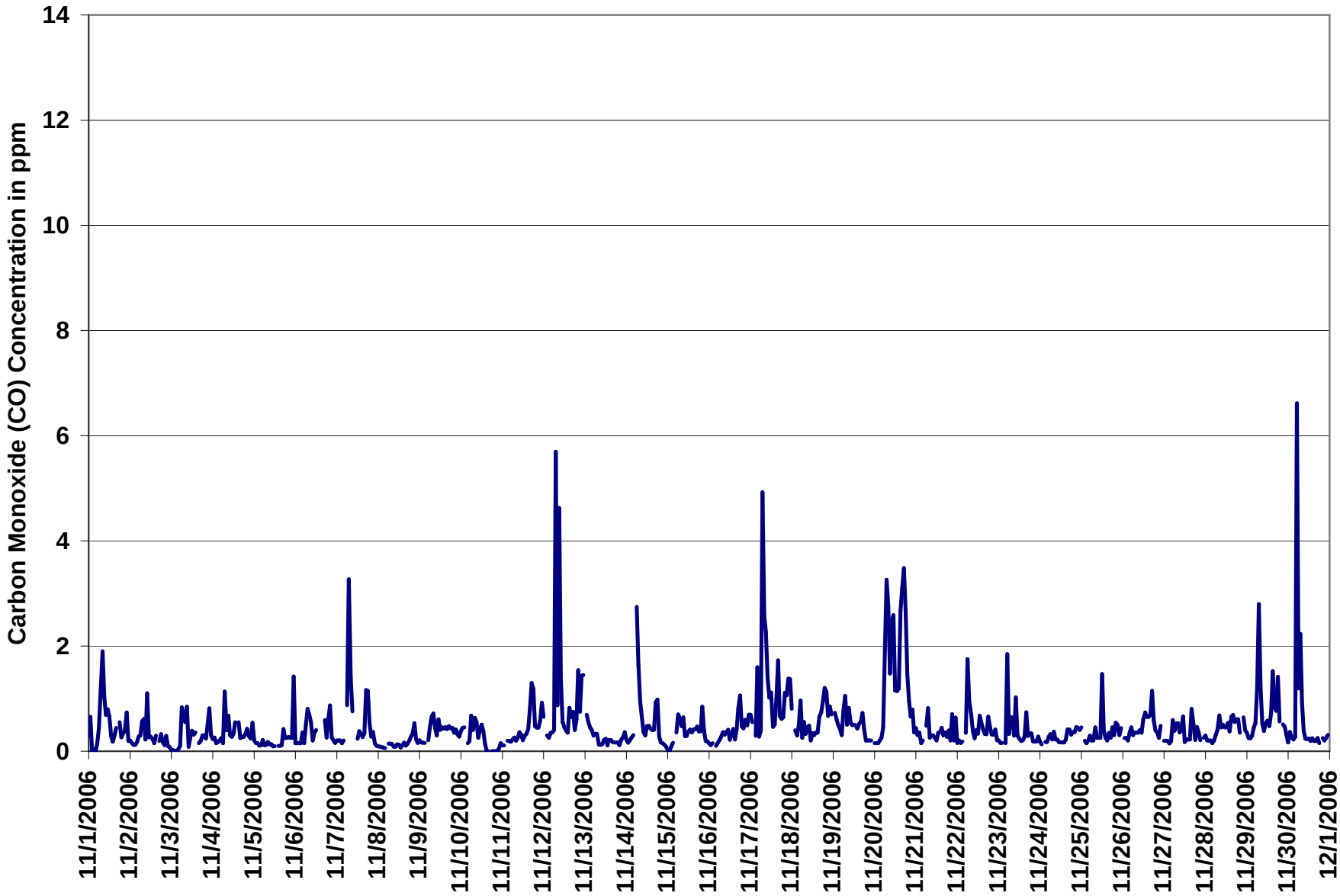
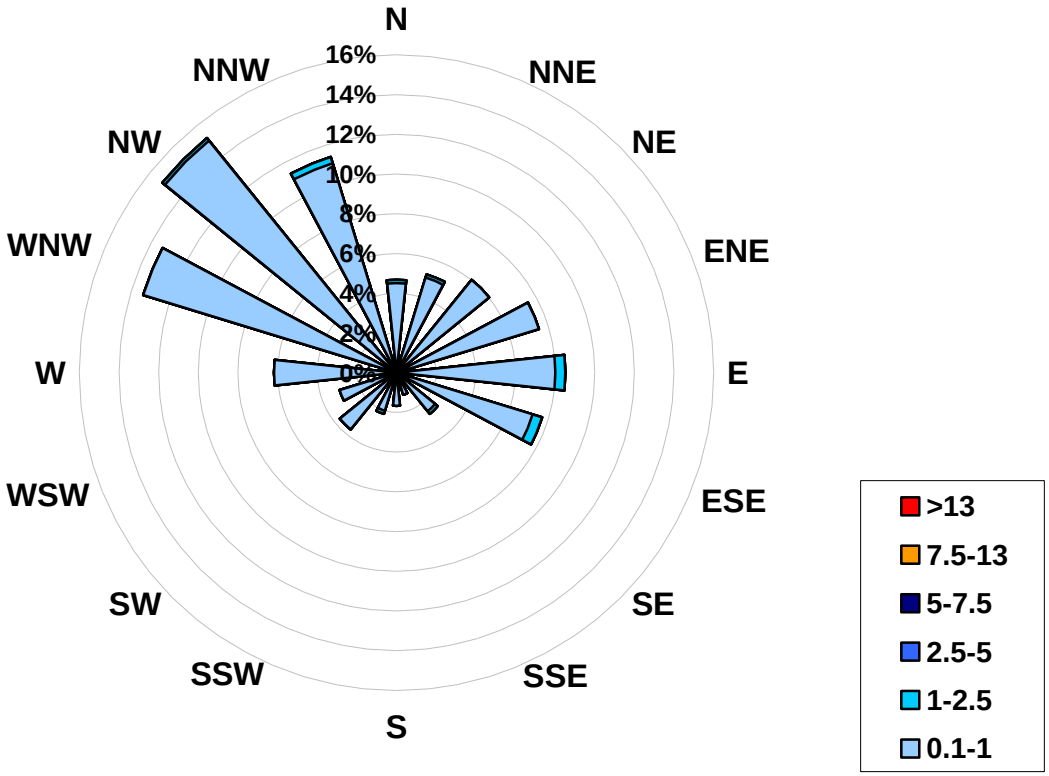



**Figure 10. PASZA - Henry Pirker Carbon Monoxide Instantaneous (30 Second) Maximum Value Monthly Trend**

## 1-hr Average Concentration Rose for Carbon Monoxide (in ppm) Located at the Henry Pirker Site for November 2006




| Calms: | 0% |
|---|---|

| Frequency Distribution of CO in ppm | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.1 | < | 1 | 669 |
| 1 | to | 2.5 | 14 |
| 2.5 | to | 5 | 0 |
| 5 | to | 7.5 | 0 |
| 7.5 | to | 13 | 0 |
| | > | 13 | 0 |
| Total Non-Zero Values | | | 683 |

# PASZA - Henry Pirker - Carbon Monoxide Monthly Summary

## EIGHT HOUR RUNNING AVERAGE TABLE

**Carbon Monoxide (CO)**

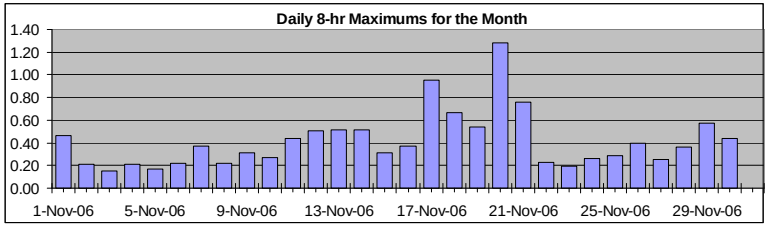
Station: Henry Pirker
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 8-hr 5 ppm

**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 8-hr Exceedances: | 0 | | | |
| Maximum 8-hr Average: | 1.3 | ppm | 20-Nov | 18:00 19:00 |




| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 |
|---|---|---|---|---|---|---|---|
| | 1.1 | 0.6 | 0.3 | 0.2 | 0.2 | 0.1 | 0.0 |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | N | N | N | N | N | N | 0.0 | 0.1 | 0.2 | 0.3 | 0.3 | 0.4 | 0.4 | 0.5 | 0.5 | 0.4 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.46 |
| 2-Nov-06 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.21 |
| 3-Nov-06 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.15 |
| 4-Nov-06 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.21 |
| 5-Nov-06 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.16 |
| 6-Nov-06 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | N | N | N | N | N | N | N | N | N | 0.2 | 0.22 |
| 7-Nov-06 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.3 | 0.4 | N | N | N | N | N | N | N | N | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.37 |
| 8-Nov-06 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.22 |
| 9-Nov-06 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.31 |
| 10-Nov-06 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.27 |
| 11-Nov-06 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.43 |
| 12-Nov-06 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.5 | 0.51 |
| 13-Nov-06 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.52 |
| 14-Nov-06 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.51 |
| 15-Nov-06 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.31 |
| 16-Nov-06 | 0.3 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.37 |
| 17-Nov-06 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.7 | 0.8 | 0.8 | 0.9 | 0.9 | 0.9 | 1.0 | 0.9 | 0.7 | 0.6 | 0.6 | 0.5 | 0.5 | 0.6 | 0.7 | 0.7 | 0.95 |
| 18-Nov-06 | 0.7 | 0.7 | 0.6 | 0.6 | 0.6 | 0.5 | 0.4 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.67 |
| 19-Nov-06 | 0.5 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.54 |
| 20-Nov-06 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.4 | 0.5 | 0.6 | 0.8 | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 | 1.1 | 1.3 | 1.3 | 1.2 | 1.2 | 1.1 | 1.1 | 1.0 | 1.28 |
| 21-Nov-06 | 0.8 | 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 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.76 |
| 22-Nov-06 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.23 |
| 23-Nov-06 | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.19 |
| 24-Nov-06 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.26 |
| 25-Nov-06 | 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 | 0.2 | 0.29 |
| 26-Nov-06 | 0.2 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.40 |
| 27-Nov-06 | 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 | 0.26 |
| 28-Nov-06 | 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 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.37 |
| 29-Nov-06 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | 0.58 |
| 30-Nov-06 | 0.4 | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.44 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Max | 0.76 | 0.67 | 0.65 | 0.62 | 0.55 | 0.49 | 0.37 | 0.45 | 0.67 | 0.85 | 0.81 | 0.99 | 1.05 | 1.09 | 1.08 | 1.09 | 1.13 | 1.25 | 1.28 | 1.17 | 1.15 | 1.13 | 1.09 | 0.96 | |

# PASZA - Henry Pirker - Total Hydrocarbons Monthly Summary

## HOURLY AVERAGE TABLE

**Total Hydrocarbons (THC)**

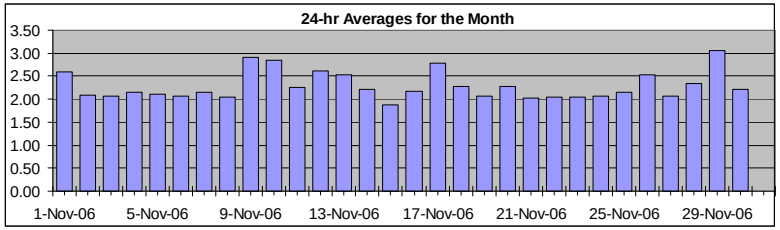
Station: Henry Pirker
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr na ppm | 24-hr na ppm

**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 3.6 | ppm | 29-Nov | 12:00 13:00 |
| Maximum 24-hr Value: | 3.1 | ppm | 29-Nov | |




| | | | |
|---|---|---|---|
| AIC Time: | 34 hrs | Operational Time: | 683 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 3.3 | 3.1 | 2.4 | 2.2 | 2.0 | 1.9 | 1.8 | 2.3 ppm | 2.2 ppm |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 2.8 | 2.8 | 2.8 | 3.0 | 3.0 | 3.0 | 3.2 | 3.0 | 3.2 | 3.2 | 2.8 | 2.8 | 2.6 | 2.2 | 2.1 | 2.2 | 2.1 | A | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.59 | 3.18 |
| 2-Nov-06 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 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 | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.08 | 2.13 |
| 3-Nov-06 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.2 | 2.2 | A | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.07 | 2.23 |
| 4-Nov-06 | 2.2 | 2.4 | 2.3 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.2 | A | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.1 | 2.0 | 2.0 | 2.0 | 2.16 | 2.37 |
| 5-Nov-06 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | A | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.3 | 2.3 | 2.2 | 2.11 | 2.34 |
| 6-Nov-06 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | C | C | C | A | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.07 | 2.16 |
| 7-Nov-06 | 2.2 | 2.2 | 2.1 | 2.3 | 2.2 | A | 2.3 | 2.3 | 2.4 | 2.4 | A | A | 2.2 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.3 | 2.3 | 2.0 | 2.0 | 2.0 | 2.16 | 2.39 |
| 8-Nov-06 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | A | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.2 | 2.3 | 2.04 | 2.29 |
| 9-Nov-06 | 2.5 | 2.7 | 2.7 | 2.5 | A | 2.8 | 3.0 | 3.1 | 3.0 | 3.2 | 3.2 | 2.9 | 2.9 | 3.1 | 2.8 | 2.7 | 2.9 | 3.0 | 3.0 | 3.0 | 3.1 | 3.0 | 3.0 | 3.1 | 2.92 | 3.20 |
| 10-Nov-06 | 3.2 | 3.1 | 3.1 | A | 3.3 | 3.3 | 3.2 | 3.0 | 3.2 | 3.2 | 3.1 | 2.9 | 3.0 | 3.2 | 3.1 | 2.9 | 2.5 | 2.4 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 | 2.4 | 2.85 | 3.31 |
| 11-Nov-06 | 2.4 | 2.4 | A | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.1 | 2.2 | 2.2 | 2.2 | 2.3 | 2.4 | 2.4 | 2.3 | 2.2 | 2.3 | 2.4 | 2.4 | 2.25 | 2.45 |
| 12-Nov-06 | 2.4 | A | 2.5 | 2.5 | 2.4 | 2.3 | 2.4 | 2.5 | 2.6 | 2.6 | 2.7 | 2.5 | 2.4 | 2.5 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.7 | 2.8 | 3.0 | 3.1 | 3.1 | 2.61 | 3.13 |
| 13-Nov-06 | A | 2.9 | 2.8 | 2.9 | 2.9 | 2.9 | 2.9 | 2.8 | 2.3 | 2.4 | 2.4 | A | 2.4 | 2.5 | 2.5 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.2 | 2.2 | 2.3 | 2.4 | 2.52 | 2.95 |
| 14-Nov-06 | 2.3 | 2.2 | 2.2 | 2.3 | 2.4 | A | 2.7 | 2.4 | 2.4 | 2.3 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.1 | 2.0 | 1.9 | 1.9 | 1.9 | 2.22 | 2.71 |
| 15-Nov-06 | 1.9 | 1.8 | 1.9 | 2.0 | A | 1.9 | 1.9 | 1.9 | 1.9 | 1.9 | 1.8 | 1.8 | 1.8 | 1.9 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.8 | 1.9 | 1.9 | 1.9 | 1.9 | 1.88 | 1.95 |
| 16-Nov-06 | 1.9 | 2.0 | 2.0 | A | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.2 | 2.3 | 2.3 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.3 | 2.4 | 2.3 | 2.4 | 2.4 | 2.5 | 2.6 | 2.17 | 2.60 |
| 17-Nov-06 | 2.7 | 2.6 | A | 2.5 | 2.6 | 2.6 | 2.5 | 2.7 | 3.0 | 2.9 | 2.5 | 2.6 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.8 | 2.9 | 2.9 | 3.1 | 3.1 | 3.3 | 3.1 | 2.78 | 3.27 |
| 18-Nov-06 | 3.0 | A | 2.6 | 2.3 | 2.6 | 2.5 | 2.3 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.4 | 2.4 | 2.3 | 2.2 | 2.2 | 2.3 | 2.29 | 2.98 |
| 19-Nov-06 | A | 2.4 | 2.3 | 2.3 | 2.2 | 2.1 | 2.5 | 2.6 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 1.8 | 1.8 | 1.8 | 1.9 | A | 2.07 | 2.58 |
| 20-Nov-06 | 1.9 | 1.9 | 1.9 | 2.0 | 2.0 | 2.1 | 2.3 | 2.3 | 2.5 | 2.3 | 2.5 | 2.6 | 2.2 | 2.2 | 2.2 | 2.5 | 2.7 | 2.7 | 2.8 | 2.4 | 2.2 | 2.3 | 2.1 | 2.2 | 2.29 | 2.81 |
| 21-Nov-06 | 2.0 | 2.1 | 2.1 | 2.0 | 1.9 | 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 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.03 | 2.10 |
| 22-Nov-06 | 2.0 | 2.0 | 2.0 | 2.0 | A | 2.0 | 2.0 | 2.0 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.04 | 2.11 |
| 23-Nov-06 | 2.0 | 2.0 | 2.0 | A | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.0 | 2.0 | 2.1 | 2.0 | 2.0 | 2.1 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.0 | 2.1 | 2.05 | 2.10 |
| 24-Nov-06 | 2.1 | 2.0 | A | 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 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.1 | 2.1 | 2.06 | 2.15 |
| 25-Nov-06 | 2.1 | A | 2.3 | 2.2 | 2.2 | 2.2 | 2.3 | 2.2 | 2.1 | 2.1 | 2.3 | 2.2 | 2.1 | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.1 | 2.0 | 2.1 | 2.1 | 2.2 | 2.3 | 2.14 | 2.34 |
| 26-Nov-06 | A | 2.8 | 2.7 | 2.7 | 2.6 | 2.5 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.5 | 2.4 | 2.5 | 2.5 | 2.6 | 2.7 | 2.7 | 2.7 | 2.7 | 2.5 | 2.5 | 2.2 | A | 2.53 | 2.84 |
| 27-Nov-06 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.0 | 2.0 | 2.1 | 2.1 | 2.0 | 2.1 | 2.2 | 2.1 | A | 2.2 | 2.06 | 2.19 |
| 28-Nov-06 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.2 | 2.2 | 2.2 | 2.3 | 2.3 | 2.4 | 2.5 | 2.5 | 2.7 | A | 2.8 | 2.8 | 2.33 | 2.85 |
| 29-Nov-06 | 2.9 | 2.9 | 3.0 | 3.1 | 3.2 | 3.0 | 3.0 | 3.1 | 3.1 | 3.2 | 3.4 | 3.5 | 3.6 | 3.5 | 3.5 | 3.5 | 3.4 | 3.0 | 3.0 | 2.5 | A | 2.4 | 2.4 | 2.3 | 3.07 | 3.57 |
| 30-Nov-06 | 2.2 | 2.2 | 2.6 | 2.6 | 2.5 | 2.5 | 2.6 | 2.7 | 2.3 | 2.2 | 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 | 2.21 | 2.73 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 2.27 | 2.30 | 2.31 | 2.29 | 2.33 | 2.34 | 2.35 | 2.34 | 2.32 | 2.32 | 2.30 | 2.30 | 2.26 | 2.27 | 2.25 | 2.25 | 2.26 | 2.27 | 2.28 | 2.26 | 2.25 | 2.23 | 2.26 | 2.30 | | |
| Hourly Max | 3.17 | 3.12 | 3.08 | 3.06 | 3.31 | 3.30 | 3.20 | 3.14 | 3.24 | 3.21 | 3.37 | 3.54 | 3.57 | 3.53 | 3.48 | 3.52 | 3.38 | 3.01 | 3.02 | 3.02 | 3.13 | 3.09 | 3.27 | 3.13 | | |

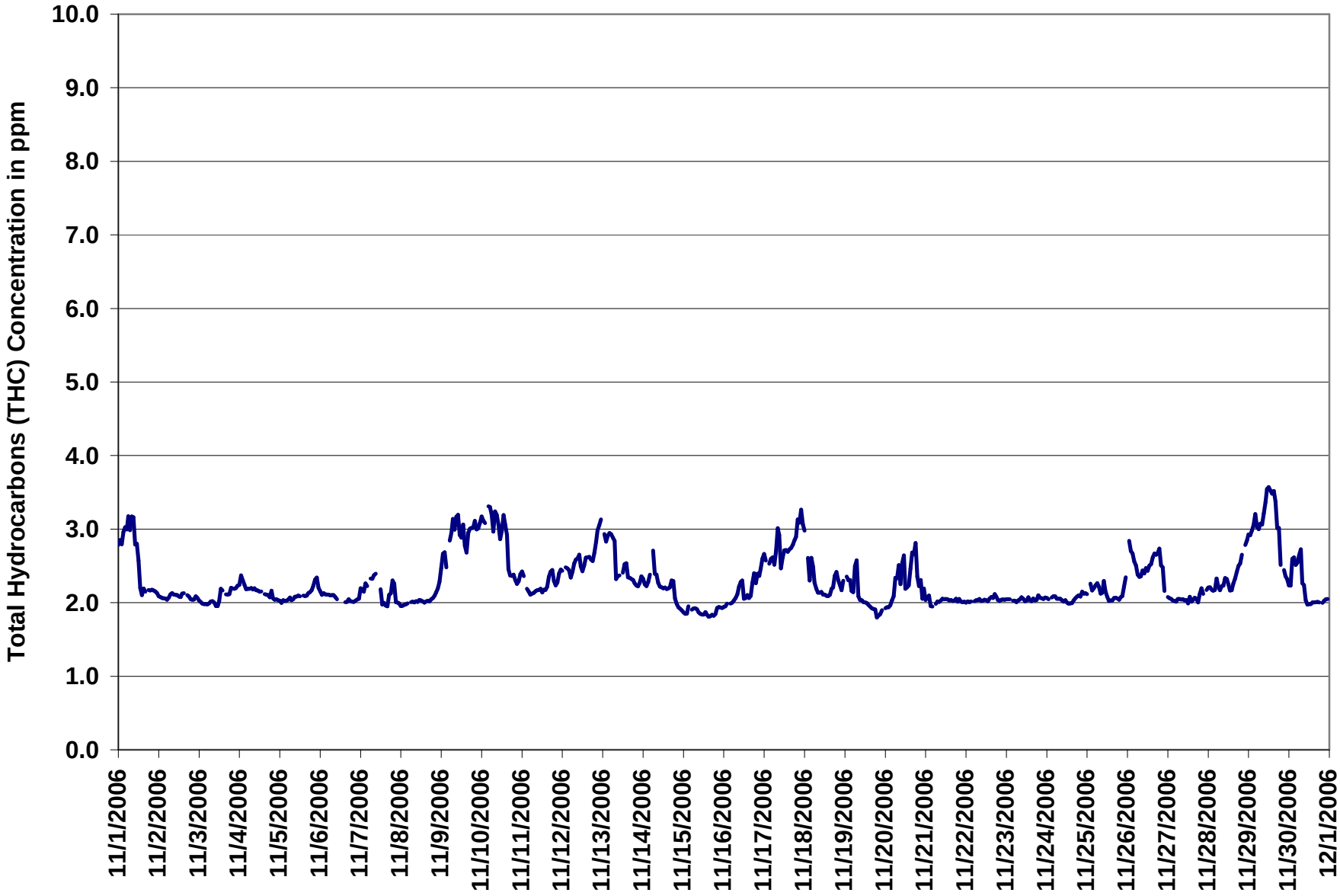


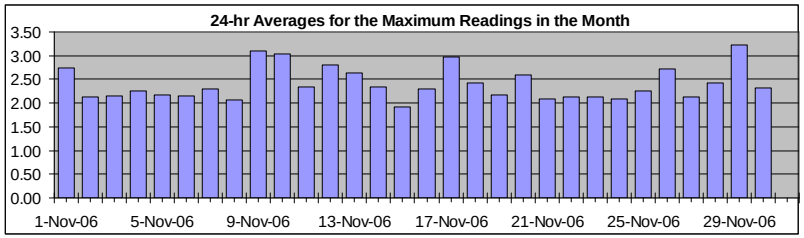

**Figure 11. PASZA - Henry Pirker Total Hydrocarbons 1-hr Average Monthly Trend**

Station: Henry Pirker
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

## Total Hydrocarbons (THC)

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 3.8 | ppm | 10-Nov | 14:00 15:00 |
| Maximum 24-hr Value: | 3.2 | ppm | 29-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 34 hrs | Operational Time: | 683 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 3.6 | 3.3 | 2.6 | 2.2 | 2.1 | 2.0 | 1.9 | 2.4 ppm | 2.2 ppm |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 3.0 | 3.2 | 3.0 | 3.1 | 3.1 | 3.1 | 3.5 | 3.1 | 3.3 | 3.2 | 3.2 | 2.9 | 2.9 | 2.3 | 2.2 | 2.3 | 2.4 | A | 2.2 | 2.2 | 2.3 | 2.2 | 2.3 | 2.1 | 2.74 | 3.52 |
| 2-Nov-06 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.2 | 2.1 | 2.1 | 2.2 | 2.2 | A | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.1 | 2.1 | 2.14 | 2.34 |
| 3-Nov-06 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 2.2 | 2.1 | 2.1 | 2.0 | 2.0 | 2.2 | 2.2 | 2.2 | A | 2.1 | 2.2 | 2.2 | 2.3 | 2.3 | 2.3 | 2.4 | 2.3 | 2.14 | 2.38 |
| 4-Nov-06 | 2.3 | 2.5 | 2.4 | 2.3 | 2.2 | 2.2 | 2.2 | 2.3 | 2.2 | 2.3 | 2.2 | 2.2 | 2.2 | 2.2 | A | 2.2 | 2.2 | 2.1 | 2.1 | 2.8 | 2.3 | 2.1 | 2.1 | 2.1 | 2.26 | 2.81 |
| 5-Nov-06 | 2.1 | 2.0 | 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 | 2.2 | 2.2 | 2.2 | 2.3 | 2.4 | 2.4 | 2.7 | 2.17 | 2.73 |
| 6-Nov-06 | 2.2 | 2.1 | 2.2 | 2.1 | 2.2 | 2.1 | 2.2 | 2.2 | 2.2 | 2.4 | 2.1 | C | C | C | A | 2.2 | 2.1 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.15 | 2.38 |
| 7-Nov-06 | 2.3 | 2.2 | 2.2 | 2.3 | 2.3 | A | 2.6 | 2.7 | 2.5 | 2.5 | A | A | 2.3 | 2.0 | 2.0 | 2.3 | 2.4 | 2.3 | 2.3 | 2.4 | 2.3 | 2.1 | 2.0 | 2.0 | 2.29 | 2.67 |
| 8-Nov-06 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | A | 2.0 | 2.0 | 2.0 | 2.1 | 2.0 | 2.1 | 2.1 | 2.0 | 2.0 | 2.1 | 2.1 | 2.0 | 2.1 | 2.1 | 2.1 | 2.3 | 2.2 | 2.4 | 2.07 | 2.36 |
| 9-Nov-06 | 2.8 | 2.8 | 2.8 | 2.8 | A | 2.9 | 3.3 | 3.7 | 3.2 | 3.2 | 3.3 | 3.1 | 3.0 | 3.2 | 2.9 | 2.9 | 3.4 | 3.3 | 3.1 | 3.1 | 3.2 | 3.1 | 3.1 | 3.1 | 3.10 | 3.65 |
| 10-Nov-06 | 3.3 | 3.3 | 3.2 | A | 3.4 | 3.4 | 3.5 | 3.3 | 3.3 | 3.3 | 3.2 | 3.0 | 3.4 | 3.5 | 3.8 | 3.0 | 2.9 | 2.4 | 2.5 | 2.6 | 2.4 | 2.3 | 2.4 | 2.4 | 3.03 | 3.79 |
| 11-Nov-06 | 2.5 | 2.4 | A | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.3 | 2.2 | 2.3 | 2.6 | 2.6 | 2.7 | 2.4 | 2.3 | 2.3 | 2.6 | 2.8 | 2.34 | 2.79 |
| 12-Nov-06 | 2.7 | A | 2.6 | 2.5 | 2.7 | 2.4 | 2.5 | 3.1 | 2.9 | 3.2 | 2.9 | 2.6 | 2.5 | 2.7 | 3.0 | 2.8 | 2.8 | 2.6 | 2.6 | 2.8 | 3.0 | 3.1 | 3.2 | 3.4 | 2.81 | 3.40 |
| 13-Nov-06 | A | 3.1 | 2.9 | 3.0 | 3.0 | 3.0 | 3.0 | 3.1 | 2.4 | 2.4 | 2.4 | A | 2.6 | 2.6 | 3.5 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 | 2.2 | 2.3 | 2.3 | 2.4 | 2.63 | 3.47 |
| 14-Nov-06 | 2.4 | 2.3 | 2.2 | 2.4 | 2.5 | A | 2.9 | 3.0 | 2.6 | 2.3 | 2.3 | 2.2 | 2.3 | 2.3 | 2.5 | 2.2 | 2.3 | 2.7 | 2.5 | 2.1 | 2.1 | 2.0 | 1.9 | 1.9 | 2.35 | 3.03 |
| 15-Nov-06 | 1.9 | 1.9 | 1.9 | 2.0 | A | 1.9 | 2.0 | 2.0 | 2.0 | 1.9 | 1.9 | 1.9 | 1.9 | 2.0 | 1.9 | 1.8 | 1.9 | 1.9 | 1.8 | 1.9 | 2.2 | 2.0 | 2.0 | 2.0 | 1.93 | 2.15 |
| 16-Nov-06 | 2.0 | 2.0 | 2.0 | A | 2.0 | 2.0 | 2.1 | 2.1 | 2.2 | 2.4 | 2.9 | 2.8 | 2.2 | 2.2 | 2.2 | 2.1 | 2.2 | 2.6 | 2.5 | 2.3 | 2.5 | 2.4 | 2.6 | 2.7 | 2.30 | 2.87 |
| 17-Nov-06 | 2.8 | 2.6 | A | 2.6 | 3.0 | 2.8 | 2.6 | 3.3 | 3.2 | 3.1 | 2.8 | 3.1 | 2.9 | 2.8 | 2.8 | 2.9 | 3.0 | 2.9 | 2.9 | 3.0 | 3.3 | 3.2 | 3.3 | 3.3 | 2.97 | 3.35 |
| 18-Nov-06 | 3.1 | A | 2.8 | 2.5 | 3.4 | 2.7 | 2.3 | 2.4 | 2.2 | 2.2 | 2.2 | 2.1 | 2.2 | 2.1 | 2.1 | 2.1 | 2.3 | 2.3 | 2.5 | 2.6 | 2.6 | 2.5 | 2.3 | 2.4 | 2.43 | 3.36 |
| 19-Nov-06 | A | 2.6 | 2.4 | 2.4 | 2.4 | 2.4 | 2.6 | 2.8 | 2.2 | 2.1 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.1 | 1.8 | 1.8 | 1.9 | 1.9 | A | 2.17 | 2.79 |
| 20-Nov-06 | 1.9 | 2.0 | 2.0 | 2.0 | 2.1 | 2.5 | 2.7 | 2.8 | 2.9 | 2.5 | 2.9 | 3.0 | 2.4 | 2.4 | 2.5 | 3.0 | 3.1 | 3.8 | 3.2 | 2.8 | 2.4 | 2.5 | 2.5 | 2.3 | 2.59 | 3.79 |
| 21-Nov-06 | 2.1 | 2.2 | 2.3 | 2.0 | 2.0 | A | 2.1 | 2.1 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.1 | 2.0 | 2.1 | 2.10 | 2.26 |
| 22-Nov-06 | 2.0 | 2.1 | 2.1 | 2.0 | A | 2.1 | 2.6 | 2.3 | 2.2 | 2.1 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.2 | 2.3 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.14 | 2.57 |
| 23-Nov-06 | 2.1 | 2.1 | 2.1 | A | 2.1 | 2.2 | 2.1 | 2.1 | 2.2 | 2.1 | 2.2 | 2.1 | 2.1 | 2.2 | 2.1 | 2.1 | 2.3 | 2.1 | 2.2 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.12 | 2.35 |
| 24-Nov-06 | 2.1 | 2.1 | A | 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 | 2.1 | 2.1 | 2.2 | 2.2 | 2.1 | 2.2 | 2.2 | 2.2 | 2.10 | 2.22 |
| 25-Nov-06 | 2.3 | A | 2.4 | 2.2 | 2.2 | 2.3 | 2.3 | 2.3 | 2.2 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.2 | 2.1 | 2.4 | 2.4 | 2.25 | 2.43 |
| 26-Nov-06 | A | 3.2 | 3.0 | 2.9 | 2.6 | 2.6 | 2.5 | 2.4 | 2.4 | 2.7 | 3.2 | 3.2 | 2.6 | 2.6 | 2.6 | 2.7 | 2.8 | 2.9 | 2.8 | 2.9 | 2.7 | 2.6 | 2.4 | A | 2.73 | 3.24 |
| 27-Nov-06 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.3 | 2.1 | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 2.2 | 2.3 | 2.2 | A | 2.3 | 2.13 | 2.25 |
| 28-Nov-06 | 2.2 | 2.3 | 2.2 | 2.2 | 2.4 | 2.4 | 2.3 | 2.2 | 2.3 | 2.3 | 2.5 | 2.4 | 2.3 | 2.2 | 2.2 | 2.3 | 2.4 | 2.5 | 2.7 | 2.6 | 2.7 | A | 2.9 | 2.9 | 2.42 | 2.92 |
| 29-Nov-06 | 3.2 | 3.1 | 3.1 | 3.2 | 3.4 | 3.2 | 3.3 | 3.3 | 3.2 | 3.4 | 3.5 | 3.7 | 3.6 | 3.6 | 3.5 | 3.7 | 3.5 | 3.3 | 3.4 | 2.6 | A | 2.5 | 2.4 | 2.4 | 3.22 | 3.71 |
| 30-Nov-06 | 2.3 | 2.4 | 2.7 | 2.7 | 2.6 | 3.2 | 2.8 | 3.1 | 2.6 | 2.4 | 2.1 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | A | 2.0 | 2.1 | 2.1 | 2.1 | 2.32 | 3.23 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 2.36 | 2.39 | 2.39 | 2.37 | 2.45 | 2.47 | 2.49 | 2.54 | 2.44 | 2.45 | 2.45 | 2.42 | 2.37 | 2.36 | 2.40 | 2.35 | 2.41 | 2.41 | 2.39 | 2.38 | 2.35 | 2.31 | 2.36 | 2.40 | | |
| Hourly Max | 3.30 | 3.29 | 3.16 | 3.25 | 3.38 | 3.40 | 3.52 | 3.65 | 3.32 | 3.36 | 3.47 | 3.68 | 3.64 | 3.61 | 3.79 | 3.71 | 3.55 | 3.79 | 3.38 | 3.10 | 3.33 | 3.23 | 3.35 | 3.40 | | |

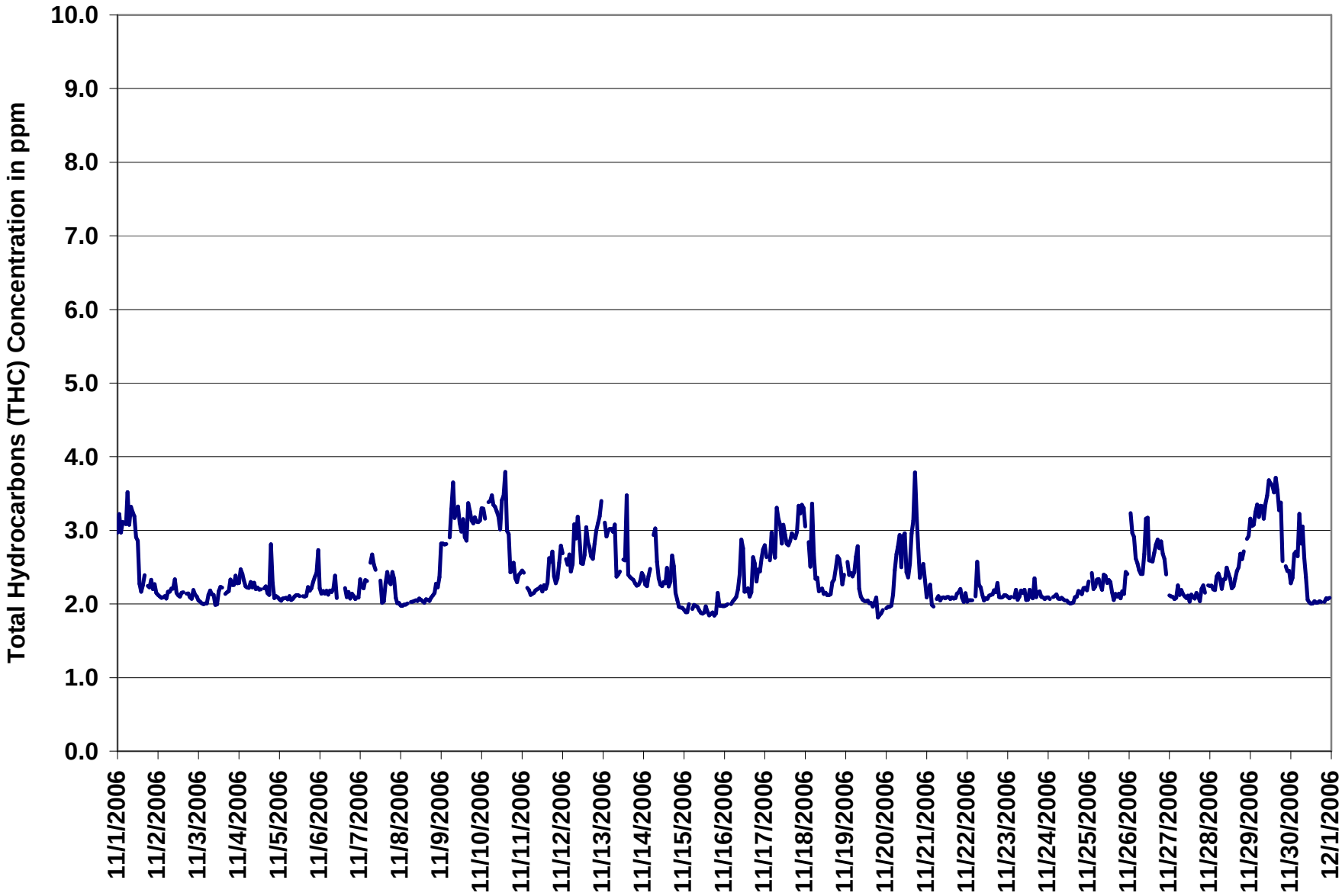
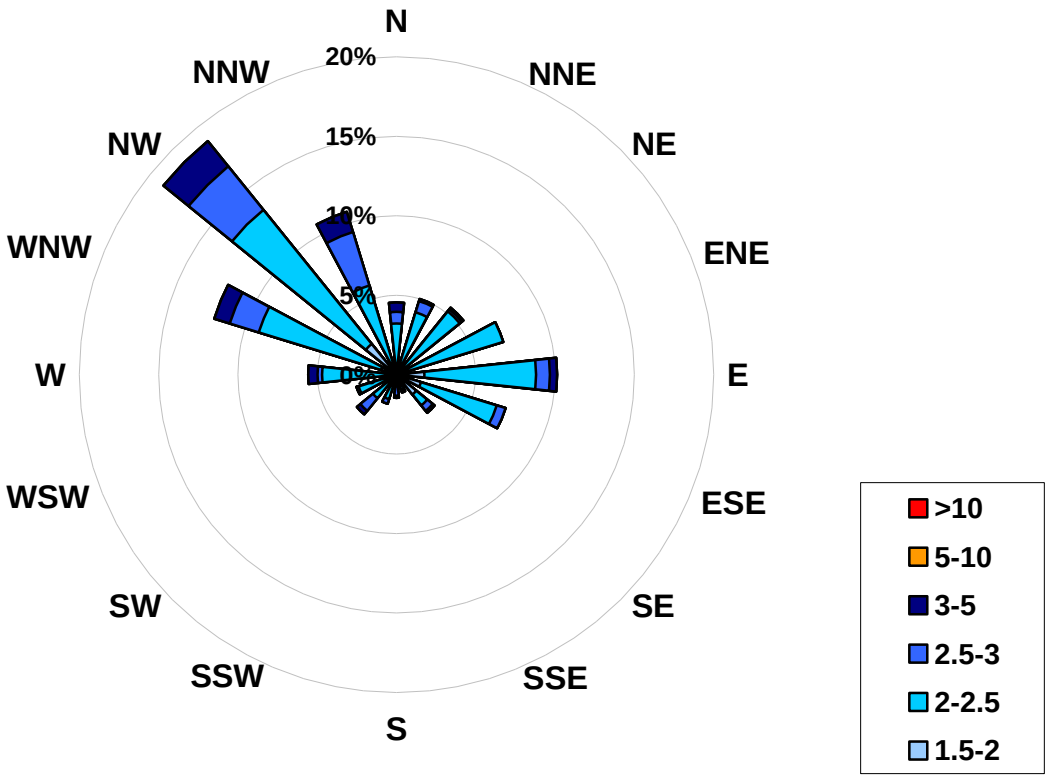



**Figure 12. PASZA - Henry Pirker Total Hydrocarbons Instantaneous (30 Second) Maximum Value Monthly Trend**

## 1-hr Average Concentration Rose for Total Hydrocarbons (in ppm) Located at the Henry Pirker Site for November 2006




| Calms: | 0% |
|---|---|

| Frequency Distribution of THC in ppm | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 1.5 | < | 2 | 75 |
| 2 | to | 2.5 | 458 |
| 2.5 | to | 3 | 102 |
| 3 | to | 5 | 48 |
| 5 | to | 10 | 0 |
| | > | 10 | 0 |
| Total Non-Zero Values | | | 683 |

# PASZA - Henry Pirker - Total Reduced Sulphur Monthly Summary

## HOURLY AVERAGE TABLE

**Total Reduced Sulphur (TRS)**

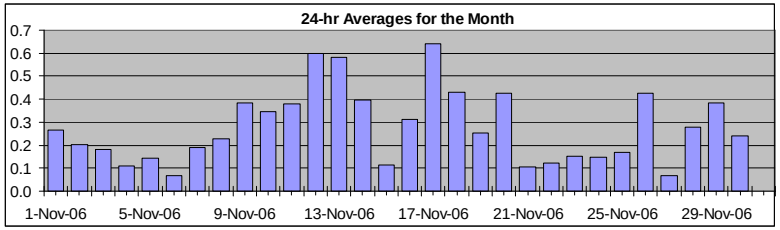
Station: Henry Pirker
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr na ppb | 24-hr na ppb

**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 1.4 | ppb | 26-Nov | 3:00 4:00 |
| Maximum 24-hr Value: | 0.6 | ppb | 17-Nov | |




| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 686 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 0.9 | 0.7 | 0.4 | 0.2 | 0.1 | 0.0 | 0.0 | 0.3 ppb | 0.2 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.6 |
| 2-Nov-06 | 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 | 0.3 |
| 3-Nov-06 | 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 |
| 4-Nov-06 | 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 |
| 5-Nov-06 | 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 |
| 6-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C | C | C | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.2 |
| 7-Nov-06 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.5 |
| 8-Nov-06 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.3 |
| 9-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0.4 | 0.8 |
| 10-Nov-06 | 0 | 0 | 0 | A | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.3 | 0.6 |
| 11-Nov-06 | 1 | 1 | A | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.4 | 0.7 |
| 12-Nov-06 | 1 | A | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0.6 | 0.8 |
| 13-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0.6 | 1.0 |
| 14-Nov-06 | 0 | 0 | 0 | 0 | 0 | A | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.8 |
| 15-Nov-06 | 0 | 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-Nov-06 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0.3 | 0.6 |
| 17-Nov-06 | 0 | 0 | A | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 1.0 |
| 18-Nov-06 | 1 | A | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0.4 | 0.7 |
| 19-Nov-06 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0.3 | 0.5 |
| 20-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0.4 | 1.0 |
| 21-Nov-06 | 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 |
| 22-Nov-06 | 0 | 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 |
| 23-Nov-06 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.3 |
| 24-Nov-06 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.4 |
| 25-Nov-06 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.4 |
| 26-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0.4 | 1.4 |
| 27-Nov-06 | 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 |
| 28-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 1 | 0 | 0.3 | 0.7 |
| 29-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | A | 0 | 0 | 0 | 0.4 | 0.6 |
| 30-Nov-06 | 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 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 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 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | | |
| Hourly Max | 0.7 | 0.8 | 0.7 | 1.4 | 0.9 | 0.6 | 0.8 | 0.8 | 0.9 | 0.9 | 0.8 | 0.8 | 0.6 | 0.9 | 1.0 | 0.8 | 0.9 | 0.9 | 1.0 | 0.8 | 0.9 | 0.8 | 1.0 | 0.8 | | |

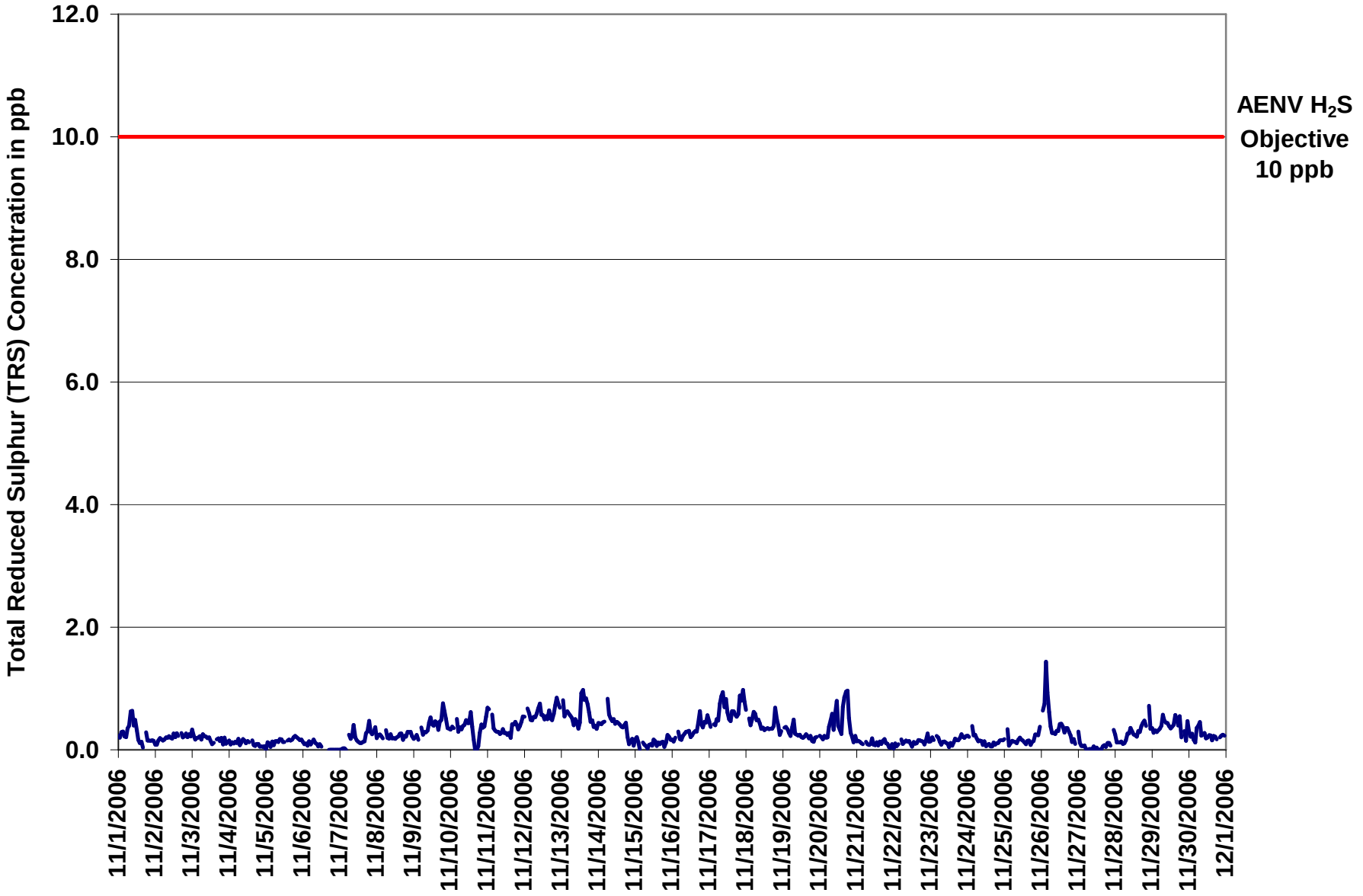


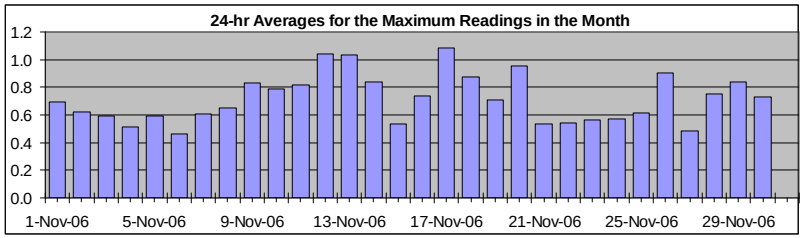

**Figure 13. PASZA - Henry Pirker Total Reduced Sulphur 1-hr Average Monthly Trend**

Station: Henry Pirker
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

## Total Reduced Sulphur (TRS)

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 1.8 | ppb | 20-Nov | 17:00 18:00 |
| Maximum 24-hr Value: | 1.1 | ppb | 17-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 686 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 1.6 | 1.2 | 0.8 | 0.7 | 0.5 | 0.4 | 0.3 | 0.7 ppb | 0.7 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | A | 1 | 1 | 0 | 1 | 1 | 0 | 0.7 | 1.1 |
| 2-Nov-06 | 0 | 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 | 0.8 |
| 3-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0.6 | 0.7 |
| 4-Nov-06 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | A | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0.5 | 0.7 |
| 5-Nov-06 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 0.9 |
| 6-Nov-06 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | C | C | C | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.8 |
| 7-Nov-06 | 1 | 0 | 0 | 1 | 0 | A | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 0.9 |
| 8-Nov-06 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 0.9 |
| 9-Nov-06 | 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 | 1.1 |
| 10-Nov-06 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.1 |
| 11-Nov-06 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.2 |
| 12-Nov-06 | 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 | 1.2 |
| 13-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.0 | 1.5 |
| 14-Nov-06 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0.8 | 1.2 |
| 15-Nov-06 | 1 | 1 | 1 | 0 | A | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0.5 | 0.7 |
| 16-Nov-06 | 0 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.7 | 1.2 |
| 17-Nov-06 | 1 | 1 | A | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.1 | 1.5 |
| 18-Nov-06 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9 | 1.3 |
| 19-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | A | 0.7 | 1.0 |
| 20-Nov-06 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1.0 | 1.8 |
| 21-Nov-06 | 0 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0.5 | 0.7 |
| 22-Nov-06 | 0 | 0 | 0 | 0 | A | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0.5 | 0.8 |
| 23-Nov-06 | 0 | 1 | 1 | A | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 0.7 |
| 24-Nov-06 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0.6 | 0.9 |
| 25-Nov-06 | 1 | A | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 1.0 |
| 26-Nov-06 | A | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 0.9 | 1.8 |
| 27-Nov-06 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | A | 1 | 0.5 | 1.0 |
| 28-Nov-06 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 2 | 1 | 0.7 | 1.7 |
| 29-Nov-06 | 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 | 1.1 |
| 30-Nov-06 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 0.7 | 1.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 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 | 0.7 | | |
| Hourly Max | 1.1 | 1.5 | 1.6 | 1.8 | 1.8 | 1.1 | 1.2 | 1.5 | 1.3 | 1.5 | 1.2 | 1.5 | 1.0 | 1.4 | 1.5 | 1.4 | 1.8 | 1.8 | 1.6 | 1.3 | 1.4 | 1.3 | 1.7 | 1.4 | | |

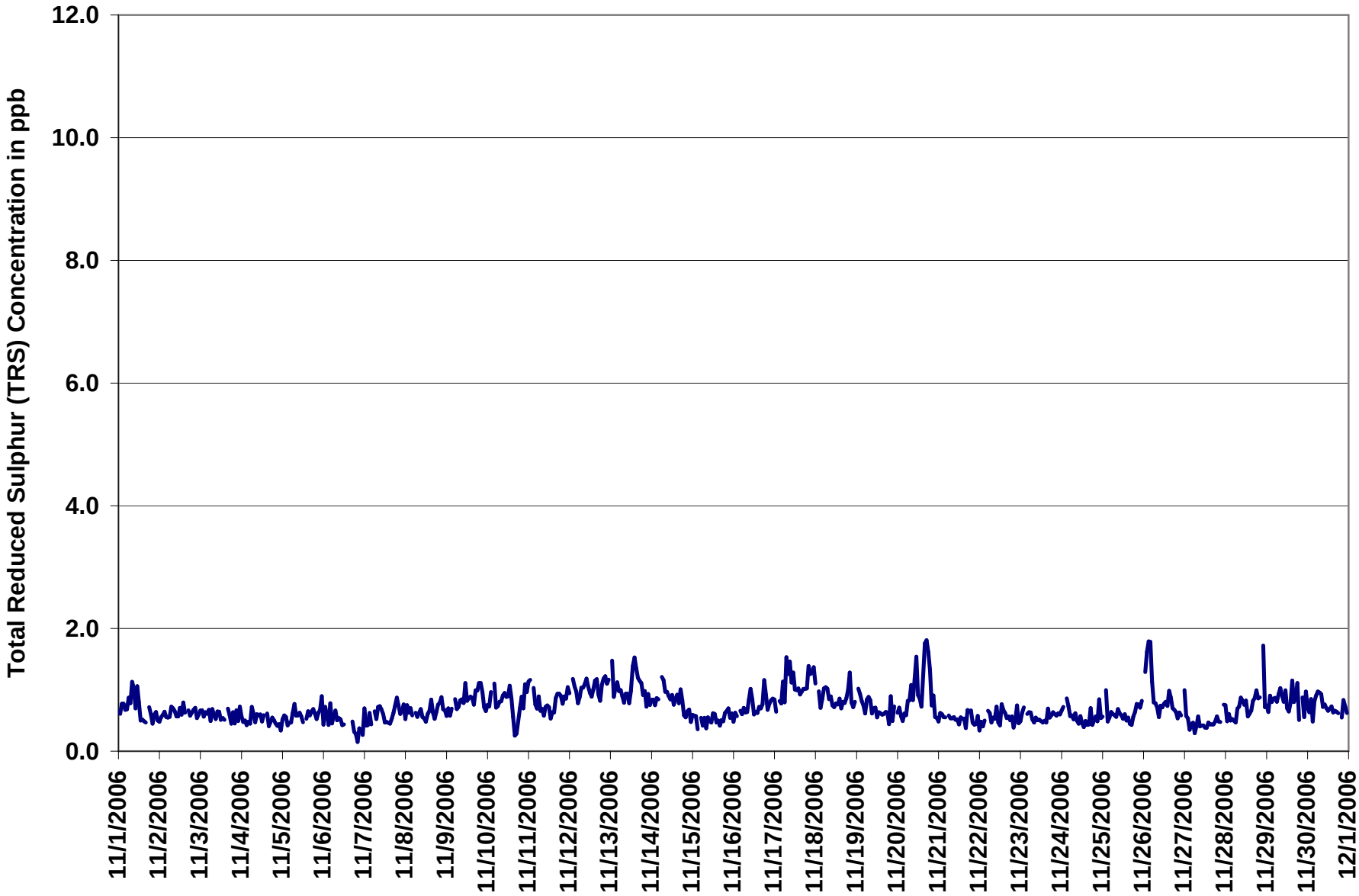
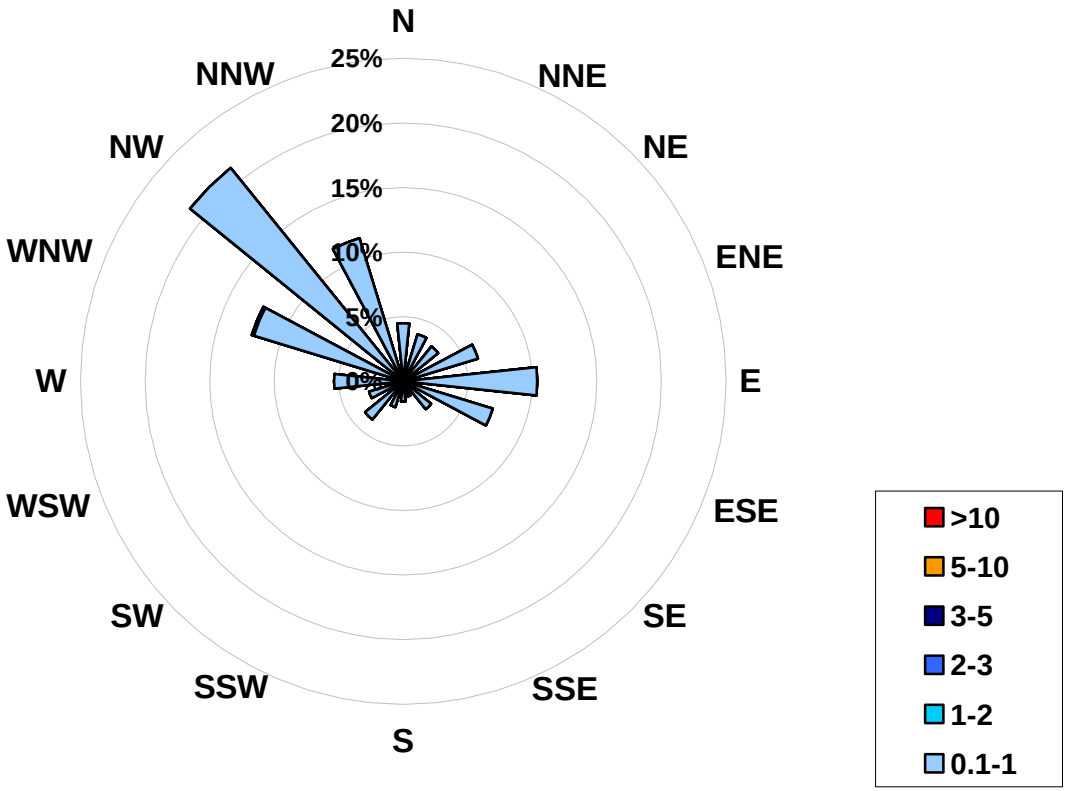



**Figure 14. PASZA - Henry Pirker Total Reduced Sulphur Instantaneous (30 Second) Maximum Value Monthly Trend**

## 1-hr Average Concentration Rose for Total Reduced Sulphur (in ppb) Located at the Henry Pirker Site for November 2006




**Calms: 0%**

| Frequency Distribution of TRS in ppb | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.1 | < | 1 | 685 |
| 1 | to | 2 | 1 |
| 2 | to | 3 | 0 |
| 3 | to | 5 | 0 |
| 5 | to | 10 | 0 |
| | > | 10 | 0 |
| Total Non-Zero Values | | | 686 |

# PASZA - Henry Pirker - Particulate Matter (less than 2.5 microns) Monthly Summary

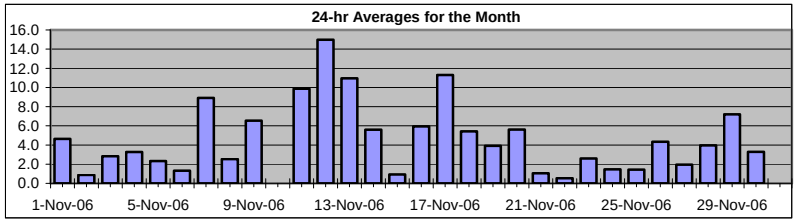
Station: Henry Pirker
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Particulate Matter ($PM_{2.5}$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Draft Objective Limit:** **Alberta Environment:** 1-hr - µg/m³ | 24-hr 30 µg/m³




**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 24-hr Exceedances (draft): | 0 | | | |
| Maximum 1-hr Average: | 25.6 | µg/m³ | 12-Nov | 11:00 12:00 |
| Maximum 24-hr Value: | 15.0 | µg/m³ | 12-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 711 hrs |
| Calibration Time: | 0 hrs | AMD Operational Uptime: | 98.8% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average / Median | Geomean |
|---|---|---|---|---|---|---|---|---|---|
| | 19.1 | 14.9 | 6.7 | 3.3 | 1.3 | 0.0 | 0.0 | 4.8 / 3 µg/m˜ | 3.4 µg/m˜ |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 5 | 6 | 3 | 5 | 3 | 4 | 5 | 6 | 11 | 14 | 14 | 15 | 9 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 0 | 1 | 1 | 1 | 4.6 | 15.0 |
| 2-Nov-06 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 2 | 5 | 4 | 0.9 | 4.7 |
| 3-Nov-06 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 5 | 6 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 2.8 | 5.7 |
| 4-Nov-06 | 3 | 3 | 2 | 2 | 1 | 1 | 2 | 2 | 3 | 4 | 6 | 3 | 3 | 12 | 11 | 8 | 2 | 0 | 0 | 1 | 0 | 1 | 1 | 3 | 3.3 | 12.1 |
| 5-Nov-06 | 2 | 4 | 3 | 4 | 3 | 3 | 3 | 4 | 2 | 2 | 1 | 2 | 1 | 1 | 0 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 3 | 1 | 2.3 | 3.8 |
| 6-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 3 | 2 | 4 | 1 | 2 | 4 | 4 | 5 | 0 | 1.3 | 4.8 |
| 7-Nov-06 | 8 | 8 | 5 | 4 | 5 | 5 | 8 | 7 | 10 | 12 | 9 | 6 | 6 | 10 | 10 | 10 | 10 | 18 | 16 | 13 | 13 | 9 | 8 | 5 | 8.9 | 17.7 |
| 8-Nov-06 | 3 | 2 | 3 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 3 | 2 | 2 | 3 | 5 | 5 | 4 | 5 | 4 | 2.5 | 5.4 |
| 9-Nov-06 | 3 | 3 | 3 | 2 | 1 | 2 | 5 | 5 | 6 | 6 | 5 | 8 | 7 | 7 | 11 | 19 | 7 | 9 | 11 | 9 | 7 | 7 | 6 | 5 | 6.5 | 19.2 |
| 10-Nov-06 | 6 | 9 | 7 | 9 | 9 | 10 | 11 | 9 | 14 | 14 | 18 | 17 | 12 | 13 | 0 | N | N | N | N | N | N | N | N | N | N | 18.3 |
| 11-Nov-06 | 16 | 11 | 6 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 9 | 9 | 9 | 9 | 10 | 11 | 14 | 15 | 17 | 12 | 9 | 10 | 16 | 15 | 9.9 | 17.2 |
| 12-Nov-06 | 20 | 16 | 12 | 9 | 12 | 10 | 10 | 12 | 15 | 17 | 23 | 26 | 20 | 11 | 15 | 15 | 14 | 12 | 12 | 12 | 18 | 15 | 16 | 15 | 15.0 | 25.6 |
| 13-Nov-06 | 15 | 16 | 14 | 15 | 17 | 14 | 16 | 15 | 10 | 11 | 12 | 13 | 9 | 12 | 11 | 12 | 7 | 7 | 6 | 6 | 5 | 5 | 6 | 7 | 11.0 | 16.9 |
| 14-Nov-06 | 6 | 6 | 7 | 6 | 6 | 6 | 9 | 9 | 7 | 7 | 7 | 6 | 5 | 6 | 6 | 6 | 5 | 6 | 7 | 3 | 3 | 1 | 3 | 2 | 5.6 | 9.5 |
| 15-Nov-06 | 1 | 1 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 0 | 8 | 0.9 | 7.5 |
| 16-Nov-06 | 5 | 5 | 5 | 4 | 3 | 4 | 3 | 4 | 6 | 7 | 10 | 9 | 3 | 3 | 4 | 3 | 4 | 7 | 13 | 10 | 9 | 6 | 6 | 12 | 5.9 | 12.8 |
| 17-Nov-06 | 9 | 5 | 5 | 5 | 5 | 4 | 7 | 11 | 18 | 18 | 12 | 20 | 20 | 7 | 8 | 12 | 11 | 12 | 11 | 11 | 13 | 12 | 23 | 14 | 11.3 | 23.1 |
| 18-Nov-06 | 8 | 8 | 5 | 2 | 3 | 6 | 3 | 4 | 9 | 6 | 6 | 4 | 5 | 3 | 3 | 4 | 4 | 4 | 7 | 11 | 7 | 8 | 5 | 5 | 5.4 | 11.0 |
| 19-Nov-06 | 10 | 9 | 7 | 6 | 4 | 4 | 5 | 6 | 3 | 2 | 2 | 3 | 3 | 4 | 2 | 3 | 2 | 3 | 13 | 1 | 0 | 1 | 0 | 0 | 3.9 | 13.2 |
| 20-Nov-06 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 5 | 3 | 8 | 15 | 7 | 6 | 4 | 11 | 14 | 15 | 17 | 8 | 4 | 4 | 2 | 4 | 5.6 | 17.1 |
| 21-Nov-06 | 2 | 0 | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 1 | 1 | 0 | 1 | 1 | 1.1 | 2.5 |
| 22-Nov-06 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0.5 | 1.3 |
| 23-Nov-06 | 1 | 1 | 1 | 3 | 0 | 2 | 3 | 3 | 2 | 4 | 4 | 3 | 2 | 4 | 2 | 3 | 5 | 4 | 5 | 2 | 2 | 2 | 0 | 3 | 2.6 | 5.5 |
| 24-Nov-06 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 1 | 2 | 2 | 2 | 3 | 3 | 5 | 1.5 | 5.2 |
| 25-Nov-06 | 3 | 3 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 4 | 3 | 2 | 2 | 1.4 | 3.8 |
| 26-Nov-06 | 2 | 1 | 1 | 2 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 | 7 | 8 | 7 | 4 | 3 | 2 | 2 | 0 | 4.3 | 8.3 |
| 27-Nov-06 | 2 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 2 | 2 | 1 | 2 | 2 | 2 | 5 | 4 | 2 | 4 | 3 | 0 | 1 | 2 | 1.9 | 4.8 |
| 28-Nov-06 | 3 | 2 | 2 | 2 | 0 | 1 | 1 | 3 | 4 | 5 | 12 | 6 | 4 | 4 | 3 | 5 | 5 | 6 | 5 | 6 | 4 | 3 | 3 | 4 | 4.0 | 12.1 |
| 29-Nov-06 | 2 | 2 | 1 | 1 | 9 | 8 | 9 | 13 | 9 | 9 | 3 | 2 | 7 | 6 | 8 | 15 | 17 | 13 | 16 | 7 | 6 | 4 | 4 | 3 | 7.2 | 16.5 |
| 30-Nov-06 | 2 | 4 | 3 | 2 | 3 | 5 | 8 | 10 | 9 | 4 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 3 | 2 | 3 | 3 | 3 | 3.3 | 10.1 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 4.8 | 4.3 | 3.5 | 3.3 | 3.4 | 3.6 | 4.3 | 5.0 | 5.5 | 5.6 | 6.1 | 6.2 | 5.0 | 4.7 | 4.3 | 5.6 | 5.2 | 5.6 | 6.4 | 4.9 | 4.6 | 4.2 | 4.7 | 4.5 | | |
| Hourly Max | 19.6 | 16.2 | 14.1 | 15.4 | 16.9 | 14.4 | 15.7 | 15.3 | 18.2 | 17.9 | 23.5 | 25.6 | 20.0 | 13.0 | 14.8 | 19.2 | 16.5 | 17.7 | 17.2 | 13.4 | 18.4 | 15.3 | 23.1 | 15.2 | | |

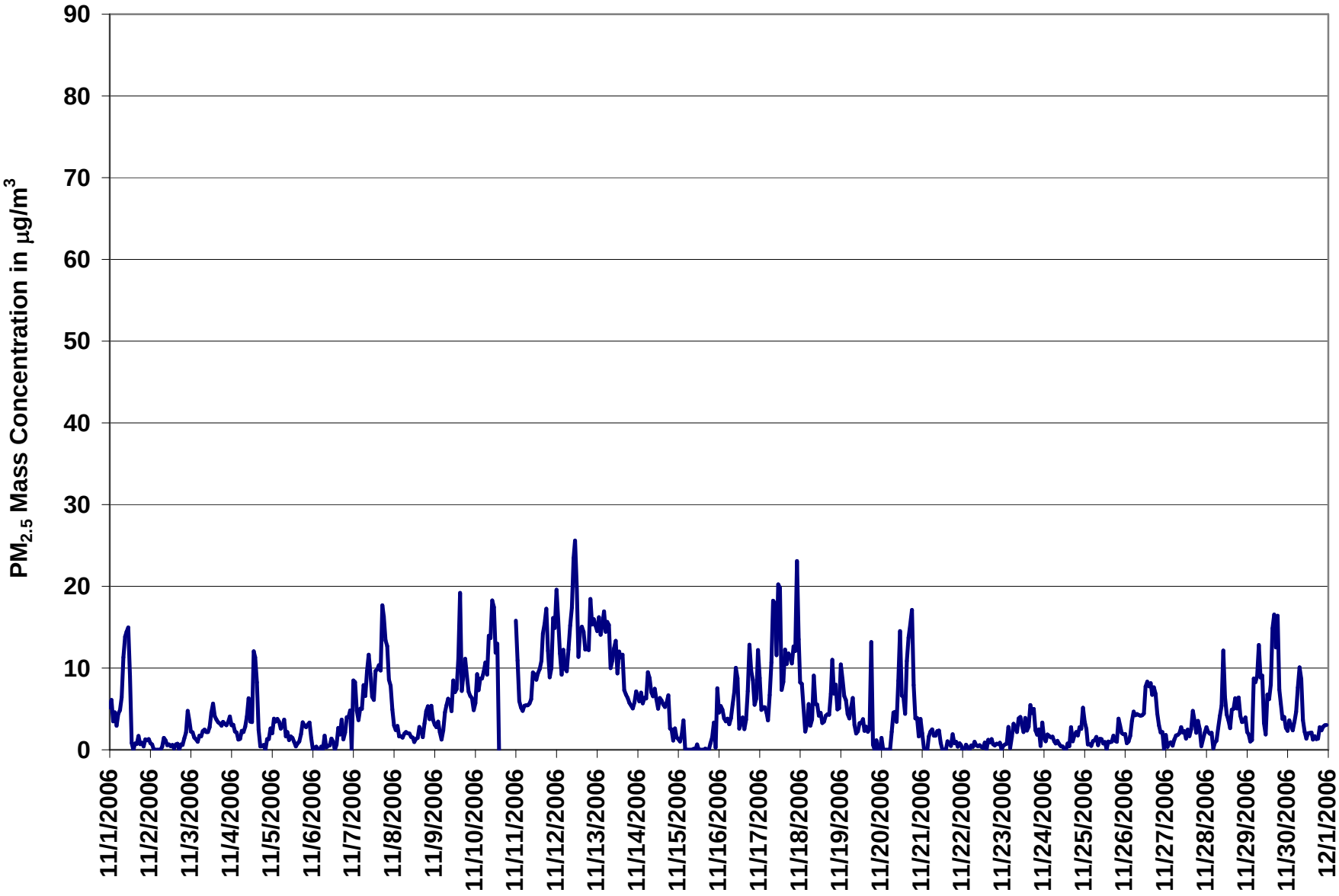


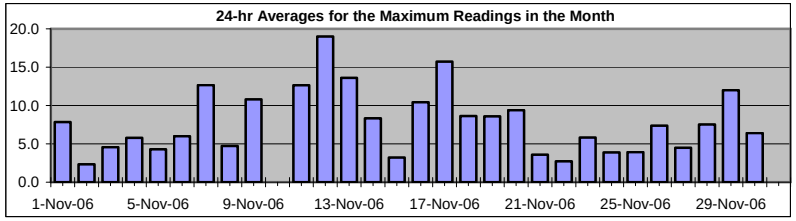

**Figure 15. PASZA - Henry Pirker Particulate Matter (less than 2.5 microns) 1-hr Average Monthly Trend**

Station: Henry Pirker
Station Owner: PASZA

## INSTANTANEOUS (30 Second) MAXIMUM TABLE

**Particulate Matter ($PM_{2.5}$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 39.5 | µg/m³ | 19-Nov | 18:00 19:00 |
| Maximum 24-hr Value: | 19.0 | µg/m³ | 12-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 711 hrs |
| Calibration Time: | 0 hrs | AMD Operational Uptime: | 98.8% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average / Median | Geomean |
|---|---|---|---|---|---|---|---|---|---|
| | 27.0 | 19.4 | 10.6 | 5.9 | 3.6 | 1.9 | 0.8 | 8.0 / 6 µg/m³ | 6.8 µg/m³ |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 10 | 10 | 5 | 8 | 5 | 11 | 9 | 9 | 17 | 18 | 19 | 21 | 19 | 3 | 1 | 3 | 3 | 4 | 2 | 2 | 2 | 2 | 3 | 2 | 7.8 | 20.9 |
| 2-Nov-06 | 2 | 2 | 2 | 0 | 1 | 1 | 1 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 5 | 6 | 5 | 2.3 | 5.9 |
| 3-Nov-06 | 3 | 4 | 3 | 3 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 6 | 6 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 7 | 4.6 | 7.9 |
| 4-Nov-06 | 5 | 5 | 4 | 4 | 3 | 3 | 4 | 4 | 4 | 6 | 12 | 7 | 7 | 18 | 16 | 11 | 5 | 2 | 2 | 2 | 1 | 4 | 6 | 5 | 5.8 | 18.0 |
| 5-Nov-06 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 4 | 4 | 4 | 5 | 3 | 2 | 2 | 2 | 3 | 4 | 6 | 5 | 5 | 5 | 5 | 3 | 4.3 | 6.0 |
| 6-Nov-06 | 4 | 3 | 2 | 2 | 1 | 3 | 3 | 8 | 7 | 5 | 5 | 6 | 3 | 3 | 4 | 7 | 6 | 10 | 6 | 7 | 11 | 16 | 15 | 8 | 6.0 | 16.0 |
| 7-Nov-06 | 19 | 15 | 9 | 6 | 8 | 8 | 10 | 11 | 13 | 17 | 12 | 8 | 8 | 12 | 13 | 14 | 15 | 24 | 20 | 17 | 15 | 12 | 12 | 7 | 12.7 | 24.0 |
| 8-Nov-06 | 6 | 4 | 5 | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 5 | 5 | 3 | 6 | 8 | 9 | 9 | 8 | 6 | 4.7 | 9.3 |
| 9-Nov-06 | 7 | 5 | 6 | 5 | 3 | 4 | 6 | 9 | 8 | 8 | 7 | 13 | 14 | 15 | 27 | 38 | 12 | 15 | 15 | 11 | 9 | 8 | 8 | 7 | 10.8 | 38.0 |
| 10-Nov-06 | 10 | 20 | 13 | 13 | 11 | 14 | 16 | 15 | 17 | 17 | 21 | 23 | 16 | 18 | 6 | N | N | N | N | N | N | N | N | N | N | 22.7 |
| 11-Nov-06 | 18 | 14 | 9 | 7 | 6 | 7 | 7 | 7 | 7 | 9 | 11 | 11 | 10 | 12 | 11 | 13 | 16 | 19 | 21 | 15 | 10 | 12 | 25 | 26 | 12.6 | 25.7 |
| 12-Nov-06 | 23 | 20 | 16 | 10 | 16 | 13 | 13 | 14 | 19 | 23 | 31 | 29 | 31 | 14 | 18 | 19 | 18 | 15 | 17 | 20 | 22 | 19 | 18 | 17 | 19.0 | 31.3 |
| 13-Nov-06 | 17 | 21 | 18 | 18 | 20 | 18 | 18 | 19 | 12 | 14 | 16 | 17 | 12 | 14 | 14 | 16 | 9 | 9 | 7 | 7 | 8 | 7 | 9 | 9 | 13.6 | 20.7 |
| 14-Nov-06 | 9 | 8 | 9 | 8 | 9 | 8 | 14 | 15 | 10 | 11 | 10 | 9 | 8 | 9 | 9 | 9 | 7 | 8 | 10 | 4 | 5 | 4 | 4 | 3 | 8.3 | 15.5 |
| 15-Nov-06 | 3 | 3 | 6 | 7 | 3 | 1 | 2 | 1 | 2 | 2 | 0 | 4 | 0 | 2 | 2 | 1 | 2 | 1 | 4 | 3 | 5 | 8 | 5 | 12 | 3.2 | 12.3 |
| 16-Nov-06 | 7 | 8 | 7 | 6 | 6 | 6 | 6 | 6 | 7 | 10 | 14 | 14 | 5 | 7 | 12 | 6 | 6 | 17 | 23 | 17 | 16 | 9 | 16 | 19 | 10.4 | 23.2 |
| 17-Nov-06 | 11 | 7 | 8 | 11 | 7 | 7 | 10 | 19 | 21 | 20 | 19 | 31 | 32 | 10 | 10 | 15 | 14 | 15 | 15 | 16 | 17 | 15 | 26 | 22 | 15.7 | 31.8 |
| 18-Nov-06 | 12 | 10 | 10 | 5 | 7 | 8 | 6 | 10 | 11 | 7 | 8 | 6 | 7 | 6 | 6 | 6 | 7 | 6 | 11 | 14 | 14 | 10 | 9 | 11 | 8.6 | 14.3 |
| 19-Nov-06 | 14 | 18 | 11 | 11 | 7 | 6 | 7 | 11 | 13 | 5 | 8 | 7 | 6 | 6 | 5 | 7 | 4 | 4 | 39 | 7 | 2 | 3 | 2 | 2 | 8.6 | 39.5 |
| 20-Nov-06 | 4 | 0 | 1 | 1 | 0 | 2 | 5 | 7 | 7 | 5 | 15 | 18 | 15 | 10 | 8 | 16 | 19 | 24 | 22 | 18 | 9 | 6 | 5 | 8 | 9.4 | 24.0 |
| 21-Nov-06 | 4 | 4 | 6 | 3 | 4 | 5 | 5 | 4 | 4 | 5 | 6 | 3 | 4 | 3 | 0 | 3 | 4 | 2 | 4 | 3 | 2 | 3 | 3 | 3 | 3.6 | 5.6 |
| 22-Nov-06 | 3 | 1 | 3 | 4 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 2 | 3 | 2 | 3 | 3 | 3 | 2.7 | 4.2 |
| 23-Nov-06 | 4 | 3 | 4 | 8 | 4 | 4 | 6 | 5 | 4 | 10 | 6 | 6 | 5 | 7 | 4 | 4 | 13 | 10 | 8 | 4 | 3 | 11 | 3 | 5 | 5.8 | 12.7 |
| 24-Nov-06 | 3 | 3 | 4 | 3 | 4 | 4 | 2 | 3 | 3 | 3 | 3 | 2 | 3 | 1 | 2 | 2 | 5 | 5 | 6 | 5 | 4 | 5 | 5 | 13 | 3.9 | 13.0 |
| 25-Nov-06 | 6 | 4 | 3 | 3 | 4 | 3 | 4 | 5 | 3 | 2 | 5 | 4 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 5 | 7 | 6 | 5 | 5 | 3.9 | 6.9 |
| 26-Nov-06 | 5 | 4 | 4 | 4 | 10 | 9 | 6 | 6 | 7 | 6 | 6 | 8 | 13 | 11 | 12 | 12 | 10 | 10 | 11 | 7 | 6 | 4 | 5 | 2 | 7.4 | 13.0 |
| 27-Nov-06 | 4 | 3 | 3 | 2 | 2 | 3 | 3 | 4 | 5 | 7 | 4 | 5 | 4 | 5 | 4 | 5 | 8 | 6 | 5 | 7 | 7 | 4 | 2 | 5 | 4.5 | 8.4 |
| 28-Nov-06 | 5 | 4 | 4 | 4 | 2 | 3 | 4 | 5 | 6 | 13 | 18 | 11 | 9 | 9 | 6 | 8 | 9 | 10 | 8 | 12 | 8 | 7 | 6 | 8 | 7.5 | 18.3 |
| 29-Nov-06 | 4 | 5 | 3 | 3 | 21 | 18 | 13 | 16 | 13 | 12 | 6 | 7 | 9 | 13 | 11 | 23 | 20 | 16 | 27 | 16 | 9 | 7 | 8 | 8 | 12.0 | 27.1 |
| 30-Nov-06 | 5 | 8 | 5 | 7 | 6 | 10 | 10 | 13 | 14 | 7 | 5 | 4 | 5 | 5 | 5 | 4 | 4 | 5 | 5 | 4 | 5 | 4 | 5 | 5 | 6.4 | 13.8 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 7.7 | 7.4 | 6.2 | 5.8 | 6.2 | 6.3 | 6.8 | 8.2 | 8.4 | 8.6 | 9.4 | 9.6 | 8.8 | 7.8 | 7.5 | 9.0 | 8.1 | 8.8 | 10.8 | 8.5 | 7.7 | 7.4 | 8.1 | 8.2 | | |
| Hourly Max | 22.9 | 20.7 | 18.1 | 17.7 | 21.3 | 18.0 | 18.2 | 19.2 | 21.0 | 22.9 | 31.3 | 30.9 | 31.8 | 18.0 | 26.8 | 38.0 | 19.9 | 24.0 | 39.5 | 20.4 | 22.5 | 19.2 | 26.4 | 25.7 | | |

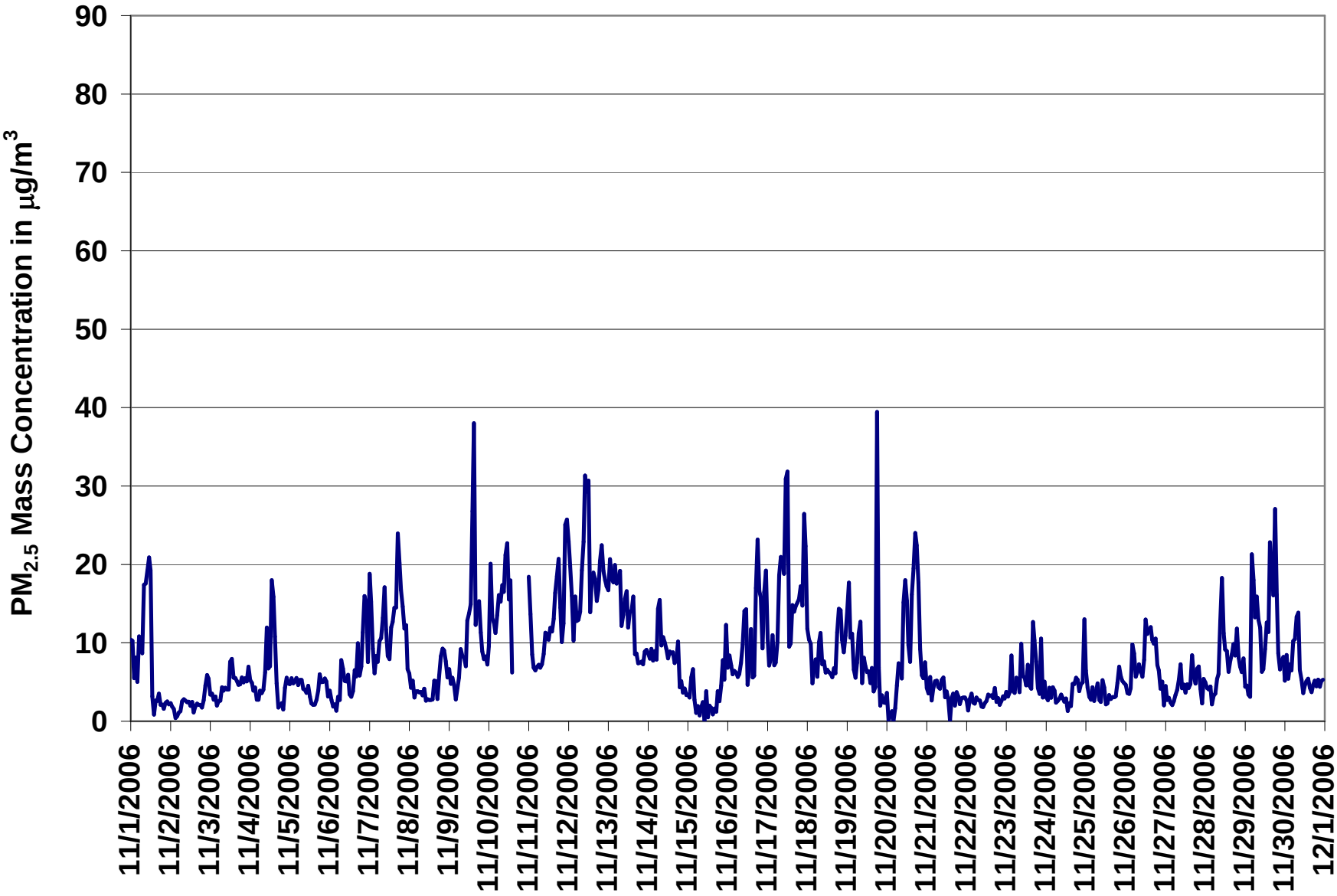
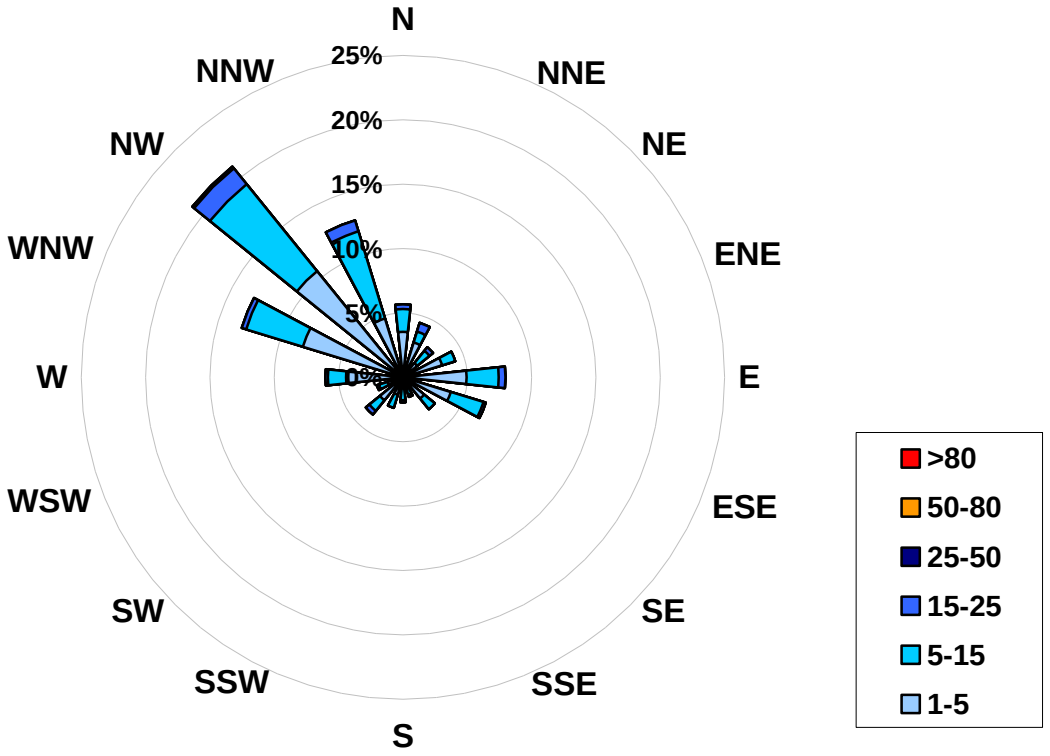



**Figure 16. PASZA - Henry Pirker Particulate Matter (less than 2.5 microns) Instantaneous (30 Second) Maximum Value Monthly Trend**

**1-hr Average Concentration Rose for Particulate Matter (less than 2.5 microns) (in micrograms per cubic meter) Located at the Henry Pirker Site for November 2006**




| Calms: | 0% |
|---|---|

| Frequency Distribution of $PM_{2.5}$ in $\mu g/m^3$ | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 1.0 | < | 5 | 460 |
| 5 | to | 15 | 216 |
| 15 | to | 25 | 34 |
| 25 | to | 50 | 1 |
| 50 | to | 80 | 0 |
| | > | 80 | 0 |
| Total Non-Zero Values | | | 711 |

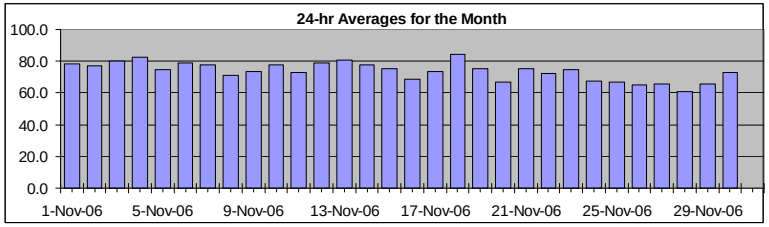
# PASZA - Henry Pirker - Relative Humidity Monthly Summary

## HOURLY AVERAGE TABLE

**Relative Humidity (RH)**

Station: Henry Pirker
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 91.1 | % | 21-Nov | 1:00 2:00 |
| Maximum 24-hr Value: | 84.1 | % | 18-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 720 hrs |
| Calibration Time: | 0 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 87.1 | 84.6 | 79.6 | 74.7 | 68.3 | 61.5 | 53.1 | 73.8 % | 74.7 % |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 84 | 83 | 82 | 81 | 81 | 81 | 82 | 83 | 84 | 71 | 69 | 66 | 61 | 66 | 70 | 75 | 77 | 80 | 82 | 84 | 85 | 85 | 85 | 84 | 78.4 | 85.2 |
| 2-Nov-06 | 83 | 84 | 85 | 85 | 84 | 81 | 81 | 81 | 80 | 79 | 75 | 72 | 71 | 69 | 70 | 71 | 72 | 74 | 75 | 75 | 75 | 76 | 77 | 76 | 77.2 | 85.5 |
| 3-Nov-06 | 76 | 77 | 80 | 83 | 84 | 84 | 84 | 85 | 84 | 82 | 79 | 74 | 72 | 72 | 74 | 74 | 78 | 81 | 82 | 83 | 84 | 84 | 85 | 85 | 80.3 | 85.0 |
| 4-Nov-06 | 85 | 85 | 84 | 84 | 82 | 83 | 84 | 85 | 85 | 84 | 81 | 81 | 80 | 78 | 77 | 79 | 81 | 83 | 85 | 86 | 85 | 84 | 82 | 80 | 82.5 | 85.6 |
| 5-Nov-06 | 79 | 79 | 82 | 80 | 79 | 79 | 79 | 81 | 80 | 78 | 74 | 68 | 67 | 66 | 65 | 66 | 69 | 71 | 71 | 73 | 76 | 77 | 78 | 78 | 74.8 | 81.8 |
| 6-Nov-06 | 76 | 75 | 78 | 80 | 80 | 80 | 79 | 79 | 80 | 78 | 77 | 76 | 75 | 75 | 74 | 75 | 77 | 80 | 81 | 82 | 83 | 84 | 84 | 85 | 79.0 | 84.9 |
| 7-Nov-06 | 84 | 83 | 83 | 84 | 84 | 84 | 84 | 84 | 84 | 77 | 70 | 68 | 66 | 65 | 64 | 66 | 71 | 78 | 78 | 79 | 80 | 84 | 82 | 79 | 77.5 | 84.2 |
| 8-Nov-06 | 77 | 75 | 74 | 71 | 70 | 70 | 70 | 71 | 71 | 66 | 67 | 66 | 66 | 67 | 67 | 69 | 69 | 70 | 71 | 72 | 73 | 75 | 78 | 78 | 71.0 | 78.1 |
| 9-Nov-06 | 77 | 75 | 76 | 75 | 73 | 72 | 73 | 73 | 73 | 72 | 73 | 71 | 69 | 70 | 69 | 70 | 74 | 76 | 78 | 78 | 76 | 75 | 75 | 74 | 73.6 | 77.9 |
| 10-Nov-06 | 74 | 74 | 73 | 72 | 72 | 73 | 73 | 74 | 74 | 74 | 75 | 77 | 78 | 78 | 78 | 80 | 84 | 85 | 85 | 84 | 84 | 84 | 83 | 81 | 77.9 | 84.8 |
| 11-Nov-06 | 80 | 78 | 76 | 75 | 76 | 79 | 78 | 76 | 75 | 73 | 68 | 67 | 64 | 58 | 61 | 61 | 70 | 74 | 77 | 75 | 74 | 77 | 79 | 81 | 73.0 | 80.6 |
| 12-Nov-06 | 79 | 79 | 79 | 80 | 80 | 79 | 81 | 81 | 80 | 79 | 76 | 77 | 77 | 76 | 77 | 77 | 77 | 80 | 79 | 80 | 82 | 82 | 81 | 80 | 79.1 | 82.0 |
| 13-Nov-06 | 80 | 79 | 77 | 78 | 80 | 81 | 82 | 83 | 84 | 84 | 84 | 84 | 82 | 81 | 81 | 81 | 81 | 81 | 81 | 80 | 80 | 80 | 80 | 79 | 81.0 | 84.5 |
| 14-Nov-06 | 79 | 78 | 78 | 79 | 81 | 81 | 81 | 81 | 80 | 79 | 77 | 75 | 75 | 75 | 74 | 74 | 75 | 76 | 79 | 82 | 81 | 79 | 76 | 77 | 77.9 | 81.5 |
| 15-Nov-06 | 78 | 77 | 76 | 70 | 70 | 71 | 71 | 70 | 72 | 71 | 68 | 71 | 73 | 68 | 67 | 74 | 80 | 82 | 81 | 83 | 83 | 85 | 83 | 81 | 75.2 | 85.4 |
| 16-Nov-06 | 81 | 76 | 72 | 70 | 70 | 70 | 70 | 70 | 72 | 69 | 61 | 60 | 52 | 50 | 56 | 58 | 64 | 69 | 73 | 75 | 76 | 76 | 79 | 80 | 68.8 | 80.9 |
| 17-Nov-06 | 80 | 77 | 77 | 77 | 77 | 77 | 77 | 78 | 80 | 71 | 58 | 60 | 62 | 60 | 63 | 63 | 71 | 75 | 78 | 81 | 82 | 81 | 81 | 79 | 73.6 | 81.7 |
| 18-Nov-06 | 83 | 87 | 90 | 91 | 91 | 90 | 86 | 83 | 82 | 82 | 81 | 79 | 79 | 81 | 77 | 78 | 82 | 86 | 86 | 86 | 85 | 83 | 85 | 85 | 84.1 | 90.9 |
| 19-Nov-06 | 86 | 85 | 86 | 87 | 87 | 82 | 84 | 86 | 80 | 74 | 70 | 69 | 68 | 68 | 66 | 62 | 65 | 70 | 76 | 75 | 71 | 78 | 76 | 63 | 75.5 | 86.8 |
| 20-Nov-06 | 68 | 62 | 59 | 64 | 64 | 66 | 73 | 68 | 70 | 69 | 67 | 53 | 52 | 54 | 58 | 58 | 67 | 77 | 78 | 76 | 78 | 80 | 74 | 75 | 67.0 | 79.6 |
| 21-Nov-06 | 87 | 91 | 87 | 76 | 75 | 73 | 71 | 73 | 75 | 78 | 77 | 75 | 72 | 71 | 68 | 68 | 68 | 71 | 76 | 76 | 76 | 77 | 76 | 75 | 75.5 | 91.1 |
| 22-Nov-06 | 75 | 75 | 74 | 74 | 73 | 71 | 71 | 71 | 72 | 72 | 71 | 70 | 68 | 66 | 65 | 70 | 72 | 73 | 74 | 74 | 74 | 75 | 75 | 76 | 72.1 | 75.6 |
| 23-Nov-06 | 75 | 75 | 75 | 75 | 76 | 76 | 74 | 74 | 74 | 73 | 73 | 74 | 73 | 73 | 73 | 73 | 74 | 76 | 77 | 77 | 76 | 74 | 74 | 74 | 74.5 | 77.4 |
| 24-Nov-06 | 73 | 73 | 73 | 72 | 71 | 71 | 71 | 71 | 70 | 69 | 68 | 66 | 64 | 63 | 62 | 62 | 63 | 64 | 66 | 66 | 65 | 67 | 67 | 68 | 67.8 | 73.4 |
| 25-Nov-06 | 69 | 71 | 69 | 67 | 69 | 69 | 70 | 70 | 70 | 69 | 67 | 64 | 62 | 62 | 60 | 62 | 64 | 66 | 67 | 67 | 70 | 69 | 69 | 68 | 67.1 | 70.5 |
| 26-Nov-06 | 68 | 66 | 66 | 66 | 65 | 65 | 65 | 64 | 64 | 63 | 63 | 62 | 62 | 63 | 63 | 64 | 65 | 65 | 66 | 67 | 67 | 67 | 69 | 68 | 65.2 | 68.6 |
| 27-Nov-06 | 68 | 68 | 68 | 68 | 68 | 67 | 68 | 67 | 67 | 66 | 63 | 60 | 57 | 58 | 59 | 63 | 67 | 67 | 67 | 68 | 67 | 66 | 66 | 66 | 65.4 | 68.3 |
| 28-Nov-06 | 66 | 66 | 66 | 65 | 64 | 64 | 63 | 63 | 64 | 62 | 57 | 55 | 51 | 50 | 51 | 53 | 59 | 62 | 64 | 63 | 63 | 64 | 63 | 61 | 60.8 | 66.3 |
| 29-Nov-06 | 61 | 61 | 61 | 61 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 63 | 64 | 67 | 69 | 70 | 71 | 72 | 73 | 76 | 77 | 76 | 65.8 | 76.8 |
| 30-Nov-06 | 77 | 76 | 75 | 74 | 75 | 76 | 77 | 78 | 80 | 77 | 68 | 66 | 68 | 69 | 70 | 74 | 76 | 75 | 70 | 69 | 69 | 69 | 70 | 73 | 73.0 | 80.3 |
| Hourly Avg | 77.0 | 76.3 | 76.0 | 75.5 | 75.4 | 75.3 | 75.5 | 75.5 | 75.6 | 73.4 | 70.7 | 69.0 | 67.7 | 67.1 | 67.5 | 69.0 | 72.1 | 74.6 | 75.7 | 76.1 | 76.5 | 77.1 | 76.9 | 76.2 | | |
| Hourly Max | 87.5 | 91.1 | 89.9 | 90.9 | 90.8 | 90.3 | 85.6 | 85.9 | 84.7 | 84.4 | 84.1 | 83.8 | 82.3 | 81.0 | 81.0 | 81.1 | 83.7 | 85.6 | 86.4 | 86.4 | 85.5 | 85.4 | 85.0 | 85.4 | | |

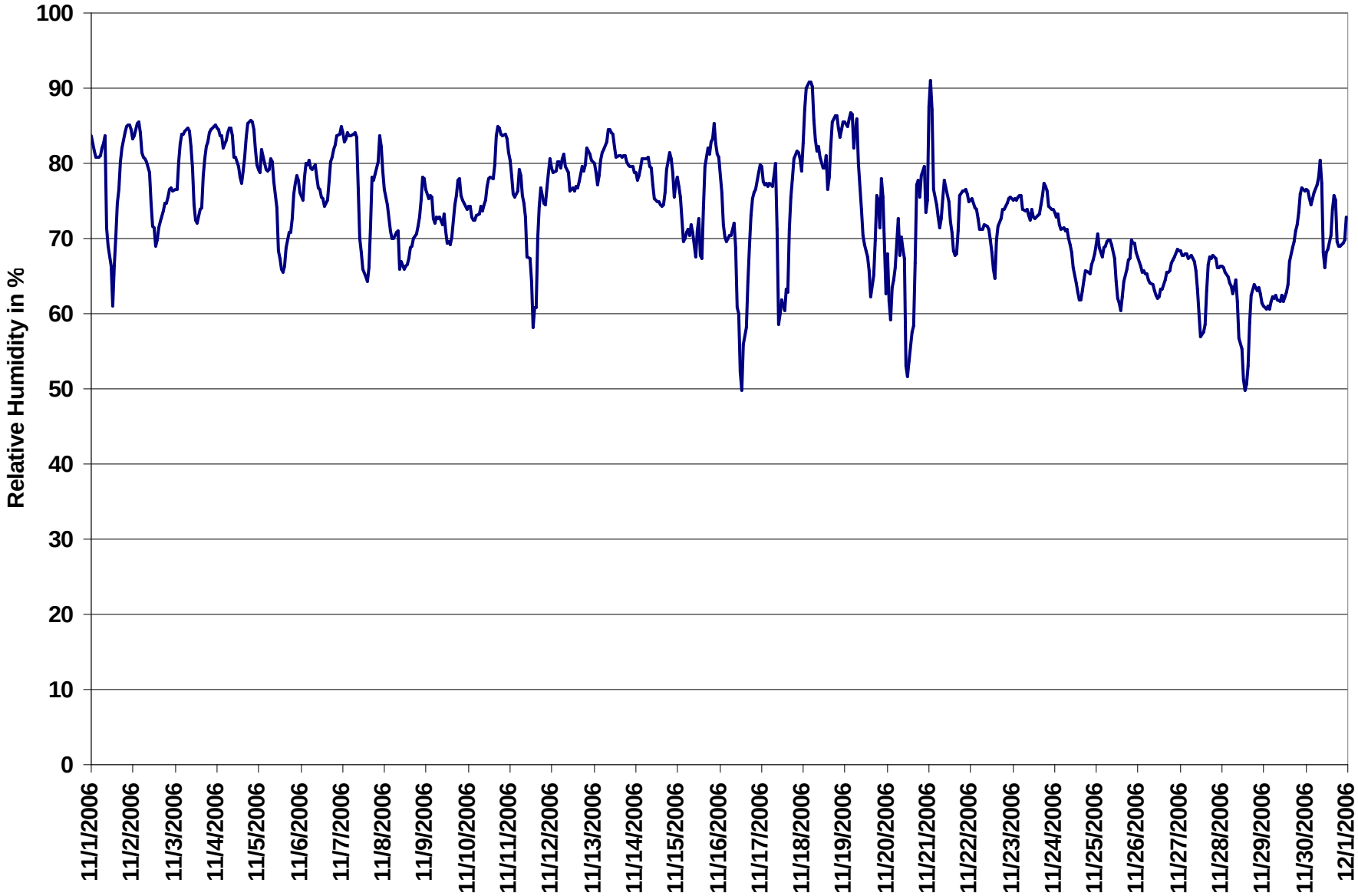



**Figure 17. PASZA - Henry Pirker Relative Humidity 1-hr Average Monthly Trend**

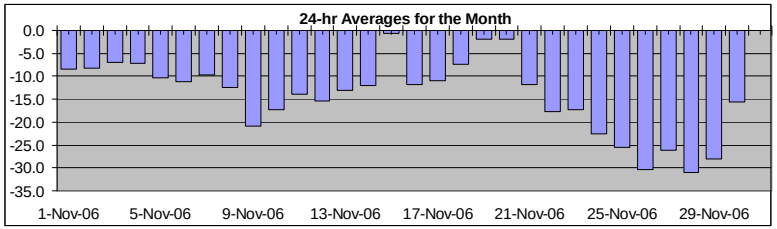
# PASZA - Henry Pirker - Temperature Monthly Summary

Station: Henry Pirker
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Ambient Temperature (T)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 3.9 | °C | 20-Nov | 12:00 13:00 |
| Maximum 24-hr Value: | -0.7 | °C | 15-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 720 hrs |
| Calibration Time: | 0 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 3.0 | -1.2 | -8.5 | -12.8 | -18.2 | -30.5 | -34.6 | -14.2 °C | -12.8 °C |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | -11 | -11 | -11 | -11 | -10 | -10 | -10 | -10 | -10 | -7 | -6 | -4 | -2 | -4 | -5 | -6 | -7 | -8 | -9 | -9 | -10 | -10 | -10 | -10 | -8.4 | -2.3 |
| 2-Nov-06 | -10 | -10 | -10 | -11 | -11 | -10 | -11 | -11 | -11 | -10 | -9 | -7 | -7 | -6 | -6 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -6 | -7 | -8.3 | -6.0 |
| 3-Nov-06 | -7 | -7 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -7 | -7 | -5 | -5 | -5 | -5 | -6 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -6.9 | -4.6 |
| 4-Nov-06 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -6 | -6 | -6 | -7 | -7 | -7 | -7 | -8 | -8 | -8 | -8 | -8 | -7.1 | -5.8 |
| 5-Nov-06 | -8 | -8 | -9 | -9 | -9 | -9 | -10 | -9 | -10 | -10 | -10 | -10 | -9 | -9 | -9 | -9 | -10 | -10 | -11 | -12 | -14 | -15 | -14 | -13 | -10.3 | -8.1 |
| 6-Nov-06 | -12 | -12 | -12 | -12 | -12 | -13 | -13 | -13 | -13 | -12 | -12 | -11 | -10 | -10 | -10 | -10 | -10 | -10 | -10 | -10 | -10 | -10 | -10 | -10 | -11.1 | -9.6 |
| 7-Nov-06 | -11 | -11 | -11 | -12 | -12 | -12 | -12 | -12 | -12 | -11 | -9 | -9 | -6 | -5 | -5 | -6 | -8 | -9 | -9 | -10 | -11 | -10 | -9 | -10 | -9.6 | -4.9 |
| 8-Nov-06 | -11 | -12 | -13 | -13 | -13 | -13 | -13 | -13 | -13 | -11 | -12 | -12 | -11 | -11 | -11 | -11 | -12 | -12 | -12 | -12 | -12 | -13 | -17 | -19 | -12.5 | -10.9 |
| 9-Nov-06 | -21 | -22 | -22 | -22 | -25 | -25 | -25 | -25 | -25 | -23 | -21 | -17 | -15 | -16 | -15 | -15 | -17 | -19 | -20 | -20 | -22 | -23 | -23 | -23 | -20.9 | -14.8 |
| 10-Nov-06 | -23 | -23 | -24 | -25 | -25 | -23 | -23 | -22 | -22 | -21 | -19 | -17 | -15 | -14 | -14 | -14 | -11 | -10 | -10 | -11 | -11 | -11 | -12 | -13 | -17.2 | -10.0 |
| 11-Nov-06 | -13 | -13 | -13 | -14 | -14 | -14 | -15 | -15 | -15 | -15 | -15 | -14 | -13 | -10 | -12 | -12 | -15 | -16 | -16 | -14 | -14 | -13 | -14 | -16 | -13.9 | -10.3 |
| 12-Nov-06 | -18 | -18 | -17 | -15 | -14 | -15 | -16 | -17 | -18 | -18 | -16 | -16 | -15 | -14 | -14 | -13 | -13 | -14 | -13 | -14 | -15 | -15 | -16 | -17 | -15.4 | -12.7 |
| 13-Nov-06 | -17 | -18 | -19 | -17 | -16 | -15 | -14 | -13 | -11 | -11 | -10 | -9 | -9 | -10 | -10 | -11 | -12 | -12 | -12 | -13 | -13 | -13 | -15 | -15 | -13.1 | -8.9 |
| 14-Nov-06 | -14 | -14 | -14 | -15 | -17 | -17 | -17 | -16 | -17 | -15 | -14 | -13 | -13 | -12 | -11 | -11 | -10 | -10 | -9 | -8 | -6 | -5 | -4 | -4 | -11.9 | -3.9 |
| 15-Nov-06 | -4 | -3 | -3 | -2 | -2 | -2 | -2 | -2 | -2 | 0 | 1 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 0 | -9 | -12 | -0.7 | 3.3 |
| 16-Nov-06 | -12 | -12 | -12 | -13 | -13 | -12 | -13 | -13 | -14 | -12 | -9 | -8 | -6 | -5 | -8 | -8 | -10 | -12 | -14 | -15 | -16 | -15 | -16 | -15 | -11.8 | -5.4 |
| 17-Nov-06 | -16 | -17 | -15 | -14 | -13 | -12 | -14 | -14 | -14 | -11 | -7 | -7 | -8 | -6 | -7 | -6 | -10 | -10 | -11 | -11 | -11 | -10 | -9 | -8 | -11.0 | -6.4 |
| 18-Nov-06 | -7 | -6 | -4 | -3 | -4 | -4 | -6 | -7 | -8 | -8 | -7 | -8 | -7 | -7 | -6 | -6 | -7 | -9 | -10 | -10 | -12 | -13 | -11 | -10 | -7.5 | -3.3 |
| 19-Nov-06 | -10 | -11 | -9 | -9 | -5 | -5 | -7 | -7 | -4 | -2 | -1 | 0 | 0 | 1 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 1 | 1 | -1.9 | 3.4 |
| 20-Nov-06 | 0 | 0 | -1 | -2 | -3 | -4 | -5 | -4 | -4 | -4 | -3 | 2 | 4 | 3 | 2 | 2 | 0 | -4 | -5 | -5 | -6 | -5 | -1 | -2 | -1.8 | 3.9 |
| 21-Nov-06 | -2 | -3 | -5 | -10 | -11 | -12 | -12 | -12 | -12 | -12 | -12 | -11 | -11 | -12 | -12 | -13 | -14 | -14 | -15 | -15 | -15 | -16 | -16 | -17 | -11.9 | -2.5 |
| 22-Nov-06 | -17 | -17 | -18 | -18 | -18 | -18 | -18 | -18 | -18 | -18 | -18 | -18 | -17 | -16 | -16 | -18 | -18 | -18 | -18 | -18 | -18 | -18 | -18 | -18 | -17.7 | -16.2 |
| 23-Nov-06 | -18 | -18 | -18 | -17 | -17 | -17 | -17 | -17 | -17 | -18 | -17 | -17 | -16 | -16 | -16 | -16 | -17 | -17 | -18 | -18 | -18 | -18 | -18 | -19 | -17.3 | -16.3 |
| 24-Nov-06 | -19 | -20 | -20 | -21 | -22 | -20 | -20 | -21 | -21 | -21 | -21 | -22 | -22 | -22 | -22 | -23 | -25 | -26 | -27 | -26 | -26 | -26 | -26 | -26 | -22.6 | -19.3 |
| 25-Nov-06 | -27 | -27 | -26 | -26 | -26 | -26 | -25 | -25 | -25 | -25 | -24 | -23 | -23 | -24 | -24 | -24 | -25 | -25 | -25 | -26 | -27 | -28 | -28 | -29 | -25.4 | -23.1 |
| 26-Nov-06 | -30 | -31 | -32 | -31 | -31 | -32 | -33 | -33 | -32 | -32 | -32 | -32 | -30 | -28 | -30 | -30 | -30 | -30 | -30 | -29 | -28 | -28 | -27 | -26 | -30.3 | -26.2 |
| 27-Nov-06 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -25 | -25 | -24 | -25 | -25 | -26 | -27 | -27 | -26 | -26 | -27 | -28 | -29 | -29 | -26.2 | -24.3 |
| 28-Nov-06 | -30 | -30 | -31 | -31 | -32 | -32 | -32 | -32 | -32 | -31 | -29 | -28 | -26 | -25 | -27 | -28 | -31 | -32 | -33 | -34 | -34 | -34 | -34 | -35 | -31.0 | -25.4 |
| 29-Nov-06 | -36 | -36 | -36 | -36 | -35 | -35 | -35 | -34 | -34 | -34 | -30 | -29 | -28 | -27 | -26 | -25 | -24 | -22 | -21 | -19 | -19 | -18 | -16 | -16 | -28.0 | -16.3 |
| 30-Nov-06 | -16 | -16 | -17 | -18 | -18 | -18 | -19 | -19 | -15 | -14 | -13 | -12 | -13 | -14 | -14 | -15 | -15 | -15 | -15 | -15 | -15 | -15 | -15 | -15 | -15.5 | -12.4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | -15.1 | -15.3 | -15.5 | -15.6 | -15.6 | -15.6 | -15.9 | -15.8 | -15.7 | -14.9 | -13.8 | -12.9 | -12.1 | -11.8 | -12.0 | -12.3 | -13.0 | -13.7 | -13.8 | -13.9 | -14.2 | -14.3 | -14.6 | -14.9 | | |
| Hourly Max | 0.4 | 0.5 | -0.5 | -1.6 | -1.6 | -1.5 | -1.9 | -1.7 | -1.5 | -0.4 | 1.2 | 2.4 | 3.9 | 3.3 | 3.3 | 3.1 | 3.1 | 2.6 | 2.5 | 3.4 | 3.2 | 2.0 | 1.1 | 1.1 | | |

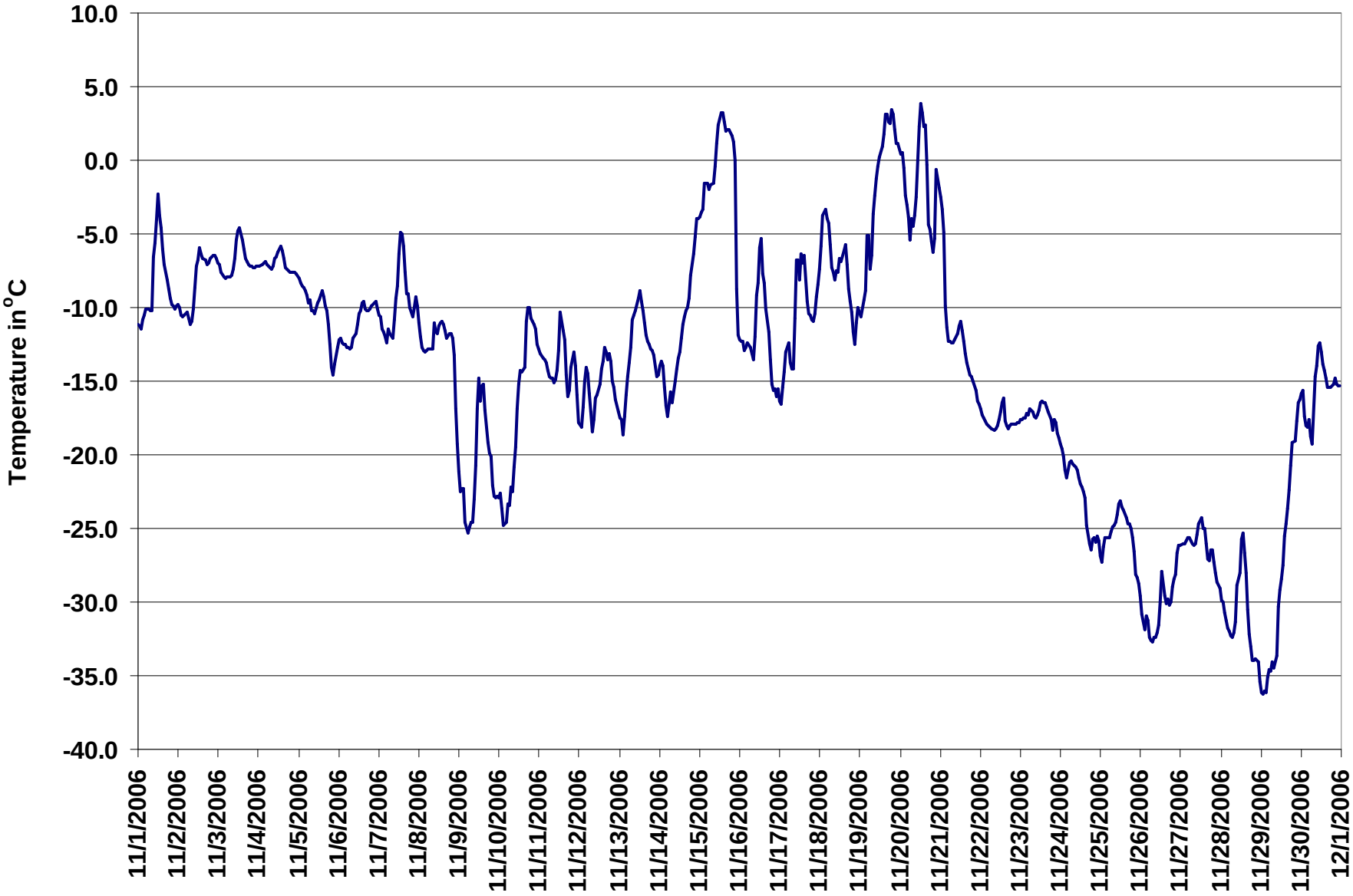



**Figure 18. PASZA - Henry Pirker Temperature 1-hr Average Monthly Trend**

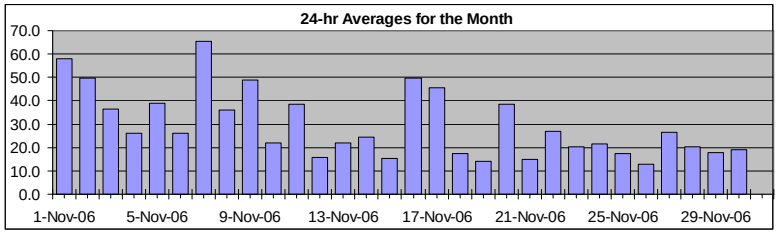
# PASZA - Henry Pirker - Solar Radiation Monthly Summary

## HOURLY AVERAGE TABLE

**Solar Radiation (SR)**

Station: Henry Pirker
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 336.6 | W/m² | 7-Nov | 12:00 13:00 |
| Maximum 24-hr Value: | 65.4 | W/m² | 7-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 720 hrs |
| Calibration Time: | 0 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 230.5 | 152.5 | 38.3 | 0.1 | 0.1 | 0.0 | 0.0 | 29.5 W/m² | 0.1 W/m² |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** — **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 48 | 124 | 178 | 218 | 320 | 260 | 152 | 61 | 27 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 58.0 | 320.3 |
| 2-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 79 | 179 | 262 | 190 | 188 | 148 | 82 | 33 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 49.6 | 262.4 |
| 3-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 57 | 118 | 188 | 165 | 149 | 110 | 60 | 17 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 36.6 | 188.3 |
| 4-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 25 | 69 | 87 | 133 | 121 | 102 | 65 | 16 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 26.1 | 133.4 |
| 5-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 56 | 81 | 195 | 166 | 173 | 145 | 77 | 22 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 38.9 | 194.9 |
| 6-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 53 | 62 | 96 | 109 | 102 | 114 | 58 | 18 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 26.1 | 113.8 |
| 7-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 119 | 185 | 249 | 337 | 294 | 226 | 115 | 26 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 65.4 | 336.6 |
| 8-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 151 | 116 | 113 | 131 | 138 | 104 | 69 | 32 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 36.2 | 150.7 |
| 9-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 66 | 120 | 224 | 231 | 210 | 188 | 98 | 24 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 49.0 | 231.4 |
| 10-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 42 | 81 | 97 | 99 | 87 | 66 | 36 | 9 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 22.1 | 99.3 |
| 11-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 39 | 114 | 120 | 165 | 223 | 145 | 95 | 12 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 38.5 | 222.7 |
| 12-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 24 | 50 | 71 | 61 | 62 | 60 | 35 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15.8 | 70.9 |
| 13-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 17 | 47 | 92 | 111 | 110 | 86 | 50 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22.1 | 111.4 |
| 14-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 43 | 105 | 104 | 99 | 93 | 80 | 46 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 24.5 | 105.2 |
| 15-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 17 | 40 | 55 | 86 | 79 | 60 | 27 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15.5 | 85.9 |
| 16-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 79 | 167 | 223 | 249 | 218 | 152 | 88 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 49.7 | 249.0 |
| 17-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 99 | 185 | 177 | 184 | 223 | 123 | 82 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 45.6 | 223.2 |
| 18-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 14 | 41 | 54 | 70 | 80 | 96 | 55 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17.5 | 96.2 |
| 19-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 10 | 38 | 43 | 39 | 54 | 54 | 86 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14.1 | 85.5 |
| 20-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 38 | 64 | 203 | 220 | 146 | 138 | 100 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38.4 | 219.9 |
| 21-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 11 | 36 | 68 | 84 | 70 | 50 | 32 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14.9 | 84.1 |
| 22-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 12 | 32 | 97 | 157 | 173 | 121 | 41 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26.8 | 173.2 |
| 23-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 17 | 39 | 67 | 99 | 103 | 81 | 68 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20.4 | 103.1 |
| 24-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 33 | 51 | 70 | 111 | 116 | 84 | 40 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21.4 | 115.5 |
| 25-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 45 | 85 | 90 | 77 | 67 | 32 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17.4 | 89.6 |
| 26-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 36 | 52 | 73 | 69 | 31 | 21 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12.7 | 72.8 |
| 27-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 25 | 89 | 124 | 139 | 112 | 105 | 34 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26.5 | 139.0 |
| 28-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 17 | 55 | 83 | 97 | 95 | 79 | 46 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20.1 | 96.6 |
| 29-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 25 | 58 | 78 | 86 | 85 | 62 | 24 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17.7 | 86.3 |
| 30-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 25 | 70 | 96 | 99 | 76 | 51 | 31 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18.9 | 99.4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 7.1 | 44.9 | 85.2 | 123.0 | 140.1 | 132.8 | 102.6 | 58.4 | 13.3 | 0.5 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | | |
| Hourly Max | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.2 | 0.3 | 0.6 | 47.6 | 150.7 | 185.3 | 262.4 | 336.6 | 293.9 | 226.3 | 115.5 | 33.4 | 2.8 | 0.8 | 0.2 | 0.3 | 0.3 | 0.2 | 0.3 | | |

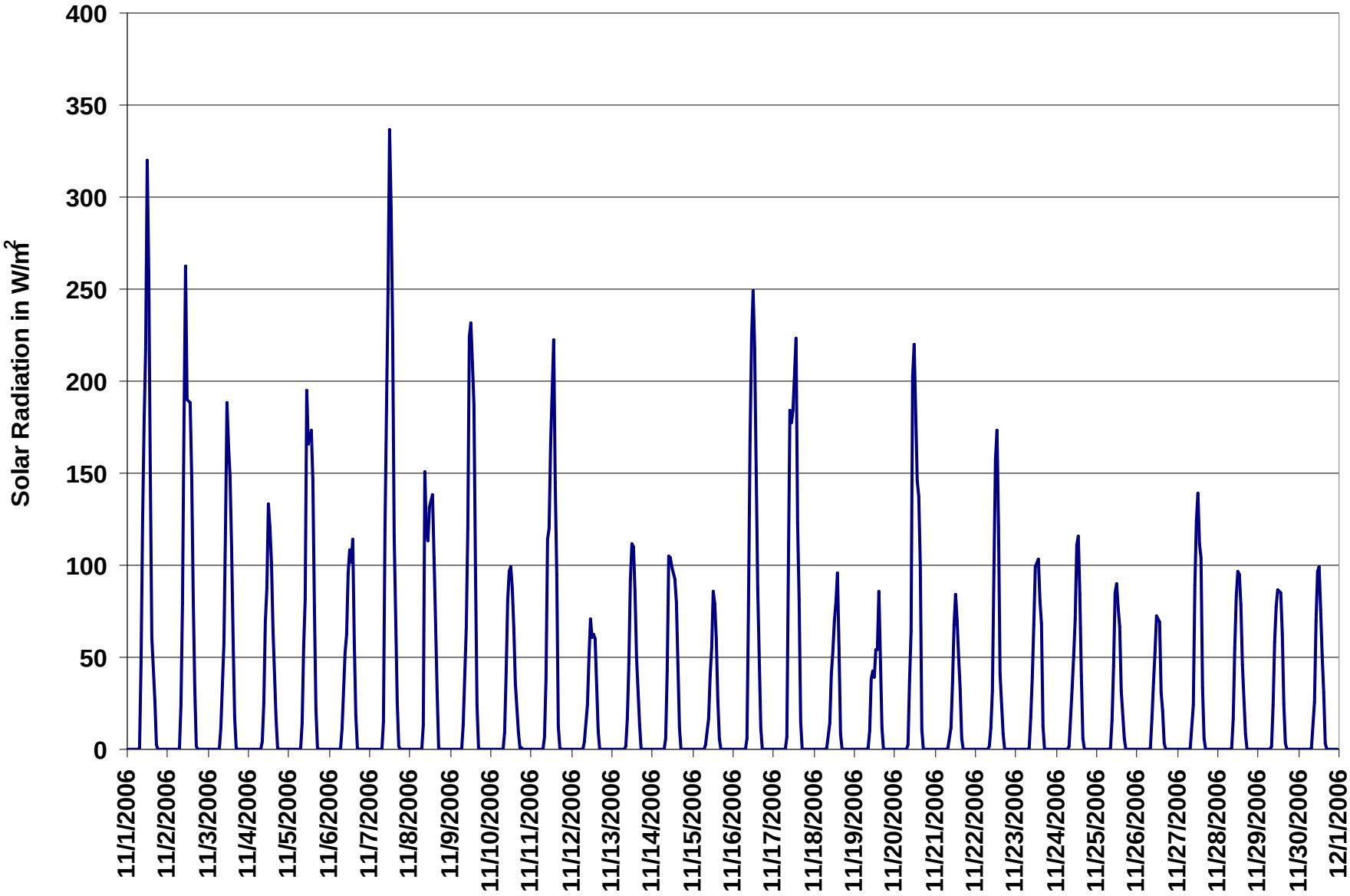



**Figure 19. PASZA - Henry Pirker Solar Radiation 1-hr Average Monthly Trend**

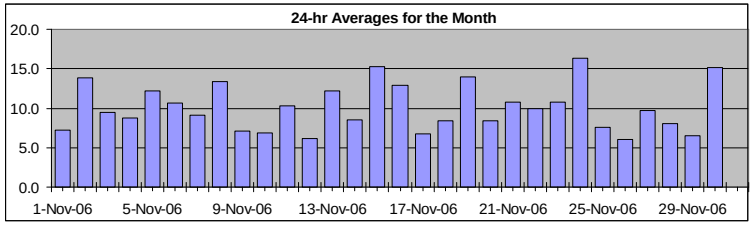
# PASZA - Henry Pirker - Scalar Wind Speed Monthly Summary

Station: Henry Pirker
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Wind Speed (WSs)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 35.3 | km/hr | 15-Nov | 22:00 23:00 |
| Maximum 24-hr Value: | 16.3 | km/hr | 24-Nov | |

| | | | |
|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | Operational Time: 719 hrs |
| Calibration Time: | 0 hrs | | AMD Operational Uptime: 99.9% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | AverageS |
|---|---|---|---|---|---|---|---|---|
| | 26.2 | 19.8 | 11.9 | 8.8 | 6.6 | 5.2 | 4.0 | 10.1 km/hr |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hr Scalar Average | Daily Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 5 | 6 | 6 | 7 | 6 | 5 | 6 | 5 | 4 | 5 | 6 | 6 | 7 | 11 | 10 | 10 | 9 | 9 | 8 | 7 | 6 | 8 | 10 | 12 | 7.2 | 12.4 |
| 2-Nov-06 | 14 | 13 | 11 | 11 | 12 | 15 | 16 | 16 | 16 | 17 | 18 | 16 | 15 | 15 | 11 | 10 | 11 | 15 | 13 | 14 | 13 | 14 | 14 | 14 | 13.9 | 17.7 |
| 3-Nov-06 | 14 | 13 | 13 | 12 | 12 | 11 | 10 | 10 | 10 | 10 | 11 | 9 | 7 | 7 | 7 | 8 | 8 | 9 | 9 | 8 | 8 | 9 | 7 | 6 | 9.4 | 13.7 |
| 4-Nov-06 | 6 | 7 | 7 | 6 | 6 | 6 | 6 | 7 | 8 | 9 | 10 | 10 | 11 | 9 | 11 | 12 | 12 | 11 | 11 | 10 | 10 | 10 | 10 | 9 | 8.8 | 12.4 |
| 5-Nov-06 | 10 | 11 | 12 | 14 | 12 | 11 | 11 | 12 | 15 | 17 | 18 | 17 | 18 | 14 | 15 | 14 | 13 | 10 | 10 | 10 | 9 | 7 | 7 | 10 | 12.2 | 18.0 |
| 6-Nov-06 | 7 | 9 | 11 | 11 | 12 | 12 | 13 | 12 | 12 | 13 | 15 | 16 | 12 | 13 | 13 | 8 | 8 | 9 | 8 | 7 | 6 | 10 | 11 | 8 | 10.7 | 16.1 |
| 7-Nov-06 | 10 | 8 | 6 | 5 | 6 | 5 | 6 | 6 | 6 | 6 | 8 | 8 | 9 | 7 | 9 | 9 | 7 | 5 | 11 | 9 | 13 | 17 | 20 | 20 | 9.1 | 20.0 |
| 8-Nov-06 | 20 | 22 | 22 | 20 | 19 | 16 | 16 | 15 | 15 | 15 | 16 | 15 | 14 | 15 | 12 | 12 | 10 | 7 | 6 | 6 | 7 | 5 | 6 | 7 | 13.3 | 22.5 |
| 9-Nov-06 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 8 | 6 | 6 | 6 | 9 | 8 | 8 | 7 | 7 | 6 | 7 | 7 | 7 | 8 | 6 | 7.1 | 9.3 |
| 10-Nov-06 | 6 | 6 | 6 | 6 | 6 | 5 | 6 | 6 | 6 | 5 | 5 | 5 | 6 | 5 | 6 | 5 | 7 | 8 | 9 | 8 | 8 | 9 | 12 | 14 | 6.9 | 14.3 |
| 11-Nov-06 | 16 | 15 | 16 | 14 | 14 | 15 | 14 | 14 | 12 | 11 | 11 | 12 | 10 | 7 | 8 | 7 | 7 | 5 | 6 | 7 | 9 | 7 | 6 | 6 | 10.3 | 15.8 |
| 12-Nov-06 | 6 | 7 | 8 | 6 | 9 | 6 | 5 | 5 | 5 | 5 | 6 | 6 | 8 | 7 | 7 | 6 | 6 | 6 | 7 | 6 | 6 | 5 | 4 | 5 | 6.2 | 8.6 |
| 13-Nov-06 | 5 | 4 | 6 | 6 | 6 | 6 | 5 | 7 | 10 | 11 | 13 | 11 | 11 | 14 | 19 | 21 | 21 | 22 | 21 | 19 | 18 | 16 | 11 | 9 | 12.2 | 21.8 |
| 14-Nov-06 | 7 | 10 | 10 | 5 | 6 | 6 | 7 | 9 | 5 | 10 | 9 | 10 | 10 | 8 | 8 | 9 | 8 | 6 | 7 | 10 | 10 | 11 | 12 | 11 | 8.5 | 12.4 |
| 15-Nov-06 | 12 | 11 | 11 | 12 | 13 | 14 | 15 | 15 | 17 | 19 | 17 | 16 | 14 | 13 | 13 | 14 | 13 | 12 | 13 | 9 | 7 | 15 | 35 | 35 | 15.2 | 35.3 |
| 16-Nov-06 | 31 | 31 | 26 | 24 | 21 | 17 | 15 | 15 | 15 | 12 | 8 | 8 | 7 | 6 | 9 | 11 | 9 | 7 | 7 | 9 | 7 | 6 | 5 | 6 | 12.9 | 31.0 |
| 17-Nov-06 | 6 | 7 | 9 | 8 | 7 | 8 | 7 | 6 | 6 | 5 | 7 | 6 | 10 | 7 | 6 | 6 | 7 | 8 | 7 | 4 | 6 | 7 | 6 | 6 | 6.8 | 10.3 |
| 18-Nov-06 | 6 | 5 | 5 | 5 | 6 | 10 | 13 | 13 | 10 | 11 | 12 | 13 | 12 | 13 | 11 | 9 | 8 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 8.5 | 13.1 |
| 19-Nov-06 | 6 | 6 | 5 | 6 | 11 | 8 | 6 | 6 | 8 | 11 | 15 | 15 | 13 | 15 | 14 | 16 | 15 | 12 | 22 | 28 | 27 | 26 | 16 | 30 | 14.0 | 29.9 |
| 20-Nov-06 | 22 | 21 | 13 | 8 | 6 | 7 | 7 | 7 | 6 | 6 | M | 5 | 8 | 5 | 6 | 6 | 6 | 6 | 7 | 6 | 7 | 7 | 10 | 11 | 8.4 | 22.1 |
| 21-Nov-06 | 10 | 7 | 12 | 16 | 15 | 13 | 11 | 9 | 5 | 7 | 10 | 10 | 11 | 12 | 11 | 11 | 11 | 12 | 10 | 10 | 10 | 12 | 12 | 12 | 10.8 | 16.0 |
| 22-Nov-06 | 10 | 10 | 10 | 10 | 10 | 11 | 10 | 11 | 10 | 10 | 10 | 11 | 11 | 11 | 10 | 10 | 10 | 10 | 10 | 11 | 9 | 9 | 8 | 6 | 9.9 | 11.4 |
| 23-Nov-06 | 7 | 8 | 10 | 11 | 9 | 11 | 9 | 8 | 8 | 12 | 11 | 10 | 10 | 11 | 12 | 11 | 9 | 8 | 8 | 9 | 12 | 18 | 18 | 18 | 10.8 | 18.0 |
| 24-Nov-06 | 17 | 17 | 18 | 16 | 15 | 17 | 19 | 19 | 18 | 20 | 20 | 21 | 23 | 24 | 21 | 19 | 15 | 13 | 11 | 12 | 11 | 10 | 8 | 7 | 16.3 | 23.6 |
| 25-Nov-06 | 6 | 5 | 8 | 10 | 7 | 7 | 7 | 7 | 8 | 9 | 8 | 9 | 8 | 9 | 9 | 8 | 8 | 7 | 8 | 7 | 5 | 7 | 8 | 5 | 7.5 | 9.8 |
| 26-Nov-06 | 5 | 7 | 7 | 6 | 6 | 6 | 7 | 6 | 6 | 6 | 7 | 7 | 6 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 9 | 10 | 6.1 | 10.0 |
| 27-Nov-06 | 11 | 10 | 10 | 10 | 10 | 10 | 10 | 9 | 10 | 10 | 11 | 11 | 10 | 9 | 11 | 10 | 8 | 8 | 7 | 9 | 10 | 11 | 10 | 8 | 9.8 | 11.5 |
| 28-Nov-06 | 7 | 7 | 7 | 7 | 10 | 10 | 13 | 9 | 8 | 8 | 8 | 8 | 9 | 8 | 9 | 7 | 7 | 9 | 7 | 7 | 7 | 7 | 6 | 7 | 8.1 | 13.4 |
| 29-Nov-06 | 6 | 7 | 6 | 7 | 5 | 5 | 5 | 5 | 6 | 7 | 8 | 7 | 6 | 7 | 6 | 7 | 7 | 8 | 6 | 7 | 6 | 6 | 6 | 8 | 6.5 | 8.4 |
| 30-Nov-06 | 10 | 9 | 8 | 10 | 8 | 6 | 6 | 8 | 12 | 15 | 22 | 23 | 22 | 19 | 19 | 21 | 23 | 22 | 24 | 18 | 18 | 17 | 14 | 10 | 15.2 | 23.5 |
| 1-hr Average | 10.2 | 10.2 | 10.3 | 10.0 | 9.8 | 9.5 | 9.5 | 9.4 | 9.5 | 10.4 | 11.2 | 11.0 | 10.8 | 10.5 | 10.5 | 10.4 | 9.7 | 9.3 | 9.6 | 9.5 | 9.5 | 10.2 | 10.5 | 10.8 | | |
| Hourly Max | 30.7 | 31.0 | 26.0 | 24.2 | 21.1 | 17.4 | 18.7 | 19.2 | 17.7 | 20.3 | 21.6 | 23.5 | 23.0 | 23.6 | 21.2 | 21.2 | 22.7 | 21.8 | 23.5 | 27.7 | 26.7 | 26.2 | 35.3 | 34.7 | | |

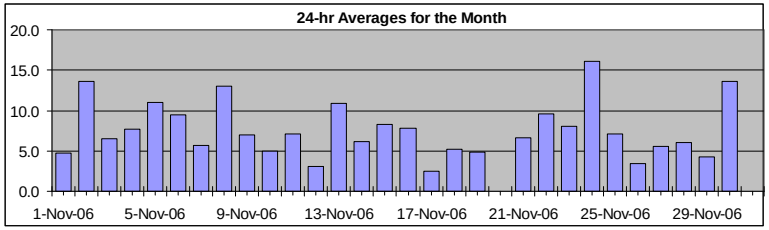
# PASZA - Henry Pirker - Vector Wind Speed Monthly Summary

Station: Henry Pirker
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Wind Speed (WSv)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 35.2 | km/hr | 15-Nov | 22:00 23:00 |
| Maximum 24-hr Value: | 16.1 | km/hr | 24-Nov | |

| | | | |
|---|---|---|---|
| Calm Time: | 4 hrs | **1%** calms | |
| Calibration Time: | 0 hrs | | |
| Operational Time: | 715 hrs | | |
| AMD Operational Uptime: | 99.9% | | |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | AverageV |
|---|---|---|---|---|---|---|---|---|
| | 25.9 | 19.4 | 11.7 | 8.5 | 5.9 | 2.8 | 1.5 | 6.6 km/hr |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** — **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hr Vector Average | Daily Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 1 | 4 | 5 | 7 | 5 | 1 | 3 | 3 | 3 | 2 | 4 | 5 | 2 | 10 | 10 | 10 | 9 | 9 | 8 | 6 | 6 | 8 | 10 | 12 | 4.7 | 12.4 |
| 2-Nov-06 | 14 | 13 | 11 | 11 | 12 | 15 | 16 | 16 | 16 | 17 | 18 | 16 | 15 | 15 | 11 | 10 | 11 | 15 | 13 | 14 | 13 | 14 | 14 | 14 | 13.6 | 17.5 |
| 3-Nov-06 | 14 | 13 | 13 | 12 | 12 | 11 | 10 | 9 | 10 | 10 | 11 | 8 | 6 | 6 | 6 | 8 | 8 | 8 | 9 | 8 | 8 | 8 | 7 | 6 | 6.5 | 13.6 |
| 4-Nov-06 | 6 | 6 | 6 | 4 | 5 | 6 | 5 | 6 | 8 | 9 | 10 | 10 | 10 | 8 | 10 | 12 | 12 | 11 | 11 | 10 | 10 | 10 | 10 | 9 | 7.7 | 12.3 |
| 5-Nov-06 | 10 | 10 | 12 | 14 | 12 | 11 | 10 | 12 | 15 | 17 | 18 | 17 | 18 | 13 | 14 | 14 | 13 | 9 | 9 | 10 | 8 | 6 | 6 | 9 | 11.0 | 17.9 |
| 6-Nov-06 | 7 | 9 | 10 | 11 | 12 | 12 | 12 | 12 | 12 | 13 | 15 | 16 | 12 | 13 | 13 | 8 | 7 | 8 | 8 | 7 | 2 | 8 | 8 | 4 | 9.5 | 15.9 |
| 7-Nov-06 | 8 | 6 | 2 | 5 | 3 | 4 | 3 | 4 | 3 | 4 | 7 | 8 | 9 | 7 | 9 | 8 | calm | 1 | 11 | 7 | 13 | 17 | 20 | 20 | 5.6 | 19.9 |
| 8-Nov-06 | 20 | 22 | 22 | 20 | 19 | 16 | 16 | 15 | 15 | 15 | 16 | 15 | 14 | 15 | 12 | 12 | 10 | 7 | 3 | 5 | 7 | 2 | 5 | 7 | 13.0 | 22.4 |
| 9-Nov-06 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 6 | 5 | 9 | 8 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 6.9 | 9.2 |
| 10-Nov-06 | 6 | 5 | 6 | 6 | 6 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 6 | 8 | 8 | 7 | 6 | 9 | 12 | 14 | 4.9 | 14.3 |
| 11-Nov-06 | 16 | 15 | 16 | 14 | 14 | 15 | 14 | 14 | 12 | 11 | 11 | 11 | 10 | 6 | 8 | 7 | 6 | 4 | 6 | 6 | 8 | 5 | 6 | 4 | 7.1 | 15.7 |
| 12-Nov-06 | 4 | 6 | 7 | 5 | 7 | 4 | 5 | 4 | 2 | calm | 3 | 5 | 7 | 7 | 6 | 4 | 3 | 3 | 6 | 3 | 5 | 2 | 3 | 4 | 3.1 | 7.4 |
| 13-Nov-06 | 5 | 2 | 6 | 5 | 6 | 5 | 5 | 7 | 10 | 11 | 12 | 11 | 11 | 14 | 18 | 21 | 21 | 22 | 21 | 19 | 17 | 16 | 11 | 9 | 10.9 | 21.7 |
| 14-Nov-06 | 7 | 10 | 10 | 4 | 5 | 5 | 7 | 9 | 4 | 9 | 9 | 10 | 9 | 7 | 8 | 8 | 7 | 6 | 7 | 10 | 10 | 10 | 12 | 11 | 6.2 | 12.3 |
| 15-Nov-06 | 12 | 11 | 11 | 12 | 13 | 14 | 14 | 15 | 17 | 19 | 17 | 15 | 14 | 13 | 12 | 14 | 13 | 12 | 13 | 9 | 6 | 13 | 35 | 34 | 8.3 | 35.2 |
| 16-Nov-06 | 31 | 31 | 26 | 24 | 21 | 17 | 15 | 14 | 15 | 11 | 8 | 8 | 6 | 4 | 8 | 11 | 9 | 6 | 5 | 9 | 7 | 4 | 1 | 1 | 7.8 | 31.0 |
| 17-Nov-06 | 4 | 3 | 7 | 2 | 4 | 7 | 6 | 4 | 3 | 3 | 5 | 2 | 10 | 6 | 5 | 3 | 5 | 7 | 7 | 3 | 3 | 2 | calm | 4 | 2.5 | 9.7 |
| 18-Nov-06 | 4 | 2 | calm | 4 | 5 | 10 | 12 | 13 | 9 | 11 | 12 | 13 | 12 | 13 | 11 | 8 | 6 | 6 | 2 | 2 | 4 | 4 | 5 | 3 | 5.2 | 13.0 |
| 19-Nov-06 | 3 | 4 | 4 | 3 | 10 | 5 | 2 | 4 | 6 | 11 | 15 | 15 | 13 | 15 | 14 | 16 | 15 | 12 | 13 | 28 | 27 | 26 | 16 | 30 | 4.9 | 29.8 |
| 20-Nov-06 | 22 | 21 | 13 | 6 | 5 | 3 | 3 | 4 | 5 | 3 | M | 3 | 7 | 3 | 4 | 2 | 1 | 2 | 5 | 4 | 6 | 6 | 6 | 10 | 0.0 | 21.9 |
| 21-Nov-06 | 9 | 4 | 11 | 16 | 15 | 12 | 11 | 8 | 2 | 6 | 10 | 10 | 11 | 10 | 10 | 10 | 10 | 11 | 10 | 10 | 10 | 12 | 11 | 11 | 6.6 | 15.8 |
| 22-Nov-06 | 10 | 10 | 10 | 10 | 9 | 10 | 10 | 11 | 10 | 10 | 10 | 11 | 11 | 11 | 10 | 10 | 10 | 10 | 9 | 11 | 9 | 9 | 8 | 6 | 9.6 | 11.2 |
| 23-Nov-06 | 7 | 8 | 10 | 11 | 8 | 11 | 9 | 7 | 7 | 12 | 11 | 10 | 10 | 11 | 12 | 11 | 9 | 8 | 8 | 9 | 12 | 18 | 18 | 18 | 8.1 | 18.0 |
| 24-Nov-06 | 17 | 17 | 18 | 16 | 15 | 17 | 19 | 19 | 18 | 20 | 20 | 21 | 23 | 24 | 21 | 19 | 15 | 13 | 11 | 12 | 11 | 10 | 7 | 7 | 16.1 | 23.6 |
| 25-Nov-06 | 6 | 5 | 7 | 10 | 7 | 7 | 7 | 7 | 8 | 9 | 8 | 9 | 7 | 9 | 9 | 8 | 8 | 7 | 7 | 7 | 4 | 7 | 8 | 5 | 7.1 | 9.8 |
| 26-Nov-06 | 5 | 6 | 7 | 6 | 6 | 5 | 7 | 6 | 6 | 6 | 7 | 7 | 6 | 4 | 4 | 4 | 3 | 4 | 4 | 4 | 8 | 8 | 7 | 10 | 3.5 | 9.8 |
| 27-Nov-06 | 11 | 9 | 10 | 10 | 9 | 10 | 10 | 9 | 9 | 9 | 11 | 10 | 10 | 9 | 10 | 10 | 8 | 8 | 7 | 9 | 10 | 11 | 10 | 8 | 5.5 | 11.4 |
| 28-Nov-06 | 7 | 7 | 7 | 7 | 10 | 10 | 13 | 9 | 8 | 8 | 8 | 8 | 9 | 8 | 8 | 7 | 6 | 9 | 6 | 6 | 7 | 6 | 5 | 7 | 6.1 | 13.1 |
| 29-Nov-06 | 6 | 7 | 5 | 6 | 4 | 4 | 1 | 1 | 6 | 7 | 7 | 7 | 6 | 7 | 5 | 6 | 6 | 7 | 3 | 5 | 5 | 5 | 4 | 8 | 4.3 | 8.2 |
| 30-Nov-06 | 10 | 9 | 7 | 8 | 6 | 3 | 5 | 8 | 12 | 15 | 22 | 23 | 22 | 19 | 19 | 21 | 23 | 22 | 23 | 18 | 18 | 17 | 13 | 10 | 13.6 | 23.5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-hr Vector | 3.3 | 3.3 | 4.0 | 3.3 | 3.1 | 2.4 | 3.0 | 2.8 | 3.5 | 4.4 | 4.1 | 4.0 | 4.2 | 4.6 | 4.9 | 5.2 | 5.2 | 5.8 | 4.7 | 3.8 | 4.1 | 5.3 | 4.8 | 3.5 | | |
| Hourly Max | 30.6 | 31.0 | 25.9 | 24.2 | 21.0 | 17.2 | 18.7 | 19.2 | 17.7 | 20.3 | 21.5 | 23.4 | 22.9 | 23.6 | 21.2 | 21.2 | 22.7 | 21.7 | 23.5 | 27.6 | 26.6 | 25.7 | 35.2 | 34.3 | | |

# PASZA - Henry Pirker - Wind Direction Monthly Summary

Station: Henry Pirker
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Wind Direction (WD)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Summary**

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | | | | | | | | | | | | | | | | | | | | | | | | | |
| Calibration Time: | 0 hrs | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operational Time: | 719 hrs | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AMD Operational Uptime: | 99.9% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | | | | | | | | | | | | | | | | | | | |
| | 356.8 | 340.9 | 310.9 | 254.5 | 89.9 | 24.8 | 4.9 | 340 deg | | | | | | | | | | | | | | | | | | | |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | WD Sector |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 91 | 348 | 318 | 324 | 5 | 349 | 351 | 84 | 130 | 80 | 22 | 185 | 138 | 94 | 106 | 110 | 94 | 90 | 80 | 82 | 77 | 75 | 91 | 99 | 79 | E |
| 2-Nov-06 | 100 | 108 | 98 | 84 | 88 | 101 | 98 | 97 | 102 | 101 | 105 | 108 | 100 | 98 | 73 | 70 | 69 | 73 | 76 | 85 | 96 | 90 | 94 | 98 | 93 | E |
| 3-Nov-06 | 101 | 102 | 101 | 94 | 90 | 92 | 89 | 88 | 89 | 91 | 98 | 100 | 82 | 35 | 9 | 352 | 339 | 347 | 357 | 359 | 3 | 2 | 354 | 8 | 62 | ENE |
| 4-Nov-06 | 336 | 342 | 12 | 32 | 83 | 74 | 80 | 78 | 79 | 81 | 72 | 72 | 71 | 65 | 63 | 76 | 75 | 69 | 64 | 62 | 48 | 29 | 18 | 5 | 56 | ENE |
| 5-Nov-06 | 342 | 327 | 326 | 326 | 330 | 317 | 309 | 310 | 317 | 329 | 330 | 323 | 307 | 302 | 303 | 308 | 310 | 329 | 325 | 334 | 339 | 360 | 48 | 99 | 324 | NW |
| 6-Nov-06 | 69 | 82 | 75 | 80 | 73 | 74 | 83 | 78 | 79 | 72 | 80 | 81 | 73 | 71 | 78 | 78 | 64 | 60 | 87 | 97 | 126 | 4 | 329 | 17 | 71 | ENE |
| 7-Nov-06 | 287 | 181 | 195 | 157 | 346 | 45 | 53 | 118 | 124 | 296 | 306 | 305 | 295 | 305 | 335 | 315 | 2 | 43 | 346 | 0 | 339 | 334 | 320 | 321 | 329 | NNW |
| 8-Nov-06 | 312 | 315 | 312 | 315 | 309 | 305 | 311 | 312 | 311 | 308 | 308 | 318 | 313 | 311 | 316 | 322 | 318 | 317 | 257 | 332 | 343 | 26 | 345 | 319 | 314 | NW |
| 9-Nov-06 | 316 | 330 | 348 | 336 | 305 | 330 | 337 | 327 | 332 | 321 | 306 | 333 | 315 | 333 | 329 | 336 | 349 | 318 | 343 | 345 | 335 | 334 | 336 | 333 | 331 | NNW |
| 10-Nov-06 | 334 | 358 | 332 | 313 | 326 | 315 | 314 | 336 | 320 | 305 | 285 | 307 | 283 | 225 | 274 | 316 | 78 | 76 | 54 | 33 | 331 | 320 | 316 | 321 | 329 | NNW |
| 11-Nov-06 | 324 | 322 | 306 | 298 | 296 | 304 | 302 | 305 | 311 | 323 | 311 | 298 | 312 | 261 | 310 | 314 | 48 | 95 | 81 | 98 | 98 | 60 | 31 | 51 | 320 | NW |
| 12-Nov-06 | 357 | 341 | 306 | 54 | 249 | 282 | 169 | 174 | 305 | 221 | 248 | 320 | 319 | 339 | 343 | 19 | 301 | 11 | 341 | 359 | 319 | 53 | 148 | 177 | 322 | NW |
| 13-Nov-06 | 175 | 274 | 334 | 308 | 319 | 328 | 311 | 343 | 26 | 20 | 3 | 359 | 335 | 316 | 319 | 320 | 325 | 328 | 329 | 325 | 309 | 307 | 299 | 300 | 327 | NNW |
| 14-Nov-06 | 279 | 264 | 264 | 176 | 165 | 149 | 117 | 116 | 104 | 104 | 120 | 116 | 117 | 106 | 122 | 112 | 124 | 129 | 122 | 130 | 133 | 134 | 136 | 122 | 131 | SE |
| 15-Nov-06 | 127 | 128 | 152 | 135 | 123 | 117 | 113 | 119 | 118 | 122 | 124 | 126 | 115 | 130 | 114 | 93 | 89 | 85 | 101 | 93 | 62 | 345 | 323 | 315 | 104 | ESE |
| 16-Nov-06 | 308 | 308 | 305 | 295 | 304 | 297 | 278 | 276 | 263 | 254 | 236 | 207 | 213 | 327 | 90 | 96 | 95 | 66 | 354 | 342 | 342 | 16 | 185 | 81 | 299 | WNW |
| 17-Nov-06 | 27 | 319 | 347 | 326 | 12 | 173 | 186 | 86 | 101 | 122 | 148 | 232 | 340 | 335 | 293 | 286 | 331 | 342 | 339 | 120 | 47 | 83 | 9 | 324 | 354 | N |
| 18-Nov-06 | 344 | 50 | 288 | 180 | 134 | 101 | 94 | 107 | 82 | 81 | 102 | 107 | 118 | 104 | 108 | 107 | 60 | 65 | 94 | 246 | 306 | 311 | 309 | 162 | 96 | E |
| 19-Nov-06 | 214 | 337 | 292 | 185 | 116 | 149 | 286 | 138 | 112 | 123 | 122 | 120 | 113 | 117 | 120 | 123 | 129 | 128 | 253 | 267 | 266 | 261 | 241 | 260 | 194 | SSW |
| 20-Nov-06 | 236 | 233 | 253 | 308 | 88 | 254 | 69 | 124 | 111 | 107 | M | 212 | 234 | 308 | 13 | 340 | 83 | 308 | 16 | 298 | 297 | 326 | 25 | 236 | 270 | W |
| 21-Nov-06 | 267 | 271 | 49 | 49 | 48 | 31 | 28 | 42 | 321 | 265 | 224 | 246 | 279 | 331 | 27 | 23 | 22 | 9 | 9 | 24 | 24 | 52 | 44 | 52 | 15 | NNE |
| 22-Nov-06 | 55 | 45 | 38 | 31 | 31 | 49 | 55 | 65 | 69 | 67 | 78 | 76 | 76 | 76 | 47 | 59 | 61 | 59 | 58 | 60 | 44 | 30 | 37 | 42 | 55 | NE |
| 23-Nov-06 | 36 | 37 | 35 | 53 | 36 | 8 | 356 | 25 | 23 | 328 | 330 | 311 | 313 | 295 | 291 | 312 | 339 | 289 | 285 | 294 | 288 | 294 | 297 | 298 | 327 | NNW |
| 24-Nov-06 | 295 | 289 | 289 | 292 | 298 | 303 | 303 | 304 | 296 | 293 | 292 | 286 | 280 | 281 | 286 | 288 | 279 | 281 | 282 | 268 | 272 | 275 | 269 | 281 | 288 | WNW |
| 25-Nov-06 | 301 | 301 | 312 | 320 | 315 | 304 | 305 | 301 | 317 | 313 | 291 | 298 | 337 | 340 | 334 | 312 | 317 | 320 | 5 | 12 | 312 | 314 | 315 | 312 | 318 | NW |
| 26-Nov-06 | 323 | 307 | 284 | 299 | 288 | 233 | 217 | 207 | 203 | 206 | 209 | 211 | 214 | 233 | 293 | 304 | 305 | 293 | 292 | 319 | 293 | 285 | 18 | 34 | 271 | W |
| 27-Nov-06 | 40 | 48 | 33 | 34 | 39 | 55 | 46 | 29 | 23 | 6 | 357 | 331 | 313 | 288 | 280 | 280 | 292 | 284 | 278 | 256 | 278 | 286 | 279 | 254 | 335 | NNW |
| 28-Nov-06 | 218 | 224 | 224 | 225 | 239 | 240 | 257 | 253 | 222 | 229 | 205 | 194 | 243 | 278 | 299 | 300 | 317 | 307 | 325 | 314 | 315 | 335 | 295 | 309 | 262 | W |
| 29-Nov-06 | 321 | 309 | 280 | 297 | 315 | 325 | 283 | 226 | 307 | 305 | 305 | 284 | 285 | 277 | 279 | 289 | 297 | 279 | 19 | 99 | 117 | 73 | 255 | 292 | 298 | WNW |
| 30-Nov-06 | 281 | 274 | 226 | 219 | 199 | 221 | 358 | 330 | 324 | 312 | 303 | 303 | 297 | 284 | 279 | 283 | 279 | 275 | 278 | 277 | 285 | 290 | 297 | 267 | 285 | WNW |
| | | | | | | | | | | | | | | | | | | | | | | | | | | N |
| Hourly Avg | 319 | 317 | 320 | 336 | 353 | 350 | 360 | 29 | 18 | 1 | 346 | 315 | 316 | 330 | 342 | 346 | 4 | 360 | 350 | 346 | 329 | 338 | 332 | 322 | | |

# PASZA - Henry Pirker - Standard Deviation of Wind Direction Monthly Summary

Station: Henry Pirker
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Wind Direction (WD)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Summary**

Determined by the Yamartino 15-min interval calculation

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | | Operational Time: | | 719 hrs | |
| Calibration Time: | 0 hrs | | | AMD Operational Uptime: | | 99.9% | |
| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 |
| | 64.4 | 50.0 | 20.4 | 11.1 | 7.0 | 4.1 | 3.2 |

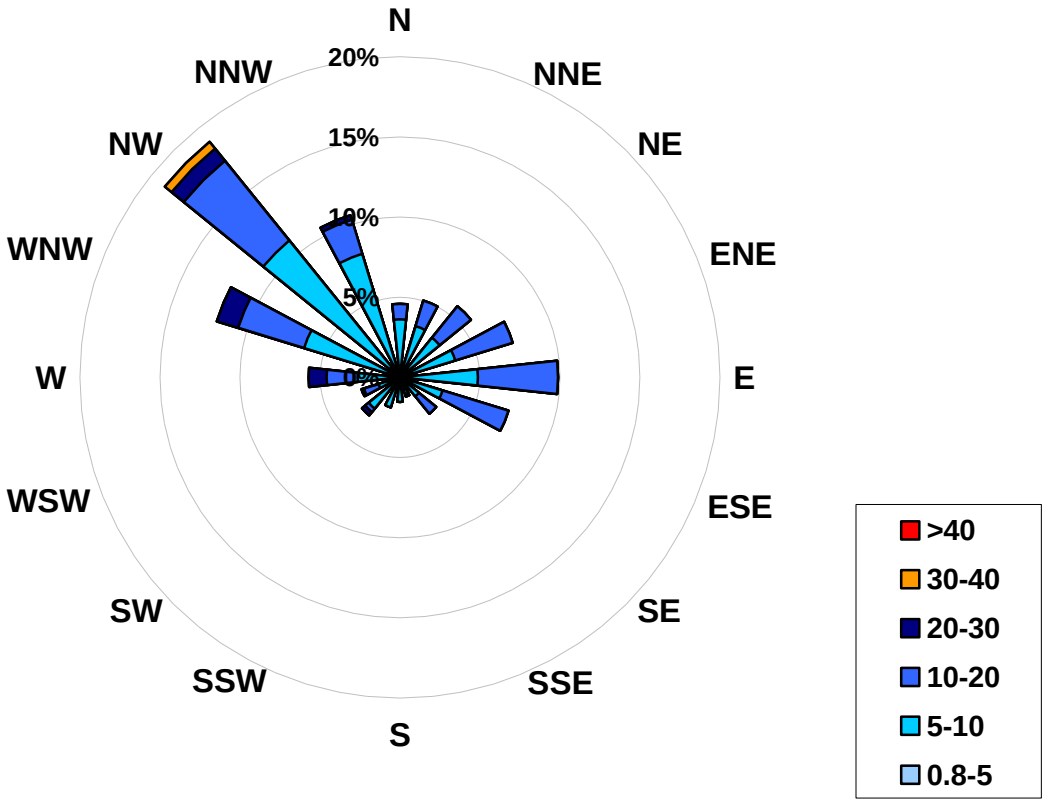
**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 62 | 50 | 25 | 11 | 20 | 41 | 49 | 36 | 26 | 44 | 51 | 26 | 45 | 13 | 13 | 10 | 7 | 8 | 9 | 13 | 15 | 8 | 7 | 5 | 61.9 |
| 2-Nov-06 | 6 | 7 | 11 | 8 | 8 | 6 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 8 | 9 | 10 | 10 | 8 | 8 | 7 | 7 | 6 | 6 | 8 | 10.7 |
| 3-Nov-06 | 7 | 7 | 7 | 8 | 8 | 9 | 9 | 10 | 8 | 9 | 10 | 15 | 20 | 29 | 26 | 13 | 16 | 9 | 9 | 11 | 13 | 12 | 12 | 23 | 28.6 |
| 4-Nov-06 | 23 | 18 | 13 | 23 | 17 | 17 | 20 | 15 | 11 | 11 | 10 | 9 | 10 | 13 | 11 | 9 | 10 | 10 | 10 | 12 | 14 | 16 | 12 | 11 | 22.7 |
| 5-Nov-06 | 7 | 7 | 6 | 6 | 6 | 5 | 6 | 7 | 7 | 7 | 5 | 6 | 5 | 8 | 5 | 6 | 6 | 7 | 8 | 5 | 13 | 48 | 27 | 9 | 48.4 |
| 6-Nov-06 | 16 | 11 | 9 | 9 | 9 | 10 | 9 | 11 | 9 | 8 | 11 | 9 | 10 | 10 | 10 | 19 | 18 | 16 | 14 | 23 | 67 | 31 | 38 | 34 | 66.7 |
| 7-Nov-06 | 26 | 43 | 60 | 25 | 61 | 34 | 52 | 52 | 66 | 65 | 15 | 15 | 7 | 23 | 15 | 22 | 74 | 70 | 16 | 24 | 7 | 6 | 5 | 4 | 73.5 |
| 8-Nov-06 | 5 | 5 | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 7 | 6 | 6 | 8 | 8 | 6 | 18 | 50 | 32 | 20 | 34 | 26 | 15 | 49.9 |
| 9-Nov-06 | 16 | 7 | 7 | 6 | 5 | 9 | 12 | 11 | 10 | 12 | 14 | 13 | 24 | 7 | 12 | 26 | 17 | 11 | 8 | 9 | 10 | 8 | 8 | 26 | 26.0 |
| 10-Nov-06 | 15 | 18 | 13 | 12 | 9 | 25 | 15 | 13 | 13 | 15 | 11 | 11 | 29 | 15 | 16 | 40 | 27 | 19 | 20 | 22 | 49 | 7 | 5 | 5 | 49.0 |
| 11-Nov-06 | 7 | 5 | 5 | 6 | 6 | 5 | 5 | 4 | 5 | 7 | 5 | 7 | 7 | 40 | 7 | 14 | 14 | 34 | 17 | 15 | 9 | 21 | 20 | 46 | 46.5 |
| 12-Nov-06 | 50 | 33 | 35 | 29 | 29 | 42 | 20 | 23 | 37 | 61 | 38 | 45 | 23 | 20 | 41 | 48 | 36 | 40 | 30 | 63 | 41 | 36 | 25 | 23 | 63.3 |
| 13-Nov-06 | 11 | 23 | 15 | 20 | 10 | 13 | 13 | 11 | 8 | 5 | 7 | 8 | 9 | 7 | 4 | 4 | 4 | 4 | 4 | 6 | 5 | 3 | 4 | 5 | 23.1 |
| 14-Nov-06 | 21 | 6 | 6 | 30 | 13 | 21 | 7 | 8 | 54 | 13 | 13 | 12 | 13 | 27 | 26 | 26 | 20 | 12 | 7 | 12 | 7 | 8 | 6 | 4 | 53.8 |
| 15-Nov-06 | 5 | 6 | 8 | 7 | 4 | 7 | 5 | 5 | 4 | 5 | 5 | 7 | 7 | 8 | 9 | 5 | 6 | 6 | 6 | 9 | 18 | 12 | 4 | 4 | 18.2 |
| 16-Nov-06 | 4 | 4 | 3 | 3 | 4 | 6 | 7 | 6 | 6 | 8 | 13 | 16 | 34 | 56 | 18 | 11 | 10 | 27 | 31 | 7 | 17 | 58 | 61 | 47 | 61.0 |
| 17-Nov-06 | 38 | 68 | 33 | 54 | 43 | 24 | 29 | 51 | 53 | 52 | 29 | 46 | 16 | 34 | 45 | 38 | 41 | 28 | 23 | 51 | 58 | 25 | 25 | 50 | 68.3 |
| 18-Nov-06 | 52 | 50 | 44 | 42 | 18 | 15 | 8 | 9 | 14 | 11 | 9 | 8 | 10 | 9 | 11 | 14 | 31 | 21 | 59 | 66 | 34 | 51 | 24 | 30 | 65.6 |
| 19-Nov-06 | 33 | 42 | 32 | 34 | 9 | 52 | 50 | 37 | 40 | 11 | 6 | 8 | 7 | 10 | 8 | 7 | 6 | 11 | 17 | 4 | 5 | 8 | 7 | 4 | 52.2 |
| 20-Nov-06 | 6 | 5 | 10 | 18 | 32 | 37 | 45 | 27 | 18 | 57 | M | 38 | 15 | 37 | 29 | 44 | 34 | 53 | 37 | 56 | 27 | 27 | 21 | 20 | 57.3 |
| 21-Nov-06 | 20 | 26 | 26 | 10 | 15 | 15 | 12 | 18 | 39 | 23 | 9 | 11 | 9 | 17 | 11 | 19 | 14 | 13 | 10 | 15 | 14 | 10 | 10 | 9 | 39.3 |
| 22-Nov-06 | 12 | 12 | 13 | 12 | 17 | 12 | 12 | 11 | 12 | 13 | 11 | 10 | 12 | 11 | 12 | 10 | 11 | 10 | 12 | 8 | 13 | 13 | 19 | 25 | 25.0 |
| 23-Nov-06 | 19 | 14 | 11 | 10 | 15 | 10 | 12 | 20 | 17 | 7 | 7 | 8 | 10 | 8 | 6 | 8 | 9 | 8 | 4 | 6 | 5 | 4 | 4 | 4 | 19.6 |
| 24-Nov-06 | 5 | 3 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 4 | 5 | 4 | 4 | 3 | 3 | 4 | 4 | 4 | 4 | 12 | 5 | 12.2 |
| 25-Nov-06 | 13 | 14 | 13 | 4 | 11 | 10 | 9 | 8 | 5 | 5 | 7 | 10 | 17 | 11 | 11 | 9 | 8 | 12 | 20 | 11 | 17 | 10 | 7 | 6 | 20.3 |
| 26-Nov-06 | 7 | 9 | 8 | 10 | 12 | 16 | 10 | 9 | 11 | 13 | 11 | 10 | 8 | 15 | 10 | 14 | 19 | 8 | 10 | 11 | 7 | 4 | 20 | 12 | 19.5 |
| 27-Nov-06 | 12 | 15 | 14 | 14 | 18 | 16 | 12 | 18 | 18 | 19 | 11 | 10 | 7 | 9 | 7 | 6 | 5 | 6 | 4 | 8 | 4 | 4 | 7 | 10 | 18.6 |
| 28-Nov-06 | 7 | 12 | 23 | 25 | 8 | 8 | 5 | 13 | 10 | 12 | 16 | 13 | 11 | 10 | 10 | 19 | 20 | 9 | 26 | 25 | 14 | 22 | 17 | 7 | 26.5 |
| 29-Nov-06 | 21 | 15 | 45 | 11 | 42 | 38 | 47 | 67 | 9 | 12 | 9 | 12 | 15 | 13 | 19 | 18 | 16 | 13 | 30 | 43 | 24 | 26 | 36 | 11 | 67.0 |
| 30-Nov-06 | 7 | 13 | 36 | 37 | 32 | 60 | 38 | 15 | 4 | 5 | 6 | 4 | 4 | 5 | 5 | 3 | 3 | 4 | 3 | 3 | 4 | 5 | 6 | 6 | 60.2 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Max | 62 | 68 | 60 | 54 | 61 | 60 | 52 | 67 | 66 | 65 | 51 | 46 | 45 | 56 | 45 | 48 | 74 | 70 | 59 | 66 | 67 | 58 | 61 | 50 | |

## 1-hr Average Wind Rose (in km/hr) Located at the Henry Pirker Site for November 2006




| Calms: | 0% |
|---|---|

| Frequency Distribution of Wind in km/hr | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.8 | < | 5 | 25 |
| 5 | to | 10 | 402 |
| 10 | to | 20 | 258 |
| 20 | to | 30 | 30 |
| 30 | to | 40 | 4 |
| | > | 40 | 0 |
| Total Non-Zero Values | | | 719 |

# PASZA – Evergreen Park Station

## Monthly Summary Tables, Graphs, and Roses

# PASZA - Evergreen Park - Sulphur Dioxide Monthly Summary

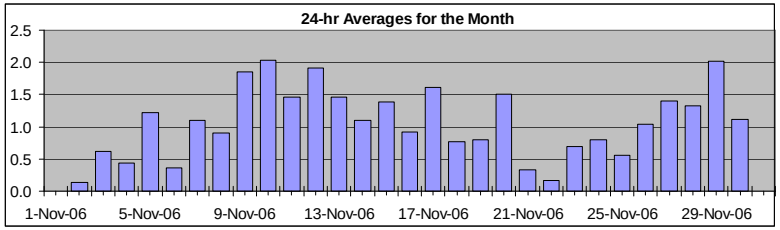
## HOURLY AVERAGE TABLE

**Sulphur Dioxide ($SO_2$)**

Station: Evergreen Park
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr 172 ppb | 24-hr 57 ppb




**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 1-hr Exceedances: | 0 | | | |
| Number of 24-hr Exceedances: | 0 | | | |
| Maximum 1-hr Average: | 8.6 | ppb | 10-Nov | 12:00 13:00 |
| Maximum 24-hr Average: | 2.0 | ppb | 10-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 33 hrs | Operational Time: | 674 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 98.6% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 4.4 | 2.5 | 1.4 | 0.8 | 0.5 | 0.1 | 0.0 | 1.1 ppb | 0.8 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | N | N | N | N | N | N | N | N | N | N | A | A | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N | 0.7 |
| 2-Nov-06 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1 | C | C | C | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.1 | 0.7 |
| 3-Nov-06 | 1 | 1 | 1 | 1 | 0 | A | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0.6 | 1.1 |
| 4-Nov-06 | 1 | 0 | 0 | 1 | A | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0.4 | 0.9 |
| 5-Nov-06 | 0 | 1 | 2 | A | 5 | 7 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1.2 | 7.5 |
| 6-Nov-06 | 1 | 0 | A | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0.4 | 0.6 |
| 7-Nov-06 | 1 | A | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1.1 | 2.0 |
| 8-Nov-06 | A | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 0 | A | 0.9 | 2.1 |
| 9-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 4 | 2 | 2 | A | 1 | 1.9 | 3.6 |
| 10-Nov-06 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 4 | 9 | 3 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | A | 1 | 1 | 2.0 | 8.6 |
| 11-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | A | 1 | 1 | 1 | 1.5 | 3.2 |
| 12-Nov-06 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | A | 2 | 3 | 2 | 2 | 1.9 | 2.9 |
| 13-Nov-06 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | A | 1 | 1 | 1 | 1 | 1 | 1.5 | 2.3 |
| 14-Nov-06 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 3 | 2 | 1 | 1.1 | 2.6 |
| 15-Nov-06 | 2 | 2 | 5 | 2 | 4 | 5 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | A | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1.4 | 4.9 |
| 16-Nov-06 | 1 | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 0.9 | 2.2 |
| 17-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 2 | 2 | 3 | A | 2 | 2 | 3 | 2 | 2 | 4 | 2 | 2 | 2 | 1.6 | 4.3 |
| 18-Nov-06 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | A | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 0.8 | 1.8 |
| 19-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0.8 | 2.5 |
| 20-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | A | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 6 | 6 | 3 | 3 | 2 | 1.5 | 6.1 |
| 21-Nov-06 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.8 |
| 22-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.3 |
| 23-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | A | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.7 | 1.7 |
| 24-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.6 |
| 25-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0.6 | 1.2 |
| 26-Nov-06 | 1 | 2 | 2 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.0 | 2.2 |
| 27-Nov-06 | 0 | 0 | 0 | 0 | A | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 4 | 3 | 2 | 1 | 2 | 1 | 1 | 1 | 1.4 | 3.8 |
| 28-Nov-06 | 1 | 1 | 1 | A | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1.3 | 2.2 |
| 29-Nov-06 | 1 | 1 | A | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 4 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 1 | 1 | 2 | 2.0 | 4.3 |
| 30-Nov-06 | 3 | A | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.1 | 2.7 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 0.9 | 0.9 | 1.1 | 0.8 | 1.0 | 1.2 | 0.8 | 0.8 | 0.9 | 0.9 | 1.1 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 | 1.3 | 1.2 | 1.2 | 1.3 | 1.1 | 1.0 | 0.9 | | |
| Hourly Max | 2.7 | 2.2 | 4.9 | 1.9 | 5.3 | 7.5 | 2.1 | 1.5 | 2.8 | 2.2 | 3.2 | 4.3 | 8.6 | 2.6 | 2.9 | 2.9 | 3.8 | 3.2 | 3.0 | 6.1 | 5.7 | 3.5 | 2.9 | 2.3 | | |

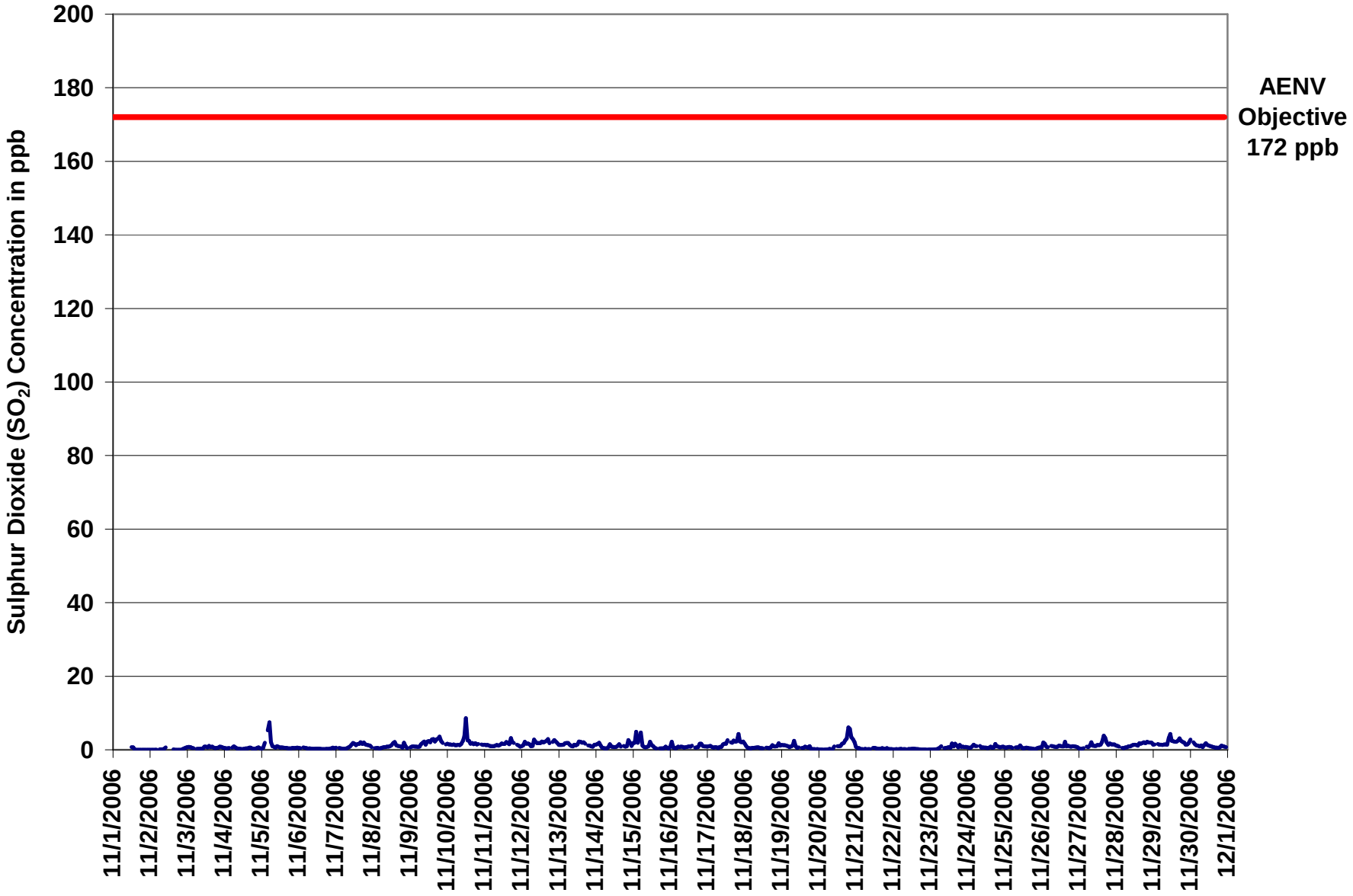


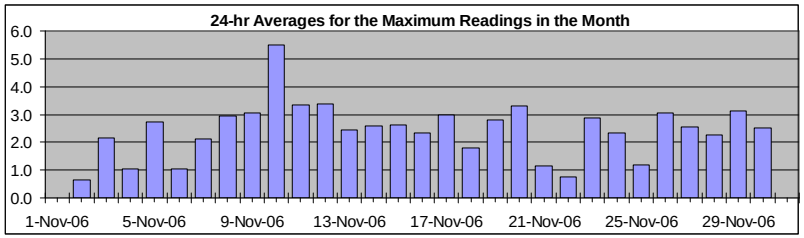

**Figure 20. PASZA - Evergreen Park Sulphur Dioxide 1-hr Average Monthly Trend**

Station: Evergreen Park
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

## Sulphur Dioxide ($SO_2$)

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 36.0 | ppb | 10-Nov | 12:00 13:00 |
| Maximum 24-hr Value: | 5.5 | ppb | 10-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 33 hrs | Operational Time: | 674 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 98.6% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 15.0 | 7.0 | 2.6 | 1.6 | 1.1 | 0.7 | 0.4 | 2.4 ppb | 1.6 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | N | N | N | N | N | N | N | N | N | N | A | A | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | N | 1.3 |
| 2-Nov-06 | 0 | 0 | 0 | 0 | 1 | A | 1 | 1 | 1 | 1 | 1 | C | C | C | A | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0.6 | 1.3 |
| 3-Nov-06 | 1 | 1 | 2 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 19 | 1 | 4 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2.1 | 18.8 |
| 4-Nov-06 | 1 | 1 | 1 | 1 | A | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.1 | 1.8 |
| 5-Nov-06 | 1 | 2 | 3 | A | 9 | 10 | 3 | 2 | 2 | 1 | 3 | 2 | 1 | 5 | 3 | 2 | 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2.7 | 9.9 |
| 6-Nov-06 | 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 |
| 7-Nov-06 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 7 | 2 | 2 | 2.1 | 7.0 |
| 8-Nov-06 | A | 1 | 1 | 6 | 1 | 1 | 1 | 1 | 1 | 4 | 1 | 2 | 2 | 15 | 9 | 2 | 2 | 2 | 2 | 1 | 4 | 3 | 2 | A | 2.9 | 15.3 |
| 9-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 5 | 3 | 3 | 4 | 4 | 3 | 3 | 8 | 7 | 4 | 2 | A | 3 | 3.1 | 7.6 |
| 10-Nov-06 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 7 | 8 | 36 | 4 | 4 | 3 | 3 | 5 | 14 | 2 | 12 | A | 2 | 7 | 5.5 | 36.0 |
| 11-Nov-06 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 4 | 3 | 21 | 2 | 2 | 10 | 3 | 3 | A | 2 | 2 | 2 | 3.4 | 21.1 |
| 12-Nov-06 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 12 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 6 | 4 | 3 | A | 3 | 5 | 4 | 3 | 3.4 | 11.8 |
| 13-Nov-06 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 7 | 3 | A | 3 | 1 | 1 | 2 | 3 | 2.4 | 6.7 |
| 14-Nov-06 | 2 | 2 | 5 | 3 | 1 | 1 | 1 | 1 | 1 | 4 | 1 | 1 | 1 | 1 | 2 | 15 | 2 | A | 2 | 1 | 2 | 4 | 3 | 2 | 2.6 | 14.9 |
| 15-Nov-06 | 3 | 3 | 8 | 4 | 5 | 7 | 3 | 1 | 1 | 1 | 2 | 4 | 2 | 2 | 1 | 1 | A | 1 | 1 | 1 | 1 | 5 | 2 | 1 | 2.6 | 8.0 |
| 16-Nov-06 | 3 | 4 | 1 | 1 | 1 | 13 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | A | 1 | 1 | 2 | 3 | 4 | 2 | 2 | 2 | 2.3 | 13.1 |
| 17-Nov-06 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 2 | 3 | 4 | A | 3 | 3 | 4 | 6 | 5 | 11 | 4 | 3 | 4 | 3.0 | 10.8 |
| 18-Nov-06 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 3 | 5 | 3 | 2 | 2 | 5 | 2 | 1.8 | 4.9 |
| 19-Nov-06 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 13 | 2 | 1 | 2 | A | 1 | 3 | 3 | 2 | 1 | 18 | 1 | 1 | 1 | 1 | 1 | 2.8 | 17.7 |
| 20-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 6 | A | 2 | 2 | 2 | 4 | 3 | 6 | 8 | 12 | 9 | 7 | 4 | 4 | 3.3 | 11.6 |
| 21-Nov-06 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.1 | 4.4 |
| 22-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 0.9 |
| 23-Nov-06 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | A | 1 | 1 | 1 | 1 | 1 | 6 | 2 | 2 | 2 | 1 | 31 | 2 | 2 | 1 | 2 | 2.9 | 30.9 |
| 24-Nov-06 | 1 | 2 | 1 | 4 | 5 | 2 | 2 | A | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 16 | 2 | 2 | 1 | 1 | 2 | 2.3 | 15.7 |
| 25-Nov-06 | 1 | 1 | 1 | 2 | 1 | 1 | A | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.2 | 1.7 |
| 26-Nov-06 | 1 | 8 | 6 | 1 | 1 | A | 2 | 2 | 2 | 2 | 1 | 13 | 9 | 1 | 2 | 6 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 3.1 | 12.7 |
| 27-Nov-06 | 1 | 1 | 1 | 1 | A | 1 | 1 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 8 | 5 | 5 | 3 | 2 | 7 | 2 | 2 | 2 | 2.6 | 7.6 |
| 28-Nov-06 | 2 | 3 | 1 | A | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 6 | 3 | 3 | 3 | 2.3 | 5.8 |
| 29-Nov-06 | 2 | 3 | A | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 5 | 9 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3 | 3 | 2 | 2 | 3 | 3.1 | 9.1 |
| 30-Nov-06 | 5 | A | 4 | 3 | 2 | 2 | 2 | 3 | 1 | 2 | 3 | 2 | 4 | 2 | 2 | 1 | 1 | 1 | 1 | 3 | 8 | 3 | 1 | 1 | 2.5 | 7.9 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 1.7 | 1.9 | 2.1 | 1.8 | 1.9 | 2.4 | 1.5 | 1.6 | 2.3 | 1.8 | 2.3 | 2.8 | 3.5 | 2.5 | 3.6 | 2.7 | 2.4 | 2.4 | 3.8 | 3.2 | 3.3 | 2.4 | 1.9 | 2.0 | | |
| Hourly Max | 5.0 | 8.5 | 8.0 | 6.1 | 9.4 | 13.1 | 2.9 | 3.4 | 13.1 | 4.2 | 7.0 | 12.7 | 36.0 | 15.3 | 21.1 | 14.9 | 6.7 | 10.1 | 17.7 | 30.9 | 11.9 | 7.1 | 4.8 | 6.6 | | |

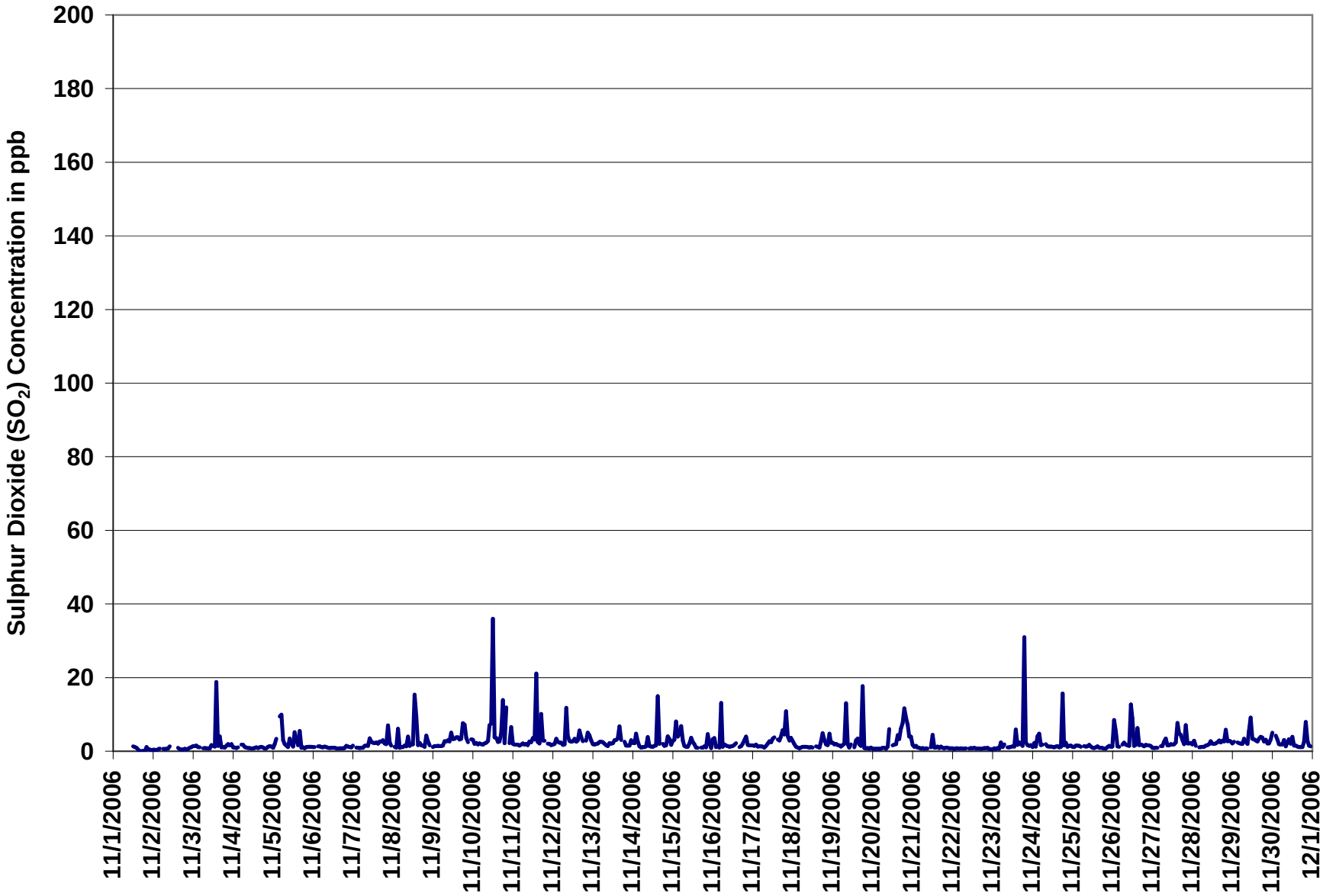
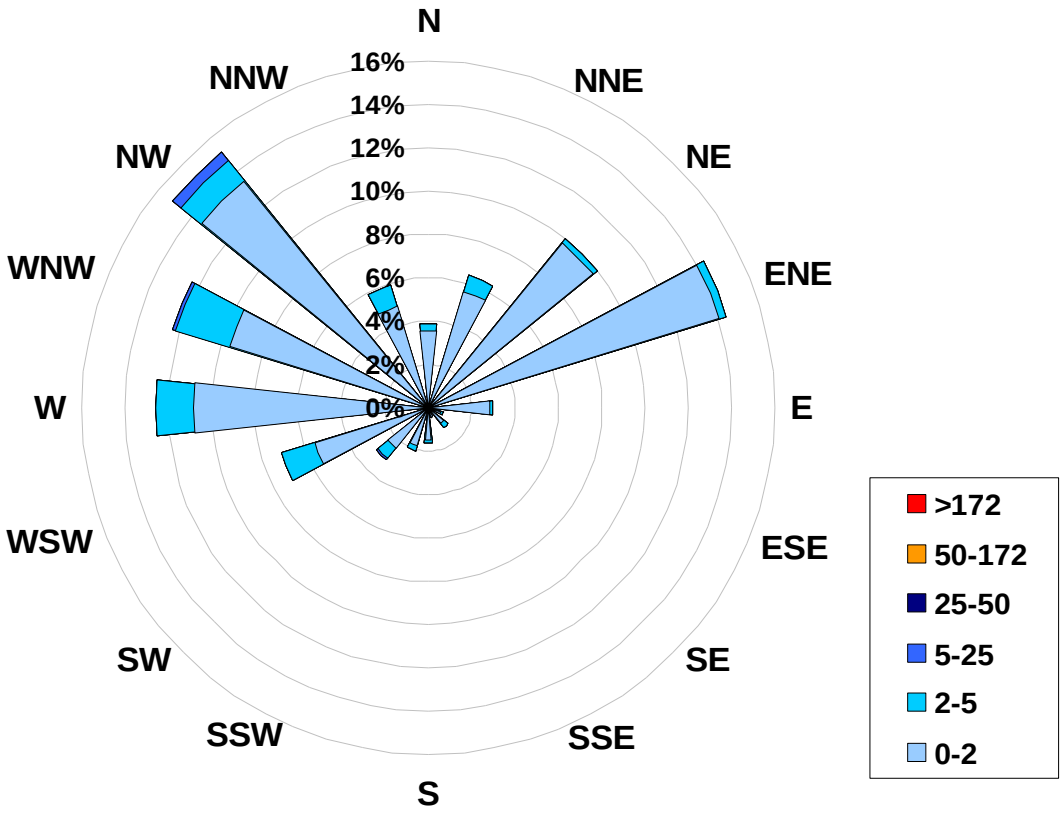



**Figure 21. PASZA - Evergreen Park Sulphur Dioxide Instantaneous (30 Second) Maximum Value Monthly Trend**

## 1-hr Average Concentration Rose for Sulphur Dioxide (in ppb) Located at the Evergreen Park Site for November 2006




| Calms: | 0% |
|---|---|

| Frequency Distribution of $SO_2$ in ppb | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.0 | < | 2 | 592 |
| 2 | to | 5 | 77 |
| 5 | to | 25 | 5 |
| 25 | to | 50 | 0 |
| 50 | to | 172 | 0 |
| | > | 172 | 0 |
| Total Non-Zero Values | | | 674 |

# PASZA - Evergreen Park - Total Reduced Sulphur Monthly Summary

Station: Evergreen Park
Station Owner: PASZA

## HOURLY AVERAGE TABLE

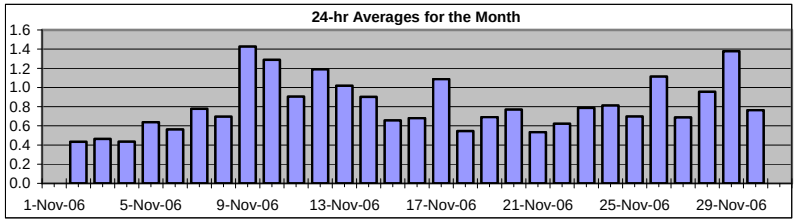
**Total Reduced Sulphur (TRS)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr na ppb | 24-hr na ppb

**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 2.5 | ppb | 17-Nov | 17:00 18:00 |
| Maximum 24-hr Value: | 1.4 | ppb | 9-Nov | |




| | | | |
|---|---|---|---|
| AIC Time: | 33 hrs | Operational Time: | 670 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 98.1% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 1.9 | 1.5 | 1.0 | 0.7 | 0.6 | 0.4 | 0.4 | 0.8 ppb | 0.7 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | N | N | N | N | N | N | N | N | N | N | A | A | N | N | N | N | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | N | 1.3 |
| 2-Nov-06 | 1 | 1 | 1 | 0 | 1 | A | 0 | 0 | 0 | 0 | 0 | C | C | C | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.7 |
| 3-Nov-06 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0.5 | 0.6 |
| 4-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0.4 | 0.5 |
| 5-Nov-06 | 0 | 0 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 0.8 |
| 6-Nov-06 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0.6 | 0.6 |
| 7-Nov-06 | 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 | 1.2 |
| 8-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 0.7 | 1.0 |
| 9-Nov-06 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | A | 2 | 1.4 | 2.1 |
| 10-Nov-06 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1.3 | 1.5 |
| 11-Nov-06 | 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 | 1.3 |
| 12-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | A | 1 | 1 | 1 | 1 | 1.2 | 1.8 |
| 13-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1.0 | 1.4 |
| 14-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 0.9 | 1.2 |
| 15-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.7 | 1.0 |
| 16-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.7 | 1.0 |
| 17-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1.1 | 2.5 |
| 18-Nov-06 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0.5 | 1.3 |
| 19-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0.7 | 1.0 |
| 20-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 0.8 | 1.9 |
| 21-Nov-06 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | A | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0.5 | 0.7 |
| 22-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 0.7 |
| 23-Nov-06 | 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 | 0.9 |
| 24-Nov-06 | 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 |
| 25-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.7 | 1.0 |
| 26-Nov-06 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1.1 | 1.6 |
| 27-Nov-06 | 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 |
| 28-Nov-06 | 1 | 1 | 1 | A | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 1.0 | 1.7 |
| 29-Nov-06 | 1 | 2 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1.4 | 2.1 |
| 30-Nov-06 | 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 | 1.2 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 0.8 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.8 | 0.9 | | |
| Hourly Max | 1.5 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.5 | 1.9 | 1.7 | 1.8 | 2.1 | 1.6 | 1.6 | 1.4 | 1.5 | 1.6 | 2.5 | 1.9 | 1.9 | 2.0 | 2.1 | 1.5 | 2.0 | | |

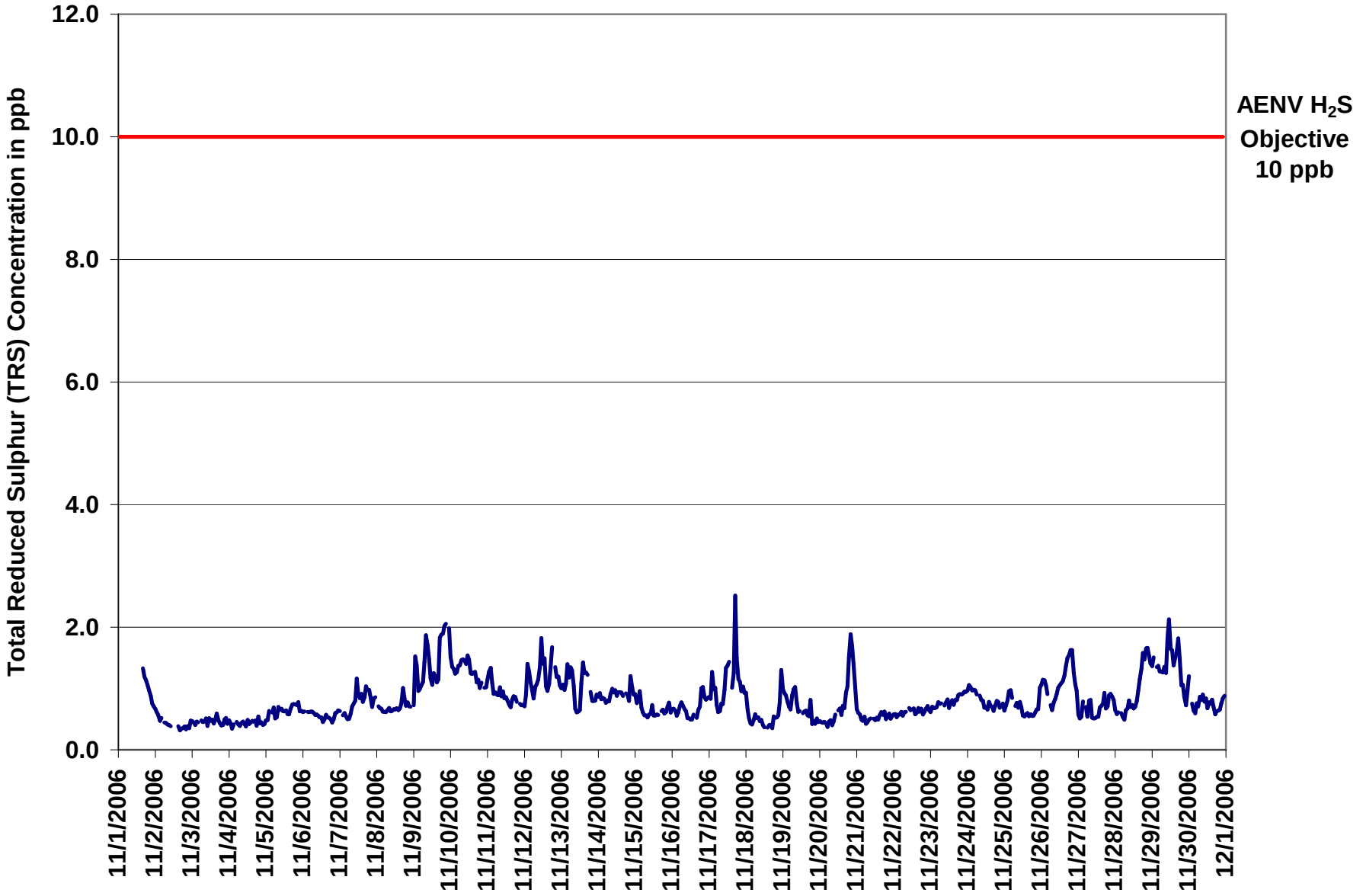


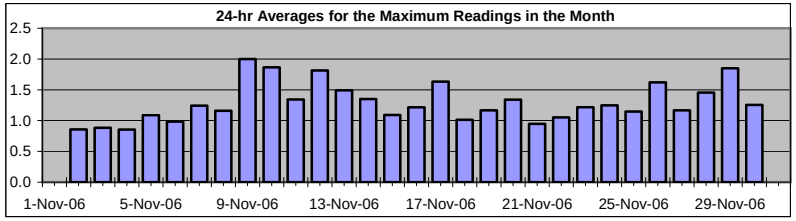

**Figure 22. PASZA - Evergreen Park Total Reduced Sulphur 1-hr Average Monthly Trend**

Station: Evergreen Park
Station Owner: PASZA

## INSTANTANEOUS (30 Second) MAXIMUM TABLE

**Total Reduced Sulphur (TRS)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 4.1 | ppb | 17-Nov | 17:00 18:00 |
| Maximum 24-hr Value: | 2.0 | ppb | 9-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 33 hrs | Operational Time: | 670 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 98.1% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 2.8 | 2.1 | 1.5 | 1.2 | 1.0 | 0.8 | 0.7 | 1.3 ppb | 1.2 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | N | N | N | N | N | N | N | N | N | N | A | A | N | N | N | N | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | N | 1.9 |
| 2-Nov-06 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | C | C | C | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9 | 1.2 |
| 3-Nov-06 | 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 | 1.1 |
| 4-Nov-06 | 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 | 1.0 |
| 5-Nov-06 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.1 | 1.4 |
| 6-Nov-06 | 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 | 1.3 |
| 7-Nov-06 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1.2 | 1.7 |
| 8-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | A | 1.2 | 1.6 |
| 9-Nov-06 | 1 | 3 | 2 | 1 | 1 | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | A | 3 | 2.0 | 2.9 |
| 10-Nov-06 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 1 | 2 | A | 2 | 2 | 1.9 | 2.6 |
| 11-Nov-06 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1.3 | 1.8 |
| 12-Nov-06 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 1 | 1 | 2 | 2 | 3 | A | 2 | 2 | 2 | 1 | 1.8 | 2.9 |
| 13-Nov-06 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | A | 1 | 1 | 1 | 1 | 1 | 1.5 | 2.1 |
| 14-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | A | 1 | 1 | 1 | 2 | 1 | 1 | 1.4 | 1.9 |
| 15-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.1 | 1.4 |
| 16-Nov-06 | 1 | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1.2 | 2.8 |
| 17-Nov-06 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | A | 2 | 2 | 4 | 2 | 2 | 2 | 1 | 1 | 1 | 1.6 | 4.1 |
| 18-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1.0 | 2.0 |
| 19-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.2 | 2.1 |
| 20-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | A | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 2 | 2 | 1.3 | 2.9 |
| 21-Nov-06 | 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 | 1.1 |
| 22-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.1 | 1.2 |
| 23-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1.2 | 1.6 |
| 24-Nov-06 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.2 | 1.7 |
| 25-Nov-06 | 1 | 1 | 1 | 1 | 2 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1.1 | 1.8 |
| 26-Nov-06 | 1 | 2 | 2 | 2 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1.6 | 2.2 |
| 27-Nov-06 | 1 | 1 | 1 | 2 | A | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.2 | 1.8 |
| 28-Nov-06 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 1.5 | 3.1 |
| 29-Nov-06 | 2 | 2 | A | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 1.9 | 2.8 |
| 30-Nov-06 | 2 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1.3 | 1.7 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 1.2 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 | 1.3 | 1.2 | 1.3 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 | 1.3 | 1.4 | 1.5 | 1.3 | 1.4 | 1.4 | 1.3 | 1.4 | | |
| Hourly Max | 2.1 | 2.6 | 2.3 | 1.8 | 2.1 | 2.8 | 1.9 | 2.2 | 2.5 | 2.2 | 2.8 | 2.7 | 2.4 | 2.1 | 1.9 | 2.1 | 2.2 | 4.1 | 2.9 | 2.6 | 3.1 | 2.7 | 1.9 | 2.9 | | |

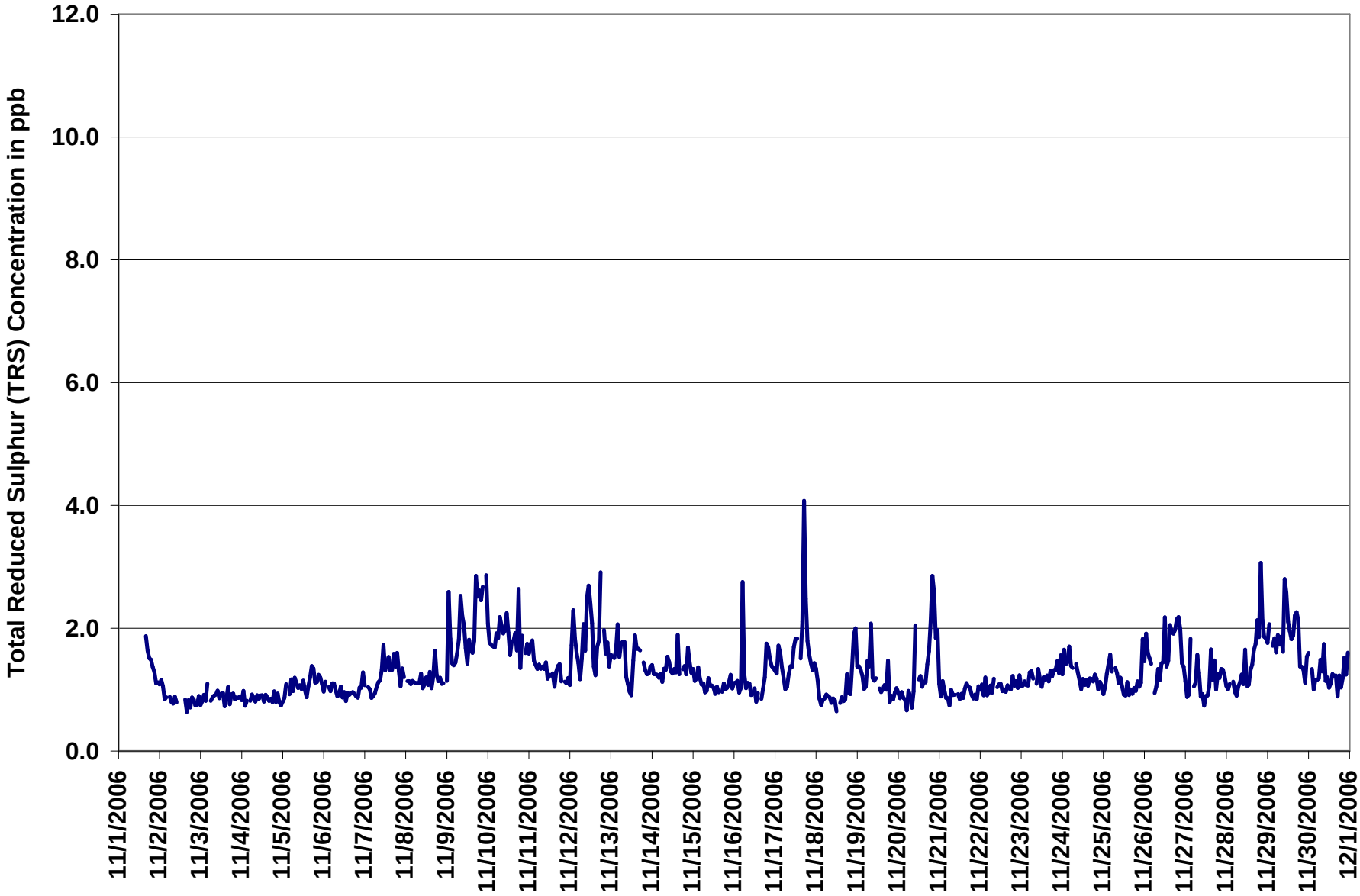
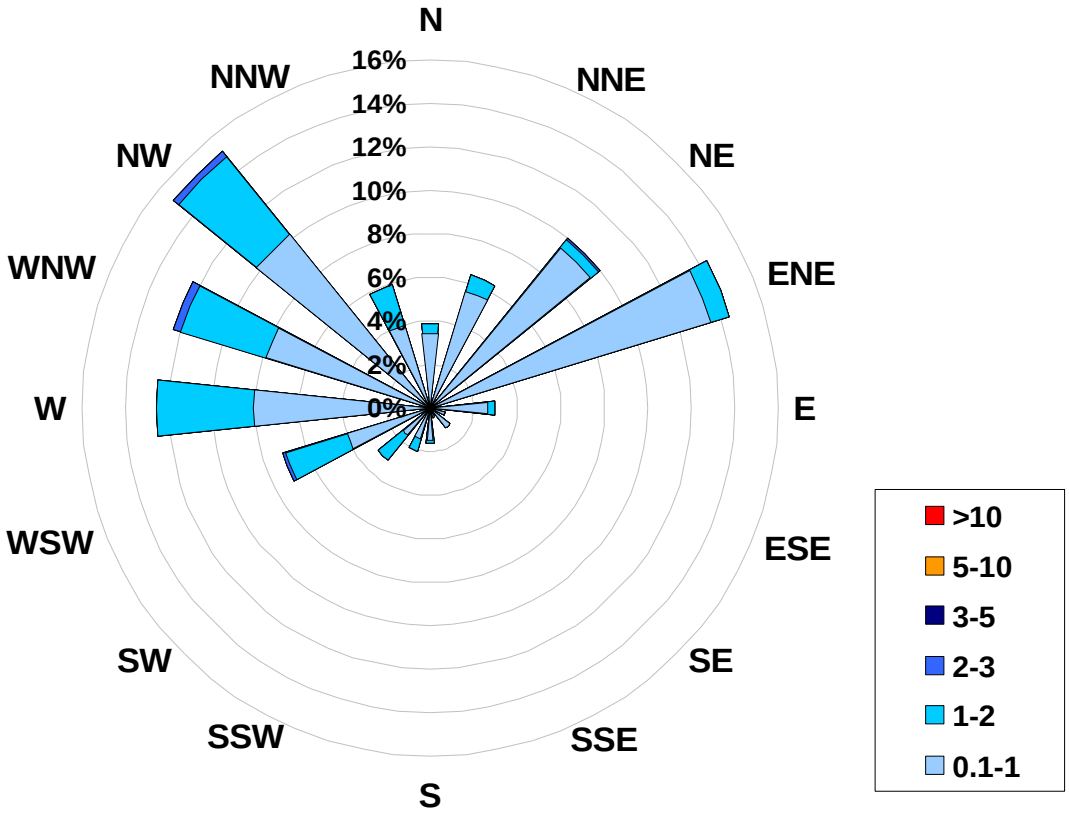



**Figure 23. PASZA - Evergreen Park Total Reduced Sulphur Instantaneous (30 Second) Maximum Value Monthly Trend**

**1-hr Average Concentration Rose for Total Reduced Sulphur (in ppb)**
**Located at the Evergreen Park Site for November 2006**




| Calms: | 0% |
|---|---|

| Frequency Distribution of TRS in ppb | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.1 | < | 1 | 512 |
| 1 | to | 2 | 156 |
| 2 | to | 3 | 6 |
| 3 | to | 5 | 0 |
| 5 | to | 10 | 0 |
| | > | 10 | 0 |
| Total Non-Zero Values | | | 674 |

# PASZA - Evergreen Park - Particulate Matter (less than 2.5 microns) Monthly Summary

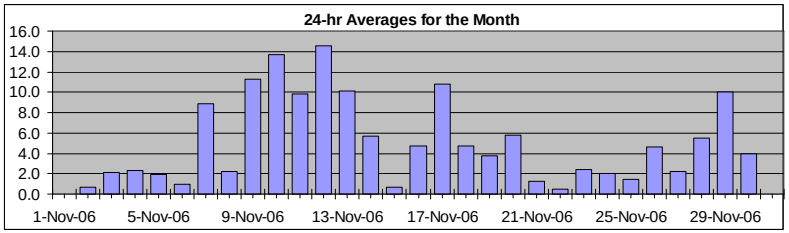
Station: Evergreen Park
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Particulate Matter ($PM_{2.5}$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Draft Objective Limit:** **Alberta Environment:** 1-hr - µg/m³ 24-hr 30 µg/m³




**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 24-hr Exceedances (draft): | 0 | | | |
| Maximum 1-hr Average: | 29.8 | µg/m³ | 29-Nov | 11:00 12:00 |
| Maximum 24-hr Value: | 14.6 | µg/m³ | 12-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 696 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 97.2% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average / Median | Geomean |
|---|---|---|---|---|---|---|---|---|---|
| | 22.2 | 16.0 | 7.1 | 3.2 | 1.3 | 0.0 | 0.0 | 5.1 / 3 µg/m³ | 3.5 µg/m³ |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | M | M | 2 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | N | 5.8 |
| 2-Nov-06 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | C | C | C | C | D | D | 0 | 0 | 0 | 3 | 3 | 0.7 | 3.4 |
| 3-Nov-06 | 3 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 3 | 2 | 2 | 3 | 3 | 5 | 5 | 2.1 | 5.0 |
| 4-Nov-06 | 5 | 4 | 2 | 2 | 1 | 0 | 1 | 1 | 3 | 1 | 2 | 2 | 1 | 3 | 4 | 4 | 7 | 5 | 3 | 2 | 0 | 1 | 1 | 1 | 2.3 | 6.7 |
| 5-Nov-06 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 4 | 2 | 3 | 2.0 | 3.8 |
| 6-Nov-06 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 2 | 1 | 2 | 0 | 1 | 2 | 3 | 9 | 0 | 1.0 | 8.7 |
| 7-Nov-06 | 4 | 3 | 2 | 1 | 2 | 1 | 4 | 2 | 5 | 10 | 8 | 14 | 14 | 11 | 14 | 14 | 19 | 18 | 19 | 14 | 11 | 9 | 8 | 5 | 8.8 | 18.8 |
| 8-Nov-06 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 5 | 3 | 2 | 1 | 2.2 | 5.3 |
| 9-Nov-06 | 2 | 5 | 5 | 5 | 6 | 6 | 5 | 10 | 13 | 18 | 12 | 8 | 11 | 16 | 23 | 22 | 16 | 21 | 15 | 16 | 13 | 10 | 8 | 7 | 11.3 | 22.7 |
| 10-Nov-06 | 9 | 8 | 9 | 9 | 10 | 10 | 11 | 10 | 11 | 14 | 21 | 23 | 26 | 17 | 21 | 17 | 17 | 13 | 13 | 12 | 12 | 12 | 12 | 12 | 13.7 | 25.6 |
| 11-Nov-06 | 15 | 12 | 11 | 6 | 5 | 5 | 6 | 6 | 8 | 6 | 7 | 8 | 8 | 9 | 11 | 11 | 12 | 20 | 18 | 14 | 9 | 10 | 11 | 9 | 9.8 | 19.8 |
| 12-Nov-06 | 9 | 13 | 16 | 12 | 12 | 10 | 8 | 9 | 12 | 12 | 14 | 17 | 17 | 25 | 16 | 17 | 16 | 28 | 18 | 16 | 15 | 14 | 13 | 11 | 14.6 | 28.2 |
| 13-Nov-06 | 10 | 10 | 11 | 11 | 14 | 15 | 18 | 20 | 16 | 11 | 12 | 12 | 10 | 10 | 11 | 9 | 7 | 6 | 5 | 5 | 5 | 5 | 5 | 6 | 10.1 | 19.6 |
| 14-Nov-06 | 5 | 8 | 7 | 4 | 4 | 4 | 3 | 2 | 6 | 10 | 8 | 5 | 4 | 6 | 9 | 6 | 5 | 7 | 6 | 4 | 5 | 9 | 7 | 2 | 5.7 | 9.9 |
| 15-Nov-06 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | D | D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 7 | 0.7 | 6.7 |
| 16-Nov-06 | 6 | 6 | 5 | 4 | 4 | 5 | 4 | 5 | 5 | 6 | 4 | 3 | 4 | 2 | 3 | 2 | 3 | 4 | 3 | 8 | 9 | 6 | 5 | 6 | 4.7 | 9.4 |
| 17-Nov-06 | 6 | 7 | 8 | 6 | 6 | 5 | 6 | 4 | 7 | 9 | 11 | 11 | 14 | 24 | 15 | 15 | 16 | 17 | 15 | 10 | 12 | 10 | 12 | 12 | 10.8 | 23.6 |
| 18-Nov-06 | 14 | 10 | 4 | 1 | 1 | 5 | 5 | 3 | 8 | 6 | 5 | 3 | 4 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 5 | 10 | 4 | 4.7 | 13.6 |
| 19-Nov-06 | 6 | 6 | 5 | 4 | 4 | 5 | 6 | 6 | 10 | 5 | 4 | 3 | 0 | 2 | 1 | 2 | 0 | 1 | 13 | 1 | 0 | 2 | D | 0 | 3.8 | 12.9 |
| 20-Nov-06 | 1 | D | 0 | 1 | 0 | D | 0 | 0 | 0 | 1 | 4 | 10 | 2 | 5 | 5 | 6 | 7 | 9 | 10 | 19 | 18 | 11 | 11 | 10 | 5.8 | 18.6 |
| 21-Nov-06 | 4 | 3 | 3 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1.2 | 4.0 |
| 22-Nov-06 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0.4 | 1.0 |
| 23-Nov-06 | 0 | 0 | 0 | 3 | 0 | 1 | 3 | 2 | 2 | 2 | 4 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 3 | 0 | 1 | 2.4 | 4.4 |
| 24-Nov-06 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 3 | 6 | 2 | 2 | 2 | 5 | 4 | 3 | 3 | 4 | 2.0 | 6.0 |
| 25-Nov-06 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 3 | 3 | 1.5 | 3.3 |
| 26-Nov-06 | 2 | 5 | 6 | 4 | 2 | 4 | 5 | 4 | 5 | 5 | 4 | 5 | 5 | 2 | 4 | 6 | 6 | 8 | 6 | 7 | 6 | 5 | 5 | 3 | 4.7 | 8.0 |
| 27-Nov-06 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 3 | 3 | 2 | 3 | 4 | 5 | 3 | 3 | 4 | 3 | 3 | 2.2 | 5.0 |
| 28-Nov-06 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 4 | 5 | 7 | 3 | 4 | 5 | 2 | 3 | 10 | 12 | 11 | 9 | 15 | 11 | 9 | 9 | 5.5 | 15.3 |
| 29-Nov-06 | 7 | 7 | 6 | 7 | 7 | 6 | 5 | 5 | 6 | 6 | 22 | 30 | 12 | 12 | 11 | 12 | 15 | 19 | 13 | 9 | 7 | 5 | 5 | 6 | 10.0 | 29.8 |
| 30-Nov-06 | 14 | 11 | 7 | 4 | 3 | 4 | 3 | 5 | 4 | 10 | 5 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 3 | 3 | 2 | 2 | 3 | 3.9 | 14.4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 4.7 | 4.8 | 4.2 | 3.4 | 3.2 | 3.5 | 3.7 | 3.8 | 4.7 | 5.2 | 5.6 | 6.0 | 5.4 | 6.0 | 6.0 | 6.1 | 6.2 | 7.4 | 6.6 | 5.7 | 5.6 | 5.2 | 5.3 | 4.6 | | |
| Hourly Max | 15.0 | 12.6 | 16.3 | 11.8 | 13.6 | 14.7 | 18.5 | 19.6 | 15.9 | 17.9 | 22.2 | 29.8 | 25.6 | 24.9 | 22.7 | 21.7 | 18.8 | 28.2 | 18.8 | 18.6 | 17.7 | 13.6 | 13.0 | 12.2 | | |

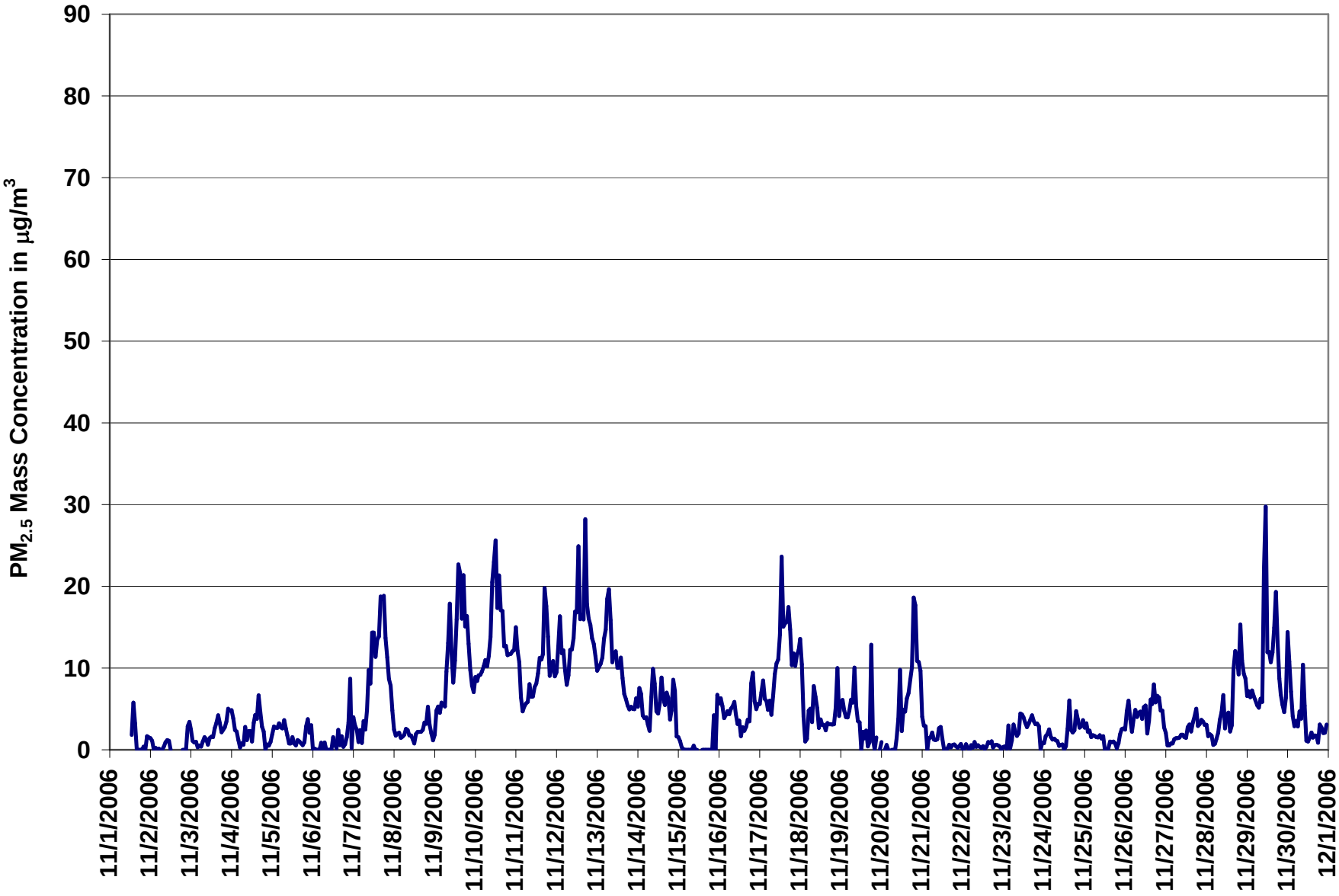


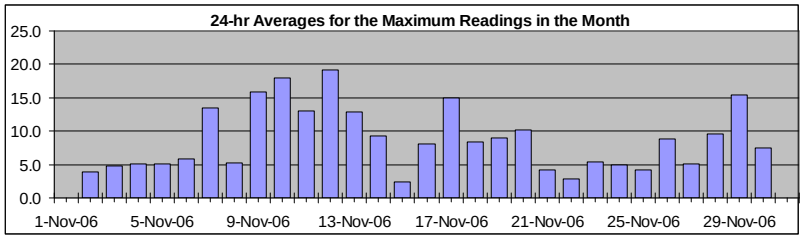

**Figure 24. PASZA - Evergreen Park Particulate Matter (less than 2.5 microns) 1-hr Average Monthly Trend**

Station: Evergreen Park
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

## Particulate Matter ($PM_{2.5}$)

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 43.6 | µg/m³ | 19-Nov | 18:00 19:00 |
| Maximum 24-hr Value: | 19.1 | µg/m³ | 12-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 696 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 97.2% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average / Median | Geomean |
|---|---|---|---|---|---|---|---|---|---|
| | 28.9 | 21.5 | 11.2 | 6.6 | 4.3 | 2.4 | 0.9 | 8.7 / 7 µg/m³ | 7.5 µg/m³ |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** — **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | M | M | 10 | 10 | 7 | 2 | 1 | 2 | 2 | 6 | 4 | 6 | 6 | N | 10.5 |
| 2-Nov-06 | 5 | 5 | 2 | 4 | 3 | 3 | 2 | 4 | 4 | 4 | 6 | 9 | 2 | C | C | C | C | D | D | 2 | 1 | 3 | 5 | 6 | 3.9 | 8.9 |
| 3-Nov-06 | 5 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 5 | 4 | 4 | 5 | 7 | 7 | 6 | 5 | 5 | 6 | 7 | 7 | 8 | 4.8 | 7.7 |
| 4-Nov-06 | 7 | 7 | 4 | 5 | 3 | 3 | 3 | 4 | 6 | 4 | 5 | 5 | 3 | 7 | 9 | 6 | 9 | 8 | 5 | 5 | 1 | 4 | 4 | 4 | 5.0 | 9.3 |
| 5-Nov-06 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 5 | 6 | 6 | 5 | 4 | 3 | 3 | 5 | 4 | 3 | 4 | 6 | 8 | 6 | 6 | 5.1 | 7.5 |
| 6-Nov-06 | 4 | 3 | 3 | 2 | 3 | 5 | 5 | 7 | 7 | 3 | 7 | 5 | 4 | 4 | 3 | 6 | 3 | 6 | 7 | 6 | 8 | 16 | 16 | 6 | 5.8 | 16.3 |
| 7-Nov-06 | 17 | 10 | 9 | 3 | 6 | 3 | 6 | 7 | 9 | 13 | 13 | 18 | 17 | 15 | 17 | 18 | 26 | 25 | 22 | 17 | 16 | 14 | 12 | 9 | 13.4 | 25.7 |
| 8-Nov-06 | 8 | 5 | 5 | 6 | 4 | 5 | 4 | 5 | 6 | 5 | 4 | 4 | 4 | 5 | 5 | 4 | 5 | 5 | 7 | 6 | 10 | 8 | 5 | 4 | 5.2 | 9.8 |
| 9-Nov-06 | 6 | 8 | 9 | 7 | 9 | 9 | 9 | 15 | 18 | 23 | 17 | 12 | 17 | 21 | 27 | 27 | 27 | 30 | 19 | 22 | 16 | 14 | 11 | 10 | 15.9 | 29.6 |
| 10-Nov-06 | 12 | 11 | 13 | 13 | 13 | 14 | 17 | 14 | 16 | 21 | 27 | 27 | 33 | 24 | 29 | 20 | 21 | 16 | 18 | 14 | 16 | 15 | 14 | 16 | 18.0 | 32.9 |
| 11-Nov-06 | 18 | 17 | 13 | 10 | 7 | 8 | 8 | 10 | 10 | 10 | 10 | 10 | 10 | 11 | 16 | 14 | 15 | 26 | 20 | 19 | 11 | 13 | 14 | 11 | 13.0 | 26.1 |
| 12-Nov-06 | 14 | 17 | 21 | 16 | 15 | 13 | 11 | 12 | 22 | 19 | 17 | 21 | 24 | 28 | 24 | 19 | 25 | 31 | 28 | 19 | 18 | 16 | 16 | 15 | 19.1 | 31.4 |
| 13-Nov-06 | 12 | 13 | 12 | 14 | 18 | 18 | 24 | 23 | 21 | 13 | 14 | 14 | 12 | 13 | 13 | 11 | 10 | 8 | 7 | 7 | 7 | 9 | 7 | 8 | 12.9 | 24.1 |
| 14-Nov-06 | 7 | 10 | 11 | 7 | 7 | 7 | 6 | 6 | 9 | 18 | 12 | 8 | 6 | 12 | 12 | 10 | 10 | 11 | 10 | 6 | 8 | 13 | 9 | 6 | 9.3 | 18.0 |
| 15-Nov-06 | 5 | 5 | 3 | 3 | 2 | 1 | 0 | 1 | 2 | 5 | 0 | 2 | D | D | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 8 | 5 | 9 | 2.5 | 9.3 |
| 16-Nov-06 | 9 | 9 | 8 | 6 | 7 | 7 | 7 | 8 | 9 | 10 | 9 | 8 | 8 | 4 | 5 | 4 | 7 | 6 | 6 | 15 | 15 | 11 | 8 | 9 | 8.1 | 15.1 |
| 17-Nov-06 | 8 | 10 | 11 | 11 | 12 | 8 | 10 | 8 | 10 | 14 | 17 | 15 | 23 | 28 | 19 | 22 | 18 | 20 | 20 | 14 | 16 | 14 | 16 | 15 | 15.0 | 28.2 |
| 18-Nov-06 | 17 | 15 | 7 | 4 | 4 | 10 | 8 | 8 | 10 | 9 | 8 | 5 | 8 | 5 | 6 | 5 | 6 | 6 | 7 | 7 | 6 | 11 | 20 | 10 | 8.4 | 19.6 |
| 19-Nov-06 | 9 | 9 | 9 | 6 | 6 | 8 | 9 | 10 | 22 | 8 | 7 | 7 | 5 | 6 | 6 | 7 | 3 | 4 | 44 | 10 | 3 | 4 | D | 5 | 9.0 | 43.6 |
| 20-Nov-06 | 5 | D | 2 | 7 | 7 | D | 2 | 3 | 1 | 5 | 16 | 21 | 5 | 10 | 9 | 10 | 9 | 15 | 14 | 21 | 22 | 14 | 13 | 13 | 10.1 | 21.7 |
| 21-Nov-06 | 6 | 6 | 10 | 1 | 5 | 4 | 5 | 6 | 5 | 4 | 7 | 5 | 4 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4.2 | 9.8 |
| 22-Nov-06 | 2 | 3 | 3 | 4 | 2 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | 2 | 2.9 | 3.8 |
| 23-Nov-06 | 3 | 3 | 3 | 10 | 3 | 5 | 6 | 5 | 5 | 5 | 7 | 6 | 7 | 7 | 5 | 5 | 6 | 6 | 7 | 8 | 5 | 7 | 2 | 4 | 5.4 | 10.3 |
| 24-Nov-06 | 3 | 4 | 5 | 4 | 5 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 2 | 3 | 6 | 9 | 5 | 5 | 6 | 9 | 7 | 6 | 7 | 7 | 4.9 | 8.6 |
| 25-Nov-06 | 5 | 6 | 6 | 6 | 4 | 4 | 4 | 5 | 4 | 5 | 4 | 5 | 2 | 2 | 2 | 3 | 4 | 3 | 4 | 3 | 3 | 5 | 5 | 5 | 4.2 | 5.7 |
| 26-Nov-06 | 5 | 14 | 11 | 7 | 5 | 8 | 8 | 7 | 9 | 10 | 9 | 9 | 19 | 6 | 7 | 9 | 9 | 11 | 9 | 9 | 9 | 8 | 8 | 6 | 8.8 | 19.2 |
| 27-Nov-06 | 4 | 3 | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 5 | 4 | 5 | 4 | 6 | 9 | 5 | 6 | 6 | 8 | 6 | 6 | 6 | 6 | 6 | 5.0 | 8.7 |
| 28-Nov-06 | 7 | 5 | 5 | 4 | 3 | 3 | 5 | 5 | 10 | 7 | 11 | 7 | 9 | 8 | 4 | 7 | 15 | 16 | 14 | 15 | 31 | 18 | 12 | 11 | 9.6 | 30.6 |
| 29-Nov-06 | 10 | 11 | 10 | 11 | 10 | 9 | 9 | 9 | 10 | 9 | 42 | 41 | 26 | 16 | 15 | 16 | 18 | 24 | 20 | 13 | 10 | 9 | 8 | 13 | 15.4 | 42.2 |
| 30-Nov-06 | 17 | 14 | 12 | 14 | 6 | 6 | 5 | 13 | 7 | 17 | 10 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 3 | 6 | 6 | 4 | 4 | 5 | 7.4 | 17.3 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 8.1 | 8.3 | 7.5 | 6.8 | 6.3 | 6.5 | 6.6 | 7.3 | 8.7 | 9.0 | 10.3 | 10.0 | 9.7 | 9.5 | 9.5 | 9.1 | 9.7 | 10.7 | 11.0 | 9.1 | 9.2 | 9.1 | 8.8 | 7.9 | | |
| Hourly Max | 17.9 | 16.6 | 20.7 | 15.7 | 17.7 | 18.0 | 24.1 | 22.7 | 22.2 | 23.3 | 42.2 | 40.8 | 32.9 | 28.2 | 28.8 | 27.0 | 27.2 | 31.4 | 43.6 | 21.7 | 30.6 | 17.7 | 19.6 | 15.9 | | |

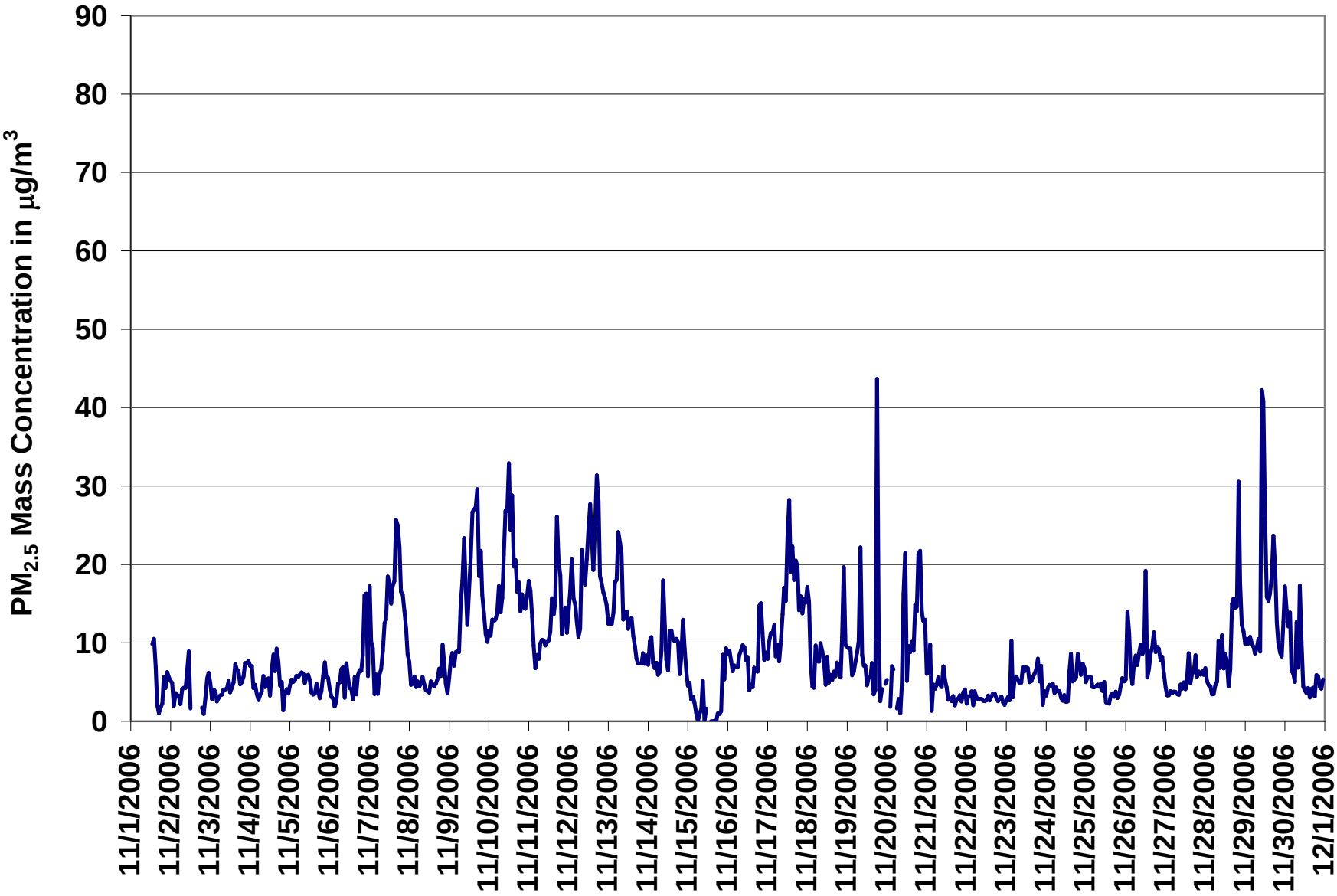
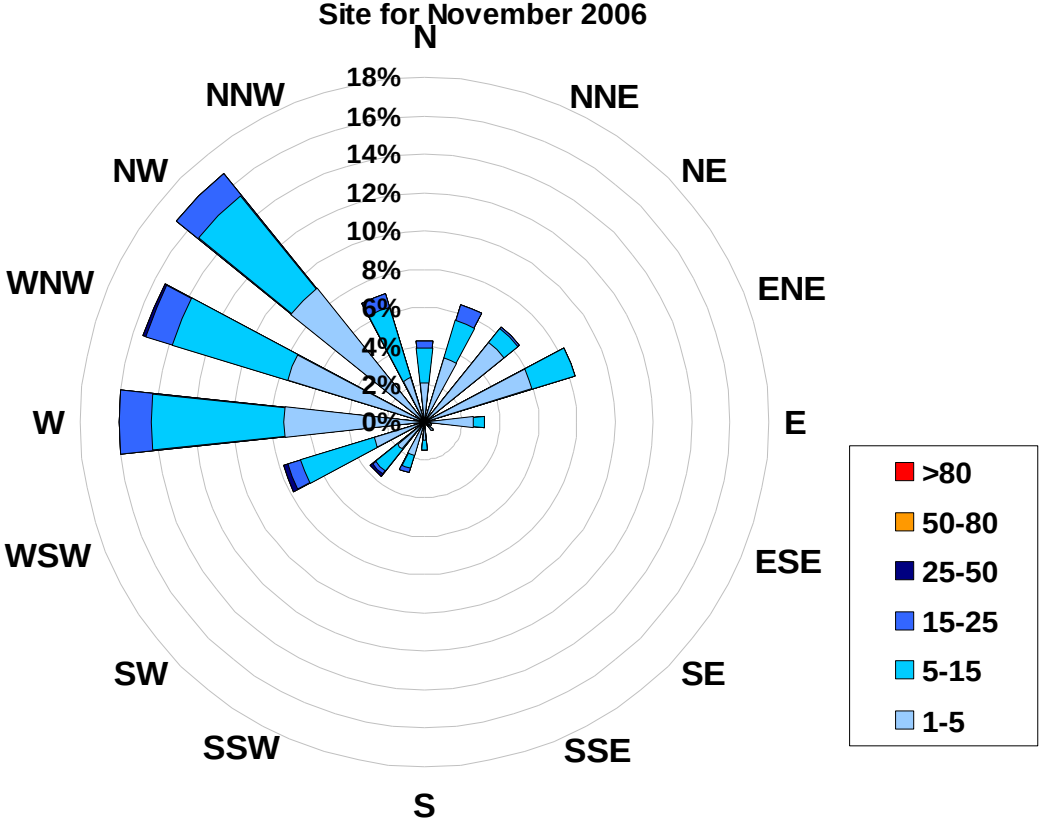



**Figure 25. PASZA - Evergreen Park Particulate Matter (less than 2.5 microns) Instantaneous (30 Second) Maximum Value Monthly Trend**

**1-hr Average Concentration Rose for Particulate Matter (less than 2.5 microns) (in micrograms per cubic meter) Located at the Evergreen Park Site for November 2006**




| | |
|---|---|
| **Calms:** | **0%** |

| Frequency Distribution of $PM_{2.5}$ in $\mu g/m^3$ | | | |
|---|---|---|---|
| **Range** | | | **Frequency (hrs)** |
| 1.0 | < | 5 | 444 |
| 5 | to | 15 | 206 |
| 15 | to | 25 | 43 |
| 25 | to | 50 | 3 |
| 50 | to | 80 | 0 |
| | > | 80 | 0 |
| Total Non-Zero Values | | | 696 |

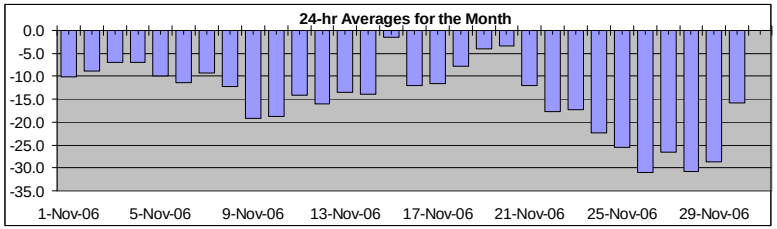
# PASZA - Evergreen Park - Temperature Monthly Summary

Station: Evergreen Park
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Ambient Temperature (T)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 3.9 | °C | 20-Nov | 15:00 16:00 |
| Maximum 24-hr Value: | -1.5 | °C | 15-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 720 hrs |
| Calibration Time: | 0 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 2.4 | -2.6 | -8.9 | -13.0 | -19.2 | -30.9 | -36.1 | -14.6 °C | -13.0 °C |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** — **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | -12 | -12 | -12 | -12 | -11 | -11 | -11 | -11 | -13 | -10 | -8 | -6 | -4 | -4 | -5 | -6 | -7 | -9 | -11 | -12 | -13 | -14 | -15 | -13 | -10.1 | -3.6 |
| 2-Nov-06 | -13 | -12 | -11 | -12 | -12 | -12 | -12 | -12 | -12 | -11 | -8 | -7 | -6 | -5 | -5 | -6 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -8.8 | -5.0 |
| 3-Nov-06 | -7 | -7 | -7 | -8 | -8 | -8 | -8 | -8 | -8 | -7 | -6 | -5 | -5 | -5 | -5 | -6 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -6.9 | -5.1 |
| 4-Nov-06 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -6 | -6 | -6 | -6 | -7 | -7 | -7 | -7 | -8 | -8 | -8 | -8 | -7.0 | -5.7 |
| 5-Nov-06 | -8 | -8 | -8 | -8 | -9 | -9 | -9 | -9 | -10 | -10 | -10 | -10 | -9 | -9 | -9 | -9 | -10 | -10 | -11 | -13 | -13 | -13 | -13 | -13 | -10.0 | -7.8 |
| 6-Nov-06 | -13 | -13 | -13 | -13 | -13 | -13 | -13 | -13 | -13 | -12 | -12 | -11 | -11 | -10 | -9 | -10 | -10 | -10 | -10 | -10 | -10 | -10 | -10 | -10 | -11.3 | -9.5 |
| 7-Nov-06 | -10 | -11 | -11 | -12 | -12 | -13 | -12 | -12 | -13 | -11 | -8 | -7 | -6 | -5 | -4 | -5 | -6 | -8 | -8 | -9 | -9 | -9 | -9 | -9 | -9.2 | -3.6 |
| 8-Nov-06 | -10 | -11 | -12 | -13 | -13 | -13 | -13 | -12 | -13 | -12 | -12 | -12 | -11 | -11 | -11 | -11 | -11 | -12 | -13 | -13 | -13 | -13 | -15 | -17 | -12.3 | -10.3 |
| 9-Nov-06 | -18 | -19 | -20 | -21 | -21 | -23 | -23 | -23 | -22 | -21 | -20 | -17 | -15 | -14 | -14 | -13 | -15 | -17 | -18 | -20 | -20 | -21 | -22 | -22 | -19.2 | -13.5 |
| 10-Nov-06 | -23 | -24 | -25 | -25 | -25 | -25 | -24 | -25 | -24 | -22 | -19 | -18 | -16 | -16 | -16 | -15 | -15 | -15 | -14 | -13 | -13 | -13 | -13 | -13 | -18.8 | -12.6 |
| 11-Nov-06 | -13 | -13 | -14 | -14 | -14 | -14 | -15 | -15 | -15 | -14 | -14 | -14 | -13 | -11 | -11 | -11 | -14 | -17 | -17 | -16 | -15 | -14 | -15 | -17 | -14.2 | -10.7 |
| 12-Nov-06 | -19 | -18 | -16 | -15 | -15 | -15 | -18 | -20 | -21 | -20 | -17 | -15 | -15 | -14 | -13 | -12 | -13 | -14 | -13 | -13 | -15 | -17 | -18 | -19 | -16.1 | -12.2 |
| 13-Nov-06 | -20 | -20 | -19 | -18 | -17 | -16 | -15 | -14 | -13 | -11 | -10 | -9 | -9 | -10 | -10 | -11 | -12 | -12 | -12 | -12 | -12 | -13 | -14 | -14 | -13.4 | -8.7 |
| 14-Nov-06 | -13 | -13 | -14 | -16 | -19 | -20 | -21 | -21 | -21 | -19 | -16 | -14 | -12 | -12 | -11 | -11 | -11 | -11 | -12 | -13 | -13 | -13 | -8 | -4 | -14.0 | -4.4 |
| 15-Nov-06 | -4 | -3 | -3 | -3 | -3 | -3 | -4 | -5 | -5 | -1 | 1 | 2 | 2 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | -8 | -11 | -1.5 | 2.9 |
| 16-Nov-06 | -12 | -11 | -11 | -12 | -12 | -12 | -13 | -14 | -15 | -15 | -11 | -9 | -8 | -6 | -7 | -8 | -11 | -13 | -14 | -15 | -14 | -15 | -16 | -17 | -12.0 | -6.2 |
| 17-Nov-06 | -17 | -17 | -15 | -15 | -15 | -14 | -15 | -17 | -17 | -16 | -10 | -7 | -6 | -6 | -6 | -5 | -7 | -9 | -10 | -11 | -12 | -12 | -11 | -9 | -11.6 | -4.8 |
| 18-Nov-06 | -7 | -5 | -4 | -5 | -6 | -6 | -6 | -7 | -8 | -7 | -7 | -7 | -7 | -6 | -6 | -6 | -8 | -9 | -10 | -11 | -13 | -13 | -12 | -11 | -7.8 | -4.0 |
| 19-Nov-06 | -12 | -12 | -11 | -11 | -11 | -11 | -10 | -9 | -8 | -6 | -5 | -3 | -2 | 0 | 0 | 1 | 1 | 1 | 1 | 3 | 4 | 2 | 2 | 2 | -4.0 | 3.6 |
| 20-Nov-06 | 1 | 1 | 1 | -1 | -5 | -7 | -8 | -9 | -10 | -10 | -8 | -2 | 1 | 2 | 4 | 4 | -1 | -4 | -5 | -5 | -5 | -5 | -4 | -4 | -3.3 | 3.9 |
| 21-Nov-06 | -3 | -4 | -6 | -10 | -11 | -12 | -12 | -13 | -13 | -12 | -12 | -11 | -11 | -12 | -12 | -13 | -14 | -14 | -15 | -15 | -15 | -16 | -16 | -17 | -12.1 | -3.1 |
| 22-Nov-06 | -17 | -17 | -17 | -18 | -18 | -18 | -18 | -18 | -18 | -18 | -18 | -17 | -17 | -15 | -17 | -18 | -18 | -18 | -18 | -18 | -18 | -18 | -18 | -18 | -17.6 | -15.3 |
| 23-Nov-06 | -18 | -17 | -17 | -17 | -17 | -17 | -17 | -17 | -17 | -17 | -17 | -17 | -17 | -16 | -17 | -16 | -17 | -17 | -17 | -18 | -18 | -18 | -18 | -19 | -17.2 | -16.4 |
| 24-Nov-06 | -19 | -19 | -20 | -20 | -21 | -20 | -20 | -20 | -21 | -21 | -21 | -21 | -22 | -22 | -22 | -23 | -23 | -24 | -25 | -25 | -26 | -26 | -26 | -27 | -22.3 | -19.1 |
| 25-Nov-06 | -28 | -28 | -27 | -26 | -25 | -25 | -25 | -25 | -25 | -24 | -24 | -23 | -23 | -24 | -24 | -24 | -24 | -25 | -25 | -27 | -28 | -29 | -28 | -29 | -25.5 | -23.2 |
| 26-Nov-06 | -31 | -32 | -32 | -31 | -32 | -32 | -33 | -33 | -33 | -33 | -33 | -32 | -31 | -31 | -31 | -31 | -30 | -30 | -30 | -29 | -29 | -28 | -28 | -27 | -30.9 | -27.2 |
| 27-Nov-06 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -25 | -25 | -25 | -25 | -25 | -26 | -26 | -26 | -26 | -27 | -28 | -28 | -29 | -30 | -26.5 | -24.9 |
| 28-Nov-06 | -30 | -29 | -30 | -31 | -31 | -32 | -32 | -33 | -33 | -34 | -31 | -28 | -27 | -25 | -25 | -26 | -28 | -31 | -32 | -33 | -34 | -34 | -35 | -36 | -30.8 | -25.1 |
| 29-Nov-06 | -36 | -36 | -37 | -37 | -36 | -36 | -36 | -36 | -36 | -35 | -31 | -29 | -27 | -26 | -25 | -24 | -23 | -22 | -21 | -21 | -20 | -19 | -18 | -17 | -28.6 | -17.4 |
| 30-Nov-06 | -17 | -17 | -18 | -19 | -20 | -20 | -20 | -17 | -21 | -17 | -12 | -12 | -13 | -13 | -14 | -14 | -15 | -15 | -15 | -15 | -15 | -14 | -15 | -15 | -15.9 | -12.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | -15.4 | -15.4 | -15.5 | -15.9 | -16.2 | -16.3 | -16.6 | -16.7 | -17.0 | -16.0 | -14.4 | -13.2 | -12.3 | -11.8 | -11.7 | -11.9 | -12.9 | -13.7 | -14.1 | -14.4 | -14.6 | -14.8 | -15.1 | -15.3 | | |
| Hourly Max | 1.5 | 1.4 | 0.8 | -1.1 | -2.6 | -2.5 | -4.4 | -4.8 | -4.7 | -0.7 | 1.0 | 2.1 | 2.4 | 2.9 | 3.7 | 3.9 | 1.5 | 1.4 | 1.2 | 3.5 | 3.6 | 2.4 | 1.8 | 1.9 | | |

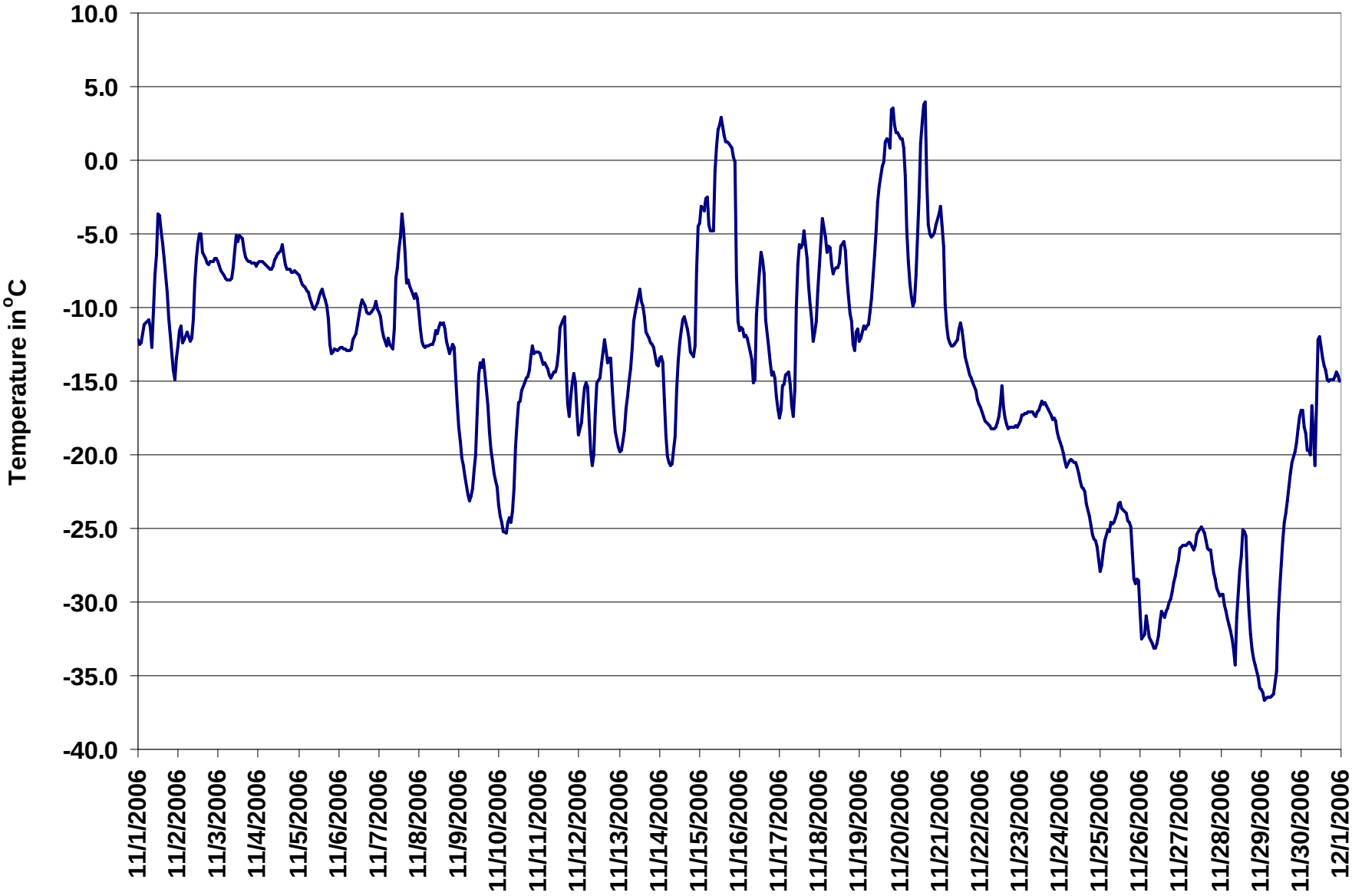



**Figure 26. PASZA - Evergreen Park Temperature 1-hr Average Monthly Trend**

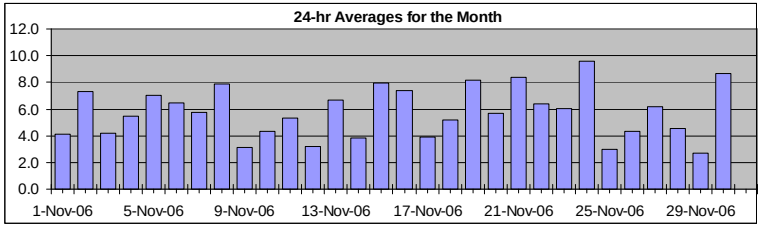
# PASZA - Evergreen Park - Scalar Wind Speed Monthly Summary

Station: Evergreen Park
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Wind Speed (WSs)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 24.3 | km/hr | 20-Nov | 0:00 1:00 |
| Maximum 24-hr Value: | 9.6 | km/hr | 24-Nov | |

| | | | |
|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | Operational Time: 720 hrs |
| Calibration Time: | 0 hrs | | AMD Operational Uptime: 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | AverageS |
|---|---|---|---|---|---|---|---|---|
| | 18.3 | 11.9 | 7.3 | 5.0 | 3.2 | 2.2 | 1.8 | 5.8 km/hr |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hr Scalar Average | Daily Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 3 | 4 | 4 | 7 | 7 | 7 | 6 | 5 | 4 | 3 | 2 | 3 | 6 | 6 | 4.1 | 7.2 |
| 2-Nov-06 | 6 | 5 | 5 | 6 | 6 | 7 | 8 | 8 | 7 | 7 | 9 | 10 | 8 | 9 | 8 | 8 | 8 | 9 | 8 | 8 | 6 | 6 | 7 | 7 | 7.3 | 9.8 |
| 3-Nov-06 | 6 | 6 | 6 | 6 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 5 | 4 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 4.2 | 6.5 |
| 4-Nov-06 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 6 | 7 | 8 | 8 | 7 | 7 | 8 | 8 | 8 | 7 | 6 | 7 | 6 | 5 | 5 | 5.5 | 8.5 |
| 5-Nov-06 | 5 | 6 | 8 | 8 | 8 | 7 | 6 | 8 | 8 | 10 | 10 | 11 | 11 | 9 | 12 | 8 | 6 | 5 | 4 | 4 | 5 | 2 | 3 | 5 | 7.0 | 11.8 |
| 6-Nov-06 | 6 | 6 | 6 | 7 | 8 | 8 | 7 | 5 | 7 | 9 | 10 | 9 | 8 | 9 | 8 | 6 | 5 | 4 | 3 | 3 | 4 | 7 | 6 | 5 | 6.5 | 10.0 |
| 7-Nov-06 | 8 | 6 | 4 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 6 | 7 | 6 | 5 | 6 | 4 | 4 | 5 | 5 | 10 | 10 | 13 | 13 | 5.7 | 13.1 |
| 8-Nov-06 | 12 | 12 | 14 | 13 | 10 | 9 | 10 | 9 | 9 | 10 | 11 | 10 | 9 | 9 | 9 | 9 | 5 | 4 | 3 | 3 | 2 | 3 | 2 | 2 | 7.9 | 13.6 |
| 9-Nov-06 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 4 | 3 | 4 | 6 | 5 | 5 | 3 | 4 | 3 | 2 | 3 | 3 | 3 | 2 | 3.1 | 5.7 |
| 10-Nov-06 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 4 | 5 | 6 | 5 | 6 | 7 | 6 | 6 | 6 | 7 | 8 | 8 | 4.3 | 8.2 |
| 11-Nov-06 | 7 | 7 | 9 | 8 | 10 | 8 | 7 | 6 | 7 | 6 | 7 | 7 | 6 | 4 | 3 | 3 | 4 | 3 | 3 | 4 | 3 | 2 | 2 | 3 | 5.3 | 9.6 |
| 12-Nov-06 | 3 | 2 | 4 | 3 | 6 | 3 | 2 | 3 | 2 | 2 | 2 | 3 | 5 | 4 | 4 | 3 | 3 | 3 | 3 | 4 | 4 | 3 | 2 | 4 | 3.2 | 5.7 |
| 13-Nov-06 | 2 | 2 | 2 | 2 | 4 | 3 | 4 | 4 | 5 | 6 | 6 | 6 | 6 | 9 | 10 | 12 | 13 | 10 | 11 | 11 | 9 | 8 | 7 | 8 | 6.7 | 13.2 |
| 14-Nov-06 | 7 | 6 | 6 | 3 | 2 | 2 | 2 | 3 | 3 | 5 | 4 | 3 | 4 | 5 | 4 | 4 | 3 | 2 | 3 | 2 | 2 | 4 | 6 | 6 | 3.8 | 6.7 |
| 15-Nov-06 | 6 | 7 | 6 | 6 | 6 | 7 | 5 | 4 | 6 | 10 | 10 | 8 | 7 | 6 | 7 | 8 | 7 | 7 | 6 | 5 | 4 | 8 | 22 | 21 | 8.0 | 22.0 |
| 16-Nov-06 | 18 | 15 | 16 | 17 | 15 | 10 | 7 | 8 | 5 | 5 | 5 | 6 | 5 | 4 | 7 | 6 | 5 | 3 | 3 | 3 | 4 | 4 | 4 | 3 | 7.4 | 18.2 |
| 17-Nov-06 | 3 | 3 | 4 | 5 | 5 | 7 | 4 | 3 | 3 | 3 | 4 | 3 | 5 | 5 | 4 | 3 | 4 | 4 | 5 | 3 | 4 | 4 | 3 | 4 | 3.9 | 6.9 |
| 18-Nov-06 | 4 | 4 | 5 | 4 | 3 | 6 | 10 | 8 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 6 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 5.2 | 10.2 |
| 19-Nov-06 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 4 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 18 | 24 | 22 | 18 | 17 | 24 | 8.2 | 24.0 |
| 20-Nov-06 | 24 | 23 | 14 | 8 | 3 | 3 | 4 | 4 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 6 | 5.7 | 24.3 |
| 21-Nov-06 | 6 | 5 | 9 | 16 | 13 | 15 | 11 | 9 | 3 | 3 | 6 | 5 | 7 | 9 | 11 | 10 | 7 | 8 | 7 | 8 | 7 | 10 | 8 | 8 | 8.4 | 15.9 |
| 22-Nov-06 | 6 | 7 | 8 | 8 | 8 | 7 | 6 | 6 | 6 | 5 | 6 | 7 | 7 | 7 | 8 | 7 | 7 | 5 | 6 | 7 | 6 | 6 | 4 | 3 | 6.4 | 8.2 |
| 23-Nov-06 | 3 | 3 | 6 | 4 | 5 | 4 | 4 | 5 | 3 | 6 | 5 | 7 | 7 | 8 | 9 | 8 | 6 | 3 | 4 | 6 | 6 | 9 | 12 | 10 | 6.0 | 11.9 |
| 24-Nov-06 | 10 | 11 | 10 | 9 | 8 | 9 | 11 | 10 | 10 | 11 | 13 | 14 | 14 | 14 | 14 | 12 | 9 | 8 | 6 | 7 | 6 | 6 | 5 | 3 | 9.6 | 14.5 |
| 25-Nov-06 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 4 | 4 | 5 | 6 | 6 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3.0 | 5.6 |
| 26-Nov-06 | 2 | 2 | 4 | 4 | 4 | 4 | 5 | 7 | 7 | 7 | 6 | 6 | 6 | 5 | 5 | 4 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 4.3 | 7.2 |
| 27-Nov-06 | 5 | 4 | 7 | 8 | 6 | 6 | 7 | 7 | 8 | 6 | 6 | 6 | 6 | 6 | 7 | 6 | 5 | 5 | 5 | 7 | 6 | 6 | 7 | 7 | 6.2 | 7.7 |
| 28-Nov-06 | 7 | 9 | 7 | 8 | 8 | 8 | 7 | 8 | 4 | 4 | 3 | 3 | 3 | 4 | 5 | 4 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 4.6 | 8.7 |
| 29-Nov-06 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3 | 3 | 3 | 5 | 2.7 | 4.5 |
| 30-Nov-06 | 6 | 7 | 7 | 5 | 5 | 6 | 4 | 7 | 3 | 9 | 13 | 10 | 14 | 13 | 11 | 12 | 11 | 11 | 11 | 10 | 9 | 10 | 9 | 4 | 8.6 | 13.6 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-hr Average | 6.0 | 5.8 | 6.1 | 6.0 | 5.7 | 5.5 | 5.3 | 5.3 | 4.9 | 5.5 | 6.0 | 6.1 | 6.4 | 6.6 | 6.8 | 6.3 | 5.5 | 4.9 | 5.2 | 5.3 | 5.2 | 5.4 | 6.1 | 6.2 | | |
| Hourly Max | 24.3 | 23.1 | 16.2 | 17.5 | 15.1 | 14.8 | 11.4 | 9.7 | 9.5 | 10.6 | 13.4 | 13.5 | 14.5 | 14.2 | 14.0 | 12.4 | 13.2 | 10.7 | 18.1 | 24.0 | 22.5 | 18.3 | 22.0 | 24.0 | | |

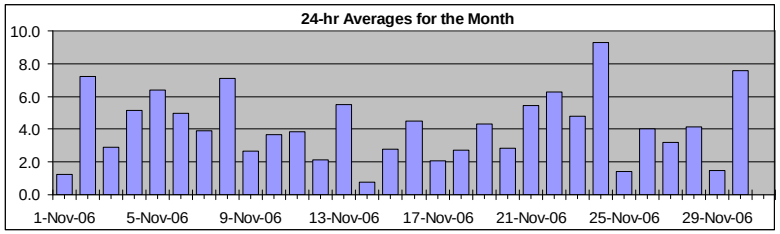
# PASZA - Evergreen Park - Vector Wind Speed Monthly Summary

Station: Evergreen Park
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Wind Speed (WSv)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 24.2 | km/hr | 20-Nov | 0:00 1:00 |
| Maximum 24-hr Value: | 9.3 | km/hr | 24-Nov | |

| | | | |
|---|---|---|---|
| Calm Time: | 27 hrs | **4%** calms | Operational Time: 693 hrs |
| Calibration Time: | 0 hrs | | AMD Operational Uptime: 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | AverageV |
|---|---|---|---|---|---|---|---|---|
| | 18.0 | 11.7 | 7.1 | 4.8 | 2.6 | 1.4 | 1.0 | 3.3 km/hr |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** — **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hr Vector Average | Daily Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 1 | calm | 2 | 3 | 2 | 3 | 4 | 2 | 3 | 4 | 2 | 3 | 2 | 7 | 7 | 7 | 6 | 5 | 4 | 3 | 2 | 3 | 6 | 6 | 1.2 | 6.9 |
| 2-Nov-06 | 6 | 5 | 5 | 5 | 6 | 7 | 8 | 8 | 7 | 7 | 9 | 9 | 8 | 8 | 7 | 8 | 8 | 9 | 8 | 8 | 6 | 6 | 7 | 7 | 7.2 | 9.3 |
| 3-Nov-06 | 6 | 6 | 6 | 5 | 5 | 4 | 4 | 4 | 5 | 5 | 4 | 2 | 2 | 4 | 4 | 4 | 4 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2.9 | 6.3 |
| 4-Nov-06 | 1 | 1 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 6 | 6 | 7 | 7 | 7 | 7 | 8 | 7 | 8 | 7 | 6 | 7 | 5 | 5 | 4 | 5.2 | 8.3 |
| 5-Nov-06 | 5 | 6 | 8 | 8 | 8 | 7 | 6 | 8 | 8 | 9 | 9 | 10 | 10 | 9 | 12 | 7 | 6 | 5 | 3 | 3 | 4 | 2 | 3 | 5 | 6.4 | 11.5 |
| 6-Nov-06 | 6 | 6 | 6 | 6 | 8 | 7 | 6 | 5 | 7 | 9 | 10 | 9 | 8 | 9 | 8 | 5 | 5 | 3 | 2 | calm | 1 | 4 | 4 | 2 | 5.0 | 9.7 |
| 7-Nov-06 | 7 | 5 | 2 | 1 | 1 | 2 | 2 | calm | calm | 2 | 3 | 5 | 7 | 5 | 5 | 6 | 3 | 2 | 4 | 4 | 10 | 9 | 13 | 12 | 3.9 | 12.8 |
| 8-Nov-06 | 12 | 12 | 13 | 13 | 10 | 9 | 9 | 9 | 8 | 9 | 11 | 10 | 9 | 8 | 9 | 8 | 5 | calm | 2 | 2 | 1 | 2 | 2 | 1 | 7.1 | 13.1 |
| 9-Nov-06 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 4 | 5 | 5 | 4 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2.7 | 5.5 |
| 10-Nov-06 | 3 | 1 | 1 | 2 | 1 | 1 | 1 | calm | calm | 2 | 2 | 2 | 2 | 5 | 4 | 4 | 6 | 6 | 5 | 6 | 6 | 7 | 8 | 8 | 3.7 | 8.1 |
| 11-Nov-06 | 7 | 6 | 9 | 8 | 10 | 8 | 7 | 6 | 7 | 5 | 7 | 6 | 5 | 3 | 3 | 2 | 4 | 3 | 2 | 3 | 3 | 2 | calm | 1 | 3.9 | 9.5 |
| 12-Nov-06 | 1 | 1 | 3 | 2 | 5 | 2 | calm | 2 | 1 | calm | 2 | 3 | 4 | 3 | 4 | 2 | 3 | 1 | 3 | 3 | 4 | 1 | 1 | 3 | 2.1 | 4.7 |
| 13-Nov-06 | calm | 1 | 2 | 1 | 2 | 2 | 3 | 4 | 5 | 6 | 6 | 5 | 6 | 9 | 10 | 12 | 13 | 9 | 11 | 10 | 9 | 8 | 7 | 8 | 5.5 | 12.7 |
| 14-Nov-06 | 7 | 6 | 6 | 2 | 1 | calm | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | calm | 2 | 2 | 4 | 6 | 6 | 0.7 | 6.5 |
| 15-Nov-06 | 6 | 7 | 6 | 6 | 6 | 6 | 5 | 4 | 6 | 10 | 9 | 7 | 7 | 6 | 7 | 8 | 7 | 7 | 6 | 5 | 4 | 8 | 21 | 21 | 2.8 | 21.1 |
| 16-Nov-06 | 18 | 15 | 16 | 17 | 15 | 9 | 7 | 8 | 4 | 5 | 5 | 5 | 4 | 1 | 6 | 6 | 5 | 3 | 2 | 3 | 4 | 2 | 1 | 1 | 4.5 | 17.7 |
| 17-Nov-06 | calm | 1 | 3 | 3 | 3 | 6 | calm | 2 | 2 | 2 | 2 | 2 | 4 | 4 | 4 | 2 | 3 | 4 | 3 | 2 | 3 | 2 | 2 | 3 | 2.1 | 6.1 |
| 18-Nov-06 | 3 | 4 | 4 | 3 | 1 | 6 | 10 | 8 | 6 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 4 | 3 | 2 | calm | 1 | 2 | 2 | 2 | 2.7 | 10.0 |
| 19-Nov-06 | 1 | 1 | 2 | 1 | 2 | 3 | 2 | calm | calm | 2 | 2 | 4 | 5 | 5 | 4 | 3 | 4 | 5 | 15 | 24 | 22 | 18 | 17 | 24 | 4.3 | 23.9 |
| 20-Nov-06 | 24 | 23 | 14 | 7 | 2 | calm | calm | 2 | 3 | 2 | 1 | 3 | 3 | 2 | 2 | 2 | 2 | calm | 3 | 2 | 2 | 3 | 1 | 5 | 2.8 | 24.2 |
| 21-Nov-06 | 5 | 4 | 8 | 16 | 12 | 15 | 11 | 9 | 1 | 3 | 6 | 5 | 6 | 8 | 11 | 10 | 7 | 8 | 7 | 8 | 7 | 10 | 8 | 8 | 5.5 | 15.6 |
| 22-Nov-06 | 6 | 7 | 7 | 8 | 8 | 7 | 6 | 6 | 6 | 5 | 5 | 7 | 7 | 7 | 8 | 7 | 6 | 5 | 6 | 7 | 6 | 6 | 3 | 3 | 6.3 | 8.0 |
| 23-Nov-06 | 3 | 3 | 6 | 4 | 5 | 4 | 4 | 4 | 3 | 5 | 5 | 7 | 7 | 8 | 9 | 8 | 6 | 3 | 4 | 5 | 6 | 9 | 12 | 10 | 4.8 | 11.7 |
| 24-Nov-06 | 10 | 10 | 9 | 9 | 8 | 9 | 11 | 9 | 9 | 10 | 13 | 13 | 14 | 14 | 14 | 12 | 9 | 8 | 6 | 7 | 6 | 6 | 5 | 3 | 9.3 | 14.1 |
| 25-Nov-06 | 2 | 2 | 3 | 3 | 2 | 2 | calm | 2 | 2 | 2 | 4 | 3 | 4 | 5 | 5 | 4 | 3 | 2 | calm | 2 | 1 | 1 | 2 | 3 | 1.4 | 5.3 |
| 26-Nov-06 | 2 | 2 | 3 | 4 | 4 | 4 | 5 | 7 | 7 | 7 | 6 | 6 | 6 | 5 | 5 | 4 | 3 | 3 | 3 | 4 | 2 | 2 | 2 | calm | 4.0 | 7.1 |
| 27-Nov-06 | 5 | 4 | 6 | 8 | 6 | 6 | 7 | 7 | 7 | 6 | 5 | 5 | 6 | 6 | 7 | 6 | 4 | 4 | 5 | 7 | 6 | 6 | 7 | 7 | 3.2 | 7.5 |
| 28-Nov-06 | 7 | 9 | 7 | 8 | 8 | 8 | 7 | 8 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 4.2 | 8.7 |
| 29-Nov-06 | 1 | 2 | 1 | 2 | 2 | 1 | calm | 1 | 2 | 2 | 2 | 4 | 2 | 2 | 2 | 2 | 2 | 1 | 4 | calm | 2 | 2 | 2 | 4 | 1.5 | 4.0 |
| 30-Nov-06 | 5 | 7 | 7 | 3 | 1 | 3 | calm | 3 | 2 | 9 | 13 | 10 | 13 | 13 | 11 | 11 | 11 | 10 | 10 | 10 | 9 | 9 | 9 | 4 | 7.6 | 13.2 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-hr Vector | 2.9 | 2.9 | 2.5 | 1.6 | 1.7 | 1.3 | 1.7 | 1.5 | 1.9 | 1.8 | 2.3 | 2.4 | 3.1 | 3.2 | 3.7 | 3.9 | 3.0 | 2.2 | 2.0 | 2.5 | 2.9 | 2.7 | 3.1 | 3.3 | | |
| Hourly Max | 24.2 | 23.0 | 15.9 | 17.3 | 14.7 | 14.6 | 11.2 | 9.4 | 9.2 | 10.3 | 13.2 | 13.0 | 14.1 | 13.9 | 13.5 | 12.1 | 12.7 | 10.5 | 14.9 | 23.9 | 22.2 | 17.5 | 21.1 | 23.7 | | |

# PASZA - Evergreen Park - Wind Direction Monthly Summary

Station: Evergreen Park
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Wind Direction (WD)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Summary**

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Calibration Time: | 0 hrs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operational Time: | 720 hrs | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AMD Operational Uptime: | 100.0% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | | | | | | | | | | | | | | | | | | | | | | | | |
| | 352.4 | 333.6 | 300.4 | 249.9 | 65.4 | 24.1 | 4.8 | 329 deg | | | | | | | | | | | | | | | | | | | | | | | | |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | WD Sector |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 270 | 248 | 244 | 218 | 239 | 215 | 223 | 234 | 221 | 240 | 339 | 349 | 324 | 55 | 58 | 62 | 67 | 57 | 55 | 36 | 349 | 28 | 68 | 67 | 38 | NE |
| 2-Nov-06 | 69 | 82 | 75 | 65 | 71 | 81 | 76 | 76 | 75 | 76 | 91 | 93 | 86 | 94 | 86 | 61 | 65 | 64 | 66 | 74 | 80 | 78 | 85 | 86 | 78 | ENE |
| 3-Nov-06 | 84 | 86 | 86 | 74 | 64 | 58 | 55 | 53 | 65 | 71 | 101 | 142 | 330 | 14 | 17 | 344 | 318 | 10 | 38 | 28 | 357 | 352 | 329 | 305 | 48 | NE |
| 4-Nov-06 | 338 | 323 | 28 | 20 | 41 | 46 | 51 | 50 | 58 | 63 | 67 | 64 | 60 | 60 | 66 | 70 | 60 | 55 | 56 | 48 | 37 | 29 | 26 | 9 | 50 | NE |
| 5-Nov-06 | 352 | 313 | 322 | 312 | 302 | 310 | 292 | 280 | 310 | 310 | 316 | 300 | 313 | 314 | 326 | 313 | 321 | 308 | 326 | 316 | 322 | 278 | 56 | 65 | 315 | NW |
| 6-Nov-06 | 57 | 69 | 67 | 62 | 60 | 64 | 71 | 62 | 57 | 62 | 72 | 67 | 58 | 69 | 62 | 53 | 42 | 13 | 36 | 167 | 274 | 339 | 306 | 294 | 53 | NE |
| 7-Nov-06 | 277 | 203 | 205 | 63 | 78 | 32 | 48 | 348 | 60 | 324 | 284 | 275 | 268 | 301 | 348 | 335 | 270 | 344 | 0 | 351 | 338 | 328 | 328 | 319 | 322 | NW |
| 8-Nov-06 | 310 | 309 | 303 | 310 | 301 | 297 | 297 | 294 | 299 | 307 | 313 | 322 | 324 | 300 | 288 | 323 | 319 | 255 | 191 | 41 | 254 | 144 | 14 | 313 | 306 | NW |
| 9-Nov-06 | 312 | 311 | 313 | 317 | 281 | 320 | 318 | 310 | 287 | 275 | 310 | 316 | 327 | 344 | 17 | 24 | 340 | 287 | 279 | 303 | 302 | 284 | 292 | 282 | 316 | NW |
| 10-Nov-06 | 215 | 286 | 287 | 209 | 290 | 323 | 276 | 329 | 308 | 36 | 253 | 298 | 225 | 202 | 263 | 292 | 251 | 249 | 240 | 252 | 281 | 261 | 263 | 273 | 263 | W |
| 11-Nov-06 | 277 | 287 | 264 | 273 | 265 | 272 | 269 | 273 | 273 | 303 | 323 | 291 | 286 | 265 | 249 | 281 | 32 | 20 | 38 | 64 | 50 | 30 | 336 | 2 | 291 | WNW |
| 12-Nov-06 | 293 | 310 | 272 | 75 | 239 | 271 | 191 | 215 | 346 | 230 | 329 | 317 | 288 | 281 | 355 | 13 | 278 | 284 | 320 | 299 | 256 | 291 | 227 | 202 | 282 | WNW |
| 13-Nov-06 | 89 | 324 | 355 | 239 | 260 | 306 | 247 | 311 | 28 | 27 | 10 | 7 | 344 | 324 | 311 | 321 | 318 | 301 | 308 | 305 | 300 | 297 | 273 | 280 | 315 | NW |
| 14-Nov-06 | 276 | 270 | 272 | 219 | 228 | 358 | 21 | 54 | 7 | 64 | 44 | 27 | 39 | 12 | 64 | 37 | 48 | 21 | 265 | 20 | 354 | 200 | 181 | 177 | 357 | N |
| 15-Nov-06 | 178 | 173 | 172 | 165 | 142 | 130 | 56 | 66 | 78 | 120 | 125 | 122 | 110 | 128 | 85 | 74 | 69 | 75 | 79 | 64 | 31 | 334 | 317 | 301 | 90 | E |
| 16-Nov-06 | 304 | 300 | 290 | 280 | 292 | 276 | 273 | 269 | 243 | 210 | 251 | 223 | 205 | 128 | 66 | 67 | 59 | 28 | 347 | 308 | 278 | 274 | 72 | 13 | 289 | WNW |
| 17-Nov-06 | 19 | 311 | 300 | 247 | 298 | 190 | 225 | 77 | 4 | 15 | 30 | 295 | 322 | 337 | 316 | 292 | 316 | 313 | 255 | 259 | 222 | 73 | 246 | 284 | 297 | WNW |
| 18-Nov-06 | 274 | 244 | 235 | 184 | 120 | 73 | 71 | 80 | 69 | 73 | 72 | 68 | 76 | 53 | 62 | 57 | 43 | 42 | 109 | 300 | 308 | 266 | 321 | 221 | 67 | ENE |
| 19-Nov-06 | 321 | 317 | 232 | 223 | 242 | 243 | 334 | 187 | 85 | 77 | 85 | 86 | 83 | 95 | 86 | 81 | 142 | 162 | 254 | 255 | 255 | 247 | 239 | 252 | 241 | WSW |
| 20-Nov-06 | 243 | 238 | 237 | 234 | 83 | 177 | 39 | 177 | 61 | 71 | 29 | 282 | 2 | 255 | 2 | 336 | 354 | 297 | 4 | 314 | 314 | 339 | 246 | 253 | 260 | W |
| 21-Nov-06 | 246 | 214 | 61 | 60 | 55 | 49 | 47 | 47 | 12 | 204 | 214 | 247 | 276 | 330 | 34 | 39 | 49 | 42 | 35 | 40 | 43 | 63 | 60 | 70 | 44 | NE |
| 22-Nov-06 | 65 | 56 | 55 | 50 | 47 | 53 | 67 | 71 | 71 | 67 | 66 | 60 | 53 | 43 | 58 | 65 | 62 | 55 | 57 | 60 | 51 | 40 | 26 | 11 | 56 | NE |
| 23-Nov-06 | 25 | 17 | 40 | 60 | 43 | 20 | 43 | 38 | 16 | 21 | 356 | 331 | 330 | 320 | 327 | 329 | 328 | 317 | 299 | 307 | 285 | 297 | 316 | 312 | 339 | NNW |
| 24-Nov-06 | 321 | 313 | 302 | 303 | 301 | 302 | 312 | 310 | 305 | 312 | 313 | 307 | 317 | 309 | 316 | 314 | 306 | 290 | 295 | 268 | 273 | 272 | 258 | 289 | 305 | NW |
| 25-Nov-06 | 270 | 283 | 317 | 288 | 289 | 352 | 98 | 207 | 195 | 233 | 298 | 11 | 26 | 39 | 34 | 40 | 46 | 311 | 349 | 3 | 232 | 286 | 277 | 295 | 339 | NNW |
| 26-Nov-06 | 248 | 270 | 290 | 260 | 280 | 265 | 263 | 270 | 265 | 266 | 262 | 269 | 267 | 272 | 266 | 268 | 320 | 287 | 304 | 313 | 278 | 263 | 240 | 196 | 270 | W |
| 27-Nov-06 | 58 | 38 | 35 | 37 | 44 | 49 | 46 | 40 | 43 | 38 | 34 | 12 | 27 | 339 | 314 | 306 | 297 | 297 | 253 | 264 | 264 | 263 | 267 | 265 | 354 | N |
| 28-Nov-06 | 268 | 269 | 264 | 262 | 270 | 268 | 269 | 265 | 255 | 209 | 240 | 262 | 303 | 313 | 308 | 315 | 329 | 306 | 308 | 306 | 293 | 295 | 257 | 293 | 276 | W |
| 29-Nov-06 | 330 | 266 | 267 | 285 | 229 | 249 | 294 | 230 | 2 | 344 | 236 | 249 | 289 | 254 | 276 | 322 | 27 | 273 | 62 | 340 | 32 | 88 | 291 | 275 | 295 | WNW |
| 30-Nov-06 | 256 | 261 | 246 | 251 | 248 | 226 | 54 | 283 | 292 | 331 | 330 | 310 | 313 | 310 | 303 | 305 | 301 | 289 | 279 | 278 | 284 | 302 | 322 | 281 | 295 | WNW |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 293 | 284 | 296 | 306 | 318 | 337 | 0 | 338 | 5 | 12 | 355 | 336 | 339 | 344 | 359 | 360 | 356 | 338 | 329 | 316 | 304 | 308 | 304 | 291 | | |

# PASZA - Evergreen Park - Standard Deviation of Wind Direction Monthly Summary

Station: Evergreen Park
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Wind Direction (WD)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Summary**

Determined by the Yamartino 15-min interval calculation

| | | | |
|---|---|---|---|
| Calm Time: | 0 hrs **0%** calms | Operational Time: | 720 hrs |
| Calibration Time: | 0 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 |
|---|---|---|---|---|---|---|---|
| | 66.1 | 53.1 | 29.2 | 16.9 | 12.3 | 8.0 | 5.6 |

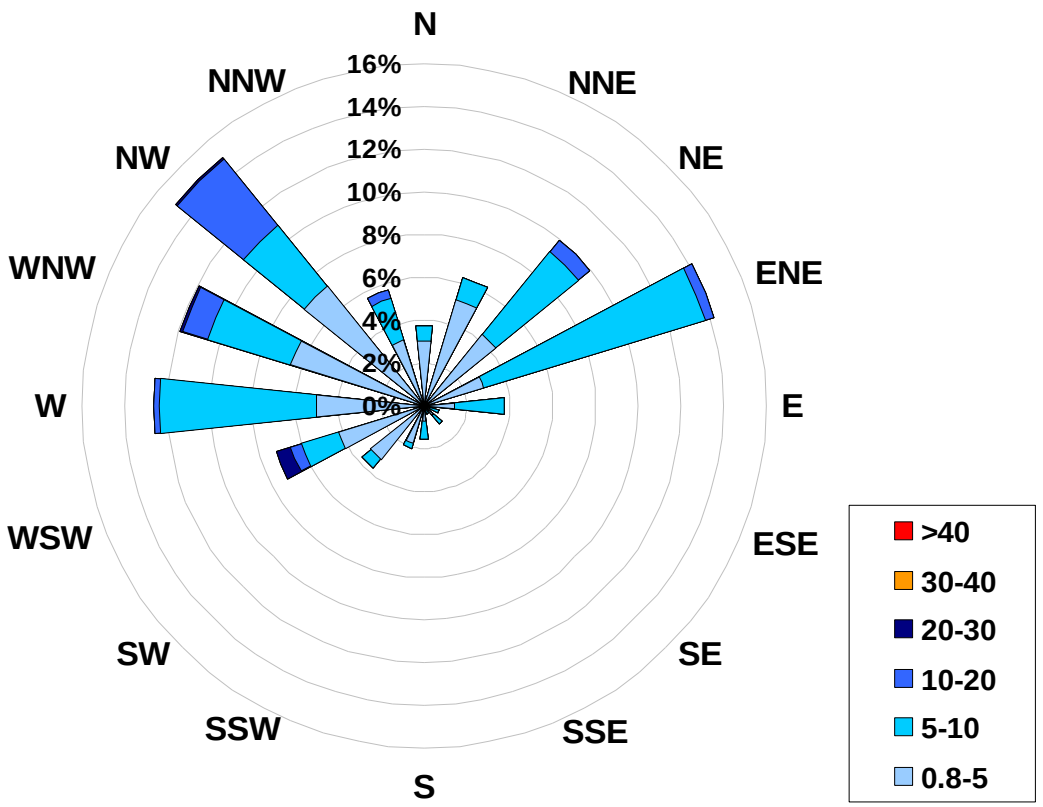
**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 37 | 59 | 22 | 12 | 20 | 17 | 12 | 35 | 27 | 15 | 46 | 22 | 36 | 15 | 15 | 14 | 11 | 8 | 7 | 9 | 16 | 22 | 6 | 5 | 58.7 |
| 2-Nov-06 | 6 | 15 | 15 | 9 | 12 | 12 | 9 | 10 | 11 | 14 | 15 | 18 | 18 | 18 | 23 | 13 | 15 | 10 | 11 | 11 | 11 | 16 | 17 | 13 | 22.6 |
| 3-Nov-06 | 14 | 14 | 18 | 17 | 14 | 17 | 14 | 11 | 11 | 21 | 28 | 62 | 28 | 25 | 28 | 16 | 16 | 24 | 15 | 25 | 29 | 23 | 20 | 19 | 61.9 |
| 4-Nov-06 | 36 | 22 | 23 | 18 | 13 | 11 | 13 | 11 | 14 | 15 | 19 | 15 | 15 | 16 | 17 | 13 | 12 | 10 | 11 | 11 | 12 | 17 | 17 | 23 | 35.5 |
| 5-Nov-06 | 19 | 13 | 11 | 13 | 14 | 13 | 13 | 11 | 15 | 19 | 15 | 17 | 14 | 21 | 11 | 15 | 14 | 14 | 34 | 27 | 17 | 34 | 29 | 16 | 34.1 |
| 6-Nov-06 | 12 | 15 | 14 | 15 | 11 | 16 | 22 | 26 | 15 | 18 | 15 | 14 | 18 | 15 | 18 | 28 | 20 | 26 | 48 | 49 | 51 | 51 | 53 | 53 | 53.3 |
| 7-Nov-06 | 26 | 43 | 46 | 60 | 43 | 43 | 54 | 81 | 76 | 57 | 35 | 24 | 14 | 26 | 24 | 28 | 34 | 50 | 29 | 36 | 9 | 14 | 10 | 12 | 80.9 |
| 8-Nov-06 | 13 | 13 | 12 | 13 | 15 | 11 | 12 | 13 | 13 | 14 | 16 | 17 | 15 | 19 | 15 | 16 | 16 | 43 | 43 | 40 | 51 | 42 | 32 | 33 | 51.4 |
| 9-Nov-06 | 17 | 17 | 12 | 16 | 19 | 14 | 12 | 13 | 18 | 22 | 15 | 17 | 10 | 13 | 18 | 15 | 13 | 11 | 18 | 18 | 12 | 12 | 25 | 13 | 25.4 |
| 10-Nov-06 | 16 | 30 | 38 | 28 | 26 | 49 | 22 | 53 | 42 | 59 | 37 | 30 | 46 | 14 | 20 | 17 | 8 | 9 | 11 | 13 | 14 | 7 | 7 | 9 | 59.2 |
| 11-Nov-06 | 13 | 12 | 5 | 8 | 7 | 8 | 7 | 10 | 9 | 14 | 13 | 20 | 17 | 23 | 30 | 19 | 15 | 29 | 34 | 21 | 21 | 23 | 62 | 38 | 62.1 |
| 12-Nov-06 | 49 | 57 | 33 | 45 | 22 | 44 | 59 | 48 | 32 | 79 | 42 | 27 | 30 | 29 | 28 | 42 | 17 | 50 | 32 | 36 | 11 | 53 | 37 | 22 | 79.0 |
| 13-Nov-06 | 39 | 22 | 22 | 9 | 15 | 27 | 17 | 22 | 10 | 9 | 15 | 19 | 16 | 12 | 14 | 12 | 12 | 14 | 12 | 11 | 12 | 13 | 10 | 9 | 39.4 |
| 14-Nov-06 | 15 | 9 | 9 | 53 | 50 | 39 | 40 | 23 | 25 | 38 | 34 | 32 | 31 | 51 | 48 | 43 | 23 | 57 | 26 | 32 | 26 | 23 | 8 | 8 | 57.3 |
| 15-Nov-06 | 8 | 8 | 21 | 11 | 16 | 16 | 11 | 17 | 7 | 10 | 13 | 15 | 16 | 26 | 9 | 9 | 9 | 12 | 26 | 17 | 12 | 10 | 13 | 10 | 26.3 |
| 16-Nov-06 | 13 | 15 | 11 | 7 | 12 | 8 | 8 | 10 | 16 | 20 | 18 | 19 | 39 | 58 | 18 | 15 | 9 | 20 | 17 | 21 | 22 | 30 | 64 | 37 | 64.1 |
| 17-Nov-06 | 62 | 51 | 29 | 28 | 43 | 36 | 53 | 54 | 62 | 31 | 32 | 41 | 36 | 40 | 26 | 40 | 35 | 18 | 30 | 26 | 41 | 28 | 52 | 38 | 62.5 |
| 18-Nov-06 | 37 | 11 | 9 | 58 | 48 | 20 | 11 | 16 | 16 | 14 | 17 | 16 | 19 | 19 | 19 | 13 | 18 | 31 | 37 | 63 | 66 | 46 | 33 | 56 | 66.3 |
| 19-Nov-06 | 51 | 48 | 46 | 71 | 57 | 28 | 32 | 55 | 67 | 66 | 34 | 37 | 17 | 24 | 23 | 48 | 32 | 20 | 14 | 6 | 7 | 8 | 8 | 6 | 71.0 |
| 20-Nov-06 | 6 | 5 | 6 | 39 | 36 | 70 | 37 | 30 | 50 | 76 | 32 | 35 | 34 | 38 | 44 | 24 | 45 | 53 | 39 | 40 | 44 | 20 | 48 | 23 | 75.9 |
| 21-Nov-06 | 12 | 24 | 22 | 9 | 11 | 11 | 11 | 14 | 47 | 38 | 9 | 16 | 15 | 15 | 9 | 12 | 11 | 8 | 11 | 10 | 12 | 11 | 11 | 16 | 47.2 |
| 22-Nov-06 | 19 | 12 | 12 | 11 | 12 | 11 | 16 | 17 | 17 | 15 | 19 | 16 | 16 | 21 | 12 | 14 | 13 | 16 | 10 | 10 | 11 | 11 | 21 | 21 | 21.5 |
| 23-Nov-06 | 17 | 18 | 10 | 21 | 16 | 19 | 20 | 22 | 17 | 17 | 21 | 12 | 10 | 19 | 16 | 15 | 10 | 20 | 8 | 15 | 12 | 13 | 11 | 13 | 21.8 |
| 24-Nov-06 | 13 | 11 | 11 | 14 | 13 | 12 | 12 | 13 | 15 | 13 | 13 | 14 | 12 | 12 | 13 | 15 | 12 | 10 | 12 | 7 | 9 | 10 | 8 | 13 | 15.3 |
| 25-Nov-06 | 12 | 19 | 8 | 12 | 20 | 35 | 31 | 48 | 23 | 28 | 23 | 25 | 28 | 17 | 21 | 23 | 22 | 22 | 39 | 10 | 14 | 33 | 31 | 14 | 47.8 |
| 26-Nov-06 | 17 | 11 | 14 | 12 | 16 | 11 | 10 | 17 | 8 | 6 | 8 | 8 | 8 | 12 | 8 | 14 | 30 | 22 | 14 | 13 | 19 | 19 | 30 | 34 | 33.6 |
| 27-Nov-06 | 14 | 16 | 10 | 10 | 15 | 13 | 14 | 13 | 11 | 13 | 18 | 20 | 21 | 20 | 17 | 14 | 12 | 12 | 10 | 6 | 10 | 23 | 5 | 6 | 22.8 |
| 28-Nov-06 | 7 | 7 | 8 | 8 | 7 | 6 | 9 | 9 | 18 | 15 | 17 | 28 | 29 | 18 | 12 | 12 | 17 | 20 | 45 | 30 | 19 | 31 | 16 | 21 | 44.9 |
| 29-Nov-06 | 32 | 23 | 32 | 25 | 27 | 41 | 40 | 48 | 33 | 25 | 15 | 19 | 21 | 32 | 24 | 26 | 55 | 53 | 33 | 44 | 51 | 42 | 35 | 21 | 54.7 |
| 30-Nov-06 | 14 | 15 | 23 | 61 | 47 | 36 | 59 | 34 | 54 | 9 | 10 | 17 | 14 | 12 | 13 | 11 | 13 | 11 | 11 | 9 | 10 | 14 | 11 | 16 | 61.1 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Max | 62 | 59 | 46 | 71 | 57 | 70 | 59 | 81 | 76 | 79 | 46 | 62 | 46 | 58 | 48 | 48 | 55 | 57 | 48 | 63 | 66 | 53 | 64 | 56 | |

## 1-hr Average Wind Rose (in km/hr) Located at the Evergreen Park Site for November 2006




| Calms: | 0% |
|---|---|

| Frequency Distribution of Wind in km/hr | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.8 | < | 5 | 357 |
| 5 | to | 10 | 301 |
| 10 | to | 20 | 55 |
| 20 | to | 30 | 7 |
| 30 | to | 40 | 0 |
| | > | 40 | 0 |
| Total Non-Zero Values | | | 720 |

# PASZA – Smoky Heights Station

## Monthly Summary Tables, Graphs, and Roses

# PASZA - Smoky Heights - Sulphur Dioxide Monthly Summary

## HOURLY AVERAGE TABLE

**Sulphur Dioxide ($SO_2$)**

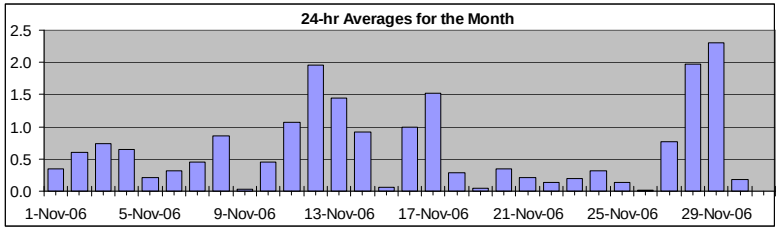
Station: Smoky Heights
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr 172 ppb | 24-hr 57 ppb

**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 1-hr Exceedances: | 0 | | | |
| Number of 24-hr Exceedances: | 0 | | | |
| Maximum 1-hr Average: | 13.9 | ppb | 8-Nov | 14:00 15:00 |
| Maximum 24-hr Average: | 2.3 | ppb | 29-Nov | |




| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 685 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 4.1 | 2.3 | 1.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0.6 ppb | 0.2 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 1 | 0 | 0.3 | 0.9 |
| 2-Nov-06 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | A | 1 | 1 | 2 | 1 | 0.6 | 1.6 |
| 3-Nov-06 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 0 | 1 | 0 | 0 | 1 | 0.7 | 1.4 |
| 4-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | A | 1 | 0 | 0 | 0 | 1 | 0 | 0.6 | 1.4 |
| 5-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | A | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0.2 | 0.8 |
| 6-Nov-06 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 2.0 |
| 7-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 4 | 3 | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0.5 | 3.7 |
| 8-Nov-06 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 14 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0.9 | 13.9 |
| 9-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.4 |
| 10-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | A | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 2 | 1 | 0 | 0.5 | 1.8 |
| 11-Nov-06 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 1 | 1 | 1 | A | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 3 | 4 | 2 | 1 | 0 | 2 | 1.1 | 4.2 |
| 12-Nov-06 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | A | 0 | 12 | 8 | 6 | 0 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2.0 | 12.1 |
| 13-Nov-06 | 1 | 0 | 2 | 1 | 2 | 0 | 1 | 1 | A | 1 | 2 | 1 | 1 | 1 | 0 | 2 | 2 | 1 | 3 | 2 | 2 | 2 | 2 | 2 | 1.5 | 2.5 |
| 14-Nov-06 | 3 | 2 | 2 | 1 | 1 | 2 | 2 | A | 1 | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0.9 | 2.7 |
| 15-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.4 |
| 16-Nov-06 | 1 | 0 | 0 | 1 | 1 | A | 1 | 1 | 0 | 1 | 2 | 1 | 2 | 3 | 2 | 2 | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1.0 | 2.6 |
| 17-Nov-06 | 1 | 1 | 0 | 1 | A | 1 | 0 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | 1 | 3 | 4 | 4 | 2 | 2 | 2 | 1 | 1 | 1 | 1.5 | 4.2 |
| 18-Nov-06 | 1 | 1 | 1 | A | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 1.3 |
| 19-Nov-06 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.7 |
| 20-Nov-06 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0.3 | 2.1 |
| 21-Nov-06 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | A | 0.2 | 1.2 |
| 22-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0.1 | 0.9 |
| 23-Nov-06 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | A | 0 | 0 | 0.2 | 1.0 |
| 24-Nov-06 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | A | 1 | 0 | 0 | 0.3 | 1.3 |
| 25-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | A | 0 | 0 | 0 | 1 | 0.1 | 1.0 |
| 26-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.2 |
| 27-Nov-06 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 2 | A | 2 | 2 | 1 | 2 | 1 | 1 | 0.8 | 2.0 |
| 28-Nov-06 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 0 | 1 | 1 | 2 | 2 | 3 | 3 | A | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2.0 | 3.3 |
| 29-Nov-06 | 1 | 1 | 2 | 2 | 2 | 3 | 1 | 2 | 3 | 4 | 3 | C | C | C | C | A | 5 | 4 | 3 | 2 | 2 | 2 | 1 | 0 | 2.3 | 4.7 |
| 30-Nov-06 | 0 | 0 | 0 | 0 | 0 | A | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 1.3 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 0.6 | 0.5 | 0.5 | 0.6 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.5 | 0.6 | 0.8 | 0.7 | 0.8 | 1.0 | 0.8 | 0.9 | 0.8 | 0.9 | 0.7 | 0.7 | 0.7 | 0.5 | 0.6 | | |
| Hourly Max | 2.7 | 2.1 | 2.4 | 2.3 | 2.4 | 3.0 | 1.8 | 2.2 | 2.9 | 3.7 | 3.0 | 12.1 | 8.4 | 6.2 | 13.9 | 3.7 | 4.7 | 4.1 | 3.4 | 4.2 | 3.0 | 2.2 | 2.4 | 2.3 | | |

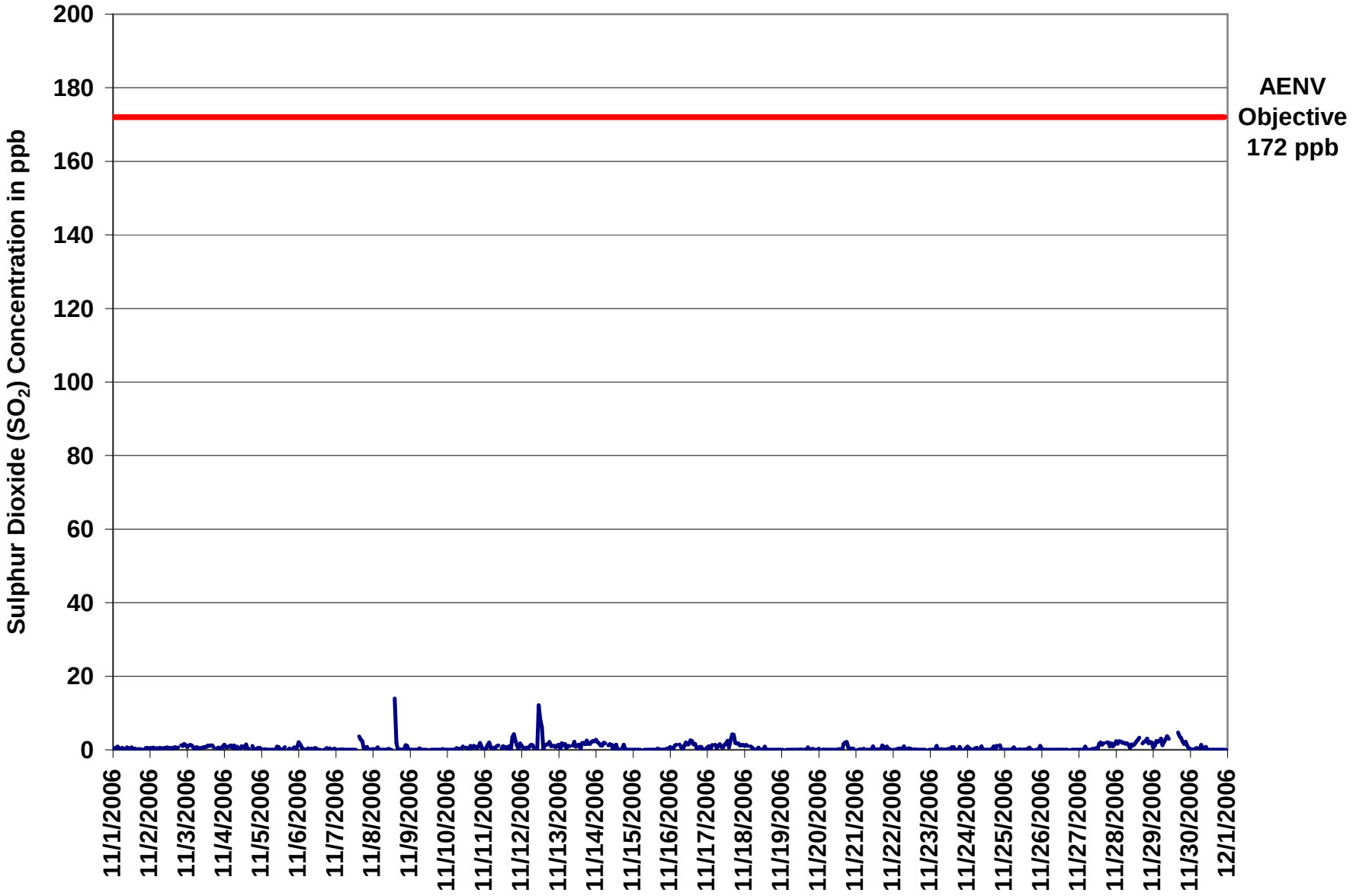


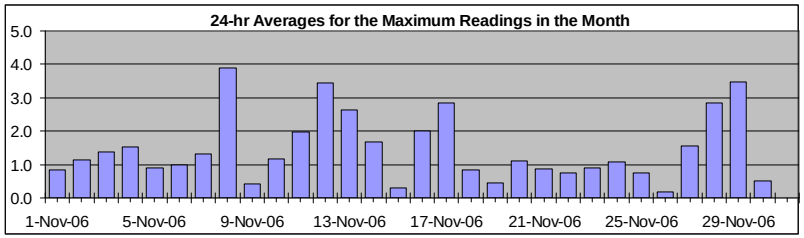

**Figure 27. PASZA - Smoky Heights Sulphur Dioxide 1-hr Average Monthly Trend**

Station: Smoky Heights
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

## Sulphur Dioxide ($SO_2$)

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 67.4 | ppb | 8-Nov | 14:00 15:00 |
| Maximum 24-hr Value: | 3.9 | ppb | 8-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 685 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 6.4 | 3.5 | 1.9 | 1.0 | 0.5 | 0.0 | 0.0 | 1.4 ppb | 1.0 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | A | 1 | 1 | 1 | 0.8 | 1.3 |
| 2-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 2 | 2 | 2 | 2 | 1.1 | 2.1 |
| 3-Nov-06 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | A | 1 | 1 | 1 | 1 | 2 | 1.4 | 2.2 |
| 4-Nov-06 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | A | 2 | 1 | 1 | 1 | 1 | 1 | 1.5 | 2.4 |
| 5-Nov-06 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 0 | 2 | 2 | A | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 0.9 | 2.1 |
| 6-Nov-06 | 3 | 2 | 2 | 1 | 0 | 0 | 2 | 0 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | A | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 1 | 1.0 | 3.1 |
| 7-Nov-06 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | A | 8 | 5 | 4 | 1 | 1 | 2 | 1 | 0 | 1 | 1.3 | 8.5 |
| 8-Nov-06 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | A | 67 | 5 | 1 | 1 | 0 | 1 | 0 | 3 | 3 | 1 | 3.9 | 67.4 |
| 9-Nov-06 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | A | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0.4 | 1.4 |
| 10-Nov-06 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 1 | 1 | 2 | A | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 3 | 2 | 1 | 1.2 | 3.0 |
| 11-Nov-06 | 0 | 1 | 3 | 3 | 1 | 1 | 1 | 1 | 2 | 2 | A | 2 | 2 | 2 | 1 | 1 | 2 | 1 | 6 | 6 | 3 | 3 | 1 | 3 | 2.0 | 5.8 |
| 12-Nov-06 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | A | 1 | 18 | 13 | 10 | 1 | 3 | 3 | 3 | 3 | 1 | 2 | 2 | 1 | 2 | 3.5 | 18.3 |
| 13-Nov-06 | 2 | 1 | 3 | 3 | 4 | 2 | 2 | 2 | A | 2 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 4 | 2 | 2 | 3 | 4 | 4 | 2.6 | 4.0 |
| 14-Nov-06 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | A | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 1 | 1.7 | 3.3 |
| 15-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | 0.3 | 1.5 |
| 16-Nov-06 | 1 | 2 | 1 | 2 | 2 | A | 3 | 1 | 1 | 2 | 3 | 3 | 2 | 5 | 4 | 2 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 2.0 | 4.7 |
| 17-Nov-06 | 2 | 2 | 1 | 3 | A | 3 | 1 | 3 | 2 | 2 | 2 | 2 | 4 | 4 | 2 | 5 | 6 | 5 | 3 | 3 | 3 | 2 | 3 | 2 | 2.9 | 6.4 |
| 18-Nov-06 | 2 | 2 | 2 | A | 2 | 1 | 1 | 1 | 1 | 2 | 0 | 0 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.8 | 2.1 |
| 19-Nov-06 | 1 | 1 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | 0.5 | 2.2 |
| 20-Nov-06 | 2 | A | 2 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 4 | 3 | 3 | 1 | 1 | 1 | 1 | 0 | 1.1 | 4.4 |
| 21-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 1 | 0 | 2 | 2 | 0 | 2 | 2 | 1 | A | 0.9 | 2.5 |
| 22-Nov-06 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0.8 | 1.8 |
| 23-Nov-06 | 1 | 0 | 0 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 0 | 1 | 1 | 1 | 1 | A | 1 | 2 | 0.9 | 1.8 |
| 24-Nov-06 | 2 | 1 | 1 | 0 | 1 | 2 | 2 | 0 | 2 | 2 | 1 | 1 | 0 | 1 | 1 | 0 | 2 | 2 | 0 | 2 | A | 2 | 0 | 1 | 1.1 | 2.3 |
| 25-Nov-06 | 0 | 1 | 0 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | A | 0 | 0 | 1 | 2 | 0.8 | 2.3 |
| 26-Nov-06 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0.2 | 1.0 |
| 27-Nov-06 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 3 | 2 | 3 | A | 4 | 4 | 1 | 3 | 2 | 2 | 1.5 | 3.8 |
| 28-Nov-06 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | A | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 2.8 | 4.4 |
| 29-Nov-06 | 1 | 3 | 3 | 3 | 4 | 4 | 2 | 3 | 4 | 5 | 4 | C | C | C | C | A | 7 | 7 | 4 | 3 | 3 | 3 | 2 | 1 | 3.5 | 7.1 |
| 30-Nov-06 | 1 | 1 | 0 | 1 | 1 | A | 1 | 3 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 2.5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 1.3 | 1.2 | 1.3 | 1.2 | 1.1 | 1.1 | 1.2 | 1.0 | 1.0 | 1.2 | 1.2 | 1.7 | 1.5 | 1.7 | 3.6 | 1.8 | 1.8 | 1.8 | 1.7 | 1.3 | 1.3 | 1.4 | 1.1 | 1.3 | | |
| Hourly Max | 3.3 | 3.1 | 3.5 | 3.4 | 3.8 | 4.2 | 2.9 | 2.8 | 4.0 | 4.8 | 3.9 | 18.3 | 13.3 | 10.5 | 67.4 | 8.5 | 7.1 | 6.6 | 5.8 | 5.6 | 4.4 | 3.4 | 3.6 | 4.0 | | |

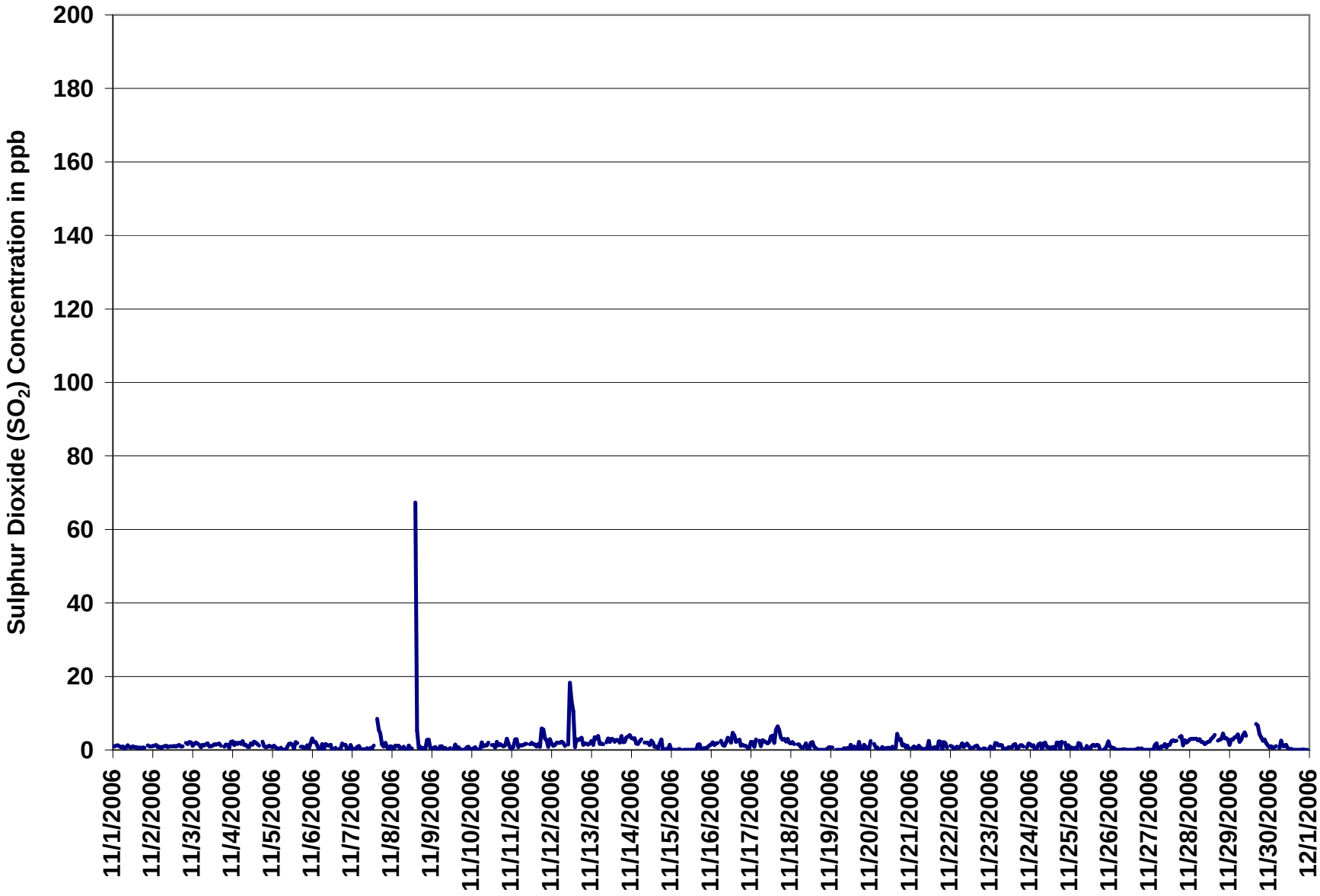
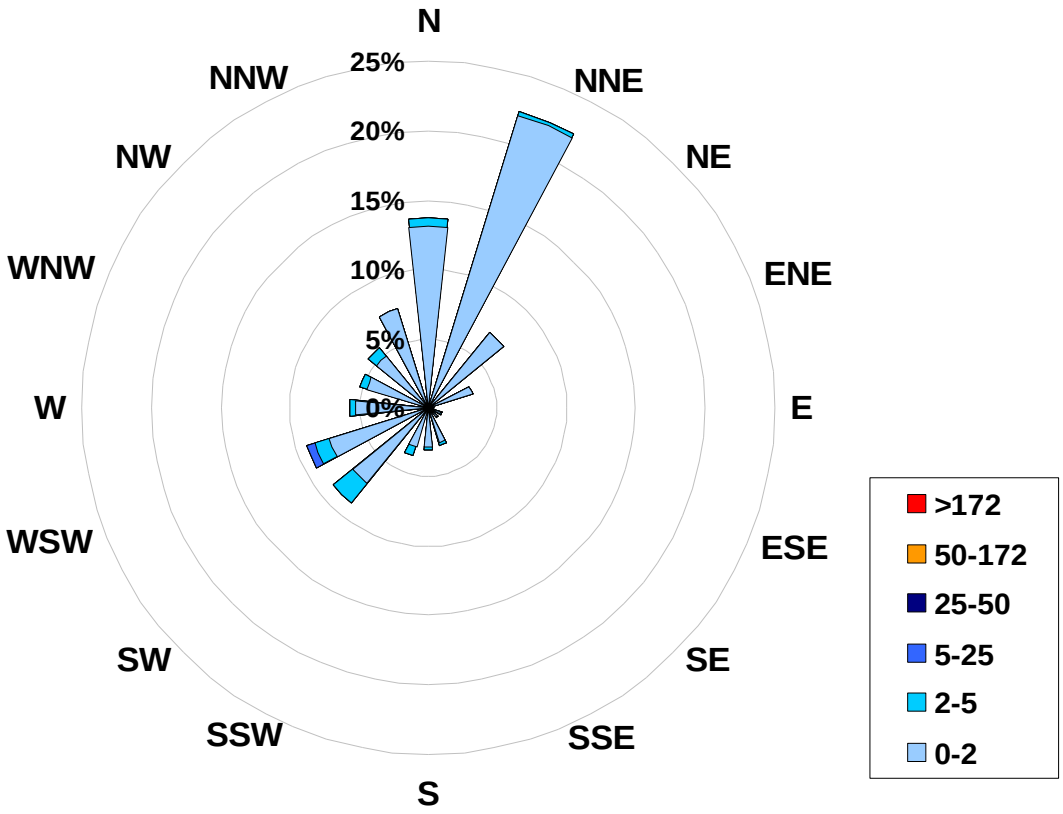



**Figure 28. PASZA - Smoky Heights Sulphur Dioxide Instantaneous (30 Second) Maximum Value Monthly Trend**

## 1-hr Average Concentration Rose for Sulphur Dioxide (in ppb) Located at the Smoky Heights Site for November 2006




| Calms: | 0% |
|---|---|

| Frequency Distribution of $SO_2$ in ppb | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.0 | < | 2 | 635 |
| 2 | to | 5 | 46 |
| 5 | to | 25 | 4 |
| 25 | to | 50 | 0 |
| 50 | to | 172 | 0 |
| | > | 172 | 0 |
| Total Non-Zero Values | | | 685 |

# PASZA - Smoky Heights - Total Reduced Sulphur Monthly Summary

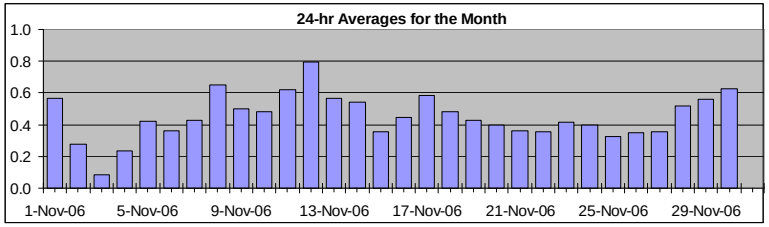
## HOURLY AVERAGE TABLE

**Total Reduced Sulphur (TRS)**

Station: Smoky Heights
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr na ppb | 24-hr na ppb




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 4.5 | ppb | 8-Nov | 14:00 15:00 |
| Maximum 24-hr Value: | 0.8 | ppb | 12-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 685 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 0.9 | 0.7 | 0.5 | 0.4 | 0.3 | 0.2 | 0.0 | 0.4 ppb | 0.4 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0.6 | 0.9 |
| 2-Nov-06 | 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 |
| 3-Nov-06 | 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 |
| 4-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.4 |
| 5-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | A | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0.4 | 0.6 |
| 6-Nov-06 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.6 |
| 7-Nov-06 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.4 | 0.6 |
| 8-Nov-06 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 5 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0.6 | 4.5 |
| 9-Nov-06 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | A | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0.5 | 0.7 |
| 10-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0.5 | 0.6 |
| 11-Nov-06 | 0 | 0 | 0 | 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 |
| 12-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.1 |
| 13-Nov-06 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | A | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0.6 | 0.9 |
| 14-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.7 |
| 15-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0.4 | 0.6 |
| 16-Nov-06 | 1 | 0 | 0 | 0 | 0 | A | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.6 |
| 17-Nov-06 | 0 | 0 | 0 | 0 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 0.8 |
| 18-Nov-06 | 1 | 1 | 1 | A | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0.5 | 0.9 |
| 19-Nov-06 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.6 |
| 20-Nov-06 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.5 |
| 21-Nov-06 | 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 |
| 22-Nov-06 | 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 | 0.4 |
| 23-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 1 | 1 | 0.4 | 1.4 |
| 24-Nov-06 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0.4 | 0.5 |
| 25-Nov-06 | 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 |
| 26-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.5 |
| 27-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.5 |
| 28-Nov-06 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 1.0 |
| 29-Nov-06 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | C | C | C | C | A | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0.6 | 0.8 |
| 30-Nov-06 | 0 | 0 | 0 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 1.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 0.4 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.4 | 0.4 | 0.6 | 0.5 | 0.4 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.4 | | |
| Hourly Max | 1.0 | 0.9 | 0.9 | 0.7 | 0.8 | 0.8 | 1.1 | 0.8 | 1.0 | 0.9 | 0.8 | 0.9 | 0.8 | 0.9 | 4.5 | 0.9 | 0.9 | 1.0 | 0.7 | 0.8 | 0.8 | 0.7 | 1.4 | 0.8 | | |

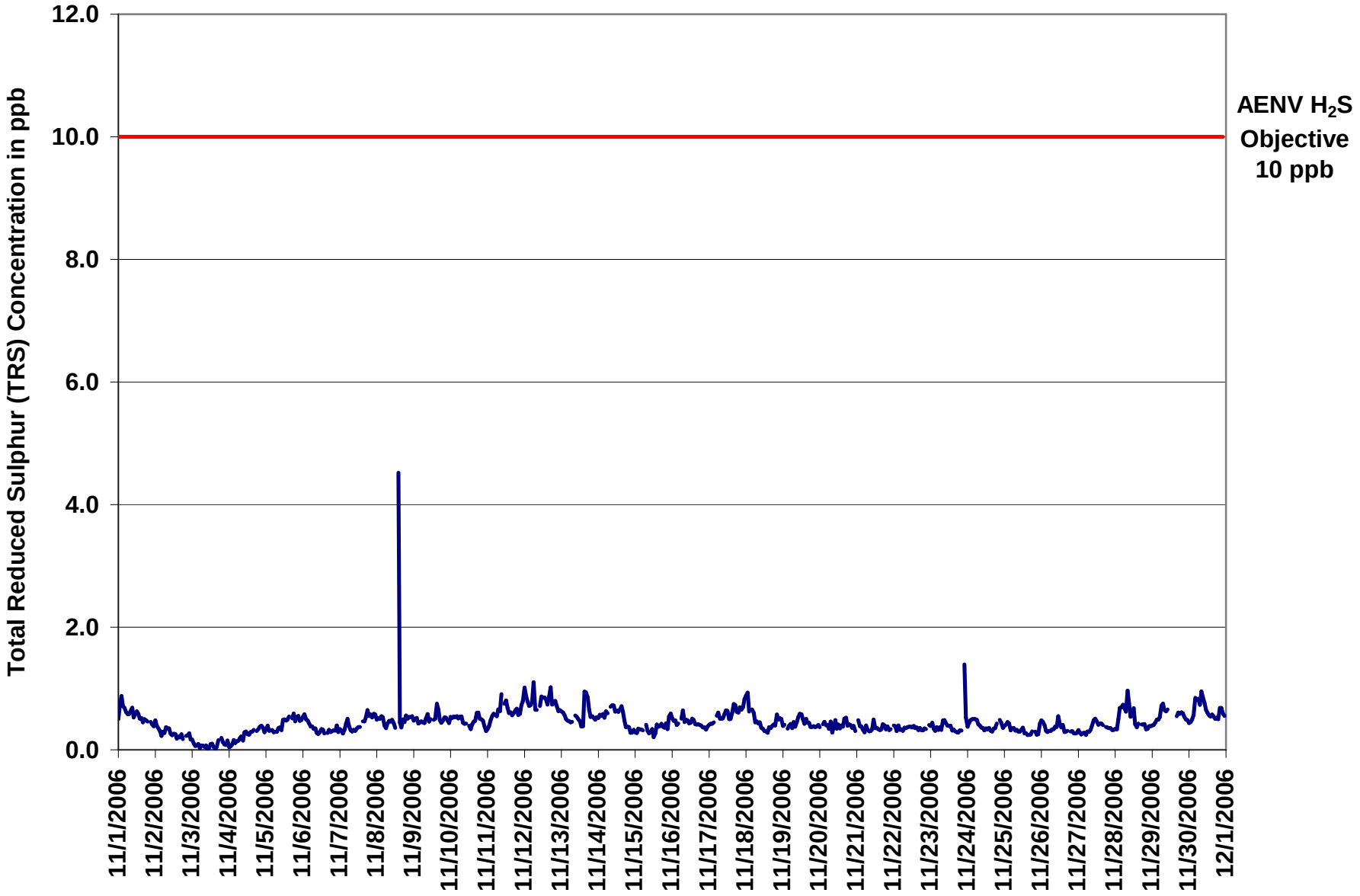


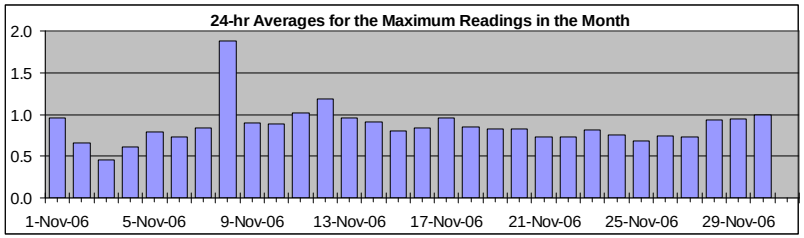

**Figure 29. PASZA - Smoky Heights Total Reduced Sulphur 1-hr Average Monthly Trend**

Station: Smoky Heights
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

## Total Reduced Sulphur (TRS)

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 23.6 | ppb | 8-Nov | 14:00 15:00 |
| Maximum 24-hr Value: | 1.9 | ppb | 8-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 685 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 1.5 | 1.2 | 0.9 | 0.8 | 0.7 | 0.6 | 0.4 | 0.9 ppb | 0.8 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 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 | 1.5 |
| 2-Nov-06 | 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 |
| 3-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | A | 1 | 1 | 0 | 0 | 0 | 0.5 | 0.6 |
| 4-Nov-06 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 0.8 |
| 5-Nov-06 | 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 |
| 6-Nov-06 | 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 |
| 7-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.1 |
| 8-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 24 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.9 | 23.6 |
| 9-Nov-06 | 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 |
| 10-Nov-06 | 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 | 1.1 |
| 11-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.0 | 1.4 |
| 12-Nov-06 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.2 | 1.6 |
| 13-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.0 | 1.4 |
| 14-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9 | 1.2 |
| 15-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.5 |
| 16-Nov-06 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.0 |
| 17-Nov-06 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.0 | 1.3 |
| 18-Nov-06 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.4 |
| 19-Nov-06 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.0 |
| 20-Nov-06 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.5 |
| 21-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 0.7 | 0.9 |
| 22-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 0.7 | 1.0 |
| 23-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 2 | 1 | 0.8 | 2.2 |
| 24-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 0.8 | 1.0 |
| 25-Nov-06 | 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 |
| 26-Nov-06 | 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 |
| 27-Nov-06 | 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 |
| 28-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9 | 1.6 |
| 29-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | C | C | C | C | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9 | 1.2 |
| 30-Nov-06 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.0 | 1.5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 | 1.6 | 0.9 | 0.9 | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | | |
| Hourly Max | 1.6 | 1.4 | 1.5 | 1.1 | 1.2 | 1.2 | 1.6 | 1.2 | 1.6 | 1.4 | 1.1 | 1.2 | 1.2 | 1.2 | 23.6 | 1.4 | 1.5 | 1.5 | 1.2 | 1.1 | 1.2 | 1.2 | 2.2 | 1.3 | | |

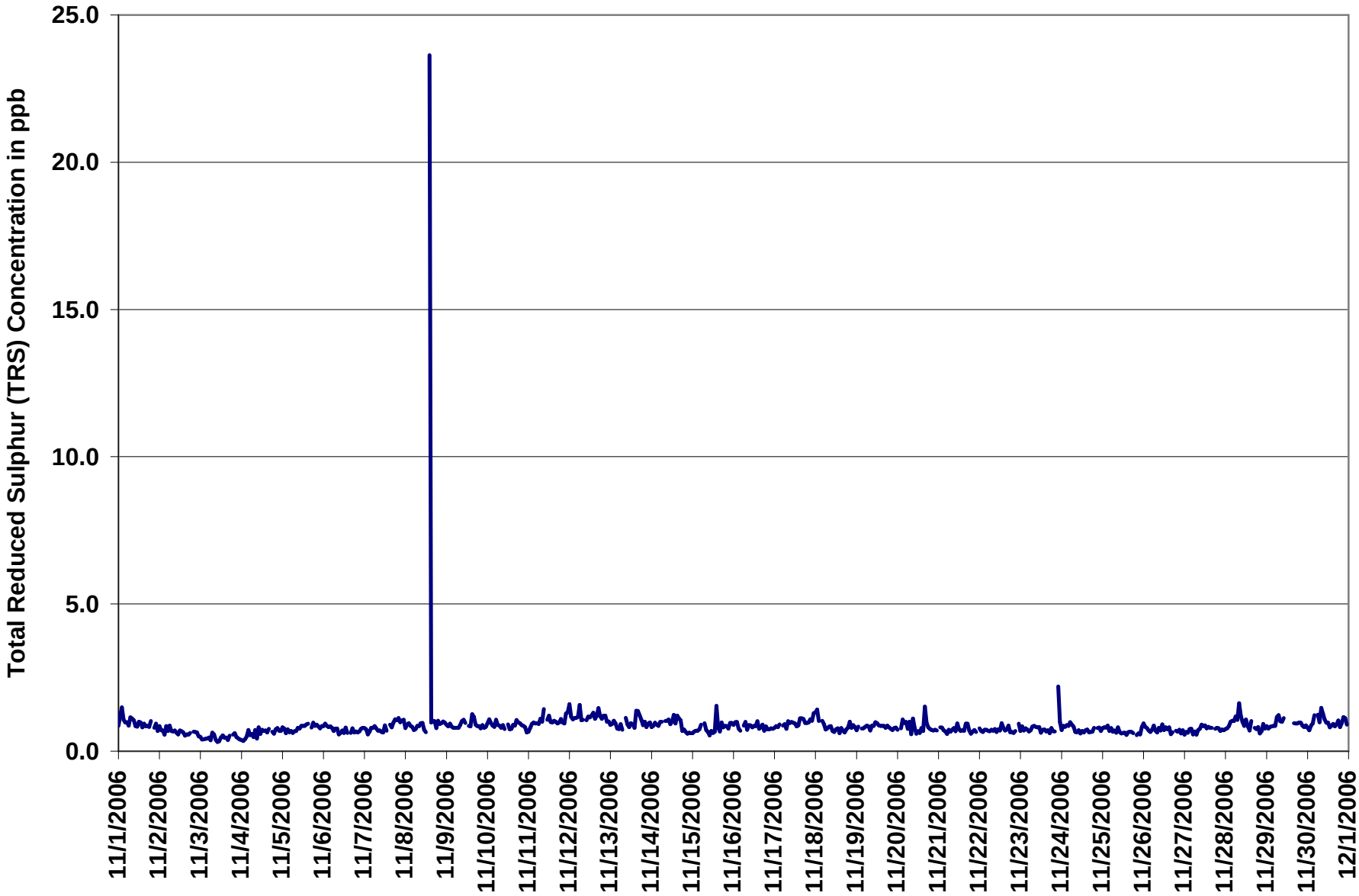
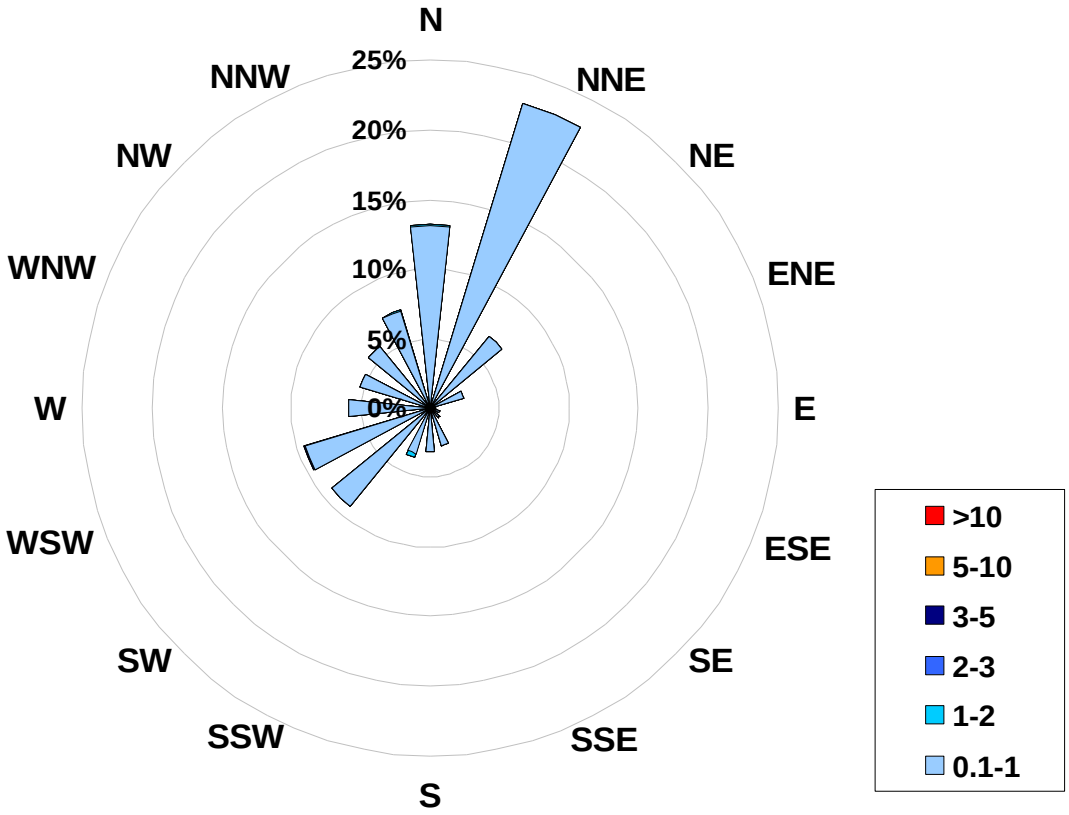



**Figure 30. PASZA - Smoky Heights Total Reduced Sulphur Instantaneous (30 Second) Maximum Value Monthly Trend**

**1-hr Average Concentration Rose for Total Reduced Sulphur (in ppb)**
**Located at the Smoky Heights Site for November 2006**




| Calms: | 0% |
|---|---|

| Frequency Distribution of TRS in ppb | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.1 | < | 1 | 680 |
| 1 | to | 2 | 4 |
| 2 | to | 3 | 0 |
| 3 | to | 5 | 1 |
| 5 | to | 10 | 0 |
| | > | 10 | 0 |
| Total Non-Zero Values | | | 685 |

# PASZA - Smoky Heights - Particulate Matter (less than 2.5 microns) Monthly Summary

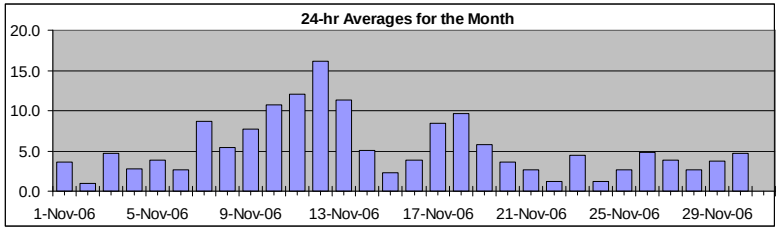
Station: Smoky Heights
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Particulate Matter ($PM_{2.5}$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Draft Objective Limit:** **Alberta Environment:** 1-hr - µg/m³ | 24-hr 30 µg/m³




**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 24-hr Exceedances (draft): | 0 | | | |
| Maximum 1-hr Average: | 51.2 | µg/m³ | 20-Nov | 16:00 17:00 |
| Maximum 24-hr Value: | 16.2 | µg/m³ | 12-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 718 hrs |
| Calibration Time: | 1 hrs | AMD Operational Uptime: | 99.9% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average / Median | Geomean |
|---|---|---|---|---|---|---|---|---|---|
| | 39.3 | 18.8 | 7.2 | 2.7 | 1.1 | 0.0 | 0.0 | 5.4 3 µg/m˜ | 4.3 µg/m˜ |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 3 | 7 | 5 | 3 | 6 | 5 | 4 | 3 | 5 | 6 | 7 | 8 | 7 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3.7 | 17.4 |
| 2-Nov-06 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 1.0 | 11.3 |
| 3-Nov-06 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 3 | 1 | 1 | 1 | 2 | 2 | 3 | 13 | 38 | 21 | 11 | 0 | 0 | 1 | 2 | 4.7 | 37.8 |
| 4-Nov-06 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 1 | 1 | 1 | 3 | 4 | 0 | 2 | 9 | 0 | 0 | 0 | 0 | 8 | 11 | 4 | 1 | 5 | 2.8 | 11.2 |
| 5-Nov-06 | 2 | 2 | 3 | 4 | 4 | 3 | 3 | 5 | 6 | 3 | 4 | 2 | 2 | 1 | 3 | 4 | 1 | 0 | 34 | D | 0 | 0 | 2 | 1 | 3.9 | 33.6 |
| 6-Nov-06 | 10 | 2 | 11 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 2 | 3 | 14 | 0 | 7 | 3 | 3 | 7 | 0 | 2.7 | 14.4 |
| 7-Nov-06 | 4 | 1 | 0 | 1 | 2 | 3 | 2 | 2 | 3 | 6 | 8 | 8 | 7 | 7 | 12 | 14 | 27 | 30 | 37 | 8 | 3 | 11 | 7 | 5 | 8.7 | 36.6 |
| 8-Nov-06 | 4 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 2 | 3 | 2 | 14 | 17 | 48 | 13 | 11 | 0 | 0 | 5.4 | 48.5 |
| 9-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 15 | 13 | 6 | 5 | 4 | 2 | 4 | 13 | 21 | 24 | 12 | 4 | 16 | 19 | 14 | 5 | 7.8 | 23.7 |
| 10-Nov-06 | 9 | 11 | 13 | 14 | 14 | 14 | 15 | 18 | 15 | 11 | 9 | 7 | 9 | 6 | 8 | 7 | 6 | 13 | 11 | 12 | 11 | 9 | 9 | 8 | 10.7 | 17.7 |
| 11-Nov-06 | 8 | 10 | 11 | 11 | 9 | 8 | 8 | 7 | 7 | 8 | 8 | 10 | 6 | 7 | 9 | 8 | 9 | 10 | 11 | 11 | 9 | 10 | 45 | 49 | 12.0 | 48.6 |
| 12-Nov-06 | 42 | 45 | 8 | 5 | 6 | 9 | 10 | 8 | 9 | 11 | 13 | 15 | 24 | 19 | 13 | 13 | 12 | 12 | 15 | 14 | 37 | 21 | 15 | 11 | 16.2 | 45.4 |
| 13-Nov-06 | 23 | 12 | 12 | 9 | 9 | 11 | 11 | 15 | 21 | 25 | 15 | 14 | 12 | 12 | 6 | 10 | 9 | 7 | 6 | 7 | 6 | 6 | 6 | 6 | 11.3 | 25.3 |
| 14-Nov-06 | 6 | 7 | 8 | 6 | 6 | 7 | 6 | 5 | 8 | 8 | 7 | 2 | 1 | 4 | 5 | 11 | 20 | 3 | 0 | 0 | 1 | 1 | 0 | 0 | 5.0 | 19.6 |
| 15-Nov-06 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 13 | 0 | 3 | 11 | 19 | 2 | 3 | 2.3 | 18.8 |
| 16-Nov-06 | 6 | 6 | 5 | 4 | 5 | 5 | 3 | 3 | 4 | 4 | 4 | 4 | 3 | 5 | 5 | 3 | 5 | 2 | 3 | 3 | 3 | 2 | 2 | 4 | 3.9 | 5.7 |
| 17-Nov-06 | 5 | 4 | 5 | 4 | 7 | 3 | 5 | 6 | 6 | 7 | 7 | 8 | 6 | 5 | 6 | 7 | 12 | 22 | 21 | 16 | 10 | 10 | 10 | 10 | 8.4 | 21.6 |
| 18-Nov-06 | 14 | 22 | 40 | 6 | 3 | 5 | 4 | 4 | 10 | 3 | 3 | 3 | 3 | 4 | 3 | 4 | 4 | 5 | 3 | 19 | 45 | 7 | 7 | 10 | 9.6 | 44.7 |
| 19-Nov-06 | 24 | 24 | 7 | 0 | 2 | 2 | 2 | 1 | 4 | 20 | 9 | 11 | 2 | 1 | 6 | 6 | 0 | 1 | 4 | 8 | 0 | 0 | 2 | 0 | 5.8 | 24.4 |
| 20-Nov-06 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 1 | 0 | 51 | 14 | 0 | 6 | 1 | 5 | 0 | 2 | 3.6 | 51.2 |
| 21-Nov-06 | 2 | 1 | 3 | 2 | 2 | 1 | 3 | 2 | 4 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 28 | 10 | 1 | 1 | 1 | 1 | 0 | 2.7 | 27.6 |
| 22-Nov-06 | 0 | 1 | 2 | 5 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 4 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 1.2 | 4.8 |
| 23-Nov-06 | 4 | 1 | 1 | 3 | 1 | 0 | 3 | 9 | 37 | 9 | 5 | 8 | 5 | 3 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 4.5 | 36.7 |
| 24-Nov-06 | 2 | 3 | 2 | 3 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1.2 | 2.7 |
| 25-Nov-06 | 1 | 2 | 2 | 4 | 0 | 1 | 1 | 2 | 1 | 1 | 13 | 14 | 8 | 2 | 0 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 3 | 2.7 | 13.7 |
| 26-Nov-06 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 4 | 3 | 7 | 20 | 6 | 1 | 4 | 8 | 9 | 15 | 14 | 2 | 2 | 1 | 4.8 | 20.3 |
| 27-Nov-06 | 2 | 2 | 4 | 2 | 1 | 2 | 2 | 2 | 10 | 20 | 13 | 12 | 3 | 1 | 0 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 3.9 | 20.0 |
| 28-Nov-06 | 2 | 2 | 3 | 2 | 1 | 1 | 2 | 2 | 2 | 3 | 4 | 5 | 4 | 3 | 3 | 5 | 4 | 3 | 2 | 2 | 4 | 2 | 2 | 3 | 2.7 | 4.8 |
| 29-Nov-06 | 4 | 4 | 4 | 4 | 4 | 7 | 8 | 8 | 6 | 3 | 3 | 4 | 3 | 4 | C | 0 | 0 | 0 | 2 | 2 | 4 | 5 | 2 | 7 | 3.8 | 8.2 |
| 30-Nov-06 | 0 | 3 | 2 | 5 | 6 | 8 | 7 | 5 | 23 | 17 | 8 | 2 | 2 | 2 | 3 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 4.7 | 22.7 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 6.5 | 5.9 | 5.2 | 3.5 | 3.2 | 3.5 | 3.7 | 4.1 | 6.8 | 6.4 | 5.3 | 5.2 | 4.3 | 4.6 | 3.8 | 4.1 | 7.2 | 9.0 | 7.5 | 7.3 | 7.1 | 5.2 | 4.9 | 4.8 | | |
| Hourly Max | 42.2 | 45.4 | 39.7 | 13.8 | 13.8 | 13.5 | 15.4 | 17.7 | 36.7 | 25.3 | 15.1 | 14.7 | 24.3 | 20.3 | 12.9 | 14.1 | 51.2 | 37.8 | 36.6 | 48.5 | 44.7 | 21.2 | 44.9 | 48.6 | | |

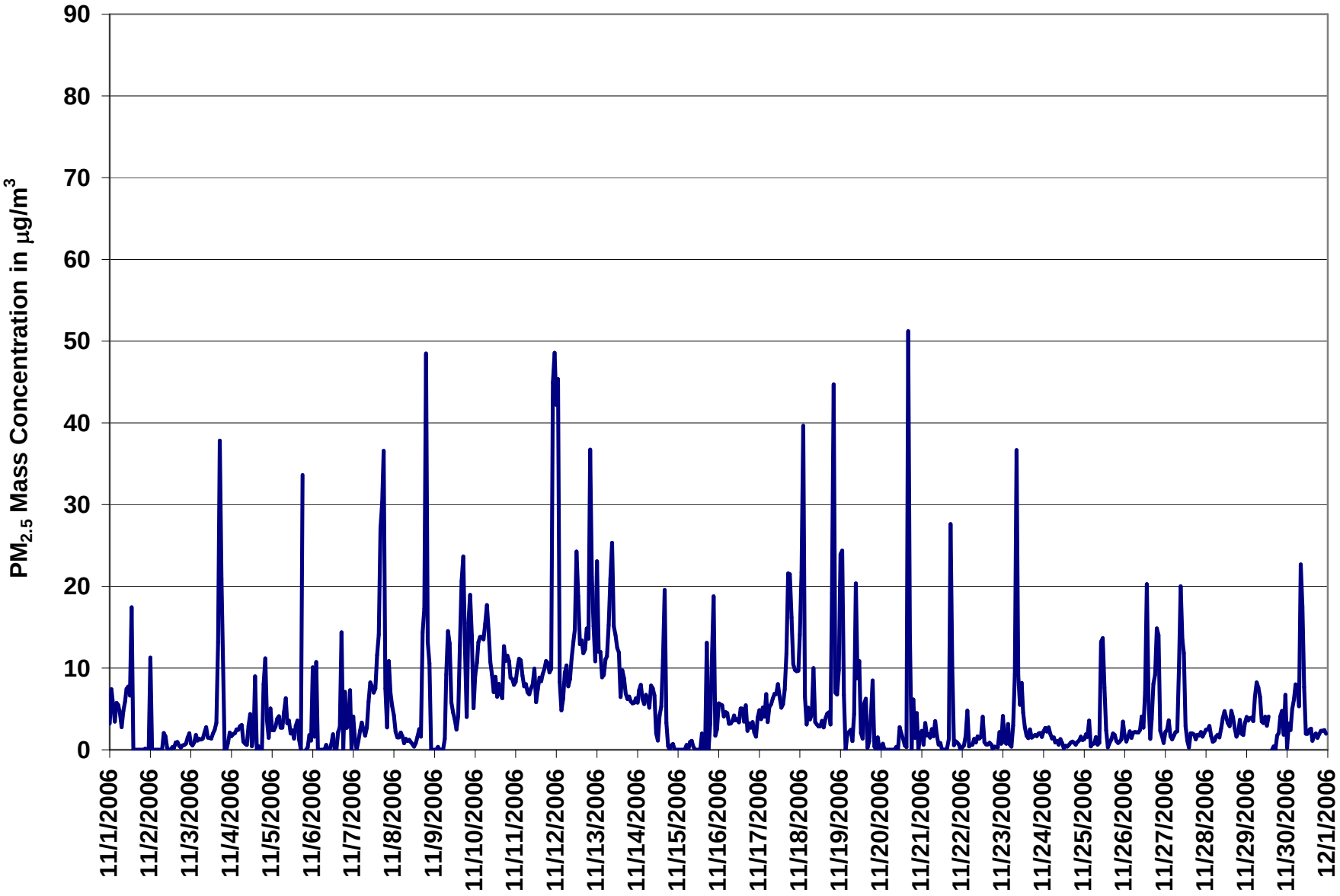


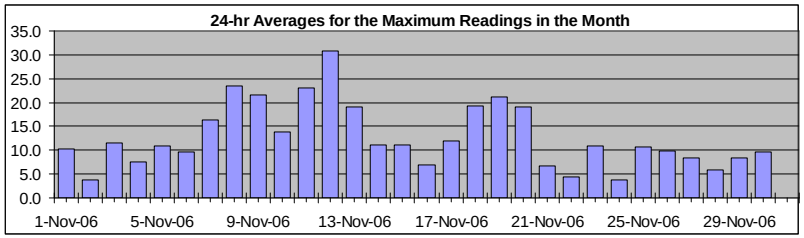

**Figure 31. PASZA - Smoky Heights Particulate Matter (less than 2.5 microns) 1-hr Average Monthly Trend**

Station: Smoky Heights
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

**Particulate Matter ($PM_{2.5}$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 256.5 | µg/m³ | 20-Nov | 16:00 17:00 |
| Maximum 24-hr Value: | 30.8 | µg/m³ | 12-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 718 hrs |
| Calibration Time: | 1 hrs | AMD Operational Uptime: | 99.9% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average / Median | Geomean |
|---|---|---|---|---|---|---|---|---|---|
| | 101.0 | 47.7 | 11.7 | 6.3 | 3.6 | 1.7 | 0.7 | 12.7 / 6 µg/m³ | 11.1 µg/m³ |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 5 | 11 | 8 | 7 | 8 | 7 | 7 | 5 | 9 | 10 | 13 | 10 | 56 | 76 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 10.3 | 76.3 |
| 2-Nov-06 | 24 | 4 | 2 | 2 | 1 | 2 | 1 | 2 | 9 | 7 | 2 | 3 | 1 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 5 | 4 | 3.7 | 23.5 |
| 3-Nov-06 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 6 | 3 | 3 | 3 | 4 | 5 | 6 | 34 | 95 | 36 | 46 | 2 | 1 | 4 | 4 | 11.6 | 94.9 |
| 4-Nov-06 | 4 | 4 | 5 | 4 | 4 | 5 | 5 | 3 | 3 | 2 | 6 | 9 | 3 | 11 | 24 | 4 | 3 | 2 | 3 | 27 | 25 | 7 | 6 | 11 | 7.5 | 27.1 |
| 5-Nov-06 | 8 | 5 | 5 | 5 | 6 | 5 | 5 | 8 | 9 | 8 | 8 | 4 | 5 | 4 | 13 | 9 | 3 | 2 | 111 | D | 6 | 5 | 12 | 6 | 11.0 | 111.4 |
| 6-Nov-06 | 32 | 14 | 25 | 1 | 3 | 1 | 4 | 4 | 4 | 2 | 4 | 6 | 7 | 3 | 4 | 5 | 8 | 34 | 3 | 16 | 9 | 16 | 17 | 8 | 9.6 | 34.4 |
| 7-Nov-06 | 10 | 8 | 3 | 5 | 7 | 7 | 6 | 7 | 7 | 10 | 11 | 11 | 8 | 9 | 22 | 30 | 40 | 57 | 56 | 19 | 5 | 24 | 21 | 9 | 16.3 | 56.6 |
| 8-Nov-06 | 7 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 8 | 19 | 101 | 90 | 176 | 61 | 42 | 11 | 2 | 23.5 | 175.6 |
| 9-Nov-06 | 2 | 2 | 4 | 4 | 5 | 3 | 6 | 19 | 19 | 17 | 9 | 7 | 6 | 6 | 6 | 21 | 70 | 63 | 45 | 12 | 53 | 68 | 63 | 8 | 21.6 | 70.0 |
| 10-Nov-06 | 12 | 14 | 16 | 17 | 17 | 17 | 19 | 21 | 19 | 13 | 13 | 9 | 11 | 10 | 12 | 9 | 8 | 19 | 14 | 14 | 14 | 15 | 11 | 11 | 13.8 | 21.0 |
| 11-Nov-06 | 10 | 13 | 13 | 13 | 11 | 9 | 9 | 9 | 8 | 11 | 10 | 16 | 10 | 11 | 12 | 11 | 11 | 13 | 16 | 14 | 12 | 25 | 155 | 132 | 23.0 | 155.2 |
| 12-Nov-06 | 113 | 101 | 31 | 17 | 10 | 11 | 12 | 11 | 10 | 15 | 16 | 21 | 31 | 24 | 17 | 16 | 17 | 15 | 17 | 16 | 112 | 50 | 37 | 20 | 30.8 | 113.3 |
| 13-Nov-06 | 99 | 20 | 15 | 11 | 13 | 13 | 14 | 31 | 27 | 54 | 22 | 17 | 15 | 22 | 8 | 12 | 11 | 9 | 7 | 8 | 8 | 7 | 8 | 8 | 19.0 | 99.2 |
| 14-Nov-06 | 8 | 10 | 10 | 10 | 8 | 9 | 9 | 8 | 11 | 10 | 9 | 9 | 4 | 7 | 8 | 23 | 96 | 6 | 2 | 3 | 4 | 3 | 1 | 4 | 11.2 | 96.0 |
| 15-Nov-06 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 3 | 3 | 2 | 3 | 0 | 0 | 2 | 19 | 0 | 1 | 77 | 42 | 11 | 38 | 39 | 6 | 10 | 11.2 | 77.3 |
| 16-Nov-06 | 11 | 9 | 9 | 6 | 7 | 7 | 5 | 6 | 5 | 7 | 6 | 6 | 7 | 8 | 9 | 6 | 8 | 4 | 6 | 5 | 4 | 6 | 6 | 9 | 6.8 | 10.6 |
| 17-Nov-06 | 8 | 8 | 9 | 9 | 11 | 6 | 9 | 10 | 11 | 11 | 9 | 12 | 10 | 11 | 7 | 12 | 17 | 26 | 24 | 22 | 13 | 12 | 13 | 12 | 12.0 | 26.1 |
| 18-Nov-06 | 17 | 40 | 82 | 28 | 9 | 8 | 7 | 7 | 18 | 5 | 6 | 6 | 6 | 6 | 5 | 6 | 9 | 8 | 5 | 66 | 62 | 24 | 11 | 21 | 19.3 | 82.0 |
| 19-Nov-06 | 98 | 99 | 30 | 1 | 6 | 4 | 4 | 4 | 27 | 37 | 25 | 47 | 7 | 7 | 13 | 24 | 2 | 3 | 29 | 30 | 4 | 3 | 3 | 1 | 21.2 | 99.4 |
| 20-Nov-06 | 2 | 2 | 1 | 1 | 0 | 1 | 1 | 1 | 3 | 2 | 1 | 12 | 3 | 3 | 2 | 2 | 256 | 89 | 2 | 32 | 12 | 18 | 4 | 5 | 19.0 | 256.5 |
| 21-Nov-06 | 8 | 2 | 10 | 6 | 4 | 5 | 5 | 7 | 8 | 5 | 4 | 3 | 3 | 4 | 3 | 3 | 4 | 46 | 20 | 2 | 3 | 3 | 3 | 2 | 6.8 | 45.5 |
| 22-Nov-06 | 2 | 3 | 4 | 10 | 2 | 4 | 2 | 4 | 3 | 4 | 4 | 4 | 23 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 6 | 3 | 4.3 | 23.3 |
| 23-Nov-06 | 11 | 3 | 4 | 11 | 3 | 3 | 7 | 43 | 49 | 30 | 12 | 21 | 18 | 9 | 5 | 4 | 5 | 4 | 4 | 4 | 3 | 4 | 5 | 3 | 11.0 | 49.1 |
| 24-Nov-06 | 5 | 5 | 4 | 5 | 5 | 3 | 4 | 4 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 5 | 4 | 3.7 | 5.2 |
| 25-Nov-06 | 3 | 5 | 5 | 9 | 2 | 3 | 3 | 4 | 2 | 4 | 59 | 62 | 25 | 15 | 9 | 3 | 3 | 8 | 8 | 4 | 3 | 4 | 4 | 8 | 10.7 | 61.8 |
| 26-Nov-06 | 5 | 5 | 4 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 8 | 5 | 18 | 34 | 15 | 4 | 6 | 19 | 20 | 26 | 19 | 7 | 5 | 4 | 9.9 | 34.3 |
| 27-Nov-06 | 5 | 7 | 9 | 5 | 3 | 5 | 5 | 4 | 23 | 28 | 25 | 19 | 12 | 4 | 4 | 6 | 5 | 4 | 4 | 4 | 4 | 5 | 4 | 5 | 8.3 | 28.4 |
| 28-Nov-06 | 6 | 6 | 6 | 5 | 4 | 4 | 5 | 6 | 4 | 5 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 6 | 4 | 5 | 8 | 5 | 5 | 6 | 5.8 | 8.0 |
| 29-Nov-06 | 9 | 7 | 7 | 8 | 7 | 11 | 10 | 12 | 11 | 6 | 6 | 6 | 5 | 6 | C | 3 | 3 | 3 | 7 | 5 | 13 | 15 | 8 | 23 | 8.4 | 23.3 |
| 30-Nov-06 | 4 | 8 | 5 | 9 | 9 | 9 | 10 | 8 | 65 | 35 | 10 | 7 | 4 | 5 | 5 | 3 | 4 | 4 | 3 | 5 | 5 | 5 | 5 | 4 | 9.6 | 65.2 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 17.7 | 14.1 | 11.3 | 7.4 | 5.9 | 5.8 | 6.1 | 8.8 | 12.7 | 11.9 | 10.5 | 11.6 | 10.4 | 10.6 | 8.5 | 8.2 | 22.0 | 24.2 | 19.7 | 20.0 | 17.1 | 14.0 | 14.8 | 11.6 | | |
| Hourly Max | 113.3 | 101.1 | 82.0 | 27.9 | 16.7 | 17.2 | 18.7 | 43.3 | 65.2 | 53.9 | 58.9 | 61.8 | 55.6 | 76.3 | 24.2 | 29.5 | 256.5 | 100.7 | 111.4 | 175.6 | 112.0 | 67.6 | 155.2 | 132.2 | | |

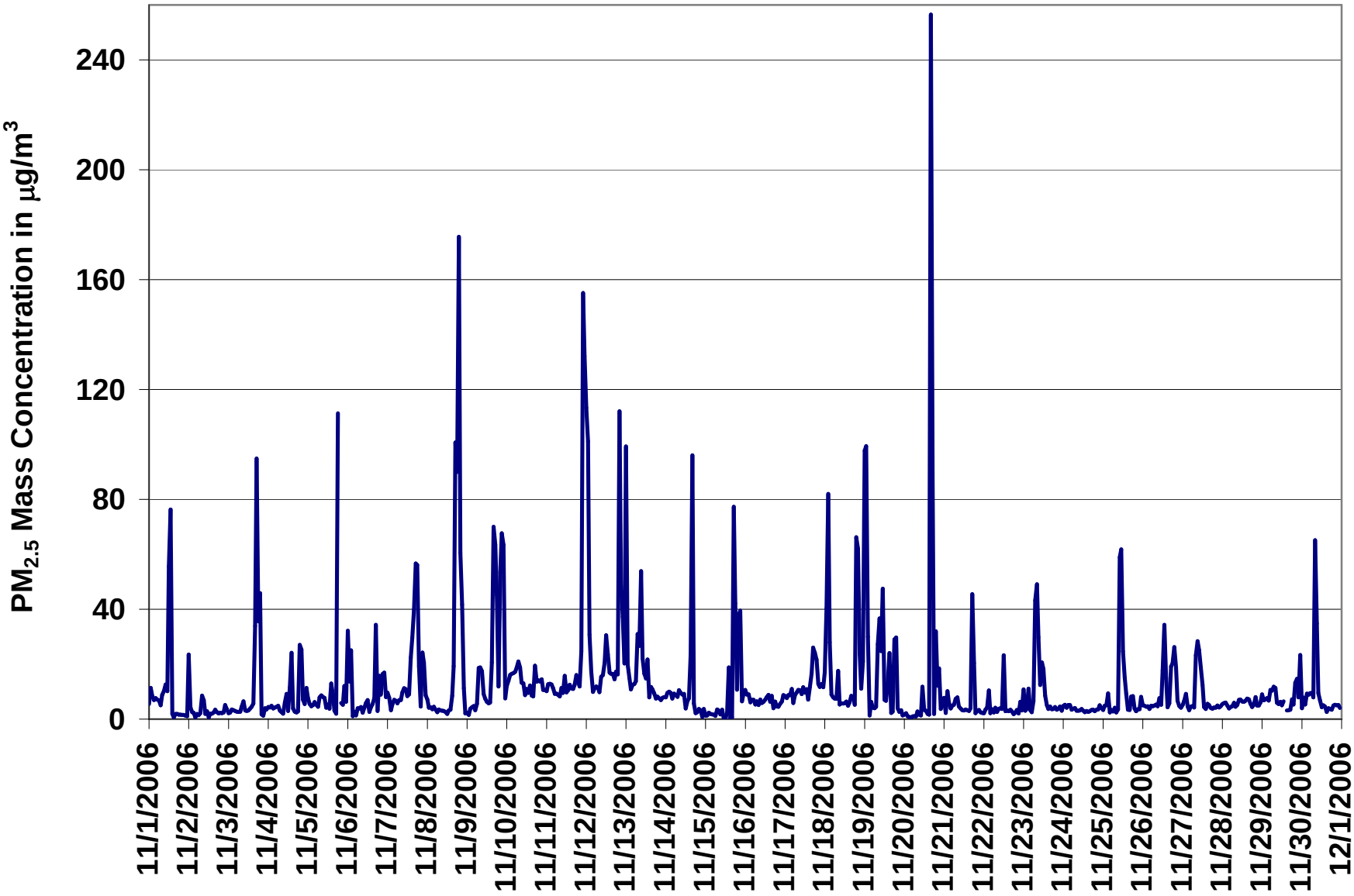
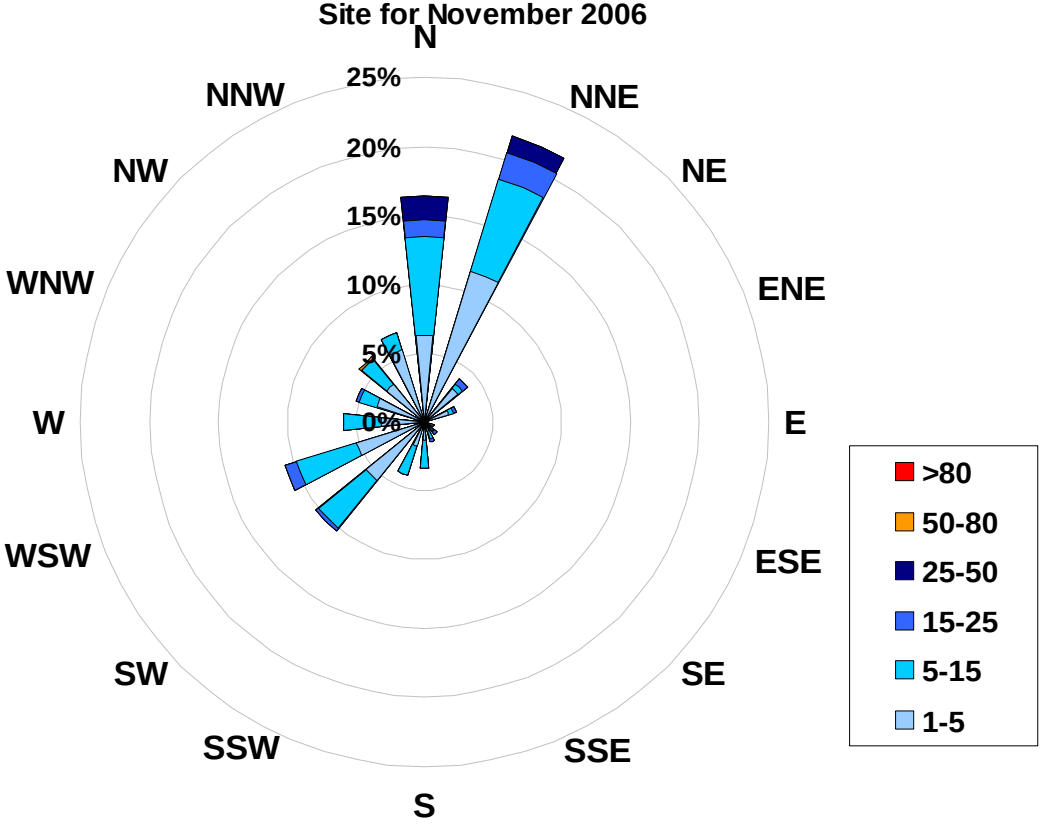



**Figure 32. PASZA - Smoky Heights Particulate Matter (less than 2.5 microns) Instantaneous (30 Second) Maximum Value Monthly Trend**

**1-hr Average Concentration Rose for Particulate Matter (less than 2.5 microns) (in micrograms per cubic meter) Located at the Smoky Heights Site for November 2006**




| Calms: | 0% |
|---|---|

| Frequency Distribution of $PM_{2.5}$ in $\mu g/m^3$ | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 1.0 | < | 5 | 468 |
| 5 | to | 15 | 202 |
| 15 | to | 25 | 31 |
| 25 | to | 50 | 16 |
| 50 | to | 80 | 1 |
| | > | 80 | 0 |
| Total Non-Zero Values | | | 718 |

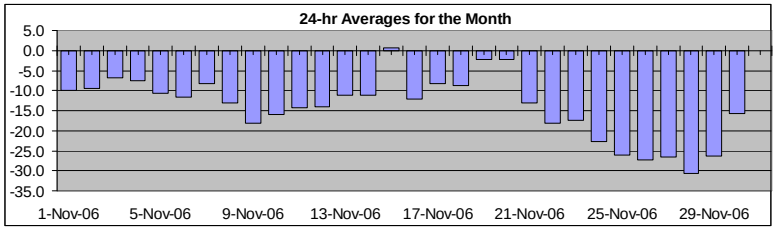
# PASZA - Smoky Heights - Temperature Monthly Summary

Station: Smoky Heights
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Ambient Temperature (T)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 5.1 | °C | 19-Nov | 18:00 19:00 |
| Maximum 24-hr Value: | 0.7 | °C | 15-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 720 hrs |
| Calibration Time: | 0 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 3.4 | -0.7 | -8.2 | -12.7 | -18.3 | -29.2 | -33.0 | -14.0 °C | -12.7 °C |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | -15 | -14 | -13 | -13 | -13 | -12 | -13 | -13 | -14 | -13 | -10 | -8 | -7 | -5 | -5 | -6 | -7 | -7 | -7 | -7 | -8 | -8 | -8 | -9 | -9.8 | -5.0 |
| 2-Nov-06 | -11 | -12 | -12 | -12 | -13 | -13 | -13 | -12 | -12 | -11 | -10 | -9 | -9 | -8 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -9.5 | -6.6 |
| 3-Nov-06 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -7 | -7 | -6 | -5 | -5 | -5 | -5 | -6 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -6.8 | -4.6 |
| 4-Nov-06 | -7 | -7 | -7 | -7 | -7 | -7 | -8 | -8 | -8 | -8 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -8 | -8 | -8 | -8 | -8 | -8 | -7.5 | -6.9 |
| 5-Nov-06 | -9 | -9 | -9 | -9 | -9 | -10 | -10 | -10 | -10 | -9 | -9 | -8 | -8 | -8 | -9 | -9 | -10 | -12 | -14 | -15 | -16 | -15 | -16 | -15 | -10.7 | -8.2 |
| 6-Nov-06 | -14 | -14 | -13 | -14 | -14 | -14 | -14 | -13 | -13 | -13 | -12 | -12 | -11 | -11 | -10 | -10 | -10 | -10 | -10 | -10 | -9 | -9 | -10 | -10 | -11.6 | -9.3 |
| 7-Nov-06 | -10 | -10 | -11 | -11 | -11 | -11 | -11 | -11 | -11 | -9 | -7 | -6 | -6 | -5 | -5 | -4 | -5 | -7 | -7 | -8 | -8 | -9 | -9 | -8 | -8.3 | -4.0 |
| 8-Nov-06 | -9 | -11 | -12 | -12 | -13 | -13 | -13 | -13 | -13 | -13 | -12 | -12 | -12 | -11 | -11 | -11 | -12 | -12 | -13 | -15 | -17 | -18 | -20 | -20 | -13.2 | -9.4 |
| 9-Nov-06 | -19 | -20 | -21 | -22 | -22 | -23 | -22 | -23 | -19 | -17 | -16 | -15 | -13 | -12 | -12 | -12 | -14 | -16 | -17 | -18 | -20 | -20 | -20 | -21 | -18.1 | -12.0 |
| 10-Nov-06 | -20 | -20 | -20 | -22 | -22 | -22 | -23 | -22 | -21 | -19 | -18 | -15 | -14 | -13 | -12 | -11 | -11 | -11 | -12 | -12 | -12 | -11 | -11 | -11 | -16.0 | -10.6 |
| 11-Nov-06 | -11 | -11 | -11 | -11 | -11 | -12 | -12 | -13 | -15 | -16 | -16 | -12 | -12 | -15 | -14 | -15 | -16 | -18 | -19 | -17 | -16 | -16 | -15 | -14 | -14.2 | -10.9 |
| 12-Nov-06 | -16 | -17 | -16 | -15 | -15 | -15 | -15 | -15 | -15 | -15 | -15 | -15 | -15 | -14 | -14 | -14 | -13 | -13 | -12 | -12 | -12 | -12 | -12 | -13 | -14.1 | -11.5 |
| 13-Nov-06 | -14 | -15 | -13 | -13 | -13 | -12 | -12 | -12 | -12 | -11 | -11 | -10 | -9 | -9 | -9 | -9 | -10 | -10 | -10 | -10 | -10 | -11 | -11 | -12 | -11.2 | -8.8 |
| 14-Nov-06 | -14 | -15 | -14 | -14 | -17 | -18 | -18 | -19 | -18 | -17 | -15 | -13 | -12 | -11 | -10 | -10 | -9 | -7 | -5 | -4 | -3 | -2 | -1 | -1 | -11.2 | -1.0 |
| 15-Nov-06 | -1 | -1 | -1 | -1 | -1 | 0 | 0 | 0 | 1 | 2 | 4 | 4 | 2 | 3 | 2 | 2 | 2 | 2 | 1 | 1 | 0 | 0 | -1 | -4 | 0.7 | 3.7 |
| 16-Nov-06 | -8 | -10 | -11 | -12 | -13 | -13 | -14 | -13 | -14 | -15 | -14 | -11 | -11 | -11 | -10 | -9 | -11 | -13 | -12 | -11 | -11 | -14 | -15 | -14 | -12.0 | -7.9 |
| 17-Nov-06 | -14 | -13 | -12 | -10 | -7 | -10 | -11 | -11 | -12 | -11 | -11 | -9 | -6 | -5 | -4 | -5 | -6 | -7 | -6 | -6 | -6 | -6 | -7 | -7 | -8.4 | -4.4 |
| 18-Nov-06 | -6 | -6 | -5 | -5 | -7 | -9 | -9 | -10 | -10 | -10 | -10 | -10 | -9 | -9 | -9 | -9 | -10 | -10 | -10 | -10 | -9 | -9 | -9 | -8 | -8.7 | -5.0 |
| 19-Nov-06 | -8 | -8 | -8 | -8 | -7 | -7 | -7 | -8 | -7 | -6 | -4 | -3 | 0 | 0 | -1 | 1 | 4 | 4 | 5 | 4 | 4 | 4 | 3 | 2 | -2.3 | 5.1 |
| 20-Nov-06 | 1 | 0 | -1 | -2 | -2 | -3 | -3 | -4 | -3 | -2 | -4 | -4 | -2 | -1 | -2 | -2 | -3 | -5 | -4 | -4 | -3 | -1 | 0 | 1 | -2.3 | 1.2 |
| 21-Nov-06 | -3 | -9 | -11 | -12 | -13 | -13 | -13 | -13 | -13 | -13 | -12 | -12 | -12 | -13 | -13 | -14 | -14 | -15 | -15 | -15 | -16 | -16 | -17 | -17 | -13.1 | -3.2 |
| 22-Nov-06 | -18 | -18 | -18 | -18 | -18 | -19 | -19 | -19 | -19 | -19 | -18 | -18 | -18 | -18 | -18 | -18 | -18 | -18 | -19 | -18 | -18 | -18 | -18 | -18 | -18.2 | -17.5 |
| 23-Nov-06 | -18 | -18 | -18 | -17 | -17 | -17 | -18 | -18 | -18 | -18 | -18 | -18 | -17 | -17 | -17 | -17 | -17 | -18 | -18 | -17 | -18 | -18 | -17 | -18 | -17.5 | -16.9 |
| 24-Nov-06 | -18 | -19 | -19 | -20 | -20 | -20 | -20 | -20 | -20 | -20 | -20 | -20 | -20 | -21 | -21 | -23 | -24 | -25 | -27 | -28 | -28 | -29 | -29 | -29 | -22.6 | -18.3 |
| 25-Nov-06 | -30 | -31 | -31 | -27 | -25 | -26 | -26 | -26 | -26 | -25 | -25 | -25 | -24 | -24 | -25 | -25 | -25 | -25 | -25 | -26 | -26 | -27 | -26 | -27 | -26.1 | -24.1 |
| 26-Nov-06 | -28 | -28 | -27 | -27 | -27 | -27 | -28 | -28 | -29 | -30 | -28 | -27 | -26 | -26 | -26 | -28 | -28 | -28 | -28 | -27 | -27 | -27 | -26 | -26 | -27.4 | -25.6 |
| 27-Nov-06 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -25 | -25 | -25 | -26 | -26 | -26 | -27 | -27 | -27 | -28 | -28 | -27 | -28 | -26.5 | -24.9 |
| 28-Nov-06 | -29 | -29 | -28 | -29 | -30 | -32 | -33 | -33 | -34 | -34 | -32 | -31 | -30 | -29 | -28 | -28 | -29 | -30 | -31 | -32 | -31 | -31 | -31 | -32 | -30.7 | -27.9 |
| 29-Nov-06 | -32 | -33 | -32 | -33 | -33 | -33 | -34 | -34 | -32 | -30 | -29 | -27 | -26 | -25 | -23 | -22 | -20 | -20 | -20 | -19 | -19 | -19 | -18 | -17 | -26.3 | -17.4 |
| 30-Nov-06 | -17 | -16 | -16 | -17 | -18 | -19 | -19 | -18 | -20 | -19 | -15 | -11 | -12 | -12 | -13 | -14 | -15 | -15 | -15 | -15 | -15 | -16 | -16 | -16 | -15.8 | -10.9 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | -14.4 | -14.9 | -14.9 | -15.0 | -15.1 | -15.4 | -15.7 | -15.7 | -15.7 | -15.2 | -14.3 | -13.2 | -12.6 | -12.2 | -12.2 | -12.3 | -12.6 | -13.1 | -13.1 | -13.4 | -13.5 | -13.6 | -13.7 | -13.9 | | |
| Hourly Max | 1.2 | -0.1 | -0.6 | -0.7 | -0.5 | -0.1 | 0.1 | 0.1 | 1.2 | 2.1 | 3.7 | 3.6 | 2.0 | 2.7 | 2.2 | 1.7 | 3.6 | 4.4 | 5.1 | 3.6 | 3.7 | 3.6 | 2.5 | 1.6 | | |

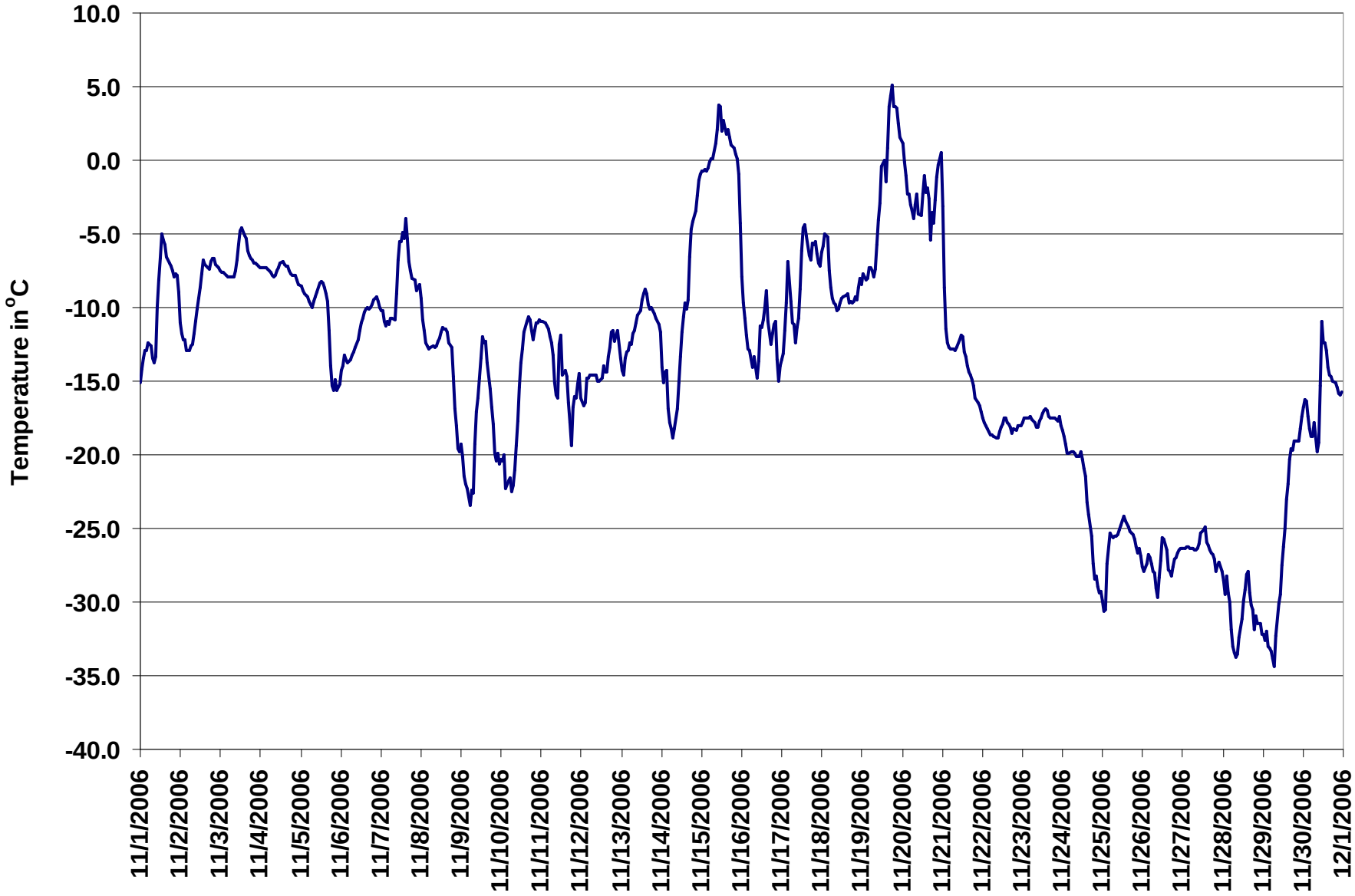



**Figure 33. PASZA - Smoky Heights Temperature 1-hr Average Monthly Trend**

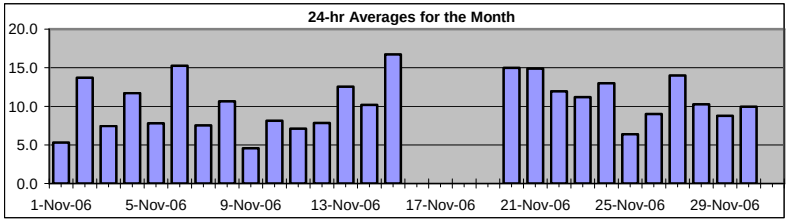
# PASZA - Smoky Heights - Scalar Wind Speed Monthly Summary

Station: Smoky Heights
Station Owner: PASZA

**HOURLY AVERAGE TABLE**

**Wind Speed (WSs)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 40.1 | km/hr | 19-Nov | 19:00 20:00 |
| Maximum 24-hr Value: | 16.7 | km/hr | 15-Nov | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | | | Operational Time: | | | | | 634 hrs |
| Calibration Time: | | 0 hrs | | | AMD Operational Uptime: | | | | | 88.1% |
| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | AverageS | | |
| | 28.1 | 22.0 | 13.6 | 9.7 | 6.2 | 3.4 | 2.3 | 10.6 km/hr | | |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hr Scalar Average | Daily Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 7 | 10 | 6 | 5 | 4 | 4 | 4 | 4 | 5 | 5 | 4 | 3 | 3 | 4 | 3 | 5 | 5 | 6 | 5 | 7 | 8 | 8 | 6 | 7 | 5.3 | 9.6 |
| 2-Nov-06 | 6 | 7 | 8 | 12 | 11 | 11 | 11 | 9 | 11 | 12 | 12 | 17 | 18 | 19 | 17 | 19 | 20 | 18 | 18 | 18 | 16 | 13 | 12 | 12 | 13.7 | 20.1 |
| 3-Nov-06 | 11 | 10 | 11 | 12 | 13 | 11 | 9 | 8 | 8 | 8 | 8 | 6 | 3 | 3 | 4 | 4 | 5 | 6 | 6 | 4 | 6 | 7 | 8 | 8 | 7.5 | 13.0 |
| 4-Nov-06 | 7 | 6 | 6 | 6 | 8 | 8 | 9 | 10 | 10 | 12 | 11 | 12 | 13 | 12 | 14 | 15 | 14 | 15 | 16 | 16 | 16 | 17 | 16 | 14 | 11.7 | 16.9 |
| 5-Nov-06 | 13 | 14 | 13 | 11 | 7 | 7 | 4 | 5 | 4 | 9 | 7 | 6 | 8 | 9 | 10 | 7 | 8 | 8 | 7 | 4 | 8 | 6 | 6 | 6 | 7.8 | 14.4 |
| 6-Nov-06 | 8 | 11 | 12 | 15 | 16 | 20 | 22 | 21 | 17 | 19 | 20 | 19 | 18 | 18 | 17 | 16 | 13 | 14 | 11 | 9 | 10 | 11 | 13 | 15 | 15.3 | 22.2 |
| 7-Nov-06 | 10 | 7 | 6 | 6 | 5 | 3 | 5 | 5 | 5 | 5 | 6 | 7 | 8 | 6 | 6 | 6 | 11 | 12 | 10 | 10 | 16 | 12 | 8 | 9 | 7.5 | 15.6 |
| 8-Nov-06 | 13 | 19 | 18 | 22 | 18 | 14 | 14 | 13 | 11 | 10 | 11 | 11 | 10 | 9 | 11 | 10 | 6 | 4 | 6 | 5 | 5 | 6 | 5 | 5 | 10.7 | 21.9 |
| 9-Nov-06 | 5 | 4 | 3 | 3 | 4 | 2 | 2 | 5 | 4 | 3 | 6 | 7 | 5 | 5 | 8 | 3 | 6 | 6 | 5 | 6 | 5 | 4 | 4 | 3 | 4.6 | 7.8 |
| 10-Nov-06 | 2 | 4 | 4 | 2 | 2 | 2 | 1 | 2 | 3 | 3 | 4 | 4 | 6 | 9 | 8 | 11 | 13 | 12 | 17 | 20 | 20 | 16 | 15 | 13 | 8.1 | 20.3 |
| 11-Nov-06 | 13 | 15 | 13 | 14 | 10 | 4 | 3 | 3 | 4 | 5 | 6 | 4 | 4 | 8 | 7 | 8 | 7 | 5 | 7 | 7 | 3 | 6 | 6 | 9 | 7.1 | 14.6 |
| 12-Nov-06 | 6 | 6 | 5 | 7 | 3 | 8 | 9 | 10 | 9 | 9 | 8 | 7 | 6 | 11 | 12 | 10 | 7 | 6 | 5 | 5 | 9 | 8 | 10 | 11 | 7.8 | 12.3 |
| 13-Nov-06 | 10 | 9 | 12 | 15 | 14 | 13 | 11 | 11 | 10 | 10 | 12 | 12 | 10 | 8 | 9 | 10 | 16 | 19 | 18 | 16 | 14 | 15 | 14 | 12 | 12.5 | 18.9 |
| 14-Nov-06 | 8 | 8 | 7 | 6 | 5 | 5 | 4 | 3 | 5 | 6 | 4 | 6 | 8 | 7 | 3 | 5 | 5 | 15 | 20 | 18 | 20 | 22 | 26 | 28 | 10.2 | 28.3 |
| 15-Nov-06 | 27 | 26 | 25 | 24 | 25 | 21 | 19 | 19 | 25 | 22 | 24 | 24 | 19 | 4 | 6 | 8 | 9 | 7 | 9 | 12 | 12 | 2 | N | N | 16.7 | 26.5 |
| 16-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 17-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 18-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 19-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | 2 | 9 | 10 | 8 | 19 | 19 | 23 | 40 | 27 | 32 | 32 | 30 | N | 40.1 |
| 20-Nov-06 | 34 | 28 | 25 | 23 | 27 | 23 | 17 | 14 | 18 | 19 | 13 | 14 | 17 | 14 | 13 | 7 | 3 | 5 | 5 | 5 | 7 | 8 | 10 | 11 | 15.0 | 33.8 |
| 21-Nov-06 | 18 | 23 | 26 | 32 | 27 | 21 | 20 | 13 | 6 | 3 | 4 | 8 | 12 | 14 | 12 | 10 | 9 | 13 | 11 | 13 | 14 | 15 | 16 | 18 | 14.9 | 32.2 |
| 22-Nov-06 | 15 | 14 | 12 | 11 | 13 | 13 | 13 | 10 | 10 | 9 | 8 | 8 | 10 | 10 | 10 | 11 | 12 | 14 | 12 | 12 | 14 | 16 | 14 | 14 | 11.9 | 16.3 |
| 23-Nov-06 | 13 | 14 | 13 | 11 | 11 | 13 | 14 | 13 | 12 | 12 | 10 | 10 | 11 | 11 | 11 | 9 | 10 | 9 | 11 | 10 | 8 | 7 | 11 | 11 | 11.2 | 14.3 |
| 24-Nov-06 | 14 | 13 | 15 | 17 | 19 | 19 | 18 | 19 | 19 | 21 | 11 | 8 | 11 | 15 | 13 | 12 | 10 | 11 | 10 | 12 | 6 | 6 | 6 | 6 | 13.0 | 20.8 |
| 25-Nov-06 | 6 | 5 | 3 | 7 | 10 | 8 | 6 | 7 | 8 | 7 | 8 | 9 | 7 | 7 | 7 | 7 | 7 | 6 | 5 | 4 | 3 | 5 | 7 | 6 | 6.4 | 9.7 |
| 26-Nov-06 | 3 | 7 | 6 | 4 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 4 | 6 | 8 | 9 | 10 | 9 | 9 | 11 | 14 | 16 | 17 | 17 | 19 | 9.0 | 19.3 |
| 27-Nov-06 | 23 | 22 | 23 | 22 | 19 | 21 | 19 | 17 | 14 | 13 | 14 | 14 | 14 | 11 | 14 | 14 | 11 | 10 | 9 | 6 | 7 | 6 | 6 | 5 | 14.0 | 22.8 |
| 28-Nov-06 | 4 | 8 | 7 | 11 | 11 | 8 | 5 | 10 | 9 | 8 | 9 | 11 | 14 | 16 | 14 | 12 | 10 | 12 | 11 | 11 | 13 | 10 | 9 | 11 | 10.3 | 16.4 |
| 29-Nov-06 | 11 | 13 | 14 | 11 | 6 | 8 | 10 | 10 | 13 | 13 | 12 | 11 | 8 | 9 | 9 | 9 | 7 | 5 | 4 | 3 | 6 | 5 | 7 | 7 | 8.8 | 13.5 |
| 30-Nov-06 | 5 | 3 | 9 | 12 | 11 | 10 | 10 | 15 | 4 | 3 | 5 | 10 | 8 | 7 | 8 | 8 | 7 | 9 | 15 | 17 | 15 | 15 | 16 | 16 | 9.9 | 17.1 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-hr Average | 11.2 | 11.7 | 11.6 | 12.4 | 11.8 | 11.1 | 10.3 | 10.1 | 9.6 | 9.6 | 9.4 | 9.7 | 9.6 | 9.8 | 9.9 | 9.4 | 9.6 | 10.1 | 10.6 | 11.3 | 11.2 | 11.0 | 11.7 | 11.7 | | |
| Hourly Max | 33.8 | 27.6 | 25.8 | 32.2 | 27.1 | 22.6 | 22.2 | 21.0 | 25.0 | 22.3 | 23.8 | 24.3 | 18.8 | 18.9 | 17.2 | 18.8 | 20.1 | 19.1 | 22.6 | 40.1 | 26.9 | 32.0 | 32.0 | 29.9 | | |

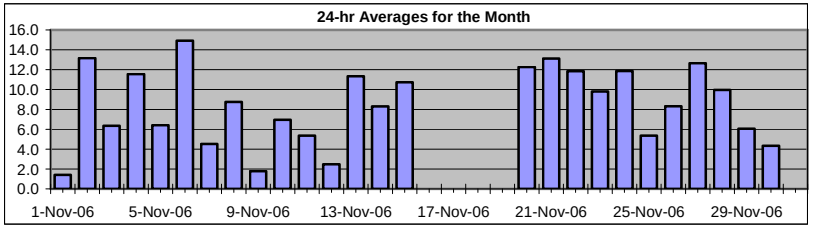
# PASZA - Smoky Heights - Vector Wind Speed Monthly Summary

Station: Smoky Heights
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Wind Speed (WSv)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 39.9 | km/hr | 19-Nov | 19:00 20:00 |
| Maximum 24-hr Value: | 14.9 | km/hr | 6-Nov | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Calm Time: | 3 hrs | **0%** calms | | | Operational Time: | | | 631 hrs | | |
| Calibration Time: | 0 hrs | | | | AMD Operational Uptime: | | | 88.1% | | |
| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | | | AverageV |
| | 28.0 | 21.8 | 13.5 | 9.6 | 5.9 | 2.4 | 1.5 | | | 4.2 km/hr |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** — **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hr Vector Average | Daily Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 7 | 10 | 6 | 4 | 4 | 3 | 4 | 4 | 4 | 5 | 2 | 2 | 1 | 2 | 2 | 4 | 2 | 6 | 5 | 7 | 8 | 8 | 6 | 6 | 1.4 | 9.5 |
| 2-Nov-06 | 6 | 7 | 8 | 12 | 11 | 11 | 11 | 9 | 11 | 12 | 12 | 17 | 18 | 19 | 17 | 19 | 20 | 18 | 18 | 18 | 16 | 12 | 12 | 12 | 13.2 | 20.0 |
| 3-Nov-06 | 11 | 10 | 11 | 12 | 13 | 11 | 9 | 8 | 8 | 8 | 8 | 5 | 3 | 2 | 3 | 4 | 4 | 6 | 6 | 4 | 6 | 7 | 8 | 7 | 6.3 | 12.9 |
| 4-Nov-06 | 6 | 6 | 6 | 5 | 8 | 8 | 9 | 10 | 10 | 12 | 11 | 12 | 13 | 12 | 14 | 15 | 14 | 15 | 16 | 16 | 16 | 17 | 16 | 14 | 11.5 | 16.9 |
| 5-Nov-06 | 13 | 14 | 13 | 11 | 6 | 6 | 3 | 4 | 4 | 8 | 7 | 5 | 8 | 9 | 10 | 7 | 8 | 8 | 7 | 4 | 7 | 6 | 6 | 5 | 6.4 | 14.2 |
| 6-Nov-06 | 8 | 11 | 12 | 15 | 16 | 20 | 22 | 21 | 16 | 19 | 20 | 19 | 18 | 18 | 17 | 16 | 13 | 14 | 11 | 9 | 10 | 11 | 12 | 14 | 14.9 | 22.2 |
| 7-Nov-06 | 9 | 2 | 4 | 4 | 4 | 2 | 3 | 3 | 4 | 5 | 6 | 7 | 7 | 6 | 6 | 3 | 11 | 12 | 10 | 10 | 15 | 12 | 8 | 8 | 4.5 | 15.5 |
| 8-Nov-06 | 12 | 19 | 18 | 22 | 17 | 14 | 14 | 13 | 11 | 10 | 11 | 10 | 10 | 9 | 11 | 7 | 6 | 4 | 4 | 5 | 5 | 5 | 2 | 5 | 8.7 | 21.7 |
| 9-Nov-06 | 5 | 4 | 3 | 3 | 3 | 2 | 1 | 5 | 4 | 3 | 6 | 7 | 5 | 5 | 8 | 2 | 6 | 6 | 5 | 6 | 5 | 4 | 3 | 3 | 1.8 | 7.8 |
| 10-Nov-06 | calm | 4 | 4 | calm | 2 | 2 | calm | 1 | 3 | 3 | 4 | 4 | 6 | 9 | 8 | 11 | 13 | 12 | 17 | 20 | 19 | 16 | 15 | 13 | 7.0 | 20.2 |
| 11-Nov-06 | 13 | 15 | 13 | 14 | 10 | 4 | 2 | 2 | 3 | 4 | 6 | 4 | 3 | 8 | 7 | 7 | 7 | 5 | 7 | 7 | 2 | 5 | 5 | 9 | 5.4 | 14.5 |
| 12-Nov-06 | 6 | 6 | 5 | 6 | 2 | 7 | 9 | 10 | 9 | 9 | 8 | 7 | 6 | 11 | 12 | 10 | 7 | 5 | 5 | 3 | 9 | 8 | 10 | 11 | 2.5 | 12.1 |
| 13-Nov-06 | 10 | 9 | 12 | 15 | 14 | 13 | 11 | 11 | 10 | 10 | 12 | 12 | 10 | 8 | 9 | 10 | 15 | 19 | 18 | 16 | 14 | 15 | 14 | 12 | 11.3 | 18.9 |
| 14-Nov-06 | 7 | 8 | 7 | 5 | 4 | 4 | 4 | 2 | 4 | 6 | 2 | 6 | 8 | 7 | 2 | 5 | 3 | 15 | 20 | 18 | 20 | 22 | 26 | 28 | 8.3 | 28.2 |
| 15-Nov-06 | 26 | 26 | 25 | 24 | 25 | 21 | 19 | 19 | 25 | 22 | 22 | 24 | 18 | 3 | 4 | 7 | 9 | 6 | 9 | 11 | 12 | 2 | N | N | 10.7 | 26.5 |
| 16-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 17-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 18-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 19-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | 2 | 7 | 10 | 7 | 19 | 19 | 19 | 40 | 27 | 32 | 32 | 30 | N | 39.9 |
| 20-Nov-06 | 34 | 28 | 25 | 23 | 27 | 23 | 17 | 13 | 18 | 19 | 12 | 14 | 17 | 14 | 13 | 7 | 1 | 5 | 5 | 4 | 6 | 5 | 10 | 11 | 12.3 | 33.6 |
| 21-Nov-06 | 18 | 22 | 26 | 32 | 27 | 21 | 20 | 13 | 5 | 2 | 4 | 7 | 12 | 14 | 12 | 9 | 8 | 12 | 11 | 13 | 14 | 15 | 16 | 18 | 13.1 | 32.1 |
| 22-Nov-06 | 15 | 14 | 11 | 11 | 13 | 13 | 13 | 10 | 10 | 9 | 8 | 8 | 10 | 10 | 10 | 11 | 12 | 14 | 12 | 12 | 14 | 16 | 14 | 14 | 11.8 | 16.3 |
| 23-Nov-06 | 13 | 14 | 13 | 11 | 11 | 13 | 14 | 13 | 12 | 12 | 10 | 10 | 11 | 11 | 11 | 9 | 10 | 9 | 11 | 10 | 8 | 7 | 11 | 11 | 9.8 | 14.3 |
| 24-Nov-06 | 14 | 13 | 15 | 17 | 19 | 19 | 18 | 19 | 19 | 20 | 11 | 8 | 11 | 15 | 12 | 12 | 10 | 10 | 10 | 12 | 6 | 6 | 6 | 6 | 11.9 | 20.5 |
| 25-Nov-06 | 6 | 5 | 3 | 6 | 10 | 8 | 6 | 7 | 8 | 6 | 8 | 9 | 7 | 7 | 6 | 7 | 7 | 6 | 5 | 4 | 2 | 5 | 7 | 5 | 5.4 | 9.7 |
| 26-Nov-06 | 2 | 7 | 6 | 4 | 7 | 7 | 6 | 6 | 6 | 6 | 7 | 3 | 5 | 8 | 9 | 10 | 9 | 9 | 11 | 14 | 16 | 17 | 17 | 19 | 8.3 | 19.3 |
| 27-Nov-06 | 23 | 22 | 23 | 22 | 19 | 21 | 19 | 17 | 14 | 13 | 14 | 14 | 13 | 11 | 14 | 13 | 11 | 10 | 9 | 6 | 7 | 6 | 6 | 5 | 12.7 | 22.8 |
| 28-Nov-06 | 4 | 8 | 7 | 11 | 11 | 8 | 5 | 10 | 9 | 8 | 9 | 11 | 14 | 16 | 14 | 12 | 10 | 11 | 11 | 11 | 13 | 10 | 9 | 11 | 10.0 | 16.3 |
| 29-Nov-06 | 10 | 13 | 13 | 11 | 6 | 8 | 10 | 10 | 13 | 13 | 12 | 11 | 8 | 9 | 9 | 8 | 7 | 4 | 4 | 1 | 6 | 5 | 7 | 7 | 6.1 | 13.4 |
| 30-Nov-06 | 5 | 1 | 8 | 12 | 10 | 10 | 10 | 11 | 2 | 1 | 2 | 6 | 8 | 5 | 7 | 7 | 6 | 8 | 15 | 17 | 15 | 15 | 16 | 16 | 4.3 | 16.8 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-hr Vector | 3.5 | 3.2 | 3.5 | 3.7 | 3.6 | 2.9 | 2.8 | 2.3 | 2.1 | 2.1 | 1.8 | 2.1 | 2.6 | 3.6 | 4.5 | 4.2 | 3.7 | 3.4 | 3.5 | 4.7 | 5.2 | 4.6 | 4.5 | 4.2 | | |
| Hourly Max | 33.6 | 27.6 | 25.7 | 32.1 | 27.1 | 22.6 | 22.2 | 20.9 | 24.8 | 22.2 | 22.5 | 23.8 | 18.4 | 18.8 | 17.1 | 18.8 | 20.0 | 19.0 | 20.2 | 39.9 | 26.5 | 32.0 | 31.7 | 29.8 | | |

# PASZA - Smoky Heights - Wind Direction Monthly Summary

## HOURLY AVERAGE TABLE

**Wind Direction (WD)**

Station: Smoky Heights
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Summary**

| | | | |
|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | Operational Time: 720 hrs |
| Calibration Time: | 0 hrs | | AMD Operational Uptime: 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average |
|---|---|---|---|---|---|---|---|---|
| | 356.9 | 349.5 | 272.1 | 194.7 | 27.8 | 8.1 | 2.2 | 344 deg |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | WD Sector |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 251 | 257 | 242 | 245 | 178 | 170 | 176 | 198 | 238 | 184 | 146 | 141 | 129 | 70 | 116 | 38 | 63 | 112 | 83 | 46 | 41 | 67 | 74 | 63 | 118 | ESE |
| 2-Nov-06 | 18 | 25 | 27 | 20 | 25 | 26 | 27 | 22 | 28 | 41 | 36 | 30 | 28 | 35 | 37 | 42 | 46 | 49 | 56 | 71 | 73 | 61 | 62 | 65 | 42 | NE |
| 3-Nov-06 | 64 | 72 | 66 | 59 | 57 | 56 | 45 | 36 | 31 | 42 | 57 | 78 | 103 | 110 | 3 | 8 | 4 | 9 | 12 | 354 | 345 | 342 | 346 | 5 | 39 | NE |
| 4-Nov-06 | 357 | 355 | 0 | 4 | 8 | 11 | 16 | 30 | 23 | 30 | 30 | 25 | 27 | 20 | 18 | 19 | 20 | 19 | 20 | 18 | 8 | 8 | 5 | 356 | 15 | NNE |
| 5-Nov-06 | 348 | 344 | 334 | 330 | 335 | 340 | 257 | 249 | 274 | 327 | 344 | 342 | 21 | 29 | 20 | 23 | 24 | 31 | 23 | 8 | 25 | 28 | 33 | 65 | 358 | N |
| 6-Nov-06 | 26 | 22 | 21 | 27 | 28 | 35 | 35 | 34 | 41 | 38 | 37 | 42 | 32 | 32 | 37 | 31 | 24 | 15 | 26 | 17 | 19 | 6 | 351 | 2 | 28 | NNE |
| 7-Nov-06 | 336 | 70 | 260 | 220 | 271 | 236 | 25 | 35 | 310 | 292 | 256 | 244 | 233 | 228 | 254 | 295 | 8 | 4 | 10 | 359 | 342 | 350 | 324 | 311 | 322 | NW |
| 8-Nov-06 | 316 | 295 | 312 | 308 | 294 | 286 | 295 | 286 | 294 | 293 | 289 | 292 | 289 | 265 | 240 | 274 | 24 | 60 | 48 | 14 | 10 | 21 | 15 | 270 | 301 | WNW |
| 9-Nov-06 | 278 | 291 | 306 | 42 | 3 | 331 | 295 | 254 | 232 | 232 | 204 | 184 | 159 | 262 | 265 | 242 | 32 | 16 | 359 | 353 | 4 | 31 | 352 | 345 | 304 | NW |
| 10-Nov-06 | 321 | 259 | 264 | 149 | 236 | 231 | 285 | 45 | 27 | 28 | 22 | 23 | 19 | 25 | 22 | 23 | 25 | 10 | 358 | 358 | 1 | 358 | 357 | 346 | 3 | N |
| 11-Nov-06 | 334 | 338 | 328 | 315 | 302 | 304 | 277 | 236 | 210 | 277 | 257 | 221 | 256 | 259 | 271 | 263 | 271 | 285 | 272 | 278 | 350 | 20 | 13 | 12 | 302 | WNW |
| 12-Nov-06 | 8 | 8 | 18 | 252 | 49 | 212 | 193 | 186 | 198 | 217 | 237 | 250 | 257 | 238 | 236 | 210 | 196 | 208 | 286 | 58 | 16 | 16 | 20 | 24 | 244 | WSW |
| 13-Nov-06 | 20 | 18 | 16 | 10 | 8 | 9 | 5 | 6 | 10 | 358 | 355 | 357 | 3 | 353 | 342 | 328 | 307 | 311 | 319 | 319 | 321 | 317 | 318 | 313 | 344 | NNW |
| 14-Nov-06 | 229 | 259 | 255 | 214 | 207 | 156 | 235 | 183 | 215 | 234 | 239 | 225 | 190 | 204 | 244 | 25 | 223 | 172 | 164 | 156 | 158 | 162 | 163 | 169 | 182 | S |
| 15-Nov-06 | 166 | 167 | 167 | 168 | 171 | 170 | 168 | 167 | 158 | 154 | 175 | 211 | 193 | 100 | 55 | 57 | 111 | 36 | 30 | 22 | 18 | 13 | 349 | 330 | 161 | SSE |
| 16-Nov-06 | 278 | 274 | 276 | 280 | 250 | 237 | 229 | 216 | 237 | 232 | 237 | 248 | 272 | 276 | 282 | 324 | 250 | 260 | 280 | 267 | 263 | 287 | 221 | 242 | 259 | WSW |
| 17-Nov-06 | 249 | 240 | 252 | 229 | 231 | 209 | 230 | 229 | 194 | 214 | 237 | 248 | 227 | 223 | 185 | 219 | 231 | 240 | 258 | 253 | 253 | 184 | 214 | 196 | 227 | SW |
| 18-Nov-06 | 154 | 127 | 12 | 19 | 38 | 33 | 38 | 30 | 16 | 32 | 32 | 31 | 31 | 29 | 28 | 27 | 22 | 19 | 17 | 14 | 11 | 14 | 7 | 16 | 28 | NNE |
| 19-Nov-06 | 17 | 6 | 19 | 13 | 12 | 11 | 6 | 3 | 11 | 20 | 8 | 32 | 136 | 50 | 33 | 133 | 157 | 160 | 174 | 259 | 240 | 232 | 222 | 227 | 217 | SW |
| 20-Nov-06 | 235 | 230 | 236 | 247 | 242 | 232 | 226 | 217 | 230 | 238 | 236 | 262 | 254 | 244 | 259 | 270 | 311 | 248 | 252 | 15 | 11 | 10 | 335 | 347 | 247 | WSW |
| 21-Nov-06 | 30 | 35 | 20 | 23 | 29 | 30 | 27 | 21 | 7 | 232 | 191 | 234 | 339 | 343 | 344 | 357 | 356 | 16 | 17 | 49 | 34 | 27 | 34 | 34 | 20 | NNE |
| 22-Nov-06 | 38 | 33 | 30 | 13 | 18 | 21 | 29 | 37 | 33 | 35 | 39 | 28 | 28 | 28 | 26 | 32 | 42 | 44 | 35 | 29 | 26 | 25 | 25 | 23 | 30 | NNE |
| 23-Nov-06 | 17 | 23 | 22 | 33 | 13 | 10 | 12 | 18 | 9 | 6 | 4 | 1 | 352 | 356 | 350 | 335 | 332 | 321 | 308 | 312 | 287 | 274 | 331 | 320 | 354 | N |
| 24-Nov-06 | 320 | 319 | 316 | 309 | 298 | 300 | 301 | 310 | 306 | 305 | 303 | 314 | 305 | 303 | 309 | 279 | 292 | 267 | 240 | 231 | 244 | 241 | 247 | 266 | 296 | WNW |
| 25-Nov-06 | 256 | 222 | 225 | 353 | 340 | 344 | 354 | 350 | 348 | 352 | 2 | 0 | 354 | 354 | 346 | 346 | 347 | 354 | 344 | 297 | 261 | 301 | 340 | 345 | 339 | NNW |
| 26-Nov-06 | 279 | 327 | 340 | 350 | 340 | 335 | 334 | 354 | 32 | 34 | 31 | 92 | 9 | 10 | 1 | 356 | 6 | 12 | 8 | 4 | 10 | 17 | 21 | 27 | 8 | N |
| 27-Nov-06 | 18 | 19 | 18 | 19 | 13 | 15 | 17 | 16 | 11 | 7 | 2 | 6 | 359 | 345 | 347 | 334 | 320 | 312 | 315 | 329 | 327 | 333 | 284 | 263 | 0 | N |
| 28-Nov-06 | 253 | 237 | 234 | 227 | 247 | 254 | 244 | 224 | 217 | 189 | 202 | 221 | 230 | 234 | 231 | 216 | 236 | 240 | 229 | 248 | 249 | 236 | 231 | 218 | 231 | SW |
| 29-Nov-06 | 217 | 195 | 198 | 207 | 204 | 189 | 187 | 201 | 243 | 238 | 201 | 216 | 215 | 233 | 249 | 250 | 229 | 187 | 152 | 117 | 45 | 25 | 30 | 20 | 213 | SSW |
| 30-Nov-06 | 49 | 108 | 186 | 193 | 178 | 191 | 218 | 251 | 55 | 166 | 295 | 45 | 73 | 65 | 354 | 300 | 267 | 280 | 303 | 299 | 303 | 307 | 301 | 304 | 285 | WNW |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 339 | 341 | 336 | 338 | 339 | 346 | 349 | 339 | 335 | 331 | 333 | 327 | 339 | 342 | 338 | 345 | 358 | 358 | 354 | 342 | 353 | 352 | 348 | 347 | | |

# PASZA - Smoky Heights - Standard Deviation of Wind Direction Monthly Summary

Station: Smoky Heights
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Wind Direction (WD)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Summary**

Determined by the Yamartino 15-min interval calculation

| | | | |
|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | Operational Time: 720 hrs |
| Calibration Time: | 0 hrs | | AMD Operational Uptime: 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 |
|---|---|---|---|---|---|---|---|
| | 49.7 | 32.0 | 11.0 | 6.8 | 4.4 | 2.9 | 2.2 |

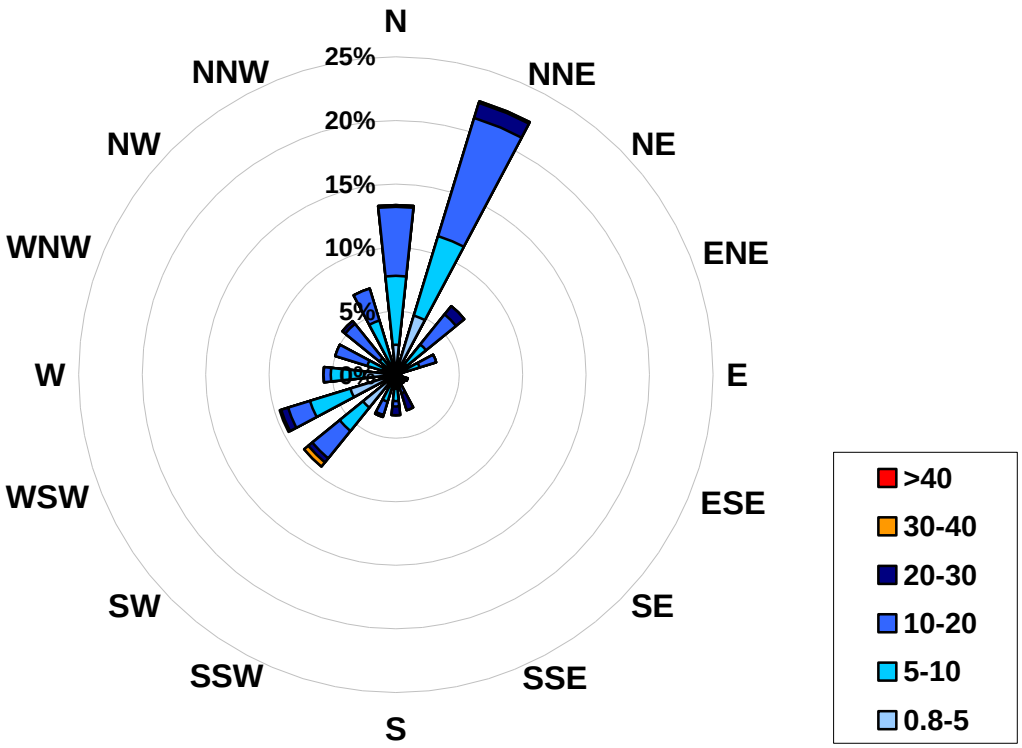
**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** — **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 15 | 4 | 13 | 18 | 7 | 17 | 7 | 8 | 10 | 11 | 27 | 31 | 37 | 52 | 37 | 33 | 43 | 18 | 18 | 8 | 4 | 6 | 6 | 8 | 52.1 |
| 2-Nov-06 | 4 | 2 | 2 | 3 | 3 | 2 | 4 | 6 | 5 | 6 | 4 | 3 | 3 | 4 | 4 | 4 | 3 | 4 | 4 | 6 | 8 | 8 | 10 | 10 | 10.4 |
| 3-Nov-06 | 11 | 13 | 11 | 7 | 6 | 6 | 5 | 3 | 3 | 5 | 9 | 13 | 19 | 20 | 27 | 16 | 12 | 7 | 8 | 13 | 10 | 7 | 7 | 8 | 26.5 |
| 4-Nov-06 | 10 | 9 | 8 | 10 | 7 | 6 | 5 | 4 | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 4 | 5 | 5 | 8 | 9.7 |
| 5-Nov-06 | 7 | 8 | 6 | 7 | 13 | 13 | 11 | 10 | 10 | 9 | 17 | 23 | 9 | 5 | 6 | 6 | 5 | 7 | 4 | 10 | 15 | 9 | 14 | 23 | 23.2 |
| 6-Nov-06 | 6 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 4 | 6 | 5 | 5 | 4 | 4 | 5 | 5 | 3 | 5 | 5 | 10 | 10 | 15 | 13 | 13 | 14.5 |
| 7-Nov-06 | 13 | 25 | 20 | 22 | 24 | 55 | 19 | 28 | 24 | 12 | 12 | 7 | 8 | 7 | 13 | 35 | 5 | 10 | 6 | 9 | 7 | 9 | 12 | 9 | 55.4 |
| 8-Nov-06 | 11 | 5 | 8 | 6 | 5 | 5 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 17 | 7 | 11 | 16 | 6 | 5 | 11 | 26 | 8 | 26.0 |
| 9-Nov-06 | 7 | 11 | 23 | 14 | 12 | 25 | 45 | 6 | 9 | 11 | 8 | 5 | 50 | 30 | 4 | 32 | 7 | 4 | 5 | 5 | 6 | 10 | 23 | 19 | 49.9 |
| 10-Nov-06 | 68 | 28 | 7 | 47 | 13 | 32 | 34 | 16 | 6 | 6 | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 6 | 5 | 5 | 7 | 6 | 7 | 67.7 |
| 11-Nov-06 | 6 | 5 | 5 | 4 | 9 | 15 | 48 | 27 | 14 | 11 | 36 | 32 | 33 | 4 | 4 | 8 | 5 | 8 | 4 | 7 | 24 | 8 | 12 | 10 | 48.3 |
| 12-Nov-06 | 12 | 9 | 33 | 26 | 29 | 24 | 7 | 5 | 7 | 10 | 7 | 5 | 12 | 7 | 6 | 7 | 14 | 11 | 30 | 28 | 11 | 8 | 5 | 3 | 33.0 |
| 13-Nov-06 | 3 | 4 | 3 | 3 | 3 | 3 | 6 | 4 | 5 | 7 | 8 | 8 | 8 | 8 | 8 | 7 | 6 | 4 | 4 | 5 | 6 | 5 | 4 | 5 | 8.4 |
| 14-Nov-06 | 17 | 6 | 5 | 16 | 13 | 14 | 22 | 25 | 13 | 7 | 21 | 10 | 8 | 8 | 34 | 7 | 25 | 5 | 2 | 3 | 2 | 3 | 3 | 2 | 33.9 |
| 15-Nov-06 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 4 | 6 | 11 | 7 | 6 | 16 | 25 | 9 | 6 | 11 | 6 | 6 | 4 | 5 | 7 | 8 | 24.9 |
| 16-Nov-06 | 8 | 8 | 6 | 6 | 5 | 11 | 4 | 5 | 6 | 7 | 5 | 10 | 8 | 7 | 10 | 43 | 21 | 18 | 25 | 18 | 11 | 55 | 18 | 6 | 55.2 |
| 17-Nov-06 | 10 | 10 | 20 | 21 | 28 | 17 | 9 | 12 | 10 | 13 | 10 | 11 | 11 | 8 | 9 | 8 | 7 | 12 | 6 | 5 | 5 | 21 | 12 | 7 | 27.5 |
| 18-Nov-06 | 40 | 73 | 5 | 8 | 4 | 4 | 6 | 7 | 4 | 5 | 4 | 4 | 4 | 4 | 3 | 2 | 3 | 3 | 2 | 5 | 4 | 5 | 8 | 4 | 73.0 |
| 19-Nov-06 | 5 | 7 | 5 | 9 | 7 | 7 | 9 | 14 | 21 | 34 | 38 | 26 | 35 | 46 | 11 | 18 | 5 | 5 | 19 | 4 | 5 | 4 | 3 | 3 | 45.7 |
| 20-Nov-06 | 3 | 3 | 3 | 4 | 3 | 3 | 4 | 4 | 3 | 4 | 8 | 3 | 4 | 5 | 4 | 13 | 43 | 20 | 22 | 21 | 39 | 46 | 9 | 8 | 45.5 |
| 21-Nov-06 | 9 | 5 | 4 | 3 | 3 | 4 | 3 | 5 | 27 | 19 | 12 | 9 | 17 | 5 | 7 | 10 | 10 | 4 | 6 | 8 | 5 | 3 | 4 | 5 | 27.0 |
| 22-Nov-06 | 5 | 4 | 6 | 5 | 5 | 4 | 4 | 5 | 5 | 5 | 8 | 7 | 6 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 4 | 7.7 |
| 23-Nov-06 | 3 | 3 | 3 | 5 | 6 | 5 | 4 | 4 | 5 | 6 | 8 | 8 | 8 | 8 | 8 | 9 | 8 | 6 | 5 | 5 | 4 | 7 | 8 | 7 | 8.6 |
| 24-Nov-06 | 6 | 5 | 6 | 5 | 3 | 4 | 4 | 5 | 5 | 7 | 17 | 27 | 16 | 8 | 7 | 5 | 6 | 7 | 12 | 6 | 9 | 14 | 10 | 13 | 26.7 |
| 25-Nov-06 | 11 | 15 | 24 | 41 | 6 | 8 | 10 | 8 | 6 | 9 | 8 | 9 | 10 | 12 | 8 | 8 | 7 | 8 | 7 | 9 | 18 | 7 | 5 | 8 | 41.1 |
| 26-Nov-06 | 43 | 4 | 8 | 13 | 5 | 4 | 3 | 7 | 9 | 4 | 4 | 21 | 32 | 6 | 7 | 6 | 6 | 6 | 6 | 6 | 4 | 3 | 3 | 3 | 42.7 |
| 27-Nov-06 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 4 | 5 | 6 | 7 | 8 | 8 | 6 | 5 | 3 | 3 | 3 | 5 | 4 | 10 | 10 | 12 | 12.5 |
| 28-Nov-06 | 15 | 6 | 8 | 3 | 4 | 4 | 8 | 4 | 5 | 11 | 7 | 4 | 3 | 4 | 3 | 5 | 6 | 12 | 6 | 4 | 3 | 4 | 7 | 4 | 14.7 |
| 29-Nov-06 | 6 | 4 | 5 | 5 | 9 | 7 | 6 | 4 | 6 | 4 | 9 | 3 | 6 | 7 | 7 | 6 | 11 | 26 | 10 | 35 | 10 | 15 | 7 | 8 | 35.4 |
| 30-Nov-06 | 16 | 53 | 14 | 11 | 12 | 6 | 7 | 28 | 32 | 47 | 53 | 40 | 21 | 28 | 49 | 22 | 29 | 14 | 9 | 9 | 7 | 8 | 8 | 5 | 53.1 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Max | 68 | 73 | 33 | 47 | 29 | 55 | 48 | 28 | 32 | 47 | 53 | 40 | 50 | 52 | 49 | 43 | 43 | 26 | 30 | 35 | 39 | 55 | 26 | 23 | |

## 1-hr Average Wind Rose (in km/hr) Located at the Smoky Heights Site for November 2006




| Calms: | 0% |
|---|---|

| Frequency Distribution of Wind in km/hr | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.8 | < | 5 | 96 |
| 5 | to | 10 | 235 |
| 10 | to | 20 | 257 |
| 20 | to | 30 | 41 |
| 30 | to | 40 | 4 |
| | > | 40 | 1 |
| Total Non-Zero Values | | | 634 |

# PASZA – Beaverlodge Station

## Monthly Summary Tables, Graphs, and Roses

# PASZA - Beaverlodge - AQI Monthly Summary

Station: Beaverlodge
Station Owner: PASZA

**Air Quality Index (AQI)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Alberta's Air Quality Index**

| | | | | |
|---|---|---|---|---|
| Good | 1 | to | 25 |
| Fair | 26 | to | 50 |
| Poor | 51 | to | 100 |
| Very Poor | | > | 100 |

**Summary**

| | |
|---|---|
| Number of 1-hr Good Readings: | 684 |
| Number of 1-hr Fair Readings: | 0 |
| Number of 1-hr Poor Readings: | 0 |
| Number of 1-hr Very Poor Readings: | 0 |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 15 | 10 | 12 | 11 | N | 11 | 7 | 6 | 7 | 6 | 7 | 6 | 13 | 15 | 13 | 16 | 16 | 16 | 16 | 15 | 15 | 15 | 17 | 17 |
| 2-Nov-06 | 17 | 17 | 17 | 16 | N | 17 | 16 | 15 | 14 | 14 | 14 | 14 | 14 | 15 | 15 | 15 | 15 | 10 | 14 | 15 | 16 | 14 | 14 | 13 |
| 3-Nov-06 | 13 | 12 | 13 | 13 | N | 14 | 14 | 14 | 12 | 12 | 12 | 13 | 13 | 14 | 14 | 14 | 14 | 13 | 13 | 12 | 12 | 12 | 12 | 12 |
| 4-Nov-06 | 11 | 11 | 11 | 10 | N | 11 | 11 | 10 | 9 | 11 | 12 | 13 | 13 | 14 | 14 | 14 | 13 | 12 | 12 | 11 | 11 | 12 | 12 | 12 |
| 5-Nov-06 | 11 | 10 | 12 | 11 | N | 12 | 11 | 11 | 11 | 11 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 11 | 9 | 9 | 10 | 12 | 13 | 13 |
| 6-Nov-06 | 12 | 10 | 11 | 11 | N | 12 | 12 | 13 | 12 | 12 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 13 | 12 | 9 | 7 | 11 | 10 | 9 |
| 7-Nov-06 | 10 | 9 | 10 | 9 | N | 9 | 8 | 4 | 5 | 7 | 8 | 10 | 9 | 11 | 11 | 10 | 7 | 9 | 7 | 7 | 9 | 10 | 10 | 11 |
| 8-Nov-06 | 11 | 12 | 12 | 13 | N | 12 | 12 | 12 | 12 | 13 | 14 | 14 | 14 | 14 | 14 | 14 | 13 | 8 | 6 | 11 | 12 | 11 | 11 | 7 |
| 9-Nov-06 | 9 | 10 | 11 | 10 | N | 8 | 7 | 5 | 5 | 7 | 8 | 9 | 10 | 8 | 8 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 10-Nov-06 | 8 | 6 | 5 | 5 | N | 7 | 7 | 6 | 11 | 8 | 10 | 11 | 11 | 10 | 13 | 13 | 10 | 9 | 13 | 14 | 11 | 13 | 15 | 22 |
| 11-Nov-06 | 9 | 10 | 10 | 10 | N | 9 | 9 | 9 | 10 | 10 | 10 | 11 | 12 | 12 | 13 | 12 | 12 | 12 | 10 | 9 | 12 | 13 | 11 | 11 |
| 12-Nov-06 | 10 | 12 | 12 | 11 | N | 10 | 10 | 8 | 9 | 9 | 12 | 13 | 11 | 11 | 12 | 10 | 11 | 13 | 11 | 11 | 10 | 12 | 13 | 12 |
| 13-Nov-06 | 11 | 13 | 12 | 10 | N | 8 | 6 | 6 | 7 | 8 | 8 | 10 | 9 | 10 | 10 | 9 | 8 | 7 | 8 | 8 | 8 | 8 | 6 | 6 |
| 14-Nov-06 | 7 | 7 | 7 | 8 | N | 7 | 6 | 8 | 6 | 6 | 7 | 9 | 14 | 11 | 15 | 17 | 13 | 9 | 10 | 10 | 7 | 7 | 10 | 11 |
| 15-Nov-06 | 12 | 14 | 17 | 18 | N | 18 | 16 | 17 | 15 | 17 | 17 | 19 | 20 | 20 | N | 20 | 19 | 19 | 19 | 18 | 15 | 11 | 11 | 11 |
| 16-Nov-06 | 11 | 11 | 12 | 12 | N | 12 | 11 | 7 | 6 | 10 | 11 | 13 | 12 | 10 | 13 | 14 | 12 | 10 | 10 | 9 | 6 | 5 | 5 | 6 |
| 17-Nov-06 | 6 | 5 | 6 | 7 | N | 6 | 5 | 5 | 10 | 7 | 7 | 7 | 9 | 8 | 6 | 7 | 6 | 7 | 6 | 6 | 6 | 5 | 6 | 14 |
| 18-Nov-06 | 16 | 19 | 18 | 17 | N | 17 | 9 | 11 | 11 | 12 | 14 | 13 | 12 | 13 | 13 | 13 | 11 | 9 | 10 | 9 | 12 | 11 | 11 | 10 |
| 19-Nov-06 | 10 | 10 | 9 | 9 | N | 8 | 8 | 7 | 7 | 11 | 11 | 10 | 11 | 14 | 17 | 18 | 17 | 16 | 20 | 23 | 23 | 23 | 23 | 23 |
| 20-Nov-06 | 22 | 21 | 21 | 20 | N | 20 | 20 | 19 | 19 | 17 | 17 | 21 | 20 | 20 | 21 | 20 | 18 | 21 | 21 | 19 | 18 | 14 | 12 | 15 |
| 21-Nov-06 | 11 | 13 | 15 | 13 | N | 17 | 17 | 17 | 17 | 17 | 16 | 16 | N | 17 | N | N | N | N | 17 | 16 | 17 | 17 | 17 | 18 |
| 22-Nov-06 | 18 | 18 | 18 | 18 | N | 18 | 18 | 18 | 18 | 18 | 17 | 17 | 17 | 17 | 16 | 16 | 16 | 17 | 17 | 17 | 16 | 16 | 16 | 16 |
| 23-Nov-06 | 15 | 16 | 16 | 15 | N | 14 | 13 | 14 | 15 | 15 | 16 | 16 | 15 | 15 | 15 | 15 | 14 | 12 | 11 | 12 | 13 | 12 | 13 | 13 |
| 24-Nov-06 | 14 | 14 | 15 | 15 | N | 15 | 15 | 16 | 17 | 17 | 18 | 1 | 1 | 0 | 1 | 16 | 15 | 14 | 13 | 13 | 6 | 9 | 13 | 14 |
| 25-Nov-06 | 15 | 13 | 16 | 16 | N | 15 | 15 | 14 | 15 | 15 | 15 | 16 | 16 | 16 | 16 | 16 | 15 | 12 | 13 | 12 | 12 | 13 | 12 | 7 |
| 26-Nov-06 | 9 | 12 | 13 | 12 | N | 11 | 9 | 7 | 5 | 6 | 7 | 8 | 8 | 8 | 8 | 7 | 6 | 8 | 7 | 12 | 13 | 13 | 11 | 15 |
| 27-Nov-06 | 15 | 15 | 15 | 16 | N | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 15 | 13 | 11 | 11 | 12 | 11 | 13 | 10 | 14 | 14 |
| 28-Nov-06 | 15 | 14 | 12 | 13 | N | 13 | 13 | 14 | 11 | 12 | 12 | 12 | 14 | 15 | 15 | 15 | 12 | 9 | 7 | 6 | 7 | 8 | 9 | 8 |
| 29-Nov-06 | 7 | 7 | 9 | 10 | N | 13 | 10 | 9 | 10 | 10 | 11 | 7 | 9 | 8 | 11 | 9 | 8 | 9 | 8 | 7 | 6 | 9 | 7 | 8 |
| 30-Nov-06 | 7 | 6 | 6 | 7 | N | 17 | 18 | 15 | 16 | 16 | 18 | 19 | 19 | 18 | 18 | 17 | 18 | 18 | 17 | 18 | 19 | 19 | 19 | 20 |

# PASZA - Beaverlodge - Sulphur Dioxide Monthly Summary

## HOURLY AVERAGE TABLE

**Sulphur Dioxide ($SO_2$)**

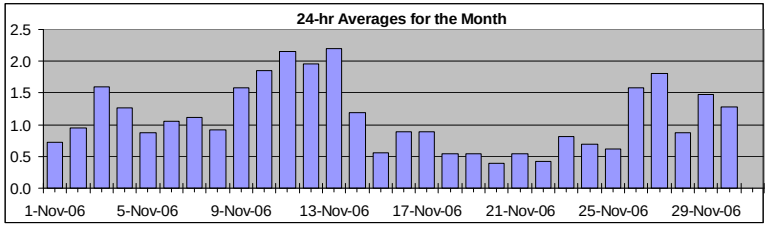
Station: Beaverlodge
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr 172 ppb | 24-hr 57 ppb

**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 1-hr Exceedances: | 0 | | | |
| Number of 24-hr Exceedances: | 0 | | | |
| Maximum 1-hr Average: | 9.1 | ppb | 4-Nov | 22:00 23:00 |
| Maximum 24-hr Average: | 2.2 | ppb | 13-Nov | |




| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 685 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 3.9 | 2.7 | 1.4 | 0.9 | 0.5 | 0.2 | 0.1 | 1.1 ppb | 0.9 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 1 | 0 | 0 | 0 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | C | C | C | C | A | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.7 | 1.5 |
| 2-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 1 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.0 | 2.3 |
| 3-Nov-06 | 1 | 2 | 2 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 4 | 4 | 3 | 2 | 1.6 | 4.0 |
| 4-Nov-06 | 1 | 0 | 0 | 0 | A | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 9 | 8 | 1.3 | 9.1 |
| 5-Nov-06 | 0 | 0 | 0 | 0 | A | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0.9 | 1.7 |
| 6-Nov-06 | 1 | 2 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 1.1 | 2.0 |
| 7-Nov-06 | 1 | 1 | 1 | 0 | A | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.1 | 2.1 |
| 8-Nov-06 | 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 | 1.4 |
| 9-Nov-06 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 1.6 | 2.6 |
| 10-Nov-06 | 2 | 1 | 1 | 1 | A | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 1 | 1.9 | 3.1 |
| 11-Nov-06 | 1 | 1 | 1 | 1 | A | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 4 | 3 | 2.2 | 3.6 |
| 12-Nov-06 | 3 | 3 | 2 | 2 | A | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2.0 | 2.9 |
| 13-Nov-06 | 2 | 2 | 2 | 2 | A | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 4 | 4 | 3 | 4 | 3 | 3 | 2 | 3 | 1 | 1 | 2.2 | 4.4 |
| 14-Nov-06 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1.2 | 2.1 |
| 15-Nov-06 | 0 | 0 | 0 | 1 | A | 0 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0.6 | 1.6 |
| 16-Nov-06 | 1 | 0 | 0 | 1 | A | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 0.9 | 2.0 |
| 17-Nov-06 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0.9 | 1.9 |
| 18-Nov-06 | 0 | 1 | 0 | 0 | A | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0.5 | 1.6 |
| 19-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 1.1 |
| 20-Nov-06 | 0 | 1 | 1 | 1 | A | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0.4 | 1.2 |
| 21-Nov-06 | 1 | 0 | 1 | 1 | A | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 2 | 0 | 1 | 0 | 0 | 0.5 | 2.0 |
| 22-Nov-06 | 0 | 0 | 0 | 1 | A | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 1.1 |
| 23-Nov-06 | 0 | 1 | 2 | 2 | A | 2 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 2.3 |
| 24-Nov-06 | 1 | 1 | 2 | 1 | A | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0.7 | 1.7 |
| 25-Nov-06 | 1 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 1.5 |
| 26-Nov-06 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 4 | 3 | 3 | 3 | 1.6 | 4.5 |
| 27-Nov-06 | 3 | 2 | 3 | 4 | A | 1 | 1 | 1 | 2 | 4 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 1.8 | 4.2 |
| 28-Nov-06 | 1 | 1 | 1 | 1 | A | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9 | 1.5 |
| 29-Nov-06 | 1 | 1 | 1 | 1 | A | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 3 | 3 | 2 | 2 | 1 | 1 | 2 | 3 | 2 | 3 | 1.5 | 3.4 |
| 30-Nov-06 | 3 | 3 | 4 | 2 | A | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 1 | 1 | 1.3 | 3.8 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 1.0 | 1.0 | 1.1 | 1.0 | N | 0.8 | 0.8 | 0.7 | 0.9 | 1.1 | 1.1 | 1.2 | 1.2 | 1.1 | 1.3 | 1.3 | 1.1 | 1.1 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.4 | | |
| Hourly Max | 2.8 | 3.4 | 3.8 | 4.2 | 0.0 | 2.4 | 2.5 | 2.1 | 2.7 | 3.6 | 3.1 | 2.8 | 3.0 | 2.6 | 4.1 | 4.4 | 3.1 | 3.6 | 3.2 | 3.3 | 4.5 | 3.7 | 9.1 | 8.1 | | |

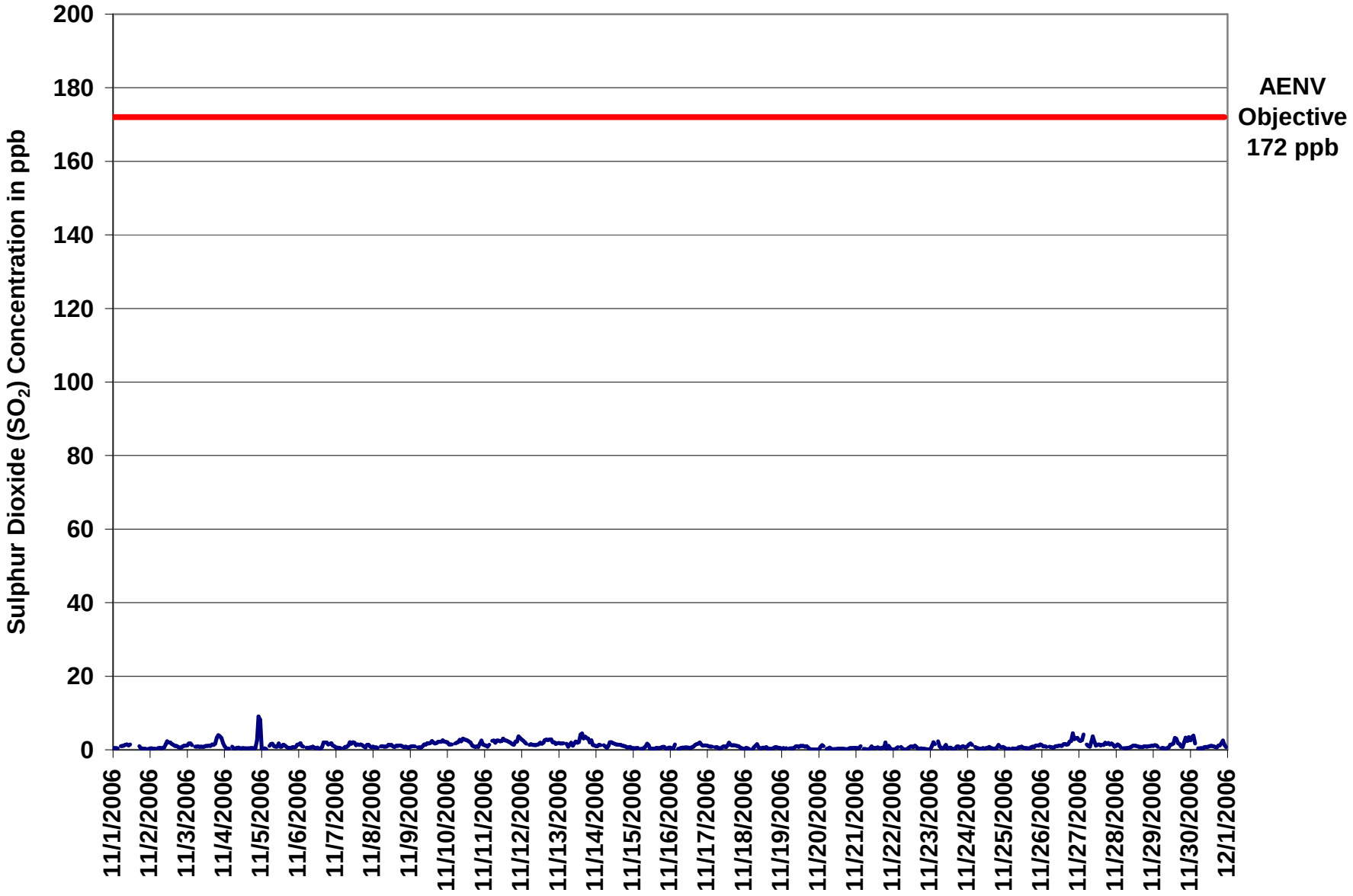


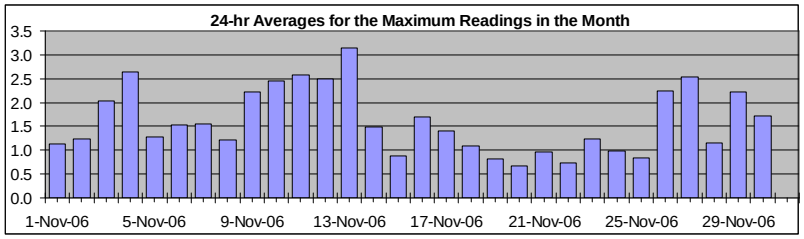

**Figure 34. PASZA - Beaverlodge Sulphur Dioxide 1-hr Average Monthly Trend**

Station: Beaverlodge
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

## Sulphur Dioxide ($SO_2$)

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 21.7 | ppb | 4-Nov | 23:00 0:00 |
| Maximum 24-hr Value: | 3.1 | ppb | 13-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 685 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 5.5 | 3.7 | 2.1 | 1.3 | 0.7 | 0.4 | 0.2 | 1.6 ppb | 1.3 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 1 | 1 | 1 | 1 | A | 2 | 1 | 2 | 2 | 2 | 2 | 2 | C | C | C | C | A | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1.1 | 2.4 |
| 2-Nov-06 | 1 | 1 | 0 | 1 | A | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.2 | 2.7 |
| 3-Nov-06 | 1 | 2 | 2 | 2 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 2 | 3 | 4 | 5 | 4 | 4 | 3 | 2.0 | 4.6 |
| 4-Nov-06 | 1 | 1 | 0 | 0 | A | 2 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 5 | 20 | 22 | 2.6 | 21.7 |
| 5-Nov-06 | 1 | 1 | 1 | 0 | A | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1.3 | 2.2 |
| 6-Nov-06 | 2 | 2 | 2 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 1.5 | 2.8 |
| 7-Nov-06 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 2 | 3 | 2 | 3 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 1.6 | 2.9 |
| 8-Nov-06 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1.2 | 2.1 |
| 9-Nov-06 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2.2 | 3.5 |
| 10-Nov-06 | 3 | 2 | 2 | 2 | A | 3 | 3 | 3 | 4 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 2 | 1 | 1 | 1 | 1 | 2 | 3 | 2 | 2.4 | 4.1 |
| 11-Nov-06 | 1 | 1 | 1 | 2 | A | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 2.6 | 4.5 |
| 12-Nov-06 | 4 | 3 | 3 | 2 | A | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 2 | 2 | 2 | 2 | 2.5 | 4.2 |
| 13-Nov-06 | 3 | 2 | 2 | 3 | A | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 2 | 2 | 11 | 5 | 5 | 5 | 4 | 4 | 3 | 3 | 2 | 2 | 3.1 | 11.4 |
| 14-Nov-06 | 1 | 1 | 2 | 1 | A | 2 | 1 | 1 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.5 | 2.6 |
| 15-Nov-06 | 1 | 1 | 1 | 1 | A | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9 | 2.4 |
| 16-Nov-06 | 1 | 1 | 1 | 3 | A | 0 | 0 | 8 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 1 | 1 | 1.7 | 8.1 |
| 17-Nov-06 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 0 | 1 | 2 | 2 | 1 | 3 | 3 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 0 | 1.4 | 3.2 |
| 18-Nov-06 | 0 | 1 | 1 | 0 | A | 0 | 1 | 2 | 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1.1 | 8.9 |
| 19-Nov-06 | 0 | 1 | 0 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0.8 | 1.4 |
| 20-Nov-06 | 0 | 1 | 2 | 1 | A | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0.7 | 1.6 |
| 21-Nov-06 | 1 | 1 | 1 | 2 | A | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 0 | 1.0 | 2.6 |
| 22-Nov-06 | 0 | 0 | 1 | 1 | A | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 2 | 2 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0.7 | 1.6 |
| 23-Nov-06 | 0 | 2 | 3 | 2 | A | 3 | 2 | 1 | 1 | 1 | 4 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.2 | 3.7 |
| 24-Nov-06 | 1 | 2 | 2 | 2 | A | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 2 | 1 | 1 | 1 | 1.0 | 1.9 |
| 25-Nov-06 | 1 | 0 | 0 | 1 | A | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 0.8 | 1.7 |
| 26-Nov-06 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 5 | 4 | 7 | 4 | 2.2 | 7.5 |
| 27-Nov-06 | 3 | 3 | 4 | 6 | A | 2 | 2 | 1 | 4 | 5 | 4 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 1 | 2.5 | 5.6 |
| 28-Nov-06 | 1 | 2 | 2 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 1.1 | 1.8 |
| 29-Nov-06 | 1 | 2 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 4 | 4 | 4 | 3 | 2 | 1 | 1 | 3 | 4 | 4 | 4 | 2.2 | 4.3 |
| 30-Nov-06 | 3 | 4 | 5 | 3 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 4 | 3 | 1 | 1.7 | 4.6 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 1.3 | 1.4 | 1.4 | 1.5 | N | 1.2 | 1.1 | 1.3 | 1.6 | 1.6 | 1.8 | 1.6 | 1.6 | 1.5 | 1.9 | 1.7 | 1.6 | 1.5 | 1.5 | 1.6 | 1.7 | 1.9 | 2.4 | 2.2 | | |
| Hourly Max | 3.6 | 4.2 | 4.6 | 5.6 | 0.0 | 3.2 | 3.1 | 8.1 | 8.9 | 5.4 | 4.1 | 3.5 | 3.4 | 4.3 | 11.4 | 5.3 | 4.6 | 4.6 | 4.3 | 4.2 | 5.5 | 5.0 | 19.8 | 21.7 | | |

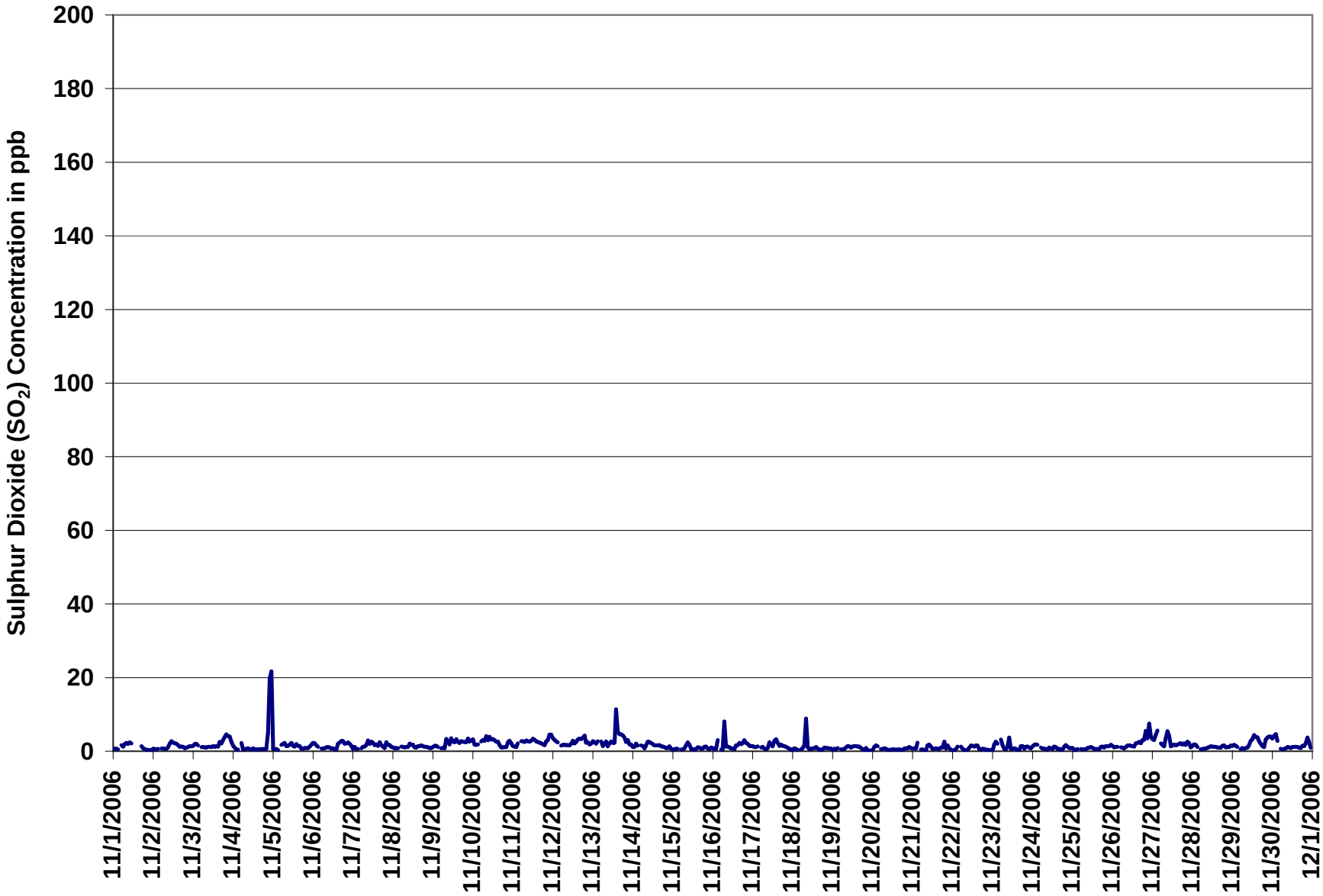
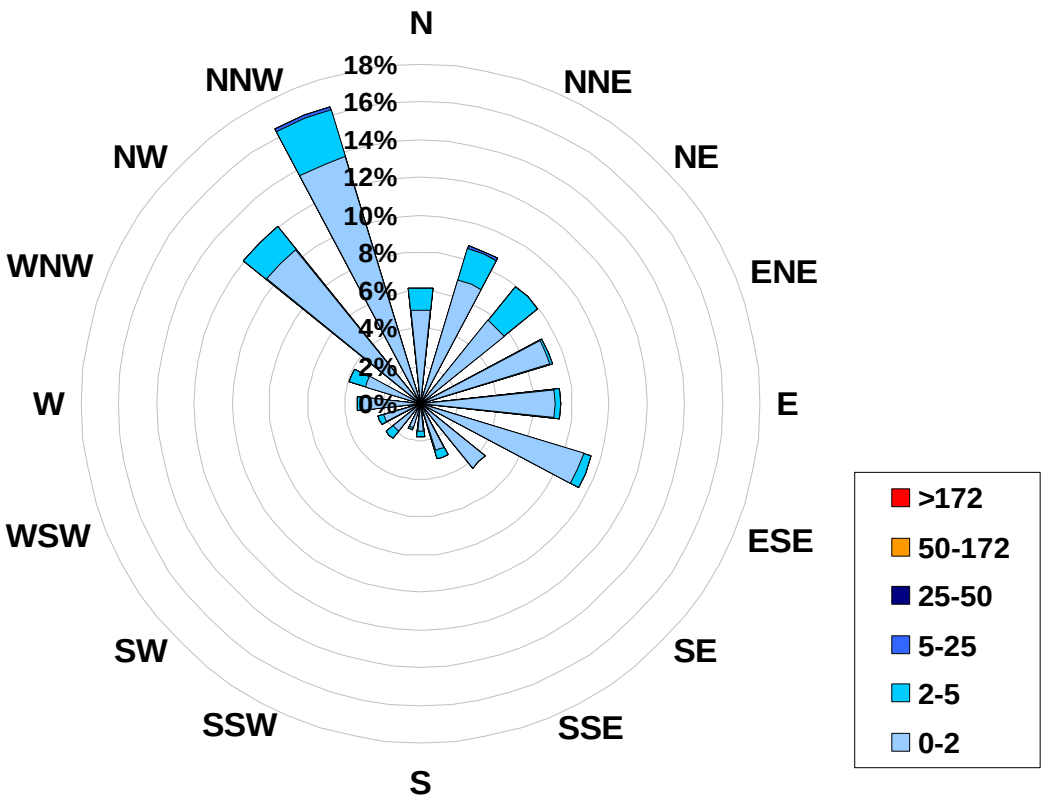



**Figure 35. PASZA - Beaverlodge Sulphur Dioxide Instantaneous (30 Second) Maximum Value Monthly Trend**

## 1-hr Average Concentration Rose for Sulphur Dioxide (in ppb) Located at the Beaverlodge Site for November 2006




| Calms: | 2% |
|---|---|

| Frequency Distribution of $SO_2$ in ppb | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.0 | < | 2 | 594 |
| 2 | to | 5 | 89 |
| 5 | to | 25 | 2 |
| 25 | to | 50 | 0 |
| 50 | to | 172 | 0 |
| | > | 172 | 0 |
| Total Non-Zero Values | | | 685 |

# PASZA - Beaverlodge - Nitrogen Dioxide Monthly Summary

## HOURLY AVERAGE TABLE

**Nitrogen Dioxide ($NO_2$)**

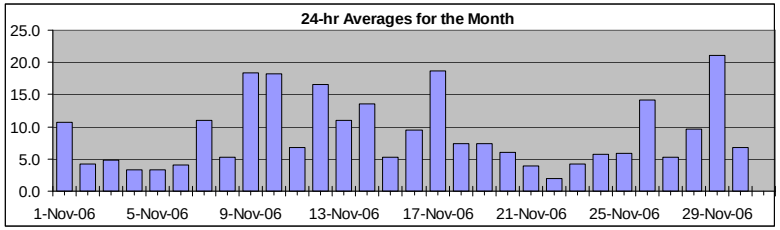
Station: Beaverlodge
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr 212 ppb | 24-hr 106 ppb

**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 1-hr Exceedances: | 0 | | | |
| Number of 24-hr Exceedances: | 0 | | | |
| Maximum 1-hr Average: | 38.8 | ppb | 29-Nov | 14:00 15:00 |
| Maximum 24-hr Average: | 21.1 | ppb | 29-Nov | |




| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 685 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 30.3 | 23.6 | 12.8 | 6.0 | 3.2 | 1.4 | 0.9 | 8.8 ppb | 6.0 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 5 | 14 | 10 | 13 | A | 10 | 18 | 24 | 28 | 23 | 17 | 20 | 8 | 5 | 9 | 6 | 6 | 5 | 4 | 5 | 5 | 6 | 2 | 2 | 10.7 | 27.6 |
| 2-Nov-06 | 2 | 2 | 2 | 2 | A | 1 | 2 | 3 | 4 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 14 | 6 | 3 | 3 | 5 | 6 | 6 | 4.2 | 14.2 |
| 3-Nov-06 | 6 | 6 | 5 | 4 | A | 3 | 3 | 3 | 6 | 7 | 6 | 5 | 5 | 4 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 6 | 5 | 5 | 4.9 | 6.9 |
| 4-Nov-06 | 5 | 5 | 5 | 5 | A | 3 | 3 | 4 | 6 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3.3 | 5.5 |
| 5-Nov-06 | 3 | 5 | 3 | 4 | A | 4 | 4 | 4 | 3 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 3 | 7 | 7 | 7 | 3 | 2 | 3 | 3.3 | 7.3 |
| 6-Nov-06 | 4 | 7 | 4 | 4 | A | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 3 | 4 | 5 | 9 | 14 | 5 | 7 | 9 | 4.1 | 14.5 |
| 7-Nov-06 | 6 | 7 | 5 | 7 | A | 6 | 9 | 16 | 14 | 18 | 11 | 15 | 14 | 7 | 12 | 11 | 18 | 20 | 17 | 14 | 9 | 6 | 4 | 3 | 10.9 | 19.8 |
| 8-Nov-06 | 3 | 3 | 3 | 2 | A | 3 | 5 | 6 | 5 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 4 | 13 | 18 | 7 | 6 | 6 | 7 | 13 | 5.3 | 18.4 |
| 9-Nov-06 | 10 | 7 | 6 | 8 | A | 10 | 12 | 16 | 17 | 18 | 11 | 16 | 16 | 18 | 17 | 23 | 24 | 27 | 30 | 29 | 29 | 29 | 24 | 26 | 18.4 | 29.6 |
| 10-Nov-06 | 30 | 23 | 22 | 23 | A | 25 | 24 | 26 | 28 | 20 | 20 | 18 | 13 | 11 | 12 | 13 | 17 | 18 | 16 | 16 | 11 | 11 | 12 | 11 | 18.2 | 29.7 |
| 11-Nov-06 | 8 | 5 | 4 | 5 | A | 5 | 6 | 6 | 5 | 4 | 5 | 3 | 4 | 3 | 3 | 4 | 5 | 5 | 7 | 10 | 16 | 16 | 14 | 14 | 6.8 | 15.9 |
| 12-Nov-06 | 13 | 15 | 16 | 16 | A | 17 | 16 | 19 | 17 | 12 | 11 | 10 | 10 | 12 | 14 | 17 | 21 | 23 | 21 | 19 | 22 | 23 | 21 | 20 | 16.6 | 23.0 |
| 13-Nov-06 | 20 | 23 | 22 | 22 | A | 22 | 15 | 13 | 10 | 6 | 6 | 7 | 6 | 5 | 5 | 5 | 7 | 7 | 7 | 6 | 5 | 5 | 13 | 15 | 10.9 | 22.9 |
| 14-Nov-06 | 12 | 7 | 7 | 5 | A | 6 | 7 | 13 | 12 | 12 | 13 | 12 | 11 | 11 | 13 | 15 | 19 | 23 | 24 | 24 | 22 | 19 | 14 | 12 | 13.5 | 23.8 |
| 15-Nov-06 | 10 | 9 | 6 | 4 | A | 4 | 9 | 8 | 12 | 6 | 6 | 4 | 4 | 4 | 3 | 4 | 5 | 4 | 4 | 4 | 6 | 3 | 2 | 2 | 5.3 | 11.6 |
| 16-Nov-06 | 2 | 2 | 2 | 2 | A | 4 | 7 | 19 | 18 | 7 | 6 | 3 | 5 | 8 | 4 | 3 | 7 | 9 | 10 | 10 | 27 | 23 | 22 | 17 | 9.4 | 26.5 |
| 17-Nov-06 | 16 | 17 | 20 | 18 | A | 24 | 22 | 16 | 9 | 13 | 14 | 13 | 11 | 16 | 22 | 19 | 26 | 30 | 26 | 23 | 24 | 22 | 19 | 9 | 18.7 | 30.1 |
| 18-Nov-06 | 9 | 5 | 7 | 10 | A | 3 | 8 | 6 | 6 | 5 | 3 | 5 | 6 | 5 | 6 | 6 | 10 | 13 | 11 | 13 | 7 | 8 | 8 | 8 | 7.4 | 13.0 |
| 19-Nov-06 | 8 | 9 | 10 | 10 | A | 10 | 11 | 11 | 14 | 10 | 10 | 11 | 11 | 10 | 6 | 6 | 8 | 9 | 3 | 1 | 1 | 1 | 1 | 1 | 7.4 | 14.2 |
| 20-Nov-06 | 1 | 2 | 2 | 2 | A | 3 | 3 | 6 | 7 | 11 | 12 | 4 | 6 | 5 | 3 | 4 | 9 | 3 | 3 | 5 | 8 | 15 | 17 | 11 | 6.1 | 17.1 |
| 21-Nov-06 | 18 | 12 | 7 | 7 | A | 1 | 1 | 1 | 2 | 2 | 4 | C | C | C | C | A | 3 | 3 | 2 | 3 | 1 | 1 | 1 | 1 | 3.9 | 17.9 |
| 22-Nov-06 | 0 | 0 | 0 | 1 | A | 1 | 0 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 5 | 4 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 1.9 | 5.2 |
| 23-Nov-06 | 3 | 2 | 2 | 3 | A | 4 | 7 | 4 | 3 | 3 | 1 | 2 | 2 | 4 | 3 | 4 | 5 | 9 | 10 | 7 | 5 | 5 | 3 | 3 | 4.2 | 10.1 |
| 24-Nov-06 | 3 | 2 | 1 | 2 | A | 2 | 2 | 2 | 3 | 2 | 2 | 1 | 1 | 1 | 2 | 4 | 6 | 8 | 12 | 10 | 27 | 20 | 11 | 9 | 5.7 | 26.6 |
| 25-Nov-06 | 5 | 8 | 3 | 2 | A | 4 | 6 | 6 | 5 | 4 | 5 | 3 | 2 | 2 | 2 | 3 | 3 | 10 | 9 | 9 | 8 | 7 | 9 | 18 | 5.8 | 18.4 |
| 26-Nov-06 | 15 | 7 | 7 | 7 | A | 9 | 13 | 16 | 21 | 24 | 17 | 16 | 15 | 14 | 18 | 21 | 26 | 33 | 17 | 7 | 5 | 5 | 10 | 3 | 14.2 | 33.4 |
| 27-Nov-06 | 3 | 3 | 2 | 2 | A | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 5 | 9 | 13 | 12 | 11 | 11 | 9 | 15 | 7 | 7 | 5.3 | 15.3 |
| 28-Nov-06 | 3 | 5 | 9 | 6 | A | 5 | 6 | 5 | 9 | 9 | 8 | 8 | 5 | 2 | 3 | 4 | 9 | 16 | 20 | 24 | 20 | 17 | 14 | 17 | 9.7 | 23.6 |
| 29-Nov-06 | 19 | 17 | 11 | 9 | A | 5 | 12 | 14 | 13 | 13 | 13 | 22 | 19 | 25 | 39 | 39 | 36 | 37 | 32 | 31 | 27 | 17 | 18 | 17 | 21.1 | 38.8 |
| 30-Nov-06 | 19 | 25 | 24 | 17 | A | 3 | 2 | 9 | 5 | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 5 | 7 | 6 | 3 | 3 | 4 | 3 | 6.8 | 25.2 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 8.7 | 8.4 | 7.5 | 7.3 | N | 6.7 | 7.8 | 9.3 | 9.5 | 8.4 | 7.3 | 7.5 | 6.6 | 6.6 | 7.6 | 8.4 | 10.3 | 12.5 | 11.6 | 10.9 | 11.2 | 10.3 | 9.4 | 9.0 | | |
| Hourly Max | 29.7 | 25.2 | 24.0 | 23.0 | 0.0 | 24.9 | 23.9 | 25.6 | 27.9 | 24.1 | 19.8 | 21.8 | 19.4 | 24.9 | 38.8 | 38.7 | 35.5 | 37.0 | 32.4 | 31.5 | 28.9 | 29.3 | 23.6 | 26.2 | | |

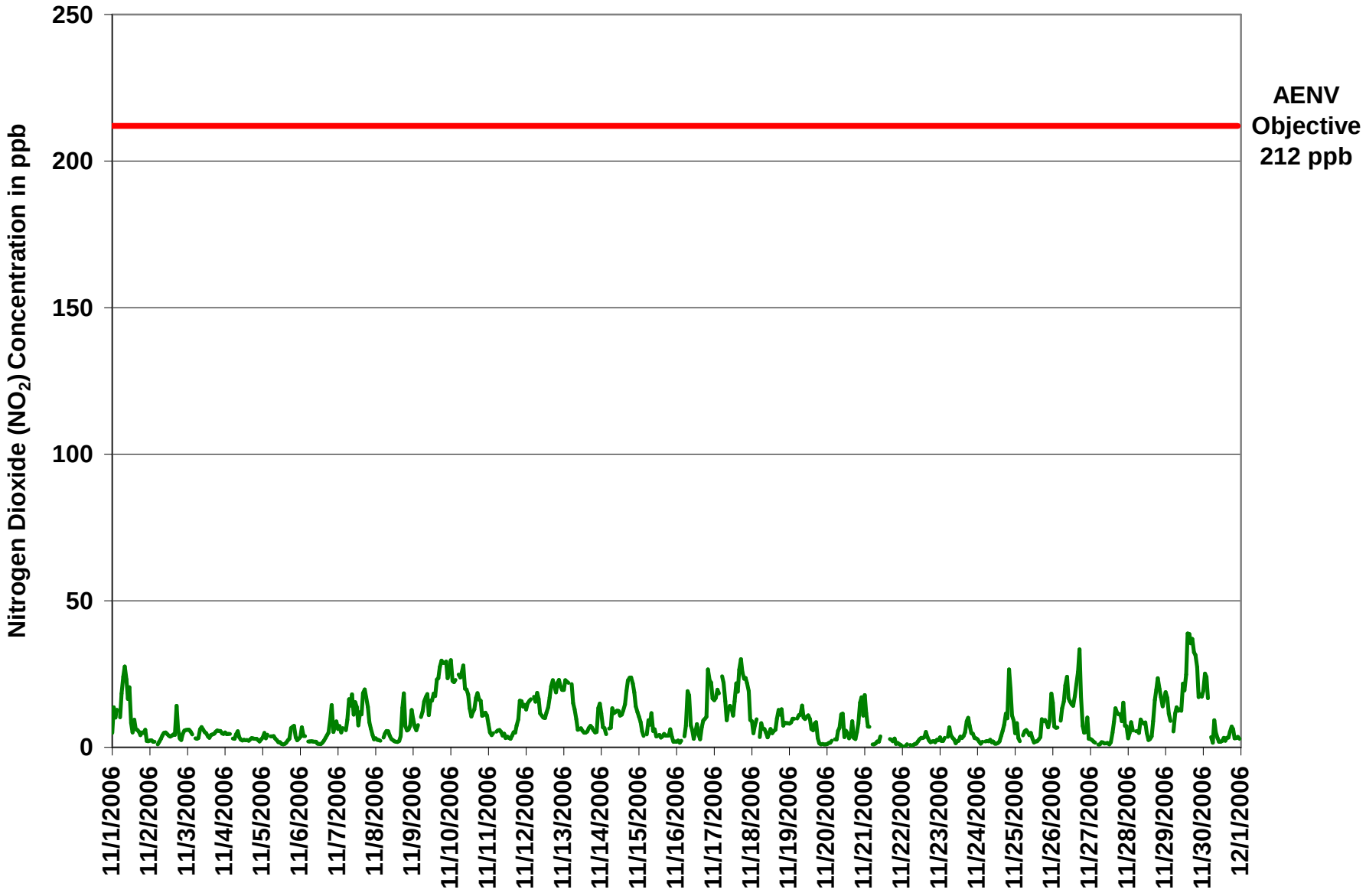


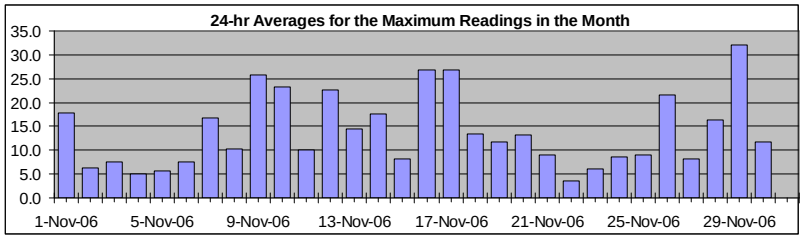

**Figure 36. PASZA - Beaverlodge Nitrogen Dioxide 1-hr Average Monthly Trend**

Station: Beaverlodge
Station Owner: PASZA

## INSTANTANEOUS (30 Second) MAXIMUM TABLE

## Nitrogen Dioxide ($NO_2$)

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 301.2 | ppb | 16-Nov | 7:00 8:00 |
| Maximum 24-hr Value: | 32.2 | ppb | 29-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 685 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 43.0 | 35.4 | 20.0 | 9.7 | 5.0 | 2.5 | 1.6 | 13.9 ppb | 9.7 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 7 | 36 | 23 | 26 | A | 15 | 31 | 35 | 37 | 32 | 29 | 28 | 15 | 7 | 18 | 9 | 8 | 7 | 8 | 7 | 7 | 16 | 4 | 3 | 17.8 | 36.9 |
| 2-Nov-06 | 3 | 3 | 2 | 2 | A | 2 | 3 | 4 | 5 | 7 | 6 | 5 | 5 | 4 | 5 | 6 | 11 | 28 | 18 | 4 | 3 | 7 | 7 | 6 | 6.3 | 27.8 |
| 3-Nov-06 | 7 | 7 | 6 | 6 | A | 4 | 4 | 7 | 15 | 15 | 14 | 7 | 7 | 6 | 5 | 10 | 6 | 8 | 7 | 8 | 7 | 7 | 6 | 6 | 7.5 | 15.3 |
| 4-Nov-06 | 6 | 5 | 8 | 6 | A | 4 | 6 | 8 | 12 | 5 | 3 | 3 | 4 | 5 | 5 | 4 | 4 | 5 | 5 | 3 | 4 | 3 | 3 | 4 | 5.0 | 11.6 |
| 5-Nov-06 | 6 | 7 | 4 | 7 | A | 5 | 6 | 5 | 4 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 5 | 7 | 9 | 19 | 15 | 6 | 5 | 4 | 5.6 | 18.8 |
| 6-Nov-06 | 4 | 16 | 10 | 5 | A | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 3 | 4 | 5 | 8 | 12 | 17 | 26 | 8 | 11 | 20 | 7.5 | 26.1 |
| 7-Nov-06 | 11 | 21 | 7 | 10 | A | 8 | 17 | 23 | 26 | 35 | 19 | 20 | 17 | 14 | 16 | 14 | 31 | 29 | 20 | 18 | 11 | 9 | 7 | 3 | 16.8 | 35.2 |
| 8-Nov-06 | 4 | 3 | 3 | 3 | A | 5 | 9 | 9 | 10 | 7 | 6 | 4 | 3 | 4 | 4 | 3 | 7 | 31 | 29 | 14 | 13 | 15 | 23 | 26 | 10.2 | 30.5 |
| 9-Nov-06 | 11 | 8 | 7 | 17 | A | 22 | 18 | 21 | 39 | 33 | 21 | 32 | 25 | 24 | 20 | 27 | 29 | 37 | 33 | 30 | 30 | 37 | 30 | 41 | 25.8 | 41.4 |
| 10-Nov-06 | 42 | 27 | 28 | 28 | A | 32 | 37 | 36 | 36 | 30 | 29 | 21 | 19 | 15 | 13 | 15 | 21 | 20 | 18 | 19 | 13 | 12 | 13 | 12 | 23.3 | 41.9 |
| 11-Nov-06 | 10 | 6 | 5 | 7 | A | 7 | 7 | 9 | 7 | 6 | 7 | 4 | 6 | 4 | 4 | 6 | 12 | 10 | 16 | 21 | 19 | 21 | 18 | 20 | 10.1 | 21.0 |
| 12-Nov-06 | 20 | 26 | 24 | 23 | A | 18 | 22 | 25 | 21 | 18 | 16 | 19 | 24 | 23 | 24 | 20 | 25 | 26 | 24 | 25 | 23 | 25 | 24 | 22 | 22.6 | 26.4 |
| 13-Nov-06 | 26 | 26 | 37 | 25 | A | 26 | 18 | 19 | 12 | 7 | 8 | 8 | 7 | 5 | 6 | 7 | 8 | 9 | 8 | 7 | 6 | 7 | 22 | 28 | 14.4 | 37.4 |
| 14-Nov-06 | 22 | 12 | 8 | 7 | A | 11 | 15 | 20 | 17 | 16 | 18 | 17 | 16 | 13 | 15 | 17 | 22 | 25 | 25 | 25 | 25 | 23 | 18 | 16 | 17.6 | 25.1 |
| 15-Nov-06 | 12 | 12 | 9 | 5 | A | 6 | 14 | 15 | 24 | 7 | 9 | 5 | 6 | 6 | 5 | 6 | 7 | 5 | 5 | 5 | 18 | 4 | 3 | 3 | 8.2 | 23.9 |
| 16-Nov-06 | 2 | 4 | 3 | 4 | A | 8 | 16 | 301 | 25 | 17 | 12 | 4 | 10 | 11 | 9 | 5 | 11 | 16 | 14 | 15 | 43 | 31 | 28 | 25 | 26.7 | 301.2 |
| 17-Nov-06 | 20 | 19 | 28 | 31 | A | 26 | 27 | 23 | 17 | 18 | 29 | 24 | 17 | 38 | 32 | 22 | 31 | 39 | 34 | 34 | 35 | 29 | 28 | 17 | 26.9 | 38.8 |
| 18-Nov-06 | 14 | 13 | 13 | 40 | A | 6 | 10 | 7 | 7 | 7 | 6 | 7 | 9 | 6 | 7 | 13 | 14 | 21 | 23 | 39 | 10 | 11 | 12 | 14 | 13.4 | 39.8 |
| 19-Nov-06 | 10 | 10 | 15 | 16 | A | 14 | 20 | 16 | 25 | 15 | 15 | 14 | 18 | 18 | 8 | 8 | 10 | 13 | 10 | 3 | 3 | 4 | 3 | 3 | 11.7 | 25.5 |
| 20-Nov-06 | 5 | 4 | 2 | 3 | A | 6 | 5 | 9 | 12 | 21 | 23 | 6 | 11 | 6 | 5 | 7 | 23 | 6 | 8 | 13 | 29 | 26 | 43 | 32 | 13.2 | 43.1 |
| 21-Nov-06 | 41 | 39 | 10 | 15 | A | 2 | 3 | 3 | 6 | 7 | 7 | C | C | C | C | A | 6 | 3 | 3 | 6 | 3 | 3 | 2 | 1 | 8.9 | 40.9 |
| 22-Nov-06 | 1 | 1 | 1 | 1 | A | 2 | 1 | 3 | 1 | 3 | 4 | 4 | 4 | 4 | 6 | 9 | 9 | 4 | 3 | 5 | 4 | 3 | 6 | 5 | 3.6 | 9.1 |
| 23-Nov-06 | 5 | 3 | 3 | 4 | A | 5 | 12 | 6 | 5 | 4 | 2 | 4 | 3 | 5 | 4 | 6 | 7 | 12 | 13 | 12 | 7 | 7 | 5 | 4 | 6.0 | 13.0 |
| 24-Nov-06 | 4 | 3 | 2 | 3 | A | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 2 | 3 | 5 | 7 | 8 | 11 | 17 | 16 | 33 | 37 | 14 | 10 | 8.5 | 36.9 |
| 25-Nov-06 | 10 | 17 | 5 | 3 | A | 5 | 8 | 7 | 7 | 8 | 8 | 6 | 2 | 2 | 3 | 4 | 5 | 17 | 12 | 13 | 15 | 10 | 18 | 22 | 9.1 | 22.3 |
| 26-Nov-06 | 18 | 11 | 9 | 8 | A | 12 | 25 | 21 | 36 | 35 | 26 | 22 | 17 | 17 | 32 | 35 | 41 | 39 | 37 | 9 | 7 | 18 | 19 | 3 | 21.6 | 40.6 |
| 27-Nov-06 | 3 | 3 | 2 | 2 | A | 2 | 2 | 4 | 5 | 2 | 6 | 4 | 2 | 7 | 7 | 15 | 19 | 14 | 14 | 14 | 11 | 27 | 11 | 14 | 8.2 | 26.7 |
| 28-Nov-06 | 4 | 8 | 19 | 9 | A | 7 | 16 | 12 | 18 | 13 | 11 | 13 | 8 | 4 | 4 | 5 | 18 | 28 | 35 | 46 | 26 | 22 | 19 | 30 | 16.3 | 45.8 |
| 29-Nov-06 | 34 | 23 | 13 | 12 | A | 17 | 33 | 17 | 32 | 34 | 34 | 35 | 38 | 56 | 52 | 43 | 44 | 41 | 39 | 33 | 35 | 33 | 22 | 20 | 32.2 | 55.8 |
| 30-Nov-06 | 35 | 34 | 41 | 27 | A | 7 | 6 | 15 | 13 | 6 | 3 | 3 | 3 | 5 | 4 | 6 | 7 | 8 | 12 | 13 | 5 | 5 | 5 | 5 | 11.7 | 41.2 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 13.3 | 13.5 | 11.6 | 11.8 | N | 9.7 | 13.2 | 22.9 | 16.1 | 13.9 | 12.6 | 11.2 | 10.5 | 10.9 | 11.1 | 11.6 | 15.1 | 17.5 | 17.0 | 16.4 | 16.2 | 15.5 | 14.2 | 14.0 | | |
| Hourly Max | 41.9 | 38.9 | 41.2 | 39.8 | 0.0 | 32.1 | 37.2 | 301.2 | 39.1 | 35.2 | 33.7 | 34.6 | 37.9 | 55.8 | 52.0 | 43.0 | 43.7 | 41.4 | 39.0 | 45.8 | 43.0 | 37.2 | 43.1 | 41.4 | | |

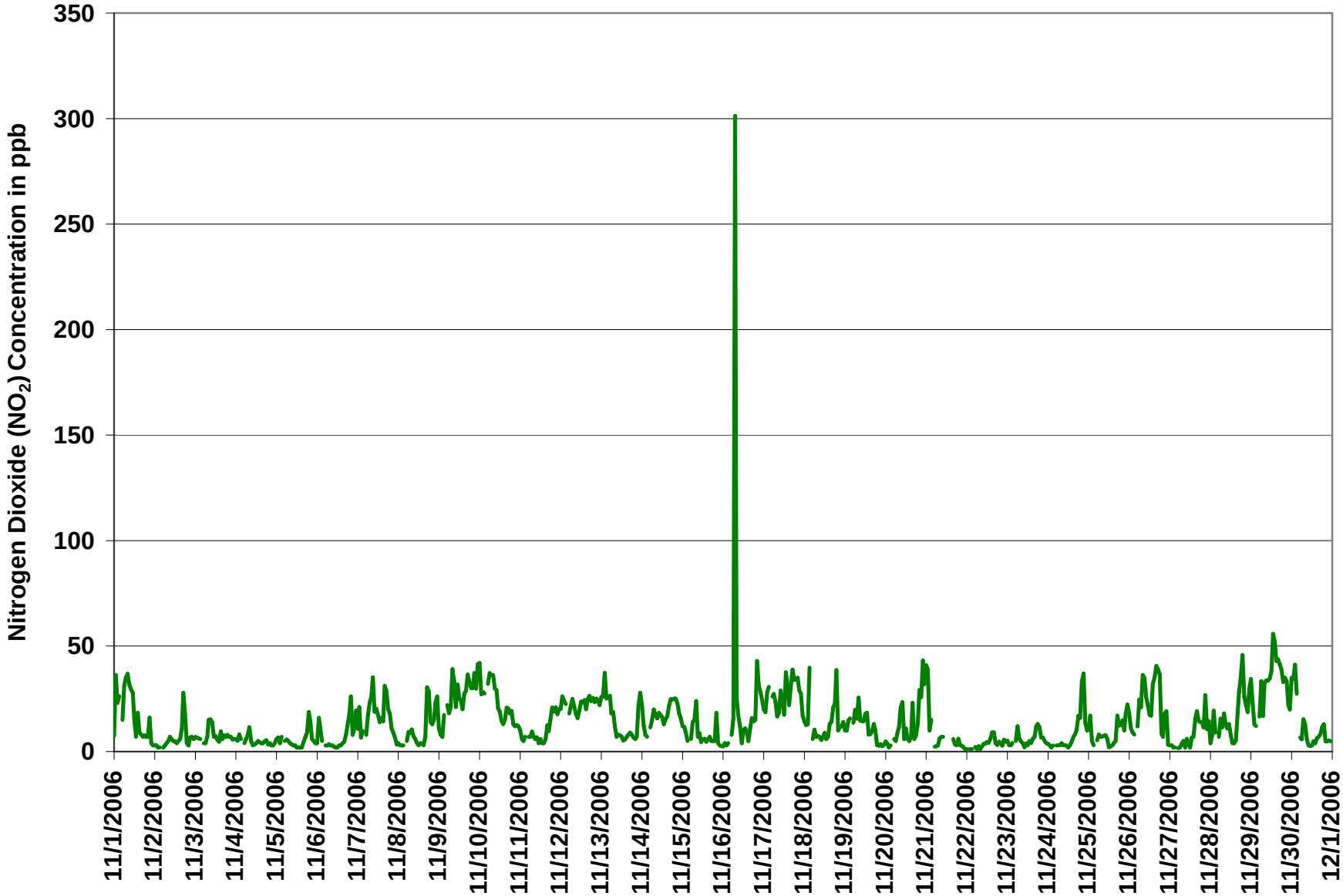
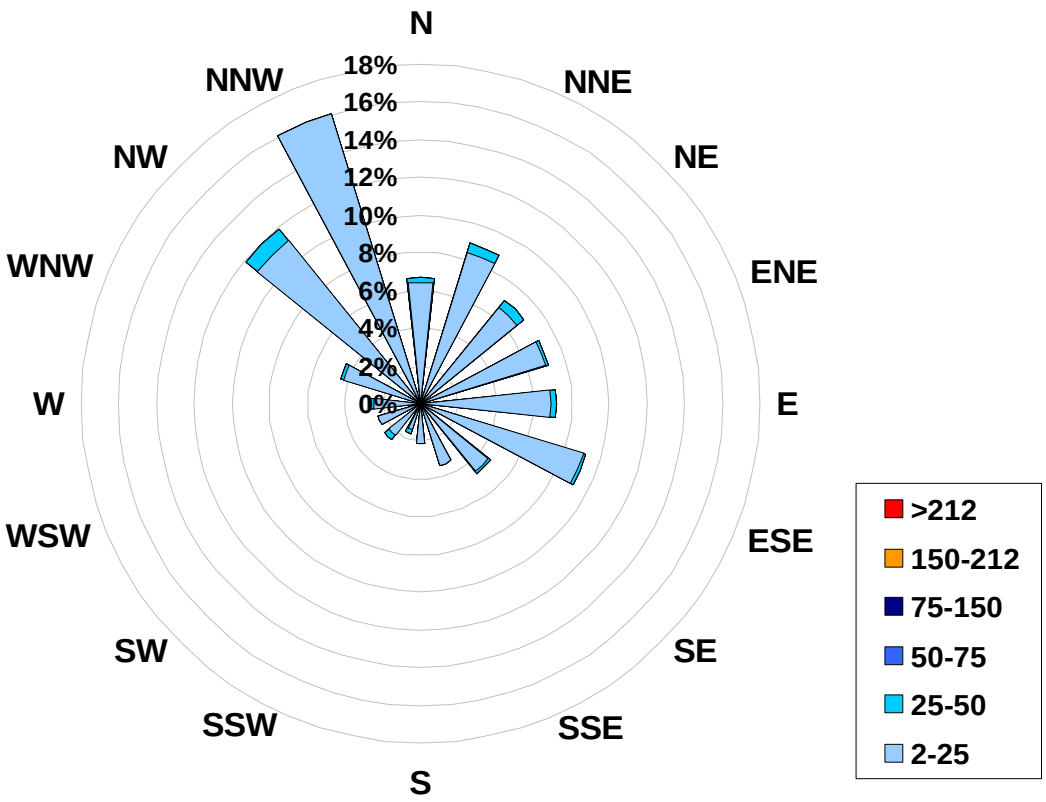



**Figure 37. PASZA - Beaverlodge Nitrogen Dioxide Instantaneous (30 Second) Maximum Value Monthly Trend**

## 1-hr Average Concentration Rose for Nitrogen Dioxide (in ppb) Located at the Beaverlodge Site for November 2006




| Calms: | 2% |
|---|---|

| Frequency Distribution of $NO_2$ in ppb | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 2.0 | < | 25 | 661 |
| 25 | to | 50 | 21 |
| 50 | to | 75 | 2 |
| 75 | to | 150 | 1 |
| 150 | to | 212 | 0 |
| | > | 212 | 0 |
| Total Non-Zero Values | | | 685 |

# PASZA – Beaverlodge - Nitric Oxide Monthly Summary

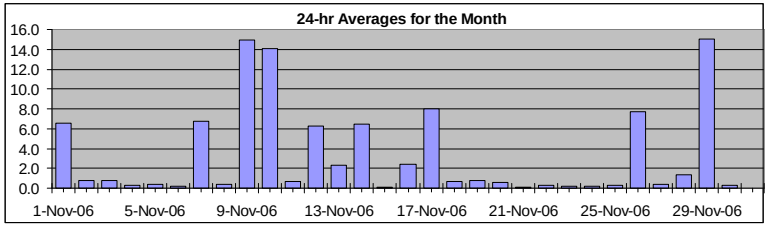
## HOURLY AVERAGE TABLE

**Nitric Oxide (NO)**

Station: Beaverlodge
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Guideline Limit:** 1-hr na ppb | 24-hr na ppb




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 84.9 | ppb | 29-Nov | 14:00 15:00 |
| Maximum 24-hr Average: | 15.0 | ppb | 29-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 685 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 38.9 | 19.7 | 1.6 | 0.1 | 0.0 | 0.0 | 0.0 | 3.3 ppb | 0.1 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 0 | 1 | 0 | 0 | A | 0 | 1 | 10 | 30 | 28 | 24 | 36 | 8 | 3 | 6 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6.6 | 36.2 |
| 2-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 2 | 3 | 4 | 3 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.7 | 3.6 |
| 3-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 3 | 4 | 3 | 3 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.7 | 3.5 |
| 4-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 1.0 |
| 5-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0.4 | 1.2 |
| 6-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.6 |
| 7-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 1 | 4 | 25 | 19 | 30 | 27 | 10 | 16 | 9 | 11 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 6.7 | 29.9 |
| 8-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0.4 | 1.9 |
| 9-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 13 | 24 | 18 | 39 | 35 | 42 | 31 | 36 | 20 | 14 | 18 | 11 | 10 | 13 | 2 | 16 | 14.9 | 42.5 |
| 10-Nov-06 | 35 | 2 | 2 | 2 | A | 8 | 17 | 24 | 56 | 32 | 44 | 39 | 22 | 13 | 11 | 6 | 6 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 14.0 | 56.2 |
| 11-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 3 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.7 | 3.2 |
| 12-Nov-06 | 0 | 2 | 1 | 0 | A | 0 | 0 | 2 | 4 | 10 | 13 | 13 | 17 | 15 | 16 | 17 | 16 | 8 | 2 | 2 | 1 | 4 | 1 | 0 | 6.3 | 16.7 |
| 13-Nov-06 | 3 | 5 | 1 | 2 | A | 9 | 0 | 0 | 0 | 1 | 4 | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 2.3 | 9.2 |
| 14-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 2 | 3 | 9 | 16 | 18 | 15 | 15 | 14 | 11 | 11 | 10 | 13 | 9 | 1 | 1 | 0 | 0 | 6.5 | 17.8 |
| 15-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.8 |
| 16-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 9 | 2 | 2 | 4 | 2 | 6 | 8 | 3 | 1 | 0 | 0 | 0 | 0 | 13 | 2 | 1 | 0 | 2.4 | 12.5 |
| 17-Nov-06 | 0 | 0 | 3 | 4 | A | 3 | 4 | 0 | 0 | 6 | 21 | 20 | 15 | 25 | 37 | 18 | 15 | 7 | 2 | 1 | 1 | 2 | 0 | 0 | 8.0 | 37.2 |
| 18-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 4 | 2 | 2 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0.6 | 3.6 |
| 19-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 1 | 1 | 3 | 4 | 3 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.8 | 3.5 |
| 20-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 2 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0.6 | 3.7 |
| 21-Nov-06 | 1 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 1 | C | C | C | C | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.5 |
| 22-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 1.8 |
| 23-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 1.3 |
| 24-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0.2 | 1.1 |
| 25-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 1.5 |
| 26-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 3 | 17 | 18 | 21 | 20 | 20 | 20 | 18 | 16 | 19 | 7 | 0 | 0 | 0 | 0 | 0 | 7.7 | 21.1 |
| 27-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 3 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 2.7 |
| 28-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 2 | 5 | 9 | 5 | 2 | 2 | 1 | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 0 | 1.4 | 8.6 |
| 29-Nov-06 | 1 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 3 | 9 | 31 | 33 | 39 | 85 | 74 | 36 | 26 | 6 | 1 | 0 | 0 | 0 | 0 | 15.0 | 84.9 |
| 30-Nov-06 | 0 | 1 | 2 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 2.4 |
| Hourly Avg | 1.3 | 0.4 | 0.3 | 0.3 | N | 0.7 | 0.8 | 1.7 | 3.9 | 5.7 | 7.4 | 9.9 | 8.1 | 7.6 | 9.1 | 7.2 | 4.6 | 3.0 | 1.7 | 1.0 | 0.9 | 0.8 | 0.3 | 0.7 | | |
| Hourly Max | 34.7 | 5.0 | 2.8 | 4.0 | 0.0 | 9.2 | 17.2 | 23.7 | 56.2 | 32.5 | 43.9 | 39.2 | 35.2 | 42.5 | 84.9 | 73.7 | 36.0 | 25.8 | 17.9 | 10.6 | 12.5 | 12.8 | 2.4 | 16.0 | | |

# PASZA - Beaverlodge - Oxides of Nitrogen Monthly Summary

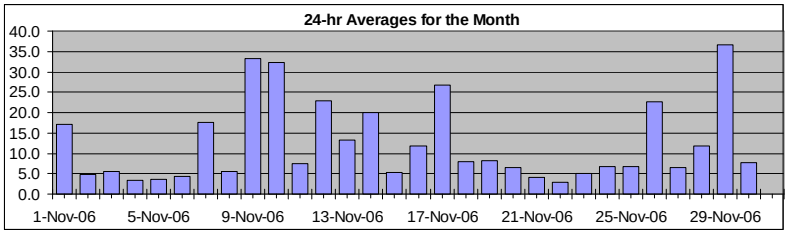
Station: Beaverlodge
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Oxides of Nitrogen ($NO_x$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Guideline Limit:** **Alberta Environment:** 1-hr na ppb | 24-hr na ppb




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 124.5 | ppb | 29-Nov | 14:00 15:00 |
| Maximum 24-hr Average: | 36.7 | ppb | 29-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 685 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 63.5 | 40.9 | 15.9 | 6.8 | 3.7 | 1.9 | 1.0 | 12.4 ppb | 6.8 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 5 | 15 | 10 | 13 | A | 10 | 19 | 34 | 57 | 51 | 40 | 57 | 17 | 8 | 16 | 8 | 7 | 5 | 4 | 5 | 5 | 6 | 2 | 2 | 17.2 | 57.0 |
| 2-Nov-06 | 2 | 2 | 2 | 2 | A | 1 | 2 | 3 | 4 | 6 | 9 | 8 | 6 | 6 | 5 | 6 | 5 | 14 | 6 | 3 | 2 | 5 | 5 | 6 | 4.8 | 14.4 |
| 3-Nov-06 | 6 | 6 | 5 | 4 | A | 3 | 3 | 3 | 7 | 10 | 10 | 8 | 8 | 6 | 4 | 5 | 5 | 5 | 5 | 6 | 5 | 5 | 5 | 5 | 5.5 | 9.6 |
| 4-Nov-06 | 5 | 4 | 5 | 4 | A | 3 | 3 | 4 | 6 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3.4 | 6.1 |
| 5-Nov-06 | 3 | 5 | 3 | 4 | A | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 6 | 8 | 8 | 4 | 2 | 3 | 3.6 | 8.1 |
| 6-Nov-06 | 3 | 7 | 4 | 4 | A | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 4 | 4 | 5 | 9 | 15 | 5 | 7 | 9 | 4.3 | 14.7 |
| 7-Nov-06 | 6 | 8 | 5 | 6 | A | 6 | 9 | 17 | 18 | 43 | 30 | 45 | 41 | 18 | 28 | 20 | 30 | 22 | 17 | 14 | 8 | 6 | 4 | 3 | 17.6 | 45.4 |
| 8-Nov-06 | 3 | 2 | 2 | 2 | A | 3 | 5 | 6 | 6 | 5 | 4 | 4 | 3 | 3 | 2 | 3 | 4 | 15 | 19 | 7 | 6 | 6 | 7 | 13 | 5.7 | 19.0 |
| 9-Nov-06 | 10 | 7 | 6 | 7 | A | 10 | 12 | 16 | 30 | 43 | 29 | 55 | 51 | 61 | 49 | 59 | 44 | 41 | 47 | 39 | 38 | 42 | 26 | 42 | 33.2 | 60.8 |
| 10-Nov-06 | 64 | 25 | 24 | 25 | A | 33 | 41 | 49 | 84 | 52 | 64 | 57 | 36 | 24 | 23 | 19 | 22 | 20 | 17 | 17 | 11 | 11 | 12 | 11 | 32.2 | 84.0 |
| 11-Nov-06 | 8 | 5 | 4 | 5 | A | 5 | 6 | 6 | 6 | 5 | 7 | 5 | 7 | 6 | 5 | 5 | 6 | 5 | 7 | 10 | 16 | 16 | 14 | 14 | 7.5 | 16.0 |
| 12-Nov-06 | 13 | 17 | 17 | 16 | A | 17 | 16 | 21 | 20 | 21 | 24 | 24 | 27 | 27 | 30 | 34 | 37 | 31 | 23 | 21 | 23 | 27 | 21 | 20 | 22.9 | 37.1 |
| 13-Nov-06 | 22 | 28 | 24 | 24 | A | 31 | 15 | 13 | 10 | 7 | 10 | 13 | 11 | 9 | 8 | 8 | 8 | 7 | 7 | 6 | 5 | 5 | 15 | 19 | 13.3 | 30.8 |
| 14-Nov-06 | 12 | 7 | 6 | 4 | A | 6 | 7 | 16 | 14 | 21 | 29 | 30 | 26 | 26 | 27 | 26 | 31 | 33 | 37 | 33 | 23 | 20 | 14 | 12 | 20.0 | 36.6 |
| 15-Nov-06 | 10 | 8 | 5 | 4 | A | 4 | 9 | 8 | 12 | 6 | 7 | 4 | 4 | 5 | 4 | 4 | 5 | 4 | 4 | 4 | 6 | 3 | 2 | 2 | 5.4 | 11.7 |
| 16-Nov-06 | 2 | 2 | 1 | 2 | A | 4 | 8 | 27 | 20 | 10 | 10 | 5 | 11 | 16 | 8 | 3 | 7 | 9 | 10 | 10 | 39 | 25 | 23 | 17 | 11.8 | 39.0 |
| 17-Nov-06 | 16 | 17 | 22 | 22 | A | 27 | 26 | 16 | 10 | 19 | 36 | 33 | 25 | 41 | 59 | 37 | 41 | 37 | 27 | 24 | 24 | 24 | 20 | 9 | 26.6 | 59.0 |
| 18-Nov-06 | 9 | 5 | 7 | 9 | A | 3 | 8 | 6 | 6 | 6 | 4 | 7 | 10 | 7 | 8 | 7 | 11 | 13 | 11 | 14 | 7 | 8 | 8 | 8 | 7.9 | 14.1 |
| 19-Nov-06 | 8 | 8 | 10 | 10 | A | 10 | 11 | 11 | 15 | 11 | 13 | 14 | 14 | 13 | 8 | 7 | 8 | 8 | 3 | 1 | 1 | 1 | 1 | 1 | 8.1 | 15.0 |
| 20-Nov-06 | 1 | 1 | 1 | 2 | A | 3 | 3 | 6 | 7 | 12 | 15 | 5 | 8 | 6 | 4 | 4 | 10 | 3 | 3 | 5 | 8 | 15 | 19 | 11 | 6.6 | 18.6 |
| 21-Nov-06 | 18 | 12 | 7 | 7 | A | 1 | 1 | 1 | 2 | 2 | 4 | C | C | C | C | A | 4 | 3 | 3 | 4 | 2 | 2 | 2 | 1 | 4.2 | 18.3 |
| 22-Nov-06 | 1 | 1 | 1 | 2 | A | 1 | 1 | 1 | 2 | 2 | 3 | 4 | 6 | 6 | 6 | 7 | 4 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | 2.9 | 7.3 |
| 23-Nov-06 | 4 | 3 | 3 | 4 | A | 4 | 8 | 5 | 4 | 4 | 2 | 4 | 4 | 6 | 5 | 5 | 6 | 10 | 11 | 8 | 6 | 5 | 4 | 4 | 5.1 | 10.9 |
| 24-Nov-06 | 4 | 2 | 2 | 3 | A | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 6 | 7 | 9 | 12 | 11 | 29 | 21 | 12 | 10 | 6.8 | 28.6 |
| 25-Nov-06 | 6 | 9 | 4 | 3 | A | 5 | 6 | 6 | 6 | 5 | 7 | 5 | 3 | 4 | 4 | 4 | 4 | 10 | 10 | 10 | 9 | 8 | 10 | 19 | 6.8 | 19.5 |
| 26-Nov-06 | 16 | 8 | 7 | 7 | A | 10 | 14 | 16 | 25 | 42 | 36 | 38 | 36 | 35 | 39 | 40 | 42 | 53 | 25 | 8 | 6 | 6 | 11 | 3 | 22.7 | 52.8 |
| 27-Nov-06 | 3 | 3 | 3 | 2 | A | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 2 | 4 | 8 | 12 | 16 | 13 | 12 | 12 | 10 | 16 | 8 | 8 | 6.5 | 16.5 |
| 28-Nov-06 | 3 | 5 | 9 | 6 | A | 6 | 6 | 6 | 10 | 11 | 14 | 18 | 11 | 6 | 5 | 6 | 10 | 17 | 22 | 28 | 21 | 18 | 15 | 18 | 11.8 | 28.2 |
| 29-Nov-06 | 21 | 17 | 12 | 9 | A | 6 | 12 | 14 | 14 | 17 | 23 | 53 | 53 | 65 | 124 | 113 | 72 | 63 | 40 | 33 | 28 | 18 | 19 | 18 | 36.7 | 124.5 |
| 30-Nov-06 | 20 | 26 | 27 | 17 | A | 4 | 2 | 10 | 6 | 4 | 3 | 3 | 4 | 5 | 3 | 4 | 4 | 6 | 8 | 7 | 4 | 4 | 4 | 4 | 7.8 | 27.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 10.1 | 8.8 | 7.9 | 7.7 | N | 7.6 | 8.8 | 11.1 | 13.7 | 14.3 | 14.9 | 17.7 | 15.0 | 14.5 | 17.0 | 15.9 | 15.3 | 15.7 | 13.5 | 12.1 | 12.3 | 11.2 | 9.8 | 9.9 | | |
| Hourly Max | 64.3 | 28.0 | 27.0 | 25.4 | 0.0 | 33.3 | 40.9 | 49.3 | 84.0 | 52.5 | 63.7 | 57.3 | 53.1 | 64.7 | 124.5 | 113.1 | 72.3 | 63.5 | 47.4 | 39.3 | 39.0 | 42.0 | 25.9 | 42.3 | | |

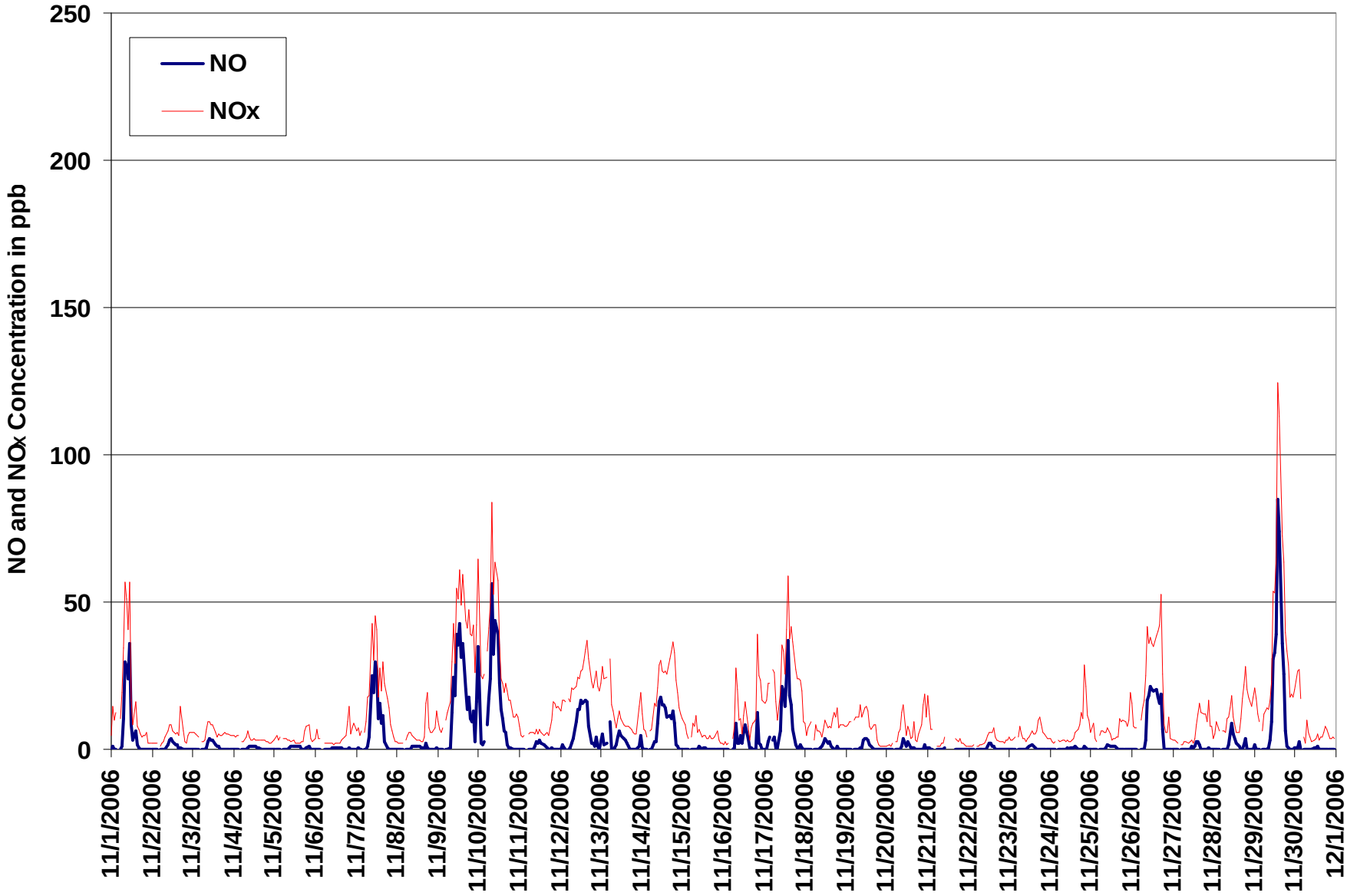


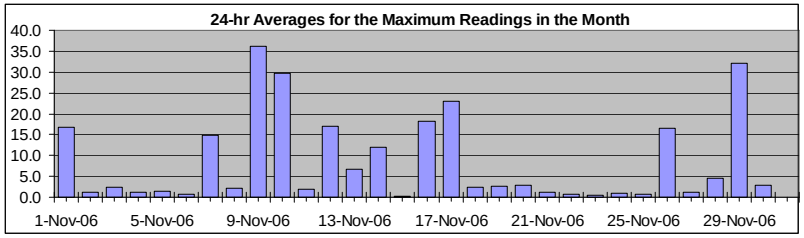

**Figure 38. PASZA - Beaverlodge Oxides of Nitrogen 1-hr Average Monthly Trend**

Station: Beaverlodge
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

**Nitric Oxide (NO)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 265.5 | ppb | 16-Nov | 7:00 8:00 |
| Maximum 24-hr Value: | 36.1 | ppb | 9-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 685 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 93.6 | 49.0 | 5.8 | 1.0 | 0.0 | 0.0 | 0.0 | 8.6 ppb | 1.0 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

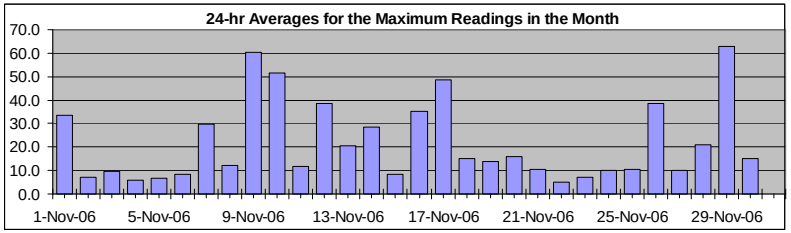
| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 0 | 11 | 2 | 2 | A | 1 | 12 | 57 | 70 | 58 | 70 | 57 | 25 | 6 | 11 | 3 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 16.9 | 69.8 |
| 2-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 1 | 4 | 4 | 4 | 3 | 3 | 2 | 2 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1.2 | 4.0 |
| 3-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 1 | 2 | 10 | 11 | 5 | 7 | 3 | 2 | 11 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2.3 | 10.6 |
| 4-Nov-06 | 0 | 0 | 1 | 0 | A | 0 | 1 | 2 | 6 | 1 | 1 | 2 | 2 | 3 | 2 | 2 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 1.1 | 5.6 |
| 5-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 13 | 5 | 2 | 1 | 0 | 1.6 | 13.0 |
| 6-Nov-06 | 1 | 0 | 0 | 0 | A | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 4 | 0 | 1 | 2 | 0.8 | 3.9 |
| 7-Nov-06 | 0 | 6 | 0 | 0 | A | 0 | 0 | 4 | 21 | 57 | 36 | 42 | 40 | 22 | 24 | 24 | 41 | 18 | 2 | 1 | 0 | 0 | 0 | 0 | 14.8 | 57.4 |
| 8-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 1 | 1 | 1 | 2 | 3 | 2 | 2 | 3 | 2 | 1 | 1 | 14 | 8 | 0 | 0 | 1 | 2 | 8 | 2.2 | 14.2 |
| 9-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 4 | 2 | 101 | 77 | 44 | 98 | 69 | 69 | 42 | 50 | 39 | 45 | 29 | 18 | 13 | 54 | 11 | 65 | 36.1 | 101.2 |
| 10-Nov-06 | 70 | 13 | 12 | 10 | A | 33 | 73 | 69 | 104 | 72 | 64 | 52 | 39 | 20 | 17 | 9 | 14 | 5 | 1 | 2 | 1 | 0 | 0 | 1 | 29.7 | 104.0 |
| 11-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 1 | 3 | 4 | 3 | 6 | 3 | 3 | 2 | 7 | 2 | 2 | 3 | 1 | 1 | 1 | 1 | 1.8 | 6.7 |
| 12-Nov-06 | 5 | 17 | 5 | 3 | A | 0 | 4 | 12 | 11 | 24 | 23 | 38 | 65 | 29 | 49 | 22 | 25 | 16 | 13 | 10 | 4 | 11 | 6 | 1 | 17.0 | 64.8 |
| 13-Nov-06 | 18 | 19 | 11 | 9 | A | 27 | 2 | 2 | 1 | 2 | 7 | 8 | 6 | 4 | 4 | 3 | 2 | 1 | 0 | 0 | 1 | 1 | 5 | 24 | 6.7 | 27.0 |
| 14-Nov-06 | 3 | 1 | 0 | 0 | A | 2 | 2 | 8 | 21 | 16 | 31 | 31 | 32 | 18 | 17 | 15 | 18 | 22 | 15 | 12 | 5 | 5 | 1 | 0 | 11.9 | 32.0 |
| 15-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 1.7 |
| 16-Nov-06 | 0 | 0 | 0 | 0 | A | 1 | 2 | 265 | 7 | 5 | 14 | 5 | 13 | 12 | 9 | 1 | 1 | 0 | 0 | 1 | 54 | 14 | 10 | 2 | 18.1 | 265.5 |
| 17-Nov-06 | 0 | 1 | 13 | 25 | A | 6 | 17 | 5 | 7 | 16 | 71 | 49 | 28 | 82 | 71 | 42 | 21 | 28 | 8 | 10 | 10 | 15 | 5 | 0 | 23.1 | 81.9 |
| 18-Nov-06 | 0 | 0 | 0 | 2 | A | 0 | 0 | 0 | 1 | 2 | 2 | 4 | 6 | 4 | 4 | 4 | 2 | 1 | 1 | 21 | 0 | 0 | 0 | 0 | 2.3 | 20.6 |
| 19-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 4 | 1 | 5 | 2 | 8 | 7 | 8 | 9 | 2 | 2 | 1 | 0 | 0 | 1 | 8 | 1 | 1 | 1 | 2.6 | 8.9 |
| 20-Nov-06 | 1 | 0 | 0 | 0 | A | 0 | 0 | 0 | 1 | 4 | 8 | 2 | 6 | 2 | 1 | 2 | 5 | 0 | 0 | 0 | 5 | 2 | 25 | 2 | 2.9 | 25.2 |
| 21-Nov-06 | 6 | 12 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1 | 1 | C | C | C | C | A | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 1.2 | 12.3 |
| 22-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 2 | 3 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 | 3.9 |
| 23-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 2 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 2.0 |
| 24-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 0 | 3 | 6 | 0 | 0 | 1.0 | 5.8 |
| 25-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 1 | 1 | 1 | 2 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 3 | 0.8 | 2.9 |
| 26-Nov-06 | 0 | 0 | 1 | 0 | A | 0 | 5 | 1 | 13 | 28 | 38 | 26 | 24 | 23 | 44 | 42 | 55 | 44 | 38 | 0 | 0 | 0 | 0 | 1 | 16.6 | 55.4 |
| 27-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 1 | 1 | 0 | 2 | 2 | 1 | 3 | 5 | 5 | 6 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 1.3 | 5.9 |
| 28-Nov-06 | 0 | 0 | 1 | 0 | A | 0 | 3 | 1 | 1 | 3 | 9 | 14 | 9 | 3 | 4 | 2 | 1 | 3 | 19 | 29 | 0 | 0 | 0 | 4 | 4.6 | 28.9 |
| 29-Nov-06 | 20 | 0 | 0 | 0 | A | 2 | 5 | 0 | 14 | 16 | 47 | 74 | 93 | 124 | 104 | 98 | 68 | 42 | 22 | 4 | 4 | 1 | 2 | 0 | 32.1 | 123.8 |
| 30-Nov-06 | 10 | 15 | 31 | 2 | A | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3.0 | 31.4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 4.5 | 3.2 | 2.6 | 1.7 | N | 2.4 | 4.4 | 14.4 | 13.0 | 13.6 | 17.0 | 18.4 | 17.0 | 15.8 | 14.8 | 12.2 | 10.6 | 8.3 | 5.5 | 4.2 | 4.0 | 3.9 | 2.4 | 3.8 | | |
| Hourly Max | 70.2 | 18.8 | 31.4 | 24.7 | 0.0 | 33.4 | 72.8 | 265.5 | 104.0 | 77.1 | 70.9 | 97.8 | 92.8 | 123.8 | 104.2 | 97.9 | 67.9 | 44.6 | 37.8 | 28.9 | 54.1 | 54.4 | 25.2 | 64.8 | | |

Station: Beaverlodge
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

**Oxides of Nitrogen ($NO_x$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 378.0 | ppb | 16-Nov | 7:00 8:00 |
| Maximum 24-hr Value: | 63.1 | ppb | 29-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 685 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 128.7 | 77.3 | 26.9 | 10.9 | 5.9 | 2.9 | 2.0 | 21.9 ppb | 10.9 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 7 | 45 | 26 | 28 | A | 15 | 41 | 86 | 99 | 85 | 100 | 85 | 39 | 14 | 29 | 11 | 10 | 7 | 8 | 7 | 7 | 16 | 4 | 3 | 33.6 | 99.6 |
| 2-Nov-06 | 2 | 3 | 2 | 2 | A | 1 | 3 | 5 | 5 | 11 | 10 | 9 | 8 | 6 | 6 | 8 | 12 | 31 | 18 | 4 | 3 | 6 | 7 | 6 | 7.3 | 31.0 |
| 3-Nov-06 | 6 | 6 | 6 | 6 | A | 4 | 4 | 7 | 17 | 25 | 23 | 12 | 14 | 9 | 7 | 20 | 7 | 8 | 7 | 8 | 7 | 7 | 5 | 7 | 9.6 | 25.0 |
| 4-Nov-06 | 6 | 5 | 9 | 7 | A | 5 | 6 | 9 | 17 | 6 | 4 | 5 | 6 | 7 | 7 | 5 | 4 | 5 | 8 | 3 | 4 | 3 | 3 | 4 | 6.0 | 17.2 |
| 5-Nov-06 | 6 | 6 | 4 | 7 | A | 5 | 5 | 5 | 4 | 4 | 5 | 5 | 4 | 3 | 3 | 3 | 5 | 7 | 9 | 32 | 20 | 7 | 7 | 4 | 6.8 | 31.6 |
| 6-Nov-06 | 5 | 16 | 10 | 5 | A | 3 | 3 | 4 | 3 | 4 | 4 | 3 | 3 | 4 | 4 | 5 | 5 | 8 | 12 | 18 | 30 | 9 | 12 | 21 | 8.2 | 29.7 |
| 7-Nov-06 | 11 | 27 | 6 | 10 | A | 8 | 17 | 27 | 38 | 86 | 55 | 61 | 56 | 35 | 40 | 25 | 71 | 47 | 21 | 18 | 11 | 9 | 6 | 3 | 30.0 | 85.7 |
| 8-Nov-06 | 4 | 3 | 3 | 3 | A | 5 | 10 | 10 | 11 | 10 | 8 | 6 | 5 | 7 | 6 | 4 | 7 | 45 | 36 | 14 | 13 | 15 | 26 | 33 | 12.3 | 44.7 |
| 9-Nov-06 | 11 | 8 | 7 | 17 | A | 22 | 22 | 22 | 138 | 110 | 62 | 129 | 94 | 92 | 61 | 75 | 67 | 75 | 61 | 47 | 43 | 89 | 40 | 97 | 60.4 | 137.8 |
| 10-Nov-06 | 112 | 40 | 40 | 36 | A | 64 | 102 | 103 | 140 | 98 | 87 | 73 | 55 | 35 | 30 | 24 | 33 | 25 | 19 | 21 | 13 | 12 | 13 | 12 | 51.6 | 139.6 |
| 11-Nov-06 | 10 | 6 | 5 | 7 | A | 7 | 7 | 10 | 7 | 8 | 11 | 7 | 11 | 7 | 7 | 8 | 18 | 12 | 17 | 23 | 20 | 21 | 18 | 21 | 11.6 | 22.9 |
| 12-Nov-06 | 25 | 41 | 29 | 24 | A | 18 | 26 | 37 | 32 | 40 | 38 | 51 | 88 | 53 | 71 | 41 | 47 | 42 | 35 | 35 | 27 | 35 | 30 | 23 | 38.6 | 87.6 |
| 13-Nov-06 | 40 | 43 | 48 | 33 | A | 52 | 19 | 20 | 12 | 8 | 15 | 15 | 13 | 10 | 9 | 9 | 9 | 10 | 9 | 7 | 6 | 8 | 27 | 51 | 20.4 | 51.9 |
| 14-Nov-06 | 25 | 13 | 8 | 7 | A | 12 | 16 | 27 | 36 | 30 | 46 | 48 | 48 | 30 | 32 | 31 | 39 | 45 | 39 | 35 | 31 | 28 | 19 | 16 | 28.7 | 47.8 |
| 15-Nov-06 | 12 | 11 | 9 | 5 | A | 6 | 14 | 15 | 25 | 8 | 10 | 5 | 7 | 7 | 5 | 6 | 7 | 5 | 5 | 5 | 18 | 4 | 3 | 2 | 8.4 | 24.7 |
| 16-Nov-06 | 2 | 4 | 3 | 4 | A | 9 | 18 | 378 | 31 | 21 | 23 | 9 | 21 | 23 | 18 | 6 | 11 | 16 | 14 | 15 | 82 | 41 | 38 | 27 | 35.3 | 378.0 |
| 17-Nov-06 | 21 | 19 | 39 | 53 | A | 32 | 42 | 28 | 23 | 35 | 99 | 69 | 45 | 116 | 96 | 63 | 50 | 60 | 41 | 44 | 45 | 43 | 32 | 17 | 48.4 | 116.3 |
| 18-Nov-06 | 14 | 12 | 13 | 42 | A | 6 | 10 | 7 | 8 | 8 | 8 | 11 | 15 | 10 | 11 | 17 | 14 | 22 | 24 | 53 | 10 | 11 | 12 | 14 | 15.2 | 52.8 |
| 19-Nov-06 | 10 | 10 | 15 | 16 | A | 14 | 23 | 16 | 29 | 17 | 23 | 21 | 25 | 27 | 10 | 9 | 11 | 13 | 10 | 4 | 6 | 4 | 3 | 3 | 13.9 | 29.0 |
| 20-Nov-06 | 5 | 4 | 2 | 3 | A | 6 | 5 | 8 | 12 | 24 | 30 | 8 | 17 | 8 | 6 | 8 | 28 | 6 | 8 | 13 | 34 | 27 | 68 | 33 | 15.7 | 67.9 |
| 21-Nov-06 | 45 | 51 | 10 | 15 | A | 3 | 3 | 3 | 6 | 8 | 8 | C | C | C | C | A | 7 | 4 | 4 | 7 | 4 | 4 | 3 | 2 | 10.3 | 50.8 |
| 22-Nov-06 | 1 | 1 | 1 | 2 | A | 3 | 2 | 4 | 2 | 4 | 5 | 6 | 8 | 8 | 9 | 14 | 11 | 5 | 4 | 6 | 5 | 4 | 6 | 5 | 5.0 | 14.0 |
| 23-Nov-06 | 6 | 4 | 4 | 5 | A | 6 | 13 | 7 | 6 | 5 | 4 | 6 | 5 | 8 | 6 | 8 | 8 | 12 | 14 | 12 | 8 | 8 | 6 | 5 | 7.2 | 13.9 |
| 24-Nov-06 | 4 | 4 | 3 | 4 | A | 4 | 4 | 4 | 5 | 5 | 5 | 4 | 4 | 5 | 8 | 10 | 10 | 12 | 18 | 17 | 36 | 44 | 14 | 11 | 10.2 | 43.6 |
| 25-Nov-06 | 11 | 18 | 6 | 4 | A | 6 | 9 | 8 | 8 | 10 | 12 | 9 | 5 | 5 | 5 | 6 | 6 | 18 | 14 | 14 | 16 | 11 | 19 | 25 | 10.6 | 25.4 |
| 26-Nov-06 | 19 | 12 | 10 | 9 | A | 12 | 30 | 22 | 50 | 61 | 65 | 47 | 41 | 40 | 77 | 77 | 95 | 82 | 73 | 9 | 8 | 19 | 20 | 5 | 38.4 | 94.6 |
| 27-Nov-06 | 4 | 4 | 3 | 3 | A | 2 | 3 | 5 | 7 | 4 | 9 | 6 | 4 | 10 | 13 | 20 | 26 | 16 | 15 | 15 | 12 | 29 | 11 | 16 | 10.2 | 29.1 |
| 28-Nov-06 | 5 | 9 | 20 | 10 | A | 8 | 19 | 14 | 19 | 15 | 21 | 28 | 18 | 7 | 9 | 8 | 20 | 31 | 56 | 70 | 26 | 23 | 19 | 34 | 21.2 | 70.2 |
| 29-Nov-06 | 56 | 24 | 14 | 13 | A | 19 | 38 | 17 | 47 | 50 | 71 | 106 | 129 | 174 | 147 | 141 | 108 | 84 | 60 | 37 | 40 | 35 | 23 | 20 | 63.1 | 173.5 |
| 30-Nov-06 | 47 | 48 | 73 | 30 | A | 7 | 6 | 17 | 14 | 6 | 4 | 4 | 5 | 8 | 6 | 8 | 8 | 9 | 13 | 14 | 6 | 5 | 6 | 5 | 15.1 | 72.9 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 17.7 | 16.5 | 14.2 | 13.6 | N | 12.1 | 17.3 | 30.8 | 28.3 | 26.8 | 28.8 | 29.1 | 27.3 | 26.4 | 25.4 | 23.1 | 25.1 | 25.4 | 22.3 | 20.2 | 19.7 | 19.2 | 16.7 | 17.5 | | |
| Hourly Max | 112.1 | 50.8 | 72.9 | 53.0 | 0.0 | 63.9 | 101.6 | 378.0 | 139.6 | 109.9 | 99.6 | 128.6 | 129.0 | 173.5 | 147.1 | 140.6 | 107.6 | 83.6 | 72.7 | 70.2 | 81.6 | 89.2 | 67.9 | 96.9 | | |

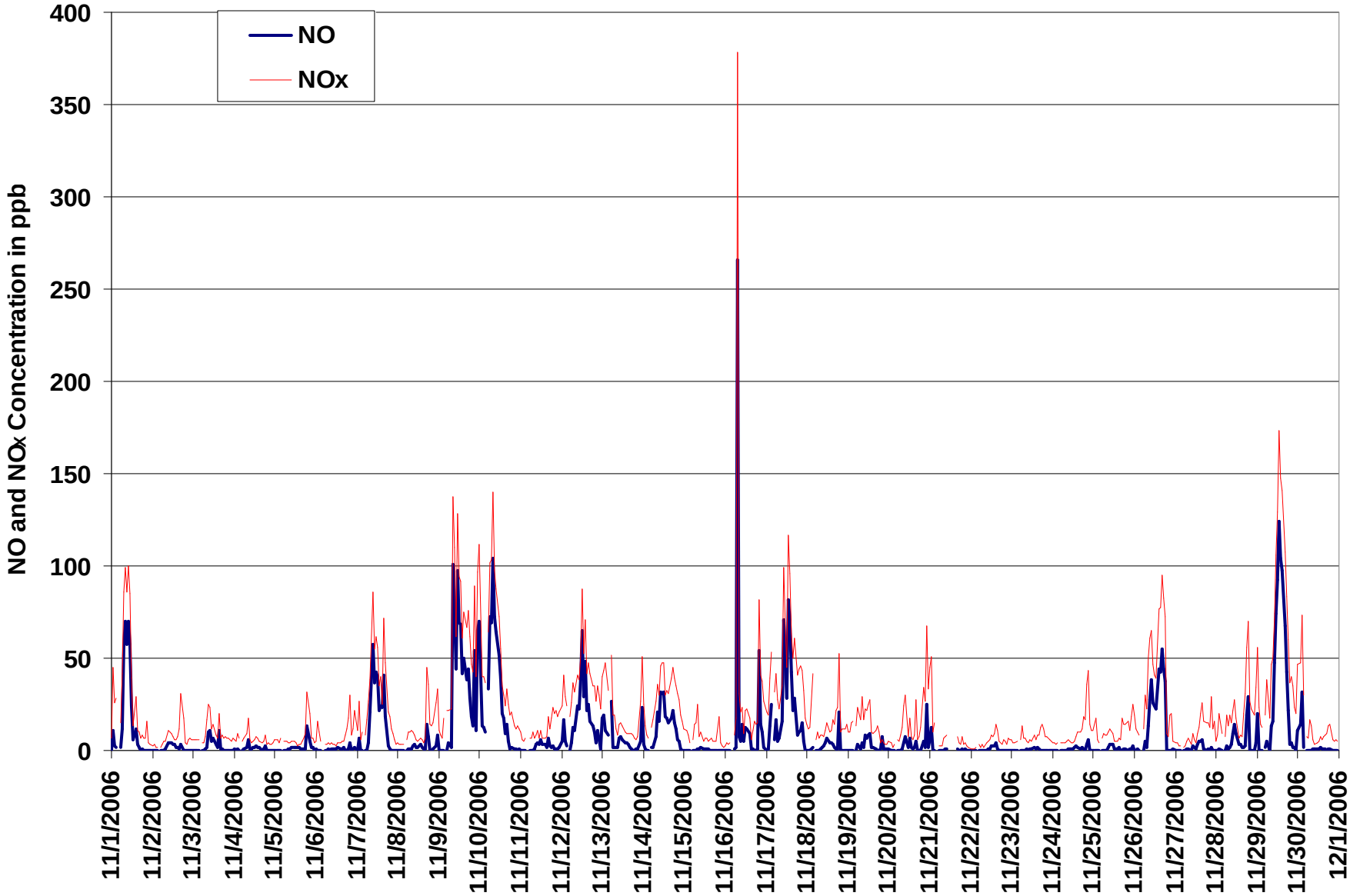



**Figure 39. PASZA - Beaverlodge Oxides of Nitrogen Instantaneous (30 Second) Maximum Value Monthly Trend**

# PASZA - Beaverlodge - Ozone Monthly Summary

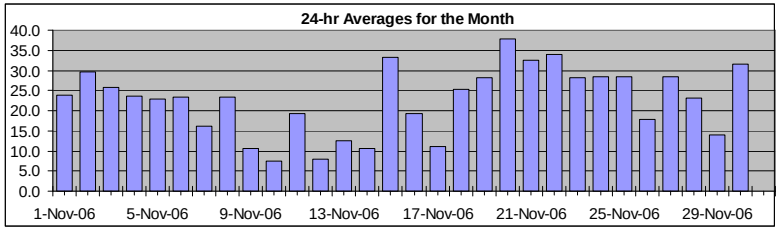
## HOURLY AVERAGE TABLE

**Ozone ($O_3$)**

Station: Beaverlodge
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr 82 ppb | 24-hr na ppb




**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 1-hr Exceedances: | 0 | | | |
| Maximum 1-hr Average: | 45.9 | ppb | 19-Nov | 20:00 21:00 |
| Maximum 24-hr Average: | 37.8 | ppb | 20-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 686 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 41.6 | 37.7 | 29.8 | 23.6 | 15.1 | 4.4 | 1.6 | 22.6 ppb | 23.6 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 30 | 21 | 24 | 21 | A | 22 | 13 | 8 | 5 | 10 | 15 | 12 | 26 | 30 | 26 | 33 | 32 | 32 | 33 | 31 | 31 | 29 | 34 | 34 | 23.9 | 33.8 |
| 2-Nov-06 | 33 | 33 | 33 | 33 | A | 33 | 32 | 30 | 28 | 27 | 27 | 28 | 29 | 30 | 30 | 30 | 30 | 20 | 28 | 31 | 31 | 29 | 27 | 26 | 29.6 | 33.4 |
| 3-Nov-06 | 25 | 25 | 25 | 27 | A | 28 | 28 | 27 | 24 | 23 | 25 | 26 | 26 | 28 | 28 | 27 | 27 | 27 | 25 | 25 | 24 | 24 | 25 | 24 | 25.8 | 28.2 |
| 4-Nov-06 | 23 | 23 | 22 | 21 | A | 22 | 22 | 20 | 19 | 21 | 24 | 25 | 26 | 27 | 28 | 27 | 26 | 24 | 24 | 23 | 23 | 24 | 24 | 24 | 23.5 | 27.7 |
| 5-Nov-06 | 23 | 21 | 23 | 23 | A | 23 | 22 | 22 | 22 | 23 | 23 | 23 | 24 | 24 | 24 | 24 | 24 | 23 | 19 | 19 | 20 | 24 | 26 | 26 | 22.8 | 25.9 |
| 6-Nov-06 | 24 | 20 | 23 | 22 | A | 23 | 24 | 25 | 25 | 25 | 26 | 26 | 26 | 27 | 27 | 26 | 25 | 25 | 24 | 19 | 15 | 23 | 21 | 19 | 23.5 | 26.8 |
| 7-Nov-06 | 20 | 19 | 20 | 19 | A | 19 | 16 | 9 | 11 | 10 | 15 | 15 | 16 | 22 | 19 | 20 | 13 | 10 | 10 | 12 | 18 | 20 | 20 | 21 | 16.2 | 22.3 |
| 8-Nov-06 | 23 | 24 | 25 | 26 | A | 24 | 23 | 23 | 24 | 26 | 27 | 27 | 27 | 27 | 27 | 28 | 26 | 17 | 11 | 22 | 23 | 23 | 21 | 15 | 23.4 | 28.0 |
| 9-Nov-06 | 18 | 21 | 22 | 20 | A | 16 | 14 | 10 | 10 | 11 | 16 | 14 | 15 | 13 | 14 | 9 | 7 | 2 | 1 | 1 | 1 | 1 | 5 | 4 | 10.7 | 21.9 |
| 10-Nov-06 | 2 | 4 | 5 | 3 | A | 2 | 3 | 2 | 3 | 6 | 7 | 8 | 11 | 13 | 13 | 14 | 9 | 6 | 7 | 8 | 13 | 12 | 11 | 12 | 7.4 | 13.6 |
| 11-Nov-06 | 16 | 20 | 21 | 20 | A | 19 | 18 | 19 | 19 | 21 | 21 | 23 | 24 | 24 | 25 | 25 | 23 | 23 | 20 | 17 | 12 | 11 | 12 | 11 | 19.2 | 25.2 |
| 12-Nov-06 | 11 | 9 | 8 | 8 | A | 7 | 8 | 5 | 7 | 11 | 13 | 14 | 14 | 13 | 12 | 9 | 5 | 3 | 4 | 7 | 3 | 3 | 4 | 5 | 8.0 | 14.0 |
| 13-Nov-06 | 5 | 2 | 3 | 3 | A | 4 | 12 | 13 | 13 | 16 | 15 | 15 | 18 | 20 | 20 | 18 | 16 | 15 | 15 | 16 | 16 | 16 | 10 | 8 | 12.6 | 20.0 |
| 14-Nov-06 | 10 | 14 | 14 | 16 | A | 13 | 13 | 6 | 8 | 9 | 10 | 10 | 12 | 12 | 12 | 11 | 5 | 1 | 1 | 1 | 9 | 13 | 20 | 22 | 10.6 | 22.0 |
| 15-Nov-06 | 24 | 27 | 33 | 37 | A | 37 | 32 | 34 | 29 | 35 | 34 | 38 | 41 | 40 | 41 | 40 | 38 | 38 | 38 | 37 | 29 | 21 | 22 | 21 | 33.3 | 40.6 |
| 16-Nov-06 | 22 | 22 | 24 | 24 | A | 23 | 22 | 14 | 13 | 21 | 22 | 25 | 23 | 21 | 27 | 29 | 24 | 21 | 20 | 18 | 4 | 6 | 7 | 11 | 19.3 | 29.0 |
| 17-Nov-06 | 11 | 10 | 7 | 9 | A | 2 | 4 | 10 | 19 | 14 | 14 | 15 | 18 | 17 | 12 | 12 | 6 | 4 | 9 | 11 | 8 | 5 | 11 | 27 | 11.2 | 27.2 |
| 18-Nov-06 | 31 | 39 | 37 | 34 | A | 35 | 17 | 22 | 22 | 24 | 28 | 26 | 24 | 26 | 26 | 25 | 22 | 19 | 20 | 19 | 23 | 22 | 21 | 21 | 25.3 | 38.9 |
| 19-Nov-06 | 20 | 19 | 17 | 17 | A | 16 | 14 | 13 | 14 | 21 | 22 | 20 | 22 | 28 | 35 | 35 | 34 | 33 | 40 | 45 | 46 | 46 | 45 | 45 | 28.1 | 45.9 |
| 20-Nov-06 | 44 | 42 | 42 | 41 | A | 40 | 41 | 39 | 38 | 33 | 34 | 41 | 39 | 41 | 41 | 41 | 35 | 41 | 42 | 38 | 35 | 28 | 24 | 29 | 37.8 | 43.7 |
| 21-Nov-06 | 23 | 26 | 30 | 27 | A | 34 | 35 | 35 | 34 | 34 | 33 | 33 | 34 | 34 | 33 | 33 | 33 | 33 | 34 | 32 | 35 | 34 | 35 | 36 | 32.6 | 36.2 |
| 22-Nov-06 | 36 | 37 | 36 | 35 | A | 36 | 36 | 36 | 35 | 35 | 34 | 34 | 33 | 34 | 33 | 31 | 33 | 33 | 34 | 33 | 33 | 33 | 32 | 32 | 34.1 | 36.9 |
| 23-Nov-06 | 30 | 32 | 31 | 30 | A | 29 | 25 | 29 | 30 | 30 | 32 | 31 | 31 | 29 | 30 | 29 | 28 | 24 | 23 | 25 | 25 | 24 | 26 | 27 | 28.3 | 31.7 |
| 24-Nov-06 | 27 | 29 | 29 | 29 | A | 30 | 31 | 32 | 33 | 35 | 35 | C | C | C | A | 33 | 31 | 29 | 25 | 27 | 13 | 18 | 26 | 27 | 28.3 | 35.3 |
| 25-Nov-06 | 30 | 27 | 32 | 33 | A | 31 | 29 | 29 | 29 | 30 | 30 | 31 | 33 | 32 | 32 | 32 | 31 | 25 | 25 | 24 | 24 | 26 | 23 | 14 | 28.3 | 32.7 |
| 26-Nov-06 | 17 | 25 | 25 | 24 | A | 22 | 17 | 14 | 10 | 9 | 14 | 16 | 17 | 17 | 17 | 13 | 8 | 3 | 15 | 24 | 27 | 27 | 23 | 29 | 17.9 | 29.5 |
| 27-Nov-06 | 29 | 30 | 31 | 32 | A | 32 | 32 | 31 | 31 | 32 | 32 | 32 | 32 | 32 | 30 | 26 | 22 | 23 | 24 | 23 | 25 | 20 | 27 | 27 | 28.5 | 32.4 |
| 28-Nov-06 | 31 | 29 | 25 | 26 | A | 26 | 27 | 27 | 23 | 23 | 24 | 24 | 28 | 30 | 30 | 29 | 24 | 17 | 14 | 11 | 13 | 16 | 18 | 15 | 23.0 | 30.8 |
| 29-Nov-06 | 13 | 14 | 19 | 21 | A | 27 | 21 | 18 | 20 | 19 | 21 | 14 | 17 | 16 | 7 | 4 | 4 | 2 | 3 | 4 | 8 | 17 | 15 | 16 | 13.9 | 26.7 |
| 30-Nov-06 | 13 | 9 | 10 | 15 | A | 34 | 37 | 30 | 33 | 32 | 35 | 38 | 38 | 35 | 36 | 35 | 36 | 36 | 34 | 36 | 39 | 39 | 38 | 40 | 31.7 | 39.6 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 22.2 | 22.4 | 23.2 | 23.2 | N | 23.7 | 22.2 | 21.0 | 21.0 | 22.2 | 23.6 | 23.6 | 24.9 | 25.6 | 25.4 | 25.0 | 22.6 | 20.3 | 20.7 | 21.3 | 20.8 | 21.1 | 21.8 | 22.3 | | |
| Hourly Max | 43.7 | 42.0 | 41.5 | 40.8 | 0.0 | 40.5 | 40.8 | 38.6 | 37.7 | 35.1 | 35.4 | 41.3 | 40.6 | 40.7 | 41.4 | 40.6 | 38.2 | 41.2 | 41.5 | 45.1 | 45.9 | 45.6 | 45.5 | 45.0 | | |

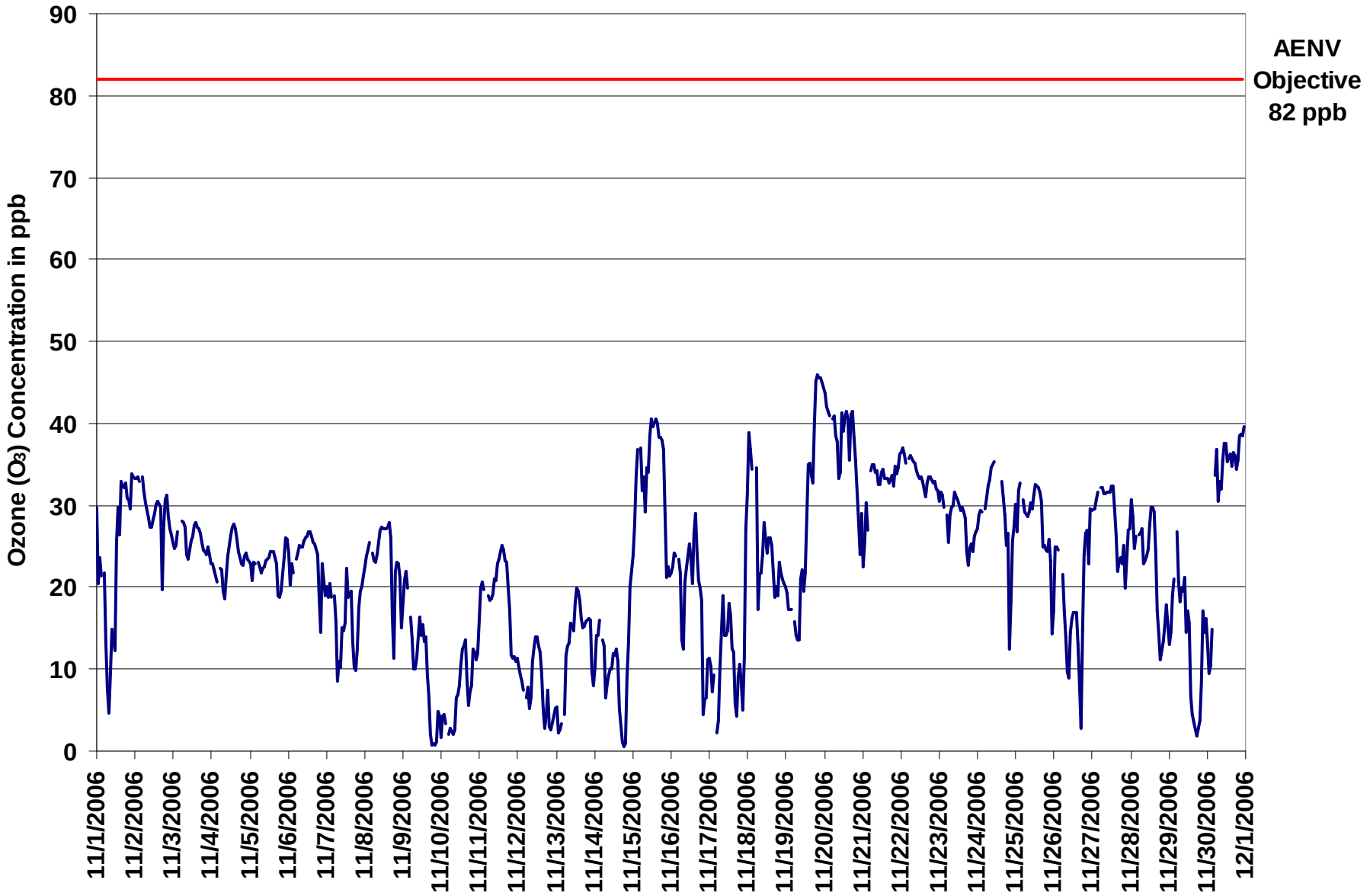


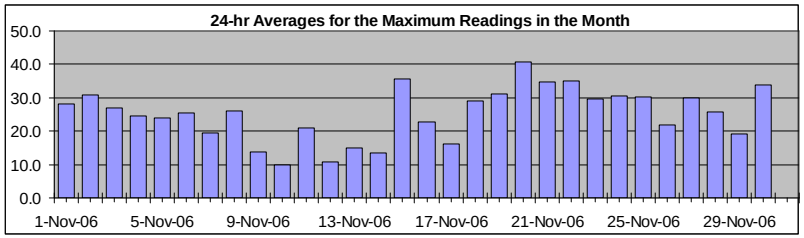

**Figure 40. PASZA - Beaverlodge Ozone 1-hr Average Monthly Trend**

Station: Beaverlodge
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

**Ozone ($O_3$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 47.4 | ppb | 19-Nov | 20:00 21:00 |
| Maximum 24-hr Value: | 40.6 | ppb | 20-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 686 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 44.7 | 39.5 | 31.7 | 25.7 | 19.4 | 8.6 | 3.2 | 25.2 ppb | 25.7 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 31 | 30 | 28 | 26 | A | 26 | 22 | 18 | 11 | 15 | 21 | 18 | 33 | 34 | 34 | 36 | 34 | 33 | 35 | 33 | 32 | 32 | 35 | 34 | 28.3 | 35.7 |
| 2-Nov-06 | 34 | 34 | 34 | 34 | A | 34 | 33 | 31 | 29 | 28 | 28 | 29 | 30 | 31 | 31 | 31 | 31 | 29 | 31 | 32 | 32 | 31 | 28 | 27 | 30.9 | 34.2 |
| 3-Nov-06 | 26 | 25 | 26 | 28 | A | 29 | 29 | 28 | 27 | 26 | 27 | 27 | 28 | 29 | 29 | 29 | 28 | 28 | 27 | 26 | 25 | 25 | 26 | 25 | 27.0 | 29.1 |
| 4-Nov-06 | 24 | 24 | 23 | 21 | A | 23 | 23 | 21 | 20 | 23 | 25 | 28 | 28 | 28 | 29 | 28 | 27 | 25 | 24 | 24 | 23 | 25 | 25 | 25 | 24.6 | 28.8 |
| 5-Nov-06 | 24 | 23 | 24 | 25 | A | 24 | 24 | 23 | 23 | 23 | 24 | 24 | 24 | 25 | 25 | 25 | 24 | 24 | 22 | 21 | 23 | 25 | 27 | 27 | 24.0 | 26.8 |
| 6-Nov-06 | 26 | 24 | 25 | 23 | A | 24 | 25 | 25 | 25 | 26 | 26 | 26 | 27 | 27 | 27 | 27 | 26 | 26 | 25 | 21 | 23 | 27 | 23 | 24 | 25.3 | 27.4 |
| 7-Nov-06 | 22 | 22 | 21 | 21 | A | 20 | 19 | 14 | 14 | 17 | 17 | 17 | 20 | 25 | 22 | 21 | 23 | 17 | 12 | 16 | 21 | 22 | 22 | 22 | 19.5 | 25.4 |
| 8-Nov-06 | 24 | 24 | 26 | 26 | A | 25 | 25 | 25 | 26 | 27 | 28 | 28 | 28 | 28 | 28 | 29 | 28 | 27 | 20 | 27 | 28 | 26 | 25 | 19 | 26.0 | 28.5 |
| 9-Nov-06 | 21 | 23 | 23 | 22 | A | 20 | 17 | 13 | 15 | 20 | 20 | 19 | 18 | 17 | 16 | 13 | 8 | 8 | 1 | 2 | 1 | 2 | 9 | 9 | 13.9 | 22.9 |
| 10-Nov-06 | 4 | 7 | 6 | 6 | A | 5 | 6 | 5 | 5 | 11 | 9 | 9 | 13 | 14 | 14 | 17 | 16 | 7 | 8 | 11 | 13 | 13 | 12 | 13 | 9.8 | 16.8 |
| 11-Nov-06 | 19 | 21 | 21 | 21 | A | 20 | 19 | 20 | 21 | 22 | 23 | 24 | 24 | 25 | 26 | 26 | 25 | 25 | 22 | 22 | 14 | 13 | 13 | 14 | 20.9 | 26.2 |
| 12-Nov-06 | 15 | 14 | 13 | 12 | A | 7 | 10 | 7 | 9 | 13 | 15 | 16 | 16 | 15 | 14 | 12 | 9 | 5 | 6 | 16 | 5 | 5 | 7 | 7 | 10.8 | 16.0 |
| 13-Nov-06 | 9 | 3 | 6 | 9 | A | 12 | 14 | 17 | 15 | 17 | 17 | 16 | 20 | 20 | 20 | 19 | 17 | 16 | 16 | 17 | 17 | 17 | 17 | 15 | 15.1 | 20.4 |
| 14-Nov-06 | 15 | 17 | 15 | 17 | A | 16 | 15 | 11 | 10 | 11 | 12 | 12 | 14 | 12 | 14 | 12 | 9 | 3 | 1 | 2 | 16 | 20 | 29 | 26 | 13.5 | 28.9 |
| 15-Nov-06 | 28 | 32 | 37 | 39 | A | 38 | 37 | 37 | 35 | 36 | 37 | 40 | 42 | 41 | 42 | 42 | 39 | 39 | 38 | 38 | 37 | 22 | 23 | 22 | 35.7 | 42.2 |
| 16-Nov-06 | 23 | 24 | 25 | 25 | A | 25 | 26 | 24 | 18 | 24 | 25 | 26 | 26 | 22 | 30 | 30 | 28 | 22 | 22 | 20 | 17 | 14 | 11 | 18 | 22.8 | 30.4 |
| 17-Nov-06 | 14 | 12 | 12 | 15 | A | 5 | 7 | 19 | 21 | 20 | 20 | 18 | 19 | 21 | 17 | 17 | 10 | 12 | 22 | 14 | 11 | 9 | 24 | 34 | 16.3 | 33.6 |
| 18-Nov-06 | 45 | 43 | 42 | 41 | A | 36 | 25 | 24 | 27 | 28 | 30 | 28 | 26 | 27 | 28 | 27 | 25 | 24 | 26 | 26 | 24 | 24 | 23 | 22 | 29.1 | 44.7 |
| 19-Nov-06 | 21 | 20 | 19 | 19 | A | 18 | 17 | 16 | 26 | 26 | 28 | 23 | 27 | 35 | 37 | 38 | 35 | 35 | 45 | 47 | 47 | 47 | 46 | 46 | 31.2 | 47.4 |
| 20-Nov-06 | 45 | 43 | 43 | 42 | A | 42 | 42 | 40 | 41 | 38 | 39 | 42 | 41 | 42 | 43 | 42 | 41 | 43 | 43 | 41 | 41 | 33 | 33 | 36 | 40.6 | 45.0 |
| 21-Nov-06 | 35 | 31 | 33 | 32 | A | 35 | 36 | 36 | 36 | 35 | 34 | 34 | 35 | 35 | 34 | 35 | 35 | 33 | 34 | 34 | 35 | 35 | 36 | 37 | 34.6 | 36.8 |
| 22-Nov-06 | 37 | 37 | 36 | 36 | A | 36 | 37 | 37 | 36 | 36 | 35 | 34 | 34 | 34 | 34 | 33 | 34 | 34 | 34 | 34 | 34 | 33 | 33 | 32 | 34.9 | 37.3 |
| 23-Nov-06 | 32 | 32 | 32 | 31 | A | 30 | 30 | 31 | 31 | 31 | 32 | 32 | 31 | 31 | 30 | 30 | 30 | 28 | 24 | 27 | 27 | 26 | 27 | 27 | 29.7 | 32.3 |
| 24-Nov-06 | 28 | 30 | 30 | 30 | A | 31 | 32 | 34 | 35 | 36 | 36 | C | C | C | A | 35 | 33 | 32 | 29 | 29 | 23 | 25 | 28 | 28 | 30.7 | 36.3 |
| 25-Nov-06 | 31 | 31 | 33 | 33 | A | 31 | 31 | 30 | 31 | 32 | 31 | 32 | 33 | 33 | 33 | 32 | 31 | 31 | 27 | 26 | 27 | 28 | 27 | 19 | 30.3 | 33.5 |
| 26-Nov-06 | 21 | 27 | 26 | 25 | A | 23 | 19 | 17 | 15 | 14 | 18 | 18 | 18 | 18 | 23 | 20 | 18 | 14 | 24 | 25 | 28 | 29 | 30 | 30 | 21.8 | 30.1 |
| 27-Nov-06 | 30 | 30 | 31 | 33 | A | 33 | 33 | 32 | 32 | 32 | 32 | 32 | 33 | 33 | 33 | 29 | 27 | 25 | 25 | 25 | 27 | 25 | 30 | 30 | 30.0 | 32.9 |
| 28-Nov-06 | 32 | 31 | 28 | 27 | A | 28 | 28 | 28 | 27 | 25 | 26 | 27 | 29 | 30 | 31 | 30 | 30 | 23 | 21 | 18 | 20 | 19 | 20 | 18 | 25.8 | 31.6 |
| 29-Nov-06 | 19 | 18 | 22 | 24 | A | 28 | 27 | 21 | 24 | 24 | 24 | 23 | 24 | 26 | 14 | 5 | 10 | 9 | 7 | 8 | 23 | 19 | 18 | 20 | 19.1 | 27.6 |
| 30-Nov-06 | 16 | 13 | 14 | 20 | A | 37 | 38 | 36 | 35 | 34 | 37 | 39 | 39 | 37 | 37 | 36 | 38 | 38 | 36 | 39 | 39 | 39 | 39 | 40 | 33.9 | 40.5 |
| Hourly Avg | 25.1 | 24.8 | 25.2 | 25.4 | N | 25.5 | 24.8 | 24.0 | 24.0 | 25.0 | 25.9 | 25.6 | 26.9 | 27.4 | 27.4 | 26.8 | 25.7 | 23.8 | 23.7 | 24.0 | 24.5 | 23.7 | 24.9 | 24.9 | | |
| Hourly Max | 45.0 | 43.0 | 42.5 | 41.5 | 0.0 | 42.1 | 42.0 | 40.1 | 41.0 | 38.1 | 38.9 | 42.3 | 41.8 | 41.6 | 42.6 | 42.1 | 41.1 | 42.6 | 45.5 | 47.4 | 47.4 | 46.5 | 46.0 | 45.5 | | |

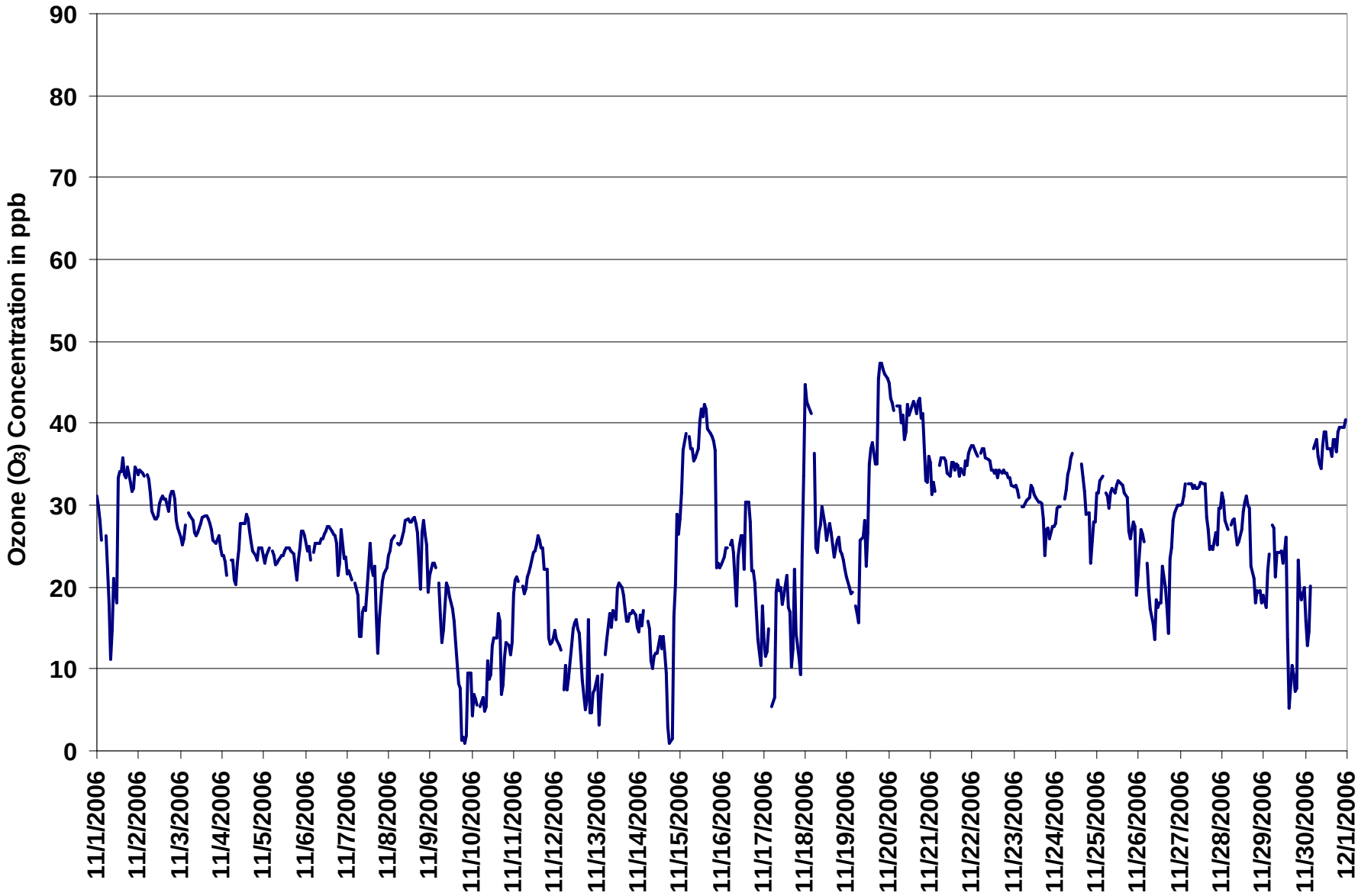
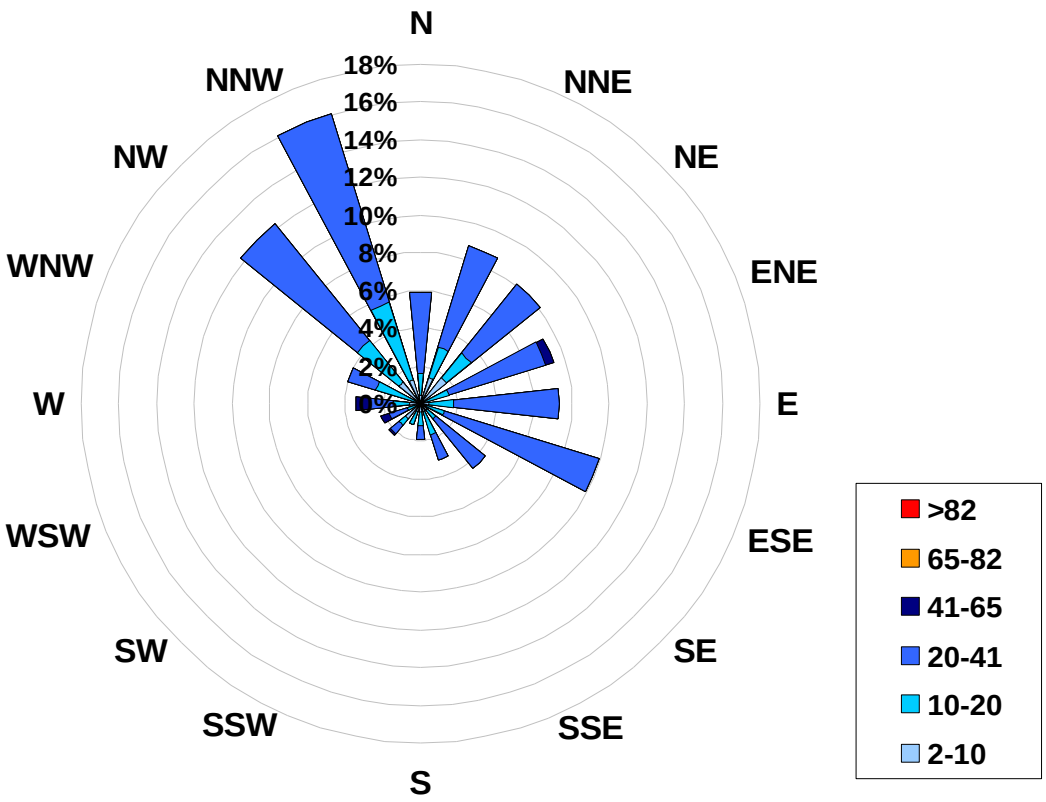



**Figure 41. PASZA - Beaverlodge Ozone Instantaneous (30 Second) Maximum Value Monthly Trend**

## 1-hr Average Concentration Rose for Ozone (in ppb) Located at the Beaverlodge Site for November 2006




**Calms: 2%**

| Frequency Distribution of $O_3$ in ppb | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 2.0 | < | 10 | 86 |
| 10 | to | 20 | 163 |
| 20 | to | 41 | 425 |
| 41 | to | 65 | 12 |
| 65 | to | 82 | 0 |
| | > | 82 | 0 |
| Total Non-Zero Values | | | 686 |

# PASZA – Beaverlodge - Ozone Monthly Summary

## EIGHT HOUR RUNNING AVERAGE TABLE

**Ozone ($O_3$)**

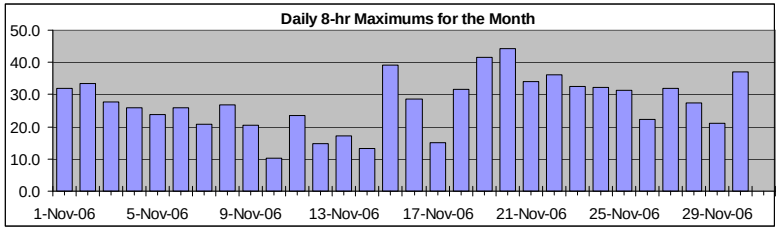
Station: Beaverlodge
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 8-hr 65 ppb

**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 8-hr Exceedances: | 0 | | | |
| Maximum 8-hr Average: | 44.3 | ppb | 20-Nov | 2:00 3:00 |




| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 |
|---|---|---|---|---|---|---|---|
| | 41.6 | 36.3 | 29.1 | 23.2 | 15.5 | 7.1 | 3.3 |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 30 | 28 | 27 | 26 | 25 | 25 | 22 | 20 | 16 | 15 | 13 | 12 | 14 | 15 | 16 | 19 | 23 | 26 | 28 | 30 | 31 | 31 | 32 | 32 | 32.0 |
| 2-Nov-06 | 32 | 32 | 32 | 33 | 33 | 33 | 33 | 33 | 32 | 31 | 30 | 30 | 29 | 29 | 29 | 29 | 29 | 28 | 28 | 28 | 29 | 29 | 28 | 28 | 33.4 |
| 3-Nov-06 | 27 | 28 | 27 | 27 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 27 | 27 | 27 | 26 | 26 | 26 | 25 | 27.8 |
| 4-Nov-06 | 25 | 24 | 24 | 23 | 23 | 23 | 22 | 22 | 21 | 21 | 21 | 22 | 22 | 23 | 24 | 25 | 26 | 26 | 26 | 26 | 25 | 25 | 24 | 24 | 26.0 |
| 5-Nov-06 | 24 | 23 | 23 | 23 | 23 | 23 | 23 | 22 | 22 | 23 | 23 | 23 | 23 | 23 | 23 | 24 | 24 | 24 | 23 | 23 | 22 | 22 | 22 | 22 | 23.8 |
| 6-Nov-06 | 22 | 22 | 23 | 23 | 24 | 23 | 23 | 23 | 23 | 24 | 24 | 25 | 25 | 25 | 26 | 26 | 26 | 26 | 26 | 25 | 23 | 23 | 22 | 21 | 26.0 |
| 7-Nov-06 | 21 | 20 | 19 | 19 | 20 | 20 | 19 | 17 | 16 | 15 | 14 | 13 | 14 | 14 | 15 | 16 | 16 | 16 | 16 | 15 | 16 | 15 | 15 | 16 | 20.7 |
| 8-Nov-06 | 17 | 18 | 20 | 22 | 22 | 23 | 24 | 24 | 24 | 24 | 25 | 25 | 25 | 26 | 26 | 27 | 27 | 26 | 24 | 23 | 23 | 22 | 21 | 20 | 26.9 |
| 9-Nov-06 | 19 | 19 | 21 | 20 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 13 | 13 | 13 | 13 | 13 | 11 | 9 | 8 | 6 | 4 | 3 | 3 | 20.6 |
| 10-Nov-06 | 2 | 2 | 3 | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 4 | 4 | 5 | 6 | 8 | 9 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10.1 |
| 11-Nov-06 | 11 | 12 | 14 | 15 | 16 | 17 | 18 | 19 | 19 | 19 | 19 | 20 | 20 | 21 | 22 | 23 | 23 | 23 | 23 | 23 | 21 | 20 | 18 | 16 | 23.5 |
| 12-Nov-06 | 15 | 13 | 12 | 10 | 10 | 9 | 9 | 8 | 7 | 8 | 8 | 9 | 10 | 10 | 11 | 12 | 11 | 10 | 9 | 9 | 7 | 6 | 5 | 4 | 14.7 |
| 13-Nov-06 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 6 | 7 | 9 | 11 | 13 | 13 | 15 | 16 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 15 | 14 | 17.3 |
| 14-Nov-06 | 13 | 13 | 13 | 13 | 13 | 12 | 13 | 12 | 12 | 11 | 11 | 10 | 10 | 10 | 10 | 11 | 10 | 9 | 8 | 7 | 7 | 7 | 8 | 9 | 13.3 |
| 15-Nov-06 | 11 | 15 | 19 | 23 | 25 | 29 | 30 | 32 | 33 | 34 | 34 | 34 | 35 | 35 | 36 | 37 | 38 | 39 | 39 | 39 | 38 | 35 | 33 | 31 | 39.2 |
| 16-Nov-06 | 29 | 27 | 25 | 23 | 22 | 23 | 23 | 22 | 20 | 20 | 20 | 20 | 20 | 20 | 21 | 23 | 24 | 24 | 24 | 23 | 20 | 19 | 16 | 14 | 28.6 |
| 17-Nov-06 | 12 | 11 | 9 | 8 | 9 | 8 | 8 | 8 | 9 | 9 | 10 | 11 | 12 | 14 | 15 | 15 | 13 | 12 | 12 | 11 | 10 | 8 | 8 | 10 | 15.2 |
| 18-Nov-06 | 13 | 18 | 21 | 24 | 26 | 31 | 31 | 31 | 29 | 27 | 26 | 25 | 25 | 24 | 25 | 25 | 25 | 24 | 24 | 23 | 23 | 22 | 21 | 21 | 31.5 |
| 19-Nov-06 | 21 | 21 | 20 | 20 | 20 | 19 | 18 | 17 | 16 | 16 | 17 | 17 | 18 | 19 | 22 | 25 | 27 | 29 | 31 | 34 | 37 | 39 | 40 | 42 | 41.7 |
| 20-Nov-06 | 43 | 44 | 44 | 44 | 43 | 43 | 42 | 41 | 40 | 39 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | 39 | 40 | 40 | 39 | 38 | 36 | 34 | 44.3 |
| 21-Nov-06 | 33 | 31 | 29 | 28 | 27 | 28 | 29 | 30 | 32 | 33 | 33 | 34 | 34 | 34 | 34 | 34 | 33 | 33 | 33 | 33 | 34 | 33 | 34 | 34 | 34.0 |
| 22-Nov-06 | 34 | 35 | 35 | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 35 | 35 | 35 | 35 | 34 | 34 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 36.1 |
| 23-Nov-06 | 32 | 32 | 32 | 32 | 31 | 31 | 30 | 29 | 29 | 29 | 29 | 29 | 29 | 30 | 30 | 30 | 30 | 29 | 28 | 27 | 27 | 26 | 26 | 25 | 32.5 |
| 24-Nov-06 | 25 | 26 | 27 | 27 | 27 | 28 | 29 | 30 | 30 | 31 | 32 | N | N | N | N | N | N | N | N | N | N | 25 | 25 | 24 | 32.1 |
| 25-Nov-06 | 24 | 24 | 25 | 26 | 28 | 29 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 31 | 31 | 31 | 31 | 30 | 29 | 28 | 27 | 26 | 24 | 31.3 |
| 26-Nov-06 | 22 | 22 | 22 | 22 | 22 | 22 | 21 | 21 | 20 | 17 | 16 | 15 | 15 | 14 | 14 | 14 | 14 | 13 | 13 | 14 | 15 | 17 | 17 | 19 | 22.4 |
| 27-Nov-06 | 22 | 25 | 27 | 28 | 29 | 29 | 31 | 31 | 31 | 32 | 32 | 32 | 32 | 32 | 32 | 31 | 30 | 29 | 28 | 27 | 26 | 24 | 24 | 24 | 31.8 |
| 28-Nov-06 | 25 | 26 | 26 | 26 | 26 | 27 | 27 | 27 | 26 | 25 | 25 | 25 | 25 | 26 | 26 | 26 | 27 | 26 | 25 | 23 | 21 | 19 | 18 | 16 | 27.3 |
| 29-Nov-06 | 15 | 14 | 15 | 16 | 17 | 18 | 19 | 19 | 20 | 21 | 21 | 20 | 20 | 18 | 17 | 15 | 13 | 11 | 8 | 7 | 6 | 6 | 7 | 9 | 21.0 |
| 30-Nov-06 | 10 | 11 | 12 | 13 | 14 | 16 | 19 | 21 | 24 | 27 | 31 | 34 | 35 | 35 | 35 | 35 | 36 | 36 | 36 | 36 | 36 | 36 | 37 | 37 | 37.2 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Max | 42.9 | 44.1 | 44.3 | 43.8 | 43.4 | 42.7 | 42.1 | 41.1 | 40.3 | 39.0 | 37.9 | 38.0 | 38.1 | 38.2 | 38.2 | 38.5 | 38.3 | 39.2 | 40.1 | 39.8 | 39.3 | 39.1 | 40.4 | 41.7 | |

# PASZA - Beaverlodge - Particulate Matter (less than 2.5 microns) Monthly Summary

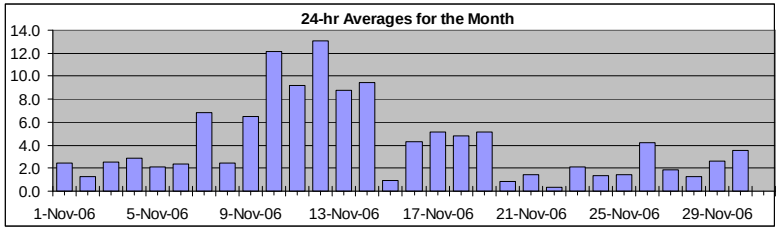
Station: Beaverlodge
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Particulate Matter ($PM_{2.5}$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Draft Objective Limit:** **Alberta Environment:** 1-hr - $\mu g/m^3$ | 24-hr 30 $\mu g/m^3$




**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 24-hr Exceedances (draft): | 0 | | | |
| Maximum 1-hr Average: | 26.9 | $\mu g/m^3$ | 10-Nov | 23:00 0:00 |
| Maximum 24-hr Value: | 13.1 | $\mu g/m^3$ | 12-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 714 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 99.7% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average / Median | Geomean |
|---|---|---|---|---|---|---|---|---|---|
| | 15.6 | 12.8 | 6.1 | 2.7 | 1.3 | 0.0 | 0.0 | 4.1 3 $\mu g/m^3$ | 2.9 $\mu g/m^3$ |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 4 | 4 | 7 | 4 | 8 | 5 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2.5 | 7.7 |
| 2-Nov-06 | 1 | 0 | 1 | 3 | 0 | 0 | 1 | 0 | 1 | 2 | 1 | 2 | 1 | 1 | 0 | 0 | 1 | 2 | 1 | 2 | 2 | 1 | 3 | 5 | 1.2 | 4.7 |
| 3-Nov-06 | 4 | 3 | 2 | 2 | 3 | 1 | 2 | 2 | 1 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2.6 | 4.0 |
| 4-Nov-06 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 1 | 1 | 2 | 1 | 4 | 11 | 10 | 8 | 5 | 3 | 2 | 1 | 2 | 1 | 1 | 1 | 0 | 2.9 | 10.8 |
| 5-Nov-06 | 3 | 2 | 5 | 7 | 3 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 0 | 2 | 3 | 2 | 1 | 3 | 2.1 | 6.7 |
| 6-Nov-06 | 2 | 1 | 2 | 3 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 2 | 3 | 2 | 3 | 3 | 4 | 7 | 7 | 5 | 6 | 2.4 | 7.1 |
| 7-Nov-06 | 4 | 4 | 4 | 2 | 3 | 2 | 5 | 4 | 6 | 8 | 8 | 12 | 10 | 10 | 13 | 10 | 8 | 11 | 8 | 9 | 10 | 7 | 4 | 2 | 6.9 | 12.8 |
| 8-Nov-06 | 3 | 3 | 4 | 2 | 2 | 3 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2.4 | 3.7 |
| 9-Nov-06 | 2 | 2 | 3 | 3 | 4 | 3 | 4 | 3 | 5 | 8 | 8 | 11 | 13 | 9 | 10 | 9 | 8 | 6 | 8 | 7 | 6 | 8 | 8 | 9 | 6.5 | 12.6 |
| 10-Nov-06 | 9 | 7 | 6 | 6 | 6 | 8 | 9 | 7 | 14 | 10 | 12 | 13 | 13 | 12 | 16 | 15 | 12 | 11 | 15 | 16 | 14 | 16 | 19 | 27 | 12.1 | 26.9 |
| 11-Nov-06 | 11 | 6 | 5 | 7 | 6 | 8 | 9 | 11 | 10 | 9 | 10 | 10 | 8 | 7 | 7 | 7 | 6 | 7 | 11 | 10 | 14 | 16 | 14 | 13 | 9.2 | 15.6 |
| 12-Nov-06 | 12 | 14 | 14 | 13 | 13 | 12 | 11 | 10 | 11 | 11 | 14 | 15 | 14 | 13 | 14 | 12 | 13 | 15 | 13 | 13 | 12 | 14 | 15 | 15 | 13.1 | 15.4 |
| 13-Nov-06 | 13 | 15 | 14 | 12 | 12 | 10 | 4 | 5 | 8 | 9 | 8 | 12 | 10 | 8 | 8 | 8 | 7 | 6 | 8 | 7 | 6 | 5 | 8 | 7 | 8.8 | 15.2 |
| 14-Nov-06 | 9 | 7 | 6 | 6 | 5 | 6 | 6 | 9 | 8 | 7 | 8 | 10 | 16 | 13 | 18 | 20 | 15 | 11 | 11 | 12 | 9 | 5 | 4 | 3 | 9.4 | 20.4 |
| 15-Nov-06 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | D | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 3 | 7 | 1.0 | 6.6 |
| 16-Nov-06 | 6 | 6 | 5 | 3 | 4 | 4 | 4 | 4 | 4 | 5 | 4 | 5 | 4 | 4 | 4 | 2 | 2 | 3 | 4 | 3 | 7 | 4 | 5 | 5 | 4.3 | 7.2 |
| 17-Nov-06 | 6 | 6 | 7 | 9 | 4 | 5 | 6 | 6 | 1 | 3 | 4 | 7 | 6 | 6 | 7 | 8 | 6 | 5 | 3 | 5 | 3 | 3 | 6 | 1 | 5.1 | 8.7 |
| 18-Nov-06 | 2 | 3 | 1 | 0 | 0 | 1 | 5 | 5 | 6 | 6 | 8 | 8 | 6 | 7 | 6 | 6 | 6 | 5 | 5 | 7 | 4 | 6 | 5 | 5 | 4.8 | 8.5 |
| 19-Nov-06 | 7 | 10 | 11 | 10 | 10 | 10 | 9 | 8 | 8 | 4 | 2 | 7 | 5 | 3 | 2 | 1 | 3 | 4 | 5 | 2 | 1 | 0 | 0 | 0 | 5.2 | 10.9 |
| 20-Nov-06 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 5 | 5 | 0.9 | 5.2 |
| 21-Nov-06 | 3 | 1 | 3 | 2 | 2 | 1 | 4 | 3 | 4 | 2 | 0 | 0 | D | 1 | C | C | C | C | 0 | 0 | 0 | 0 | 0 | 1 | 1.4 | 4.2 |
| 22-Nov-06 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0.3 | 1.3 |
| 23-Nov-06 | 0 | 1 | 1 | 3 | 0 | 1 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 3 | 4 | 3 | 3 | 1 | 1 | 1 | 1 | 2.1 | 3.5 |
| 24-Nov-06 | 2 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 0 | 1 | 1 | 1 | 2 | 2 | 1 | 2 | 3 | 1 | 2 | 1.3 | 2.6 |
| 25-Nov-06 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 2 | 2 | 1 | 2 | 3 | 3 | 2 | 2 | 3 | 2 | 1.4 | 2.7 |
| 26-Nov-06 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 5 | 5 | 7 | 8 | 7 | 6 | 8 | 7 | 7 | 9 | 4 | 2 | 1 | 2 | 4 | 1 | 4.2 | 9.2 |
| 27-Nov-06 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 2 | 1.9 | 3.0 |
| 28-Nov-06 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 3 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 1.3 | 2.6 |
| 29-Nov-06 | 1 | 2 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 3 | 3 | 6 | 13 | 11 | 6 | 3 | 1 | 0 | 1 | 0 | 1 | 3 | 2.6 | 13.1 |
| 30-Nov-06 | 3 | 7 | 6 | 3 | 6 | 3 | 3 | 1 | 2 | 3 | 4 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 4 | 3.5 | 6.6 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 4.0 | 3.8 | 3.9 | 3.7 | 3.1 | 3.2 | 3.4 | 3.2 | 3.8 | 4.0 | 3.9 | 5.2 | 5.3 | 4.5 | 5.6 | 5.0 | 4.3 | 4.4 | 4.1 | 4.0 | 4.0 | 4.2 | 4.3 | 4.6 | | |
| Hourly Max | 12.9 | 15.2 | 14.4 | 12.6 | 12.5 | 12.2 | 11.5 | 11.1 | 13.5 | 10.9 | 14.1 | 15.4 | 16.4 | 13.5 | 18.5 | 20.4 | 15.1 | 15.3 | 15.1 | 16.5 | 14.3 | 15.8 | 18.5 | 26.9 | | |

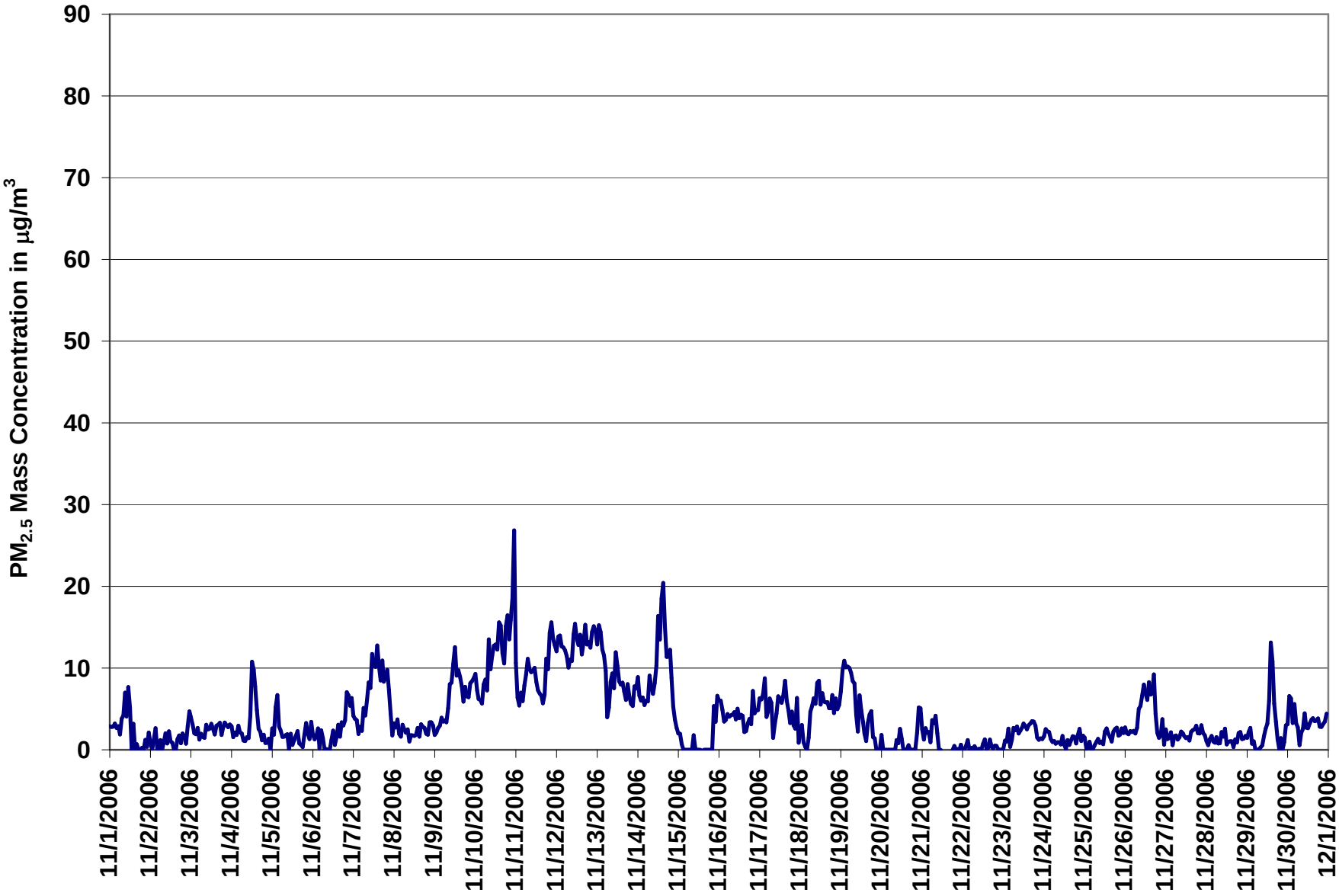


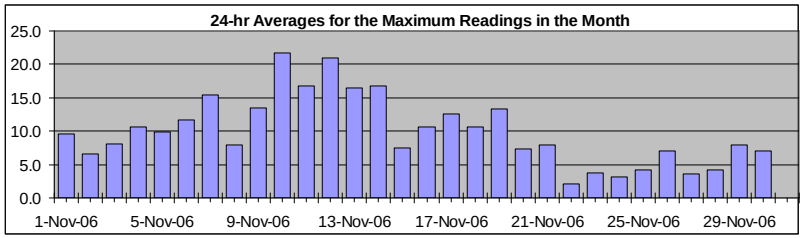

**Figure 42. PASZA - Beaverlodge Particulate Matter (less than 2.5 microns) 1-hr Average Monthly Trend**

Station: Beaverlodge
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

## Particulate Matter ($PM_{2.5}$)

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 51.8 | µg/m³ | 10-Nov | 23:00 0:00 |
| Maximum 24-hr Value: | 21.8 | µg/m³ | 10-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 714 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 99.7% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average / Median | Geomean |
|---|---|---|---|---|---|---|---|---|---|
| | 27.7 | 21.5 | 13.8 | 8.5 | 4.9 | 2.4 | 1.5 | 10.0 / 9 µg/m³ | 8.6 µg/m³ |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 13 | 13 | 13 | 14 | 13 | 17 | 12 | 13 | 14 | 11 | 8 | 13 | 17 | 5 | 7 | 4 | 7 | 3 | 4 | 5 | 5 | 6 | 6 | 6 | 9.6 | 16.7 |
| 2-Nov-06 | 5 | 6 | 6 | 13 | 4 | 5 | 7 | 4 | 6 | 7 | 6 | 7 | 8 | 5 | 7 | 4 | 6 | 7 | 5 | 7 | 7 | 7 | 8 | 10 | 6.6 | 13.3 |
| 3-Nov-06 | 9 | 10 | 7 | 7 | 11 | 10 | 9 | 10 | 7 | 8 | 7 | 7 | 7 | 7 | 6 | 7 | 8 | 8 | 9 | 8 | 8 | 8 | 8 | 8 | 8.1 | 10.6 |
| 4-Nov-06 | 9 | 8 | 9 | 7 | 10 | 9 | 8 | 8 | 6 | 6 | 6 | 15 | 20 | 19 | 16 | 13 | 12 | 12 | 10 | 10 | 10 | 11 | 11 | 9 | 10.6 | 20.3 |
| 5-Nov-06 | 12 | 11 | 14 | 14 | 11 | 11 | 10 | 10 | 14 | 10 | 7 | 8 | 6 | 7 | 6 | 10 | 6 | 7 | 8 | 8 | 12 | 11 | 8 | 15 | 9.8 | 14.9 |
| 6-Nov-06 | 10 | 11 | 8 | 8 | 6 | 10 | 8 | 8 | 10 | 7 | 9 | 7 | 8 | 10 | 9 | 10 | 9 | 14 | 10 | 16 | 20 | 30 | 23 | 18 | 11.7 | 30.3 |
| 7-Nov-06 | 17 | 12 | 12 | 10 | 12 | 12 | 16 | 10 | 18 | 15 | 14 | 20 | 19 | 21 | 19 | 15 | 17 | 18 | 18 | 16 | 21 | 14 | 16 | 8 | 15.4 | 20.9 |
| 8-Nov-06 | 10 | 8 | 8 | 9 | 9 | 10 | 10 | 7 | 7 | 6 | 8 | 7 | 6 | 6 | 6 | 5 | 7 | 8 | 6 | 8 | 11 | 9 | 11 | 9 | 7.9 | 10.8 |
| 9-Nov-06 | 7 | 8 | 7 | 8 | 10 | 11 | 8 | 8 | 17 | 18 | 18 | 18 | 21 | 17 | 16 | 15 | 14 | 12 | 15 | 13 | 12 | 17 | 16 | 16 | 13.5 | 21.4 |
| 10-Nov-06 | 16 | 15 | 15 | 13 | 12 | 15 | 14 | 23 | 23 | 22 | 21 | 20 | 17 | 18 | 26 | 24 | 21 | 19 | 26 | 28 | 23 | 27 | 32 | 52 | 21.8 | 51.8 |
| 11-Nov-06 | 25 | 16 | 14 | 13 | 15 | 18 | 16 | 18 | 18 | 18 | 17 | 16 | 11 | 11 | 11 | 11 | 12 | 16 | 19 | 17 | 23 | 22 | 20 | 23 | 16.7 | 25.2 |
| 12-Nov-06 | 19 | 22 | 21 | 19 | 18 | 19 | 22 | 18 | 20 | 21 | 19 | 21 | 22 | 18 | 21 | 16 | 19 | 22 | 21 | 28 | 18 | 25 | 24 | 28 | 20.9 | 28.3 |
| 13-Nov-06 | 22 | 22 | 22 | 18 | 18 | 17 | 12 | 15 | 17 | 17 | 16 | 17 | 17 | 16 | 18 | 19 | 18 | 13 | 15 | 16 | 12 | 13 | 13 | 12 | 16.5 | 22.5 |
| 14-Nov-06 | 14 | 12 | 12 | 16 | 13 | 17 | 12 | 17 | 16 | 12 | 13 | 16 | 28 | 22 | 25 | 29 | 28 | 18 | 16 | 18 | 18 | 12 | 9 | 9 | 16.7 | 29.0 |
| 15-Nov-06 | 8 | 9 | 6 | 6 | 8 | 6 | 4 | 5 | 6 | 8 | 7 | 6 | 6 | 4 | D | 4 | 7 | 6 | 7 | 7 | 11 | 15 | 15 | 16 | 7.6 | 16.0 |
| 16-Nov-06 | 13 | 14 | 11 | 10 | 10 | 10 | 10 | 8 | 9 | 10 | 12 | 11 | 12 | 11 | 9 | 6 | 6 | 8 | 10 | 14 | 12 | 12 | 11 | 15 | 10.6 | 15.1 |
| 17-Nov-06 | 16 | 15 | 15 | 17 | 10 | 9 | 14 | 14 | 14 | 13 | 11 | 12 | 12 | 15 | 18 | 16 | 14 | 11 | 10 | 10 | 8 | 8 | 14 | 6 | 12.6 | 18.4 |
| 18-Nov-06 | 8 | 7 | 7 | 7 | 5 | 10 | 10 | 12 | 12 | 15 | 15 | 13 | 10 | 13 | 12 | 11 | 10 | 11 | 13 | 13 | 10 | 11 | 11 | 11 | 10.7 | 15.1 |
| 19-Nov-06 | 13 | 16 | 19 | 15 | 17 | 17 | 19 | 12 | 15 | 12 | 11 | 11 | 11 | 11 | 6 | 7 | 12 | 17 | 28 | 12 | 9 | 10 | 12 | 8 | 13.4 | 27.5 |
| 20-Nov-06 | 13 | 12 | 13 | 7 | 4 | 3 | 7 | 7 | 5 | 10 | 6 | 9 | 5 | 5 | 6 | 5 | 4 | 5 | 5 | 5 | 6 | 7 | 14 | 13 | 7.3 | 13.7 |
| 21-Nov-06 | 7 | 7 | 10 | 9 | 8 | 9 | 10 | 10 | 17 | 9 | 14 | 22 | D | 7 | C | C | C | C | 2 | 3 | 1 | 2 | 2 | 3 | 8.0 | 21.7 |
| 22-Nov-06 | 3 | 1 | 2 | 4 | 2 | 2 | 1 | 3 | 1 | 2 | 2 | 1 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2.1 | 4.5 |
| 23-Nov-06 | 3 | 2 | 3 | 8 | 2 | 4 | 4 | 4 | 5 | 3 | 3 | 4 | 5 | 5 | 4 | 4 | 4 | 4 | 5 | 4 | 3 | 3 | 3 | 3 | 3.7 | 7.8 |
| 24-Nov-06 | 3 | 4 | 4 | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 | 5 | 6 | 3 | 6 | 2 | 3 | 3 | 3 | 2 | 3 | 4 | 2 | 4 | 3.2 | 6.3 |
| 25-Nov-06 | 3 | 3 | 5 | 5 | 3 | 4 | 6 | 6 | 5 | 2 | 4 | 4 | 4 | 6 | 4 | 4 | 2 | 4 | 4 | 5 | 3 | 4 | 5 | 4 | 4.1 | 6.3 |
| 26-Nov-06 | 4 | 5 | 4 | 4 | 3 | 3 | 4 | 4 | 9 | 8 | 12 | 15 | 10 | 8 | 14 | 12 | 13 | 13 | 8 | 3 | 3 | 4 | 6 | 2 | 7.1 | 14.6 |
| 27-Nov-06 | 5 | 3 | 3 | 5 | 3 | 4 | 4 | 3 | 3 | 4 | 4 | 3 | 3 | 3 | 2 | 4 | 4 | 4 | 4 | 3 | 3 | 5 | 5 | 4 | 3.6 | 4.6 |
| 28-Nov-06 | 3 | 2 | 5 | 4 | 3 | 3 | 4 | 3 | 5 | 5 | 5 | 7 | 7 | 5 | 3 | 3 | 2 | 3 | 3 | 8 | 5 | 3 | 4 | 5 | 4.1 | 7.8 |
| 29-Nov-06 | 4 | 6 | 6 | 4 | 6 | 3 | 2 | 2 | 3 | 4 | 7 | 9 | 13 | 20 | 22 | 18 | 14 | 7 | 7 | 6 | 8 | 5 | 6 | 6 | 7.9 | 22.5 |
| 30-Nov-06 | 8 | 10 | 13 | 8 | 16 | 8 | 8 | 5 | 4 | 8 | 9 | 7 | 7 | 5 | 5 | 5 | 6 | 6 | 6 | 4 | 4 | 5 | 5 | 6 | 7.0 | 16.4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 10.1 | 9.7 | 9.8 | 9.5 | 8.8 | 9.3 | 9.1 | 8.9 | 10.2 | 9.8 | 9.7 | 11.1 | 11.1 | 10.2 | 11.0 | 9.8 | 9.9 | 9.7 | 9.8 | 10.1 | 9.8 | 10.3 | 10.6 | 11.0 | | |
| Hourly Max | 25.2 | 22.5 | 22.1 | 18.9 | 18.2 | 19.1 | 21.6 | 22.8 | 23.2 | 22.0 | 20.8 | 21.7 | 28.3 | 22.1 | 26.2 | 29.0 | 28.2 | 22.3 | 27.5 | 28.3 | 23.1 | 30.3 | 32.0 | 51.8 | | |

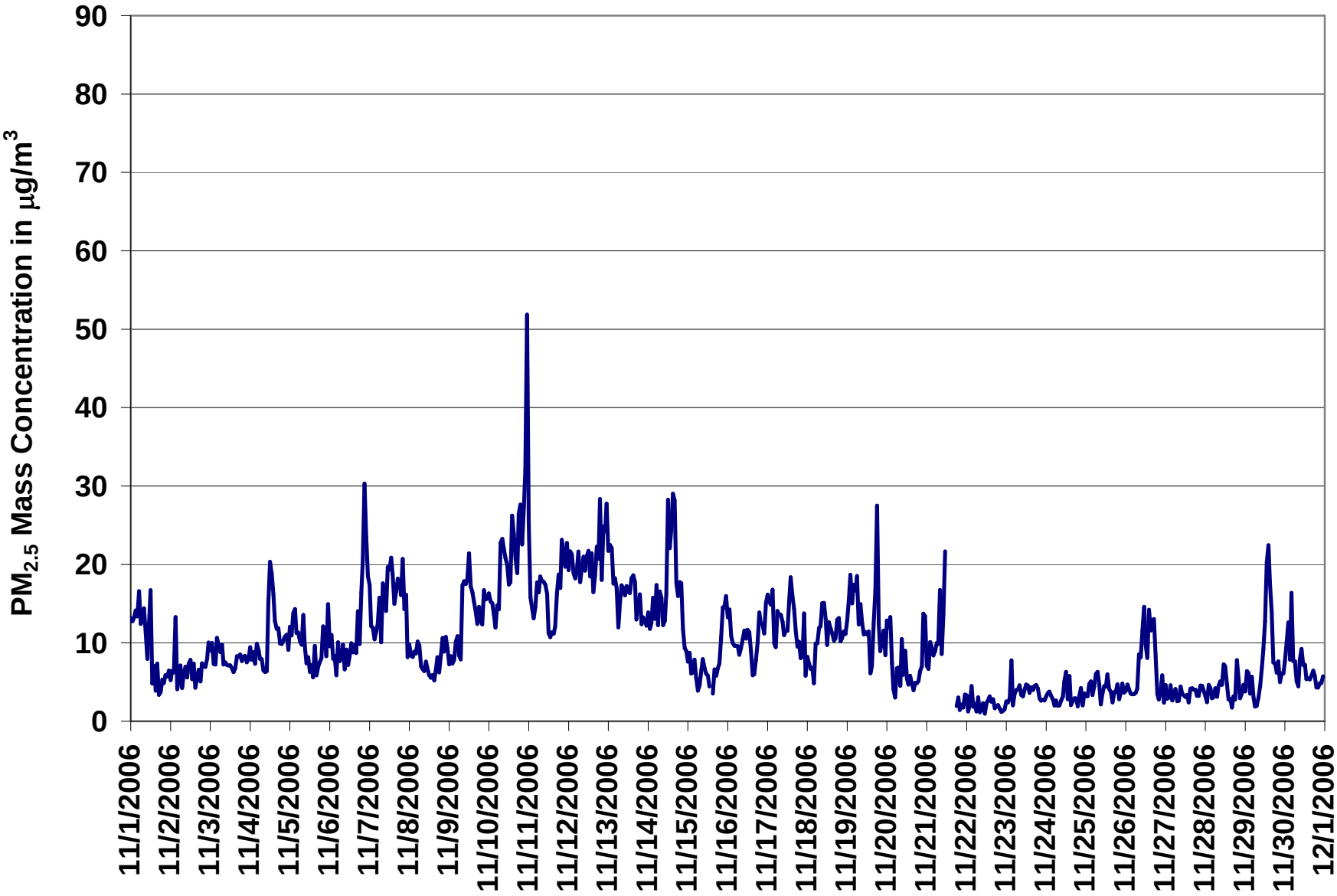
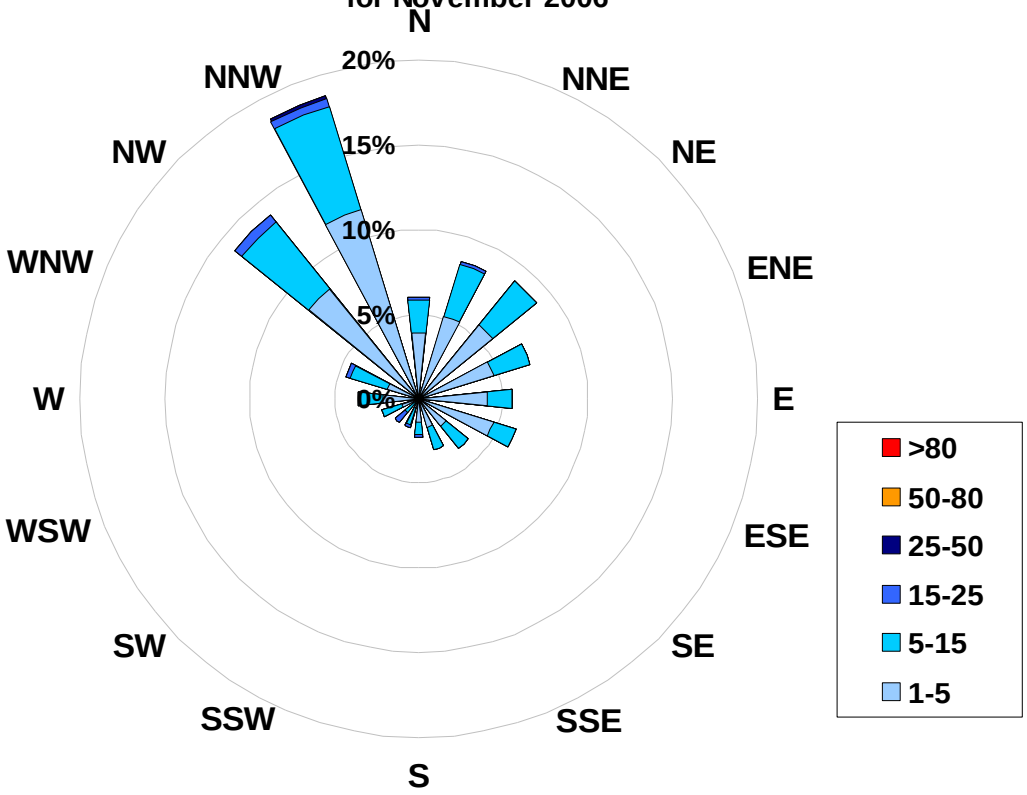



**Figure 43. PASZA - Beaverlodge Particulate Matter (less than 2.5 microns) Instantaneous (30 Second) Maximum Value Monthly Trend**

**1-hr Average Concentration Rose for Particulate Matter (less than 2.5 microns) (in micrograms per cubic meter) Located at the Beaverlodge Site for November 2006**




| Calms: | 2% |
|---|---|

| Frequency Distribution of $PM_{2.5}$ in $\mu g/m^3$ | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 1.0 | < | 5 | 492 |
| 5 | to | 15 | 206 |
| 15 | to | 25 | 15 |
| 25 | to | 50 | 1 |
| 50 | to | 80 | 0 |
| | > | 80 | 0 |
| Total Non-Zero Values | | | 714 |

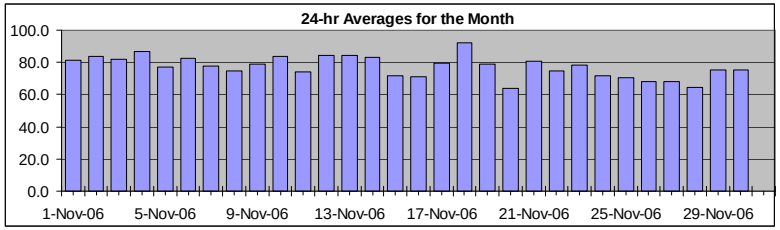
# PASZA – Beaverlodge - Relative Humidity Monthly Summary

Station: Beaverlodge
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Relative Humidity (RH)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 95.9 | % | 18-Nov | 3:00 4:00 |
| Maximum 24-hr Value: | 92.2 | % | 18-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 720 hrs |
| Calibration Time: | 0 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 93.5 | 90.7 | 84.5 | 78.7 | 71.8 | 58.2 | 51.1 | 77.3 % | 78.7 % |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 75 | 80 | 81 | 76 | 79 | 83 | 86 | 86 | 85 | 80 | 77 | 66 | 72 | 69 | 75 | 78 | 81 | 84 | 86 | 88 | 90 | 91 | 89 | 89 | 81.1 | 91.4 |
| 2-Nov-06 | 89 | 89 | 91 | 91 | 91 | 88 | 87 | 88 | 87 | 84 | 79 | 78 | 81 | 79 | 78 | 78 | 81 | 85 | 80 | 80 | 80 | 81 | 82 | 83 | 83.7 | 91.1 |
| 3-Nov-06 | 83 | 83 | 84 | 86 | 85 | 86 | 86 | 87 | 85 | 79 | 72 | 69 | 72 | 73 | 74 | 79 | 82 | 84 | 85 | 87 | 88 | 88 | 87 | 88 | 82.1 | 87.7 |
| 4-Nov-06 | 88 | 88 | 89 | 88 | 89 | 89 | 90 | 91 | 90 | 87 | 82 | 83 | 84 | 83 | 81 | 84 | 84 | 85 | 89 | 87 | 87 | 87 | 86 | 86 | 86.5 | 90.6 |
| 5-Nov-06 | 85 | 86 | 84 | 84 | 84 | 83 | 81 | 85 | 84 | 81 | 72 | 71 | 66 | 61 | 59 | 60 | 70 | 76 | 80 | 82 | 80 | 81 | 79 | 77 | 77.0 | 86.2 |
| 6-Nov-06 | 80 | 83 | 86 | 87 | 85 | 83 | 82 | 82 | 83 | 80 | 80 | 77 | 76 | 77 | 77 | 77 | 83 | 83 | 83 | 86 | 87 | 87 | 88 | 88 | 82.5 | 88.1 |
| 7-Nov-06 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 87 | 87 | 79 | 60 | 59 | 58 | 54 | 56 | 57 | 71 | 77 | 80 | 83 | 90 | 90 | 86 | 83 | 78.0 | 90.1 |
| 8-Nov-06 | 81 | 79 | 76 | 74 | 74 | 74 | 75 | 74 | 74 | 73 | 72 | 70 | 70 | 67 | 67 | 63 | 66 | 76 | 80 | 80 | 80 | 81 | 86 | 87 | 74.9 | 87.2 |
| 9-Nov-06 | 87 | 88 | 87 | 87 | 85 | 86 | 85 | 82 | 82 | 79 | 76 | 66 | 57 | 62 | 60 | 67 | 74 | 81 | 82 | 83 | 86 | 86 | 87 | 84 | 79.2 | 87.7 |
| 10-Nov-06 | 83 | 86 | 86 | 86 | 85 | 85 | 83 | 82 | 81 | 81 | 80 | 79 | 81 | 81 | 84 | 86 | 86 | 86 | 86 | 86 | 85 | 84 | 84 | 83 | 83.7 | 86.4 |
| 11-Nov-06 | 81 | 80 | 81 | 82 | 81 | 80 | 79 | 77 | 77 | 74 | 73 | 67 | 55 | 54 | 44 | 57 | 73 | 73 | 75 | 76 | 81 | 84 | 87 | 87 | 74.1 | 87.4 |
| 12-Nov-06 | 87 | 86 | 86 | 86 | 85 | 86 | 87 | 86 | 86 | 84 | 82 | 80 | 77 | 78 | 81 | 81 | 82 | 83 | 84 | 87 | 89 | 90 | 88 | 88 | 84.4 | 89.6 |
| 13-Nov-06 | 87 | 87 | 88 | 86 | 86 | 88 | 88 | 89 | 88 | 87 | 86 | 84 | 81 | 79 | 78 | 79 | 81 | 84 | 83 | 84 | 83 | 84 | 85 | 86 | 84.6 | 88.7 |
| 14-Nov-06 | 85 | 85 | 86 | 87 | 87 | 86 | 86 | 86 | 85 | 84 | 83 | 82 | 80 | 79 | 79 | 81 | 83 | 84 | 85 | 85 | 84 | 82 | 78 | 78 | 83.2 | 86.9 |
| 15-Nov-06 | 79 | 77 | 72 | 68 | 59 | 57 | 57 | 57 | 61 | 65 | 68 | 68 | 66 | 68 | 73 | 67 | 76 | 84 | 80 | 82 | 87 | 87 | 84 | 83 | 71.8 | 86.9 |
| 16-Nov-06 | 79 | 74 | 73 | 74 | 74 | 74 | 76 | 79 | 80 | 69 | 66 | 54 | 51 | 57 | 55 | 59 | 67 | 72 | 74 | 76 | 81 | 81 | 82 | 82 | 71.2 | 82.4 |
| 17-Nov-06 | 80 | 77 | 79 | 78 | 83 | 84 | 86 | 90 | 92 | 89 | 88 | 84 | 64 | 58 | 62 | 62 | 76 | 81 | 82 | 84 | 84 | 78 | 85 | 82 | 79.5 | 91.6 |
| 18-Nov-06 | 76 | 90 | 95 | 96 | 96 | 95 | 94 | 94 | 93 | 90 | 91 | 93 | 93 | 92 | 92 | 92 | 93 | 92 | 92 | 93 | 93 | 93 | 93 | 92 | 92.2 | 95.9 |
| 19-Nov-06 | 92 | 92 | 92 | 93 | 93 | 93 | 93 | 93 | 94 | 91 | 84 | 84 | 77 | 67 | 60 | 59 | 61 | 64 | 77 | 66 | 70 | 77 | 62 | 60 | 78.8 | 93.5 |
| 20-Nov-06 | 65 | 74 | 73 | 69 | 67 | 67 | 66 | 67 | 72 | 74 | 63 | 57 | 52 | 59 | 56 | 49 | 58 | 57 | 54 | 58 | 57 | 60 | 69 | 90 | 63.9 | 89.8 |
| 21-Nov-06 | 93 | 94 | 95 | 90 | 83 | 79 | 79 | 77 | 79 | 79 | 79 | 77 | 72 | 72 | 72 | 74 | 74 | 80 | 81 | 83 | 83 | 83 | 79 | 78 | 80.5 | 95.0 |
| 22-Nov-06 | 76 | 73 | 74 | 77 | 71 | 73 | 71 | 73 | 75 | 75 | 74 | 73 | 69 | 63 | 68 | 76 | 78 | 78 | 79 | 77 | 78 | 78 | 80 | 82 | 74.6 | 81.6 |
| 23-Nov-06 | 81 | 80 | 80 | 80 | 81 | 80 | 81 | 80 | 79 | 78 | 76 | 75 | 74 | 76 | 77 | 78 | 79 | 80 | 79 | 80 | 77 | 77 | 76 | 76 | 78.4 | 80.9 |
| 24-Nov-06 | 75 | 74 | 74 | 75 | 75 | 75 | 76 | 72 | 71 | 71 | 70 | 68 | 66 | 65 | 65 | 65 | 67 | 69 | 71 | 72 | 74 | 74 | 75 | 75 | 71.4 | 75.6 |
| 25-Nov-06 | 74 | 74 | 73 | 72 | 72 | 73 | 73 | 73 | 73 | 71 | 68 | 66 | 63 | 62 | 63 | 65 | 70 | 73 | 74 | 74 | 73 | 73 | 73 | 73 | 70.7 | 74.4 |
| 26-Nov-06 | 73 | 73 | 72 | 72 | 71 | 71 | 70 | 68 | 69 | 66 | 63 | 56 | 54 | 55 | 61 | 66 | 70 | 72 | 71 | 71 | 71 | 71 | 73 | 72 | 67.9 | 72.9 |
| 27-Nov-06 | 71 | 71 | 71 | 71 | 71 | 71 | 70 | 70 | 69 | 68 | 65 | 61 | 53 | 55 | 58 | 64 | 68 | 70 | 71 | 72 | 72 | 74 | 73 | 72 | 68.0 | 73.7 |
| 28-Nov-06 | 70 | 70 | 71 | 71 | 71 | 70 | 70 | 69 | 68 | 66 | 59 | 48 | 45 | 44 | 45 | 50 | 58 | 67 | 71 | 72 | 73 | 74 | 74 | 74 | 64.6 | 74.4 |
| 29-Nov-06 | 73 | 74 | 73 | 73 | 75 | 76 | 75 | 75 | 76 | 75 | 71 | 66 | 70 | 72 | 72 | 73 | 76 | 78 | 77 | 77 | 82 | 83 | 83 | 82 | 75.3 | 82.7 |
| 30-Nov-06 | 82 | 83 | 83 | 84 | 83 | 73 | 66 | 67 | 70 | 73 | 66 | 66 | 70 | 71 | 73 | 76 | 77 | 79 | 79 | 76 | 75 | 77 | 77 | 73 | 75.0 | 84.1 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 80.6 | 81.3 | 81.3 | 81.0 | 80.3 | 79.9 | 79.4 | 79.6 | 79.8 | 77.8 | 74.3 | 70.9 | 68.2 | 67.7 | 68.2 | 70.0 | 74.8 | 77.9 | 78.9 | 79.5 | 80.7 | 81.2 | 80.9 | 81.1 | | |
| Hourly Max | 92.9 | 94.0 | 95.1 | 95.9 | 95.8 | 95.4 | 93.6 | 93.5 | 93.5 | 90.6 | 91.4 | 93.1 | 92.7 | 91.8 | 92.3 | 92.4 | 92.6 | 92.3 | 92.1 | 93.1 | 92.9 | 92.8 | 92.7 | 92.3 | | |

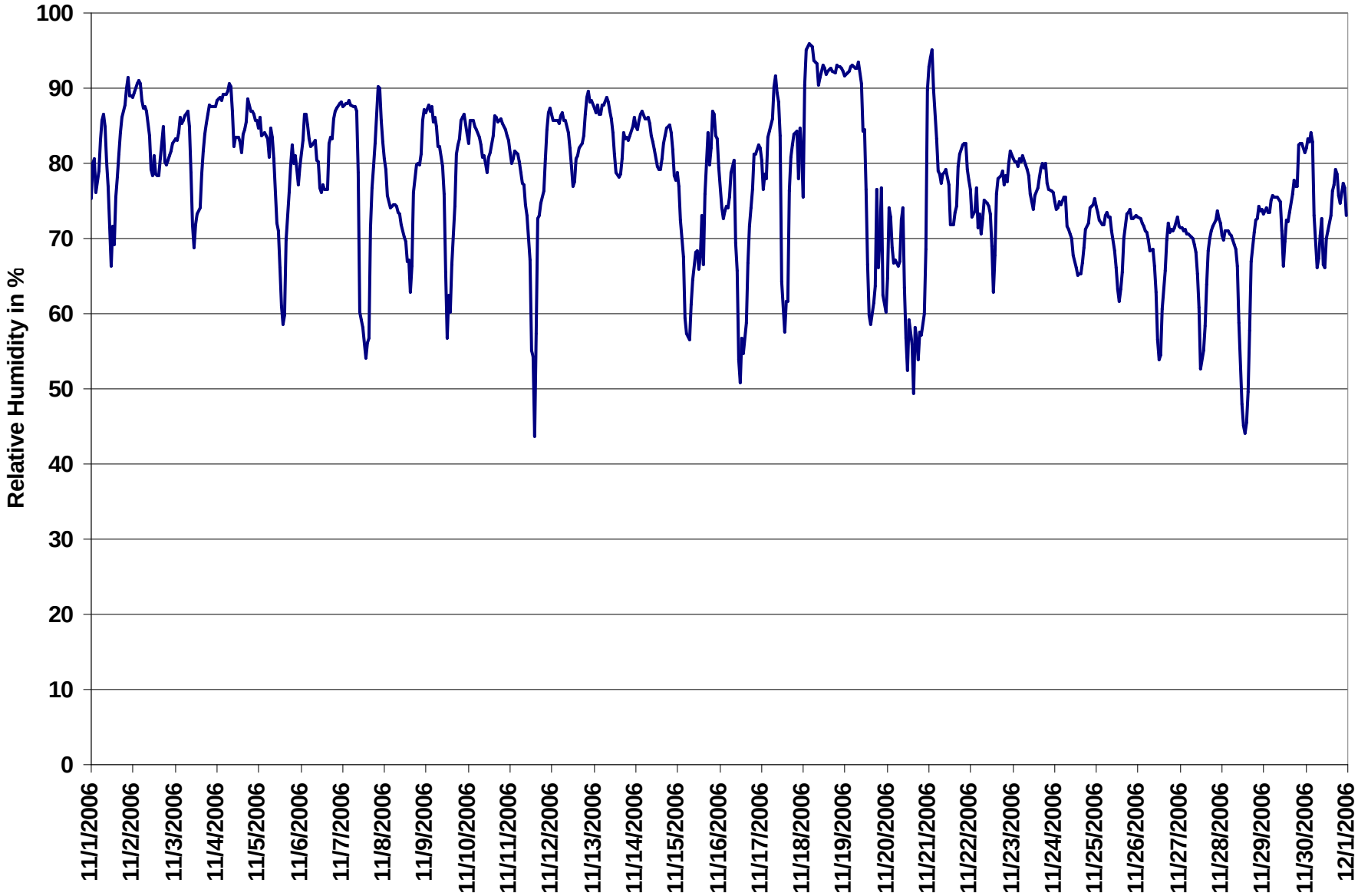



**Figure 44. PASZA - Beaverlodge Relative Humidity 1-hr Average Monthly Trend**

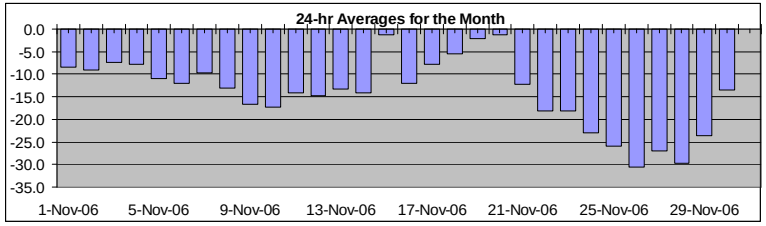
# PASZA – Beaverlodge - Temperature Monthly Summary

Station: Beaverlodge
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Ambient Temperature (T)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 4.7 | °C | 19-Nov | 15:00 16:00 |
| Maximum 24-hr Value: | -1.2 | °C | 15-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 720 hrs |
| Calibration Time: | 0 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 2.6 | -0.4 | -8.1 | -13.3 | -18.3 | -28.8 | -33.9 | -14.0 °C | -13.3 °C |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | -8 | -9 | -9 | -8 | -9 | -10 | -11 | -11 | -10 | -9 | -8 | -5 | -6 | -5 | -6 | -6 | -7 | -8 | -9 | -9 | -10 | -11 | -10 | -10 | -8.5 | -4.7 |
| 2-Nov-06 | -10 | -10 | -10 | -11 | -10 | -10 | -11 | -12 | -12 | -11 | -10 | -9 | -9 | -8 | -8 | -7 | -8 | -8 | -8 | -8 | -7 | -7 | -7 | -7 | -9.1 | -7.2 |
| 3-Nov-06 | -7 | -8 | -8 | -8 | -8 | -9 | -9 | -9 | -8 | -7 | -5 | -5 | -5 | -6 | -7 | -7 | -7 | -7 | -8 | -8 | -8 | -8 | -8 | -8 | -7.3 | -4.8 |
| 4-Nov-06 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -8 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -8 | -8 | -8 | -8 | -9 | -9 | -9 | -7.8 | -6.9 |
| 5-Nov-06 | -9 | -9 | -9 | -9 | -10 | -10 | -11 | -11 | -11 | -12 | -11 | -11 | -10 | -9 | -9 | -9 | -11 | -12 | -14 | -14 | -13 | -13 | -13 | -13 | -11.0 | -8.5 |
| 6-Nov-06 | -13 | -12 | -13 | -13 | -12 | -12 | -13 | -13 | -13 | -13 | -13 | -12 | -11 | -11 | -10 | -10 | -12 | -12 | -12 | -12 | -12 | -12 | -12 | -12 | -12.0 | -10.3 |
| 7-Nov-06 | -12 | -13 | -13 | -13 | -13 | -14 | -13 | -14 | -13 | -11 | -6 | -6 | -5 | -4 | -3 | -3 | -6 | -7 | -9 | -10 | -10 | -10 | -11 | -12 | -9.7 | -3.3 |
| 8-Nov-06 | -13 | -13 | -14 | -14 | -14 | -13 | -13 | -13 | -13 | -13 | -13 | -12 | -12 | -11 | -11 | -10 | -11 | -13 | -14 | -14 | -14 | -14 | -15 | -17 | -13.2 | -10.1 |
| 9-Nov-06 | -16 | -17 | -17 | -18 | -19 | -19 | -20 | -21 | -21 | -21 | -17 | -15 | -9 | -13 | -12 | -14 | -15 | -16 | -16 | -16 | -17 | -17 | -16 | -17 | -16.7 | -9.3 |
| 10-Nov-06 | -21 | -19 | -18 | -19 | -19 | -20 | -21 | -21 | -23 | -20 | -20 | -18 | -17 | -16 | -14 | -12 | -13 | -14 | -14 | -14 | -14 | -14 | -14 | -15 | -17.2 | -12.3 |
| 11-Nov-06 | -15 | -15 | -15 | -15 | -15 | -15 | -15 | -15 | -16 | -16 | -15 | -14 | -12 | -11 | -8 | -12 | -15 | -15 | -15 | -14 | -14 | -14 | -15 | -15 | -14.2 | -8.0 |
| 12-Nov-06 | -17 | -16 | -15 | -15 | -16 | -16 | -16 | -16 | -17 | -16 | -17 | -16 | -14 | -13 | -13 | -13 | -13 | -12 | -12 | -13 | -14 | -15 | -16 | -15 | -14.9 | -12.2 |
| 13-Nov-06 | -15 | -16 | -15 | -15 | -15 | -14 | -13 | -13 | -12 | -12 | -11 | -12 | -12 | -12 | -12 | -13 | -13 | -13 | -13 | -13 | -13 | -14 | -15 | -15 | -13.3 | -11.1 |
| 14-Nov-06 | -15 | -15 | -16 | -16 | -18 | -17 | -19 | -18 | -17 | -16 | -15 | -15 | -15 | -15 | -14 | -14 | -14 | -14 | -14 | -14 | -9 | -8 | -6 | -5 | -14.2 | -5.4 |
| 15-Nov-06 | -5 | -4 | -3 | -2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 0 | -10 | -12 | -12 | -1.2 | 2.8 |
| 16-Nov-06 | -12 | -12 | -13 | -13 | -12 | -12 | -13 | -14 | -14 | -12 | -12 | -8 | -7 | -9 | -8 | -9 | -11 | -11 | -12 | -13 | -15 | -15 | -15 | -15 | -12.1 | -7.5 |
| 17-Nov-06 | -14 | -12 | -12 | -11 | -11 | -12 | -12 | -11 | -9 | -10 | -9 | -9 | -3 | -2 | -3 | -4 | -7 | -6 | -6 | -5 | -6 | -6 | -4 | -1 | -7.8 | -0.6 |
| 18-Nov-06 | -1 | -1 | -2 | -2 | -3 | -4 | -5 | -5 | -5 | -5 | -5 | -6 | -7 | -7 | -6 | -7 | -7 | -8 | -8 | -7 | -8 | -8 | -8 | -8 | -5.6 | -0.5 |
| 19-Nov-06 | -9 | -8 | -8 | -7 | -7 | -7 | -7 | -7 | -6 | -4 | -3 | -4 | -2 | 1 | 4 | 5 | 4 | 4 | 2 | 4 | 3 | 1 | 2 | 1 | -2.0 | 4.7 |
| 20-Nov-06 | 0 | -2 | -4 | -4 | -3 | -4 | -4 | -3 | -4 | -4 | -1 | 1 | 3 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 0 | -1 | -2 | -3 | -1.3 | 3.0 |
| 21-Nov-06 | -3 | -4 | -5 | -6 | -10 | -11 | -12 | -12 | -12 | -12 | -13 | -13 | -13 | -13 | -14 | -14 | -14 | -15 | -15 | -15 | -15 | -16 | -16 | -17 | -12.2 | -3.2 |
| 22-Nov-06 | -17 | -18 | -18 | -18 | -18 | -18 | -18 | -18 | -18 | -19 | -18 | -18 | -17 | -16 | -17 | -19 | -19 | -19 | -18 | -18 | -18 | -18 | -20 | -20 | -18.1 | -15.7 |
| 23-Nov-06 | -19 | -19 | -19 | -19 | -19 | -19 | -19 | -18 | -18 | -18 | -18 | -17 | -17 | -17 | -17 | -17 | -17 | -18 | -18 | -18 | -18 | -19 | -20 | -20 | -18.2 | -16.9 |
| 24-Nov-06 | -20 | -21 | -21 | -21 | -21 | -21 | -21 | -22 | -22 | -22 | -22 | -23 | -23 | -23 | -23 | -23 | -24 | -25 | -25 | -26 | -26 | -26 | -26 | -26 | -23.0 | -20.3 |
| 25-Nov-06 | -26 | -25 | -25 | -25 | -25 | -25 | -26 | -26 | -26 | -26 | -25 | -25 | -24 | -24 | -24 | -25 | -25 | -26 | -26 | -27 | -27 | -28 | -28 | -29 | -25.8 | -23.9 |
| 26-Nov-06 | -30 | -30 | -30 | -31 | -31 | -32 | -33 | -35 | -36 | -35 | -33 | -32 | -31 | -31 | -29 | -29 | -29 | -29 | -29 | -28 | -28 | -28 | -27 | -27 | -30.5 | -26.7 |
| 27-Nov-06 | -27 | -27 | -27 | -27 | -27 | -27 | -27 | -27 | -27 | -27 | -26 | -25 | -24 | -25 | -25 | -27 | -27 | -28 | -28 | -28 | -28 | -29 | -29 | -29 | -26.9 | -24.1 |
| 28-Nov-06 | -30 | -30 | -32 | -33 | -34 | -34 | -34 | -34 | -34 | -34 | -30 | -27 | -26 | -26 | -25 | -25 | -26 | -28 | -27 | -29 | -28 | -28 | -28 | -29 | -29.7 | -24.8 |
| 29-Nov-06 | -30 | -30 | -29 | -28 | -27 | -26 | -28 | -28 | -27 | -27 | -24 | -25 | -25 | -23 | -22 | -22 | -21 | -19 | -20 | -19 | -17 | -17 | -17 | -16 | -23.7 | -15.7 |
| 30-Nov-06 | -16 | -17 | -17 | -18 | -15 | -7 | -5 | -6 | -7 | -10 | -13 | -13 | -14 | -15 | -15 | -16 | -16 | -16 | -16 | -15 | -14 | -15 | -14 | -14 | -13.4 | -5.5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | -14.6 | -14.8 | -14.8 | -14.9 | -14.9 | -15.0 | -15.2 | -15.4 | -15.3 | -14.9 | -14.1 | -13.3 | -12.4 | -12.2 | -11.8 | -12.1 | -12.9 | -13.4 | -13.6 | -13.7 | -13.8 | -14.2 | -14.4 | -14.5 | | |
| Hourly Max | -0.5 | -1.3 | -1.6 | -1.8 | 0.3 | 0.1 | 0.2 | 0.5 | 0.1 | -0.1 | 0.0 | 1.2 | 2.6 | 2.3 | 3.8 | 4.7 | 4.2 | 3.9 | 2.5 | 3.6 | 2.6 | 1.5 | 1.6 | 0.8 | | |

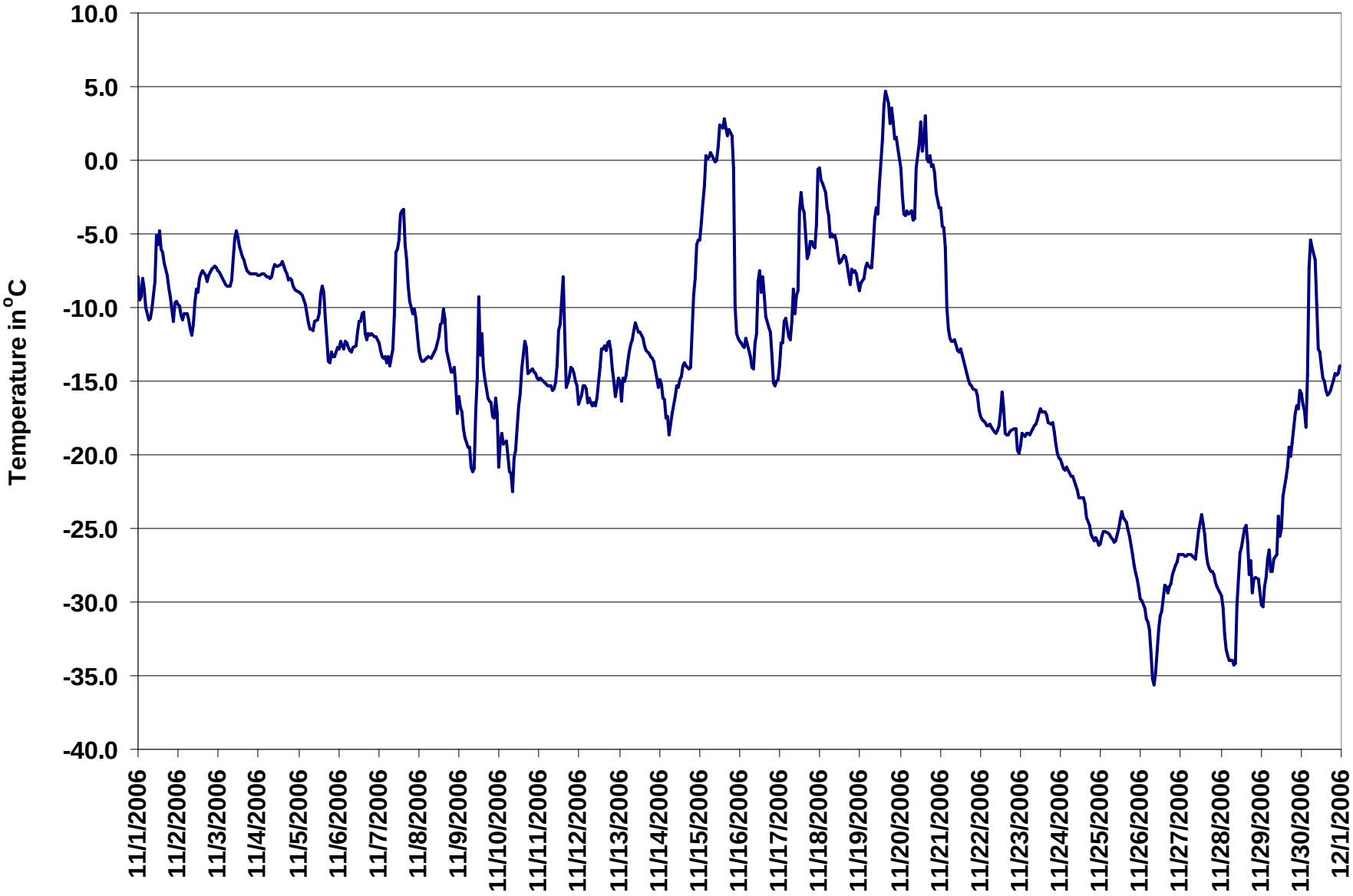



**Figure 45. PASZA - Beaverlodge Temperature 1-hr Average Monthly Trend**

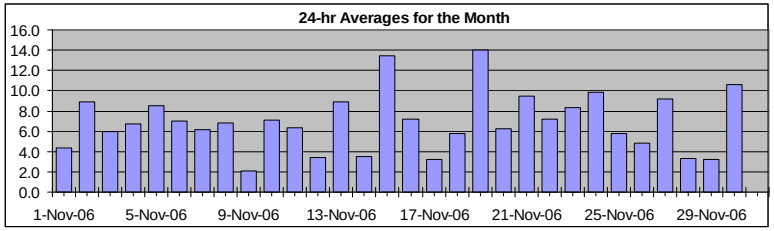
# PASZA - Beaverlodge - Scalar Wind Speed Monthly Summary

Station: Beaverlodge
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Wind Speed (WSs)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 40.3 | km/hr | 19-Nov | 20:00 21:00 |
| Maximum 24-hr Value: | 14.0 | km/hr | 19-Nov | |

| | | | |
|---|---|---|---|
| Calm Time: | 14 hrs | **2%** calms | Operational Time: 706 hrs |
| Calibration Time: | 0 hrs | | AMD Operational Uptime: 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | AverageS |
|---|---|---|---|---|---|---|---|---|
| | 27.8 | 14.6 | 9.4 | 5.9 | 3.3 | 1.6 | 1.1 | 7.0 km/hr |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** — **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hr Scalar Average | Daily Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | calm | 1 | 3 | 5 | 4 | 6 | 3 | 2 | 1 | 2 | 3 | 1 | 4 | 4 | 4 | 7 | 9 | 7 | 7 | 7 | 5 | 1 | 6 | 8 | 4.3 | 9.0 |
| 2-Nov-06 | 12 | 11 | 10 | 8 | 8 | 8 | 8 | 8 | 8 | 7 | 8 | 10 | 10 | 7 | 6 | 5 | 5 | 3 | 8 | 13 | 15 | 12 | 12 | 13 | 8.9 | 14.6 |
| 3-Nov-06 | 14 | 13 | 12 | 10 | 8 | 8 | 6 | 6 | 1 | calm | calm | 2 | 4 | 5 | 4 | 4 | 4 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 6.0 | 13.6 |
| 4-Nov-06 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 4 | 3 | 3 | 6 | 7 | 8 | 8 | 9 | 9 | 8 | 11 | 11 | 9 | 9 | 8 | 8 | 7 | 6.7 | 11.3 |
| 5-Nov-06 | 7 | 9 | 10 | 8 | 7 | 9 | 11 | 12 | 12 | 10 | 9 | 10 | 12 | 10 | 9 | 7 | 5 | 5 | 3 | 5 | 9 | 9 | 10 | 7 | 8.5 | 12.0 |
| 6-Nov-06 | 7 | 3 | 3 | 5 | 3 | 7 | 9 | 12 | 13 | 17 | 12 | 7 | 5 | 6 | 4 | 4 | 6 | 7 | 2 | 3 | 5 | 10 | 10 | 8 | 7.0 | 16.9 |
| 7-Nov-06 | 3 | 4 | 4 | 4 | 3 | 5 | 5 | 4 | 3 | 3 | 1 | 3 | 2 | 4 | 5 | 3 | 5 | 13 | 14 | 12 | 11 | 12 | 12 | 13 | 6.2 | 14.0 |
| 8-Nov-06 | 13 | 11 | 10 | 10 | 11 | 10 | 10 | 9 | 9 | 9 | 9 | 10 | 9 | 6 | 6 | 4 | 2 | 2 | 4 | 4 | 3 | 2 | 2 | 2 | 6.8 | 13.0 |
| 9-Nov-06 | 2 | 1 | 1 | calm | calm | calm | calm | calm | 1 | 3 | calm | 2 | 2 | 3 | 3 | 2 | 1 | 2 | 3 | 2 | 1 | 1 | 4 | 2 | 2.1 | 3.7 |
| 10-Nov-06 | 3 | 3 | 3 | 3 | calm | 1 | 4 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 6 | 8 | 13 | 15 | 14 | 13 | 14 | 14 | 16 | 14 | 7.1 | 15.7 |
| 11-Nov-06 | 14 | 15 | 12 | 12 | 13 | 9 | 9 | 8 | 7 | 7 | 6 | 5 | 4 | 2 | 2 | 1 | 5 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 6.4 | 14.5 |
| 12-Nov-06 | 3 | 3 | 4 | 5 | 3 | 1 | 3 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 6 | 5 | 4 | 6 | 6 | 8 | 2 | 2 | 4 | 4 | 3.4 | 7.7 |
| 13-Nov-06 | 4 | 2 | 2 | 2 | 2 | 2 | 6 | 6 | 9 | 11 | 11 | 13 | 15 | 15 | 15 | 18 | 16 | 12 | 12 | 13 | 11 | 10 | 5 | 3 | 8.9 | 17.6 |
| 14-Nov-06 | 2 | 3 | 1 | 2 | calm | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 3 | 4 | 5 | 4 | 3 | 5 | 6 | 8 | 8 | 3.5 | 8.4 |
| 15-Nov-06 | 7 | 5 | 6 | 6 | 8 | 9 | 9 | 8 | 10 | 16 | 18 | 18 | 15 | 12 | 12 | 15 | 16 | 15 | 13 | 9 | 13 | 27 | 29 | 28 | 13.4 | 28.6 |
| 16-Nov-06 | 26 | 21 | 14 | 14 | 10 | 11 | 9 | 7 | 4 | 2 | 4 | 2 | 3 | 5 | 6 | 5 | 4 | 3 | 5 | 4 | 3 | 4 | 5 | 3 | 7.2 | 25.8 |
| 17-Nov-06 | 4 | 3 | 2 | 9 | 2 | 3 | 3 | 5 | 2 | 3 | 3 | 3 | 1 | 2 | 3 | 2 | 3 | 1 | calm | 2 | 3 | 3 | 7 | 7 | 3.2 | 8.5 |
| 18-Nov-06 | 6 | 9 | 6 | 3 | 3 | 5 | 9 | 10 | 5 | 4 | 6 | 9 | 10 | 8 | 8 | 7 | 4 | 4 | 3 | 5 | 5 | 3 | 3 | 5 | 5.8 | 9.8 |
| 19-Nov-06 | 3 | 3 | 3 | 3 | 4 | 4 | 2 | 2 | 7 | 9 | 7 | 5 | 4 | 11 | 18 | 17 | 15 | 14 | 36 | 30 | 40 | 29 | 36 | 34 | 14.0 | 40.3 |
| 20-Nov-06 | 28 | 17 | 8 | 5 | 3 | 7 | 4 | 7 | 8 | 4 | 6 | 6 | 3 | 2 | 3 | 4 | 4 | 6 | 5 | 3 | 3 | 1 | 6 | 8 | 6.3 | 27.7 |
| 21-Nov-06 | 5 | 5 | 5 | 14 | 19 | 14 | 13 | 9 | 4 | 3 | 11 | 11 | 11 | 11 | 12 | 11 | 9 | 9 | 9 | 8 | 9 | 8 | 11 | 9 | 9.5 | 18.8 |
| 22-Nov-06 | 12 | 11 | 10 | 9 | 8 | 6 | 4 | 8 | 9 | 8 | 8 | 7 | 7 | 5 | 4 | 5 | 6 | 8 | 9 | 9 | 8 | 7 | 5 | 2 | 7.2 | 11.6 |
| 23-Nov-06 | 4 | 6 | 8 | 7 | 5 | 7 | 8 | 5 | 5 | 7 | 7 | 8 | 7 | 8 | 9 | 8 | 8 | 7 | 9 | 11 | 14 | 13 | 14 | 14 | 8.3 | 14.1 |
| 24-Nov-06 | 11 | 11 | 11 | 9 | 9 | 11 | 12 | 12 | 13 | 12 | 15 | 16 | 14 | 14 | 14 | 12 | 8 | 6 | 6 | 5 | 4 | 5 | 5 | 4 | 9.9 | 15.7 |
| 25-Nov-06 | 5 | 5 | 6 | 8 | 8 | 6 | 4 | 3 | 4 | 6 | 6 | 6 | 6 | 5 | 5 | 4 | 3 | 4 | 7 | 8 | 9 | 8 | 6 | 6 | 5.7 | 9.4 |
| 26-Nov-06 | 8 | 10 | 10 | 10 | 9 | 7 | 4 | 1 | 2 | 1 | 3 | 1 | 1 | calm | 2 | 2 | 2 | 3 | 4 | 6 | 6 | 5 | 4 | 8 | 4.8 | 10.1 |
| 27-Nov-06 | 10 | 8 | 11 | 14 | 13 | 15 | 13 | 10 | 10 | 10 | 5 | 7 | 8 | 6 | 6 | 6 | 7 | 7 | 7 | 9 | 8 | 8 | 10 | 10 | 9.2 | 14.5 |
| 28-Nov-06 | 10 | 6 | 2 | 2 | 3 | 3 | 4 | 4 | 2 | 4 | 3 | 3 | 4 | 3 | 4 | 3 | 3 | 3 | 2 | 4 | 2 | 3 | 1 | 2 | 3.3 | 9.9 |
| 29-Nov-06 | 2 | 1 | calm | 1 | 1 | 3 | 2 | 2 | 1 | 3 | 2 | 2 | 4 | 3 | 1 | 2 | 4 | 6 | 7 | 4 | 6 | 7 | 6 | 3 | 3.2 | 6.9 |
| 30-Nov-06 | 3 | 4 | 5 | 4 | 5 | 9 | 16 | 10 | 9 | 13 | 16 | 15 | 16 | 16 | 15 | 12 | 12 | 11 | 9 | 10 | 12 | 13 | 11 | 9 | 10.6 | 16.3 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-hr Average | 8.0 | 6.8 | 6.4 | 6.6 | 6.5 | 6.7 | 6.8 | 6.2 | 5.7 | 6.4 | 6.8 | 6.4 | 6.5 | 6.5 | 6.9 | 6.5 | 6.5 | 6.7 | 7.8 | 7.6 | 8.0 | 7.9 | 8.7 | 8.3 | | |
| Hourly Max | 27.7 | 20.5 | 13.8 | 14.4 | 18.8 | 14.5 | 16.3 | 12.0 | 13.3 | 16.9 | 18.1 | 17.8 | 16.1 | 15.5 | 17.7 | 17.6 | 16.2 | 15.5 | 35.9 | 30.0 | 40.3 | 29.2 | 36.2 | 34.2 | | |

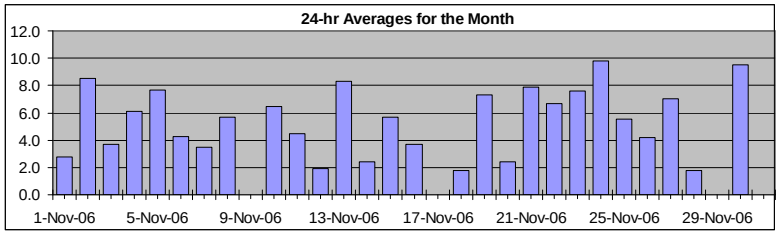
# PASZA - Beaverlodge - Vector Wind Speed Monthly Summary

Station: Beaverlodge
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Wind Speed (WSv)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 40.2 | km/hr | 19-Nov | 20:00 21:00 |
| Maximum 24-hr Value: | 9.8 | km/hr | 24-Nov | |

| | | | |
|---|---|---|---|
| Calm Time: | 47 hrs | **7%** calms | Operational Time: 673 hrs |
| Calibration Time: | 0 hrs | | AMD Operational Uptime: 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | AverageV |
|---|---|---|---|---|---|---|---|---|
| | 28.0 | 14.7 | 9.5 | 5.9 | 2.9 | 1.2 | 0.9 | 2.8 km/hr |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** — **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hr Vector Average | Daily Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | calm | calm | 3 | 5 | 4 | 6 | 2 | 2 | calm | 1 | 2 | 1 | 4 | 3 | 4 | 7 | 9 | 6 | 7 | 7 | 4 | 1 | 6 | 8 | 2.8 | 9.0 |
| 2-Nov-06 | 12 | 11 | 9 | 8 | 8 | 8 | 8 | 7 | 8 | 7 | 8 | 10 | 10 | 7 | 6 | 5 | 5 | 2 | 7 | 13 | 15 | 12 | 12 | 13 | 8.6 | 14.6 |
| 3-Nov-06 | 14 | 13 | 12 | 10 | 8 | 8 | 6 | 6 | 1 | calm | calm | 2 | 4 | 5 | 4 | 4 | 4 | 4 | 5 | 4 | 4 | 3 | 4 | 4 | 3.7 | 13.6 |
| 4-Nov-06 | 5 | 4 | 4 | 4 | 5 | 5 | 5 | 4 | 3 | 3 | 6 | 7 | 8 | 8 | 9 | 9 | 8 | 11 | 11 | 9 | 9 | 8 | 8 | 7 | 6.1 | 11.2 |
| 5-Nov-06 | 7 | 9 | 10 | 8 | 7 | 9 | 11 | 12 | 12 | 10 | 9 | 10 | 11 | 10 | 9 | 7 | 5 | 4 | 2 | 5 | 9 | 9 | 10 | 7 | 7.7 | 12.0 |
| 6-Nov-06 | 7 | 2 | 2 | 3 | 1 | 7 | 9 | 11 | 13 | 17 | 12 | 7 | 4 | 6 | 4 | 3 | 6 | 7 | 1 | 1 | 5 | 7 | 8 | 4 | 4.2 | 16.8 |
| 7-Nov-06 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 2 | 2 | 1 | 3 | calm | 2 | 3 | 2 | 3 | 13 | 13 | 11 | 11 | 12 | 12 | 13 | 3.5 | 13.1 |
| 8-Nov-06 | 13 | 11 | 10 | 10 | 11 | 10 | 10 | 9 | 9 | 9 | 9 | 10 | 9 | 6 | 5 | 3 | 1 | 2 | 4 | 4 | 3 | 1 | 1 | 1 | 5.7 | 12.9 |
| 9-Nov-06 | 2 | 1 | 1 | calm | calm | calm | calm | calm | 1 | 2 | calm | calm | 1 | 2 | 3 | 1 | 1 | 2 | 2 | 2 | calm | 1 | 4 | calm | N | 3.5 |
| 10-Nov-06 | 2 | 2 | 1 | calm | calm | calm | 3 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 6 | 8 | 13 | 15 | 14 | 13 | 14 | 14 | 16 | 14 | 6.4 | 15.6 |
| 11-Nov-06 | 14 | 14 | 12 | 11 | 13 | 9 | 9 | 8 | 7 | 6 | 6 | 5 | 4 | 1 | 2 | 1 | 4 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 4.5 | 14.5 |
| 12-Nov-06 | 2 | 2 | 2 | 3 | 3 | 1 | 1 | 2 | calm | 2 | 2 | calm | calm | 2 | 3 | 1 | 3 | 5 | 5 | 5 | calm | 1 | 2 | 3 | 1.9 | 5.1 |
| 13-Nov-06 | 1 | calm | 1 | calm | calm | 1 | 6 | 6 | 8 | 11 | 10 | 13 | 15 | 15 | 15 | 18 | 16 | 12 | 12 | 13 | 11 | 10 | 5 | 2 | 8.3 | 17.6 |
| 14-Nov-06 | 1 | 2 | 1 | 2 | calm | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 5 | 4 | 3 | 5 | 6 | 8 | 8 | 2.4 | 8.3 |
| 15-Nov-06 | 7 | 5 | 6 | 6 | 8 | 8 | 8 | 8 | 10 | 16 | 18 | 18 | 15 | 12 | 12 | 15 | 16 | 15 | 13 | 9 | 12 | 27 | 29 | 28 | 5.7 | 28.6 |
| 16-Nov-06 | 26 | 20 | 14 | 14 | 10 | 11 | 9 | 7 | 4 | 1 | 4 | 2 | 3 | 4 | 6 | 5 | 4 | 2 | 4 | 3 | 2 | 4 | 5 | 2 | 3.7 | 25.8 |
| 17-Nov-06 | 4 | 1 | calm | 8 | calm | 2 | 2 | 5 | 1 | 1 | 1 | 1 | 1 | calm | calm | 1 | calm | calm | calm | 2 | 2 | 2 | 4 | 7 | N | 7.7 |
| 18-Nov-06 | 6 | 8 | 6 | 1 | 2 | 2 | 8 | 10 | 5 | 3 | 6 | 8 | 10 | 8 | 8 | 6 | 2 | 2 | calm | 3 | 5 | 3 | 2 | 3 | 1.8 | 9.8 |
| 19-Nov-06 | 3 | 1 | 2 | 2 | 4 | 3 | calm | calm | 4 | 8 | 5 | 3 | 4 | 10 | 18 | 16 | 14 | 14 | 36 | 30 | 40 | 29 | 36 | 34 | 7.3 | 40.2 |
| 20-Nov-06 | 28 | 17 | 6 | 4 | 2 | 5 | 3 | 7 | 8 | 2 | 6 | 6 | 2 | 2 | 1 | 3 | 3 | 6 | 5 | 3 | 2 | calm | 6 | 7 | 2.4 | 27.7 |
| 21-Nov-06 | 2 | 4 | 4 | 13 | 19 | 14 | 13 | 9 | 4 | 2 | 11 | 11 | 11 | 10 | 12 | 11 | 9 | 9 | 8 | 8 | 8 | 8 | 10 | 9 | 7.9 | 18.7 |
| 22-Nov-06 | 12 | 11 | 10 | 9 | 8 | 6 | 4 | 8 | 9 | 8 | 8 | 7 | 7 | 5 | 4 | 5 | 6 | 8 | 9 | 9 | 8 | 7 | 5 | 2 | 6.7 | 11.5 |
| 23-Nov-06 | 4 | 6 | 8 | 6 | 4 | 7 | 8 | 5 | 5 | 7 | 7 | 7 | 7 | 8 | 9 | 8 | 8 | 7 | 9 | 11 | 14 | 13 | 14 | 14 | 7.6 | 14.1 |
| 24-Nov-06 | 10 | 11 | 11 | 9 | 9 | 11 | 11 | 12 | 13 | 12 | 15 | 16 | 14 | 13 | 14 | 12 | 8 | 6 | 6 | 5 | 4 | 5 | 5 | 4 | 9.8 | 15.6 |
| 25-Nov-06 | 5 | 4 | 6 | 8 | 8 | 6 | 4 | 3 | 4 | 6 | 6 | 6 | 6 | 5 | 5 | 4 | 3 | 4 | 7 | 8 | 9 | 8 | 6 | 6 | 5.5 | 9.4 |
| 26-Nov-06 | 8 | 10 | 10 | 10 | 9 | 7 | 3 | 1 | 1 | 1 | 2 | 1 | calm | calm | 1 | 2 | 2 | 3 | 4 | 6 | 6 | 5 | 3 | 8 | 4.2 | 10.1 |
| 27-Nov-06 | 10 | 8 | 11 | 14 | 13 | 14 | 13 | 10 | 10 | 10 | 5 | 7 | 8 | 6 | 6 | 6 | 7 | 7 | 7 | 9 | 8 | 8 | 10 | 10 | 7.0 | 14.5 |
| 28-Nov-06 | 10 | 5 | 1 | 2 | 3 | 3 | 4 | 4 | 2 | 4 | 3 | 3 | 3 | 3 | 4 | 3 | 2 | 2 | 1 | 1 | 1 | 3 | 1 | 1 | 1.8 | 9.9 |
| 29-Nov-06 | calm | calm | calm | 1 | 1 | 3 | 2 | 2 | 1 | 1 | calm | calm | 1 | 1 | calm | calm | 1 | 3 | 6 | calm | 4 | 6 | 5 | 2 | N | 6.4 |
| 30-Nov-06 | 2 | 3 | 3 | 3 | 1 | 8 | 16 | 10 | 9 | 13 | 16 | 15 | 16 | 15 | 15 | 12 | 12 | 11 | 9 | 10 | 12 | 13 | 10 | 9 | 9.5 | 16.3 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-hr Vector | 3.4 | 2.9 | 3.2 | 3.6 | 3.7 | 2.9 | 2.7 | 2.0 | 2.0 | 2.8 | 2.1 | 2.0 | 2.5 | 2.3 | 2.4 | 2.6 | 2.4 | 2.8 | 3.6 | 2.9 | 3.6 | 4.4 | 4.5 | 4.0 | | |
| Hourly Max | 27.7 | 20.4 | 13.7 | 14.4 | 18.7 | 14.5 | 16.3 | 12.0 | 13.2 | 16.8 | 18.1 | 17.7 | 16.0 | 15.4 | 17.6 | 17.6 | 16.2 | 15.4 | 35.6 | 29.6 | 40.2 | 29.0 | 36.2 | 34.2 | | |

# PASZA - Beaverlodge - Wind Direction Monthly Summary

## HOURLY AVERAGE TABLE

**Wind Direction (WD)**

Station: Beaverlodge
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Summary**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | | | Operational Time: | | 720 hrs | | | | |
| Calibration Time: | 0 hrs | | | | AMD Operational Uptime: | | 100.0% | | | | |
| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | | | |
| | 356.0 | 344.6 | 321.3 | 148.2 | 72.6 | 17.1 | 3.2 | 3 deg | | | |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | WD Sector |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 49 | 82 | 350 | 339 | 2 | 11 | 52 | 263 | 128 | 50 | 50 | 296 | 46 | 75 | 173 | 123 | 123 | 109 | 91 | 100 | 57 | 26 | 80 | 96 | 78 | ENE |
| 2-Nov-06 | 99 | 103 | 107 | 113 | 105 | 111 | 117 | 106 | 108 | 115 | 119 | 122 | 115 | 120 | 114 | 105 | 115 | 291 | 95 | 105 | 108 | 96 | 94 | 104 | 107 | ESE |
| 3-Nov-06 | 110 | 105 | 95 | 93 | 75 | 79 | 64 | 71 | 74 | 286 | 311 | 288 | 269 | 294 | 324 | 340 | 5 | 21 | 18 | 15 | 20 | 10 | 17 | 19 | 59 | ENE |
| 4-Nov-06 | 32 | 33 | 31 | 21 | 34 | 38 | 48 | 57 | 62 | 72 | 88 | 83 | 74 | 74 | 73 | 62 | 80 | 74 | 53 | 51 | 33 | 24 | 11 | 343 | 52 | NE |
| 5-Nov-06 | 349 | 332 | 339 | 339 | 328 | 312 | 318 | 320 | 327 | 336 | 337 | 328 | 326 | 331 | 335 | 341 | 351 | 7 | 20 | 33 | 28 | 32 | 43 | 32 | 344 | NNW |
| 6-Nov-06 | 38 | 306 | 153 | 103 | 36 | 111 | 108 | 95 | 103 | 86 | 92 | 92 | 58 | 64 | 60 | 358 | 351 | 35 | 70 | 242 | 320 | 358 | 342 | 319 | 62 | ENE |
| 7-Nov-06 | 257 | 199 | 92 | 157 | 59 | 85 | 116 | 164 | 153 | 240 | 289 | 305 | 13 | 44 | 316 | 74 | 34 | 334 | 339 | 354 | 355 | 349 | 344 | 339 | 354 | N |
| 8-Nov-06 | 333 | 329 | 324 | 324 | 317 | 309 | 309 | 311 | 312 | 319 | 320 | 313 | 323 | 306 | 322 | 344 | 0 | 183 | 77 | 44 | 72 | 83 | 106 | 95 | 325 | NW |
| 9-Nov-06 | 101 | 111 | 137 | 144 | 256 | 59 | 250 | 12 | 320 | 30 | 289 | 24 | 41 | 267 | 309 | 66 | 276 | 317 | 350 | 46 | 83 | 32 | 46 | 203 | 21 | NNE |
| 10-Nov-06 | 355 | 26 | 44 | 1 | 94 | 254 | 46 | 326 | 21 | 29 | 341 | 50 | 286 | 256 | 338 | 2 | 327 | 327 | 329 | 324 | 327 | 323 | 326 | 329 | 334 | NNW |
| 11-Nov-06 | 332 | 328 | 330 | 324 | 325 | 329 | 325 | 326 | 337 | 345 | 337 | 327 | 294 | 336 | 103 | 95 | 57 | 74 | 89 | 114 | 160 | 170 | 148 | 282 | 335 | NNW |
| 12-Nov-06 | 0 | 338 | 14 | 304 | 290 | 94 | 33 | 50 | 145 | 143 | 197 | 296 | 60 | 54 | 340 | 337 | 283 | 333 | 5 | 34 | 158 | 176 | 28 | 37 | 1 | N |
| 13-Nov-06 | 37 | 227 | 21 | 54 | 27 | 19 | 339 | 11 | 9 | 12 | 346 | 325 | 322 | 324 | 328 | 327 | 327 | 331 | 329 | 331 | 327 | 323 | 305 | 313 | 335 | NNW |
| 14-Nov-06 | 281 | 301 | 54 | 65 | 68 | 97 | 109 | 175 | 115 | 214 | 236 | 195 | 205 | 223 | 214 | 215 | 221 | 216 | 213 | 195 | 132 | 148 | 171 | 191 | 186 | S |
| 15-Nov-06 | 189 | 154 | 150 | 127 | 141 | 147 | 129 | 126 | 139 | 120 | 123 | 119 | 124 | 121 | 109 | 109 | 105 | 102 | 104 | 94 | 335 | 332 | 329 | 325 | 102 | ESE |
| 16-Nov-06 | 321 | 314 | 325 | 318 | 316 | 305 | 294 | 285 | 295 | 269 | 59 | 79 | 110 | 135 | 128 | 100 | 110 | 111 | 331 | 48 | 272 | 87 | 192 | 111 | 322 | NW |
| 17-Nov-06 | 69 | 352 | 17 | 350 | 188 | 195 | 146 | 62 | 150 | 79 | 151 | 189 | 51 | 95 | 258 | 129 | 83 | 30 | 189 | 112 | 190 | 229 | 334 | 313 | 44 | NE |
| 18-Nov-06 | 280 | 312 | 301 | 252 | 143 | 40 | 38 | 117 | 110 | 78 | 142 | 140 | 154 | 132 | 135 | 142 | 237 | 297 | 310 | 172 | 125 | 254 | 47 | 237 | 139 | SE |
| 19-Nov-06 | 279 | 19 | 346 | 280 | 295 | 316 | 153 | 261 | 87 | 157 | 172 | 209 | 160 | 141 | 131 | 126 | 134 | 143 | 274 | 265 | 261 | 264 | 262 | 260 | 241 | WSW |
| 20-Nov-06 | 255 | 242 | 230 | 83 | 166 | 216 | 229 | 249 | 235 | 157 | 231 | 240 | 148 | 92 | 61 | 98 | 103 | 63 | 62 | 84 | 92 | 251 | 309 | 15 | 233 | SW |
| 21-Nov-06 | 350 | 272 | 352 | 30 | 32 | 39 | 45 | 56 | 50 | 310 | 319 | 325 | 8 | 25 | 24 | 25 | 28 | 27 | 18 | 27 | 37 | 52 | 77 | 99 | 27 | NNE |
| 22-Nov-06 | 107 | 94 | 89 | 68 | 71 | 62 | 116 | 127 | 114 | 111 | 115 | 116 | 110 | 128 | 103 | 110 | 88 | 113 | 103 | 92 | 74 | 63 | 41 | 22 | 96 | E |
| 23-Nov-06 | 25 | 42 | 36 | 40 | 328 | 356 | 339 | 360 | 9 | 355 | 13 | 4 | 343 | 328 | 327 | 335 | 333 | 327 | 327 | 323 | 325 | 329 | 328 | 329 | 343 | NNW |
| 24-Nov-06 | 330 | 328 | 324 | 324 | 329 | 333 | 341 | 343 | 336 | 333 | 330 | 331 | 334 | 334 | 327 | 324 | 330 | 335 | 325 | 318 | 302 | 320 | 331 | 330 | 330 | NNW |
| 25-Nov-06 | 344 | 3 | 17 | 16 | 10 | 8 | 359 | 355 | 340 | 351 | 347 | 357 | 346 | 355 | 13 | 3 | 19 | 324 | 328 | 326 | 343 | 345 | 349 | 3 | 354 | N |
| 26-Nov-06 | 341 | 339 | 342 | 336 | 335 | 331 | 334 | 360 | 346 | 325 | 264 | 283 | 329 | 73 | 297 | 279 | 316 | 322 | 23 | 28 | 16 | 16 | 8 | 44 | 347 | NNW |
| 27-Nov-06 | 41 | 42 | 42 | 46 | 56 | 55 | 53 | 47 | 47 | 50 | 34 | 18 | 17 | 348 | 330 | 320 | 311 | 321 | 322 | 320 | 325 | 320 | 324 | 323 | 15 | NNE |
| 28-Nov-06 | 327 | 321 | 286 | 82 | 63 | 65 | 64 | 64 | 73 | 74 | 110 | 122 | 85 | 75 | 72 | 75 | 129 | 135 | 146 | 346 | 37 | 78 | 105 | 253 | 59 | ENE |
| 29-Nov-06 | 115 | 92 | 125 | 79 | 79 | 73 | 144 | 151 | 185 | 16 | 290 | 323 | 62 | 349 | 228 | 106 | 36 | 66 | 273 | 214 | 41 | 283 | 289 | 45 | 14 | NNE |
| 30-Nov-06 | 264 | 325 | 304 | 85 | 21 | 275 | 281 | 300 | 328 | 359 | 345 | 342 | 343 | 339 | 335 | 330 | 326 | 317 | 301 | 301 | 322 | 322 | 311 | 309 | 324 | NW |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 341 | 341 | 6 | 16 | 13 | 16 | 18 | 28 | 37 | 39 | 19 | 1 | 15 | 18 | 12 | 31 | 25 | 15 | 345 | 357 | 345 | 338 | 337 | 332 | | |

# PASZA - Beaverlodge - Standard Deviation of Wind Direction Monthly Summary

Station: Beaverlodge
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Wind Direction (WD)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Summary**

Determined by the Yamartino 15-min interval calculation

| | | | |
|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | Operational Time: 720 hrs |
| Calibration Time: | 0 hrs | | AMD Operational Uptime: 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 |
|---|---|---|---|---|---|---|---|
| | 61.3 | 49.1 | 24.7 | 9.3 | 5.3 | 3.2 | 2.4 |

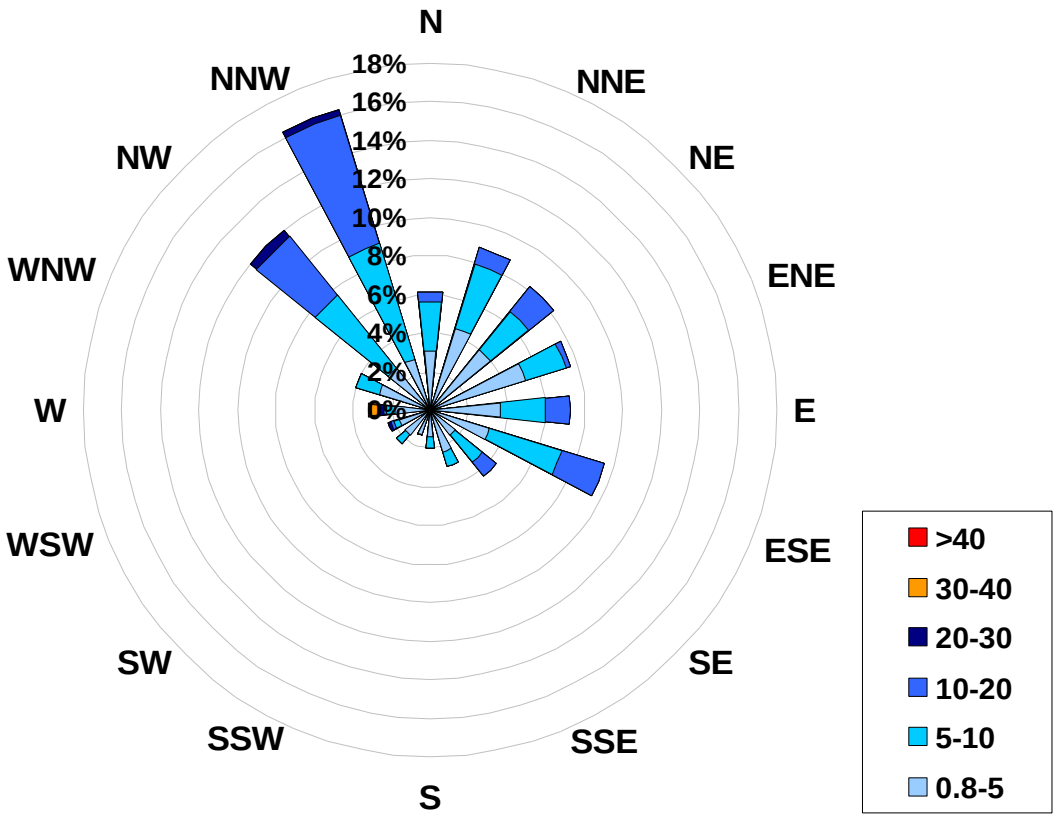
**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** — **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 39 | 50 | 19 | 5 | 13 | 11 | 27 | 22 | 37 | 32 | 28 | 44 | 17 | 14 | 17 | 4 | 3 | 4 | 4 | 5 | 8 | 26 | 10 | 7 | 49.7 |
| 2-Nov-06 | 12 | 4 | 4 | 5 | 6 | 6 | 5 | 4 | 3 | 4 | 5 | 5 | 5 | 6 | 7 | 8 | 18 | 36 | 47 | 4 | 3 | 3 | 4 | 4 | 47.4 |
| 3-Nov-06 | 3 | 4 | 5 | 5 | 5 | 5 | 7 | 8 | 58 | 32 | 42 | 9 | 5 | 8 | 13 | 9 | 12 | 5 | 7 | 7 | 11 | 9 | 7 | 7 | 58.3 |
| 4-Nov-06 | 5 | 5 | 7 | 8 | 4 | 3 | 3 | 3 | 3 | 7 | 7 | 5 | 6 | 5 | 6 | 5 | 9 | 6 | 3 | 6 | 7 | 6 | 10 | 7 | 9.6 |
| 5-Nov-06 | 9 | 5 | 6 | 6 | 6 | 5 | 4 | 4 | 6 | 6 | 7 | 6 | 5 | 7 | 8 | 9 | 11 | 10 | 33 | 34 | 3 | 4 | 3 | 4 | 33.8 |
| 6-Nov-06 | 8 | 23 | 28 | 12 | 50 | 12 | 8 | 7 | 5 | 5 | 7 | 20 | 31 | 10 | 17 | 19 | 7 | 6 | 35 | 55 | 11 | 34 | 23 | 20 | 54.5 |
| 7-Nov-06 | 23 | 23 | 23 | 24 | 11 | 9 | 11 | 14 | 31 | 38 | 50 | 31 | 26 | 26 | 40 | 61 | 57 | 15 | 19 | 21 | 10 | 8 | 7 | 7 | 61.4 |
| 8-Nov-06 | 7 | 8 | 7 | 6 | 5 | 4 | 5 | 6 | 5 | 6 | 7 | 8 | 6 | 9 | 12 | 11 | 29 | 13 | 9 | 9 | 21 | 19 | 20 | 18 | 28.7 |
| 9-Nov-06 | 15 | 16 | 11 | 28 | 47 | 55 | 32 | 34 | 42 | 19 | 33 | 44 | 28 | 12 | 48 | 26 | 29 | 40 | 30 | 38 | 44 | 43 | 16 | 26 | 55.4 |
| 10-Nov-06 | 21 | 25 | 44 | 34 | 39 | 66 | 55 | 53 | 26 | 33 | 18 | 43 | 22 | 12 | 6 | 9 | 7 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 66.2 |
| 11-Nov-06 | 3 | 3 | 5 | 5 | 4 | 5 | 5 | 7 | 9 | 10 | 9 | 11 | 10 | 31 | 8 | 35 | 9 | 9 | 12 | 19 | 20 | 17 | 44 | 30 | 43.8 |
| 12-Nov-06 | 54 | 35 | 31 | 21 | 32 | 16 | 30 | 49 | 61 | 30 | 34 | 54 | 55 | 53 | 29 | 17 | 38 | 44 | 22 | 19 | 23 | 34 | 37 | 30 | 61.0 |
| 13-Nov-06 | 41 | 21 | 32 | 52 | 46 | 43 | 14 | 11 | 6 | 4 | 7 | 3 | 4 | 4 | 4 | 4 | 3 | 5 | 5 | 4 | 5 | 6 | 7 | 16 | 52.1 |
| 14-Nov-06 | 46 | 14 | 28 | 9 | 24 | 26 | 9 | 26 | 51 | 17 | 30 | 31 | 24 | 18 | 14 | 16 | 7 | 8 | 9 | 30 | 10 | 7 | 7 | 12 | 50.6 |
| 15-Nov-06 | 12 | 16 | 15 | 11 | 5 | 13 | 5 | 7 | 5 | 3 | 2 | 3 | 5 | 4 | 4 | 3 | 3 | 3 | 3 | 10 | 18 | 4 | 3 | 4 | 18.0 |
| 16-Nov-06 | 4 | 4 | 5 | 4 | 5 | 5 | 5 | 8 | 10 | 48 | 17 | 14 | 19 | 9 | 8 | 13 | 12 | 15 | 50 | 39 | 66 | 33 | 12 | 44 | 65.9 |
| 17-Nov-06 | 42 | 54 | 42 | 23 | 76 | 45 | 35 | 17 | 32 | 18 | 22 | 79 | 40 | 34 | 32 | 28 | 41 | 57 | 47 | 41 | 26 | 37 | 30 | 12 | 78.9 |
| 18-Nov-06 | 16 | 6 | 5 | 22 | 34 | 31 | 14 | 5 | 22 | 53 | 15 | 8 | 6 | 6 | 8 | 8 | 25 | 47 | 54 | 29 | 20 | 17 | 38 | 40 | 53.5 |
| 19-Nov-06 | 23 | 21 | 51 | 28 | 16 | 33 | 63 | 49 | 46 | 17 | 23 | 44 | 20 | 14 | 6 | 13 | 16 | 11 | 10 | 6 | 3 | 3 | 3 | 2 | 63.0 |
| 20-Nov-06 | 2 | 3 | 27 | 34 | 47 | 15 | 59 | 13 | 25 | 38 | 32 | 12 | 30 | 20 | 43 | 11 | 10 | 4 | 8 | 26 | 43 | 44 | 33 | 9 | 59.3 |
| 21-Nov-06 | 24 | 45 | 19 | 17 | 4 | 5 | 4 | 6 | 19 | 33 | 4 | 5 | 8 | 7 | 5 | 5 | 5 | 4 | 6 | 4 | 3 | 5 | 6 | 8 | 45.0 |
| 22-Nov-06 | 5 | 6 | 8 | 5 | 5 | 7 | 8 | 7 | 6 | 5 | 5 | 5 | 6 | 5 | 11 | 6 | 8 | 4 | 5 | 5 | 6 | 7 | 10 | 12 | 11.7 |
| 23-Nov-06 | 5 | 5 | 3 | 9 | 30 | 9 | 6 | 10 | 16 | 8 | 8 | 12 | 10 | 6 | 5 | 6 | 7 | 5 | 4 | 3 | 4 | 5 | 4 | 4 | 29.9 |
| 24-Nov-06 | 6 | 7 | 5 | 5 | 7 | 6 | 6 | 6 | 6 | 7 | 5 | 7 | 8 | 9 | 5 | 5 | 9 | 7 | 5 | 5 | 5 | 5 | 4 | 6 | 9.2 |
| 25-Nov-06 | 6 | 9 | 6 | 5 | 6 | 9 | 13 | 25 | 8 | 10 | 9 | 11 | 11 | 13 | 14 | 13 | 9 | 7 | 3 | 4 | 3 | 5 | 7 | 6 | 25.3 |
| 26-Nov-06 | 4 | 3 | 2 | 2 | 2 | 4 | 12 | 20 | 16 | 31 | 38 | 17 | 24 | 16 | 42 | 12 | 15 | 13 | 14 | 5 | 6 | 13 | 9 | 4 | 41.6 |
| 27-Nov-06 | 4 | 5 | 3 | 3 | 3 | 3 | 4 | 5 | 5 | 5 | 13 | 13 | 12 | 10 | 6 | 6 | 3 | 3 | 3 | 3 | 5 | 3 | 2 | 1 | 12.6 |
| 28-Nov-06 | 6 | 26 | 16 | 10 | 6 | 8 | 5 | 4 | 14 | 6 | 12 | 25 | 25 | 13 | 6 | 8 | 15 | 26 | 46 | 47 | 42 | 11 | 42 | 59 | 59.0 |
| 29-Nov-06 | 25 | 36 | 48 | 46 | 60 | 9 | 16 | 19 | 37 | 18 | 71 | 47 | 48 | 29 | 51 | 73 | 45 | 60 | 11 | 23 | 45 | 8 | 10 | 18 | 72.9 |
| 30-Nov-06 | 21 | 46 | 56 | 21 | 37 | 9 | 4 | 5 | 6 | 8 | 5 | 5 | 5 | 5 | 5 | 7 | 6 | 5 | 4 | 5 | 4 | 3 | 4 | 4 | 55.9 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Max | 54 | 54 | 56 | 52 | 76 | 66 | 63 | 53 | 61 | 53 | 71 | 79 | 55 | 53 | 51 | 73 | 57 | 60 | 54 | 55 | 66 | 44 | 44 | 59 | |

## 1-hr Average Wind Rose (in km/hr) Located at the Beaverlodge Site for November 2006




| Calms: | 2% |
|---|---|

| Frequency Distribution of Wind in km/hr | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.8 | < | 5 | 314 |
| 5 | to | 10 | 243 |
| 10 | to | 20 | 137 |
| 20 | to | 30 | 8 |
| 30 | to | 40 | 3 |
| | > | 40 | 1 |
| Total Non-Zero Values | | | 706 |

# PASZA – Portable-Falher Station

## Monthly Summary Tables, Graphs, and Roses

# PASZA - Portable-Falher - Sulphur Dioxide Monthly Summary

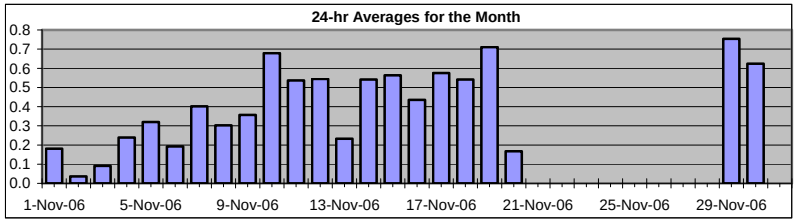
Station: Portable-Falher
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Sulphur Dioxide ($SO_2$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr 172 ppb | 24-hr 57 ppb




**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 1-hr Exceedances: | 0 | | | |
| Number of 24-hr Exceedances: | 0 | | | |
| Maximum 1-hr Average: | 2.8 | ppb | 4-Nov | 10:00 11:00 |
| Maximum 24-hr Average: | 0.8 | ppb | 29-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 24 hrs | Operational Time: | 523 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 76.4% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 1.8 | 1.1 | 0.5 | 0.3 | 0.1 | 0.0 | 0.0 | 0.4 ppb | 0.3 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 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 | 0.3 |
| 2-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.1 |
| 3-Nov-06 | 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 |
| 4-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 2.8 |
| 5-Nov-06 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0.3 | 0.6 |
| 6-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.5 |
| 7-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0.4 | 1.0 |
| 8-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.5 |
| 9-Nov-06 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.9 |
| 10-Nov-06 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0.7 | 1.7 |
| 11-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0.5 | 1.0 |
| 12-Nov-06 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 1.5 |
| 13-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.6 |
| 14-Nov-06 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 1 | 1 | 0.5 | 2.0 |
| 15-Nov-06 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 | 1.2 |
| 16-Nov-06 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.5 |
| 17-Nov-06 | A | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 0 | C | C | C | A | 0 | 0 | 0 | 0 | 0 | 0.6 | 1.8 |
| 18-Nov-06 | 0 | 0 | 0 | A | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0.5 | 2.5 |
| 19-Nov-06 | 1 | 2 | A | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0.7 | 2.2 |
| 20-Nov-06 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.4 |
| 21-Nov-06 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | P | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.4 |
| 22-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 23-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 24-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 25-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 26-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 27-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 28-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | N | 1.2 |
| 29-Nov-06 | 1 | 1 | A | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.9 |
| 30-Nov-06 | 1 | A | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 | 1.4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | | |
| Hourly Max | 1.7 | 2.2 | 1.2 | 1.4 | 1.0 | 2.5 | 1.6 | 1.4 | 1.1 | 1.4 | 2.8 | 1.5 | 1.9 | 1.1 | 1.0 | 0.9 | 1.2 | 1.1 | 1.7 | 0.8 | 0.9 | 1.1 | 0.9 | 0.9 | | |

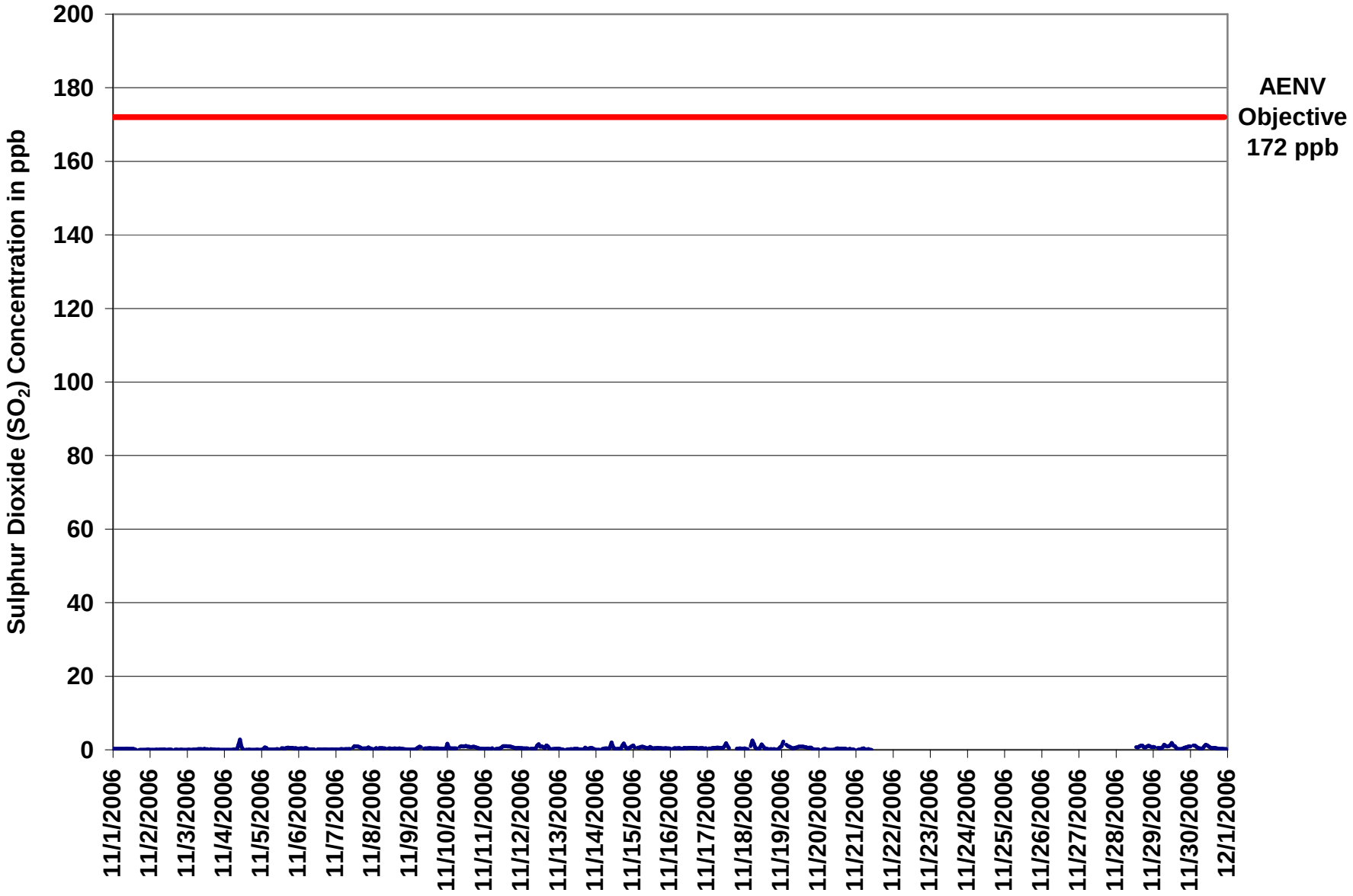


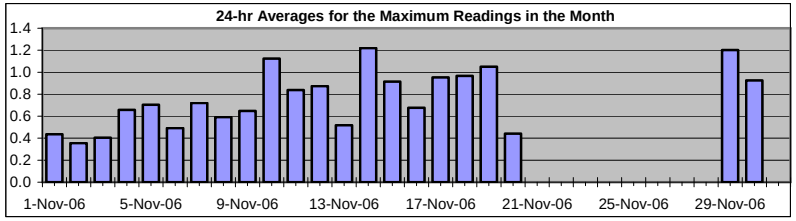

**Figure 46. PASZA - Portable-Falher Sulphur Dioxide 1-hr Average Monthly Trend**

Station: Portable-Falher
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

**Sulphur Dioxide ($SO_2$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 5.1 | ppb | 14-Nov | 10:00 11:00 |
| Maximum 24-hr Value: | 1.2 | ppb | 14-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 24 hrs | Operational Time: | 523 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 76.4% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 3.0 | 1.7 | 1.0 | 0.5 | 0.4 | 0.3 | 0.3 | 0.8 ppb | 0.5 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.8 |
| 2-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.4 |
| 3-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.4 |
| 4-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 2 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.7 | 3.5 |
| 5-Nov-06 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0.7 | 1.5 |
| 6-Nov-06 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 1.0 |
| 7-Nov-06 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.7 | 1.2 |
| 8-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 1.1 |
| 9-Nov-06 | 1 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | A | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0.6 | 1.5 |
| 10-Nov-06 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1.1 | 3.0 |
| 11-Nov-06 | 0 | 0 | 0 | 0 | 0 | 1 | A | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.5 |
| 12-Nov-06 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0.9 | 2.8 |
| 13-Nov-06 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0.5 | 1.0 |
| 14-Nov-06 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 1 | 1 | 5 | 1 | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 2 | 1 | 1 | 1 | 3 | 1.2 | 5.1 |
| 15-Nov-06 | 2 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9 | 2.5 |
| 16-Nov-06 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.7 | 1.0 |
| 17-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | C | C | C | A | 1 | 1 | 1 | 0 | 0 | 1.0 | 2.5 |
| 18-Nov-06 | 1 | 1 | 0 | A | 2 | 3 | 2 | 1 | 0 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1.0 | 3.0 |
| 19-Nov-06 | 1 | 3 | A | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1.0 | 3.4 |
| 20-Nov-06 | 0 | A | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.8 |
| 21-Nov-06 | A | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | P | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.9 |
| 22-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 23-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 24-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 25-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 26-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 27-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 28-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | N | 1.7 |
| 29-Nov-06 | 1 | 1 | A | 1 | 1 | 1 | 1 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1.2 | 2.7 |
| 30-Nov-06 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0.9 | 1.8 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.7 | 0.6 | 0.6 | 0.6 | 0.7 | | |
| Hourly Max | 3.0 | 3.4 | 1.5 | 1.9 | 2.3 | 3.0 | 2.5 | 2.7 | 2.2 | 2.4 | 5.1 | 2.5 | 2.5 | 1.7 | 1.5 | 1.5 | 2.8 | 3.0 | 3.2 | 1.9 | 1.2 | 1.3 | 1.5 | 3.0 | | |

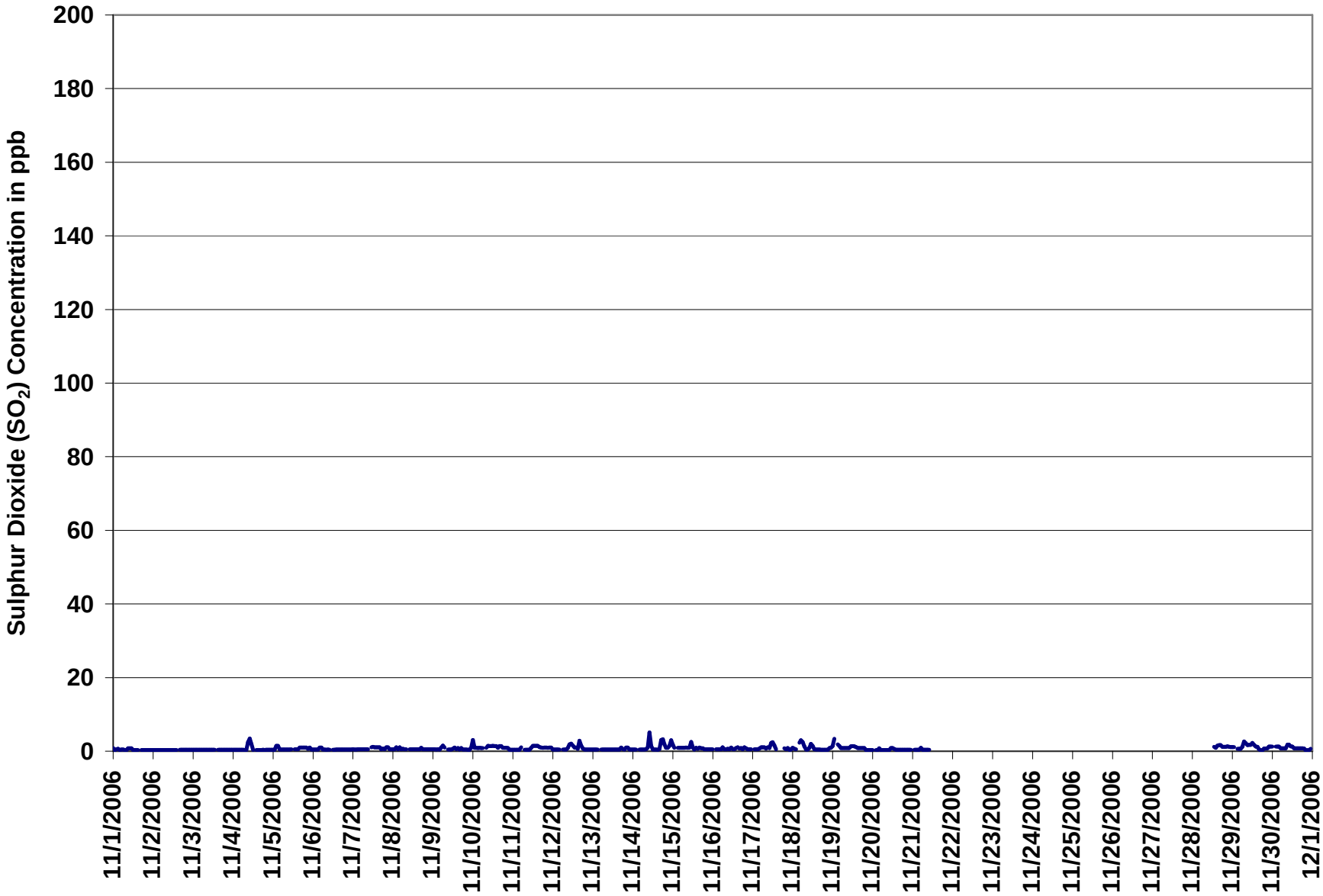
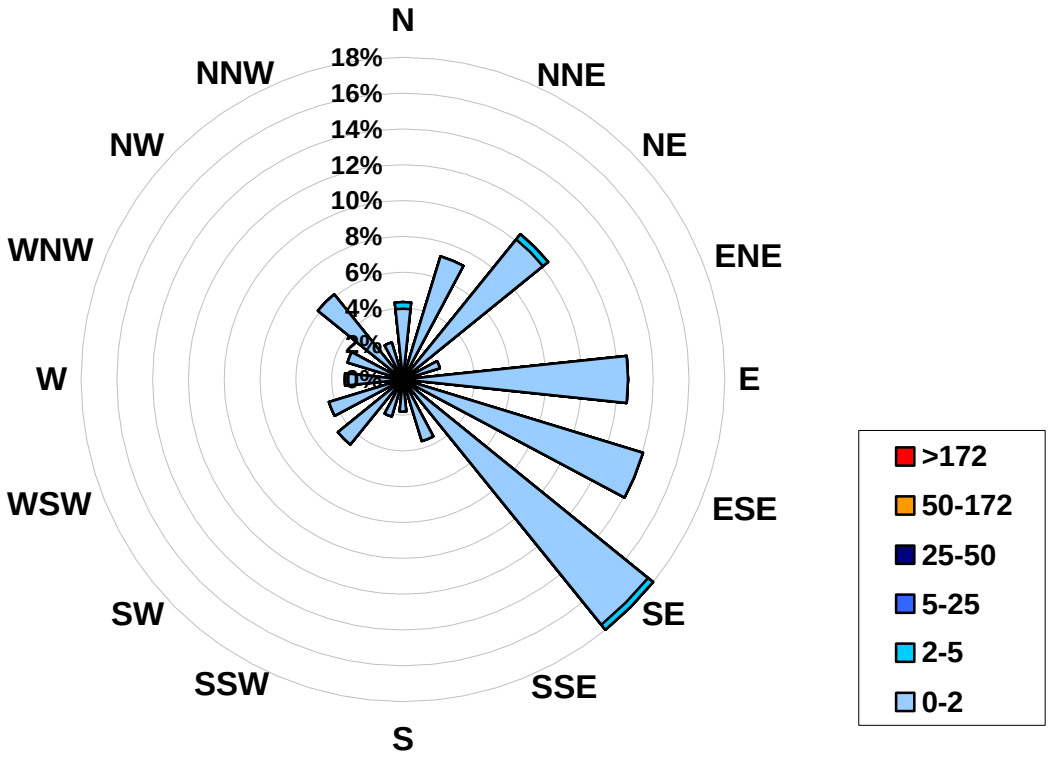



**Figure 47. PASZA - Portable-Falher Sulphur Dioxide Instantaneous (30 Second) Maximum Value Monthly Trend**

**1-hr Average Concentration Rose for Sulphur Dioxide (in ppb) Located at the Portable-Falher Site for November 2006**




| Calms: | 0% |
|---|---|

| Frequency Distribution of $SO_2$ in ppb | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.0 | < | 2 | 520 |
| 2 | to | 5 | 3 |
| 5 | to | 25 | 0 |
| 25 | to | 50 | 0 |
| 50 | to | 172 | 0 |
| | > | 172 | 0 |
| Total Non-Zero Values | | | 523 |

# PASZA - Portable-Falher - Ozone Monthly Summary

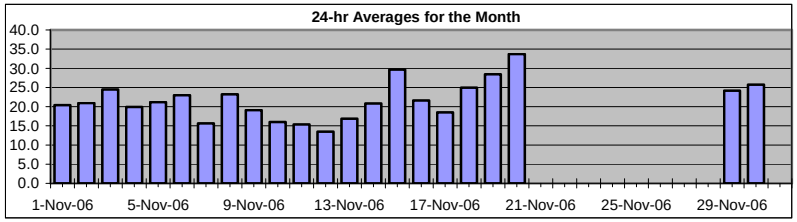
Station: Portable-Falher
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Ozone ($O_3$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr 82 ppb | 24-hr na ppb




**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 1-hr Exceedances: | 0 | | | |
| Maximum 1-hr Average: | 44.0 | ppb | 19-Nov | 23:00 0:00 |
| Maximum 24-hr Average: | 33.7 | ppb | 20-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 24 hrs | Operational Time: | 523 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 76.4% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 40.7 | 34.2 | 25.9 | 21.6 | 17.5 | 10.9 | 4.2 | 21.9 ppb | 21.6 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 25 | 22 | 24 | 23 | 21 | 22 | 21 | 19 | 21 | 22 | 22 | 24 | 24 | 25 | 28 | 30 | A | 26 | 23 | 24 | 12 | 4 | 4 | 2 | 20.4 | 30.1 |
| 2-Nov-06 | 3 | 5 | 5 | 8 | 12 | 15 | 20 | 21 | 22 | 23 | 23 | 25 | 27 | 28 | 30 | A | 28 | 27 | 27 | 25 | 26 | 26 | 28 | 27 | 21.0 | 29.9 |
| 3-Nov-06 | 27 | 27 | 27 | 27 | 26 | 26 | 25 | 25 | 25 | 25 | 26 | 26 | 26 | 27 | A | 26 | 24 | 24 | 22 | 22 | 20 | 21 | 19 | 19 | 24.5 | 27.4 |
| 4-Nov-06 | 19 | 20 | 19 | 17 | 19 | 19 | 20 | 20 | 20 | 20 | 20 | 19 | 20 | A | 21 | 21 | 21 | 21 | 20 | 20 | 20 | 19 | 20 | 21 | 19.9 | 21.4 |
| 5-Nov-06 | 21 | 21 | 22 | 23 | 24 | 24 | 23 | 23 | 23 | 24 | 25 | 26 | A | 27 | 27 | 26 | 20 | 19 | 18 | 18 | 16 | 11 | 11 | 15 | 21.2 | 27.4 |
| 6-Nov-06 | 17 | 16 | 17 | 19 | 19 | 21 | 23 | 26 | 25 | 26 | 27 | A | 26 | 26 | 25 | 25 | 25 | 25 | 25 | 24 | 23 | 22 | 22 | 22 | 23.0 | 26.9 |
| 7-Nov-06 | 21 | 20 | 19 | 20 | 19 | 19 | 17 | 16 | 16 | 16 | A | 14 | 14 | 15 | 13 | 12 | 11 | 9 | 13 | 11 | 13 | 16 | 17 | 18 | 15.6 | 21.1 |
| 8-Nov-06 | 18 | 23 | 22 | 24 | 25 | 24 | 25 | 25 | 26 | A | 28 | 29 | 29 | 29 | 29 | 29 | 27 | 25 | 24 | 20 | 20 | 21 | 12 | 1 | 23.2 | 29.5 |
| 9-Nov-06 | 3 | 11 | 17 | 12 | 13 | 14 | 15 | 17 | A | 18 | 19 | 20 | 21 | 23 | 26 | 26 | 22 | 24 | 24 | 25 | 24 | 23 | 21 | 21 | 19.1 | 26.0 |
| 10-Nov-06 | 20 | 20 | 20 | 19 | 19 | 20 | 17 | A | 14 | 17 | 17 | 16 | 16 | 16 | 15 | 13 | 12 | 12 | 13 | 13 | 13 | 14 | 15 | 16 | 16.0 | 20.3 |
| 11-Nov-06 | 17 | 18 | 17 | 18 | 19 | 19 | A | 20 | 20 | 20 | 17 | 18 | 19 | 19 | 19 | 19 | 18 | 14 | 10 | 8 | 4 | 6 | 8 | 6 | 15.4 | 20.4 |
| 12-Nov-06 | 9 | 11 | 15 | 16 | 15 | A | 14 | 13 | 13 | 13 | 12 | 14 | 14 | 15 | 15 | 14 | 10 | 6 | 9 | 15 | 18 | 19 | 17 | 14 | 13.5 | 18.6 |
| 13-Nov-06 | 14 | 14 | 12 | 15 | A | 16 | 15 | 12 | 14 | 13 | 14 | 15 | 16 | 17 | 17 | 19 | 19 | 19 | 21 | 21 | 22 | 22 | 21 | 21 | 16.8 | 21.6 |
| 14-Nov-06 | 21 | 20 | 20 | A | 16 | 15 | 14 | 14 | 14 | 13 | 14 | 16 | 20 | 21 | 21 | 20 | 20 | 22 | 27 | 28 | 30 | 30 | 30 | 31 | 20.8 | 30.5 |
| 15-Nov-06 | 30 | 32 | A | 31 | 32 | 33 | 33 | 34 | 35 | 36 | 36 | 33 | 39 | 38 | 27 | 26 | 25 | 25 | 24 | 24 | 24 | 24 | 22 | 21 | 29.7 | 38.6 |
| 16-Nov-06 | 19 | A | 19 | 21 | 23 | 24 | 25 | 25 | 25 | 26 | 27 | 27 | 27 | 28 | 27 | 23 | 14 | 9 | 15 | 15 | 18 | 19 | 20 | 21 | 21.6 | 27.5 |
| 17-Nov-06 | A | 20 | 21 | 21 | 22 | 19 | 19 | 18 | 18 | 17 | 17 | 18 | 20 | 24 | 25 | C | C | C | A | 19 | 19 | 12 | 11 | 12 | 18.5 | 25.4 |
| 18-Nov-06 | 18 | 22 | 23 | A | 24 | 24 | 25 | 27 | 27 | 30 | 29 | 28 | 28 | 27 | 25 | 24 | 25 | 25 | 24 | 24 | 24 | 22 | 24 | 27 | 25.0 | 29.5 |
| 19-Nov-06 | 28 | 27 | A | 24 | 24 | 24 | 26 | 26 | 26 | 25 | 25 | 25 | 26 | 24 | 25 | 26 | 26 | 26 | 26 | 29 | 38 | 41 | 43 | 44 | 28.4 | 44.0 |
| 20-Nov-06 | 43 | A | 42 | 42 | 40 | 40 | 38 | 39 | 38 | 39 | 38 | 36 | 40 | 39 | 37 | 36 | 24 | 10 | 20 | 27 | 26 | 29 | 27 | 25 | 33.7 | 43.2 |
| 21-Nov-06 | A | 29 | 30 | 31 | 33 | 34 | 34 | 34 | 34 | 34 | 34 | P | N | N | N | N | N | N | N | N | N | N | N | N | N | 34.3 |
| 22-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 23-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 24-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 25-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 26-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 27-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 28-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | 25 | 24 | 20 | 18 | 14 | 15 | 19 | 20 | 21 | 24 | 25 | N | 25.3 |
| 29-Nov-06 | 25 | 25 | A | 24 | 24 | 25 | 21 | 20 | 20 | 23 | 24 | 24 | 26 | 26 | 26 | 25 | 27 | 27 | 26 | 25 | 24 | 22 | 22 | 22 | 24.2 | 27.5 |
| 30-Nov-06 | 24 | A | 19 | 17 | 20 | 19 | 18 | 16 | 9 | 12 | 21 | 24 | 28 | 33 | 34 | 34 | 33 | 33 | 32 | 33 | 33 | 33 | 34 | 34 | 25.7 | 34.4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 21.3 | 21.1 | 20.7 | 20.6 | 20.2 | | |
| Hourly Max | 43.2 | 32.3 | 41.8 | 41.5 | 40.3 | 40.2 | 38.4 | 38.7 | 37.5 | 38.8 | 37.6 | 36.3 | 39.9 | 38.6 | 37.1 | 36.3 | 33.0 | 32.6 | 32.5 | 33.4 | 37.5 | 40.8 | 43.0 | 44.0 | | |

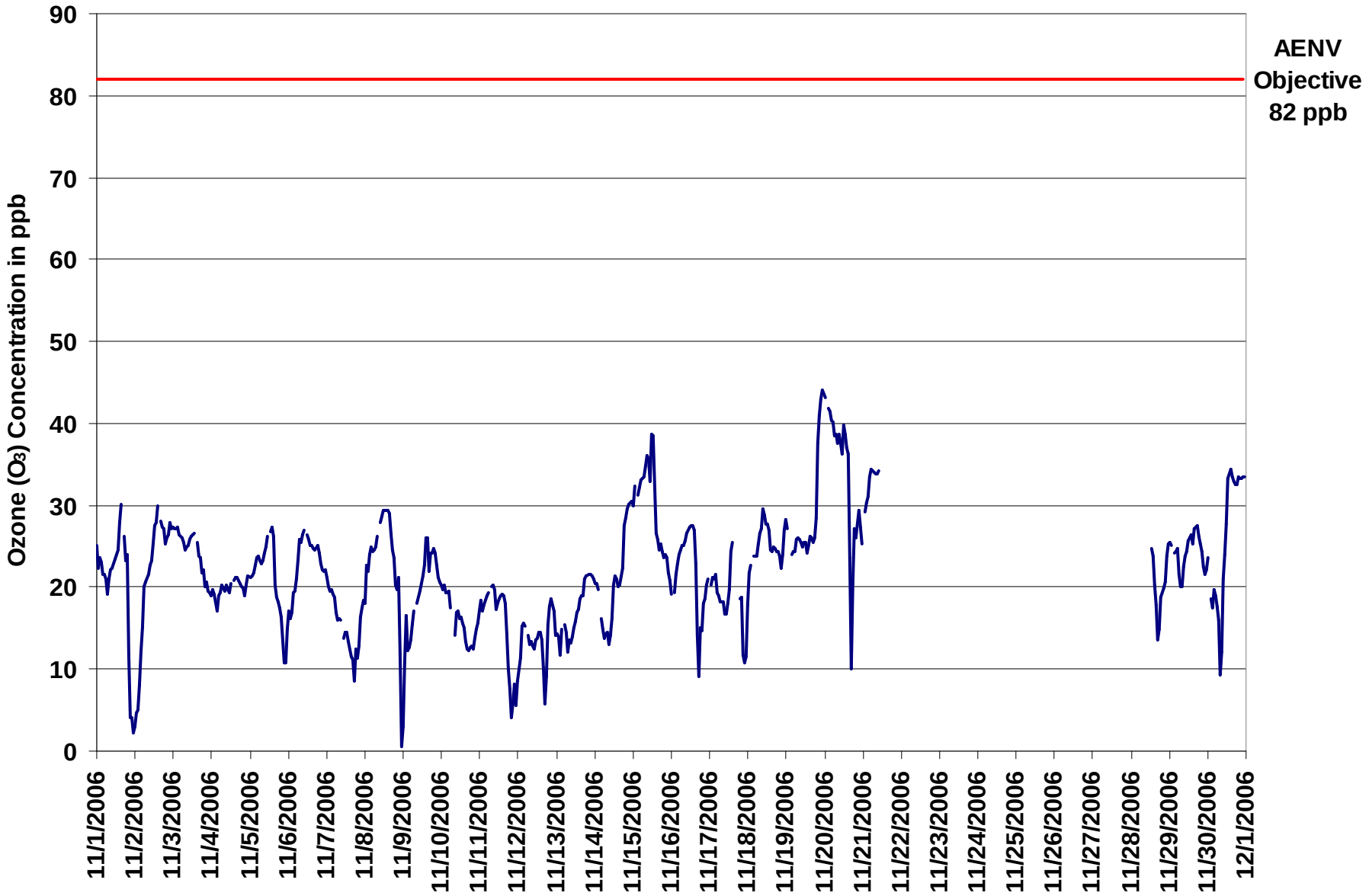


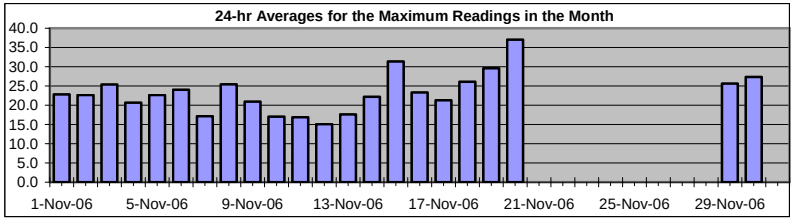

**Figure 48. PASZA - Portable-Falher Ozone 1-hr Average Monthly Trend**

Station: Portable-Falher
Station Owner: PASZA

## INSTANTANEOUS (30 Second) MAXIMUM TABLE

**Ozone ($O_3$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 44.7 | ppb | 19-Nov | 23:00 0:00 |
| Maximum 24-hr Value: | 37.0 | ppb | 20-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 24 hrs | Operational Time: | 523 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 76.4% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 42.3 | 35.1 | 27.1 | 23.2 | 19.3 | 13.5 | 6.7 | 23.5 ppb | 23.2 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 31 | 24 | 26 | 24 | 24 | 23 | 23 | 22 | 22 | 23 | 23 | 24 | 25 | 26 | 31 | 31 | A | 29 | 27 | 26 | 19 | 7 | 11 | 4 | 22.8 | 31.2 |
| 2-Nov-06 | 5 | 9 | 7 | 12 | 13 | 17 | 22 | 22 | 22 | 24 | 24 | 29 | 28 | 29 | 32 | A | 30 | 28 | 28 | 27 | 27 | 27 | 30 | 28 | 22.6 | 32.3 |
| 3-Nov-06 | 28 | 28 | 28 | 28 | 28 | 27 | 26 | 26 | 26 | 26 | 27 | 27 | 27 | 27 | A | 26 | 26 | 25 | 24 | 23 | 22 | 21 | 21 | 21 | 25.4 | 28.2 |
| 4-Nov-06 | 20 | 21 | 20 | 19 | 20 | 20 | 21 | 21 | 21 | 21 | 20 | 20 | 22 | A | 22 | 22 | 22 | 22 | 21 | 21 | 20 | 20 | 21 | 22 | 20.7 | 22.1 |
| 5-Nov-06 | 22 | 22 | 23 | 24 | 24 | 24 | 24 | 24 | 24 | 25 | 26 | 27 | A | 28 | 28 | 28 | 22 | 20 | 19 | 20 | 19 | 15 | 15 | 18 | 22.7 | 28.1 |
| 6-Nov-06 | 18 | 17 | 18 | 22 | 22 | 22 | 25 | 27 | 26 | 28 | 28 | A | 27 | 27 | 26 | 26 | 25 | 26 | 26 | 26 | 24 | 23 | 23 | 23 | 24.0 | 27.6 |
| 7-Nov-06 | 22 | 22 | 20 | 20 | 20 | 19 | 19 | 17 | 17 | 17 | A | 14 | 15 | 15 | 14 | 13 | 12 | 10 | 19 | 17 | 15 | 17 | 18 | 19 | 17.1 | 22.0 |
| 8-Nov-06 | 19 | 24 | 24 | 25 | 25 | 25 | 25 | 26 | 27 | A | 28 | 30 | 30 | 30 | 30 | 30 | 29 | 29 | 26 | 24 | 25 | 25 | 24 | 3 | 25.4 | 30.3 |
| 9-Nov-06 | 6 | 15 | 19 | 17 | 15 | 16 | 17 | 19 | A | 20 | 20 | 21 | 23 | 25 | 27 | 27 | 24 | 26 | 25 | 25 | 25 | 25 | 23 | 22 | 20.9 | 27.2 |
| 10-Nov-06 | 22 | 22 | 22 | 22 | 20 | 20 | 20 | A | 17 | 17 | 18 | 17 | 17 | 17 | 16 | 15 | 13 | 13 | 13 | 14 | 14 | 15 | 16 | 17 | 17.0 | 21.6 |
| 11-Nov-06 | 18 | 19 | 18 | 19 | 20 | 20 | A | 21 | 21 | 21 | 18 | 19 | 19 | 20 | 20 | 20 | 19 | 18 | 13 | 11 | 7 | 7 | 10 | 11 | 16.9 | 21.2 |
| 12-Nov-06 | 11 | 14 | 16 | 16 | 16 | A | 15 | 14 | 14 | 14 | 13 | 14 | 14 | 16 | 16 | 14 | 15 | 8 | 14 | 17 | 19 | 20 | 19 | 15 | 15.1 | 19.7 |
| 13-Nov-06 | 15 | 15 | 16 | 15 | A | 16 | 16 | 13 | 14 | 14 | 15 | 16 | 17 | 17 | 18 | 19 | 20 | 20 | 22 | 22 | 22 | 22 | 22 | 22 | 17.6 | 22.1 |
| 14-Nov-06 | 21 | 21 | 21 | A | 18 | 15 | 15 | 15 | 15 | 13 | 15 | 21 | 22 | 22 | 22 | 21 | 22 | 26 | 29 | 29 | 30 | 31 | 31 | 31 | 22.2 | 31.5 |
| 15-Nov-06 | 31 | 33 | A | 32 | 33 | 34 | 34 | 34 | 36 | 37 | 37 | 37 | 40 | 40 | 32 | 26 | 26 | 29 | 25 | 25 | 27 | 27 | 23 | 21 | 31.4 | 39.9 |
| 16-Nov-06 | 21 | A | 20 | 23 | 24 | 24 | 25 | 25 | 26 | 26 | 27 | 28 | 28 | 28 | 28 | 27 | 20 | 16 | 17 | 17 | 20 | 21 | 22 | 22 | 23.3 | 28.2 |
| 17-Nov-06 | A | 22 | 22 | 23 | 23 | 20 | 20 | 30 | 20 | 18 | 19 | 21 | 23 | 26 | 27 | C | C | C | A | 20 | 20 | 16 | 17 | 17 | 21.3 | 29.9 |
| 18-Nov-06 | 20 | 23 | 23 | A | 24 | 24 | 26 | 28 | 29 | 30 | 30 | 29 | 28 | 29 | 27 | 25 | 26 | 26 | 26 | 26 | 25 | 23 | 25 | 28 | 26.1 | 30.3 |
| 19-Nov-06 | 29 | 29 | A | 25 | 25 | 26 | 27 | 27 | 26 | 26 | 26 | 26 | 26 | 25 | 26 | 27 | 27 | 26 | 27 | 34 | 40 | 42 | 44 | 45 | 29.6 | 44.7 |
| 20-Nov-06 | 44 | A | 42 | 42 | 41 | 41 | 40 | 40 | 39 | 40 | 39 | 40 | 41 | 43 | 40 | 39 | 35 | 26 | 27 | 30 | 30 | 31 | 35 | 27 | 37.0 | 43.8 |
| 21-Nov-06 | A | 30 | 31 | 33 | 35 | 35 | 35 | 35 | 35 | 34 | 35 | P | N | N | N | N | N | N | N | N | N | N | N | N | N | 35.2 |
| 22-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 23-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 24-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 25-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 26-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 27-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 28-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | 26 | 25 | 24 | 22 | 18 | 19 | 22 | 23 | 25 | 26 | 26 | N | 26.3 |
| 29-Nov-06 | 27 | 26 | A | 25 | 25 | 26 | 25 | 23 | 23 | 25 | 25 | 26 | 27 | 28 | 28 | 27 | 28 | 28 | 27 | 26 | 25 | 24 | 22 | 23 | 25.6 | 28.4 |
| 30-Nov-06 | 24 | A | 20 | 19 | 21 | 20 | 20 | 19 | 15 | 17 | 23 | 26 | 31 | 35 | 35 | 34 | 33 | 33 | 33 | 34 | 34 | 34 | 34 | 34 | 27.4 | 35.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 23.3 | 23.1 | 22.6 | 23.2 | 21.7 | | |
| Hourly Max | 43.8 | 33.5 | 42.3 | 42.3 | 41.3 | 41.2 | 40.3 | 40.3 | 39.2 | 40.2 | 38.7 | 40.2 | 40.7 | 42.9 | 39.6 | 38.5 | 34.7 | 33.0 | 33.5 | 34.2 | 39.9 | 42.2 | 44.2 | 44.7 | | |

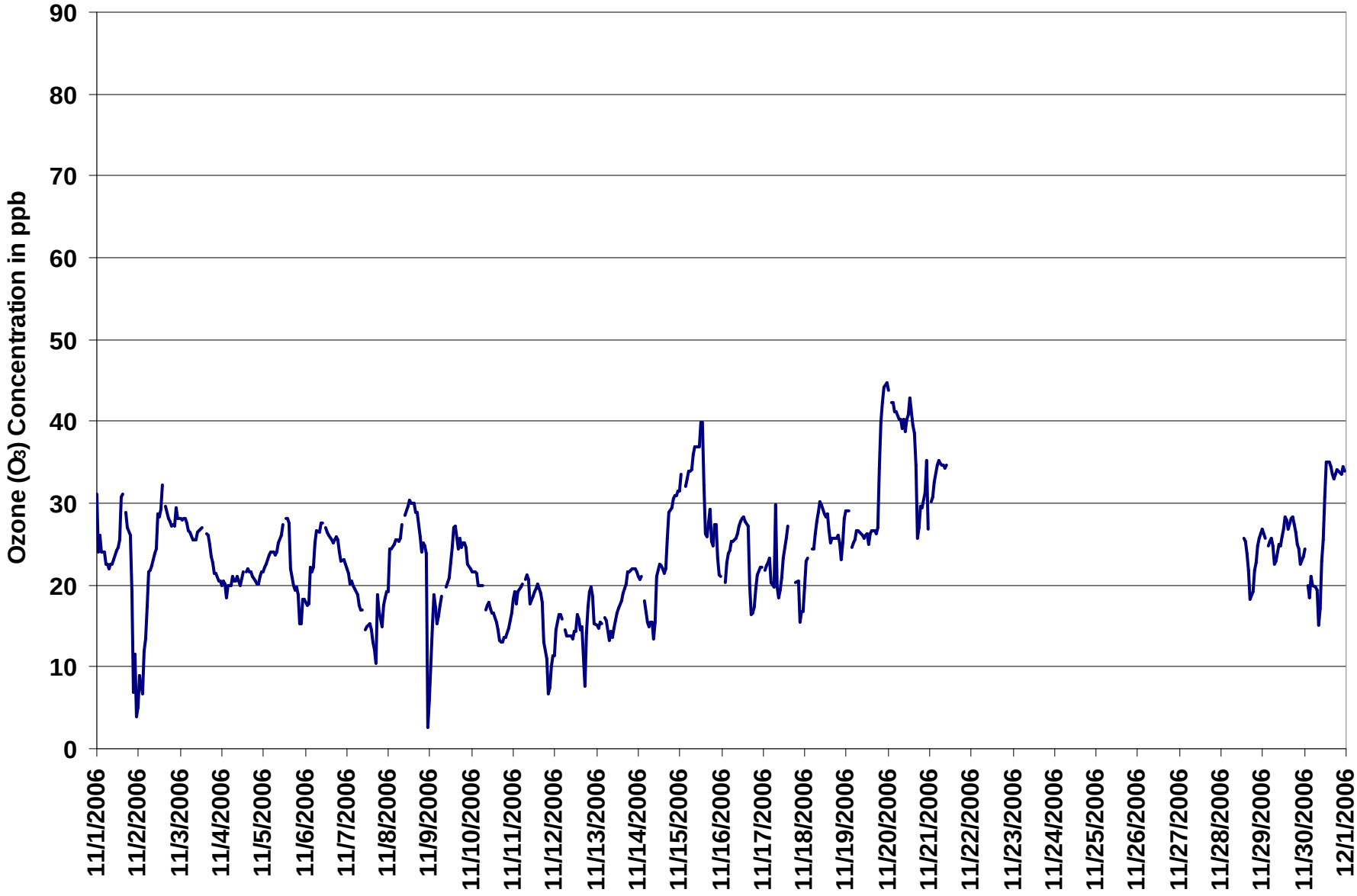
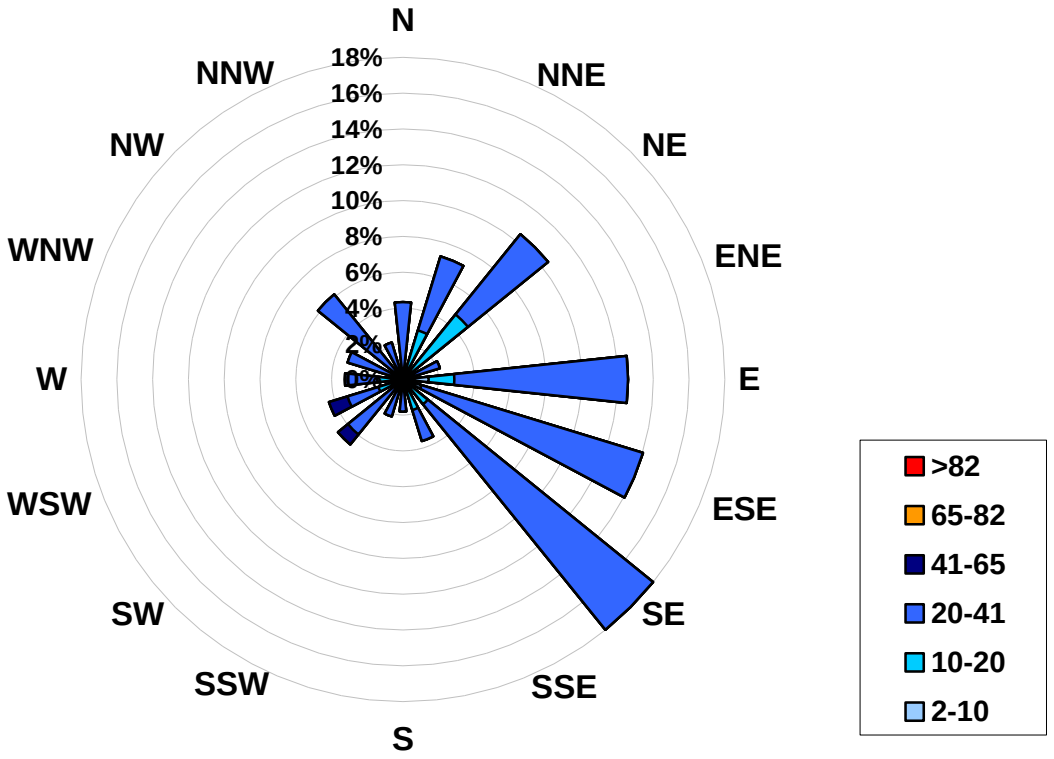



**Figure 49. PASZA - Portable-Falher Ozone Instantaneous (30 Second) Maximum Value Monthly Trend**

## 1-hr Average Concentration Rose for Ozone (in ppb) Located at the Portable-Falher Site for November 2006




| Calms: | 0% |
|---|---|

| Frequency Distribution of $O_3$ in ppb | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 2.0 | < | 10 | 21 |
| 10 | to | 20 | 178 |
| 20 | to | 41 | 319 |
| 41 | to | 65 | 5 |
| 65 | to | 82 | 0 |
| | > | 82 | 0 |
| Total Non-Zero Values | | | 523 |

# PASZA - Portable-Falher - Ozone Monthly Summary

## EIGHT HOUR RUNNING AVERAGE TABLE

**Ozone ($O_3$)**

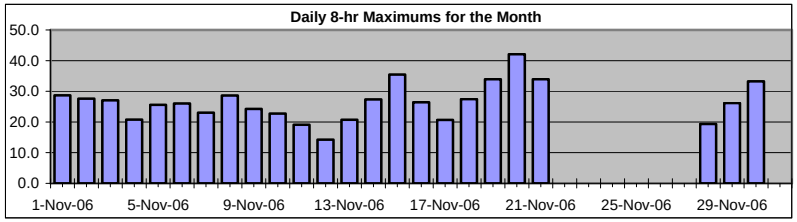
Station: Portable-Falher
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 8-hr 65 ppb

**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 8-hr Exceedances: | 0 | | | |
| Maximum 8-hr Average: | 42.1 | ppb | 20-Nov | 4:00 5:00 |




| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 |
|---|---|---|---|---|---|---|---|
| | 39.8 | 33.3 | 25.6 | 21.8 | 17.5 | 12.3 | 8.1 |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 22 | 22 | 21 | 22 | 22 | 22 | 23 | 24 | 25 | 26 | 26 | 26 | 24 | 21 | 18 | 14 | 28.7 |
| 2-Nov-06 | 12 | 10 | 7 | 5 | 5 | 7 | 9 | 11 | 13 | 16 | 18 | 20 | 22 | 24 | 25 | 25 | 26 | 27 | 28 | 28 | 27 | 27 | 27 | 27 | 27.6 |
| 3-Nov-06 | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 25 | 25 | 24 | 23 | 23 | 22 | 21 | 27.1 |
| 4-Nov-06 | 21 | 20 | 20 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 20 | 20 | 20 | 20 | 20 | 20 | 21 | 21 | 21 | 21 | 20 | 20 | 20 | 20.8 |
| 5-Nov-06 | 20 | 20 | 21 | 21 | 21 | 22 | 22 | 23 | 23 | 23 | 24 | 24 | 24 | 24 | 25 | 26 | 25 | 24 | 23 | 22 | 21 | 19 | 17 | 16 | 25.6 |
| 6-Nov-06 | 16 | 15 | 15 | 15 | 16 | 17 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 26 | 26 | 26 | 26 | 25 | 25 | 25 | 24 | 24 | 23 | 26.0 |
| 7-Nov-06 | 23 | 22 | 22 | 21 | 21 | 20 | 20 | 19 | 18 | 18 | 18 | 17 | 16 | 15 | 15 | 14 | 14 | 12 | 12 | 12 | 12 | 12 | 13 | 14 | 23.0 |
| 8-Nov-06 | 14 | 16 | 17 | 19 | 20 | 21 | 22 | 23 | 24 | 24 | 25 | 26 | 27 | 27 | 28 | 29 | 29 | 28 | 28 | 27 | 25 | 24 | 22 | 19 | 28.6 |
| 9-Nov-06 | 16 | 14 | 13 | 12 | 11 | 10 | 11 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 21 | 22 | 22 | 23 | 23 | 24 | 24 | 24 | 24 | 23 | 24.2 |
| 10-Nov-06 | 23 | 22 | 22 | 21 | 20 | 20 | 20 | 19 | 19 | 18 | 18 | 17 | 17 | 16 | 16 | 16 | 15 | 15 | 14 | 14 | 13 | 13 | 13 | 13 | 22.8 |
| 11-Nov-06 | 14 | 15 | 15 | 16 | 17 | 17 | 18 | 18 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 19 | 18 | 17 | 16 | 14 | 12 | 11 | 9 | 19.1 |
| 12-Nov-06 | 8 | 8 | 8 | 9 | 11 | 11 | 12 | 13 | 14 | 14 | 14 | 14 | 13 | 13 | 14 | 14 | 13 | 12 | 12 | 12 | 13 | 13 | 13 | 14 | 14.2 |
| 13-Nov-06 | 14 | 15 | 15 | 15 | 15 | 15 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 14 | 15 | 16 | 16 | 17 | 18 | 19 | 19 | 20 | 20 | 21 | 20.7 |
| 14-Nov-06 | 21 | 21 | 21 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 15 | 15 | 16 | 17 | 18 | 18 | 19 | 21 | 23 | 24 | 25 | 26 | 27 | 27.4 |
| 15-Nov-06 | 29 | 30 | 30 | 31 | 31 | 31 | 32 | 32 | 33 | 33 | 34 | 34 | 35 | 35 | 35 | 34 | 32 | 31 | 30 | 28 | 27 | 25 | 24 | 23 | 35.4 |
| 16-Nov-06 | 23 | 22 | 22 | 21 | 21 | 21 | 22 | 22 | 23 | 24 | 24 | 25 | 26 | 26 | 26 | 26 | 25 | 23 | 21 | 20 | 19 | 17 | 17 | 16 | 26.4 |
| 17-Nov-06 | 17 | 18 | 19 | 20 | 21 | 21 | 20 | 20 | 20 | 19 | 19 | 18 | 18 | 19 | 20 | 20 | N | N | N | N | N | N | N | N | 20.7 |
| 18-Nov-06 | N | 16 | 17 | 16 | 17 | 19 | 21 | 23 | 24 | 26 | 26 | 27 | 27 | 27 | 27 | 27 | 27 | 26 | 26 | 25 | 25 | 24 | 24 | 24 | 27.5 |
| 19-Nov-06 | 25 | 25 | 25 | 25 | 25 | 26 | 26 | 26 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 26 | 26 | 27 | 29 | 32 | 34 | 33.9 |
| 20-Nov-06 | 36 | 38 | 40 | 42 | 42 | 42 | 41 | 41 | 40 | 40 | 39 | 38 | 38 | 38 | 38 | 38 | 36 | 32 | 30 | 29 | 27 | 26 | 25 | 24 | 42.1 |
| 21-Nov-06 | 24 | 26 | 28 | 28 | 29 | 30 | 31 | 32 | 33 | 33 | 34 | 34 | N | N | N | N | N | N | N | N | N | N | N | N | 34.0 |
| 22-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 23-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 24-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 25-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 26-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 27-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 28-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 19 | 19 | 19 | 19 | 19 | 19.3 |
| 29-Nov-06 | 20 | 22 | 23 | 23 | 24 | 25 | 24 | 24 | 23 | 23 | 23 | 23 | 23 | 23 | 24 | 24 | 25 | 26 | 26 | 26 | 26 | 26 | 25 | 25 | 26.2 |
| 30-Nov-06 | 24 | 24 | 23 | 21 | 21 | 20 | 20 | 19 | 17 | 16 | 17 | 17 | 18 | 20 | 22 | 24 | 27 | 30 | 31 | 33 | 33 | 33 | 33 | 33 | 33.3 |
| Hourly Max | 36.1 | 37.6 | 39.8 | 41.7 | 42.1 | 42.0 | 41.4 | 40.6 | 39.8 | 39.7 | 39.1 | 38.5 | 38.4 | 38.2 | 38.0 | 37.7 | 36.0 | 32.4 | 31.4 | 32.5 | 33.3 | 33.2 | 33.1 | 33.9 | |

# PASZA - Portable-Falher - Total Reduced Sulphur Monthly Summary

Station: Portable-Falher
Station Owner: PASZA

## HOURLY AVERAGE TABLE

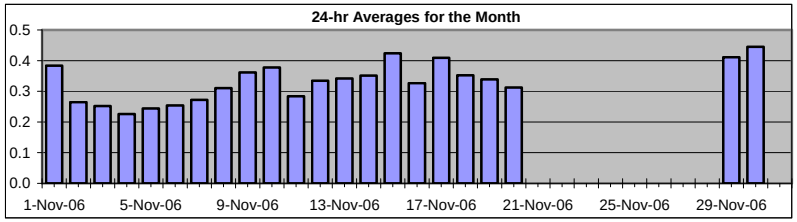
**Total Reduced Sulphur (TRS)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr na ppb | 24-hr na ppb

**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 0.5 | ppb | 28-Nov | 19:00 20:00 |
| Maximum 24-hr Value: | 0.4 | ppb | 30-Nov | |




| | | | |
|---|---|---|---|
| AIC Time: | 24 hrs | Operational Time: | 523 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 76.4% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 0.5 | 0.5 | 0.4 | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 ppb | 0.3 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.4 |
| 2-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.3 |
| 3-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.3 |
| 4-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.3 |
| 5-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.3 |
| 6-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.3 |
| 7-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.3 |
| 8-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.4 |
| 9-Nov-06 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.4 |
| 10-Nov-06 | 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 |
| 11-Nov-06 | 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 |
| 12-Nov-06 | 0 | 0 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.4 |
| 13-Nov-06 | 0 | 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 |
| 14-Nov-06 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.5 |
| 15-Nov-06 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.5 |
| 16-Nov-06 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.4 |
| 17-Nov-06 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | C | C | C | A | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.5 |
| 18-Nov-06 | 0 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.4 |
| 19-Nov-06 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.4 |
| 20-Nov-06 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.4 |
| 21-Nov-06 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | P | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.3 |
| 22-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 23-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 24-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 25-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 26-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 27-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 28-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | N | 0.5 |
| 29-Nov-06 | 0 | 0 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.5 |
| 30-Nov-06 | 0 | A | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | | |
| Hourly Max | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | | |

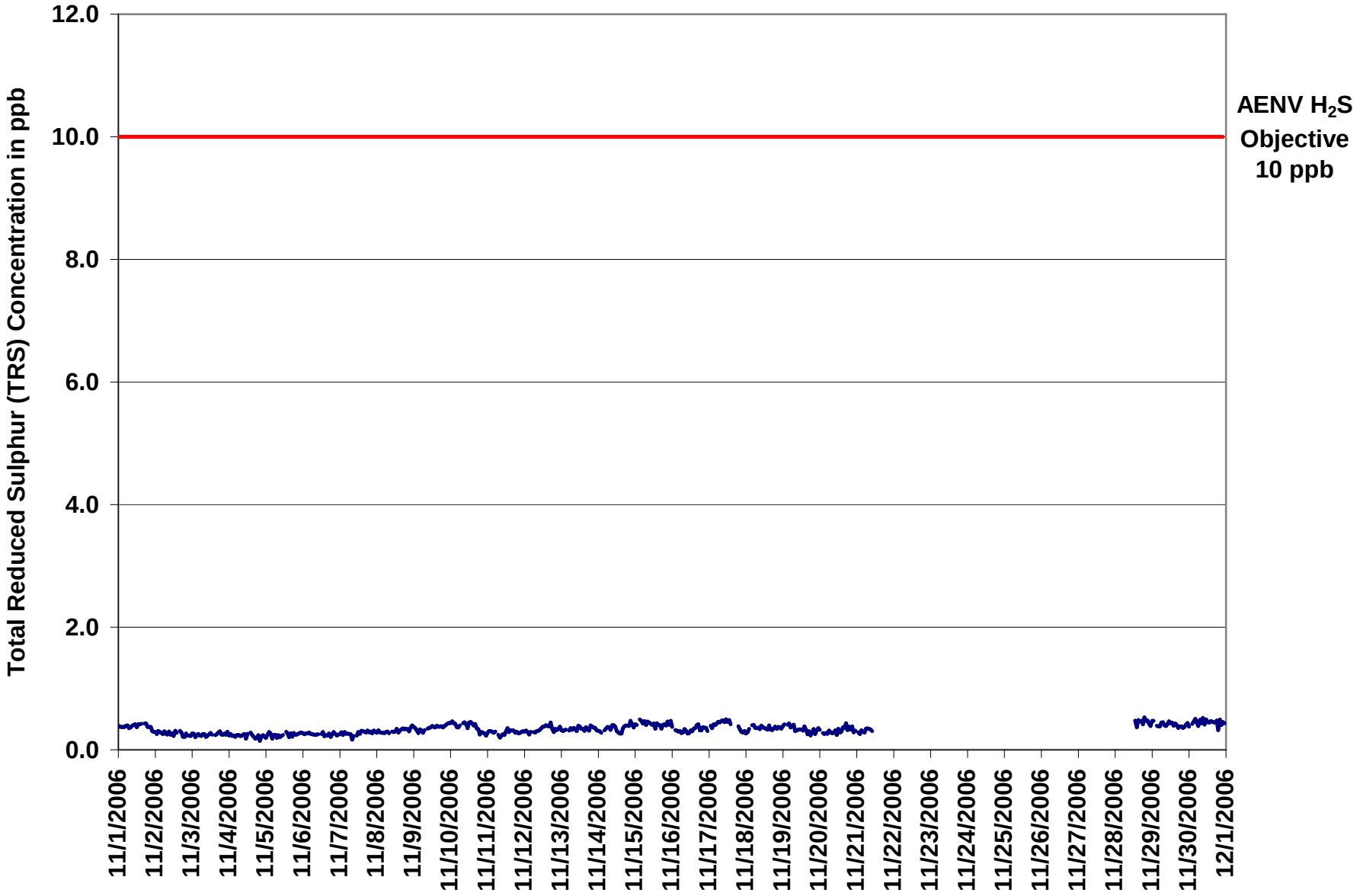


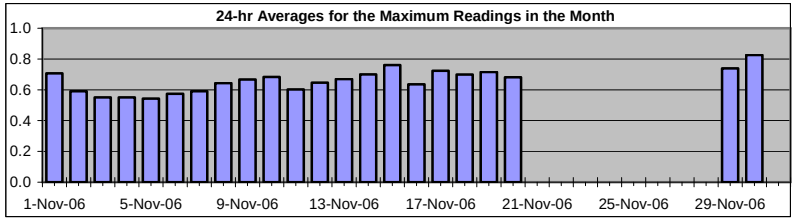

**Figure 50. PASZA - Portable-Falher Total Reduced Sulphur 1-hr Average Monthly Trend**

Station: Portable-Falher
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

**Total Reduced Sulphur (TRS)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 1.1 | ppb | 14-Nov | 22:00 23:00 |
| Maximum 24-hr Value: | 0.8 | ppb | 30-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 24 hrs | Operational Time: | 523 hrs |
| Calibration Time: | 3 hrs | AMD Operational Uptime: | 76.4% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 1.0 | 0.8 | 0.7 | 0.7 | 0.6 | 0.5 | 0.5 | 0.7 ppb | 0.7 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.7 | 0.8 |
| 2-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | A | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0.6 | 0.7 |
| 3-Nov-06 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 0.7 |
| 4-Nov-06 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | A | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0.6 | 0.8 |
| 5-Nov-06 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0.5 | 0.7 |
| 6-Nov-06 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0.6 | 0.8 |
| 7-Nov-06 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 0.7 |
| 8-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 0.8 |
| 9-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.7 | 0.8 |
| 10-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0.7 | 0.9 |
| 11-Nov-06 | 1 | 1 | 1 | 1 | 1 | 1 | A | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 0.7 |
| 12-Nov-06 | 1 | 1 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 0.8 |
| 13-Nov-06 | 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 |
| 14-Nov-06 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.7 | 1.1 |
| 15-Nov-06 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 0.9 |
| 16-Nov-06 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 0.8 |
| 17-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | C | C | C | A | 1 | 1 | 1 | 1 | 1 | 0.7 | 0.9 |
| 18-Nov-06 | 1 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.7 | 0.9 |
| 19-Nov-06 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.7 | 0.8 |
| 20-Nov-06 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.7 | 1.1 |
| 21-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | P | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.8 |
| 22-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 23-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 24-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 25-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 26-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 27-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 28-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | N | 0.9 |
| 29-Nov-06 | 1 | 1 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.7 | 0.9 |
| 30-Nov-06 | 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 | 1.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.7 | 0.7 | 0.7 | 0.7 | 0.7 | | |
| Hourly Max | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.9 | 0.8 | 1.1 | 0.8 | 0.9 | 0.8 | 0.8 | 0.9 | 0.9 | 0.9 | 0.9 | 0.8 | 0.8 | 0.9 | 1.0 | 0.9 | 1.1 | 1.1 | 0.8 | | |

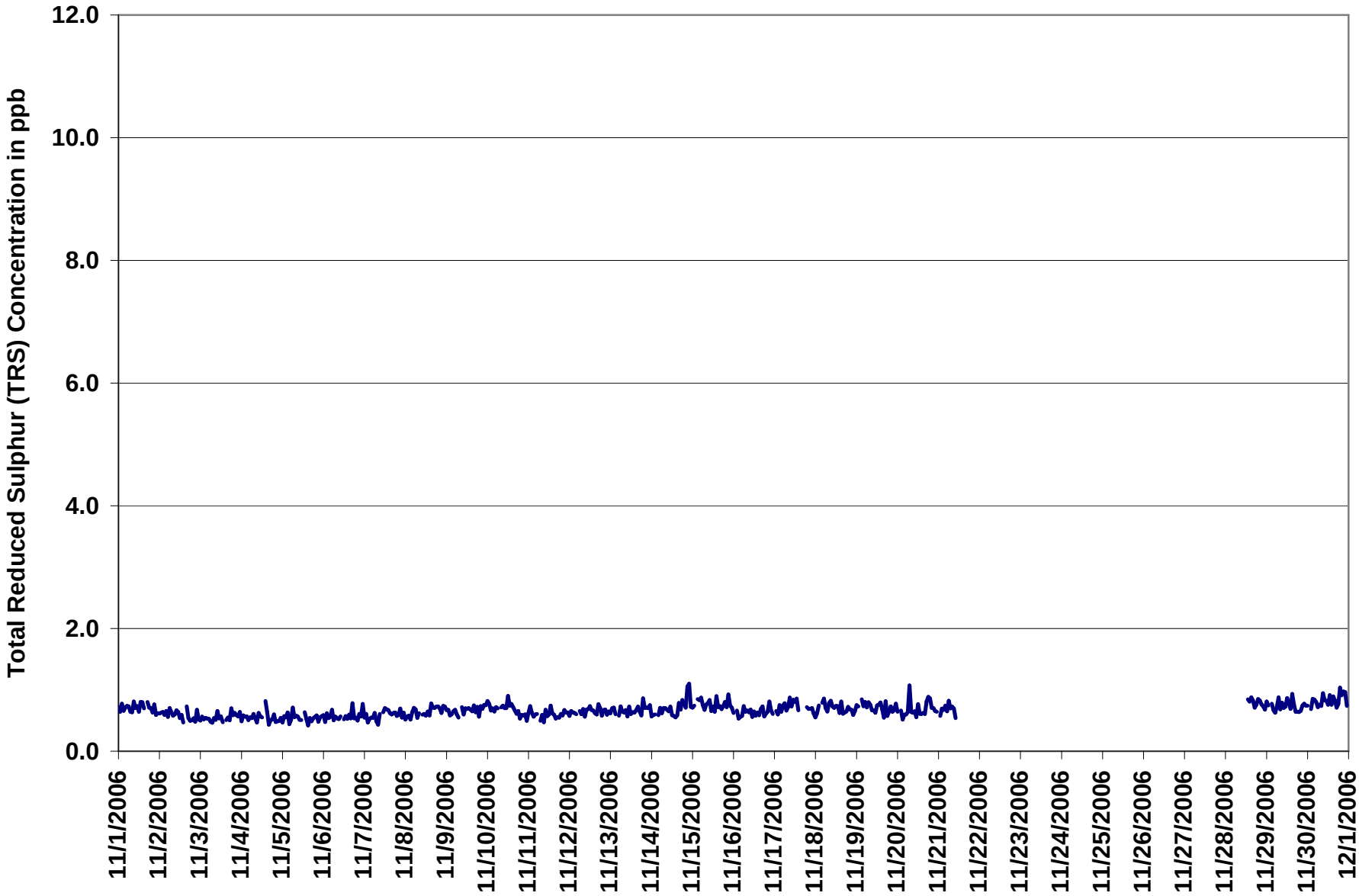
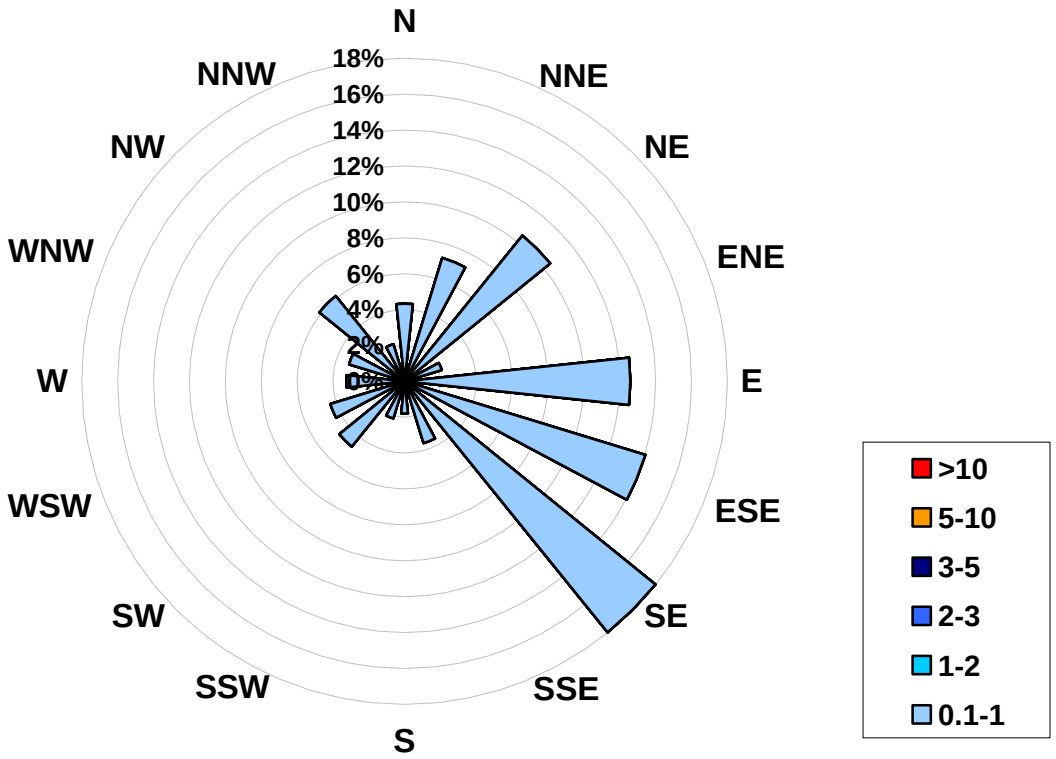



**Figure 51. PASZA - Portable-Falher Total Reduced Sulphur Instantaneous (30 Second) Maximum Value Monthly Trend**

## 1-hr Average Concentration Rose for Total Reduced Sulphur (in ppb) Located at the Portable-Falher Site for November 2006




| Calms: | 0% |
|---|---|

| Frequency Distribution of TRS in ppb | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.1 | < | 1 | 523 |
| 1 | to | 2 | 0 |
| 2 | to | 3 | 0 |
| 3 | to | 5 | 0 |
| 5 | to | 10 | 0 |
| | > | 10 | 0 |
| Total Non-Zero Values | | | 523 |

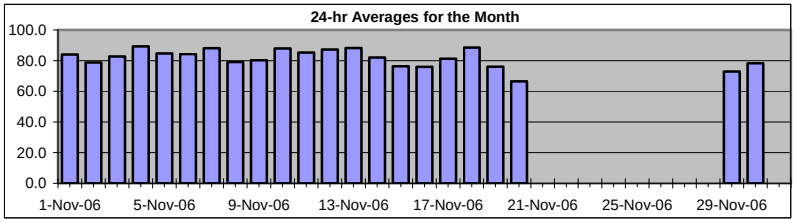
# PASZA - Portable-Falher - Relative Humidity Monthly Summary

Station: Portable-Falher
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

## HOURLY AVERAGE TABLE

**Relative Humidity (RH)**




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 94.6 | % | 18-Nov | 18:00 19:00 |
| Maximum 24-hr Value: | 89.2 | % | 4-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 549 hrs |
| Calibration Time: | 0 hrs | AMD Operational Uptime: | 76.3% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 92.7 | 90.5 | 87.2 | 83.5 | 76.5 | 66.9 | 61.4 | 81.5 % | 83.5 % |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 86 | 87 | 87 | 86 | 87 | 88 | 88 | 90 | 89 | 88 | 86 | 84 | 82 | 81 | 75 | 72 | 73 | 76 | 77 | 82 | 88 | 88 | 87 | 87 | 84.0 | 89.8 |
| 2-Nov-06 | 86 | 85 | 83 | 85 | 85 | 86 | 86 | 86 | 84 | 82 | 81 | 79 | 78 | 77 | 72 | 70 | 68 | 71 | 71 | 75 | 76 | 76 | 74 | 77 | 78.8 | 86.4 |
| 3-Nov-06 | 77 | 77 | 77 | 77 | 78 | 83 | 84 | 85 | 85 | 84 | 83 | 83 | 81 | 80 | 80 | 80 | 82 | 86 | 87 | 86 | 87 | 87 | 88 | 88 | 82.7 | 88.5 |
| 4-Nov-06 | 89 | 89 | 89 | 90 | 88 | 89 | 88 | 88 | 88 | 88 | 87 | 85 | 87 | 89 | 90 | 91 | 91 | 88 | 89 | 91 | 93 | 93 | 92 | 91 | 89.2 | 92.7 |
| 5-Nov-06 | 89 | 88 | 87 | 88 | 86 | 85 | 88 | 89 | 88 | 87 | 87 | 82 | 80 | 78 | 77 | 79 | 82 | 83 | 86 | 86 | 85 | 85 | 83 | 85 | 84.7 | 89.2 |
| 6-Nov-06 | 85 | 85 | 86 | 86 | 84 | 83 | 82 | 82 | 83 | 83 | 84 | 81 | 79 | 85 | 85 | 82 | 85 | 84 | 82 | 83 | 84 | 86 | 90 | 91 | 84.3 | 91.4 |
| 7-Nov-06 | 91 | 91 | 90 | 89 | 89 | 89 | 88 | 89 | 91 | 89 | 87 | 89 | 85 | 83 | 84 | 86 | 86 | 93 | 91 | 90 | 90 | 89 | 85 | 83 | 88.2 | 93.0 |
| 8-Nov-06 | 85 | 79 | 81 | 79 | 86 | 86 | 83 | 80 | 79 | 78 | 73 | 71 | 70 | 71 | 73 | 74 | 76 | 77 | 80 | 84 | 86 | 85 | 83 | 81 | 79.1 | 85.8 |
| 9-Nov-06 | 80 | 78 | 78 | 76 | 77 | 77 | 77 | 77 | 77 | 78 | 79 | 81 | 83 | 85 | 85 | 79 | 77 | 78 | 81 | 86 | 87 | 83 | 82 | 84 | 80.3 | 87.0 |
| 10-Nov-06 | 87 | 87 | 87 | 86 | 85 | 85 | 85 | 87 | 88 | 90 | 90 | 89 | 89 | 88 | 89 | 88 | 89 | 87 | 88 | 88 | 89 | 89 | 90 | 90 | 87.9 | 90.1 |
| 11-Nov-06 | 89 | 89 | 88 | 88 | 88 | 88 | 88 | 89 | 90 | 89 | 87 | 85 | 81 | 80 | 79 | 77 | 79 | 82 | 86 | 89 | 85 | 83 | 83 | 85 | 85.3 | 89.8 |
| 12-Nov-06 | 85 | 87 | 87 | 88 | 88 | 87 | 86 | 86 | 85 | 86 | 83 | 81 | 91 | 90 | 89 | 87 | 86 | 87 | 86 | 86 | 88 | 90 | 91 | 91 | 87.2 | 91.2 |
| 13-Nov-06 | 91 | 90 | 89 | 86 | 86 | 88 | 89 | 89 | 89 | 89 | 90 | 90 | 89 | 88 | 88 | 88 | 89 | 89 | 87 | 87 | 86 | 86 | 87 | 87 | 88.2 | 90.7 |
| 14-Nov-06 | 86 | 86 | 87 | 86 | 86 | 86 | 86 | 86 | 86 | 83 | 81 | 83 | 85 | 84 | 83 | 82 | 81 | 80 | 74 | 75 | 78 | 76 | 75 | 71 | 82.0 | 86.5 |
| 15-Nov-06 | 73 | 66 | 67 | 68 | 68 | 66 | 64 | 65 | 63 | 61 | 64 | 67 | 75 | 81 | 82 | 81 | 83 | 92 | 93 | 91 | 90 | 90 | 91 | 91 | 76.3 | 92.7 |
| 16-Nov-06 | 90 | 88 | 86 | 85 | 82 | 78 | 76 | 76 | 75 | 73 | 71 | 69 | 66 | 65 | 64 | 66 | 71 | 74 | 77 | 79 | 78 | 77 | 77 | 78 | 75.9 | 90.3 |
| 17-Nov-06 | 80 | 80 | 81 | 81 | 82 | 87 | 87 | 85 | 89 | 90 | 83 | 82 | 83 | 80 | 77 | 73 | 78 | 80 | 76 | 73 | 75 | 78 | 83 | 88 | 81.2 | 89.7 |
| 18-Nov-06 | 85 | 87 | 87 | 90 | 90 | 87 | 85 | 88 | 88 | 86 | 85 | 82 | 84 | 86 | 91 | 90 | 91 | 94 | 95 | 94 | 93 | 91 | 90 | 88 | 88.5 | 94.6 |
| 19-Nov-06 | 86 | 86 | 86 | 85 | 85 | 84 | 81 | 80 | 79 | 78 | 78 | 75 | 72 | 75 | 73 | 70 | 71 | 73 | 72 | 70 | 69 | 67 | 66 | 64 | 76.0 | 86.2 |
| 20-Nov-06 | 63 | 54 | 52 | 61 | 66 | 62 | 60 | 61 | 67 | 67 | 69 | 69 | 66 | 63 | 61 | 63 | 64 | 71 | 76 | 71 | 72 | 77 | 80 | 80 | 66.5 | 79.9 |
| 21-Nov-06 | N | 84 | 85 | 84 | 81 | 80 | 80 | 79 | 81 | 83 | 82 | P | N | N | N | N | N | N | N | N | N | N | N | N | N | 85.2 |
| 22-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 23-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 24-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 25-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 26-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 27-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 28-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | 72 | 71 | 69 | 69 | 70 | 71 | 72 | 72 | 72 | 74 | 74 | N | 74.4 |
| 29-Nov-06 | 75 | 74 | 74 | 74 | 74 | 73 | 74 | 74 | 73 | 73 | 72 | 70 | 67 | 69 | 70 | 71 | 71 | 71 | 72 | 73 | 74 | 75 | 76 | 79 | 72.9 | 78.8 |
| 30-Nov-06 | 83 | 85 | 86 | 85 | 84 | 84 | 83 | 83 | 81 | 81 | 83 | 79 | 78 | 71 | 72 | 73 | 74 | 74 | 73 | 73 | 73 | 74 | 74 | 75 | 78.3 | 85.6 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | N | 82.7 | 82.7 | 82.9 | 82.7 | 82.6 | 82.1 | 82.3 | 82.5 | 82.0 | 81.2 | N | N | 79.3 | 78.7 | 77.9 | 79.0 | 80.9 | 81.4 | 81.8 | 82.5 | 82.4 | 82.5 | 82.9 | | |
| Hourly Max | 91.4 | 90.6 | 90.0 | 90.0 | 89.6 | 88.7 | 88.8 | 89.8 | 90.5 | 89.9 | 90.1 | 89.9 | 91.0 | 90.2 | 90.7 | 90.9 | 91.0 | 93.8 | 94.6 | 93.8 | 92.9 | 92.6 | 91.8 | 91.4 | | |

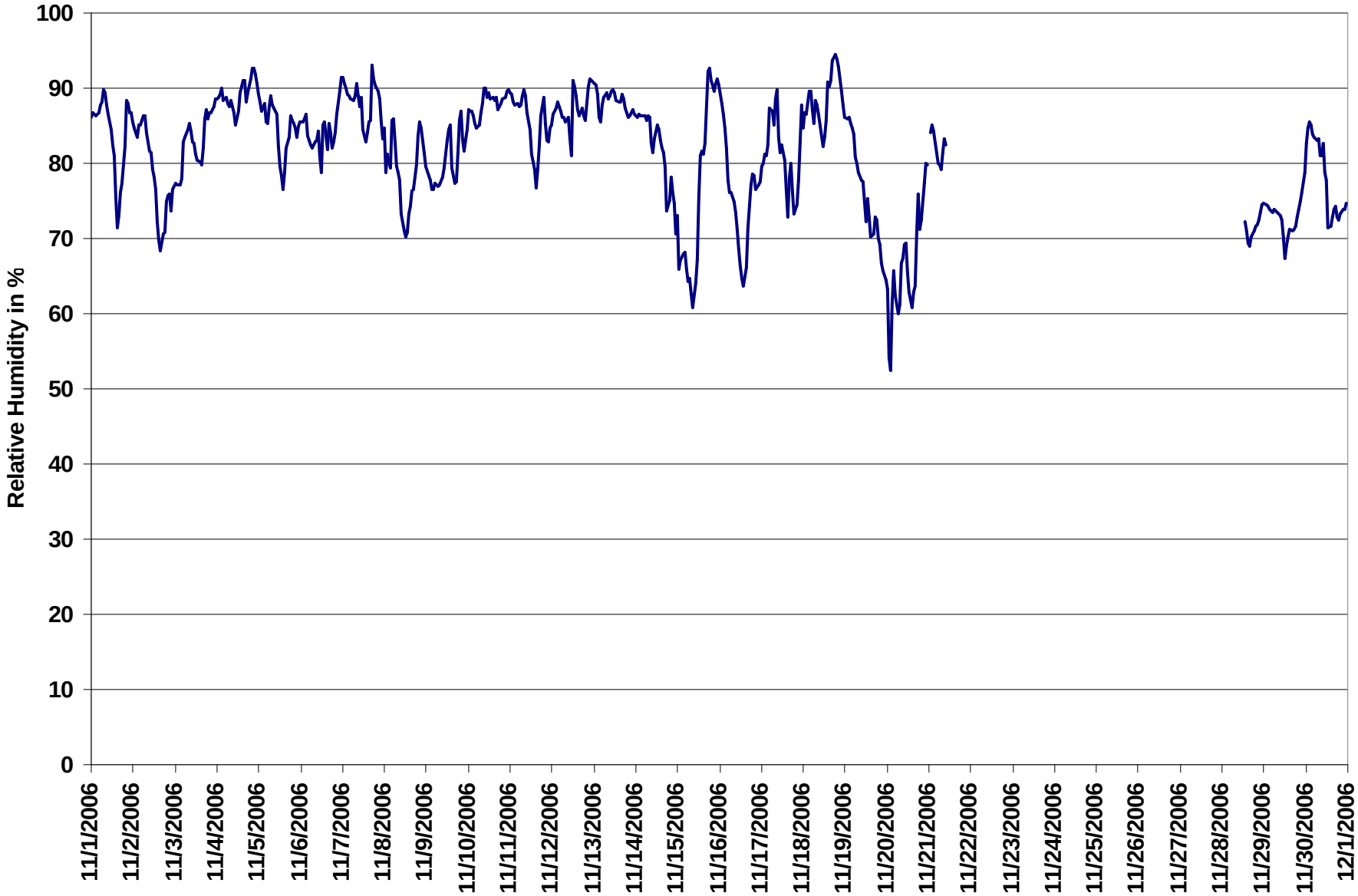



**Figure 52. PASZA - Portable-Falher Relative Humidity 1-hr Average Monthly Trend**

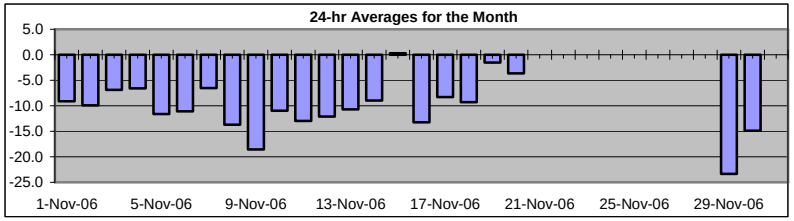
# PASZA - Portable-Falher - Temperature Monthly Summary

Station: Portable-Falher
Station Owner: PASZA

**HOURLY AVERAGE TABLE**

**Ambient Temperature (T)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 4.3 | °C | 19-Nov | 21:00 22:00 |
| Maximum 24-hr Value: | 0.3 | °C | 15-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 549 hrs |
| Calibration Time: | 0 hrs | AMD Operational Uptime: | 76.3% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 2.5 | -0.6 | -6.8 | -10.3 | -13.3 | -24.5 | -28.8 | -10.6 °C | -10.3 °C |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | -9 | -10 | -10 | -9 | -9 | -9 | -9 | -10 | -10 | -9 | -8 | -7 | -6 | -6 | -5 | -5 | -6 | -7 | -8 | -10 | -12 | -14 | -15 | -15 | -9.1 | -5.3 |
| 2-Nov-06 | -15 | -16 | -17 | -15 | -15 | -14 | -14 | -13 | -12 | -11 | -10 | -8 | -7 | -6 | -5 | -5 | -5 | -6 | -7 | -7 | -7 | -7 | -7 | -7 | -9.9 | -4.9 |
| 3-Nov-06 | -7 | -7 | -7 | -7 | -7 | -7 | -8 | -8 | -8 | -8 | -8 | -7 | -7 | -7 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -7 | -7 | -7 | -6.9 | -5.7 |
| 4-Nov-06 | -7 | -7 | -7 | -7 | -7 | -7 | -8 | -8 | -8 | -7 | -7 | -6 | -6 | -6 | -5 | -5 | -6 | -6 | -6 | -6 | -6 | -6 | -7 | -7 | -6.6 | -5.4 |
| 5-Nov-06 | -7 | -8 | -9 | -9 | -10 | -10 | -11 | -12 | -11 | -11 | -11 | -11 | -10 | -10 | -9 | -10 | -11 | -13 | -15 | -16 | -16 | -16 | -17 | -16 | -11.6 | -7.4 |
| 6-Nov-06 | -15 | -15 | -14 | -13 | -13 | -13 | -12 | -12 | -12 | -12 | -12 | -11 | -11 | -10 | -10 | -9 | -9 | -9 | -9 | -9 | -9 | -9 | -9 | -9 | -11.1 | -8.6 |
| 7-Nov-06 | -9 | -8 | -8 | -8 | -9 | -9 | -8 | -8 | -8 | -7 | -6 | -5 | -3 | -2 | -2 | -2 | -3 | -7 | -8 | -8 | -7 | -7 | -7 | -8 | -6.5 | -1.5 |
| 8-Nov-06 | -8 | -9 | -10 | -10 | -12 | -12 | -12 | -12 | -13 | -13 | -13 | -12 | -12 | -12 | -12 | -14 | -16 | -15 | -17 | -18 | -18 | -19 | -20 | -22 | -13.7 | -8.3 |
| 9-Nov-06 | -23 | -24 | -24 | -26 | -26 | -24 | -25 | -25 | -24 | -23 | -20 | -18 | -16 | -14 | -13 | -13 | -13 | -13 | -14 | -14 | -14 | -12 | -13 | -14 | -18.5 | -12.3 |
| 10-Nov-06 | -13 | -13 | -15 | -16 | -16 | -16 | -16 | -14 | -13 | -10 | -9 | -10 | -10 | -10 | -10 | -9 | -7 | -7 | -7 | -8 | -9 | -9 | -9 | -9 | -11.0 | -6.7 |
| 11-Nov-06 | -9 | -9 | -10 | -11 | -11 | -11 | -12 | -12 | -12 | -12 | -13 | -13 | -13 | -14 | -13 | -12 | -13 | -13 | -14 | -15 | -18 | -19 | -18 | -16 | -13.0 | -9.0 |
| 12-Nov-06 | -15 | -14 | -13 | -12 | -12 | -12 | -12 | -11 | -11 | -12 | -12 | -12 | -11 | -10 | -11 | -13 | -14 | -13 | -14 | -15 | -13 | -10 | -9 | -9 | -12.1 | -9.1 |
| 13-Nov-06 | -10 | -10 | -11 | -14 | -15 | -13 | -12 | -11 | -12 | -11 | -10 | -10 | -9 | -9 | -9 | -9 | -9 | -10 | -10 | -10 | -10 | -10 | -11 | -11 | -10.7 | -8.9 |
| 14-Nov-06 | -11 | -11 | -11 | -11 | -12 | -12 | -12 | -12 | -12 | -12 | -12 | -12 | -11 | -11 | -10 | -10 | -8 | -6 | -4 | -4 | -4 | -4 | -3 | -2 | -9.0 | -1.7 |
| 15-Nov-06 | -2 | -1 | 0 | 0 | 0 | 1 | 2 | 2 | 3 | 3 | 2 | 1 | 2 | 2 | 0 | -1 | -1 | -1 | 0 | 0 | -1 | -1 | -2 | -2 | 0.3 | 3.1 |
| 16-Nov-06 | -5 | -11 | -12 | -12 | -13 | -13 | -13 | -14 | -15 | -14 | -14 | -13 | -12 | -12 | -11 | -12 | -13 | -15 | -17 | -16 | -15 | -15 | -15 | -15 | -13.2 | -5.0 |
| 17-Nov-06 | -14 | -14 | -13 | -10 | -9 | -9 | -9 | -10 | -11 | -11 | -11 | -10 | -7 | -5 | -4 | -4 | -5 | -6 | -5 | -4 | -4 | -5 | -7 | -9 | -8.3 | -3.5 |
| 18-Nov-06 | -10 | -11 | -10 | -10 | -11 | -11 | -11 | -13 | -15 | -13 | -12 | -12 | -11 | -9 | -8 | -7 | -6 | -6 | -6 | -6 | -7 | -7 | -6 | -5 | -9.3 | -5.0 |
| 19-Nov-06 | -5 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -4 | -3 | -2 | -2 | -1 | 0 | 0 | 0 | 0 | 1 | 4 | 4 | 4 | 3 | -1.5 | 4.3 |
| 20-Nov-06 | 2 | 2 | 1 | -1 | -3 | -3 | -3 | -4 | -5 | -5 | -5 | -5 | -3 | -2 | -2 | -2 | -2 | -5 | -8 | -6 | -5 | -5 | -7 | -11 | -3.6 | 2.2 |
| 21-Nov-06 | N | -12 | -13 | -13 | -13 | -13 | -13 | -13 | -13 | -13 | -13 | P | N | N | N | N | N | N | N | N | N | N | N | N | N | -12.3 |
| 22-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 23-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 24-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 25-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 26-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 27-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 28-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | -27 | -27 | -27 | -27 | -28 | -28 | -29 | -29 | -28 | -28 | -28 | N | -26.6 |
| 29-Nov-06 | -29 | -28 | -29 | -30 | -30 | -30 | -29 | -29 | -29 | -28 | -27 | -25 | -22 | -22 | -21 | -20 | -20 | -19 | -18 | -17 | -16 | -15 | -14 | -14 | -23.3 | -13.6 |
| 30-Nov-06 | -13 | -12 | -11 | -11 | -13 | -14 | -15 | -16 | -18 | -17 | -14 | -13 | -12 | -13 | -14 | -14 | -15 | -16 | -16 | -17 | -18 | -19 | -19 | -19 | -14.9 | -10.8 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | N | -10.9 | -11.1 | -11.4 | -11.6 | -11.6 | -11.5 | -11.8 | -11.9 | -11.4 | -10.8 | N | N | -9.3 | -9.0 | -9.0 | -9.3 | -9.9 | -10.4 | -10.4 | -10.4 | -10.5 | -10.7 | -10.8 | | |
| Hourly Max | 2.2 | 1.7 | 1.3 | 0.0 | 0.4 | 1.1 | 1.6 | 1.9 | 2.5 | 3.1 | 2.5 | 1.5 | 2.2 | 2.2 | -0.3 | -0.2 | 0.0 | -0.4 | -0.3 | 0.9 | 4.3 | 4.3 | 3.9 | 3.4 | | |

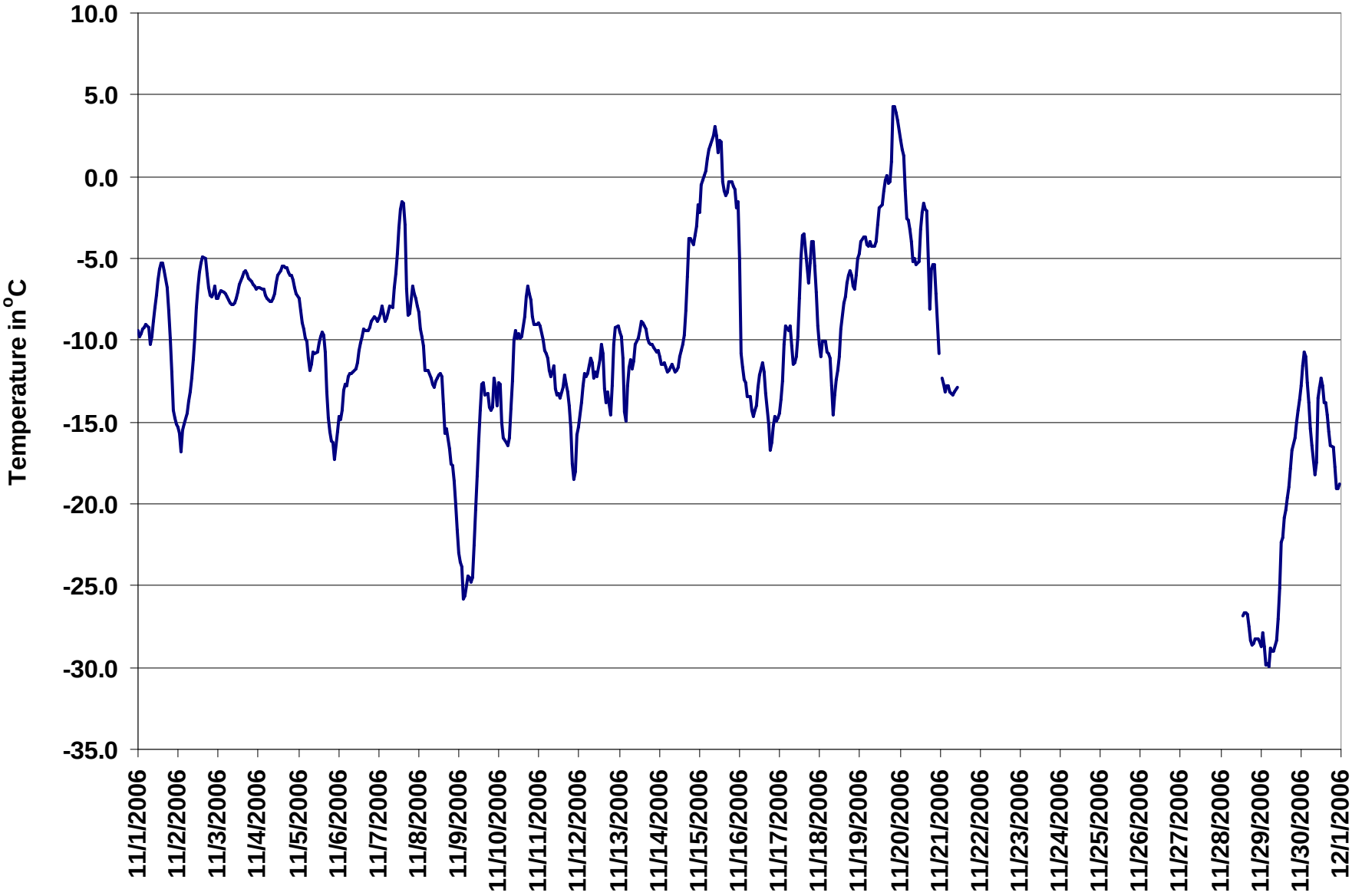



**Figure 53. PASZA - Portable-Falher Temperature 1-hr Average Monthly Trend**

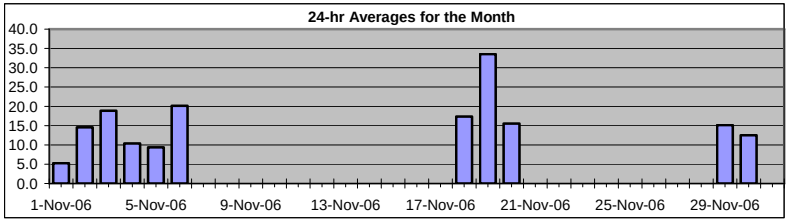
# PASZA - Portable-Falher - Scalar Wind Speed Monthly Summary

Station: Portable-Falher
Station Owner: PASZA

**HOURLY AVERAGE TABLE**

**Wind Speed (WSs)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 41.9 | km/hr | 19-Nov | 8:00 9:00 |
| Maximum 24-hr Value: | 33.5 | km/hr | 19-Nov | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | | | Operational Time: | | | | 292 hrs | |
| Calibration Time: | 0 hrs | | | | AMD Operational Uptime: | | | | 40.6% | |
| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | AverageS | | |
| | 37.3 | 34.0 | 22.7 | 12.6 | 7.9 | 3.9 | 2.6 | 15.3 km/hr | | |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hr Scalar Average | Daily Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 3 | 4 | 3 | 2 | 4 | 5 | 4 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 6 | 6 | 7 | 6 | 8 | 5 | 6 | 9 | 7 | 8 | 5.3 | 9.0 |
| 2-Nov-06 | 6 | 5 | 4 | 6 | 5 | 6 | 8 | 9 | 11 | 11 | 6 | 7 | 19 | 18 | 16 | 15 | 22 | 24 | 26 | 24 | 24 | 23 | 27 | 27 | 14.6 | 27.4 |
| 3-Nov-06 | 27 | 28 | 31 | 31 | 29 | 29 | 27 | 28 | 28 | 28 | 30 | 26 | 22 | 18 | 13 | 13 | 9 | 6 | 7 | 6 | 4 | 5 | 4 | 4 | 18.8 | 30.9 |
| 4-Nov-06 | 4 | 4 | 3 | 4 | 8 | 7 | 9 | 9 | 9 | 11 | 11 | 9 | 9 | 10 | 10 | 11 | 14 | 14 | 15 | 17 | 14 | 13 | 16 | 17 | 10.4 | 17.4 |
| 5-Nov-06 | 16 | 17 | 16 | 16 | 16 | 13 | 7 | 6 | 6 | 7 | 13 | 13 | 10 | 9 | 7 | 6 | 10 | 11 | 5 | 4 | 3 | 5 | 5 | 4 | 9.4 | 17.0 |
| 6-Nov-06 | 2 | 4 | 3 | 11 | 19 | 17 | 15 | 16 | 21 | 23 | 21 | 26 | 26 | 23 | 27 | 28 | 25 | 27 | 30 | 31 | 24 | 24 | 20 | P | 20.1 | 30.8 |
| 7-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 8-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 9-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 10-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 11-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 12-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 13-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 14-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 15-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 16-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 17-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 4 | 3 | 5 | 9 | 11 | 5 | 8 | N | 10.8 |
| 18-Nov-06 | 17 | 18 | 9 | 14 | 16 | 14 | 11 | 6 | 8 | 10 | 15 | 9 | 11 | 17 | 15 | 18 | 20 | 21 | 27 | 33 | 28 | 29 | 26 | 28 | 17.3 | 32.6 |
| 19-Nov-06 | 29 | 34 | 35 | 36 | 33 | 35 | 35 | 37 | 42 | 41 | 39 | 36 | 36 | 27 | 30 | 33 | 34 | 31 | 25 | 30 | 36 | 32 | 29 | 32 | 33.5 | 41.9 |
| 20-Nov-06 | 28 | 36 | 35 | 19 | 13 | 14 | 14 | 10 | 10 | 13 | 13 | 9 | 11 | 10 | 12 | 7 | 9 | 11 | 12 | 13 | 11 | 8 | 25 | 30 | 15.5 | 36.1 |
| 21-Nov-06 | 35 | 30 | 24 | 28 | 23 | 16 | 15 | 12 | 7 | 6 | 6 | P | N | N | N | N | N | N | N | N | N | N | N | N | N | 34.7 |
| 22-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 23-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 24-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 25-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 26-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 27-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 28-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | 8 | 8 | 9 | 10 | 9 | 9 | 10 | 10 | 10 | 9 | 8 | N | 10.5 |
| 29-Nov-06 | 8 | 7 | 10 | 10 | 10 | 13 | 13 | 11 | 17 | 14 | 11 | 12 | 10 | 10 | 13 | 16 | 22 | 22 | 24 | 22 | 21 | 23 | 24 | 22 | 15.2 | 23.9 |
| 30-Nov-06 | 22 | 18 | 11 | 10 | 9 | 8 | 3 | 9 | 9 | 12 | 13 | 17 | 19 | 21 | 19 | 20 | 17 | 13 | 12 | 11 | 8 | 8 | 7 | 6 | 12.5 | 21.6 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-hr Average | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | | |
| Hourly Max | 34.7 | 36.1 | 34.7 | 35.7 | 33.0 | 34.9 | 35.4 | 37.1 | 41.9 | 41.1 | 38.8 | 36.0 | 36.1 | 26.6 | 29.7 | 33.2 | 33.8 | 30.7 | 29.6 | 32.6 | 36.4 | 31.6 | 28.5 | 31.7 | | |

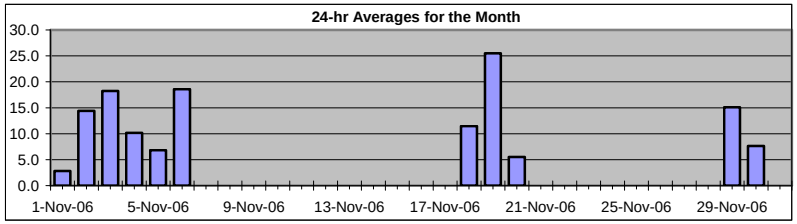
# PASZA - Portable-Falher - Vector Wind Speed Monthly Summary

Station: Portable-Falher
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

## HOURLY AVERAGE TABLE

**Wind Speed (WSv)**




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 41.9 | km/hr | 19-Nov | 8:00 9:00 |
| Maximum 24-hr Value: | 25.5 | km/hr | 19-Nov | |

| | | | |
|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | Operational Time: 292 hrs |
| Calibration Time: | 0 hrs | | AMD Operational Uptime: 40.6% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | AverageV |
|---|---|---|---|---|---|---|---|---|
| | 37.2 | 33.9 | 22.5 | 12.4 | 7.5 | 3.5 | 2.4 | 52.0 km/hr |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hr Vector Average | Daily Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 3 | 3 | 2 | 2 | 4 | 5 | 4 | 5 | 5 | 4 | 5 | 4 | 4 | 5 | 6 | 6 | 7 | 6 | 8 | 5 | 6 | 9 | 7 | 7 | 2.8 | 9.0 |
| 2-Nov-06 | 6 | 5 | 4 | 4 | 5 | 5 | 8 | 9 | 11 | 11 | 6 | 7 | 19 | 18 | 15 | 15 | 22 | 24 | 26 | 24 | 24 | 23 | 27 | 26 | 14.4 | 27.3 |
| 3-Nov-06 | 27 | 28 | 31 | 31 | 29 | 29 | 27 | 28 | 27 | 28 | 30 | 26 | 21 | 18 | 13 | 13 | 9 | 6 | 7 | 6 | 3 | 5 | 4 | 4 | 18.2 | 30.8 |
| 4-Nov-06 | 4 | 4 | 3 | 4 | 8 | 7 | 9 | 9 | 9 | 10 | 11 | 9 | 9 | 10 | 10 | 11 | 14 | 14 | 15 | 17 | 14 | 13 | 16 | 17 | 10.2 | 17.4 |
| 5-Nov-06 | 16 | 17 | 16 | 16 | 16 | 13 | 7 | 6 | 6 | 7 | 12 | 13 | 10 | 9 | 7 | 6 | 10 | 11 | 5 | 3 | 1 | 5 | 5 | 4 | 6.8 | 16.9 |
| 6-Nov-06 | 2 | 4 | 2 | 11 | 19 | 17 | 15 | 16 | 21 | 23 | 21 | 26 | 26 | 23 | 27 | 28 | 25 | 27 | 29 | 31 | 24 | 24 | 19 | P | 18.6 | 30.8 |
| 7-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 8-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 9-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 10-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 11-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 12-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 13-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 14-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 15-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 16-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 17-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 3 | 3 | 4 | 9 | 10 | 3 | 8 | N | 10.5 |
| 18-Nov-06 | 16 | 18 | 9 | 14 | 15 | 14 | 11 | 6 | 8 | 10 | 15 | 9 | 11 | 16 | 15 | 17 | 19 | 20 | 27 | 33 | 28 | 29 | 25 | 28 | 11.5 | 32.6 |
| 19-Nov-06 | 29 | 34 | 35 | 36 | 33 | 35 | 35 | 37 | 42 | 41 | 39 | 36 | 36 | 27 | 30 | 33 | 34 | 31 | 25 | 22 | 36 | 31 | 28 | 32 | 25.5 | 41.9 |
| 20-Nov-06 | 27 | 36 | 35 | 19 | 12 | 14 | 14 | 10 | 8 | 13 | 13 | 8 | 11 | 10 | 12 | 6 | 9 | 10 | 12 | 13 | 11 | 7 | 25 | 29 | 5.5 | 36.1 |
| 21-Nov-06 | 35 | 30 | 24 | 28 | 23 | 16 | 15 | 11 | 7 | 6 | 6 | P | N | N | N | N | N | N | N | N | N | N | N | N | N | 34.6 |
| 22-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 23-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 24-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 25-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 26-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 27-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 28-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | 7 | 8 | 9 | 10 | 9 | 9 | 10 | 10 | 10 | 9 | 8 | N | 10.4 |
| 29-Nov-06 | 8 | 7 | 10 | 10 | 10 | 13 | 13 | 11 | 17 | 14 | 11 | 12 | 10 | 10 | 13 | 16 | 22 | 22 | 24 | 21 | 21 | 23 | 24 | 22 | 15.1 | 23.9 |
| 30-Nov-06 | 21 | 18 | 11 | 8 | 9 | 7 | 3 | 8 | 9 | 12 | 13 | 17 | 19 | 21 | 19 | 20 | 17 | 13 | 12 | 11 | 8 | 8 | 7 | 6 | 7.6 | 21.5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-hr Vector | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | | |
| Hourly Max | 34.6 | 36.1 | 34.6 | 35.7 | 32.9 | 34.9 | 35.3 | 37.0 | 41.9 | 40.9 | 38.8 | 36.0 | 36.0 | 26.5 | 29.6 | 33.2 | 33.7 | 30.6 | 29.4 | 32.6 | 36.3 | 31.4 | 28.4 | 31.6 | | |

# PASZA - Portable-Falher - Wind Direction Monthly Summary

Station: Portable-Falher
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Wind Direction (WD)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Summary**

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | | | | | Operational Time: | | | | | | | | | | | | | | | | | | 292 hrs | |
| Calibration Time: | 0 hrs | | | | | | AMD Operational Uptime: | | | | | | | | | | | | | | | | | | 40.6% | |
| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | | | | | | | | | | | | | | | | | | |
| | 349.4 | 313.8 | 212.6 | 123.9 | 87.5 | 22.3 | 6.2 | 104 deg | | | | | | | | | | | | | | | | | | |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | WD Sector |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 311 | 265 | 306 | 252 | 255 | 254 | 261 | 239 | 236 | 260 | 233 | 234 | 224 | 227 | 226 | 234 | 239 | 221 | 217 | 193 | 100 | 87 | 94 | 107 | 223 | SW |
| 2-Nov-06 | 102 | 102 | 95 | 100 | 98 | 91 | 88 | 91 | 86 | 79 | 78 | 111 | 118 | 107 | 113 | 105 | 97 | 98 | 101 | 105 | 105 | 104 | 107 | 100 | 101 | ESE |
| 3-Nov-06 | 101 | 99 | 98 | 93 | 95 | 95 | 94 | 98 | 104 | 106 | 113 | 117 | 121 | 120 | 113 | 113 | 113 | 116 | 79 | 69 | 65 | 42 | 50 | 33 | 101 | ESE |
| 4-Nov-06 | 30 | 23 | 24 | 6 | 15 | 17 | 22 | 39 | 35 | 43 | 44 | 45 | 47 | 46 | 49 | 48 | 47 | 48 | 48 | 54 | 50 | 35 | 33 | 34 | 40 | NE |
| 5-Nov-06 | 23 | 6 | 9 | 340 | 330 | 333 | 313 | 314 | 315 | 318 | 335 | 347 | 326 | 323 | 313 | 289 | 272 | 272 | 272 | 249 | 83 | 160 | 172 | 194 | 330 | NNW |
| 6-Nov-06 | 26 | 35 | 54 | 48 | 45 | 53 | 56 | 53 | 52 | 64 | 92 | 91 | 89 | 90 | 93 | 101 | 101 | 96 | 110 | 112 | 112 | 108 | 91 | P | 87 | E |
| 7-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - |
| 8-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - |
| 9-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - |
| 10-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - |
| 11-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - |
| 12-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - |
| 13-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - |
| 14-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - |
| 15-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - |
| 16-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - |
| 17-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 99 | 34 | 73 | 136 | 163 | 41 | 24 | N | - |
| 18-Nov-06 | 40 | 23 | 349 | 353 | 8 | 2 | 11 | 4 | 360 | 23 | 44 | 45 | 52 | 82 | 133 | 110 | 95 | 95 | 118 | 119 | 120 | 125 | 132 | 127 | 84 | E |
| 19-Nov-06 | 123 | 126 | 127 | 128 | 120 | 120 | 130 | 130 | 126 | 129 | 126 | 128 | 133 | 129 | 120 | 130 | 135 | 137 | 140 | 196 | 263 | 248 | 236 | 235 | 141 | SE |
| 20-Nov-06 | 242 | 259 | 259 | 243 | 227 | 203 | 214 | 195 | 175 | 179 | 164 | 141 | 161 | 155 | 171 | 143 | 140 | 128 | 106 | 105 | 115 | 54 | 29 | 23 | 195 | SSW |
| 21-Nov-06 | 23 | 22 | 20 | 9 | 28 | 17 | 7 | 358 | 327 | 308 | 308 | P | N | N | N | N | N | N | N | N | N | N | N | N | N | - |
| 22-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - |
| 23-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - |
| 24-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - |
| 25-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - |
| 26-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - |
| 27-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | - |
| 28-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | 180 | 164 | 163 | 154 | 155 | 149 | 144 | 135 | 137 | 137 | 122 | N | - |
| 29-Nov-06 | 126 | 131 | 122 | 118 | 126 | 129 | 137 | 131 | 133 | 134 | 133 | 126 | 144 | 128 | 133 | 129 | 126 | 126 | 128 | 130 | 128 | 126 | 126 | 125 | 129 | SE |
| 30-Nov-06 | 121 | 124 | 145 | 241 | 292 | 262 | 212 | 241 | 233 | 262 | 291 | 293 | 292 | 298 | 301 | 304 | 302 | 305 | 310 | 308 | 307 | 303 | 306 | 313 | 287 | WNW |
| | | | | | | | | | | | | | | | | | | | | | | | | | | N |
| Hourly Avg | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | | |

# PASZA - Portable-Falher - Standard Deviation of Wind Direction Monthly Summary

Station: Portable-Falher
Station Owner: PASZA

**HOURLY AVERAGE TABLE**

**Wind Direction (WD)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Summary**

Determined by the Yamartino 15-min interval calculation

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | | Operational Time: | | 292 hrs | |
| Calibration Time: | 0 hrs | | | AMD Operational Uptime: | | 40.6% | |
| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 |
| | 37.4 | 24.1 | 6.6 | 4.0 | 2.5 | 1.7 | 1.5 |

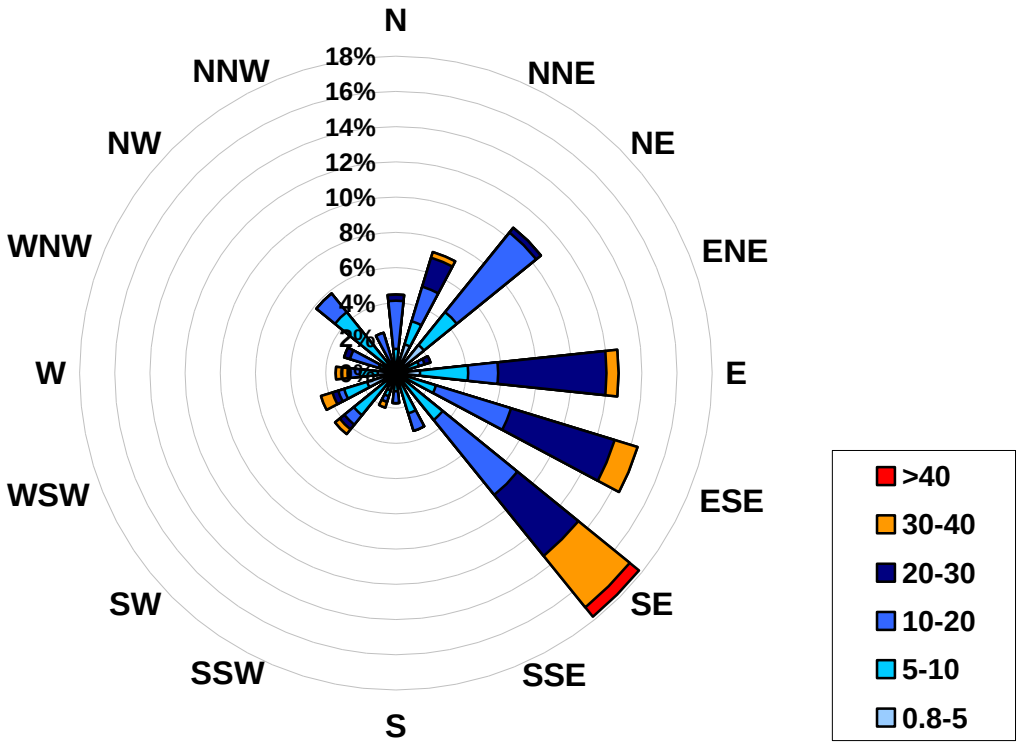
**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 9 | 22 | 27 | 23 | 10 | 11 | 10 | 4 | 12 | 16 | 12 | 24 | 14 | 9 | 7 | 10 | 12 | 12 | 2 | 6 | 6 | 2 | 3 | 4 | 26.8 |
| 2-Nov-06 | 3 | 2 | 8 | 45 | 3 | 4 | 2 | 2 | 3 | 2 | 6 | 11 | 4 | 4 | 4 | 4 | 2 | 3 | 1 | 2 | 2 | 2 | 4 | 2 | 45.3 |
| 3-Nov-06 | 11 | 2 | 2 | 2 | 2 | 8 | 2 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 3 | 4 | 3 | 3 | 4 | 4 | 11 | 2 | 2 | 9 | 11.5 |
| 4-Nov-06 | 6 | 7 | 7 | 6 | 5 | 4 | 6 | 5 | 3 | 4 | 3 | 5 | 7 | 5 | 5 | 7 | 2 | 5 | 3 | 2 | 2 | 2 | 2 | 2 | 7.5 |
| 5-Nov-06 | 5 | 4 | 5 | 4 | 5 | 4 | 6 | 9 | 7 | 8 | 6 | 7 | 9 | 8 | 6 | 6 | 3 | 4 | 27 | 27 | 37 | 19 | 7 | 22 | 37.2 |
| 6-Nov-06 | 25 | 4 | 25 | 4 | 2 | 2 | 3 | 3 | 2 | 4 | 7 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 4 | 3 | 3 | 2 | 19 | P | 24.8 |
| 7-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 8-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 9-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 10-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 11-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 12-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 13-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 14-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 15-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 16-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 17-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 43 | 30 | 31 | 7 | 29 | 30 | 13 | 42.7 |
| 18-Nov-06 | 4 | 5 | 8 | 7 | 5 | 3 | 5 | 7 | 7 | 4 | 4 | 6 | 4 | 8 | 6 | 5 | 3 | 4 | 3 | 2 | 3 | 3 | 3 | 3 | 8.1 |
| 19-Nov-06 | 3 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 4 | 3 | 2 | 3 | 2 | 3 | 16 | 3 | 3 | 3 | 3 | 15.7 |
| 20-Nov-06 | 4 | 2 | 2 | 3 | 6 | 3 | 6 | 31 | 13 | 4 | 2 | 10 | 4 | 3 | 2 | 6 | 4 | 11 | 10 | 4 | 7 | 19 | 5 | 4 | 31.2 |
| 21-Nov-06 | 2 | 3 | 4 | 3 | 4 | 6 | 5 | 4 | 8 | 7 | 6 | P | N | N | N | N | N | N | N | N | N | N | N | N | 7.7 |
| 22-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 23-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 24-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 25-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 26-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 27-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.0 |
| 28-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | 39 | 5 | 3 | 4 | 5 | 3 | 4 | 5 | 4 | 4 | 5 | 39.2 |
| 29-Nov-06 | 5 | 5 | 2 | 3 | 2 | 2 | 5 | 5 | 3 | 4 | 5 | 2 | 6 | 3 | 4 | 3 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 4 | 5.8 |
| 30-Nov-06 | 6 | 3 | 8 | 13 | 7 | 11 | 34 | 12 | 7 | 4 | 5 | 6 | 4 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 4 | 34.4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Max | 25 | 22 | 27 | 45 | 10 | 11 | 34 | 31 | 13 | 16 | 12 | 24 | 14 | 39 | 7 | 10 | 12 | 43 | 30 | 31 | 37 | 29 | 30 | 22 | |

**1-hr Average Wind Rose (in km/hr) Located at the Portable-Falher Site for November 2006**




| Calms: | 0% |
|---|---|

| Frequency Distribution of Wind in km/hr | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.8 | < | 5 | 34 |
| 5 | to | 10 | 81 |
| 10 | to | 20 | 91 |
| 20 | to | 30 | 60 |
| 30 | to | 40 | 24 |
| | > | 40 | 2 |
| Total Non-Zero Values | | | 292 |

# PASZA – Valleyview Station

## Monthly Summary Tables, Graphs, and Roses

# PASZA - Valleyview - Sulphur Dioxide Monthly Summary

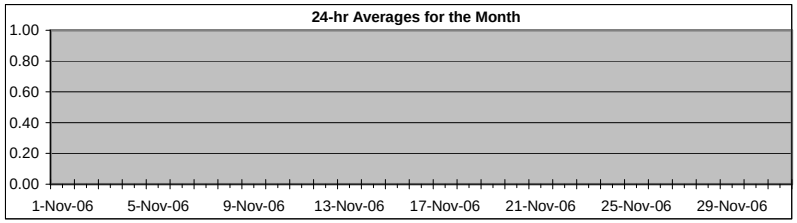
Station: Valleyview
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Sulphur Dioxide ($SO_2$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr 0.172 ppm | 24-hr 0.057 ppm




**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 1-hr Exceedances: | 0 | | | |
| Number of 24-hr Exceedances: | 0 | | | |
| Maximum 1-hr Average: | 0.01 | ppm | 19-Nov | 20:00 21:00 |
| Maximum 24-hr Average: | 0.00 | ppm | 1-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 30 hrs | Operational Time: | 660 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 96.4% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 ppm | 0.00 ppm |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | A | 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 |
| 2-Nov-06 | A | 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 |
| 3-Nov-06 | A | 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 |
| 4-Nov-06 | A | 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 |
| 5-Nov-06 | A | 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 |
| 6-Nov-06 | A | 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 |
| 7-Nov-06 | A | 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 |
| 8-Nov-06 | A | 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 |
| 9-Nov-06 | A | 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 | M | M | N | N | N | N | N | N | 0.00 |
| 10-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N | 0.00 |
| 11-Nov-06 | A | 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 |
| 12-Nov-06 | A | 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 |
| 13-Nov-06 | A | 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 |
| 14-Nov-06 | A | 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 |
| 15-Nov-06 | A | 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 |
| 16-Nov-06 | A | 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 |
| 17-Nov-06 | A | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | C | C | C | C | A | 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 |
| 18-Nov-06 | A | 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 |
| 19-Nov-06 | A | 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 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| 20-Nov-06 | A | 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 |
| 21-Nov-06 | A | 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 |
| 22-Nov-06 | A | 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 |
| 23-Nov-06 | A | 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 |
| 24-Nov-06 | A | 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 |
| 25-Nov-06 | A | 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 |
| 26-Nov-06 | A | 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 |
| 27-Nov-06 | A | 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 |
| 28-Nov-06 | A | 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| 29-Nov-06 | A | 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 |
| 30-Nov-06 | A | 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 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | N | 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 | |
| Hourly Max | 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 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | | |

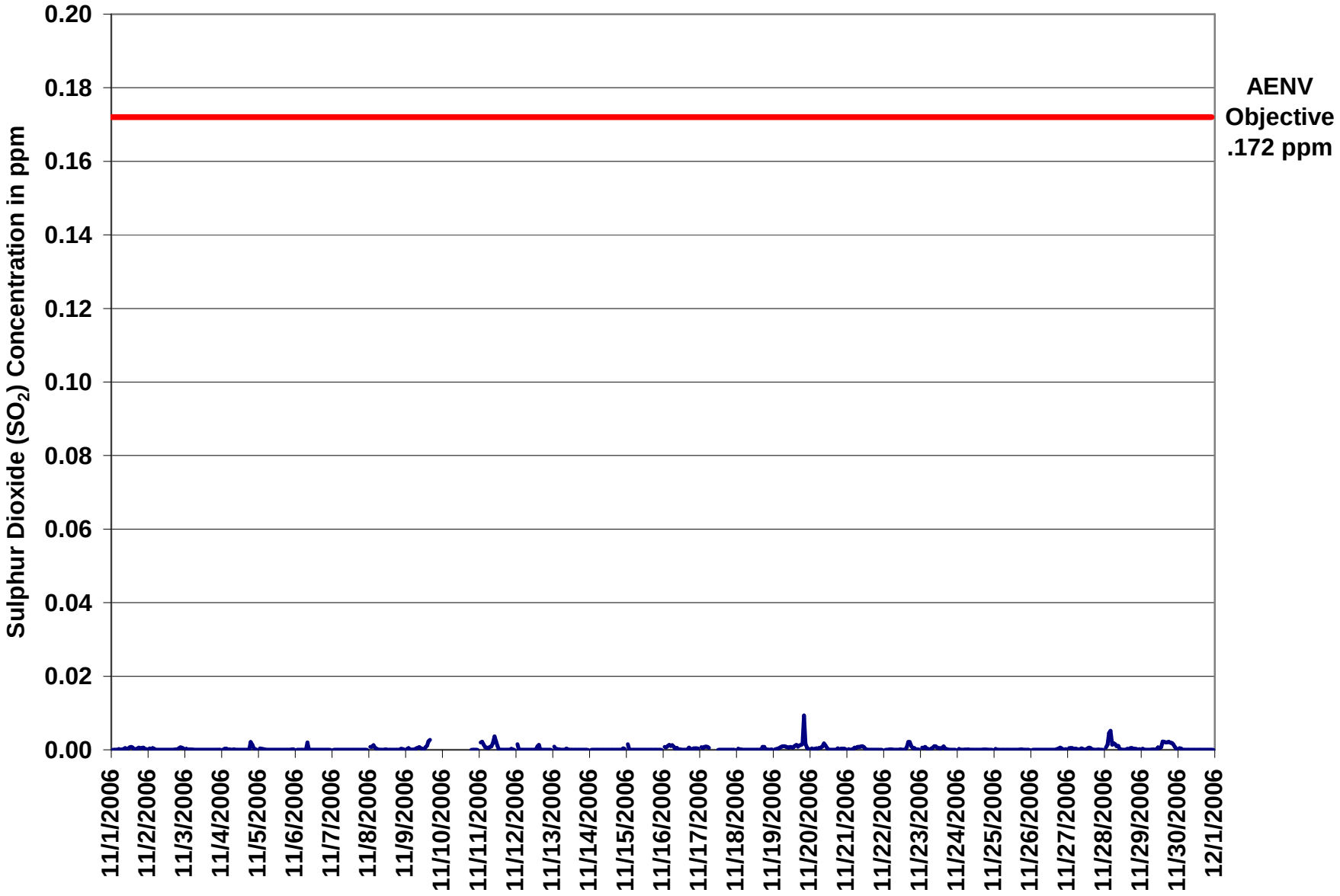


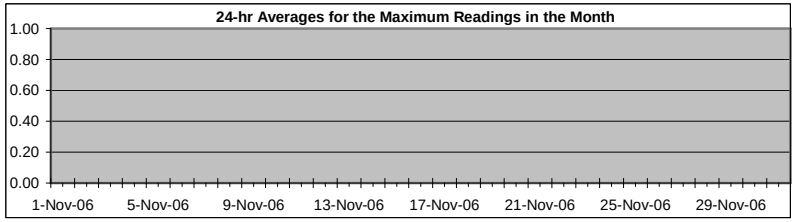

**Figure 54. PASZA - Valleyview Sulphur Dioxide 1-hr Average Monthly Trend**

Station: Valleyview
Station Owner: PASZA

## INSTANTANEOUS (30 Second) MAXIMUM TABLE

**Sulphur Dioxide ($SO_2$)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 0.03 | ppm | 19-Nov | 20:00 21:00 |
| Maximum 24-hr Value: | 0.00 | ppm | 1-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 30 hrs | Operational Time: | 660 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 96.4% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 ppm | 0.00 ppm |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | A | 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 |
| 2-Nov-06 | A | 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 |
| 3-Nov-06 | A | 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 |
| 4-Nov-06 | A | 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 |
| 5-Nov-06 | A | 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 |
| 6-Nov-06 | A | 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 |
| 7-Nov-06 | A | 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 |
| 8-Nov-06 | A | 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 |
| 9-Nov-06 | A | 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 | M | M | N | N | N | N | N | N | 0.00 |
| 10-Nov-06 | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | N | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | N | 0.00 |
| 11-Nov-06 | A | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 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 | 0.01 |
| 12-Nov-06 | A | 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 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| 13-Nov-06 | A | 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 |
| 14-Nov-06 | A | 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 |
| 15-Nov-06 | A | 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| 16-Nov-06 | A | 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 |
| 17-Nov-06 | A | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | C | C | C | C | A | 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 |
| 18-Nov-06 | A | 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 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 |
| 19-Nov-06 | A | 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 | 0.03 | 0.01 | 0.00 | 0.00 | 0.00 | 0.03 |
| 20-Nov-06 | A | 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 |
| 21-Nov-06 | A | 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 |
| 22-Nov-06 | A | 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 |
| 23-Nov-06 | A | 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 |
| 24-Nov-06 | A | 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 |
| 25-Nov-06 | A | 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 |
| 26-Nov-06 | A | 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 |
| 27-Nov-06 | A | 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 |
| 28-Nov-06 | A | 0.00 | 0.00 | 0.01 | 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 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 |
| 29-Nov-06 | A | 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 |
| 30-Nov-06 | A | 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 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | N | 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 | | |
| Hourly Max | 0.00 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.02 | 0.01 | 0.00 | 0.03 | 0.01 | 0.00 | 0.00 | | |

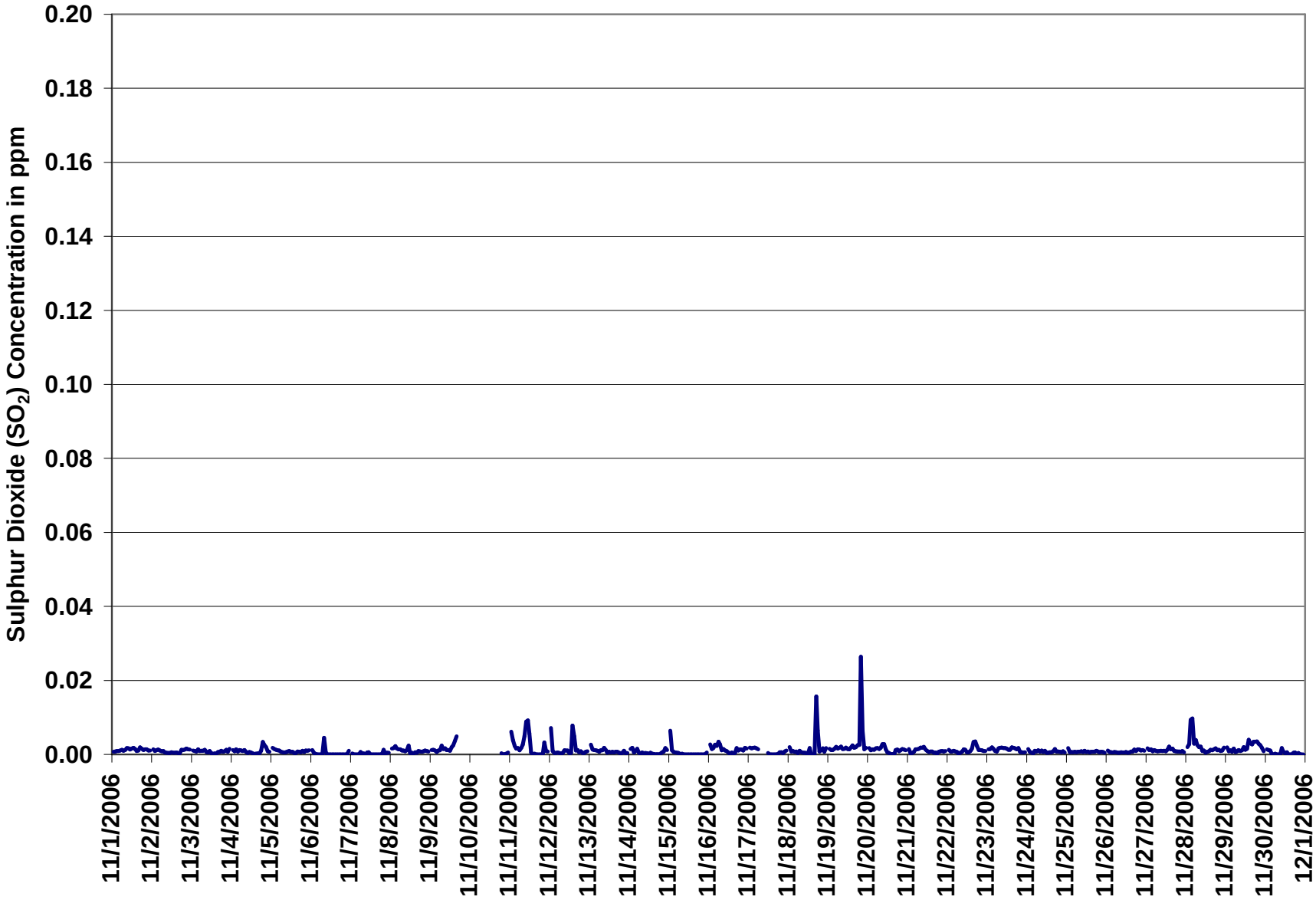
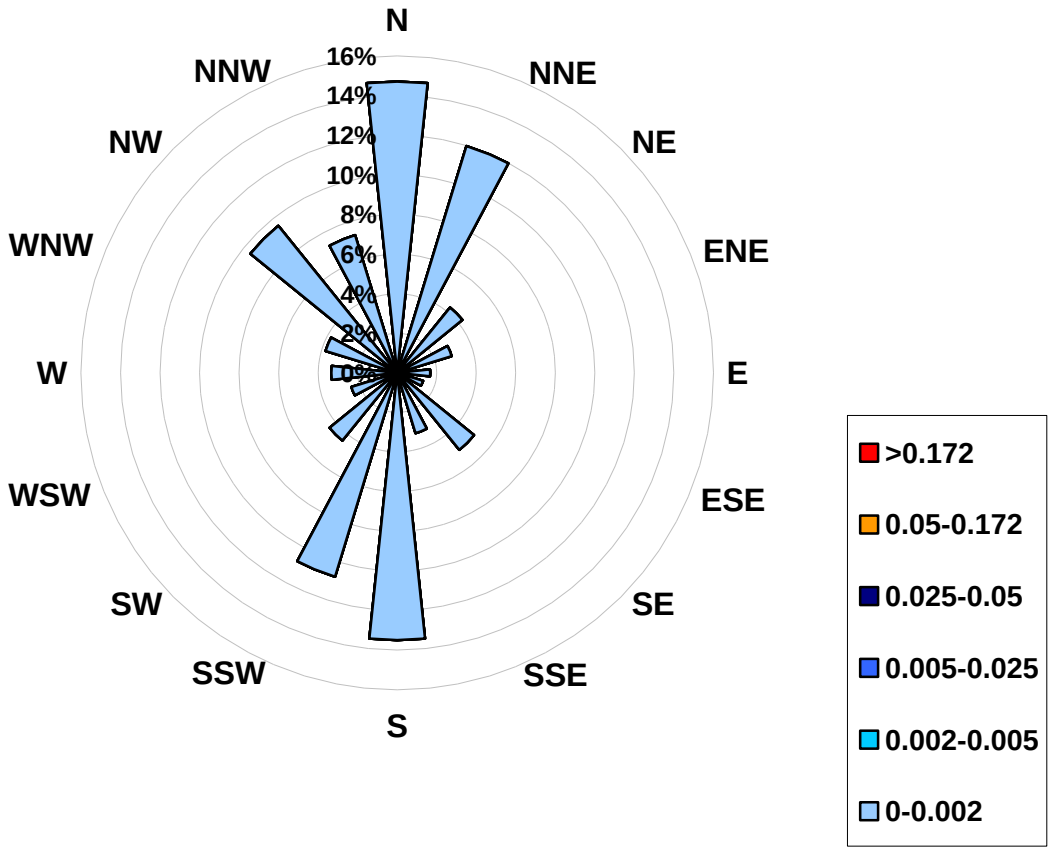



**Figure 55. PASZA - Valleyview Sulphur Dioxide Instantaneous (30 Second) Maximum Value Monthly Trend**

## 1-hr Average Concentration Rose for Sulphur Dioxide (in ppm) Located at the Valleyview Site for November 2006




**Calms: 0%**

| Frequency Distribution of $SO_2$ in ppm | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.0 | < | 0.002 | 645 |
| 0.002 | to | 0.005 | 13 |
| 0.005 | to | 0.025 | 2 |
| 0.025 | to | 0.05 | 0 |
| 0.05 | to | 0.172 | 0 |
| | > | 0.172 | 0 |
| Total Non-Zero Values | | | 660 |

# PASZA - Valleyview - Hydrogen Sulphide Monthly Summary

## HOURLY AVERAGE TABLE

**Hydrogen Sulphide ($H_2S$)**

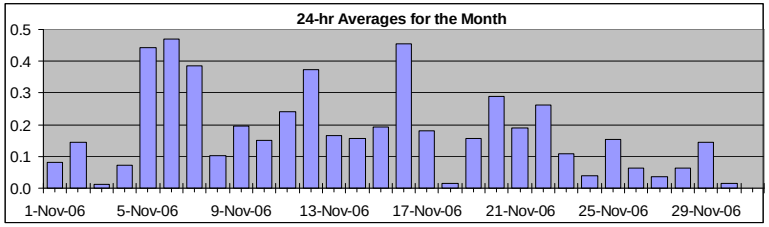
Station: Valleyview
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Objective Limit:** **Alberta Environment:** 1-hr 10 ppb | 24-hr 3 ppb

**Summary**

| | | | | |
|---|---|---|---|---|
| Number of 1-hr Exceedances: | 0 | | | |
| Number of 24-hr Exceedances: | 0 | | | |
| Maximum 1-hr Average: | 1.2 | ppb | 5-Nov | 21:00 22:00 |
| Maximum 24-hr Value: | 0.5 | ppb | 6-Nov | |




| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 685 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 0.6 | 0.5 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 ppb | 0.1 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 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 | 0.2 |
| 2-Nov-06 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.1 | 0.7 |
| 3-Nov-06 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.2 |
| 4-Nov-06 | 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 | 0.4 |
| 5-Nov-06 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0.4 | 1.2 |
| 6-Nov-06 | A | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.6 |
| 7-Nov-06 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.5 |
| 8-Nov-06 | 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 | 0.3 |
| 9-Nov-06 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0.2 | 0.6 |
| 10-Nov-06 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.6 |
| 11-Nov-06 | 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 |
| 12-Nov-06 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.4 | 0.6 |
| 13-Nov-06 | 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 | 0.3 |
| 14-Nov-06 | A | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.6 |
| 15-Nov-06 | 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 | 0.5 |
| 16-Nov-06 | A | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0.5 | 0.6 |
| 17-Nov-06 | A | 0 | 0 | 0 | 0 | 0 | 0 | C | C | C | C | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 0.4 |
| 18-Nov-06 | 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 | 0.1 |
| 19-Nov-06 | 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 | 0.3 |
| 20-Nov-06 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0.3 | 0.7 |
| 21-Nov-06 | 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 |
| 22-Nov-06 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.3 | 0.5 |
| 23-Nov-06 | 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 | 0.4 |
| 24-Nov-06 | 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 | 0.3 |
| 25-Nov-06 | 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 | 0.3 |
| 26-Nov-06 | 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 | 0.2 |
| 27-Nov-06 | 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 | 0.3 |
| 28-Nov-06 | 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 | 0.2 |
| 29-Nov-06 | 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 | 0.3 |
| 30-Nov-06 | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.2 |
| Hourly Avg | N | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | | |
| Hourly Max | 0.0 | 0.4 | 0.6 | 0.5 | 0.5 | 0.5 | 0.6 | 0.5 | 0.5 | 0.7 | 0.6 | 0.6 | 0.6 | 0.5 | 0.5 | 0.6 | 0.5 | 0.6 | 0.6 | 0.6 | 0.8 | 1.2 | 1.1 | 0.8 | | |

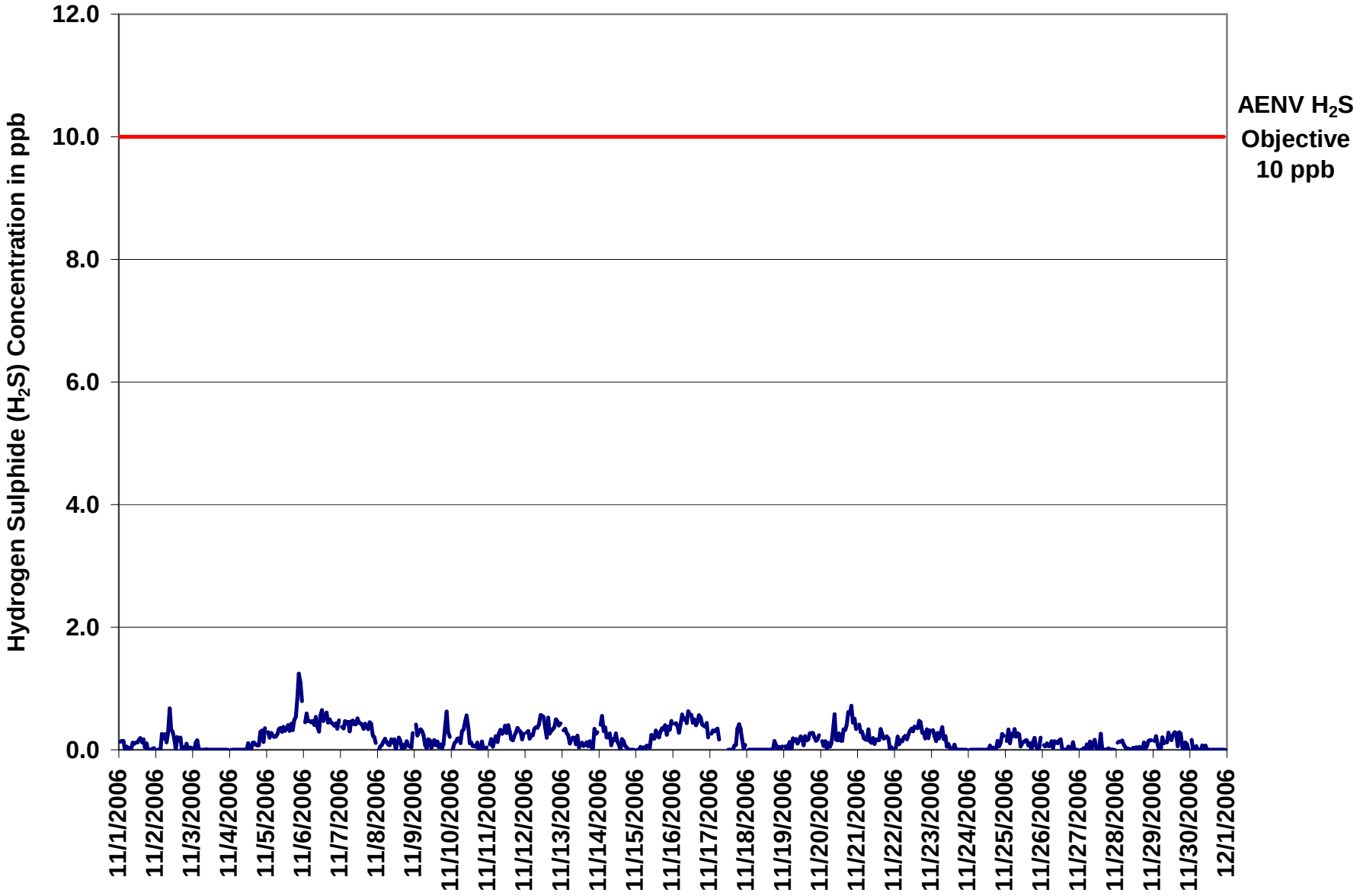


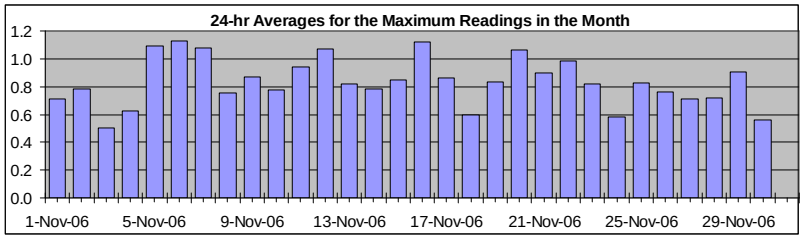

**Figure 56. PASZA - Valleyview Hydrogen Sulphide 1-hr Average Monthly Trend**

Station: Valleyview
Station Owner: PASZA

# INSTANTANEOUS (30 Second) MAXIMUM TABLE

## Hydrogen Sulphide ($H_2S$)

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Value: | 1.9 | ppb | 5-Nov | 21:00 22:00 |
| Maximum 24-hr Value: | 1.1 | ppb | 6-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 31 hrs | Operational Time: | 685 hrs |
| Calibration Time: | 4 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 1.5 | 1.3 | 1.0 | 0.8 | 0.7 | 0.4 | 0.2 | 0.8 ppb | 0.8 ppb |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0.7 | 0.9 |
| 2-Nov-06 | A | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.5 |
| 3-Nov-06 | A | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0.5 | 0.9 |
| 4-Nov-06 | A | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 1.0 |
| 5-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1.1 | 1.9 |
| 6-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.1 | 1.5 |
| 7-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.1 | 1.6 |
| 8-Nov-06 | A | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.0 |
| 9-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0.9 | 1.3 |
| 10-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0.8 | 1.5 |
| 11-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9 | 1.3 |
| 12-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.1 | 1.4 |
| 13-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.2 |
| 14-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0.8 | 1.1 |
| 15-Nov-06 | A | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.5 |
| 16-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.1 | 1.4 |
| 17-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | C | C | C | C | A | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9 | 1.4 |
| 18-Nov-06 | A | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0.6 | 1.0 |
| 19-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.2 |
| 20-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.1 | 1.9 |
| 21-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9 | 1.4 |
| 22-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1.0 | 1.7 |
| 23-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 0.8 | 1.5 |
| 24-Nov-06 | A | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0.6 | 1.0 |
| 25-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0.8 | 1.4 |
| 26-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.8 | 1.1 |
| 27-Nov-06 | A | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0.7 | 1.4 |
| 28-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.7 | 1.0 |
| 29-Nov-06 | A | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0.9 | 1.3 |
| 30-Nov-06 | A | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0.6 | 1.1 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | N | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.9 | 0.9 | 0.9 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.9 | | |
| Hourly Max | 0.0 | 1.3 | 1.3 | 1.1 | 1.1 | 1.4 | 1.3 | 1.6 | 1.2 | 1.9 | 1.5 | 1.3 | 1.5 | 1.3 | 1.3 | 1.4 | 1.7 | 1.4 | 1.5 | 1.3 | 1.4 | 1.9 | 1.8 | 1.5 | | |

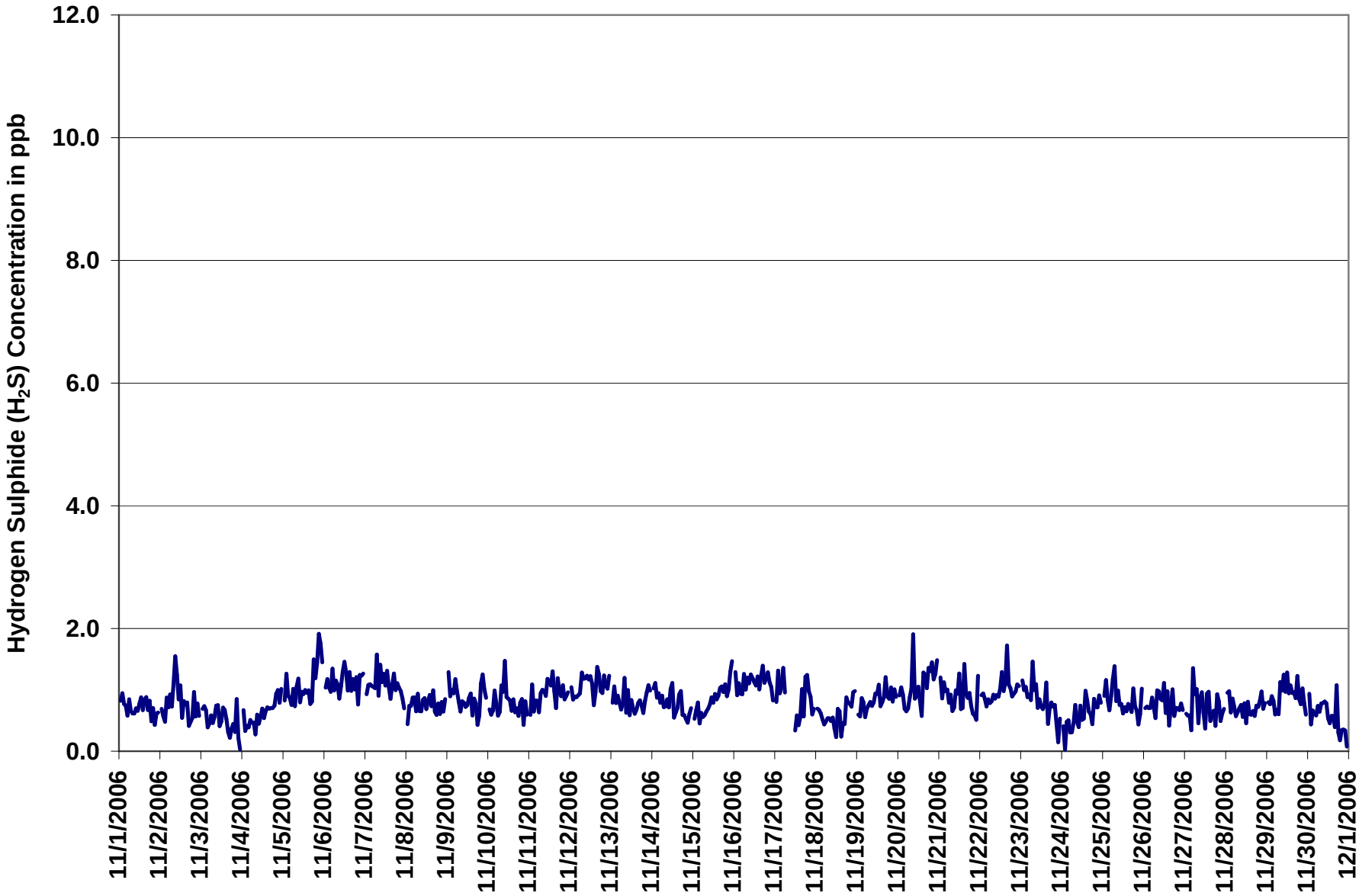
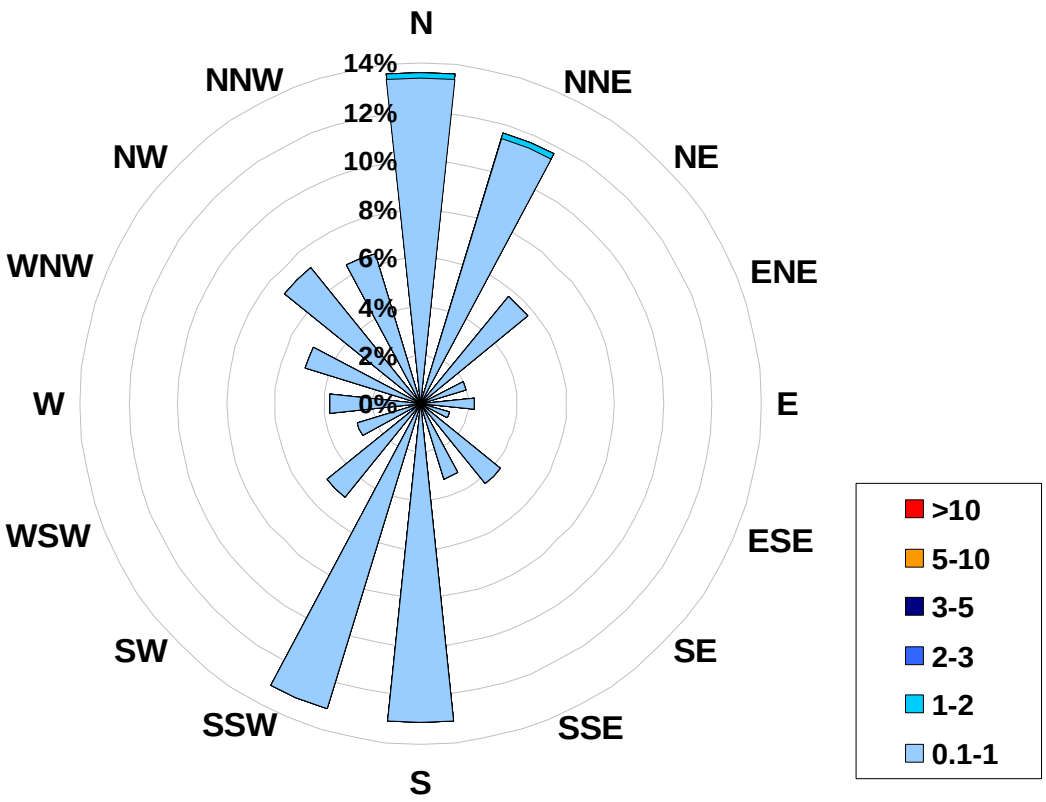



**Figure 57. PASZA - Valleyview Hydrogen Sulphide Instantaneous (30 Second) Maximum Value Monthly Trend**

## 1-hr Average Concentration Rose for Hydrogen Sulphide (in ppb) Located at the Valleyview Site for November 2006




| Calms: | 0% |
|---|---|

| Frequency Distribution of $H_2S$ in ppb | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.1 | < | 1 | 683 |
| 1 | to | 2 | 2 |
| 2 | to | 3 | 0 |
| 3 | to | 5 | 0 |
| 5 | to | 10 | 0 |
| | > | 10 | 0 |
| Total Non-Zero Values | | | 685 |

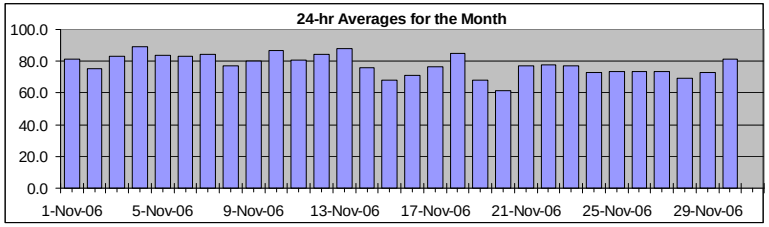
# PASZA – Valleyview - Relative Humidity Monthly Summary

## HOURLY AVERAGE TABLE

**Relative Humidity (RH)**

Station: Valleyview
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 94.1 | % | 12-Nov | 21:00 22:00 |
| Maximum 24-hr Value: | 88.9 | % | 4-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 720 hrs |
| Calibration Time: | 0 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 92.6 | 90.1 | 84.6 | 78.1 | 72.6 | 61.7 | 54.1 | 77.7 % | 78.1 % |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 87 | 86 | 86 | 85 | 86 | 85 | 85 | 86 | 85 | 81 | 79 | 79 | 79 | 76 | 76 | 74 | 75 | 76 | 77 | 79 | 80 | 81 | 82 | 82 | 81.1 | 87.5 |
| 2-Nov-06 | 83 | 87 | 86 | 84 | 89 | 89 | 88 | 87 | 86 | 85 | 82 | 70 | 63 | 62 | 61 | 62 | 62 | 63 | 65 | 69 | 71 | 73 | 73 | 74 | 75.6 | 89.3 |
| 3-Nov-06 | 75 | 79 | 78 | 82 | 89 | 89 | 90 | 90 | 89 | 89 | 86 | 83 | 77 | 75 | 75 | 76 | 80 | 82 | 83 | 84 | 85 | 87 | 89 | 89 | 83.4 | 89.8 |
| 4-Nov-06 | 90 | 90 | 91 | 91 | 91 | 92 | 92 | 92 | 92 | 91 | 89 | 85 | 84 | 84 | 83 | 85 | 85 | 86 | 88 | 86 | 88 | 91 | 92 | 93 | 88.9 | 92.9 |
| 5-Nov-06 | 93 | 92 | 91 | 93 | 94 | 87 | 84 | 83 | 87 | 85 | 78 | 84 | 78 | 73 | 73 | 75 | 78 | 80 | 81 | 82 | 85 | 84 | 84 | 85 | 83.6 | 93.7 |
| 6-Nov-06 | 86 | 84 | 85 | 87 | 88 | 88 | 87 | 84 | 86 | 87 | 83 | 78 | 75 | 78 | 77 | 78 | 79 | 80 | 82 | 84 | 85 | 89 | 86 | 85 | 83.3 | 88.6 |
| 7-Nov-06 | 86 | 88 | 90 | 90 | 91 | 87 | 87 | 87 | 88 | 85 | 81 | 79 | 78 | 76 | 75 | 76 | 75 | 84 | 89 | 85 | 86 | 84 | 86 | 90 | 84.3 | 91.2 |
| 8-Nov-06 | 89 | 89 | 88 | 88 | 86 | 77 | 76 | 78 | 76 | 73 | 71 | 67 | 66 | 66 | 67 | 67 | 70 | 72 | 72 | 74 | 79 | 82 | 87 | 88 | 77.0 | 89.2 |
| 9-Nov-06 | 87 | 86 | 84 | 83 | 81 | 81 | 81 | 80 | 81 | 77 | 77 | 77 | 74 | 69 | 66 | 65 | 66 | 75 | 83 | 87 | 91 | 89 | 89 | 88 | 79.9 | 91.3 |
| 10-Nov-06 | 91 | 92 | 88 | 86 | 84 | 83 | 82 | 82 | 83 | 84 | 85 | 87 | 88 | 89 | 87 | 78 | 77 | 89 | 92 | 93 | 93 | 91 | 91 | 88 | 86.8 | 92.8 |
| 11-Nov-06 | 85 | 85 | 86 | 85 | 85 | 83 | 83 | 83 | 82 | 80 | 79 | 76 | 72 | 70 | 71 | 72 | 73 | 78 | 84 | 89 | 86 | 84 | 85 | 84 | 80.9 | 89.0 |
| 12-Nov-06 | 85 | 84 | 84 | 83 | 84 | 83 | 84 | 84 | 83 | 81 | 80 | 82 | 79 | 79 | 80 | 78 | 78 | 81 | 88 | 92 | 93 | 94 | 91 | 92 | 84.3 | 94.1 |
| 13-Nov-06 | 88 | 89 | 89 | 89 | 88 | 88 | 89 | 89 | 90 | 90 | 89 | 89 | 88 | 89 | 89 | 89 | 89 | 89 | 87 | 87 | 86 | 85 | 85 | 84 | 88.2 | 90.2 |
| 14-Nov-06 | 83 | 83 | 83 | 82 | 82 | 83 | 82 | 81 | 81 | 80 | 77 | 72 | 71 | 72 | 72 | 73 | 74 | 73 | 71 | 69 | 70 | 69 | 68 | 63 | 75.6 | 83.4 |
| 15-Nov-06 | 61 | 63 | 64 | 61 | 59 | 58 | 56 | 52 | 55 | 57 | 65 | 79 | 83 | 76 | 72 | 75 | 75 | 67 | 71 | 74 | 76 | 78 | 80 | 80 | 68.2 | 82.6 |
| 16-Nov-06 | 83 | 85 | 80 | 75 | 71 | 70 | 70 | 72 | 73 | 70 | 66 | 63 | 58 | 57 | 54 | 52 | 56 | 63 | 71 | 77 | 81 | 85 | 87 | 88 | 71.1 | 88.0 |
| 17-Nov-06 | 88 | 87 | 84 | 83 | 83 | 84 | 84 | 86 | 87 | 82 | 75 | 65 | 61 | 59 | 56 | 54 | 61 | 70 | 75 | 77 | 79 | 84 | 84 | 88 | 76.5 | 88.0 |
| 18-Nov-06 | 86 | 83 | 82 | 92 | 93 | 90 | 87 | 89 | 89 | 89 | 87 | 84 | 81 | 81 | 80 | 79 | 82 | 86 | 89 | 89 | 81 | 79 | 77 | 76 | 84.7 | 93.5 |
| 19-Nov-06 | 76 | 77 | 76 | 74 | 74 | 74 | 74 | 70 | 67 | 64 | 67 | 65 | 63 | 64 | 62 | 62 | 62 | 62 | 60 | 64 | 67 | 71 | 75 | 60 | 67.9 | 76.7 |
| 20-Nov-06 | 63 | 64 | 56 | 57 | 64 | 63 | 62 | 62 | 66 | 70 | 69 | 61 | 51 | 45 | 44 | 45 | 52 | 60 | 63 | 66 | 69 | 72 | 76 | 74 | 61.4 | 75.5 |
| 21-Nov-06 | 68 | 77 | 83 | 82 | 83 | 83 | 82 | 81 | 79 | 78 | 73 | 69 | 69 | 70 | 72 | 74 | 75 | 73 | 76 | 82 | 81 | 82 | 81 | 80 | 77.3 | 83.4 |
| 22-Nov-06 | 81 | 80 | 81 | 81 | 81 | 81 | 80 | 80 | 81 | 81 | 80 | 76 | 74 | 72 | 75 | 76 | 77 | 79 | 80 | 79 | 77 | 71 | 69 | 71 | 77.6 | 81.3 |
| 23-Nov-06 | 72 | 73 | 73 | 74 | 74 | 74 | 78 | 80 | 80 | 78 | 79 | 80 | 80 | 80 | 78 | 78 | 81 | 79 | 77 | 79 | 77 | 77 | 76 | 76 | 77.2 | 80.5 |
| 24-Nov-06 | 75 | 75 | 77 | 79 | 78 | 76 | 75 | 75 | 74 | 73 | 72 | 69 | 66 | 66 | 66 | 68 | 70 | 70 | 70 | 72 | 74 | 75 | 75 | 75 | 72.7 | 79.4 |
| 25-Nov-06 | 73 | 73 | 73 | 75 | 75 | 74 | 74 | 75 | 75 | 75 | 73 | 71 | 70 | 70 | 70 | 71 | 74 | 75 | 75 | 75 | 75 | 75 | 76 | 76 | 73.6 | 75.6 |
| 26-Nov-06 | 76 | 76 | 76 | 76 | 76 | 76 | 75 | 74 | 74 | 74 | 73 | 70 | 68 | 68 | 68 | 70 | 72 | 73 | 74 | 74 | 74 | 74 | 75 | 75 | 73.3 | 75.7 |
| 27-Nov-06 | 75 | 75 | 75 | 75 | 75 | 75 | 76 | 76 | 75 | 74 | 73 | 73 | 71 | 71 | 71 | 71 | 73 | 74 | 73 | 73 | 72 | 72 | 73 | 73 | 73.4 | 75.9 |
| 28-Nov-06 | 73 | 73 | 72 | 71 | 71 | 71 | 70 | 70 | 70 | 68 | 65 | 62 | 60 | 58 | 56 | 56 | 64 | 69 | 74 | 77 | 78 | 77 | 77 | 76 | 69.1 | 78.0 |
| 29-Nov-06 | 76 | 75 | 75 | 74 | 74 | 74 | 73 | 73 | 74 | 73 | 72 | 70 | 68 | 68 | 65 | 67 | 68 | 72 | 72 | 68 | 68 | 78 | 86 | 88 | 73.0 | 87.9 |
| 30-Nov-06 | 87 | 84 | 83 | 84 | 84 | 86 | 84 | 80 | 85 | 87 | 84 | 79 | 71 | 78 | 83 | 81 | 83 | 83 | 82 | 77 | 73 | 72 | 78 | 78 | 81.1 | 87.1 |
| Hourly Avg | 80.7 | 81.1 | 80.6 | 80.8 | 81.1 | 80.1 | 79.6 | 79.4 | 79.8 | 78.7 | 76.9 | 74.8 | 72.3 | 71.3 | 70.9 | 70.9 | 72.8 | 75.4 | 77.4 | 78.8 | 79.4 | 80.2 | 81.1 | 80.7 | | |
| Hourly Max | 92.7 | 91.7 | 91.5 | 92.6 | 93.7 | 91.8 | 92.0 | 92.1 | 92.0 | 91.4 | 89.4 | 89.2 | 88.2 | 89.5 | 89.3 | 89.3 | 88.7 | 89.0 | 92.3 | 92.8 | 93.5 | 94.1 | 92.4 | 92.9 | | |

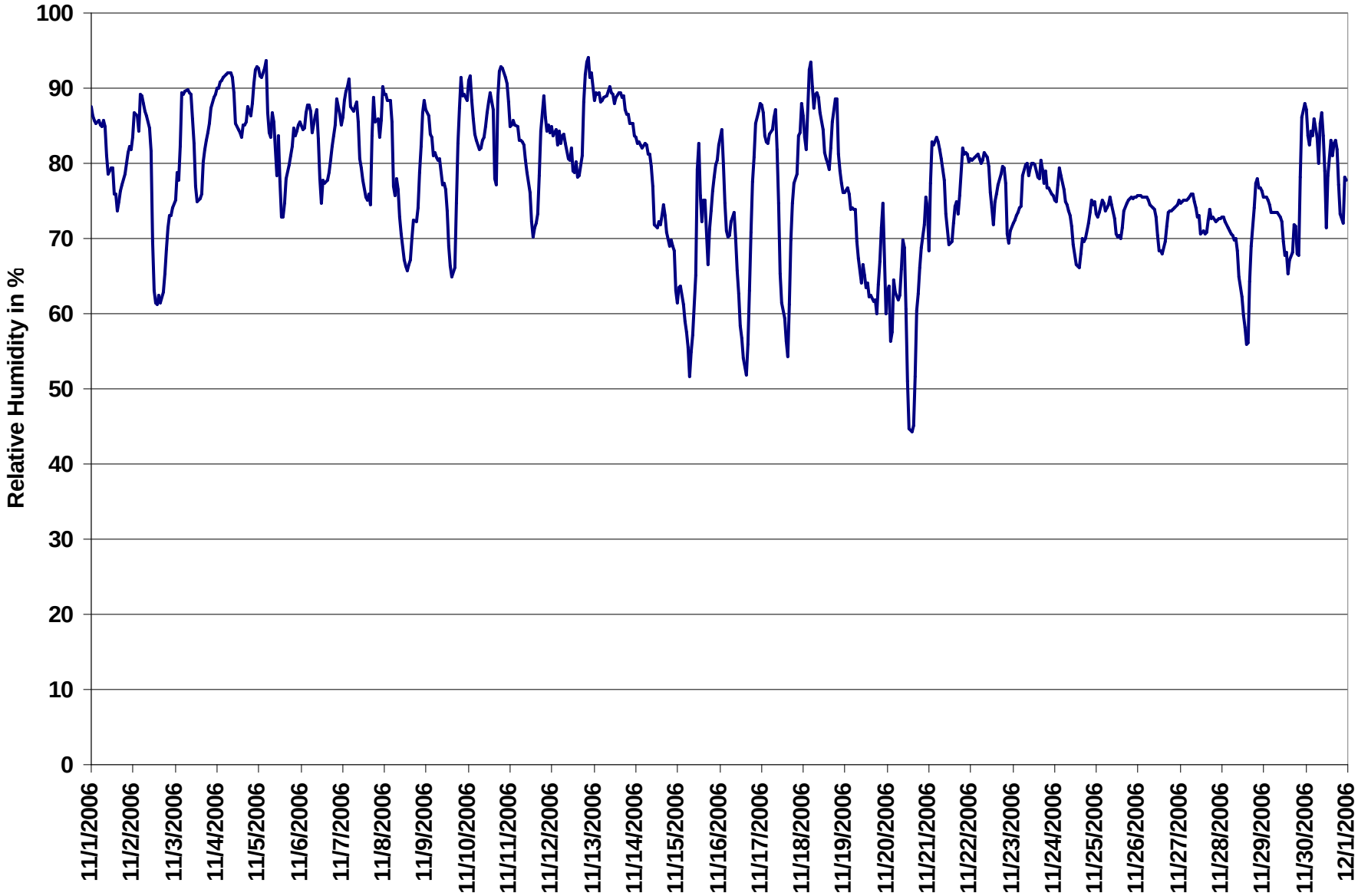



**Figure 58. PASZA - Valleyview Relative Humidity 1-hr Average Monthly Trend**

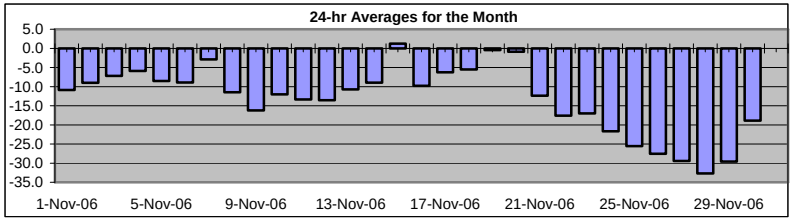
# PASZA - Valleyview - Temperature Monthly Summary

Station: Valleyview
Station Owner: PASZA

**HOURLY AVERAGE TABLE**

**Ambient Temperature (T)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 4.1 | °C | 7-Nov | 16:00 17:00 |
| Maximum 24-hr Value: | 1.2 | °C | 15-Nov | |

| | | | |
|---|---|---|---|
| AIC Time: | 0 hrs | Operational Time: | 720 hrs |
| Calibration Time: | 0 hrs | AMD Operational Uptime: | 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | Median |
|---|---|---|---|---|---|---|---|---|---|
| | 3.0 | 1.0 | -6.6 | -11.6 | -18.1 | -31.7 | -37.0 | -13.1 °C | -11.6 °C |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | -15 | -16 | -16 | -17 | -16 | -15 | -15 | -15 | -14 | -12 | -11 | -9 | -8 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -8 | -8 | -8 | -8 | -10.9 | -6.5 |
| 2-Nov-06 | -9 | -10 | -12 | -12 | -14 | -15 | -15 | -15 | -15 | -14 | -10 | -7 | -5 | -4 | -4 | -4 | -4 | -5 | -6 | -7 | -7 | -7 | -7 | -7 | -9.0 | -3.9 |
| 3-Nov-06 | -7 | -8 | -8 | -8 | -8 | -8 | -9 | -9 | -8 | -8 | -8 | -7 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -6 | -7 | -7 | -7 | -7.2 | -5.7 |
| 4-Nov-06 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -7 | -6 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5 | -5.9 | -4.7 |
| 5-Nov-06 | -6 | -6 | -6 | -6 | -8 | -8 | -9 | -9 | -9 | -9 | -9 | -9 | -8 | -8 | -8 | -8 | -8 | -8 | -9 | -10 | -11 | -12 | -11 | -11 | -8.5 | -5.7 |
| 6-Nov-06 | -11 | -11 | -11 | -11 | -11 | -11 | -11 | -11 | -11 | -11 | -10 | -9 | -8 | -7 | -7 | -6 | -6 | -6 | -7 | -7 | -7 | -8 | -7 | -7 | -8.9 | -5.9 |
| 7-Nov-06 | -7 | -7 | -7 | -7 | -7 | -7 | -6 | -6 | -6 | -5 | -3 | -2 | 0 | 2 | 3 | 3 | 4 | 2 | 1 | 1 | -1 | -3 | -5 | -6 | -2.9 | 4.1 |
| 8-Nov-06 | -7 | -7 | -8 | -9 | -10 | -11 | -12 | -13 | -13 | -13 | -12 | -12 | -11 | -11 | -11 | -11 | -11 | -12 | -12 | -12 | -13 | -14 | -15 | -16 | -11.5 | -6.6 |
| 9-Nov-06 | -17 | -18 | -19 | -20 | -21 | -22 | -23 | -23 | -23 | -21 | -19 | -17 | -15 | -13 | -11 | -10 | -10 | -11 | -13 | -14 | -13 | -13 | -12 | -10 | -16.2 | -9.8 |
| 10-Nov-06 | -13 | -14 | -15 | -16 | -17 | -18 | -19 | -19 | -18 | -17 | -16 | -14 | -11 | -9 | -6 | -5 | -5 | -7 | -8 | -7 | -7 | -8 | -8 | -10 | -12.0 | -4.9 |
| 11-Nov-06 | -12 | -12 | -12 | -12 | -12 | -13 | -13 | -13 | -13 | -13 | -14 | -13 | -12 | -12 | -12 | -11 | -11 | -13 | -14 | -16 | -17 | -18 | -16 | -16 | -13.4 | -11.4 |
| 12-Nov-06 | -17 | -18 | -18 | -18 | -18 | -18 | -17 | -16 | -17 | -17 | -15 | -13 | -12 | -10 | -10 | -9 | -8 | -9 | -9 | -10 | -10 | -11 | -12 | -12 | -13.6 | -8.4 |
| 13-Nov-06 | -13 | -12 | -10 | -11 | -13 | -13 | -12 | -12 | -11 | -10 | -10 | -10 | -10 | -10 | -9 | -9 | -9 | -9 | -10 | -10 | -10 | -11 | -11 | -12 | -10.7 | -9.0 |
| 14-Nov-06 | -12 | -13 | -14 | -14 | -14 | -14 | -14 | -14 | -14 | -14 | -13 | -11 | -10 | -8 | -7 | -6 | -5 | -4 | -4 | -4 | -3 | -3 | -2 | -1 | -9.0 | -1.4 |
| 15-Nov-06 | -1 | -1 | -1 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 1 | 0 | 0 | -1 | 1.2 | 3.0 |
| 16-Nov-06 | -1 | -8 | -10 | -11 | -11 | -11 | -12 | -13 | -13 | -12 | -11 | -10 | -9 | -8 | -7 | -6 | -7 | -8 | -9 | -11 | -11 | -12 | -12 | -12 | -9.8 | -1.4 |
| 17-Nov-06 | -12 | -12 | -11 | -11 | -10 | -10 | -11 | -11 | -12 | -10 | -8 | -5 | -2 | 0 | 1 | 2 | 0 | -2 | -3 | -4 | -4 | -5 | -5 | -6 | -6.2 | 2.5 |
| 18-Nov-06 | -6 | -6 | -5 | -3 | -3 | -5 | -7 | -7 | -8 | -8 | -9 | -8 | -7 | -6 | -5 | -5 | -6 | -7 | -7 | -5 | -3 | -2 | -2 | -2 | -5.5 | -2.2 |
| 19-Nov-06 | -2 | -3 | -3 | -3 | -3 | -3 | -4 | -3 | -2 | -2 | -2 | -1 | -1 | -1 | 0 | 1 | 1 | 1 | 2 | 1 | 4 | 3 | 3 | 3 | -0.4 | 4.0 |
| 20-Nov-06 | 2 | 1 | 1 | -1 | -2 | -2 | -2 | -3 | -3 | -4 | -3 | -1 | 1 | 3 | 3 | 3 | 1 | -1 | -2 | -3 | -3 | -2 | -2 | -2 | -0.9 | 3.3 |
| 21-Nov-06 | -1 | -1 | -7 | -11 | -12 | -12 | -13 | -13 | -13 | -13 | -13 | -13 | -13 | -13 | -13 | -13 | -13 | -14 | -15 | -16 | -16 | -16 | -16 | -17 | -12.4 | -0.7 |
| 22-Nov-06 | -17 | -17 | -18 | -18 | -18 | -18 | -18 | -19 | -20 | -20 | -19 | -18 | -18 | -17 | -18 | -17 | -16 | -17 | -17 | -17 | -16 | -16 | -16 | -17 | -17.6 | -15.9 |
| 23-Nov-06 | -17 | -16 | -16 | -16 | -16 | -16 | -16 | -17 | -17 | -17 | -17 | -17 | -17 | -17 | -17 | -17 | -17 | -17 | -18 | -18 | -18 | -18 | -19 | -19 | -17.0 | -15.5 |
| 24-Nov-06 | -19 | -19 | -20 | -20 | -21 | -21 | -21 | -21 | -21 | -21 | -20 | -20 | -20 | -20 | -20 | -21 | -21 | -22 | -23 | -24 | -25 | -26 | -26 | -27 | -21.7 | -18.7 |
| 25-Nov-06 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -25 | -25 | -25 | -25 | -25 | -25 | -25 | -26 | -26 | -26 | -26 | -26 | -26 | -26 | -25.6 | -24.7 |
| 26-Nov-06 | -26 | -26 | -26 | -27 | -27 | -29 | -29 | -29 | -29 | -29 | -28 | -27 | -27 | -27 | -27 | -27 | -27 | -27 | -28 | -28 | -28 | -28 | -27 | -27 | -27.5 | -26.0 |
| 27-Nov-06 | -26 | -26 | -26 | -25 | -26 | -25 | -25 | -26 | -26 | -28 | -31 | -31 | -31 | -31 | -31 | -31 | -32 | -32 | -32 | -33 | -33 | -33 | -33 | -33 | -29.4 | -25.4 |
| 28-Nov-06 | -33 | -33 | -33 | -33 | -33 | -33 | -33 | -33 | -34 | -33 | -33 | -32 | -31 | -30 | -29 | -29 | -30 | -31 | -32 | -34 | -35 | -36 | -36 | -36 | -32.7 | -28.8 |
| 29-Nov-06 | -37 | -37 | -37 | -38 | -38 | -38 | -38 | -38 | -38 | -36 | -33 | -30 | -29 | -28 | -26 | -26 | -26 | -24 | -21 | -19 | -19 | -18 | -18 | -17 | -29.6 | -17.4 |
| 30-Nov-06 | -17 | -16 | -16 | -16 | -17 | -17 | -18 | -18 | -19 | -21 | -20 | -18 | -16 | -16 | -17 | -18 | -19 | -19 | -20 | -22 | -22 | -23 | -23 | -23 | -18.9 | -16.1 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | -13.1 | -13.5 | -13.9 | -14.2 | -14.6 | -14.9 | -15.1 | -15.2 | -15.3 | -15.0 | -14.3 | -13.1 | -12.1 | -11.4 | -10.9 | -10.6 | -10.9 | -11.5 | -11.9 | -12.3 | -12.5 | -12.8 | -12.9 | -13.0 | | |

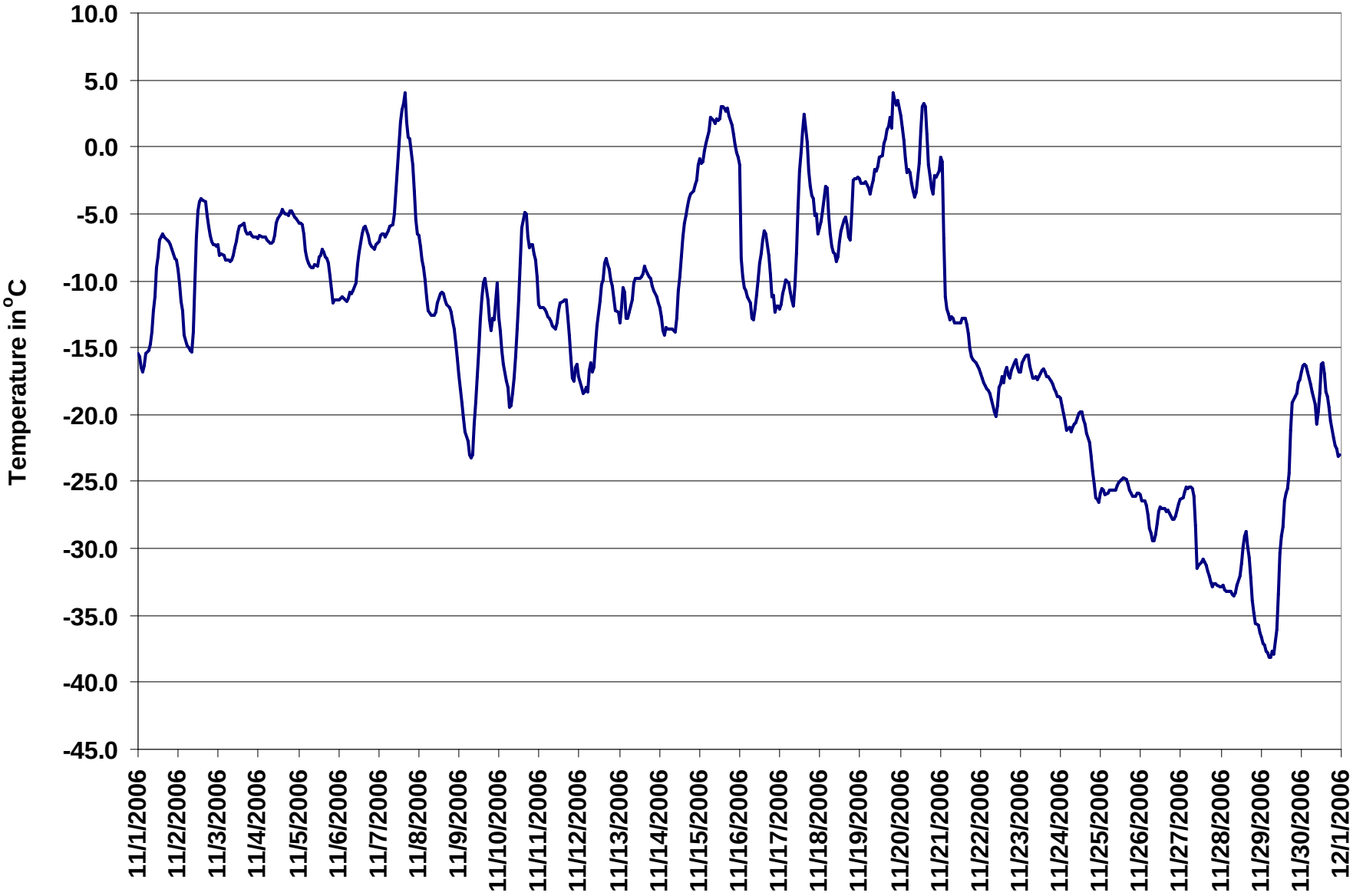



**Figure 59. PASZA - Valleyview Temperature 1-hr Average Monthly Trend**

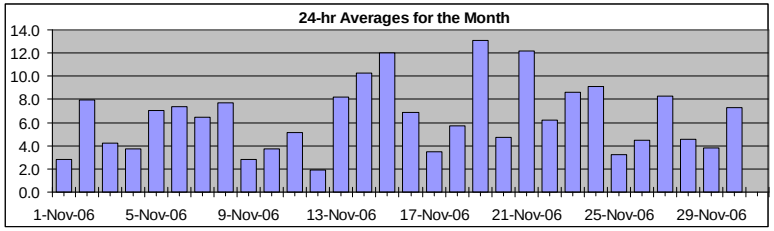
# PASZA - Valleyview - Scalar Wind Speed Monthly Summary

Station: Valleyview
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Wind Speed (WSs)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 23.4 | km/hr | 16-Nov | 1:00 2:00 |
| Maximum 24-hr Value: | 13.1 | km/hr | 19-Nov | |

| | | | |
|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | Operational Time: 720 hrs |
| Calibration Time: | 0 hrs | | AMD Operational Uptime: 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | AverageS |
|---|---|---|---|---|---|---|---|---|
| | 18.8 | 14.8 | 9.0 | 5.5 | 2.9 | 1.3 | 0.9 | 6.4 km/hr |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** — **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hr Scalar Average | Daily Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 3 | 3 | 2 | 1 | 2 | 1 | 2 | 3 | 2 | 2 | 1 | 1 | 2 | 2 | 3 | 5 | 4 | 2 | 3 | 2 | 4 | 5 | 6 | 7 | 2.8 | 6.6 |
| 2-Nov-06 | 5 | 3 | 3 | 2 | 4 | 5 | 5 | 4 | 4 | 4 | 2 | 8 | 12 | 13 | 13 | 13 | 12 | 14 | 14 | 15 | 11 | 8 | 9 | 8 | 8.0 | 14.8 |
| 3-Nov-06 | 5 | 6 | 7 | 6 | 6 | 6 | 5 | 5 | 4 | 3 | 5 | 5 | 5 | 5 | 5 | 3 | 5 | 4 | 2 | 1 | 2 | 3 | 2 | 1 | 4.2 | 6.7 |
| 4-Nov-06 | 2 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 4 | 4 | 5 | 4 | 6 | 5 | 5 | 7 | 6 | 5 | 5 | 7 | 3 | 3 | 3 | 4 | 3.8 | 6.9 |
| 5-Nov-06 | 6 | 6 | 6 | 12 | 12 | 9 | 8 | 6 | 5 | 6 | 11 | 8 | 8 | 9 | 8 | 10 | 8 | 4 | 5 | 6 | 5 | 2 | 4 | 5 | 7.1 | 12.1 |
| 6-Nov-06 | 6 | 7 | 7 | 8 | 8 | 8 | 11 | 4 | 7 | 9 | 7 | 8 | 10 | 5 | 6 | 6 | 8 | 8 | 6 | 9 | 10 | 8 | 5 | 7 | 7.4 | 10.8 |
| 7-Nov-06 | 7 | 8 | 5 | 4 | 4 | 8 | 7 | 3 | 2 | 8 | 10 | 10 | 8 | 9 | 7 | 3 | 3 | 4 | 3 | 5 | 6 | 8 | 12 | 10 | 6.5 | 11.8 |
| 8-Nov-06 | 9 | 14 | 14 | 13 | 14 | 15 | 12 | 9 | 8 | 9 | 8 | 7 | 7 | 7 | 7 | 6 | 8 | 7 | 3 | 2 | 2 | 1 | 1 | 1 | 7.7 | 15.1 |
| 9-Nov-06 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 3 | 2 | 4 | 3 | 5 | 5 | 4 | 5 | 4 | 1 | 1 | 1 | 1 | 3 | 9 | 4 | 2.9 | 8.9 |
| 10-Nov-06 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 4 | 3 | 3 | 2 | 9 | 8 | 7 | 5 | 5 | 5 | 7 | 6 | 11 | 3.7 | 10.6 |
| 11-Nov-06 | 8 | 8 | 6 | 7 | 8 | 9 | 8 | 8 | 10 | 8 | 7 | 5 | 3 | 4 | 2 | 4 | 3 | 2 | 2 | 2 | 1 | 4 | 2 | 2 | 5.1 | 9.6 |
| 12-Nov-06 | 2 | 2 | 2 | 2 | 3 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 3 | 2 | 1 | 2 | 4 | 1 | 1 | 3 | 2 | 3 | 1.9 | 3.6 |
| 13-Nov-06 | 1 | 4 | 4 | 2 | 2 | 3 | 3 | 3 | 5 | 6 | 9 | 12 | 14 | 15 | 13 | 11 | 12 | 10 | 12 | 12 | 11 | 11 | 10 | 10 | 8.2 | 15.0 |
| 14-Nov-06 | 11 | 11 | 7 | 5 | 3 | 4 | 5 | 7 | 5 | 5 | 3 | 9 | 13 | 14 | 14 | 14 | 14 | 10 | 8 | 16 | 16 | 17 | 17 | 19 | 10.3 | 18.9 |
| 15-Nov-06 | 21 | 19 | 18 | 19 | 18 | 19 | 18 | 18 | 13 | 11 | 18 | 18 | 13 | 11 | 14 | 5 | 4 | 5 | 2 | 5 | 4 | 6 | 5 | 5 | 12.0 | 21.0 |
| 16-Nov-06 | 12 | 23 | 14 | 15 | 14 | 11 | 8 | 5 | 3 | 3 | 4 | 5 | 5 | 7 | 6 | 5 | 3 | 3 | 2 | 3 | 4 | 4 | 4 | 3 | 6.9 | 23.4 |
| 17-Nov-06 | 4 | 3 | 5 | 4 | 2 | 3 | 7 | 6 | 3 | 4 | 3 | 3 | 5 | 4 | 5 | 1 | 3 | 2 | 2 | 3 | 4 | 4 | 2 | 3 | 3.5 | 6.8 |
| 18-Nov-06 | 3 | 3 | 6 | 6 | 3 | 8 | 7 | 7 | 3 | 7 | 8 | 5 | 4 | 4 | 4 | 7 | 7 | 3 | 3 | 3 | 8 | 7 | 11 | 11 | 5.7 | 11.2 |
| 19-Nov-06 | 7 | 8 | 13 | 16 | 16 | 13 | 18 | 15 | 9 | 7 | 12 | 16 | 19 | 15 | 13 | 14 | 12 | 14 | 16 | 17 | 19 | 7 | 8 | 11 | 13.1 | 19.0 |
| 20-Nov-06 | 5 | 9 | 4 | 8 | 7 | 6 | 6 | 4 | 6 | 5 | 6 | 6 | 4 | 5 | 6 | 3 | 3 | 1 | 3 | 2 | 3 | 4 | 2 | 4 | 4.7 | 8.9 |
| 21-Nov-06 | 4 | 7 | 12 | 13 | 17 | 16 | 17 | 20 | 20 | 16 | 16 | 11 | 10 | 10 | 10 | 7 | 8 | 12 | 11 | 12 | 12 | 12 | 11 | 10 | 12.2 | 19.5 |
| 22-Nov-06 | 8 | 8 | 9 | 9 | 9 | 7 | 5 | 5 | 6 | 5 | 3 | 1 | 4 | 6 | 7 | 5 | 6 | 6 | 5 | 3 | 7 | 9 | 9 | 6 | 6.2 | 9.5 |
| 23-Nov-06 | 4 | 7 | 7 | 8 | 3 | 3 | 6 | 6 | 6 | 9 | 10 | 11 | 14 | 14 | 13 | 12 | 8 | 9 | 11 | 9 | 8 | 8 | 9 | 10 | 8.6 | 14.5 |
| 24-Nov-06 | 13 | 10 | 6 | 4 | 7 | 11 | 9 | 10 | 9 | 10 | 11 | 12 | 15 | 14 | 11 | 11 | 12 | 12 | 11 | 7 | 7 | 3 | 2 | 3 | 9.1 | 14.6 |
| 25-Nov-06 | 5 | 4 | 1 | 1 | 2 | 3 | 2 | 3 | 3 | 4 | 2 | 4 | 5 | 4 | 3 | 4 | 6 | 6 | 5 | 5 | 3 | 2 | 1 | 1 | 3.2 | 6.1 |
| 26-Nov-06 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 4 | 7 | 7 | 6 | 8 | 8 | 9 | 9 | 8 | 7 | 7 | 8 | 4.5 | 9.2 |
| 27-Nov-06 | 10 | 11 | 10 | 9 | 10 | 9 | 9 | 9 | 10 | 10 | 12 | 10 | 13 | 12 | 8 | 6 | 4 | 3 | 5 | 5 | 6 | 4 | 6 | 6 | 8.2 | 13.3 |
| 28-Nov-06 | 7 | 6 | 8 | 9 | 8 | 7 | 5 | 6 | 6 | 6 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 4.6 | 8.5 |
| 29-Nov-06 | 2 | 1 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 1 | 3 | 3 | 1 | 1 | 1 | 1 | 3 | 10 | 10 | 12 | 10 | 9 | 3.8 | 11.5 |
| 30-Nov-06 | 8 | 6 | 4 | 7 | 4 | 2 | 4 | 5 | 2 | 4 | 2 | 5 | 10 | 6 | 11 | 10 | 9 | 11 | 17 | 15 | 13 | 5 | 6 | 7 | 7.3 | 16.5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-hr Average | 6.1 | 6.8 | 6.2 | 6.5 | 6.4 | 6.7 | 6.6 | 6.1 | 5.5 | 5.8 | 6.3 | 6.6 | 7.7 | 7.5 | 7.3 | 6.7 | 6.4 | 6.0 | 5.9 | 6.5 | 6.6 | 5.9 | 6.1 | 6.4 | | |
| Hourly Max | 21.0 | 23.4 | 17.6 | 18.5 | 18.2 | 19.2 | 18.3 | 19.5 | 19.5 | 15.6 | 17.9 | 18.5 | 19.0 | 15.4 | 14.3 | 14.3 | 13.9 | 14.2 | 16.5 | 16.9 | 18.9 | 16.6 | 17.0 | 18.9 | | |

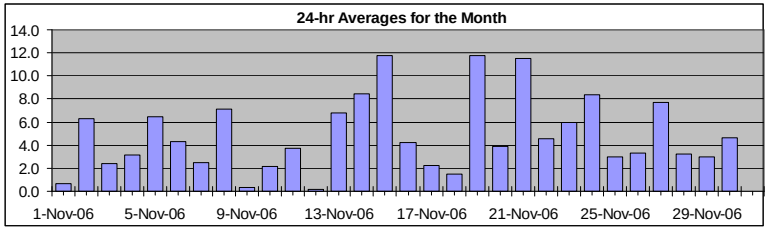
# PASZA - Valleyview - Vector Wind Speed Monthly Summary

Station: Valleyview
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Wind Speed (WSv)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006




**Summary**

| | | | | |
|---|---|---|---|---|
| Maximum 1-hr Average: | 23.2 | km/hr | 16-Nov | 1:00 2:00 |
| Maximum 24-hr Value: | 11.8 | km/hr | 15-Nov | |

| | | | |
|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | |
| Calibration Time: | 0 hrs | | |
| Operational Time: | 720 hrs | | |
| AMD Operational Uptime: | 100.0% | | |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | AverageV |
|---|---|---|---|---|---|---|---|---|
| | 18.5 | 14.5 | 8.9 | 5.2 | 2.6 | 0.7 | 0.3 | 1.1 km/hr |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** — **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hr Vector Average | Daily Max |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 3 | 3 | 2 | 1 | 2 | 1 | 2 | 3 | 2 | 1 | 0 | 1 | 2 | 1 | 3 | 5 | 4 | 1 | 0 | 2 | 4 | 5 | 6 | 6 | 0.7 | 6.5 |
| 2-Nov-06 | 4 | 3 | 3 | 2 | 4 | 5 | 5 | 4 | 4 | 3 | 2 | 6 | 12 | 13 | 13 | 13 | 12 | 14 | 14 | 15 | 11 | 8 | 9 | 8 | 6.3 | 14.7 |
| 3-Nov-06 | 5 | 6 | 7 | 6 | 6 | 6 | 5 | 5 | 4 | 3 | 5 | 5 | 5 | 5 | 4 | 1 | 4 | 4 | 2 | 1 | 2 | 3 | 2 | 1 | 2.4 | 6.6 |
| 4-Nov-06 | 1 | 0 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 4 | 5 | 7 | 3 | 2 | 3 | 4 | 3.1 | 6.8 |
| 5-Nov-06 | 6 | 6 | 6 | 11 | 12 | 9 | 8 | 6 | 4 | 6 | 11 | 7 | 7 | 9 | 8 | 9 | 8 | 4 | 5 | 6 | 5 | 2 | 4 | 5 | 6.5 | 11.9 |
| 6-Nov-06 | 6 | 7 | 7 | 8 | 8 | 8 | 11 | 3 | 7 | 8 | 7 | 7 | 10 | 4 | 6 | 6 | 8 | 8 | 6 | 9 | 9 | 8 | 4 | 5 | 4.3 | 10.7 |
| 7-Nov-06 | 4 | 5 | 3 | 3 | 3 | 8 | 6 | 2 | 2 | 7 | 10 | 9 | 8 | 9 | 7 | 3 | 1 | 4 | 3 | 5 | 6 | 8 | 12 | 10 | 2.5 | 11.7 |
| 8-Nov-06 | 8 | 13 | 14 | 13 | 14 | 15 | 12 | 9 | 8 | 9 | 8 | 7 | 6 | 7 | 7 | 6 | 8 | 7 | 3 | 0 | 2 | 0 | 1 | 1 | 7.1 | 15.0 |
| 9-Nov-06 | 1 | 1 | 1 | 2 | 0 | 0 | 2 | 2 | 3 | 2 | 2 | 3 | 5 | 5 | 4 | 5 | 4 | 0 | 1 | 1 | 1 | 2 | 9 | 2 | 0.3 | 8.8 |
| 10-Nov-06 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 4 | 3 | 2 | 1 | 9 | 8 | 3 | 5 | 5 | 5 | 7 | 5 | 10 | 2.2 | 9.7 |
| 11-Nov-06 | 8 | 7 | 6 | 7 | 8 | 9 | 7 | 8 | 9 | 8 | 7 | 4 | 2 | 4 | 1 | 3 | 2 | 2 | 1 | 2 | 1 | 3 | 2 | 1 | 3.7 | 9.5 |
| 12-Nov-06 | 0 | 0 | 1 | 0 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 3 | 1 | 1 | 3 | 2 | 3 | 0.2 | 3.0 |
| 13-Nov-06 | 0 | 4 | 4 | 2 | 2 | 3 | 2 | 3 | 5 | 6 | 9 | 12 | 14 | 15 | 13 | 11 | 12 | 10 | 12 | 11 | 11 | 11 | 10 | 10 | 6.8 | 15.0 |
| 14-Nov-06 | 10 | 11 | 7 | 4 | 2 | 4 | 5 | 7 | 5 | 5 | 3 | 8 | 13 | 14 | 14 | 14 | 14 | 10 | 8 | 16 | 16 | 17 | 17 | 19 | 8.5 | 18.9 |
| 15-Nov-06 | 21 | 18 | 18 | 18 | 18 | 19 | 18 | 18 | 13 | 11 | 18 | 18 | 13 | 11 | 14 | 3 | 2 | 4 | 2 | 5 | 4 | 6 | 5 | 4 | 11.8 | 20.9 |
| 16-Nov-06 | 11 | 23 | 14 | 14 | 14 | 11 | 8 | 4 | 3 | 2 | 3 | 4 | 5 | 7 | 5 | 4 | 2 | 3 | 1 | 3 | 4 | 3 | 4 | 3 | 4.2 | 23.2 |
| 17-Nov-06 | 4 | 3 | 3 | 4 | 1 | 3 | 1 | 6 | 3 | 4 | 3 | 2 | 5 | 4 | 5 | 1 | 3 | 1 | 1 | 2 | 3 | 3 | 1 | 1 | 2.3 | 6.0 |
| 18-Nov-06 | 2 | 1 | 3 | 5 | 1 | 8 | 7 | 7 | 2 | 7 | 8 | 5 | 4 | 3 | 4 | 7 | 7 | 2 | 3 | 2 | 8 | 7 | 11 | 11 | 1.5 | 11.0 |
| 19-Nov-06 | 7 | 8 | 13 | 16 | 16 | 13 | 18 | 14 | 9 | 7 | 12 | 16 | 19 | 15 | 13 | 14 | 12 | 14 | 16 | 11 | 18 | 6 | 7 | 11 | 11.7 | 18.9 |
| 20-Nov-06 | 3 | 9 | 3 | 8 | 7 | 6 | 6 | 4 | 6 | 5 | 6 | 6 | 4 | 5 | 6 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 4 | 3.9 | 8.7 |
| 21-Nov-06 | 3 | 4 | 12 | 13 | 17 | 15 | 17 | 19 | 19 | 16 | 15 | 11 | 10 | 9 | 10 | 6 | 8 | 12 | 10 | 12 | 12 | 12 | 11 | 10 | 11.5 | 19.4 |
| 22-Nov-06 | 8 | 8 | 9 | 9 | 8 | 7 | 5 | 5 | 6 | 5 | 3 | 1 | 4 | 6 | 7 | 5 | 6 | 6 | 5 | 3 | 4 | 9 | 9 | 6 | 4.5 | 9.4 |
| 23-Nov-06 | 4 | 6 | 6 | 7 | 3 | 3 | 5 | 6 | 6 | 9 | 10 | 11 | 14 | 14 | 13 | 12 | 8 | 9 | 11 | 9 | 8 | 8 | 9 | 10 | 6.0 | 14.4 |
| 24-Nov-06 | 13 | 10 | 6 | 3 | 7 | 11 | 9 | 10 | 9 | 10 | 11 | 12 | 14 | 13 | 11 | 11 | 11 | 12 | 11 | 7 | 7 | 3 | 2 | 2 | 8.4 | 14.3 |
| 25-Nov-06 | 5 | 4 | 1 | 0 | 1 | 3 | 2 | 2 | 3 | 4 | 2 | 4 | 5 | 4 | 3 | 4 | 6 | 6 | 5 | 5 | 2 | 2 | 0 | 1 | 2.9 | 6.1 |
| 26-Nov-06 | 0 | 1 | 0 | 1 | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 1 | 3 | 7 | 7 | 6 | 8 | 8 | 9 | 9 | 8 | 7 | 7 | 8 | 3.3 | 9.1 |
| 27-Nov-06 | 10 | 11 | 10 | 9 | 10 | 9 | 9 | 9 | 10 | 10 | 12 | 10 | 13 | 12 | 8 | 6 | 4 | 3 | 5 | 5 | 6 | 4 | 6 | 6 | 7.7 | 13.3 |
| 28-Nov-06 | 7 | 6 | 8 | 8 | 8 | 7 | 5 | 6 | 6 | 6 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 2 | 1 | 1 | 2 | 2 | 1 | 2 | 3.3 | 8.3 |
| 29-Nov-06 | 2 | 1 | 2 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 0 | 3 | 3 | 1 | 0 | 1 | 1 | 3 | 10 | 10 | 11 | 10 | 9 | 3.0 | 11.4 |
| 30-Nov-06 | 8 | 6 | 4 | 5 | 4 | 2 | 2 | 4 | 1 | 4 | 2 | 4 | 9 | 6 | 10 | 10 | 9 | 11 | 17 | 15 | 13 | 5 | 5 | 7 | 4.6 | 16.5 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1-hr Vector | 1.2 | 1.8 | 1.2 | 1.4 | 1.6 | 1.6 | 1.4 | 1.0 | 1.5 | 1.4 | 1.2 | 0.6 | 0.6 | 0.9 | 0.6 | 1.1 | 1.5 | 1.6 | 1.5 | 0.9 | 0.8 | 0.6 | 0.5 | 0.8 | | |
| Hourly Max | 20.9 | 23.2 | 17.6 | 18.5 | 18.1 | 19.1 | 18.2 | 19.4 | 19.4 | 15.5 | 17.8 | 18.4 | 18.9 | 15.3 | 14.2 | 14.3 | 13.8 | 14.1 | 16.5 | 15.7 | 18.5 | 16.5 | 16.9 | 18.9 | | |

# PASZA - Valleyview - Wind Direction Monthly Summary

## HOURLY AVERAGE TABLE

**Wind Direction (WD)**

Station: Valleyview
Station Owner: PASZA

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Summary**

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | | | | | | | | Operational Time: | | | | | | | | | | | | | | | | | | | 720 hrs | |
| Calibration Time: | | 0 hrs | | | | | | | | AMD Operational Uptime: | | | | | | | | | | | | | | | | | | | 100.0% | |
| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 | Average | | | | | | | | | | | | | | | | | | | | | | |
| | 358.4 | 352.4 | 293.8 | 189.5 | 60.3 | 7.0 | 0.8 | 323 deg | | | | | | | | | | | | | | | | | | | | | | |

**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | 24-hour Average | WD Sector |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 200 | 208 | 214 | 206 | 193 | 228 | 211 | 192 | 164 | 211 | 342 | 79 | 0 | 36 | 349 | 343 | 323 | 331 | 28 | 126 | 131 | 134 | 134 | 132 | 150 | SSE |
| 2-Nov-06 | 112 | 107 | 144 | 119 | 7 | 3 | 7 | 24 | 1 | 6 | 44 | 125 | 133 | 133 | 129 | 128 | 131 | 134 | 134 | 133 | 134 | 127 | 123 | 121 | 120 | ESE |
| 3-Nov-06 | 93 | 69 | 81 | 87 | 79 | 76 | 67 | 69 | 60 | 69 | 140 | 149 | 168 | 187 | 181 | 325 | 351 | 8 | 47 | 15 | 358 | 357 | 13 | 2 | 79 | ENE |
| 4-Nov-06 | 343 | 340 | 308 | 26 | 22 | 25 | 25 | 25 | 19 | 58 | 60 | 74 | 78 | 62 | 67 | 55 | 59 | 52 | 88 | 130 | 113 | 43 | 46 | 17 | 57 | ENE |
| 5-Nov-06 | 7 | 3 | 337 | 321 | 299 | 312 | 310 | 295 | 312 | 325 | 333 | 324 | 311 | 312 | 317 | 339 | 354 | 330 | 330 | 349 | 357 | 358 | 28 | 36 | 330 | NNW |
| 6-Nov-06 | 27 | 37 | 29 | 34 | 36 | 44 | 54 | 58 | 24 | 66 | 80 | 112 | 135 | 126 | 126 | 143 | 171 | 143 | 147 | 151 | 156 | 152 | 169 | 341 | 94 | E |
| 7-Nov-06 | 165 | 202 | 159 | 198 | 174 | 186 | 184 | 142 | 202 | 191 | 189 | 190 | 193 | 187 | 193 | 206 | 261 | 345 | 185 | 336 | 23 | 26 | 22 | 2 | 186 | S |
| 8-Nov-06 | 328 | 344 | 328 | 325 | 323 | 328 | 321 | 320 | 308 | 308 | 316 | 311 | 321 | 318 | 335 | 333 | 0 | 358 | 8 | 28 | 176 | 124 | 20 | 21 | 328 | NNW |
| 9-Nov-06 | 33 | 247 | 188 | 38 | 10 | 229 | 184 | 214 | 208 | 205 | 5 | 29 | 353 | 336 | 358 | 359 | 357 | 165 | 339 | 359 | 187 | 155 | 181 | 180 | 323 | NW |
| 10-Nov-06 | 356 | 329 | 334 | 11 | 44 | 258 | 13 | 26 | 356 | 25 | 8 | 7 | 7 | 24 | 127 | 140 | 142 | 55 | 30 | 39 | 35 | 27 | 24 | 308 | 32 | NNE |
| 11-Nov-06 | 285 | 285 | 279 | 291 | 297 | 298 | 292 | 293 | 293 | 290 | 281 | 278 | 273 | 258 | 134 | 108 | 89 | 92 | 74 | 349 | 330 | 3 | 27 | 11 | 295 | WNW |
| 12-Nov-06 | 190 | 338 | 1 | 129 | 346 | 168 | 127 | 202 | 197 | 276 | 78 | 357 | 168 | 202 | 13 | 108 | 189 | 232 | 213 | 311 | 2 | 360 | 15 | 351 | 333 | NNW |
| 13-Nov-06 | 202 | 201 | 202 | 81 | 78 | 22 | 9 | 22 | 1 | 358 | 354 | 356 | 1 | 357 | 356 | 335 | 333 | 325 | 330 | 330 | 320 | 314 | 312 | 308 | 340 | NNW |
| 14-Nov-06 | 304 | 297 | 291 | 270 | 191 | 190 | 182 | 173 | 162 | 177 | 199 | 185 | 189 | 190 | 188 | 190 | 187 | 186 | 184 | 188 | 186 | 182 | 183 | 184 | 194 | SSW |
| 15-Nov-06 | 183 | 181 | 183 | 182 | 176 | 180 | 180 | 177 | 185 | 182 | 186 | 187 | 181 | 184 | 179 | 189 | 155 | 162 | 180 | 197 | 197 | 193 | 196 | 266 | 183 | S |
| 16-Nov-06 | 301 | 296 | 306 | 307 | 304 | 304 | 293 | 234 | 174 | 172 | 191 | 194 | 175 | 184 | 189 | 174 | 183 | 199 | 216 | 207 | 213 | 206 | 218 | 222 | 264 | W |
| 17-Nov-06 | 204 | 210 | 217 | 206 | 233 | 219 | 44 | 199 | 225 | 210 | 209 | 200 | 202 | 213 | 207 | 179 | 352 | 6 | 253 | 328 | 202 | 214 | 250 | 144 | 212 | SSW |
| 18-Nov-06 | 258 | 206 | 343 | 324 | 150 | 39 | 11 | 25 | 32 | 19 | 28 | 27 | 44 | 21 | 1 | 351 | 346 | 354 | 38 | 169 | 191 | 189 | 187 | 180 | 18 | NNE |
| 19-Nov-06 | 186 | 185 | 180 | 185 | 189 | 191 | 187 | 189 | 192 | 184 | 192 | 188 | 187 | 190 | 191 | 188 | 198 | 196 | 194 | 233 | 281 | 222 | 244 | 263 | 200 | SSW |
| 20-Nov-06 | 219 | 179 | 180 | 205 | 211 | 206 | 178 | 180 | 200 | 205 | 203 | 207 | 187 | 187 | 182 | 193 | 43 | 219 | 307 | 298 | 312 | 202 | 251 | 205 | 202 | SSW |
| 21-Nov-06 | 199 | 357 | 27 | 26 | 18 | 20 | 15 | 12 | 10 | 11 | 5 | 13 | 30 | 28 | 35 | 56 | 52 | 28 | 18 | 6 | 20 | 22 | 26 | 46 | 21 | NNE |
| 22-Nov-06 | 39 | 25 | 27 | 14 | 20 | 24 | 28 | 16 | 7 | 12 | 10 | 16 | 0 | 353 | 9 | 18 | 39 | 17 | 21 | 27 | 106 | 140 | 138 | 133 | 34 | NE |
| 23-Nov-06 | 137 | 147 | 152 | 147 | 89 | 99 | 11 | 21 | 3 | 9 | 359 | 359 | 357 | 352 | 360 | 4 | 354 | 335 | 335 | 323 | 321 | 318 | 323 | 337 | 355 | N |
| 24-Nov-06 | 344 | 350 | 6 | 350 | 322 | 329 | 327 | 324 | 319 | 305 | 306 | 314 | 326 | 326 | 318 | 328 | 333 | 329 | 325 | 314 | 271 | 231 | 203 | 188 | 323 | NW |
| 25-Nov-06 | 291 | 285 | 273 | 347 | 319 | 347 | 8 | 330 | 335 | 5 | 42 | 3 | 3 | 8 | 37 | 17 | 19 | 10 | 20 | 2 | 1 | 346 | 182 | 285 | 356 | N |
| 26-Nov-06 | 256 | 240 | 148 | 276 | 236 | 211 | 193 | 207 | 197 | 209 | 211 | 326 | 354 | 356 | 3 | 350 | 7 | 11 | 14 | 18 | 25 | 31 | 26 | 31 | 9 | N |
| 27-Nov-06 | 27 | 18 | 27 | 26 | 13 | 14 | 10 | 2 | 1 | 359 | 358 | 357 | 355 | 1 | 8 | 4 | 15 | 322 | 308 | 316 | 314 | 325 | 329 | 321 | 360 | N |
| 28-Nov-06 | 318 | 290 | 296 | 283 | 296 | 297 | 279 | 271 | 271 | 269 | 232 | 235 | 153 | 170 | 206 | 209 | 179 | 190 | 197 | 225 | 223 | 199 | 220 | 239 | 260 | W |
| 29-Nov-06 | 216 | 263 | 268 | 257 | 247 | 261 | 243 | 238 | 226 | 225 | 218 | 255 | 321 | 351 | 257 | 274 | 164 | 76 | 192 | 193 | 197 | 193 | 196 | 196 | 214 | SW |
| 30-Nov-06 | 199 | 214 | 231 | 249 | 214 | 192 | 298 | 250 | 149 | 187 | 263 | 336 | 317 | 302 | 321 | 323 | 329 | 331 | 353 | 3 | 354 | 342 | 322 | 333 | 316 | NW |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Avg | 285 | 290 | 310 | 300 | 317 | 325 | 338 | 302 | 321 | 328 | 320 | 303 | 337 | 320 | 352 | 2 | 13 | 4 | 359 | 325 | 287 | 173 | 180 | 295 | | |

# PASZA - Valleyview - Standard Deviation of Wind Direction Monthly Summary

Station: Valleyview
Station Owner: PASZA

## HOURLY AVERAGE TABLE

**Wind Direction (WD)**

**Monitoring Dates:** November 1, 2006 to December 1, 2006

**Summary**

Determined by the Yamartino 15-min interval calculation

| | | | |
|---|---|---|---|
| Calm Time: | 0 hrs | **0%** calms | Operational Time: 720 hrs |
| Calibration Time: | 0 hrs | | AMD Operational Uptime: 100.0% |

| Percentile | 99 | 95 | 75 | 50 | 25 | 5 | 1 |
|---|---|---|---|---|---|---|---|
| | 62.1 | 50.1 | 21.3 | 11.4 | 7.5 | 4.8 | 3.5 |

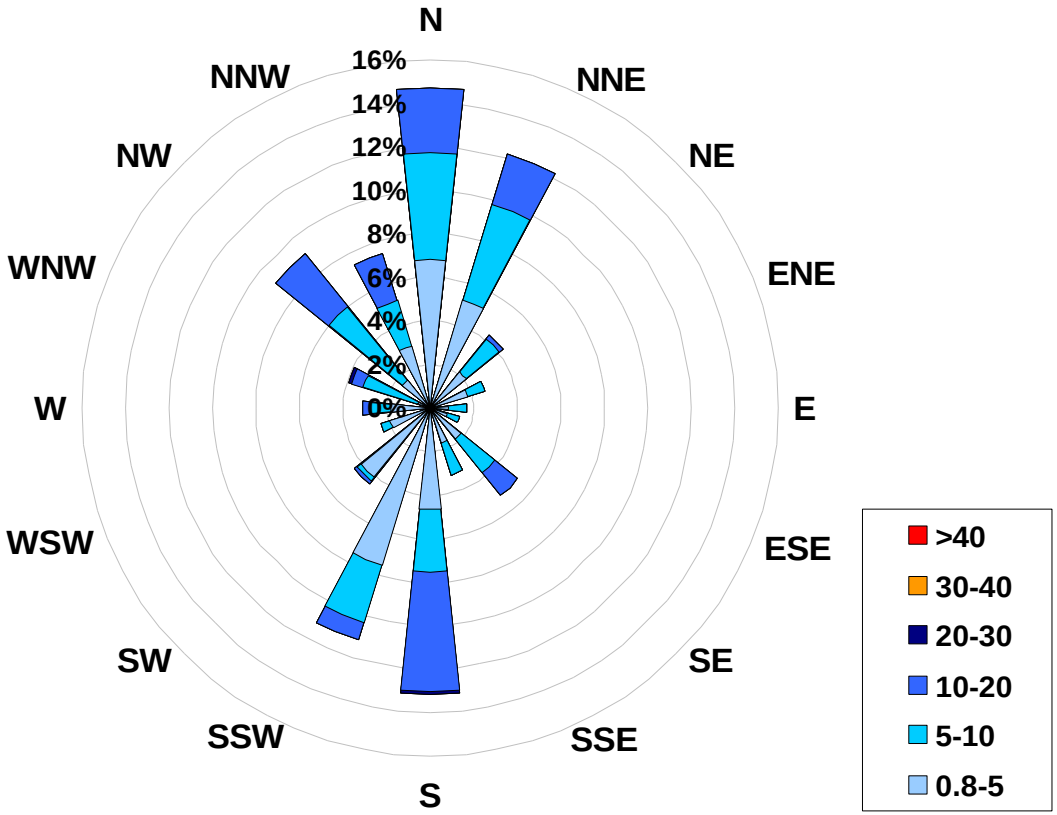
**Status Flag Characters**

| | | | |
|---|---|---|---|
| C | Calibration | A | AIC - Zero / Span Check |
| S | Instrument out of Service | X | Filter Exchange |
| N | No Data | M | Equipment Maintenance |
| D | Excessive Instrument Drift | P | Power Failure |

**Day** **Mountain Standard Time**

| Hour Start / Hour End | 0:00 1:00 | 1:00 2:00 | 2:00 3:00 | 3:00 4:00 | 4:00 5:00 | 5:00 6:00 | 6:00 7:00 | 7:00 8:00 | 8:00 9:00 | 9:00 10:00 | 10:00 11:00 | 11:00 12:00 | 12:00 13:00 | 13:00 14:00 | 14:00 15:00 | 15:00 16:00 | 16:00 17:00 | 17:00 18:00 | 18:00 19:00 | 19:00 20:00 | 20:00 21:00 | 21:00 22:00 | 22:00 23:00 | 23:00 0:00 | Daily Maximum |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1-Nov-06 | 12 | 13 | 19 | 22 | 10 | 43 | 11 | 17 | 18 | 51 | 50 | 59 | 24 | 51 | 20 | 20 | 13 | 46 | 51 | 33 | 16 | 12 | 14 | 13 | 58.6 |
| 2-Nov-06 | 13 | 16 | 12 | 24 | 17 | 5 | 4 | 9 | 5 | 8 | 36 | 26 | 11 | 9 | 9 | 7 | 7 | 6 | 6 | 7 | 10 | 11 | 8 | 10 | 35.8 |
| 3-Nov-06 | 15 | 11 | 8 | 10 | 11 | 11 | 10 | 12 | 11 | 13 | 13 | 14 | 21 | 15 | 14 | 44 | 8 | 10 | 25 | 19 | 16 | 21 | 20 | 27 | 44.2 |
| 4-Nov-06 | 24 | 63 | 37 | 23 | 21 | 11 | 10 | 10 | 11 | 14 | 13 | 23 | 14 | 17 | 14 | 11 | 10 | 10 | 22 | 8 | 41 | 23 | 19 | 10 | 63.0 |
| 5-Nov-06 | 8 | 20 | 22 | 9 | 9 | 11 | 12 | 10 | 12 | 15 | 11 | 17 | 10 | 9 | 12 | 9 | 7 | 12 | 9 | 8 | 8 | 28 | 10 | 9 | 28.0 |
| 6-Nov-06 | 9 | 9 | 8 | 7 | 8 | 8 | 7 | 45 | 8 | 14 | 13 | 14 | 11 | 23 | 13 | 17 | 13 | 13 | 13 | 12 | 12 | 18 | 46 | 55 | 55.4 |
| 7-Nov-06 | 49 | 43 | 34 | 23 | 37 | 11 | 28 | 46 | 51 | 20 | 8 | 7 | 7 | 11 | 9 | 10 | 22 | 32 | 33 | 51 | 16 | 16 | 7 | 10 | 50.8 |
| 8-Nov-06 | 10 | 8 | 6 | 9 | 7 | 6 | 6 | 8 | 12 | 10 | 11 | 12 | 11 | 12 | 11 | 10 | 4 | 5 | 15 | 32 | 26 | 50 | 42 | 35 | 50.1 |
| 9-Nov-06 | 54 | 33 | 27 | 26 | 25 | 55 | 10 | 12 | 8 | 6 | 33 | 11 | 4 | 7 | 5 | 4 | 6 | 40 | 57 | 45 | 63 | 64 | 7 | 30 | 64.4 |
| 10-Nov-06 | 16 | 24 | 25 | 32 | 61 | 77 | 40 | 28 | 21 | 23 | 20 | 8 | 8 | 23 | 44 | 10 | 12 | 39 | 8 | 7 | 8 | 12 | 16 | 10 | 77.0 |
| 11-Nov-06 | 13 | 11 | 14 | 16 | 11 | 11 | 17 | 12 | 10 | 11 | 15 | 19 | 43 | 20 | 50 | 21 | 19 | 28 | 33 | 29 | 48 | 18 | 38 | 45 | 49.7 |
| 12-Nov-06 | 46 | 48 | 51 | 51 | 21 | 57 | 48 | 56 | 51 | 52 | 50 | 62 | 39 | 38 | 37 | 52 | 48 | 41 | 18 | 53 | 55 | 18 | 15 | 20 | 61.7 |
| 13-Nov-06 | 53 | 12 | 7 | 15 | 15 | 10 | 43 | 17 | 7 | 6 | 5 | 4 | 5 | 3 | 4 | 5 | 6 | 7 | 6 | 6 | 8 | 9 | 8 | 9 | 52.6 |
| 14-Nov-06 | 7 | 7 | 10 | 29 | 29 | 12 | 11 | 9 | 10 | 10 | 20 | 12 | 6 | 6 | 7 | 6 | 7 | 8 | 7 | 5 | 6 | 6 | 5 | 5 | 29.4 |
| 15-Nov-06 | 6 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 8 | 7 | 6 | 7 | 10 | 8 | 9 | 24 | 56 | 15 | 17 | 8 | 14 | 8 | 12 | 29 | 55.6 |
| 16-Nov-06 | 16 | 6 | 12 | 11 | 10 | 12 | 20 | 19 | 17 | 18 | 21 | 20 | 19 | 12 | 15 | 19 | 41 | 16 | 40 | 25 | 7 | 32 | 8 | 6 | 41.5 |
| 17-Nov-06 | 14 | 12 | 32 | 17 | 37 | 18 | 29 | 8 | 8 | 10 | 9 | 41 | 14 | 7 | 5 | 27 | 49 | 46 | 32 | 30 | 12 | 19 | 58 | 39 | 58.3 |
| 18-Nov-06 | 58 | 71 | 65 | 21 | 37 | 13 | 8 | 9 | 26 | 9 | 9 | 14 | 20 | 20 | 13 | 6 | 10 | 34 | 30 | 34 | 6 | 7 | 6 | 7 | 71.2 |
| 19-Nov-06 | 17 | 13 | 7 | 6 | 6 | 7 | 6 | 5 | 9 | 15 | 16 | 8 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 8 | 7 | 17 | 10 | 9 | 17.0 |
| 20-Nov-06 | 19 | 8 | 33 | 5 | 5 | 4 | 8 | 16 | 4 | 5 | 5 | 14 | 13 | 10 | 8 | 17 | 17 | 49 | 29 | 40 | 59 | 62 | 39 | 17 | 62.2 |
| 21-Nov-06 | 25 | 38 | 11 | 9 | 6 | 9 | 8 | 5 | 5 | 7 | 5 | 11 | 9 | 11 | 10 | 19 | 9 | 9 | 7 | 5 | 6 | 6 | 6 | 8 | 37.6 |
| 22-Nov-06 | 10 | 8 | 8 | 6 | 7 | 8 | 8 | 6 | 5 | 5 | 26 | 46 | 10 | 5 | 7 | 9 | 11 | 8 | 11 | 14 | 22 | 10 | 7 | 9 | 46.3 |
| 23-Nov-06 | 22 | 20 | 20 | 10 | 15 | 18 | 26 | 12 | 5 | 6 | 5 | 4 | 4 | 5 | 4 | 6 | 7 | 6 | 7 | 8 | 7 | 7 | 6 | 5 | 25.6 |
| 24-Nov-06 | 4 | 2 | 6 | 12 | 8 | 5 | 5 | 5 | 7 | 8 | 7 | 9 | 8 | 8 | 8 | 7 | 6 | 6 | 6 | 7 | 7 | 12 | 18 | 33 | 33.3 |
| 25-Nov-06 | 14 | 9 | 30 | 40 | 31 | 20 | 17 | 13 | 14 | 10 | 22 | 7 | 7 | 14 | 20 | 16 | 8 | 6 | 10 | 4 | 10 | 22 | 49 | 37 | 48.6 |
| 26-Nov-06 | 40 | 27 | 56 | 30 | 22 | 17 | 14 | 5 | 6 | 8 | 21 | 63 | 18 | 4 | 5 | 4 | 4 | 8 | 5 | 8 | 8 | 8 | 9 | 9 | 62.5 |
| 27-Nov-06 | 7 | 7 | 7 | 9 | 5 | 6 | 4 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 5 | 6 | 9 | 23 | 7 | 9 | 11 | 26 | 13 | 10 | 25.7 |
| 28-Nov-06 | 9 | 13 | 10 | 9 | 11 | 12 | 13 | 9 | 9 | 9 | 26 | 22 | 13 | 19 | 12 | 15 | 7 | 16 | 29 | 29 | 16 | 23 | 19 | 26 | 29.4 |
| 29-Nov-06 | 30 | 41 | 13 | 12 | 12 | 18 | 23 | 11 | 5 | 11 | 21 | 48 | 13 | 10 | 40 | 41 | 41 | 49 | 40 | 8 | 6 | 6 | 7 | 7 | 48.6 |
| 30-Nov-06 | 6 | 8 | 17 | 26 | 11 | 43 | 32 | 21 | 34 | 23 | 27 | 45 | 12 | 11 | 13 | 8 | 9 | 7 | 3 | 6 | 7 | 18 | 15 | 9 | 44.8 |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hourly Max | 58 | 71 | 65 | 51 | 61 | 77 | 48 | 56 | 51 | 52 | 50 | 63 | 43 | 51 | 50 | 52 | 56 | 49 | 57 | 53 | 63 | 64 | 58 | 55 | |

## 1-hr Average Wind Rose (in km/hr) Located at the Valleyview Site for November 2006




| Calms: | 0% |
|---|---|

| Frequency Distribution of Wind in km/hr | | | |
|---|---|---|---|
| Range | | | Frequency (hrs) |
| 0.8 | < | 5 | 336 |
| 5 | to | 10 | 242 |
| 10 | to | 20 | 140 |
| 20 | to | 30 | 2 |
| 30 | to | 40 | 0 |
| | > | 40 | 0 |
| Total Non-Zero Values | | | 720 |

# PASZA

## Monthly Passive Data Summary

# Table 1. PASZA Passive Stations for November 2006

| Station Number | Station Name | PASZA SO2 ppb | PASZA O3 ppb | PASZA NO2 ppb | Site Legal |
|---|---|---|---|---|---|
| **Duplicates** | | | | | |
| 39a | Clouston Creek | **0.6** | **37.8** | **1.9** | |
| 39b | Clouston Creek | **0.6** | **37.9** | **1.8** | |
| 41a | Valleyview | **0.8** | **37.1** | **2.7** | |
| 41b | Valleyview | **0.8** | **36.4** | **2.6** | |
| 42a | Sunset House | **0.6** | **42.6** | **1.2** | |
| 42b | Sunset House | **0.5** | **42.9** | **1.3** | |
| 49a | Grande Prairie HP | **0.8** | **30.3** | **11.1** | |
| 49b | Grande Prairie HP | **0.8** | **25.6** | **13.9** | |
| 1 | Silver Valley | **0.8** | **35.7** | **2.2** | 08-27-081-11 W6M |
| 2 | Bay Tree | **0.6** | **29.8** | **2.1** | 13-16-078-13 W6M |
| 3 | Forth Creek | **0.5** | **33.4** | **1.5** | 04-13-082-07 W6M |
| 4 | Gordondale | **0.6** | **37.6** | **2.1** | 04-34-078-10 W6M |
| 5 | Boone Creek | **0.5** | **29.3** | **2.6** | 01-23-076-11 W6M |
| 7 | Steeprock Creek | **0.8** | **38.1** | **2.2** | 09-35-072-13 W6M |
| 9 | Spirit River | **0.7** | **36.2** | **2.3** | 08-12-079-07 W6M |
| 10 | Woking | **0.6** | **33.1** | **1.7** | 01-13-076-07 W6M |
| 11 | Webber Creek | **0.9** | **40.7** | **2.5** | 09-36-074-09 W6M |
| 12 | Hythe | **0.8** | **31.4** | **3.5** | 14-36-072-11 W6M |
| 14 | Sylvester | **0.2** | **28.7** | **1.7** | 08-06-069-12 W6M |
| 16 | Beaverlodge | **0.8** | **33.3** | **4.7** | 15-36-071-10 W6M |
| 17 | Poplar | **0.9** | **32.5** | **3.3** | 13-06-073-08 W6M |
| 18 | Saddle Hills | **0.7** | **42.3** | **1.7** | 04-25-074-07 W6M |
| 19 | Wanham | **0.6** | **40.9** | **1.9** | 16-22-077-03 W6M |
| 20 | Shaftesbury | **0.3** | **32.7** | **1.4** | 04-03-082-23 W5M |

# Table 1. PASZA Passive Stations for November 2006 (Continued)

| Station Number | Station Name | SO2 ppb | O3 ppb | NO2 ppb | Site Legal |
|---|---|---|---|---|---|
| 21 | Eaglesham | **0.4** | **34.4** | **1.2** | 16-21-079-25 W5M |
| 23 | Bear Lake | **1.0** | **42.7** | **3.4** | 15-31-072-06 W6M |
| 24 | Wembley | **0.6** | **36.4** | **4.6** | 12-31-070-08 W6M |
| 25 | Pinto Creek | **0.5** | **31.7** | **2.9** | 04-24-069-11 W6M |
| 26 | Flyingshot | **0.7** | **28.8** | **6.4** | 15-36-070-07 W6M |
| 27 | Grande Prairie I | **0.7** | **24.2** | **13.5** | 08-15-071-06 W6M |
| 28 | Clairmont Lake | **0.9** | **38.9** | **2.9** | 09-06-073-04 W6M |
| 29 | Smoky Heights | **0.6** | **37.0** | **2.8** | 04-06-075-02 W6M |
| 30 | Fitzsimmons | **0.5** | **37.2** | **3.2** | 15-36-072-03 W6M |
| 32 | Gold Creek | **0.5** | **20.6** | **4.8** | 06-33-067-05 W6M |
| 33 | Wapiti | **0.6** | **35.1** | **4.2** | 02-25-071-03 W6M |
| 34 | Puskwaskau | **0.3** | **33.2** | **1.1** | 15-35-074-25 W5M |
| 35 | Jean Cote | **0.4** | **42.5** | **1.5** | 12-35-079-21 W5M |
| 36 | Guy | **0.4** | **37.2** | **1.4** | 03-04-076-22 W5M |
| 37 | Crooked Creek | **0.7** | **38.3** | **3.8** | 16-01-071-26 W5M |
| 38 | Karr Creek | **0.3** | **23.6** | **1.2** | 10-16-065-02 W6M |
| 39 | Clouston Creek | **0.6** | **37.8** | **1.9** | 12-01-073-22 W5M |
| 40 | McLennan | **0.4** | **38.0** | **1.8** | 03-29-077-19 W5M |
| 41 | Valleyview | **0.8** | **36.8** | **2.7** | 09-30-069-22 W5M |
| 42 | Sunset House | **0.6** | **42.7** | **1.2** | 05-32-070-19 W5M |
| 43 | High Prairie | **0.4** | **34.4** | **2.7** | 16-13-074-17 W5M |
| 44 | Peavine | **0.2** | **33.6** | **1.2** | 03-05-079-15 W5M |
| 45 | Gift Lake | **0.2** | **33.3** | **1.3** | 10-07-079-12 W5M |
| 46 | Little Smoky | **0.7** | **33.0** | **4.3** | 12-01-065-21 W5M |
| 47 | Kinuso | **0.2** | **34.0** | **1.9** | 12-10-073-10 W5M |
| 48 | Deer Mountain | **0.4** | **40.2** | **1.2** | 15-22-068-09 W5M |
| 49 | Grande Prairie HP | **0.8** | **27.9** | **12.5** | 17-26-071-06 W6M |

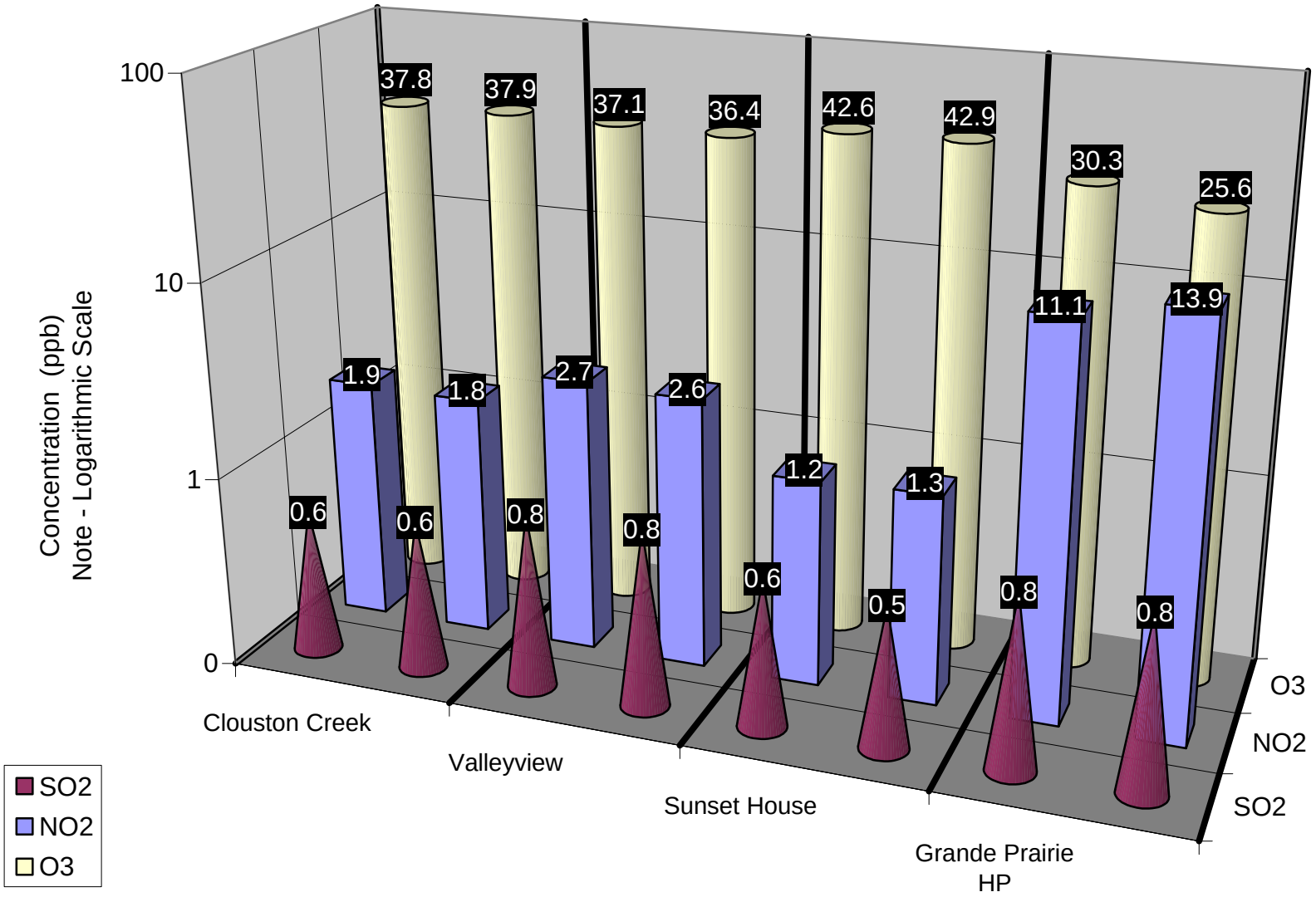



**Figure 60. Duplicate Summary Chart**

# Table 2. Passive Summary Results for November 2006

| Stats | Sulphur Dioxide $SO_2$ | Ozone $O_3$ | Nitrogen Dioxide $NO_2$ |
|---|---|---|---|
| | ppb | ppb | ppb |
| | Passive Summary for November 2006 (PASZA Zone) | | |
| **Mean** | **0.6** | **34.6** | **3.0** |
| **Standard Deviation** | **0.2** | **5.1** | **2.5** |
| **Minimum** | **0.2** | **20.6** | **1.1** |
| | **Gift Lake (#45)** | **Gold Creek (#32)** | **Puskwaskau (#34)** |
| **Maximum** | **1.0** | **42.7** | **13.5** |
| | **Bear Lake (#23)** | **Sunset House (#42)** | **Grande Prairie I (#27)** |

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

| | $SO_2$ | $O_3$ | $NO_2$ |
|---|---|---|---|
| **AENV Beaverlodge station** | **1.1** | **22.6** | **8.8** |
| **PASZA Beaverlodge passive** | **0.8** | **33.3** | **4.7** |

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

| | $SO_2$ | $O_3$ | $NO_2$ |
|---|---|---|---|
| **PASZA Henry Pirker station** | **0.8** | **14.4** | **17.2** |
| **PASZA Grande Prairie passive** | **0.8** | **27.9** | **12.5** |

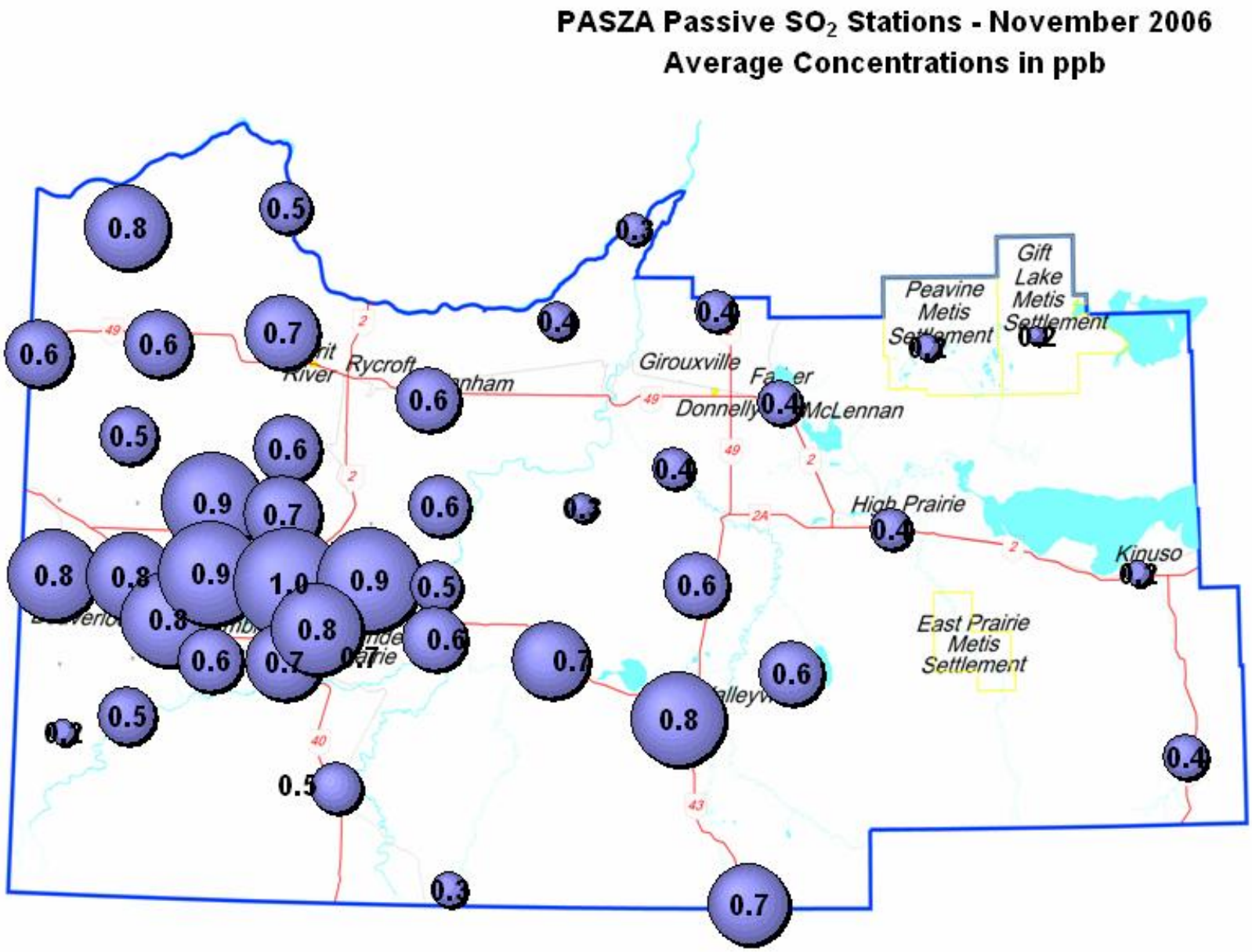



**Figure 61. $SO_2$ Bubble Chart**

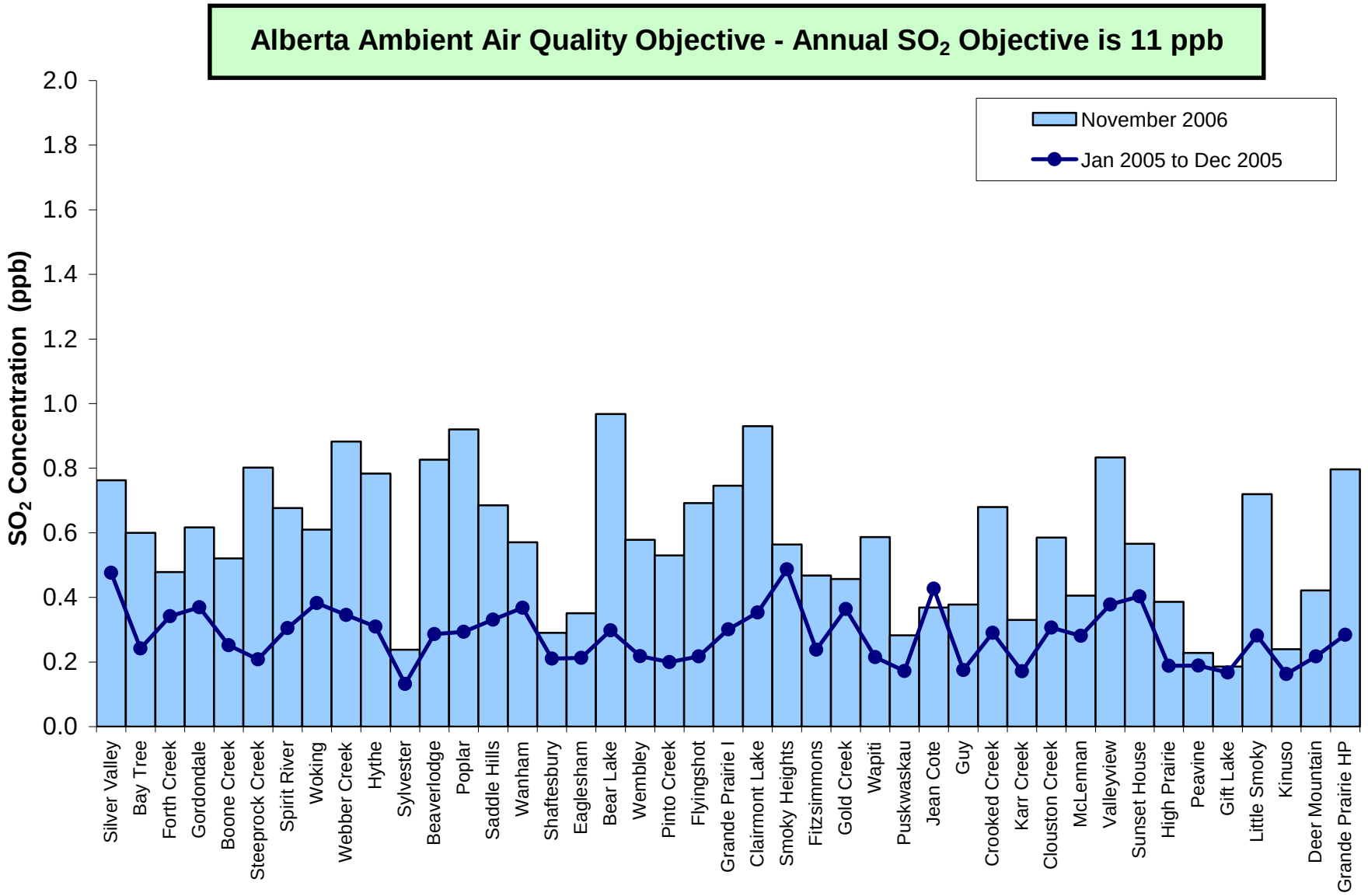



**Figure 62. $SO_2$ Summary Chart**

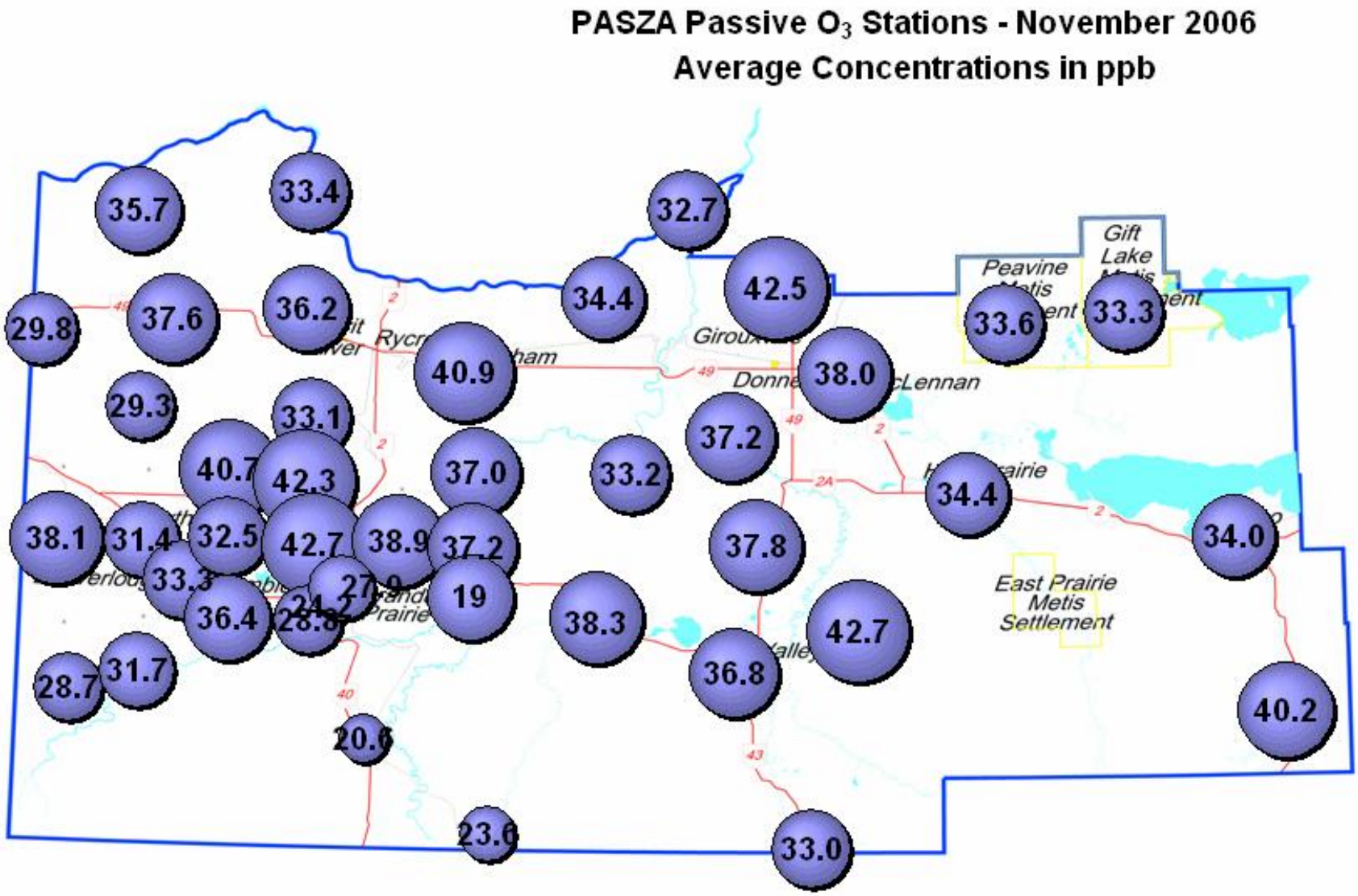



**Figure 63. $O_3$ Bubble Chart**

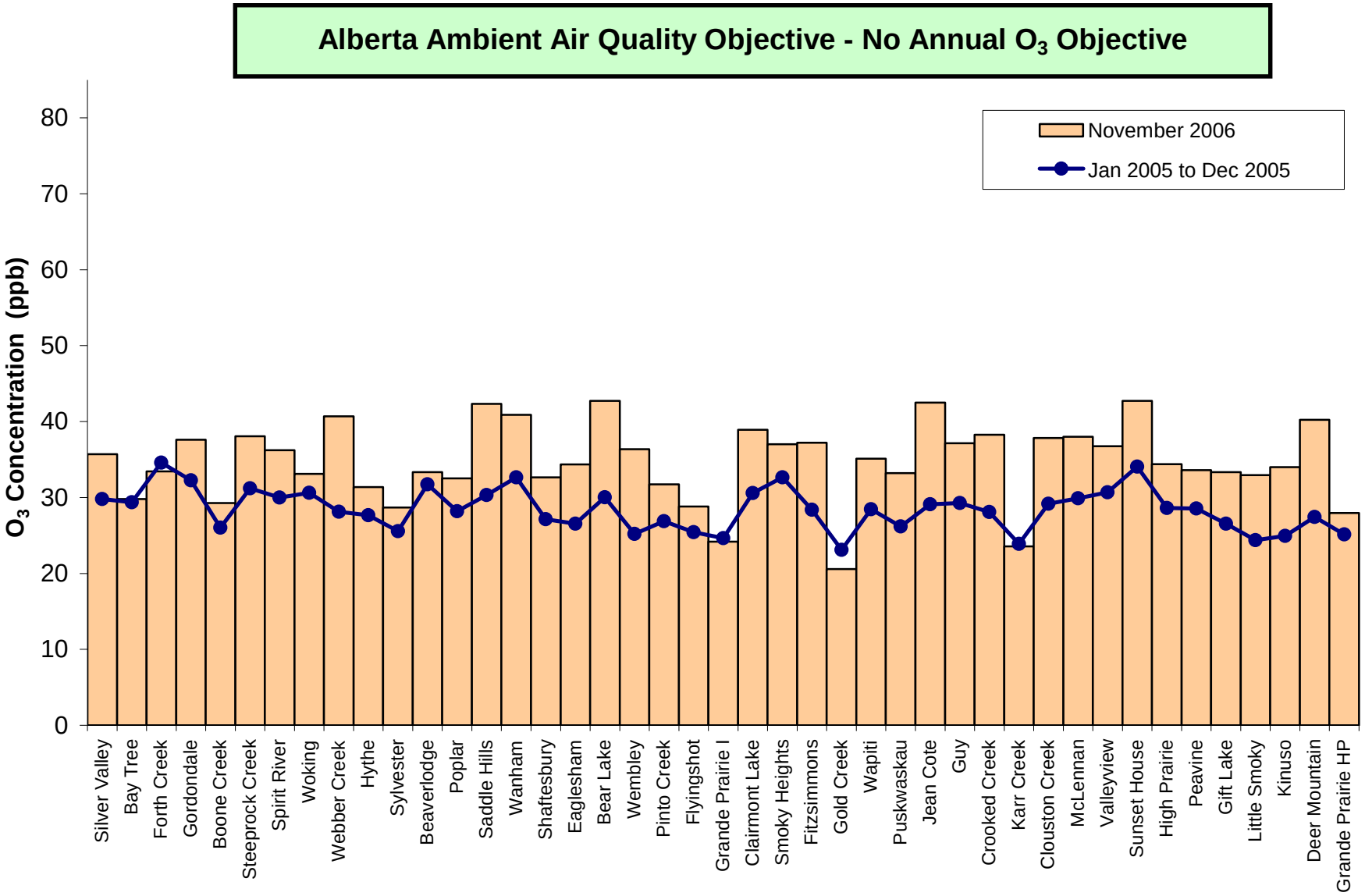



**Figure 64. $O_3$ Summary Chart**

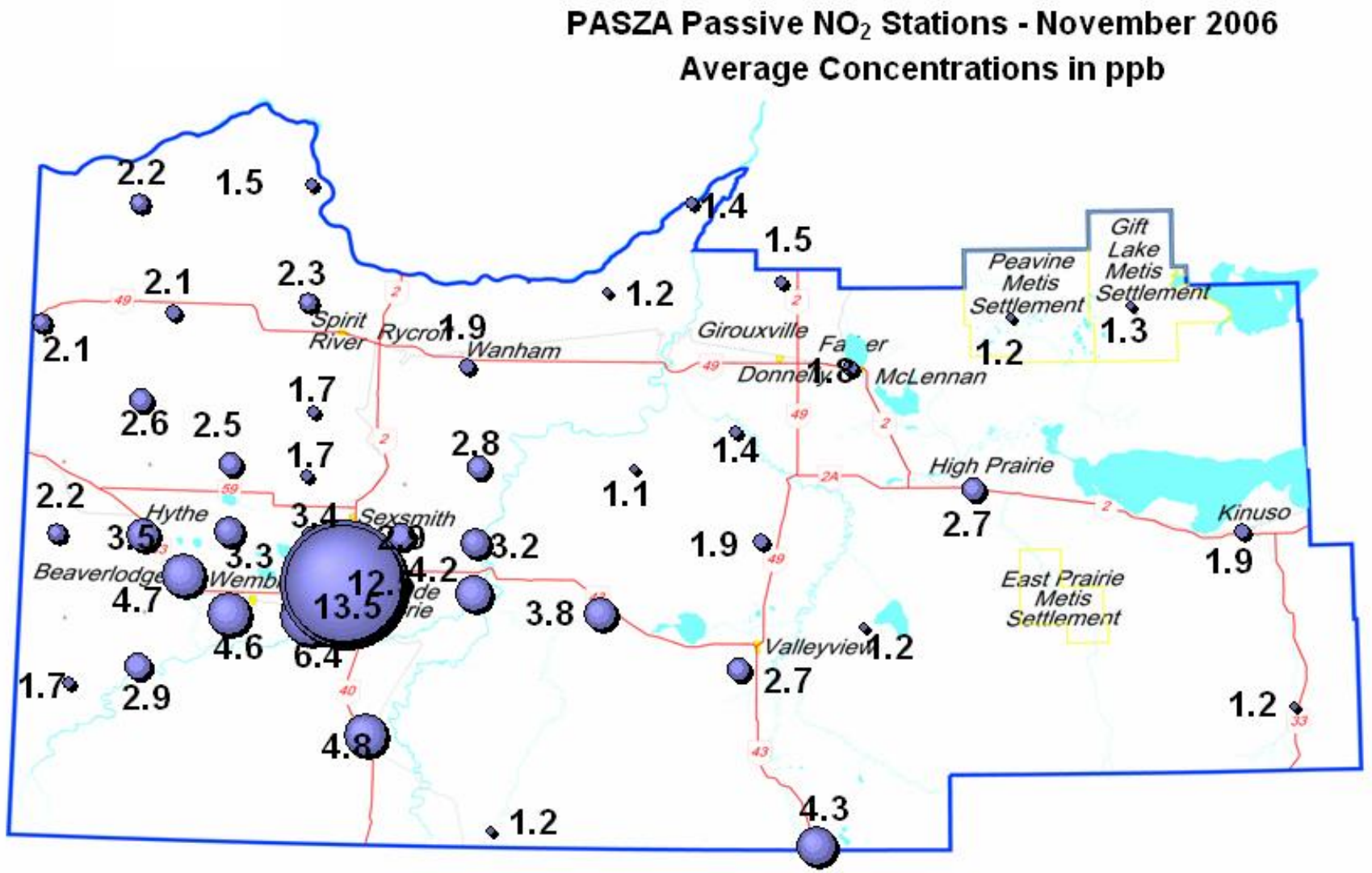



**Figure 65. $NO_2$ Bubble Chart**

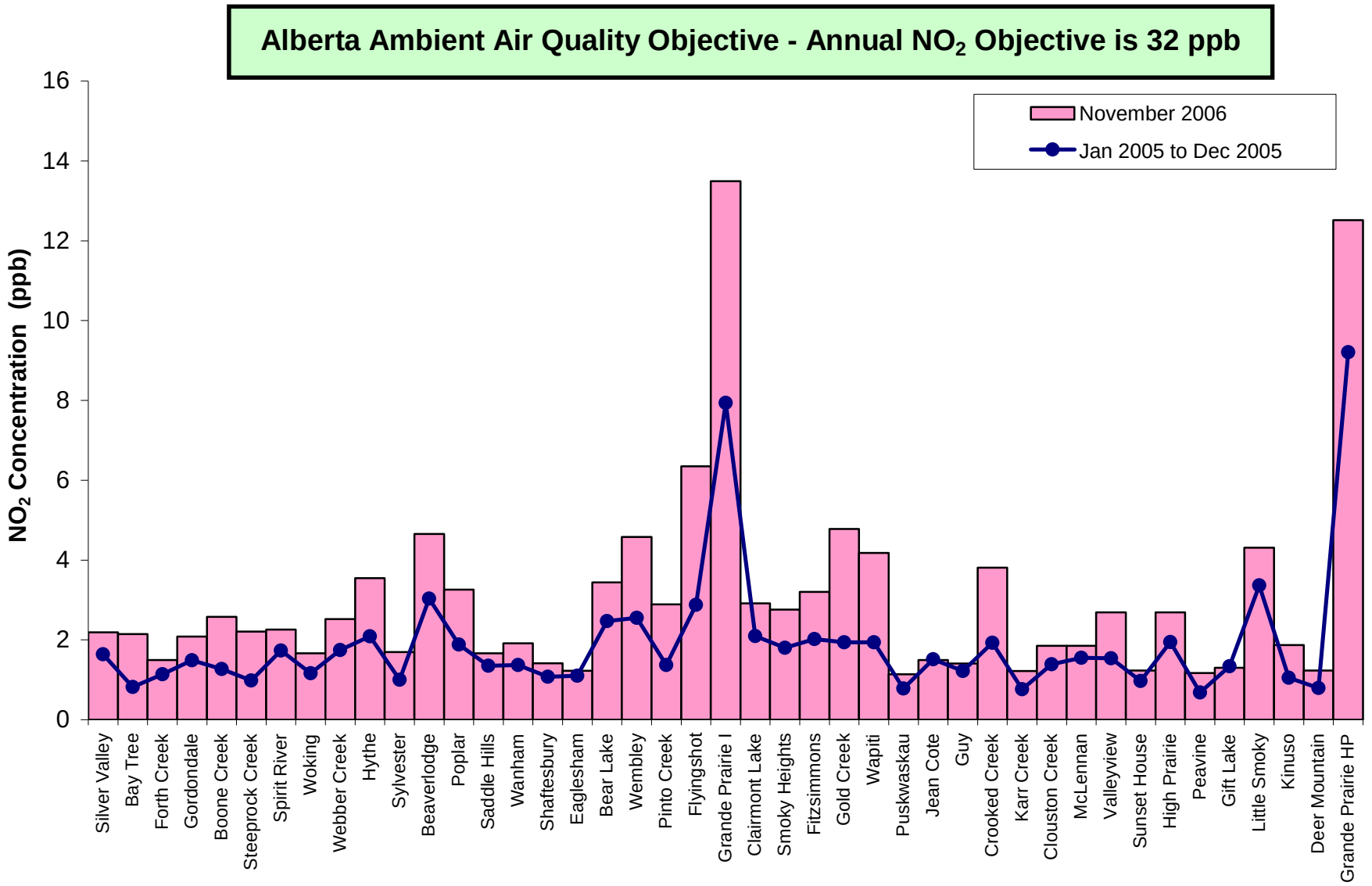



**Figure 66. $NO_2$ Summary Chart**

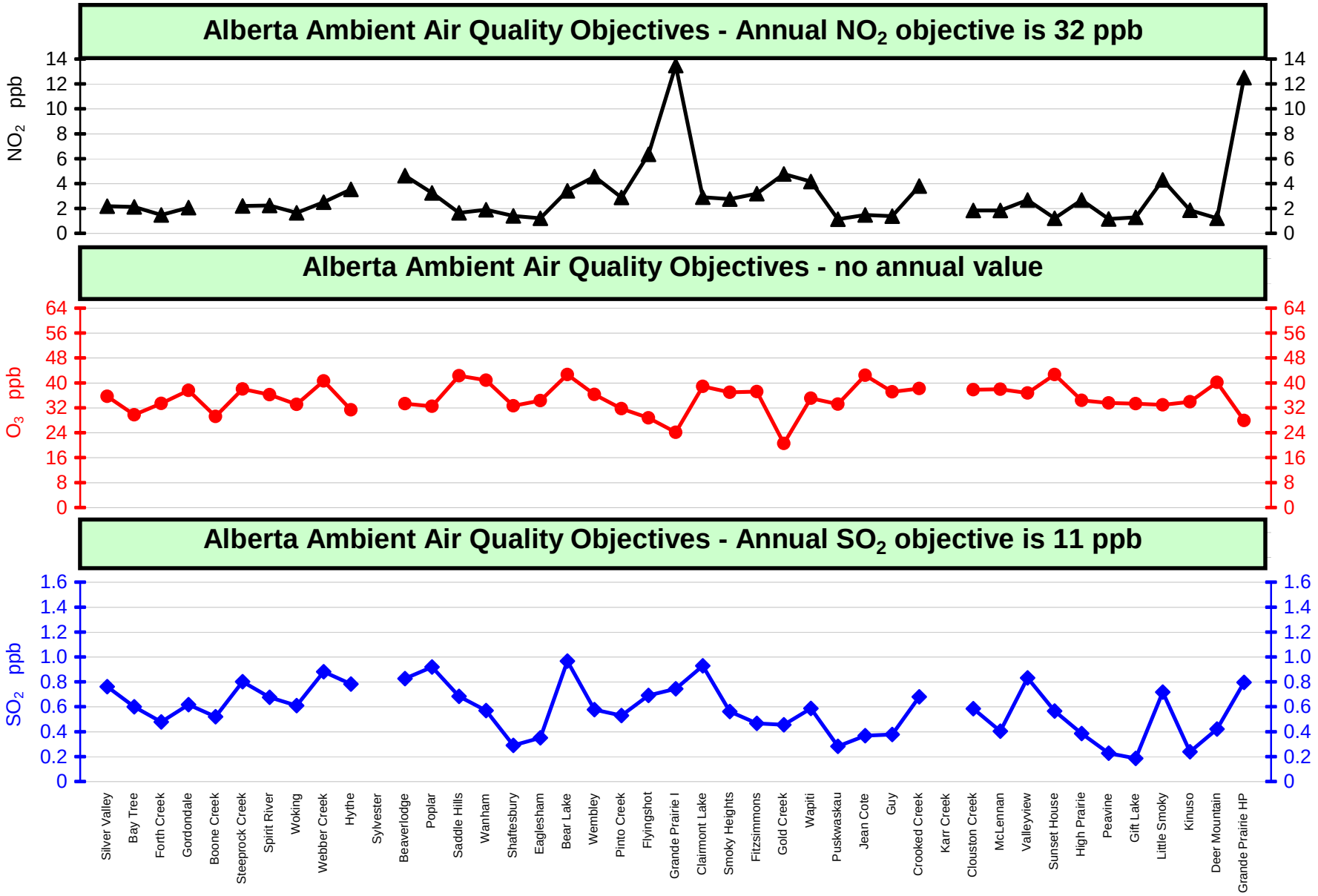



**Figure 67. Overview Summary**

# November 2006 Calibration Reports

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

**$SO_2$, NO, $NO_2$, $NO_x$, $O_3$, CO, THC, TRS,**

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

**$SO_2$, TRS, $PM_{2.5}$**

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

**$SO_2$, TRS, $PM_{2.5}$**

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

**$SO_2$, NO, $NO_2$, $NO_x$, $O_3$, $PM_{2.5}$**

**PASZA – Falher (Portable) Station with the following calibrations:**

**$SO_2$, TRS, $O_3$**

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

**$SO_2$, $H_2S$**

# Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **$SO_2$**

Air Monitoring Network **PASZA**

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 6, 2006 | Previous Calibration | October 5, 2006 |
| Station Number | 1 | Station Location | Muskoseepi Park |

Reason: [Routine] [Install] [Removal] [Other:]

| | | | |
|---|---|---|---|
| Start Time (MST) | 12:51 | End Time (MST) | 16:40 |
| Barometric Pressure | 27.3 inches Hg | Station Temperature | 20.0 Deg C |
| Calibrator | VICI Metronics | Serial Number | 111-1695 |
| Perm-tube Conc | 1,946 ng/min | Perm-tube Date | 8/8/2006 |
| Correction factor | 0.928684 | Perm-tube Cert # | 19-25218 |
| DACS make | Focus AP1000 | DACS serial No. | 45266 |
| DACS voltage range | 0 - 10 volt | DACS channel # | 4 |
| | Before | | After |
| Calculated slope | 0.969066 | Calculated slope | 0.983175 |
| Calculated intercept | -0.374166 | Calculated intercept | 2.127025 |

| | | |
|---|---|---|
| Analyzer make | TEI Model 43A | Analyzer serial # 43A-21120-195 |

| | before | | after | |
|---|---|---|---|---|
| Concentration range | 0 - 500 | ppb | 0 - 500 | ppb |
| SO2 zero pot | 170 | | 180 | |
| SO2 span pot | 233 | | 001 | |
| UV Lamp voltage | 947 | V | 950 | V |
| Vacuum | 22.2 | " Hg | 22 | " Hg |
| Sample Flow | 425 | ccm | 425 | ccm |

## *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) |
|---|---|---|---|---|
| zero | 2321.7 | 0.0 | -0.6 | N/A |
| 2500 | 2321.7 | 319.9 | 323.9 | 0.9878 |
| 5000 | 4643.4 | 160.0 | 160.4 | 0.9975 |
| 9000 | 8358.2 | 88.9 | 86.2 | 1.0315 |
| | | | | |
| | | | | |
| zero | 2321.7 | 0.0 | 1.9 | As Found Zero |
| 2500 | 2321.7 | 319.9 | 343.2 | As Found Span |
| | | | Average Correction Factor | 1.0056 |

Calculated value of As Found Response: 330.365 ppm Percent Change of As Found: -3.3%

| | before calibration | | after calibration | |
|---|---|---|---|---|
| Auto zero | -0.7 | ppm | 0.5 | ppm |
| Auto span | 276.3 | ppm | 270.4 | ppm |

Notes:

Calibration Performed By: Dawn Ewan

## Calibration Summary

FOCUS AIR QUALITY MONITORING

Parameter **SO2**

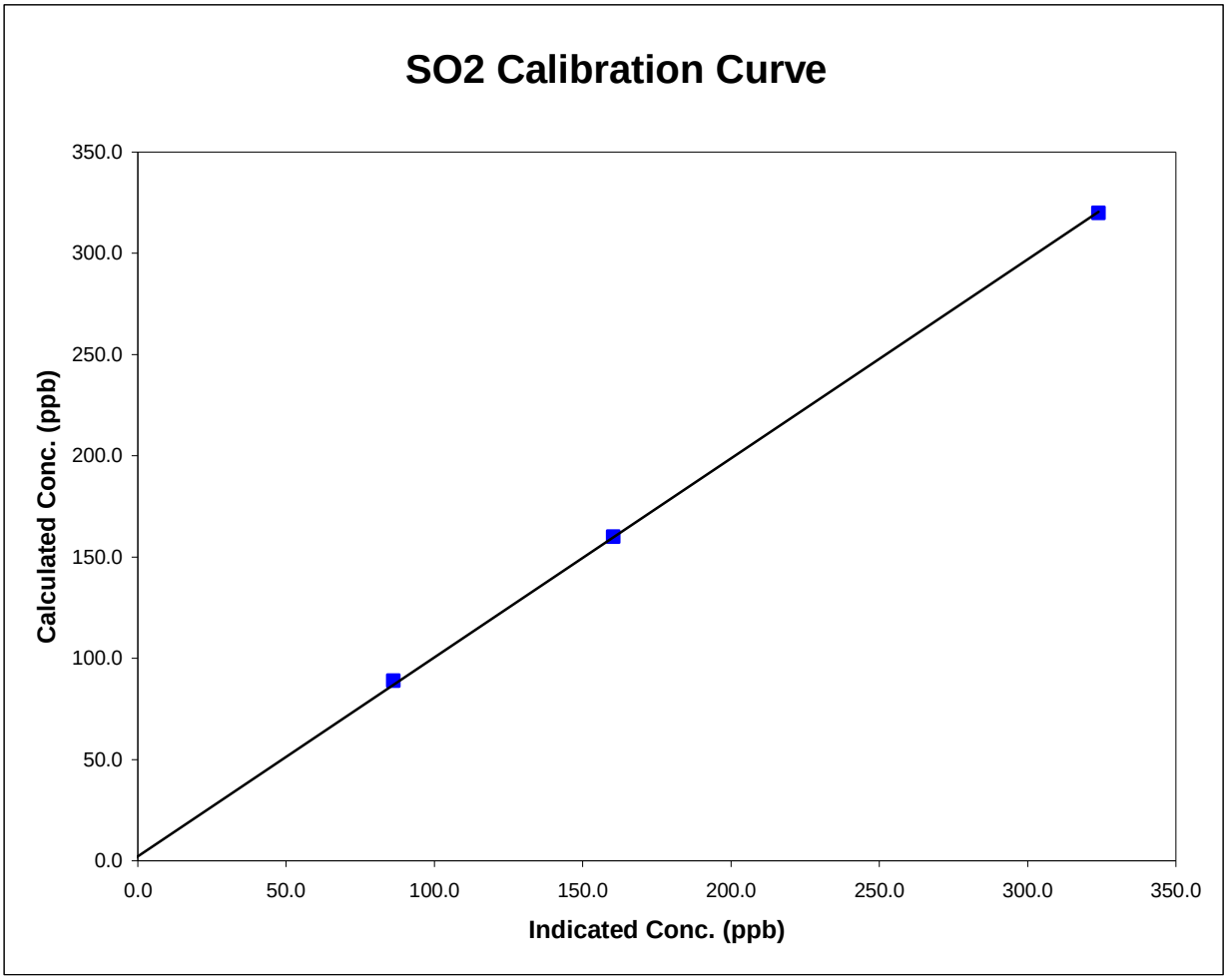
Air Monitoring Network **PASZA**

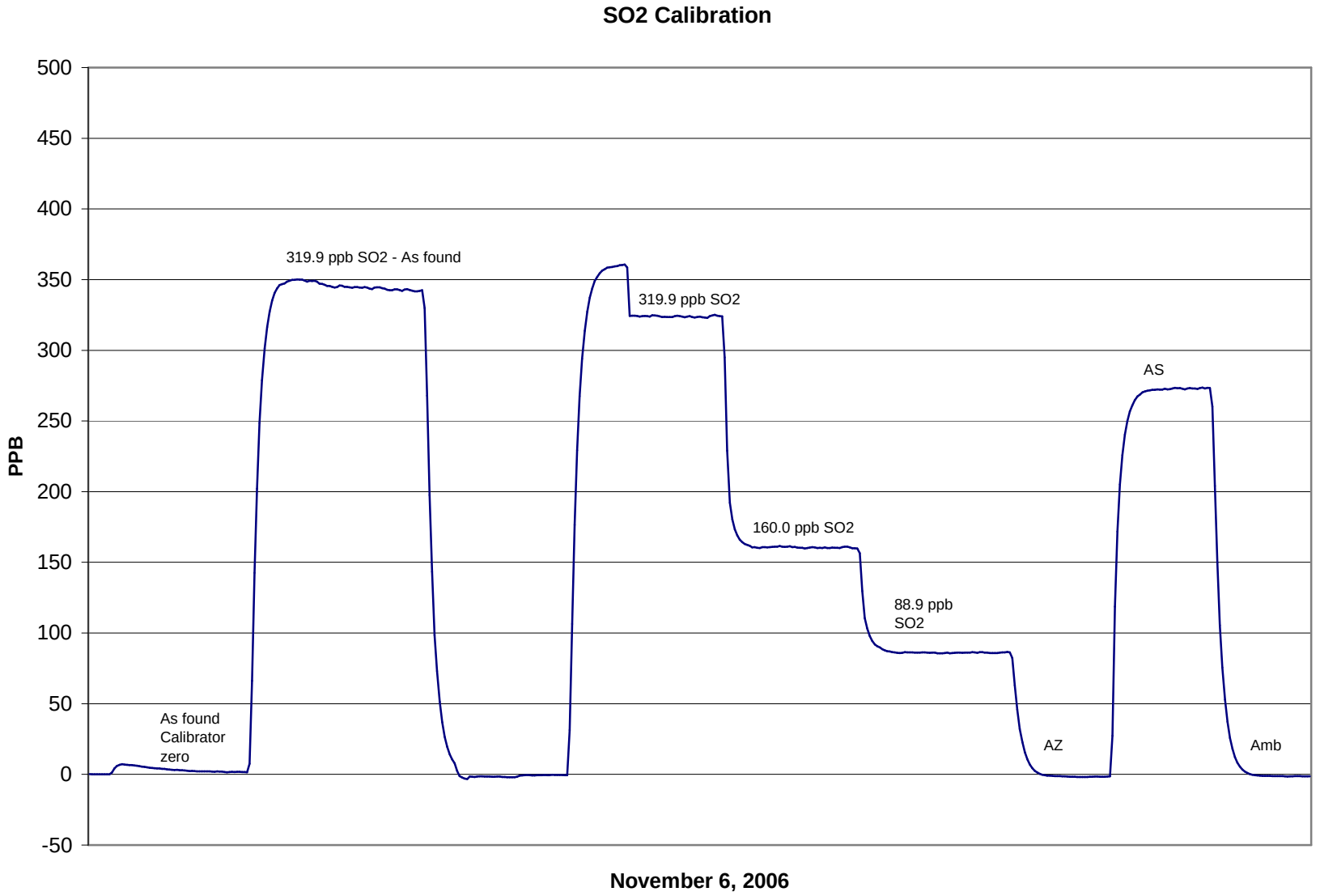
***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 6, 2006 | Previous Calibration | October 5, 2006 |
| Station Number | 1 | Station Location | Muskoseepi Park |
| Start Time (MST) | 12:51 | End Time (MST) | 16:40 |
| Analyzer make/model | TEI Model 43A | Analyzer serial # | 43A-21120-195 |

***Calibration Data***

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | -0.6 | N/A | | |
| 319.9 | 323.9 | 0.9878 | Correlation Coefficient | 0.999871 |
| 160.0 | 160.4 | 0.9975 | | |
| 88.9 | 86.2 | 1.0315 | Slope | 0.983175 |
| | | | | |
| | | | Intercept | 2.127025 |
| | | | | |




SO2 Calibration
500
450
400
350
300
250
200
150
100
50
0
-50
PPB
319.9 ppb SO2 - As found
319.9 ppb SO2
160.0 ppb SO2
88.9 ppb SO2
AS
As found Calibrator zero
AZ
Amb
November 6, 2006

# Calibration Report

Parameter **NOx-NO-$NO_2$**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 7, 2006 | Previous Calibration | October 24, 2006 |
| Station Number | 1 | Station Location | Muskoseepi Park |

Reason: Routine | Installation | Removal | Other:

| | | | | | |
|---|---|---|---|---|---|
| Start Time (MST) | 10:32 | | End Time (MST) | 16:44 | |
| Barometric Pressure | 0.902 | Atm | Station Temperature | 20.0 | Deg C |
| Calibrator | Environics 6103 | | Serial Number | 2844 | |
| NO Cal Gas Conc | 50.3 | ppm | Cal Gas Expiry Date | 22-Nov-06 | |
| NOx Cal Gas Conc | 50.5 | ppm | Cal Gas Serial # | BAL786 | |

## *DACS Information*

| | | | |
|---|---|---|---|
| DACS make | FOCUS AP1000 | DACS serial No. | 45269 |

| Parameter | | NO2 | NOx | NO |
|---|---|---|---|---|
| Before | Data Slope | 1.000846 | 0.999882 | 0.997306 |
| | Data Offset | 0.328645 | 2.203904 | 1.928013 |
| After | Data Slope | 0.999173 | 1.000796 | 1.001160 |
| | Data Offset | -0.232501 | -0.097040 | 0.193158 |
| Channel # | | 8 | 6 | 7 |
| Voltage Range | | 0 - 10 VDC | 0 - 10 VDC | 0 - 10 VDC |

## *Analyzer Information*

Analyzer make/model Teco 42C Analyzer serial # 508011073

| Test Point | before | | after | |
|---|---|---|---|---|
| Concentration range | 0 - 500 | ppb | 0 - 500 | ppb |
| NO background | 9.4 | ppb | 8.1 | mV |
| NOx background | 10.9 | ppb | 8.2 | mV |
| NO coefficient | 0.874 | | 0.775 | |
| NOx coefficient | 0.981 | | 0.983 | |
| Chamber Temp | 50.0 | Deg C | 49.9 | Deg C |
| Cooler Temp | -2.4 | Deg C | -2.4 | Deg C |
| Converter Temp | 318.0 | Deg C | 318.0 | Deg C |
| Vacuum | 194.5 | mm Hg | 176.2 | mm Hg |

Notes: Adjusted zero and span.

# Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **NOx-NO-$NO_2$**

Air Monitoring Network **PASZA**

## *Station Information*

Calibration Date: November 7, 2006 Station Location: Muskoseepi Park

## *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 | 4992 | 0.00 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | N/A | N/A |
| 1 | 4992 | 39.93 | 400.7 | 399.1 | 1.6 | 400.2 | 398.3 | 1.9 | 1.0013 | 1.0021 |
| 2 | 4992 | 19.91 | 200.6 | 199.8 | 0.8 | 201.4 | 200.1 | 1.3 | 0.9963 | 0.9988 |
| 3 | 4992 | 10.00 | 101.0 | 100.6 | 0.4 | 100.5 | 99.6 | 0.9 | 1.0048 | 1.0098 |
| | | | | | | | | | | |
| AFZ | 4992 | 0.00 | 0.0 | 0.0 | 0.0 | -1.5 | -0.5 | -1.0 | 0.0000 | 0.0000 |
| AFS | 4992 | 39.93 | 400.7 | 399.1 | 1.6 | 449.7 | 450.2 | -0.6 | 0.8911 | 0.8867 |
| | | | | | | | Average Correction Factor | | 1.0008 | 1.0035 |

As Found Concentrations: $NO_X$= 453.4 NO= 452.6 As Found Percent Change $NO_X$= 13.1% NO= 13.4%

## *GPT Calibration Data*

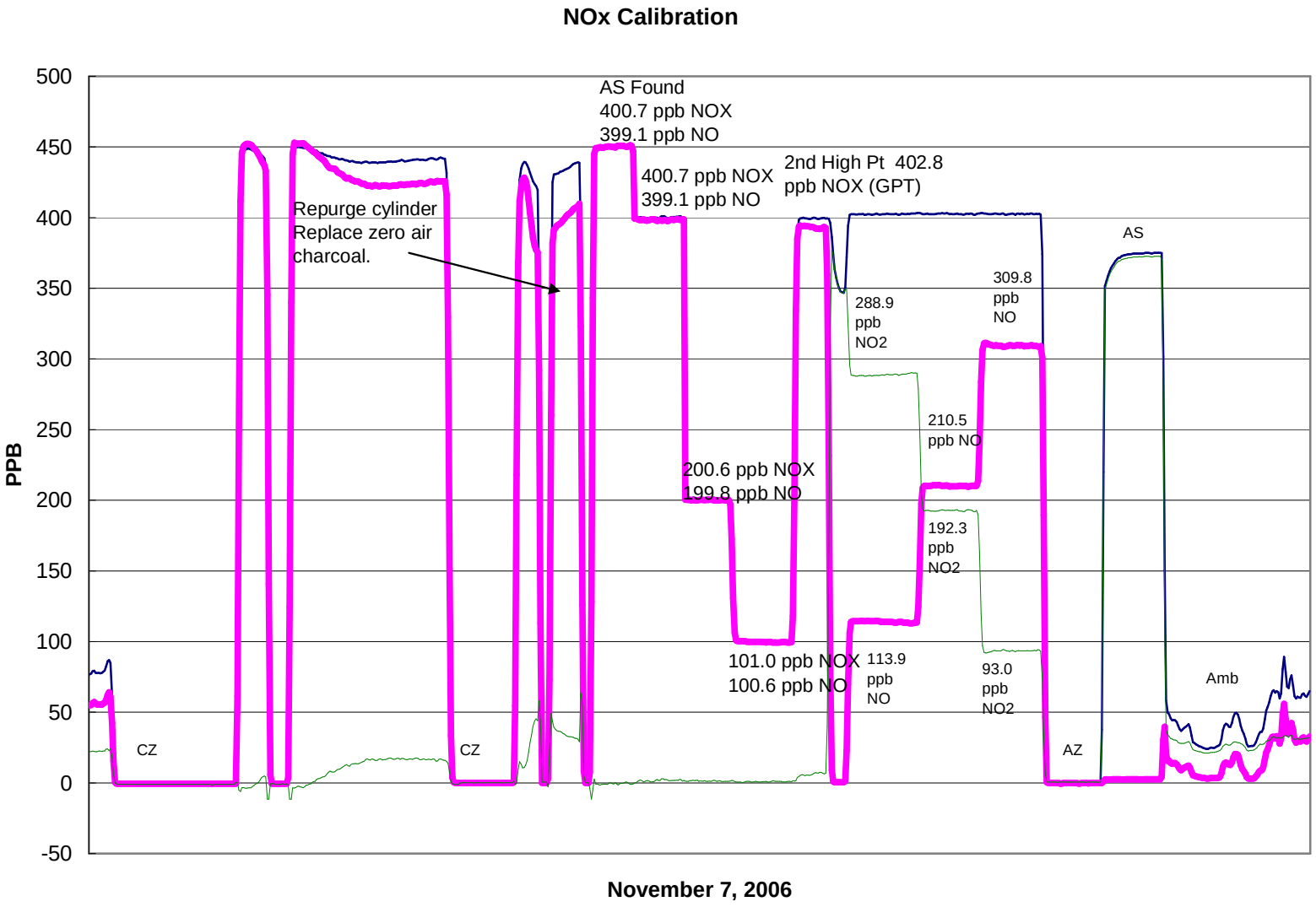
Dilution Flow 4993 ccm Source Gas Flow 39.97 ccm

| O3 Setpoint (ppb) | 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 | NO2 Correction factor | Converter Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | N/A | N/A | N/A | N/A |
| NO point | 402.8 | 393.9 | 8.9 | 399.5 | 393.2 | 6.2 | 1.0082 | 1.0017 | N/A | N/A |
| 350 | 402.8 | 113.9 | 288.9 | 402.6 | 113.5 | 289.3 | 1.0005 | 1.0029 | 0.9988 | 100.1% |
| 200 | 402.8 | 210.5 | 192.3 | 402.6 | 210.1 | 192.7 | 1.0005 | 1.0021 | 0.9976 | 100.2% |
| 100 | 402.8 | 309.8 | 93.0 | 402.5 | 309.2 | 93.6 | 1.0006 | 1.0018 | 0.9939 | 100.6% |
| | | | | | Average Correction Factor | | 1.0006 | 1.0022 | 0.9968 | 100.3% |

## *AIC Data*

| | Previous calibration | | | | Current calibration | | | |
|---|---|---|---|---|---|---|---|---|
| Parameter | NOx | NO2 | NO | | NOx | NO2 | NO | |
| Auto zero | 4.2 | 1.5 | 1.0 | ppb | 1.2 | 1.2 | 0.8 | ppb |
| Auto span | 350.9 | 347.0 | 4.4 | ppb | 375.0 | 371.8 | 2.7 | ppb |

Calibration Performed By: Dawn Ewan


NOx Calibration
PPB
500
450
400
350
300
250
200
150
100
50
0
-50
AS Found
400.7 ppb NOX
399.1 ppb NO
400.7 ppb NOX
399.1 ppb NO
2nd High Pt 402.8
ppb NOX (GPT)
Repurge cylinder
Replace zero air
charcoal.
AS
309.8
ppb
NO
288.9
ppb
NO2
210.5
ppb NO
200.6 ppb NOX
199.8 ppb NO
192.3
ppb
NO2
101.0 ppb NOX
100.6 ppb NO
113.9
ppb
NO
93.0
ppb
NO2
Amb
CZ
CZ
AZ
November 7, 2006

# Calibration Summary

Parameter **$NO_2$**

Air Monitoring Network **PASZA**

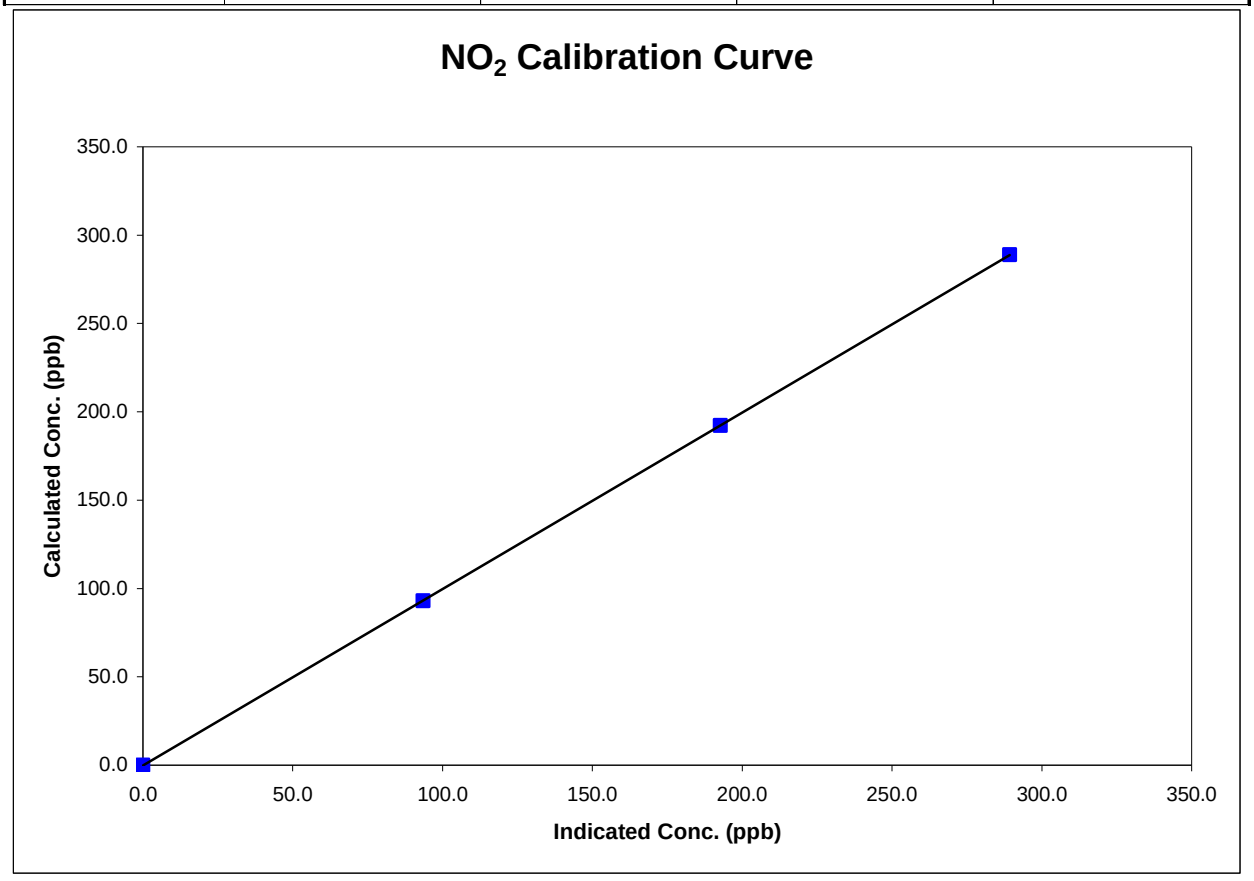
FOCUS AIR QUALITY MONITORING

***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 7, 2006 | Previous Calibration | October 24, 2006 |
| Station Number | 1 | Station Location | Muskoseepi Park |
| Start Time (MST) | 10:32 | End Time (MST) | 16:44 |
| Analyzer make | Teco 42C | Analyzer serial # | 508011073 |

***Calibration Data***

| Calculated conc (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | 0.0 | 0.0000 | | |
| 288.9 | 289.3 | 0.9988 | Correlation Coefficient | 0.999997 |
| 192.3 | 192.7 | 0.9976 | | |
| 93.0 | 93.6 | 0.9939 | Slope | 0.999173 |
| | | | | |
| | | | Intercept | -0.232501 |
| | | | | |



# Calibration Summary

Parameter **$NO_x$**

Air Monitoring Network **PASZA**

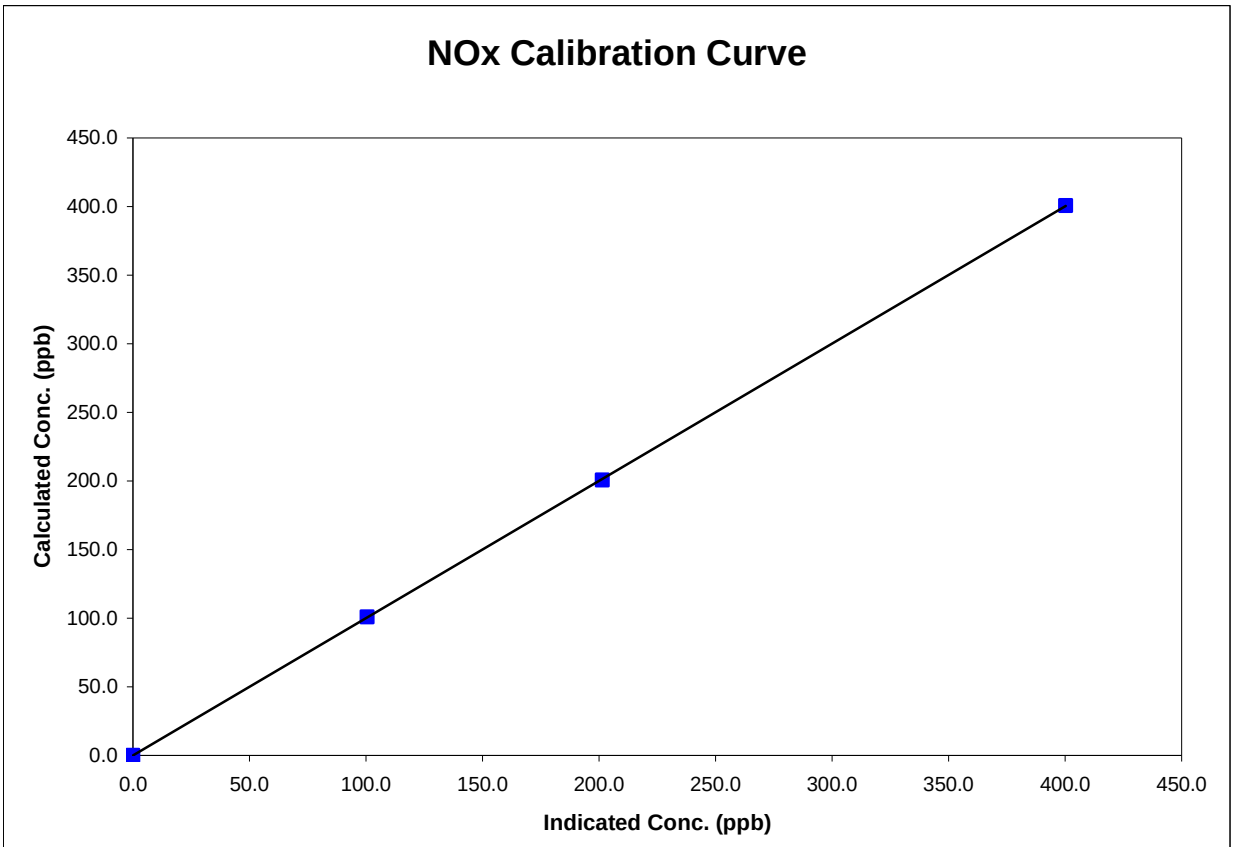
FOCUS AIR QUALITY MONITORING

### *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 7, 2006 | Previous Calibration | October 24, 2006 |
| Station Number | 1 | Station Location | Muskoseepi Park |
| Start Time (MST) | 10:32 | End Time (MST) | 16:44 |
| Analyzer make | Teco 42C | Analyzer serial # | 508011073 |

### *Calibration Data*

| Calculated conc (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | 0.1 | 0.0000 | | |
| 400.7 | 400.2 | 1.0013 | Correlation Coefficient | 0.999989 |
| 200.6 | 201.4 | 0.9963 | | |
| 101.0 | 100.5 | 1.0048 | Slope | 1.000796 |
| | | | | |
| | | | Intercept | -0.097040 |
| | | | | |



# Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

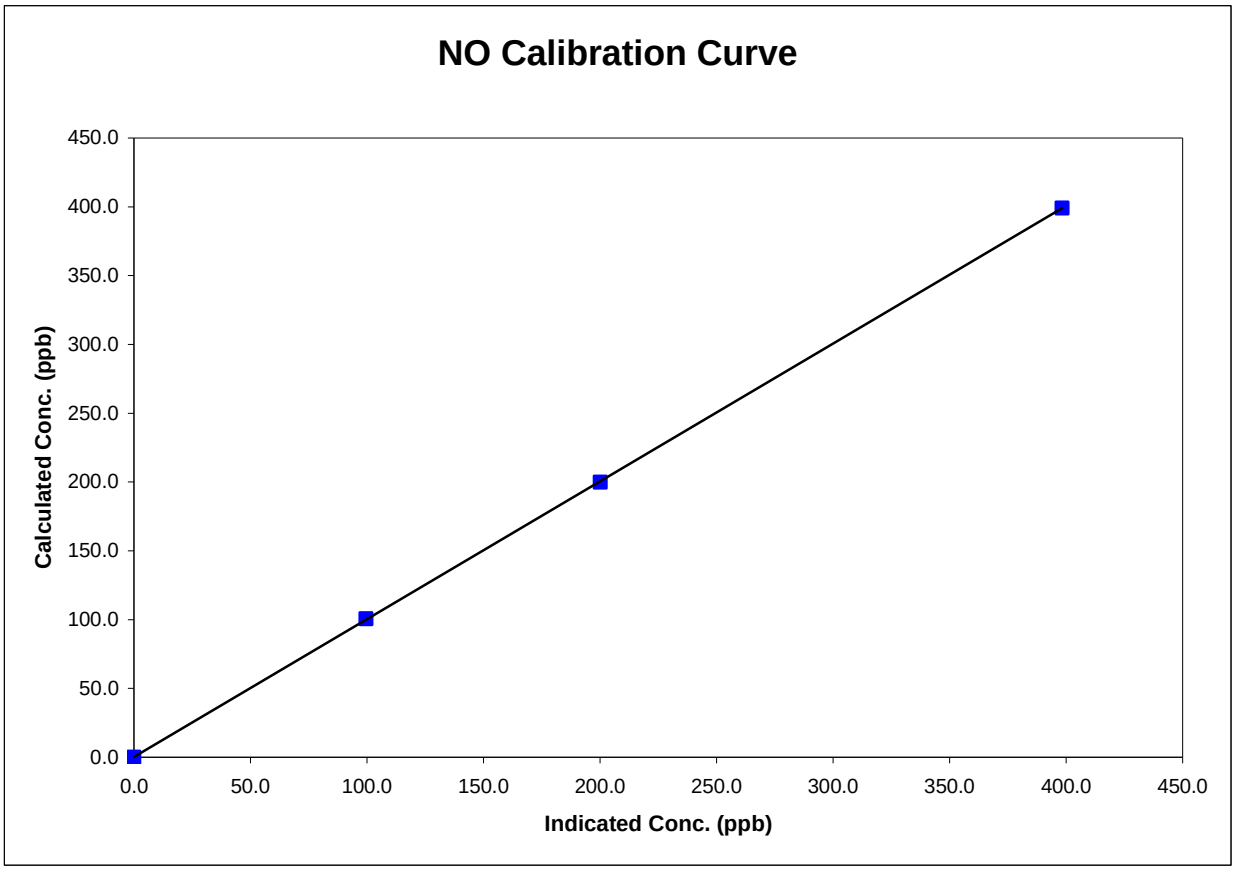
FOCUS AIR QUALITY MONITORING

### *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 7, 2006 | Previous Calibration | October 24, 2006 |
| Station Number | 1 | Station Location | Muskoseepi Park |
| Start Time (MST) | 10:32 | End Time (MST) | 16:44 |
| Analyzer make | Teco 42C | Analyzer serial # | 508011073 |

### *Calibration Data*

| Calculated conc (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | 0.0 | N/A | | |
| 399.1 | 398.3 | 1.0021 | Correlation Coefficient | 0.999989 |
| 199.8 | 200.1 | 0.9988 | | |
| 100.6 | 99.6 | 1.0098 | Slope | 1.001160 |
| | | | | |
| | | | Intercept | 0.193158 |
| | | | | |



# Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **O3**

Air Monitoring Network **PASZA**

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 13, 2006 | Previous Calibration | October 26, 2006 |
| Station Number | 1 | Station Location | Muskoseepi Park |

Reason: Routine | Install | Removal | Other:

| | | | |
|---|---|---|---|
| Start Time (MST) | 10:57 | End Time (MST) | 15:13 |
| Barometric Pressure | 0.919 atm | Station Temperature | 20.0 Deg C |
| Calibrator | Environics 6103 | Serial Number | 2844 |
| Cal Gas Concentration | NA | Cal Gas Expiry Date | NA |
| DACS make | Focus AP1000 | DACS serial No. | 45269 |
| DACS voltage range | 0 - 1 volt | DACS channel # | 5 |
| | Before | | After |
| Calculated slope | 0.996937 | Calculated slope | 0.991201 |
| Calculated intercept | 1.220767 | Calculated intercept | 1.550260 |
| Analyzer make | API Model 400 | Analyzer serial # | 383 |

| | before | | after | |
|---|---|---|---|---|
| Concentration range | 0 - 500 | ppb | 0 - 500 | ppb |
| offset | -0.9 | ppb | -0.9 | ppb |
| slope | 1.083 | | 1.083 | |
| Lamp measure | 3675 | mV | 3649 | mV |
| Lamp Reference | 3675 | mV | 3650 | mV |
| Pressure | 27.5 | inches Hg | 27.3 | inches Hg |
| Sample Flow | 670 | ccm | 675 | ccm |
| ANA Lamp temp | 52 | Deg C | 52 | Deg C |

## *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) |
|---|---|---|---|---|
| 4992 | 0.00 | 0.0 | 0.4 | N/A |
| 4992 | 0.00 | 288.9 | 290.8 | 0.9935 |
| 4992 | 0.00 | 192.3 | 192.4 | 0.9994 |
| 4992 | 0.00 | 93.0 | 89.5 | 1.0396 |
| | | | | |
| 4992 | 0.00 | 0.0 | 1.1 | As found zero |
| 4992 | 0.00 | 288.9 | 287.2 | As found span |
| | | | Average Correction Factor | 1.0108 |

Calculated value of As Found Response: 286.5 ppm Percent Change of As Found: -0.8%

| | before calibration | | after calibration | |
|---|---|---|---|---|
| Auto zero | 1.7 | ppb | 2.2 | ppb |
| Auto span | 220.2 | ppb | 255.9 | ppb |

Notes:

Calibration Performed By: Dawn Ewan

## Calibration Summary

FOCUS AIR QUALITY MONITORING

Parameter **O3**

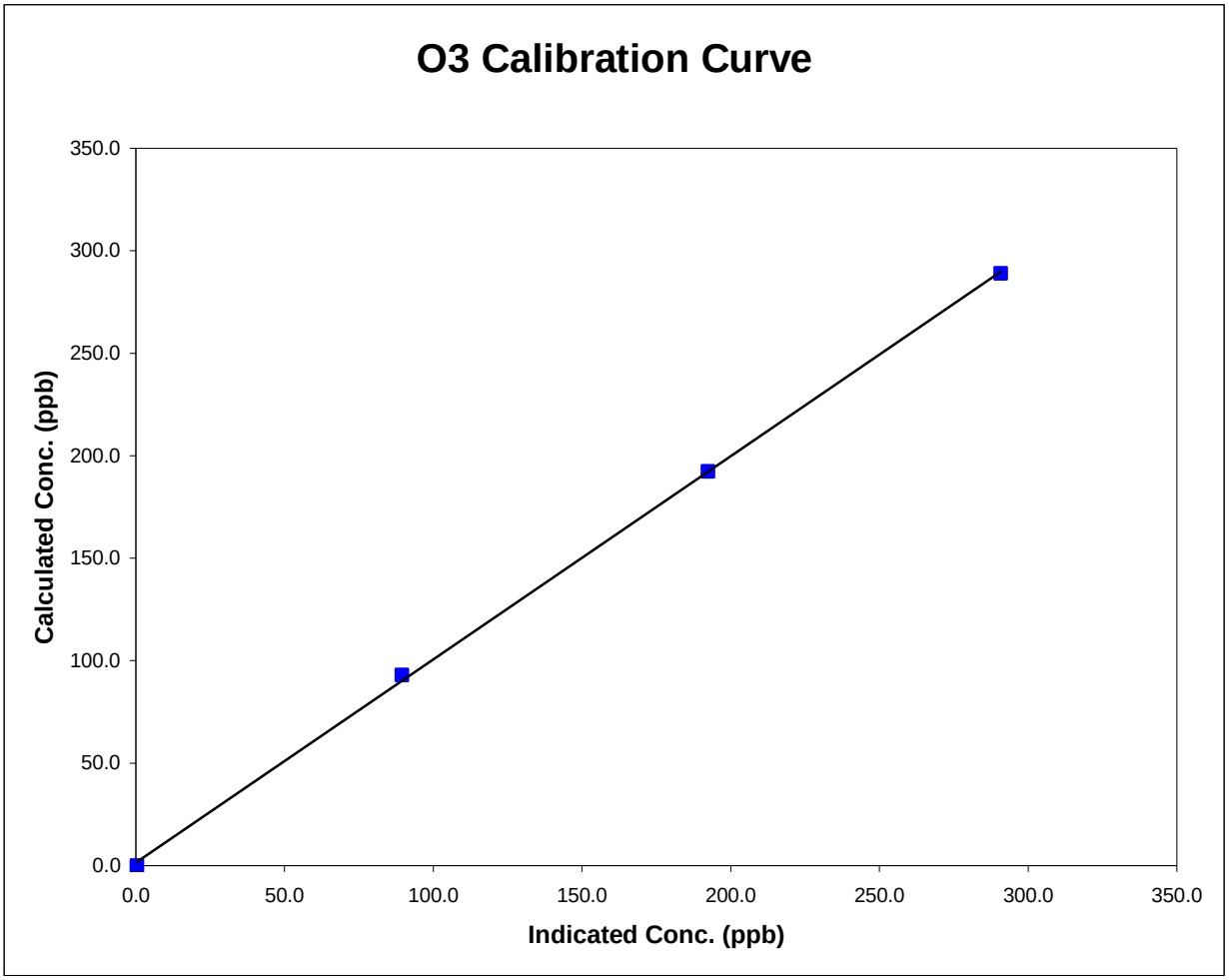
Air Monitoring Network **PASZA**

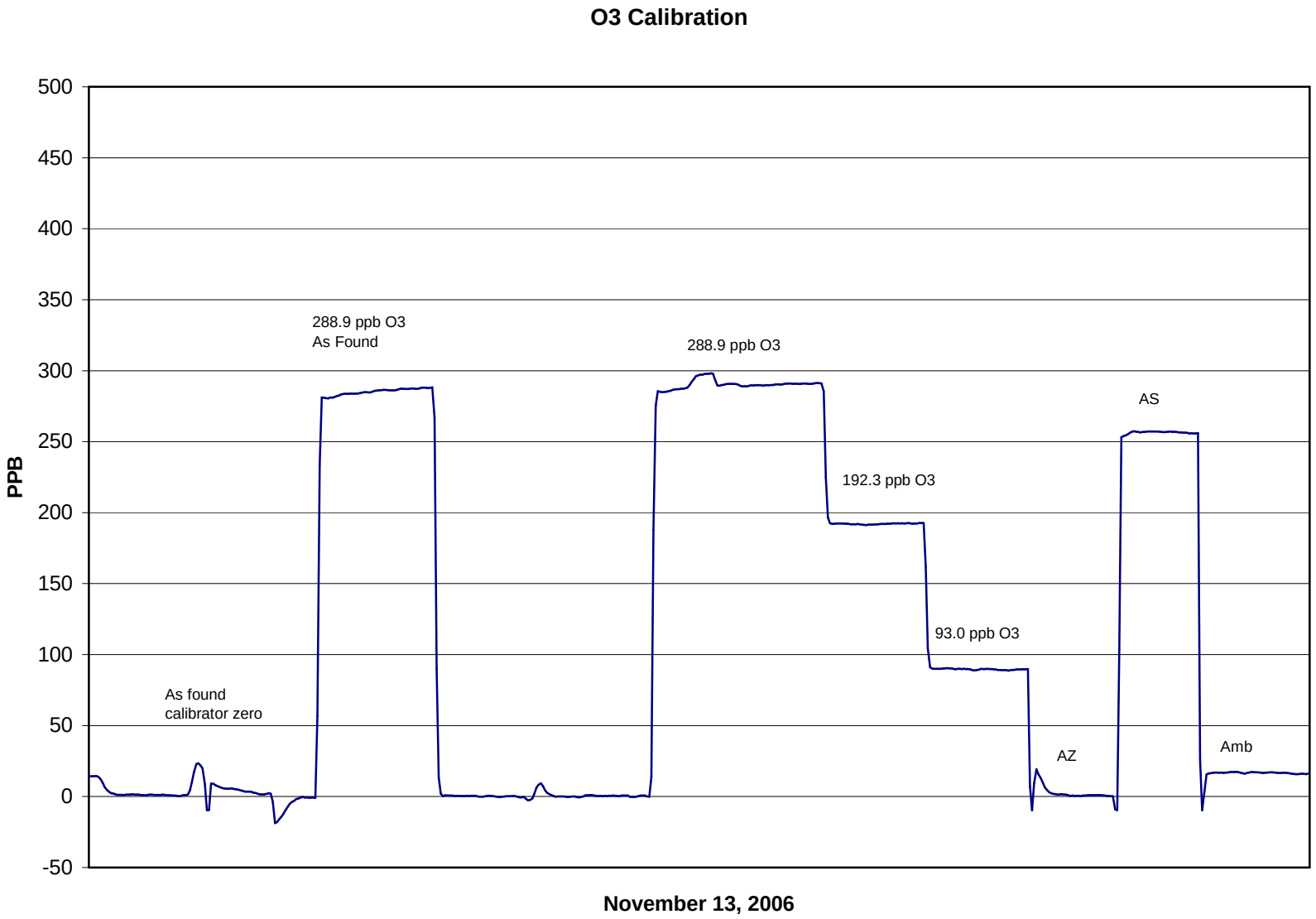
***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 13, 2006 | Previous Calibration | October 26, 2006 |
| Station Number | 1 | Station Location | Muskoseepi Park |
| Start Time (MST) | 10:57 | End Time (MST) | 15:13 |
| Analyzer make/model | API Model 400 | Analyzer serial # | 383 |

***Calibration Data***

| Calculated concentration (ppm) (Cc) | Indicated concentration (ppm) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | 0.4 | NA | | |
| 288.9 | 290.8 | 0.9935 | Correlation Coefficient | 0.999738 |
| 192.3 | 192.4 | 0.9994 | | |
| 93.0 | 89.5 | 1.0396 | Slope | 0.991201 |
| | | | | |
| | | | Intercept | 1.550260 |
| | | | | |




O3 Calibration
500
450
400
350
300
250
200
150
100
50
0
-50
PPB
288.9 ppb O3
As Found
288.9 ppb O3
192.3 ppb O3
93.0 ppb O3
AS
As found
calibrator zero
AZ
Amb
November 13, 2006

# Calibration Report

Parameter **CO**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 6, 2006 | Previous Calibration | October 5, 2006 |
| Station Number | 1 | Station Location | Muskoseepi Park |
| Reason: | Routine ☒ Install ☐ | Removal ☐ | Other: ☐ |
| Start Time (MST) | 13:31 | End Time (MST) | 16:56 |
| Barometric Pressure | 0.913 ATM | Station Temperature | 20.0 Deg C |
| Calibrator | Environics 6103 | Serial Number | 2488 |
| Cal Gas Conc | 3000 ppm | Cal Gas Expiry Date | AUG 28/05 |
| | | Cal Gas Cylinder # | AAL20565 |
| DACS make | Focus AP1000 | DACS serial No. | 1 |
| DACS voltage range | 0 - 1 volt | DACS channel # | 9 |
| | Before | | After |
| Calculated slope | 1.003034 | Calculated slope | 1.002887 |
| Calculated intercept | -0.009012 | Calculated intercept | -0.005864 |
| Analyzer make | TEI Model 48C | Analyzer serial # | 508011062 |

| | before | | after | |
|---|---|---|---|---|
| Concentration range | 0 - 25 | ppm | 0 - 25 | ppm |
| CO span setting | 1.053 | | 1.053 | |
| CO zero setting | 6.987 | | 7.569 | |
| Sample pressure | 685.9 | mm Hg | 663.4 | mm Hg |
| Sample Flow | 1.084 | LPM | 1.059 | 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) |
|---|---|---|---|---|
| 4994 | 0.00 | 0.00 | 0.00 | N/A |
| 4994 | 39.94 | 23.80 | 23.78 | 1.0010 |
| 4994 | 19.91 | 11.91 | 11.76 | 1.0128 |
| 4994 | 9.50 | 5.70 | 5.77 | 0.9868 |
| | | | | |
| | | | | |
| 4994 | 0.00 | 0.00 | 0.45 | As Found Zero |
| 4994 | 39.94 | 23.80 | 24.63 | As Found Span |
| | | | Average Correction Factor | 1.0002 |

Calculated value of As Found Response: 24.245 ppm Percent Change of As Found: -1.9%

| | before calibration | | after calibration | |
|---|---|---|---|---|
| Auto zero | 0.16 | ppm | 0.03 | ppm |
| Auto span | 21.19 | ppm | 20.99 | ppm |

Notes: Adjusted zero.

Calibration Performed By: Dawn Ewan

## Calibration Summary

Parameter **CO**

Air Monitoring Network **PASZA**

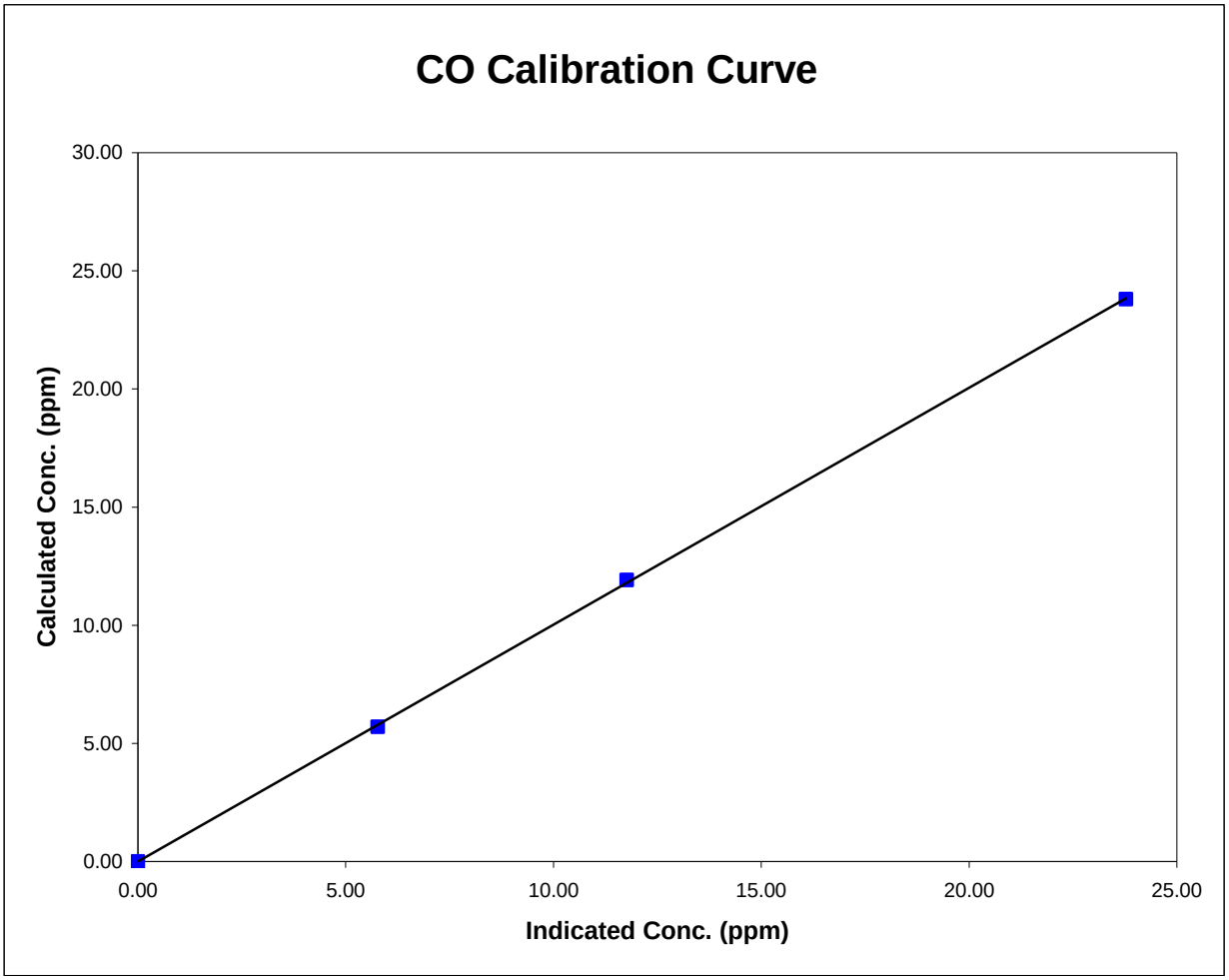
FOCUS AIR QUALITY MONITORING

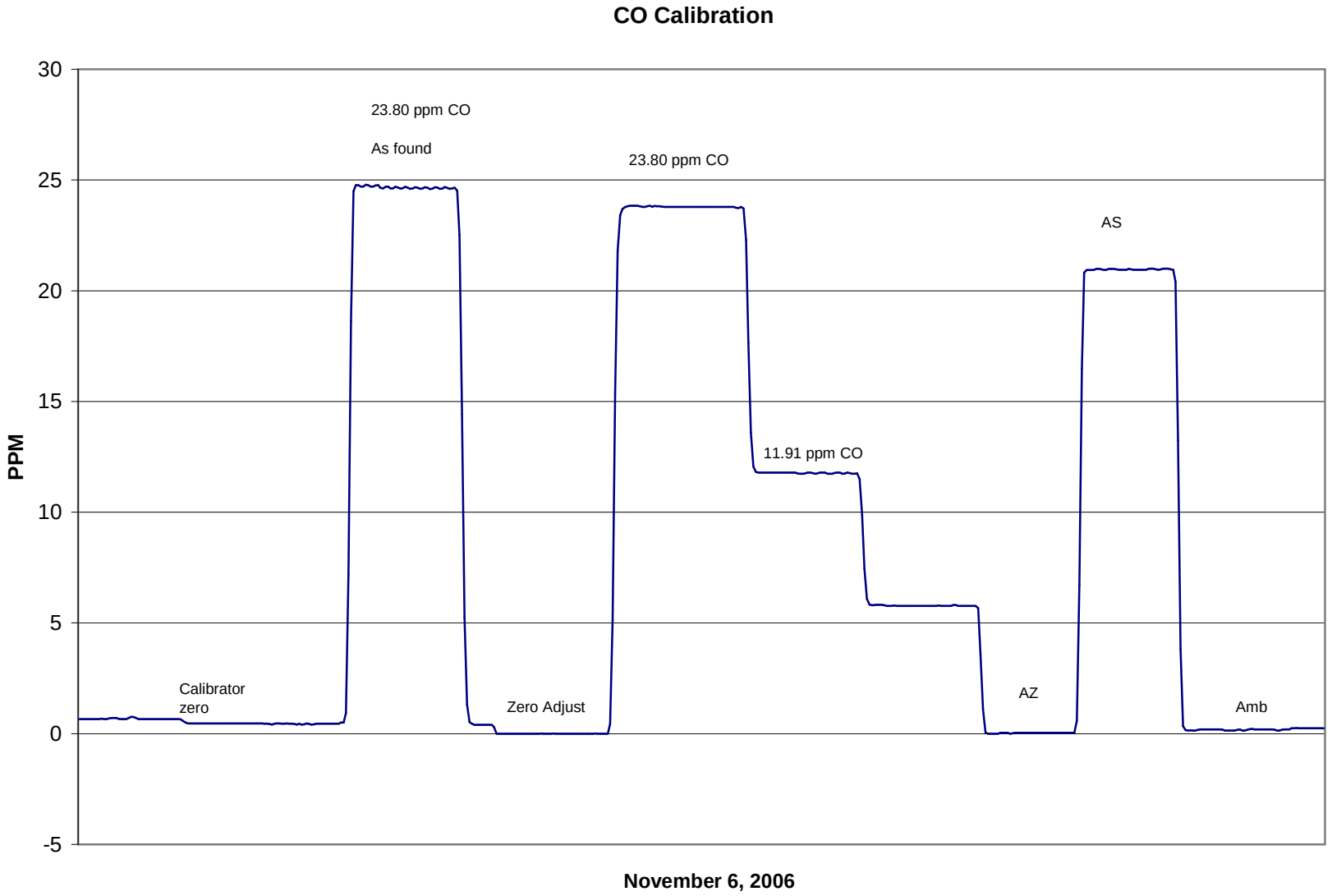
***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 6, 2006 | Previous Calibration | October 5, 2006 |
| Station Number | 1 | Station Location | Muskoseepi Park |
| Start Time (MST) | 13:31 | End Time (MST) | 16:56 |
| 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 | 0.002 | N/A | | |
| 23.802 | 23.779 | 1.0010 | Correlation Coefficient | 0.999923 |
| 11.913 | 11.762 | 1.0128 | | |
| 5.696 | 5.772 | 0.9868 | Slope | 1.002887 |
| | | | | |
| | | | Intercept | -0.005864 |
| | | | | |




CO Calibration
30
25
20
15
10
5
0
-5
PPM
23.80 ppm CO
As found
23.80 ppm CO
11.91 ppm CO
AS
Calibrator
zero
Zero Adjust
AZ
Amb
November 6, 2006

# Calibration Report

Parameter **THC**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 6, 2006 | Previous Calibration | October 26, 2006 |
| Station Number | 1 | Station Location | Muskoseepi Park |

Reason: Routine | Install | Removal | Other:

| | | | |
|---|---|---|---|
| Start Time (MST) | 11:11 | End Time (MST) | 14:12 |
| Barometric Pressure | 0.919 ATM | Station Temperature | 20.0 Deg C |
| Calibrator | Environics 6103 | Serial Number | 2977 |
| Cal Gas Concentration | 700 ppm CH4/ 299 ppm C3H8 | Cal Gas Expiry Date | 12/10/2005 |
| Cal Gas CH4 equiv | 1522.25 ppm | Cal Gas Cylinder # | ALM 030358 |
| DACS make | Focus AP1000 | DACS serial No. | 1 |
| DACS voltage range | 0 - 1 volt | DACS channel # | 9 |
| | Before | | After |
| Calculated slope | 0.997997 | Calculated slope | 1.000499 |
| Calculated intercept | 0.169557 | Calculated intercept | 0.057916 |

Analyzer make: TEI Model 51C-LT — Analyzer serial #: 51CLT-79009-390

| | before | | after | |
|---|---|---|---|---|
| Concentration range | 0 - 25 | ppm | 0 - 25 | ppm |
| THC sample pressure | 6.1 | psi | 6.1 | psi |
| THC span counts | 6874 | capture | 6874 | capture |
| THC zero counts | 1268 | capture | 1002 | capture |

## *Calibration Data*

| Dilution air flow rate (cc/min) | Source gas flow rate (cc/min) | Calculated concentration (ppm) (Cc) | Indicated concentration (ppm) (Ic) | Correction factor (Cc/Ic) |
|---|---|---|---|---|
| 4992 | 0.00 | 0.00 | -0.01 | N/A |
| 4992 | 64.92 | 19.54 | 19.51 | 1.0018 |
| 4992 | 34.95 | 10.58 | 10.47 | 1.0109 |
| 4993 | 9.92 | 3.02 | 2.93 | 1.0294 |
| | | | | |
| | | | | |
| 4992 | 0.00 | 0.00 | -0.92 | As Found Zero |
| 4992 | 64.92 | 19.54 | 19.49 | As Found Span |
| | | | Average Correction Factor | 1.0141 |

Calculated value of As Found Response: 20.542 ppm  Percent Change of As Found: -5.1%

| | before calibration | | after calibration | |
|---|---|---|---|---|
| Auto zero | 0.13 | ppm | 0.02 | ppm |
| Auto span | 22.08 | ppm | 22.25 | ppm |

Notes:

Calibration Performed By: Dawn Ewan

## Calibration Summary

Parameter **THC**

Air Monitoring Network **PASZA**

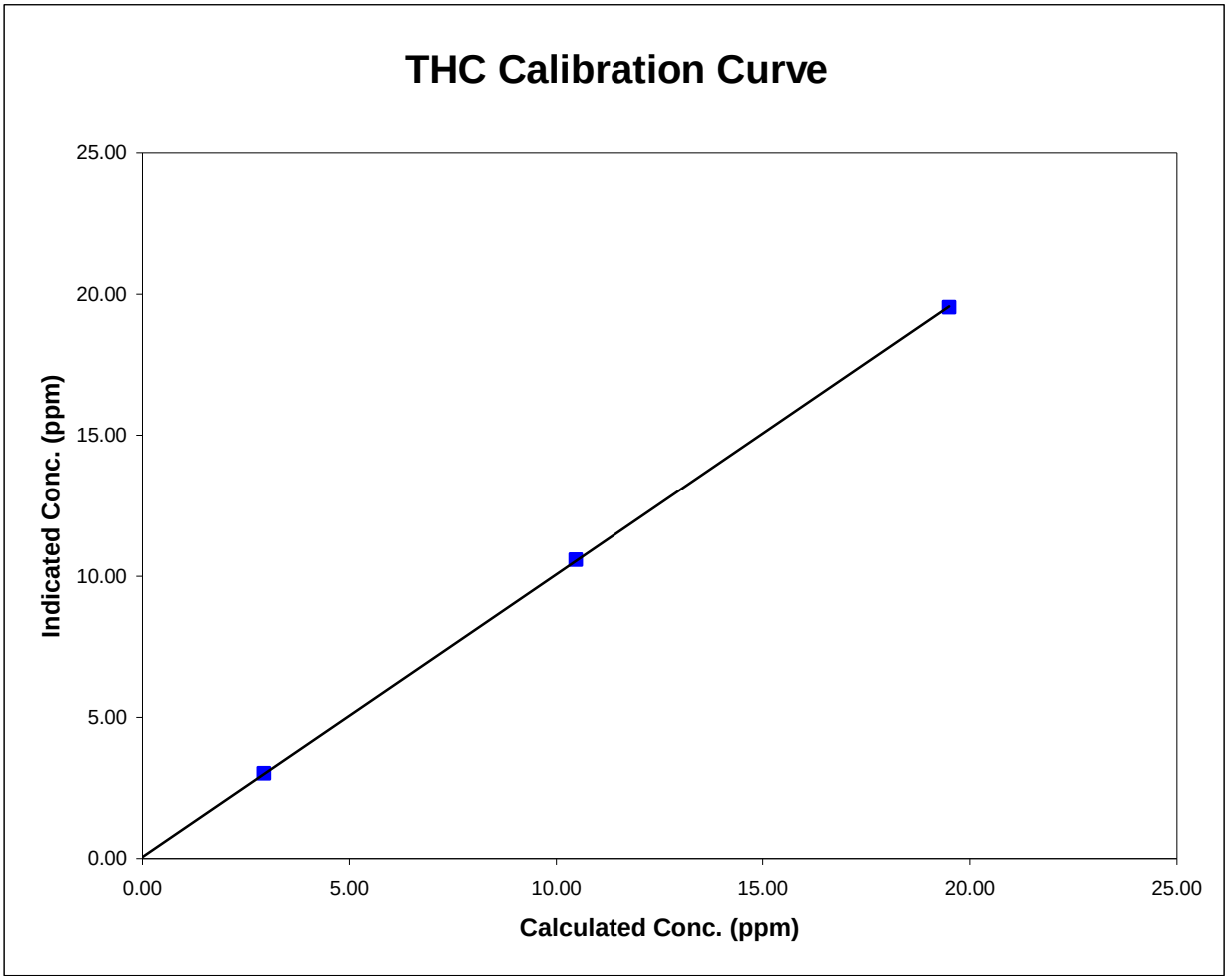
FOCUS AIR QUALITY MONITORING

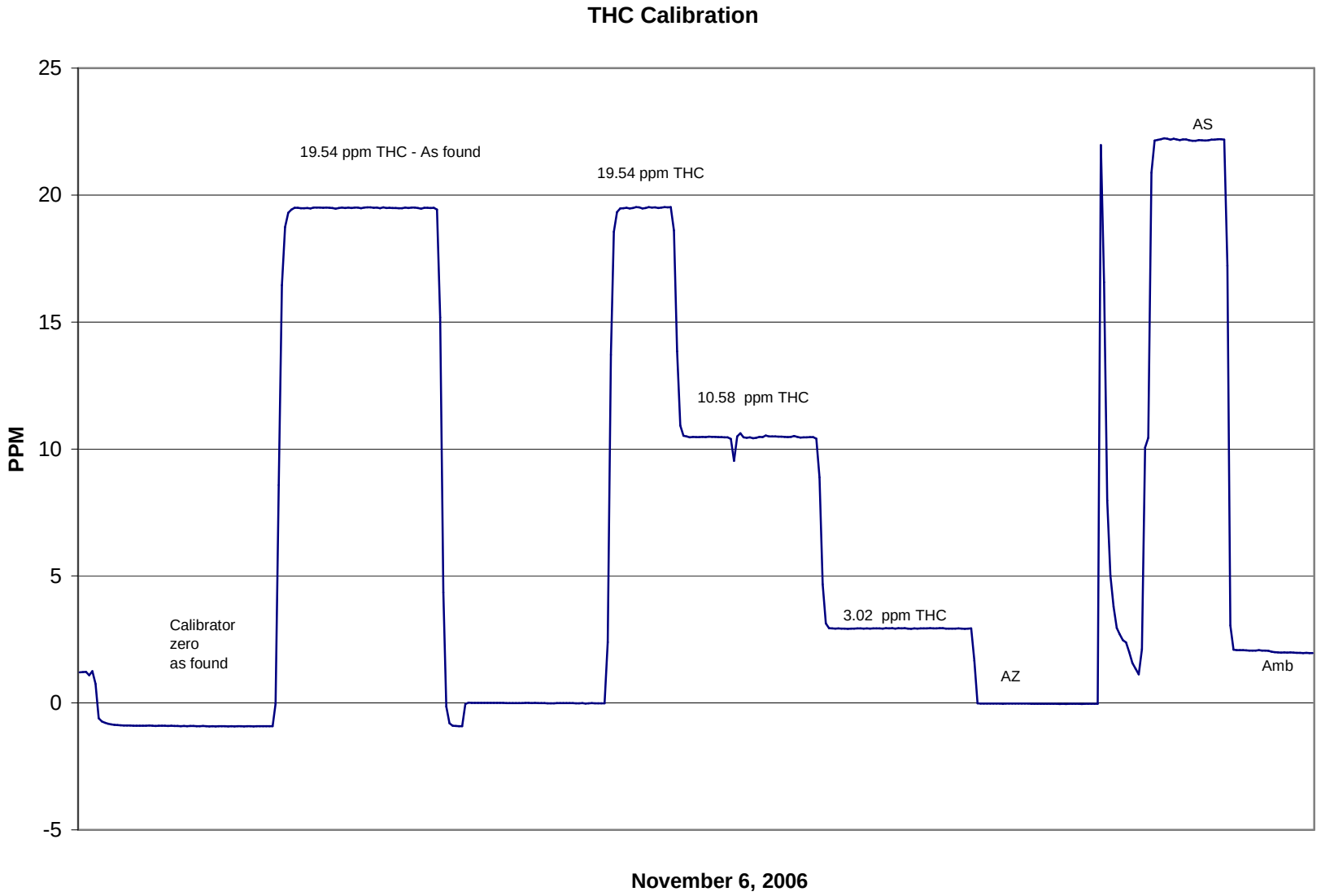
***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 6, 2006 | Previous Calibration | October 26, 2006 |
| Station Number | 1 | Station Location | Muskoseepi Park |
| Start Time (MST) | 11:11 | End Time (MST) | 14:12 |
| Analyzer make/model | TEI Model 51C-LT | Analyzer serial # | 51CLT-79009-390 |

***Calibration Data***

| Calculated concentration (ppm) (Cc) | Indicated concentration (ppm) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.000 | -0.011 | N/A | | |
| 19.542 | 19.505 | 1.0018 | Correlation Coefficient | 0.999971 |
| 10.583 | 10.469 | 1.0109 | | |
| 3.018 | 2.932 | 1.0294 | Slope | 1.000499 |
| | | | | |
| | | | Intercept | 0.057916 |
| | | | | |




THC Calibration
25
20
15
10
5
0
-5
PPM
19.54 ppm THC - As found
19.54 ppm THC
10.58 ppm THC
3.02 ppm THC
AZ
AS
Amb
Calibrator
zero
as found
November 6, 2006

# Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **TRS**

Air Monitoring Network **PASZA**

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 6, 2006 | Previous Calibration | October 5, 2006 |
| Station Number | 1 | Station Location | Muskoseepi Park |
| Reason: | Routine | Install | Removal | Other: |

| | | | |
|---|---|---|---|
| Start Time (MST) | 12:51 | End Time (MST) | 16:40 |
| Barometric Pressure | 27.3 inches Hg | Station Temperature | 20.0 Deg C |
| Calibrator | VICI Metronics | Serial Number | 111-1695 |
| Perm-tube Conc | 235 ng/min | Perm-tube Date | 8/8/2006 |
| Correction factor | 0.928684 | Perm-tube Cert # | T-25214 |
| DACS make | Focus AP1000 | DACS serial No. | 45266 |
| DACS voltage range | 0 - 10 volt | DACS channel # | 9 |
| | Before | | After |
| Calculated slope | 0.959413 | Calculated slope | 0.983300 |
| Calculated intercept | 0.186655 | Calculated intercept | 0.735313 |

Analyzer make: TEI Model 43C — Analyzer serial #: 31990000000491

| | before | | after | |
|---|---|---|---|---|
| Concentration range | 0 - 100 | ppb | 0 - 100 | ppb |
| Background | 26.6 | ppb | 28.6 | ppb |
| coefficient | 1.182 | | 1.182 | |
| Lamp Voltage | 900 | volts | 905 | volts |
| Chamber Temp | 44.6 | Deg C | 45 | Deg C |
| Perm Gas Temp | 45 | Deg C | 45 | Deg C |
| Pressure | 686.8 | mm Hg | 628.9 | mm Hg |
| Sample Flow | 550 | ccm | 607 | ccm |
| Lamp Intensity | 39,100 | mv | 38,900 | 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) |
|---|---|---|---|---|
| zero | 2321.7 | 0.0 | -0.1 | N/A |
| 2500 | 2321.7 | 72.8 | 73.6 | 0.9891 |
| 5000 | 4643.4 | 36.4 | 36.0 | 1.0102 |
| 9000 | 8358.2 | 20.2 | 19.1 | 1.0604 |
| | | | | |
| | | | | |
| zero | 2321.7 | 0.0 | 0.1 | As Found Zero |
| 2500 | 2321.7 | 72.8 | 69.2 | As Found Span |
| | | | Average Correction Factor | 1.0199 |

Calculated value of As Found Response: 66.42 ppm  Percent Change of As Found: 8.7%

| | before calibration | | after calibration | |
|---|---|---|---|---|
| Auto zero | 0.3 | ppm | 0.6 | ppm |
| Auto span | 69.7 | ppm | 67.0 | ppm |

Notes:

Calibration Performed By: Dawn Ewan

## Calibration Summary

FOCUS AIR QUALITY MONITORING

Parameter **TRS**

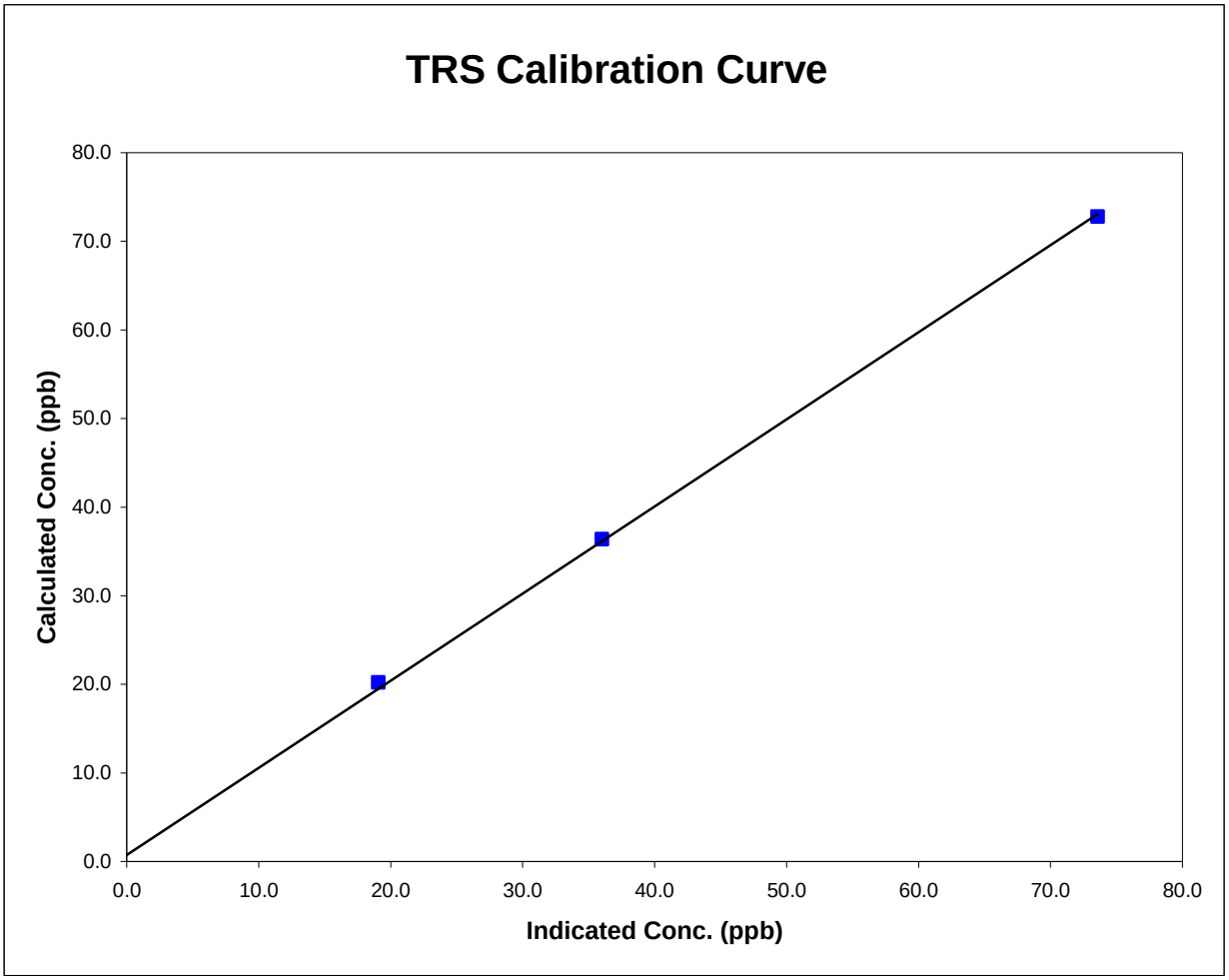
Air Monitoring Network **PASZA**

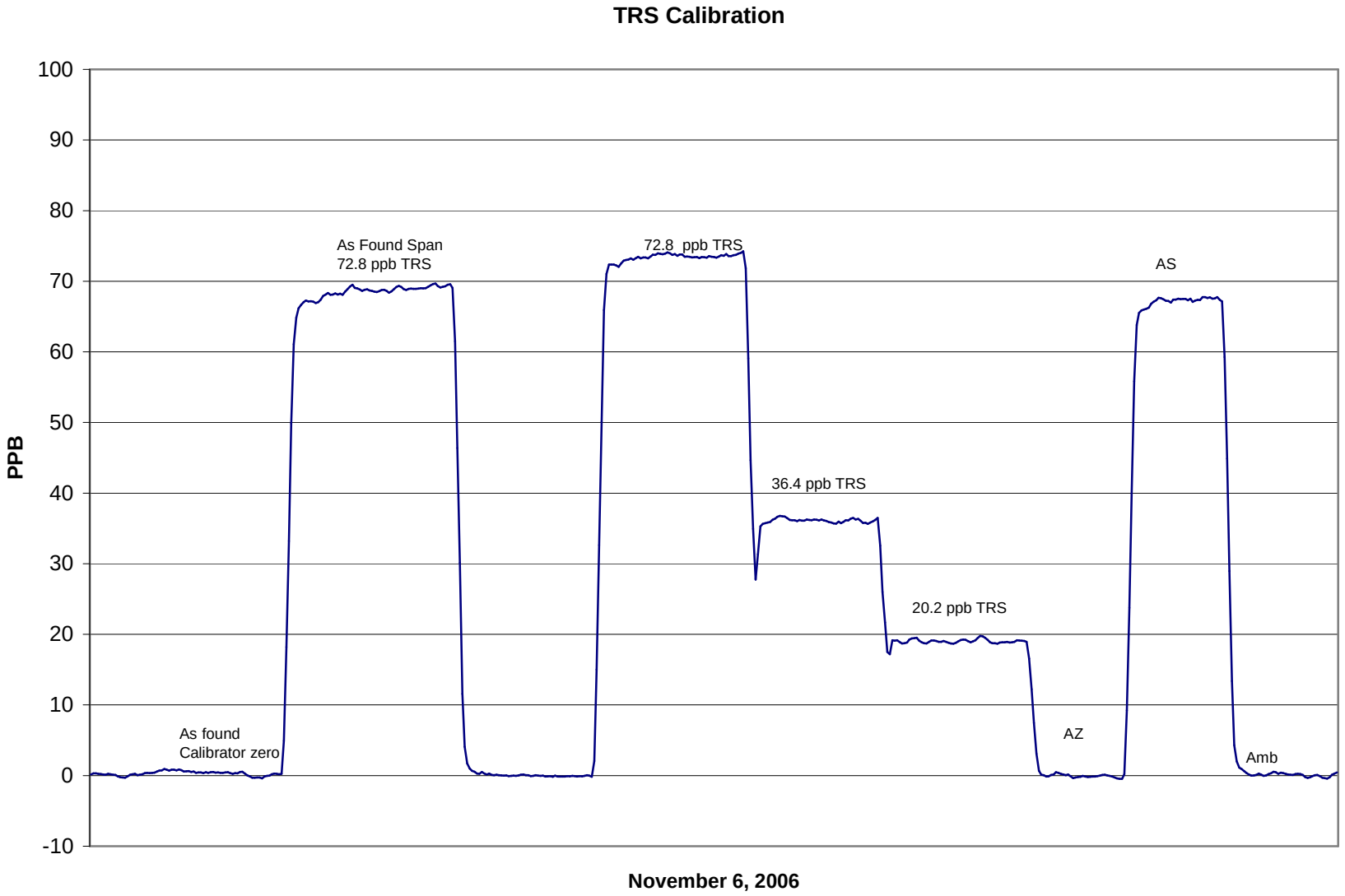
***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 6, 2006 | Previous Calibration | October 5, 2006 |
| Station Number | 1 | Station Location | Muskoseepi Park |
| Start Time (MST) | 12:51 | End Time (MST) | 16:40 |
| Analyzer make/model | TEI Model 43C | Analyzer serial # | 31990000000491 |

***Calibration Data***

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | -0.1 | N/A | | |
| 72.8 | 73.6 | 0.9891 | Correlation Coefficient | 0.999603 |
| 36.4 | 36.0 | 1.0102 | | |
| 20.2 | 19.1 | 1.0604 | Slope | 0.983300 |
| | | | | |
| | | | Intercept | 0.735313 |
| | | | | |




TRS Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
As Found Span
72.8 ppb TRS
72.8 ppb TRS
AS
36.4 ppb TRS
20.2 ppb TRS
As found
Calibrator zero
AZ
Amb
November 6, 2006

# Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **$SO_2$**

Air Monitoring Network **PASZA**

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 2, 2006 | Previous Calibration | October 17, 2006 |
| Station Number | 2 | Station Location | Evergreen Park |

Reason: [Routine] [Install] [Removal] [Other:]

| | | | |
|---|---|---|---|
| Start Time (MST) | 11:25 | End Time (MST) | 14:48 |
| Barometric Pressure | 28.0 inches Hg | Station Temperature | 20.0 Deg C |
| Calibrator | VICI Metronics | Serial Number | 111-1695 |
| Perm-tube Conc | 1,946 ng/min | Perm-tube Date | 8/8/2006 |
| Correction factor | 0.950099 | Perm-tube Cert # | 19-25218 |
| DACS make | Focus AP1000 | DACS serial No. | 45274 |
| DACS voltage range | 0 - 10 volt | DACS channel # | 4 |
| | Before | | After |
| Calculated slope | 1.025246 | Calculated slope | 0.951615 |
| Calculated intercept | -2.072921 | Calculated intercept | 0.600471 |

Analyzer make: TECO — Analyzer serial #: 43A-25573-221

| | before | | after | |
|---|---|---|---|---|
| Concentration range | 1000 | ppb | 1000 | ppb |
| Sample Flow | 475 | ccm | 475 | ccm |
| Lamp Voltage | 801 | mv | 830 | mv |
| Vacuum | 22 | " Hg | 22 | " Hg |
| Span Pot | 535 | | 685 | |
| Zero Pot | 90 | | 90 | |
| | | | | |
| | | | | |
| | | | | |

## *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) |
|---|---|---|---|---|
| zero | 2534.9 | 0.0 | 0.5 | N/A |
| 2668 | 2534.9 | 293.0 | 308.9 | 0.9487 |
| 4860 | 4617.5 | 160.9 | 165.0 | 0.9747 |
| 8180 | 7771.8 | 95.6 | 100.5 | 0.9511 |
| | | | | |
| | | | | |
| zero | 2375.2 | 0.0 | 0.5 | As Found Zero |
| 2500 | 2375.2 | 312.7 | 334.0 | As Found Span |
| | | | Average Correction Factor | 0.9582 |

Calculated value of As Found Response: 339.868 ppm  Percent Change of As Found: -8.7%

| | before calibration | | after calibration | |
|---|---|---|---|---|
| Auto zero | -0.3 | ppm | 0.9 | ppm |
| Auto span | 144.5 | ppm | 160.4 | ppm |

Notes:

Calibration Performed By: Dawn Ewan

## Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

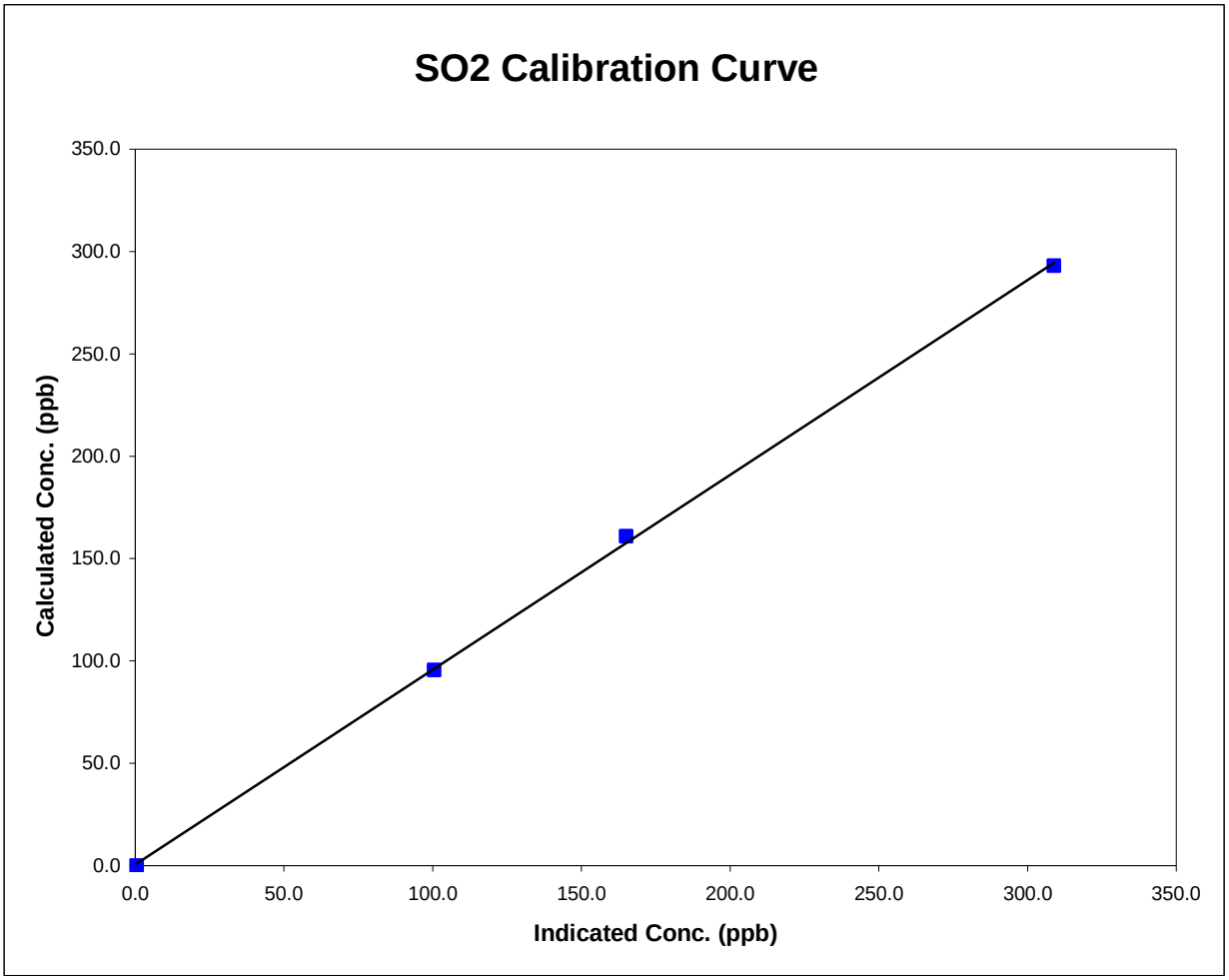
FOCUS AIR QUALITY MONITORING

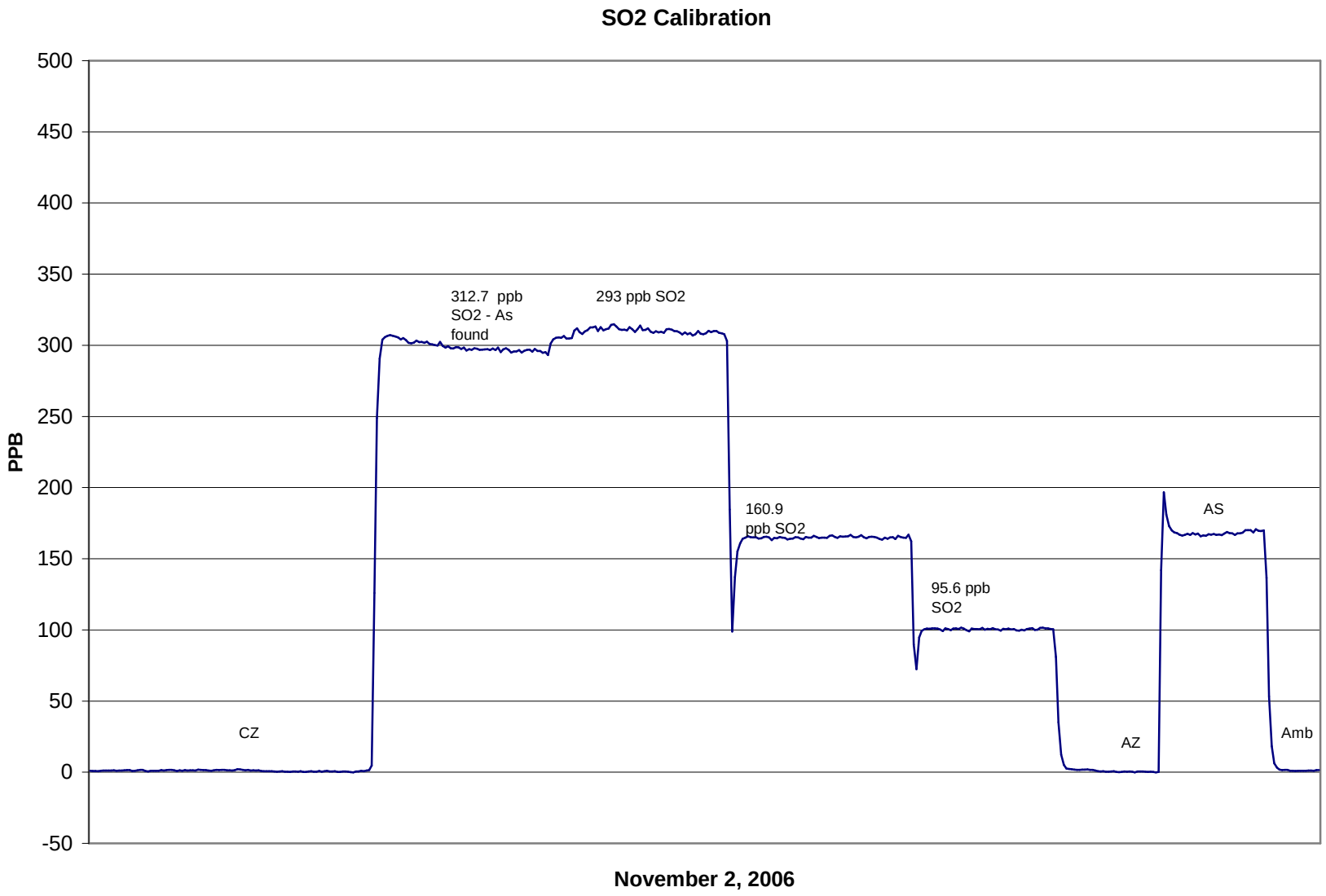
***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 2, 2006 | Previous Calibration | October 17, 2006 |
| Station Number | 2 | Station Location | Evergreen Park |
| Start Time (MST) | 11:25 | End Time (MST) | 14:48 |
| Analyzer make/model | TECO | Analyzer serial # | 43A-25573-221 |

***Calibration Data***

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | 0.5 | N/A | | |
| 293.0 | 308.9 | 0.9487 | Correlation Coefficient | 0.999689 |
| 160.9 | 165.0 | 0.9747 | | |
| 95.6 | 100.5 | 0.9511 | Slope | 0.951615 |
| | | | | |
| | | | Intercept | 0.600471 |
| | | | | |




SO2 Calibration
500
450
400
350
300
250
200
150
100
50
0
-50
PPB
312.7 ppb SO2 - As found
293 ppb SO2
160.9 ppb SO2
95.6 ppb SO2
CZ
AZ
AS
Amb
November 2, 2006

# Calibration Report

Parameter **TRS**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 2, 2006 | Previous Calibration | October 17, 2006 |
| Station Number | 2 | Station Location | Evergreen Park |
| Reason: | Routine ☒ | Install ☐ | Removal ☐ | Other: ☐ |
| Start Time (MST) | 11:25 | End Time (MST) | 14:48 |
| Barometric Pressure | 27.95 inches Hg | Station Temperature | 20.0 Deg C |
| Calibrator | VICI Metronics | Serial Number | 111-1695 |
| Perm-tube Conc | 235 ng/min | Perm-tube Expiry Date | 8/8/2006 |
| Correction factor | 0.950099 | Perm-tube Cert # | T-25214 |
| DACS make | Focus AP1000 | DACS serial No. | 1 |
| DACS voltage range | 0 - 10 volt | DACS channel # | 9 |
| | Before | | After |
| Calculated slope | 0.997828 | Calculated slope | 0.924511 |
| Calculated intercept | 0.219891 | Calculated intercept | 0.338988 |
| Analyzer make | TEI Model 43C | Analyzer serial # | 0436610005 |

| | before | | after | |
|---|---|---|---|---|
| Concentration range | 100 | ppb | 100 | ppb |
| Background | 17.3 | ppb | 17.3 | ppb |
| coefficient | 1.033 | | 1.033 | |
| Lamp Voltage | 819 | volts | 824 | volts |
| Chamber Temp | 44.2 | Deg C | 44.2 | Deg C |
| Perm Gas Temp | 44.99 | Deg C | 45 | Deg C |
| Pressure | 639.4 | mm Hg | 640.7 | mm Hg |
| Sample Flow | 471 | ccm | 472 | ccm |
| Lamp Intensity | 49,000 | mv | 49,000 | 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) |
|---|---|---|---|---|
| zero | 2534.9 | 0.0 | 0.2 | N/A |
| 2668 | 2534.9 | 66.7 | 72.3 | 0.9220 |
| 4860 | 4617.5 | 36.6 | 38.2 | 0.9573 |
| 8180 | 7771.8 | 21.7 | 23.0 | 0.9448 |
| | | | | |
| | | | | |
| zero | 2375.2 | 0.0 | 0.2 | As Found Zero |
| 2500 | 2375.2 | 71.1 | 72.3 | As Found Span |
| | | | Average Correction Factor | 0.9414 |

Calculated value of As Found Response: 72.17 ppm Percent Change of As Found: -1.4%

| | before calibration | | after calibration | |
|---|---|---|---|---|
| Auto zero | 0.0 | ppm | 0.7 | ppm |
| Auto span | 99.8 | ppm | 78.5 | ppm |

Notes:

Calibration Performed By: Dawn Ewan

## Calibration Summary

FOCUS AIR QUALITY MONITORING

Parameter **TRS**

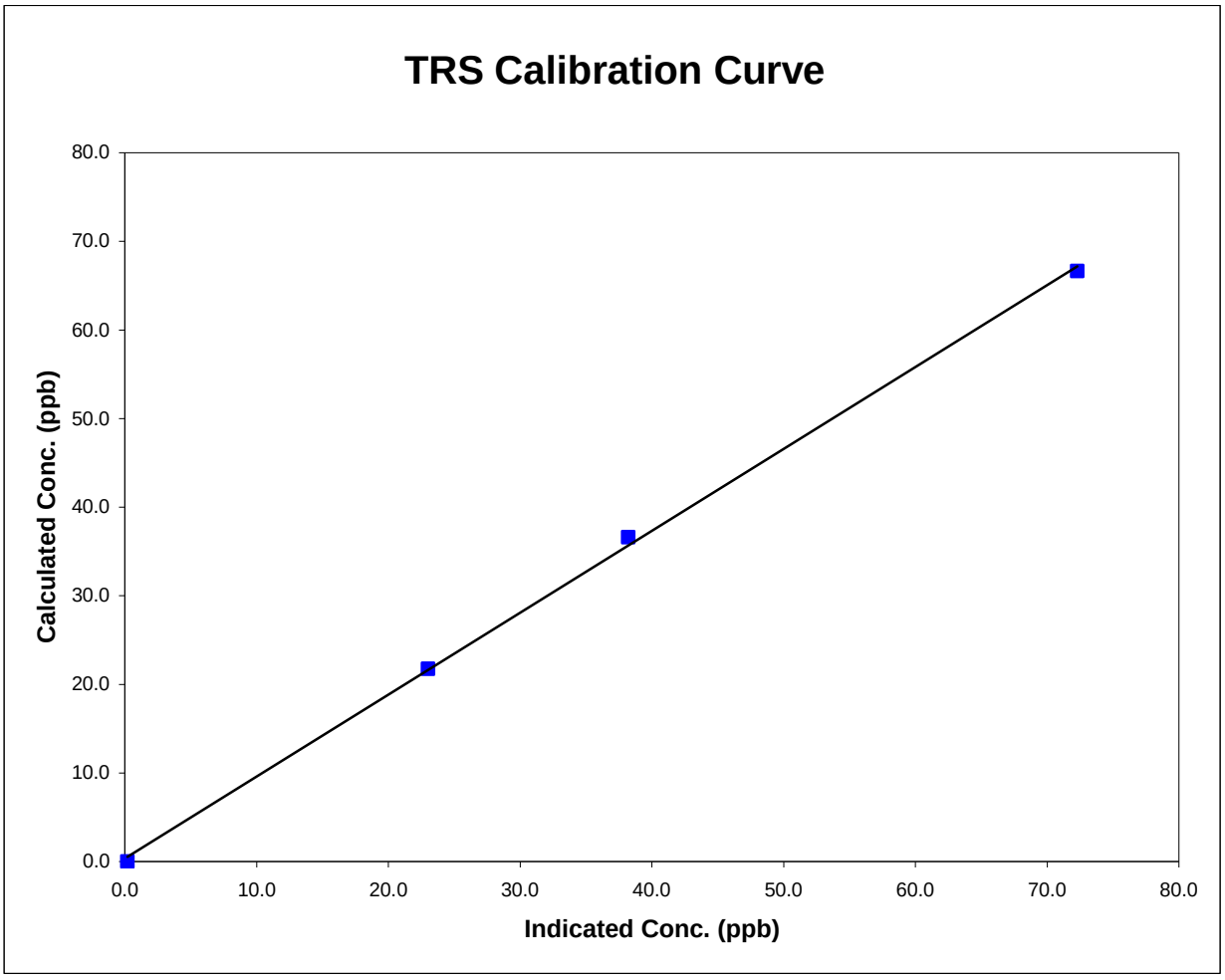
Air Monitoring Network **PASZA**

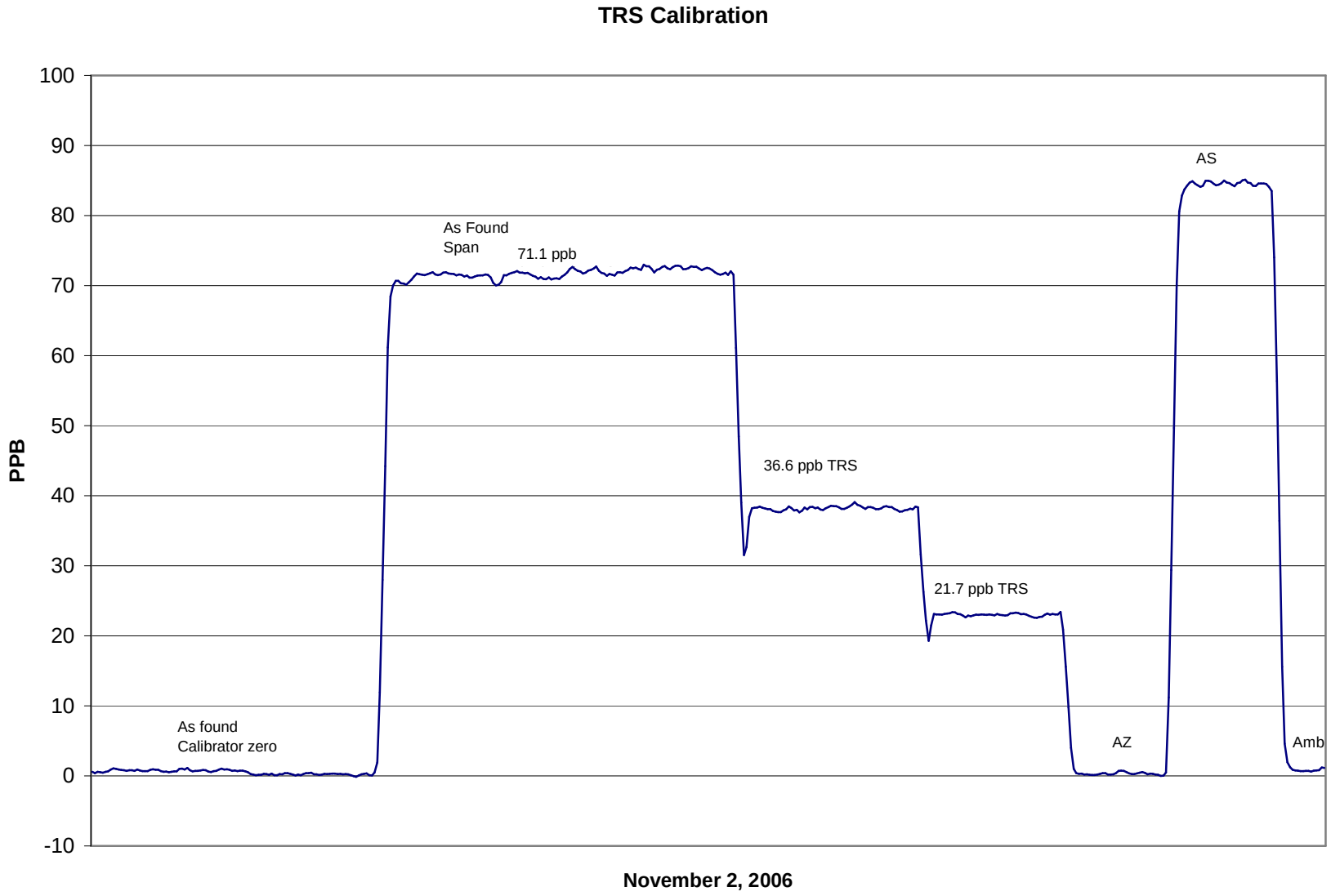
***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 2, 2006 | Previous Calibration | October 17, 2006 |
| Station Number | 2 | Station Location | Evergreen Park |
| Start Time (MST) | 11:25 | End Time (MST) | 14:48 |
| 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 | | |
| 66.7 | 72.3 | 0.9220 | Correlation Coefficient | 0.999404 |
| 36.6 | 38.2 | 0.9573 | | |
| 21.7 | 23.0 | 0.9448 | Slope | 0.924511 |
| | | | | |
| | | | Intercept | 0.338988 |
| | | | | |




TRS Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
As found
Calibrator zero
As Found
Span
71.1 ppb
36.6 ppb TRS
21.7 ppb TRS
AZ
AS
Amb
November 2, 2006

# Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **PM2.5**

Air Monitoring Network **PASZA**

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 2, 2006 | Previous Calibration | September 21, 2006 |
| Station Number | 2 | Station Location | Evergreen Park |

Reason: [Routine] [Install] [Removal] [Other:]

| | | | |
|---|---|---|---|
| Start Time (MST) | 1:14 | End Time (MST) | 15:30 |
| Barometric Pressure | 0.934 ATM | Station Temperature | 20.0 Deg C |
| Flow Calibrator | BIOS Drycal DCL-MH | Serial Number | 101780 |
| DACS make | AP 1000 | DACS serial No. | 45269 |
| DACS voltage range | 0 - 1 V | DACS channel # | 15 |
| | Before | | After |
| DACS slope | 0.050000 | DACS slope | 0.050000 |
| DACS intercept | -50.000000 | DACS intercept | -50.000000 |

## *Analyzer Information*

| | | | |
|---|---|---|---|
| Analyzer make | R&P | Control Unit serial # | 140AB246340305 |
| Analyzer model | TEOM 1400AB | Sensor Unit serial # | 140AB246340305 |

| | before | | after | |
|---|---|---|---|---|
| Main Flow Set Point | 3.000 | SLPM | 3.000 | SLPM |
| Aux Flow Set Point | 13.67 | SLPM | 13.67 | SLPM |
| Filter Load | 22 | % | 22 | % |
| Ko Factor | 10124 | | 10124 | |
| Temperature | 7.4 | Deg C | 7.4 | Deg C |
| Pressure | 0.934 | ATM | 0.924 | ATM |

## *Calibration Data*

| Parameter | Set Point | As Found | Tolerance | TEOM Reading |
|---|---|---|---|---|
| zero flow - main | 0.0 | 0.06 | | 0.08 |
| zero flow - auxillary | 0.0 | 0.04 | | 0.09 |
| flow recovery - main | 45 - 60 Seconds | 35.0 | 45 - 60 Seconds | 35.0 |
| flow recovery - aux | 46 - 60 Seconds | 45.0 | 46 - 60 Seconds | 45.0 |
| Temperature | measured | -5.1 | +/- 1.0 Deg C | -5.1 |
| Pressure | measured | 0.934 | +/- 1.5% $\Delta_{ATM}$ | 0.934 |
| Total Flow | 16.67 SLPM | 17.10 | | |
| Main Flow | 13.67 SLPM | 14.80 | +/- 1.0 SLPM | 13.67 |
| Auxillary Flow | 3.0 SLPM | 3.210 | +/- 0.2 SLPM | 3.000 |
| Leak Check - main | 0.0 | | <0.15 SLPM | 0.08 |
| Leak Check - aux | 0.0 | | <0.15 SLPM | 0.21 |
| Ko Factor (w/o filter) | measured | | filter weight (g) | 0.11012 |
| Ko Factor (w/ filter) | measured | | % Ko difference | N/A |

Notes: Adjusted flows on mass flow controllers. Aux flow slope at .960
Cleaned head.

Calibration Performed By: Dawn Ewan

# Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **$SO_2$**

Air Monitoring Network **PASZA**

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 29, 2006 | Previous Calibration | October 23, 2006 |
| Station Number | 3 | Station Location | Smoky Heights |

Reason: [Routine] [Install] [Removal] [Other:]

| | | | |
|---|---|---|---|
| Start Time (MST) | 10:50 | End Time (MST) | 15:13 |
| Barometric Pressure | 27.74 inches Hg | Station Temperature | 20.0 Deg C |
| Calibrator | VICI Metronics | Serial Number | 111-1695 |
| Perm-tube Conc | 1,946 ng/min | Perm-tube Expiry Date | 8/6/2006 |
| Correction factor | 0.942961 | Perm-tube Cert # | 19-25218 |
| DACS make | Focus AP1000 | DACS serial No. | 45274 |
| DACS voltage range | 0 - 10 volt | DACS channel # | 4 |
| | Before | | After |
| Calculated slope | 0.995292 | Calculated slope | 0.981486 |
| Calculated intercept | 3.277126 | Calculated intercept | 4.143742 |

Analyzer make: API 102A  Analyzer serial #: 212

| | before | | after | |
|---|---|---|---|---|
| Concentration range | 500 | ppb | 500 | ppb |
| Sample Flow | 569 | ccm | 579 | ccm |
| UV Lamp Voltage | 3459 | mv | 3759 | mv |
| Lamp Ratio | 100.5 | % | 109 | % |
| Rx Cell Temp | 51.4 | Deg C | 51.4 | Deg C |
| PMT Temp | 6.9 | Deg C | 6.9 | Deg C |
| IZS Temp | 45 | Deg C | 45 | Deg C |
| Slope | 0.854 | | 1.239 | |
| Intercept | 27 | | 39.1 | |

## *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) |
|---|---|---|---|---|
| zero | 2357.4 | 0.0 | -1.1 | N/A |
| 2500 | 2357.4 | 315.1 | 318.0 | 0.9907 |
| 5000 | 4714.8 | 157.5 | 155.8 | 1.0113 |
| 9000 | 8486.6 | 87.5 | 81.1 | 1.0787 |
| | | | | |
| | | | | |
| zero | 2357.4 | 0.0 | 1.5 | As Found Zero |
| 2500 | 2357.4 | 315.1 | 341.6 | As Found Span |
| | | | Average Correction Factor | 1.0269 |

Calculated value of As Found Response: 341.752 ppm  Percent Change of As Found: -8.5%

| | before calibration | | after calibration | |
|---|---|---|---|---|
| Auto zero | 3.0 | ppm | 3.5 | ppm |
| Auto span | 243.3 | ppm | 217.5 | ppm |

Notes: Replaced UV filter. Adjusted PMT gain. Adjusted span and zero.

Calibration Performed By: Dawn Ewan

## Calibration Summary

FOCUS AIR QUALITY MONITORING

Parameter **SO2**

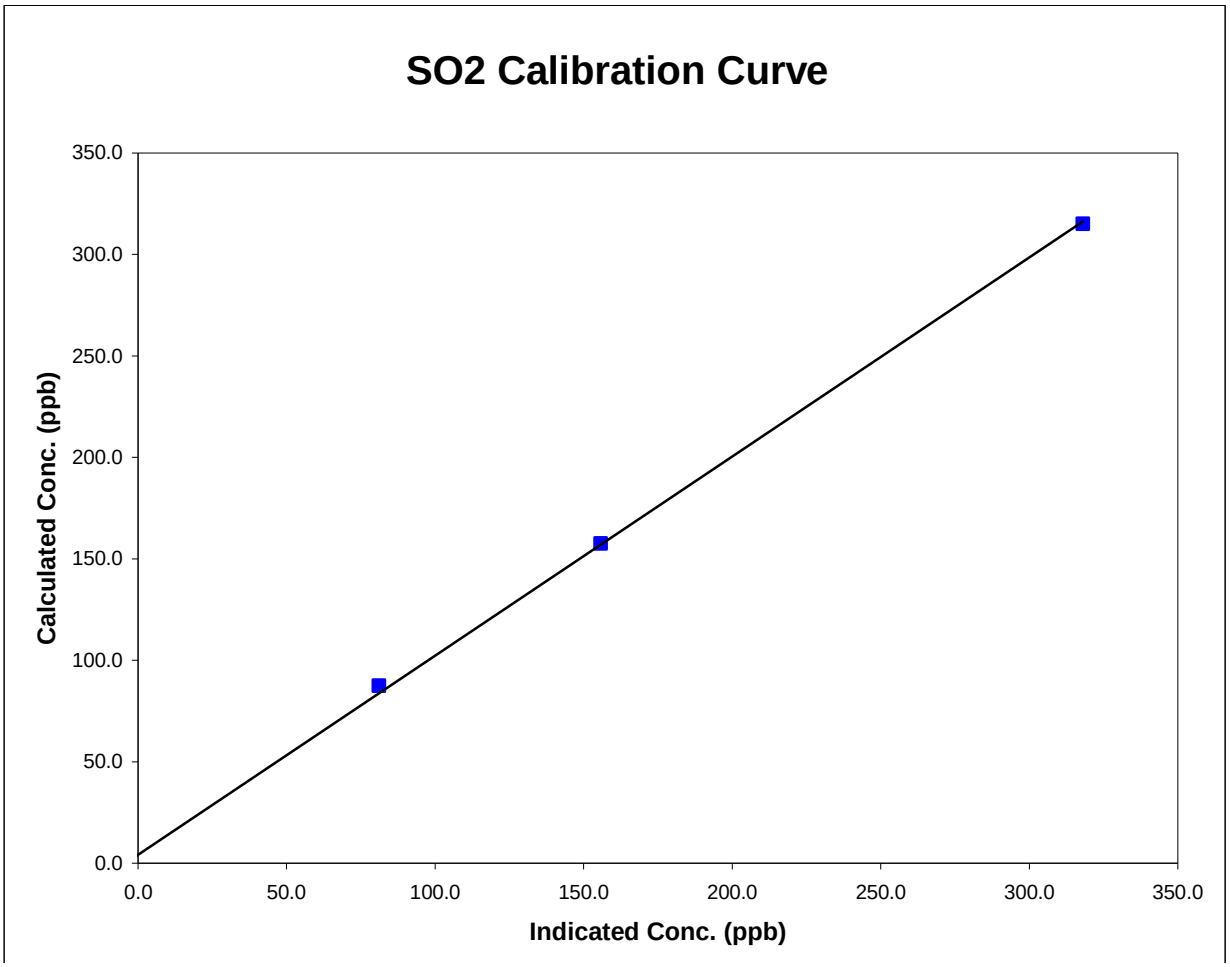
Air Monitoring Network **PASZA**

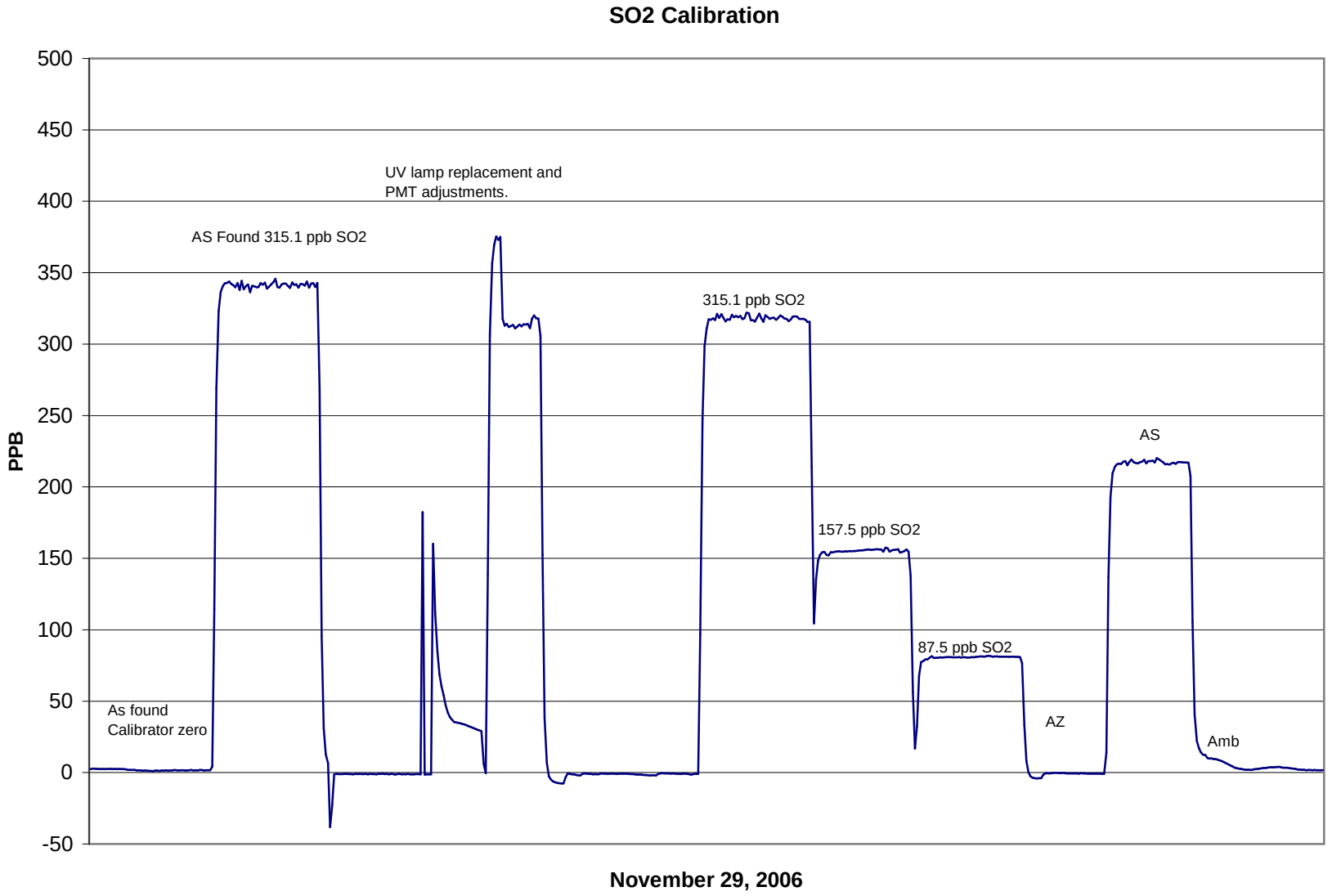
***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 29, 2006 | Previous Calibration | October 23, 2006 |
| Station Number | 3 | Station Location | Smoky Heights |
| Start Time (MST) | 10:50 | End Time (MST) | 15:13 |
| Analyzer make/model | API 102A | Analyzer serial # | 212 |

***Calibration Data***

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | -1.1 | N/A | | |
| 315.1 | 318.0 | 0.9907 | Correlation Coefficient | 0.999532 |
| 157.5 | 155.8 | 1.0113 | | |
| 87.5 | 81.1 | 1.0787 | Slope | 0.981486 |
| | | | | |
| | | | Intercept | 4.143742 |
| | | | | |




SO2 Calibration
500
450
400
350
300
250
200
150
100
50
0
-50
PPB
UV lamp replacement and
PMT adjustments.
AS Found 315.1 ppb SO2
315.1 ppb SO2
AS
157.5 ppb SO2
87.5 ppb SO2
AZ
Amb
As found
Calibrator zero
November 29, 2006

# Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **TRS**

Air Monitoring Network **PASZA**

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 29, 2006 | Previous Calibration | October 23, 2006 |
| Station Number | 3 | Station Location | Smoky Heights |
| Reason: | Routine: ■ Install: ☐ Removal: ☐ Other: | | |
| Start Time (MST) | 10:50 | End Time (MST) | 15:13 |
| Barometric Pressure | 27.74 inches Hg | Station Temperature | 20.0 Deg C |
| Calibrator | VICI Metronics | Serial Number | 111-1695 |
| Perm-tube Conc | 235 ng/min | Perm-tube Date | 8/6/2006 |
| Correction factor | 0.942961 | Perm-tube Cert # | T-25214 |
| DACS make | Focus AP1000 | DACS serial No. | 1 |
| DACS voltage range | 0 - 10 volt | DACS channel # | 9 |
| | Before | | After |
| Calculated slope | 0.988488 | Calculated slope | 0.962848 |
| Calculated intercept | 0.740499 | Calculated intercept | 0.412841 |
| Analyzer make | TEI Model 43C | Analyzer serial # | 436610004 |

| | before | | after | |
|---|---|---|---|---|
| Concentration range | 100 | ppb | 100 | ppb |
| Background | 11.7 | ppb | 12.4 | ppb |
| coefficient | 1.074 | | 1.138 | |
| Lamp Voltage | 771 | volts | 780 | volts |
| Chamber Temp | 43.9 | Deg C | 43.9 | Deg C |
| Perm Gas Temp | 44.99 | Deg C | 45 | Deg C |
| Pressure | 508.4 | mm Hg | 507.7 | mm Hg |
| Sample Flow | 798 | ccm | 795 | ccm |
| Lamp Intesity | 32,200 | mv | 32,200 | 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) |
|---|---|---|---|---|
| zero | 2357.4 | 0.0 | 0.0 | N/A |
| 2500 | 2357.4 | 71.7 | 74.2 | 0.9660 |
| 5000 | 4714.8 | 35.8 | 36.7 | 0.9764 |
| 9000 | 8486.6 | 19.9 | 19.7 | 1.0093 |
| | | | | |
| | | | | |
| zero | 2357.4 | 0.0 | -0.1 | As Found Zero |
| 2500 | 2357.4 | 71.7 | 71.3 | As Found Span |
| | | | Average Correction Factor | 0.9839 |

Calculated value of As Found Response: 71.32 ppm Percent Change of As Found: 0.5%

| | before calibration | | after calibration | |
|---|---|---|---|---|
| Auto zero | 0.5 | ppm | 0.3 | ppm |
| Auto span | 48.9 | ppm | 47.0 | ppm |

Notes: Adjusted zero and span.

Calibration Performed By: Dawn Ewan

## Calibration Summary

FOCUS AIR QUALITY MONITORING

Parameter **TRS**

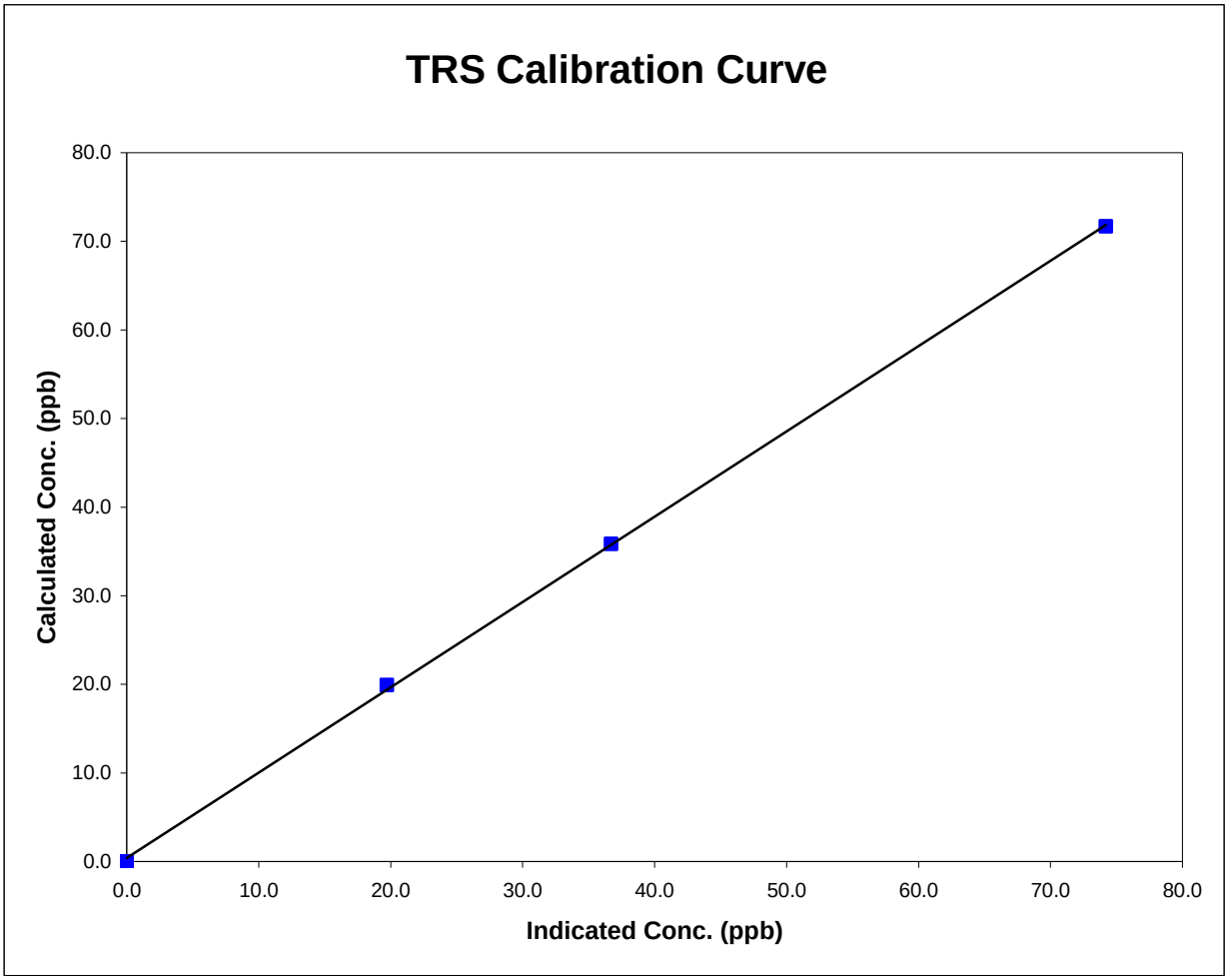
Air Monitoring Network **PASZA**

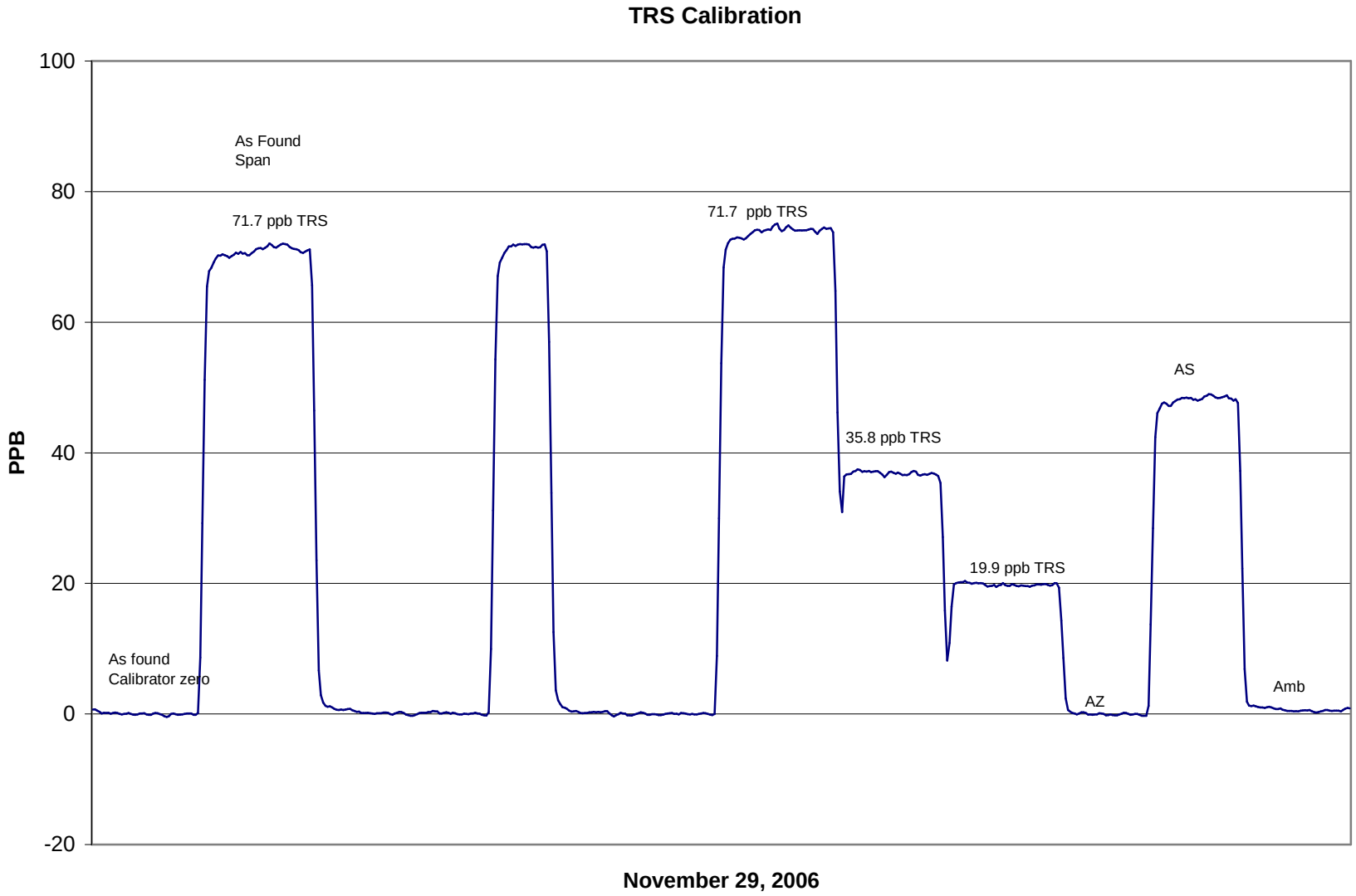
***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 29, 2006 | Previous Calibration | October 23, 2006 |
| Station Number | 3 | Station Location | Smoky Heights |
| Start Time (MST) | 10:50 | End Time (MST) | 15:13 |
| Analyzer make/model | TEI Model 43C | Analyzer serial # | 436610004 |

***Calibration Data***

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | 0.0 | N/A | | |
| 71.7 | 74.2 | 0.9660 | Correlation Coefficient | 0.999832 |
| 35.8 | 36.7 | 0.9764 | | |
| 19.9 | 19.7 | 1.0093 | Slope | 0.962848 |
| | | | | |
| | | | Intercept | 0.412841 |
| | | | | |




TRS Calibration
100
80
60
40
20
0
-20
PPB
As Found
Span
71.7 ppb TRS
71.7 ppb TRS
35.8 ppb TRS
19.9 ppb TRS
AS
As found
Calibrator zero
AZ
Amb
November 29, 2006

# Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **PM2.5**

Air Monitoring Network **PASZA**

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 29, 2006 | Previous Calibration | October 23, 2006 |
| Station Number | 3 | Station Location | Smoky Heights |

Reason: [Routine] [Install] [Removal] [Other:]

| | | | |
|---|---|---|---|
| Start Time (MST) | 13:45 | End Time (MST) | 14:45 |
| Barometric Pressure | 0.927 ATM | Station Temperature | 20.0 Deg C |
| Flow Calibrator | BIOS Drycal DCL-MH | Serial Number | 101780 |
| DACS make | AP 1000 | DACS serial No. | 45269 |
| DACS voltage range | 0 - 1 V | DACS channel # | 15 |

## *Analyzer Information*

| | | | |
|---|---|---|---|
| Analyzer make | R&P | Control Unit serial # | 140AB246340305 |
| Analyzer model | TEOM 1400AB | Sensor Unit serial # | 140AB246340305 |

| | before | | after | |
|---|---|---|---|---|
| Main Flow Set Point | 2.990 | SLPM | 3.000 | SLPM |
| Aux Flow Set Point | 13.67 | SLPM | 13.67 | SLPM |
| Filter Load | 40 | % | 16 | % |
| Ko Factor | 12122 | | 12122 | |
| Temperature | -24.6 | Deg C | -24.6 | Deg C |
| Pressure | 0.929 | ATM | 0.929 | ATM |
| Main Fadj | 1.000 | | 0.900 | |
| Aux Fadj | 1.000 | | 0.900 | |

## *Calibration Data*

| Parameter | Set Point | As Found | Tolerance | New Reading |
|---|---|---|---|---|
| zero flow - main | 0.0 | 0.00 | | 0.09 |
| zero flow - auxillary | 0.0 | -0.02 | | 0.20 |
| flow recovery - main | 45 - 60 Seconds | 33 | 45 - 60 Seconds | 33 |
| flow recovery - aux | 46 - 60 Seconds | 39 | 46 - 60 Seconds | 39 |
| Temperature | measured | -24.3 | +/- 1.0 Deg C | -24.3 |
| Pressure | measured | 0.927 | +/- 1.5% $\Delta_{ATM}$ | 0.927 |
| Total Flow | 16.67 SLPM | | | |
| Main Flow | 13.67 SLPM | 15.80 | +/- 1.0 SLPM | 13.94 |
| Auxillary Flow | 3.0 SLPM | 3.490 | +/- 0.2 SLPM | 3.042 |
| Leak Check - main | 0.0 | | <0.15 SLPM | |
| Leak Check - aux | 0.0 | | <0.15 SLPM | |
| Ko Factor (w/o filter) | measured | 324.888 | filter weight (g) | 0.11014 |
| Ko Factor (w/ filter) | measured | 232.501 | % Ko difference | 0.67 |

Notes: Adjusted flows via hard and software.
New mass filter.

Calibration Performed By: Dawn Ewan

# Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **$SO_2$**

Air Monitoring Network **PASZA**

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 1, 2006 | Previous Calibration | October 16, 2006 |
| Station Number | 4 | Station Location | Beaverlodge |

Reason: [Routine] [Install] [Removal] [Other:]

| | | | |
|---|---|---|---|
| Start Time (MST) | 12:13 | End Time (MST) | 16:03 |
| Barometric Pressure | 0.926 atm | Station Temperature | 20.0 Deg C |
| Calibrator | Environics 6103 | Serial Number | 2488 |
| Cal Gas Make | Scott | Cal Gas Expiry Date | December 12, 2005 |
| Cal Gas Conc. | 10.3 ppm | Cal Gas Cylinder # | BLM002816 |
| DACS make | Focus AP1000 | DACS serial No. | 45267 |
| DACS voltage range | 0 - 10 volt | DACS channel # | 3 |

| | Before | | After |
|---|---|---|---|
| Calculated slope | 1.000741 | Calculated slope | 1.003322 |
| Calculated intercept | 0.469201 | Calculated intercept | -0.266499 |

| | | | |
|---|---|---|---|
| Analyzer make | TEI Model 43CTL | Analyzer serial # | 43CTL-74200-376 |

| | before | | after | |
|---|---|---|---|---|
| Concentration range | 0 - 100 | ppb | 0 - 100 | ppb |
| Background | 2.38 | ppb | 2.34 | ppb |
| Coefficient | 0.868 | | 0.853 | |
| Lamp Voltage | 906.0 | Volts | 914.0 | Volts |
| Chamber Temp | 43.8 | Deg C | 43.1 | Deg C |
| Sample Flow | 312 | ccm | 605 | ccm |

## *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) |
|---|---|---|---|---|
| 4996 | 0.00 | 0.00 | 0.04 | N/A |
| 4996 | 39.94 | 81.69 | 81.58 | 1.0013 |
| 4996 | 19.97 | 41.01 | 41.21 | 0.9950 |
| 4996 | 9.95 | 20.47 | 20.92 | 0.9786 |
| | | | | |
| | | | | |
| 4996 | 0.00 | 0.00 | 0.06 | As Found Zero |
| 4996 | 39.94 | 81.69 | 80.45 | As Found Span |
| | | | Average Correction Factor | 0.9916 |

Calculated value of As Found Response: 80.925 ppm Percent Change of As Found: 0.9%

| | before calibration | | after calibration | |
|---|---|---|---|---|
| Auto zero | 0.42 | ppm | -0.27 | ppm |
| Auto span | 46.95 | ppm | 27.67 | ppm |

Notes: Rebuilt pump.
Adjust span.

Calibration Performed By: Dawn Ewan

## Calibration Summary

Parameter **SO2**

Air Monitoring Network **PASZA**

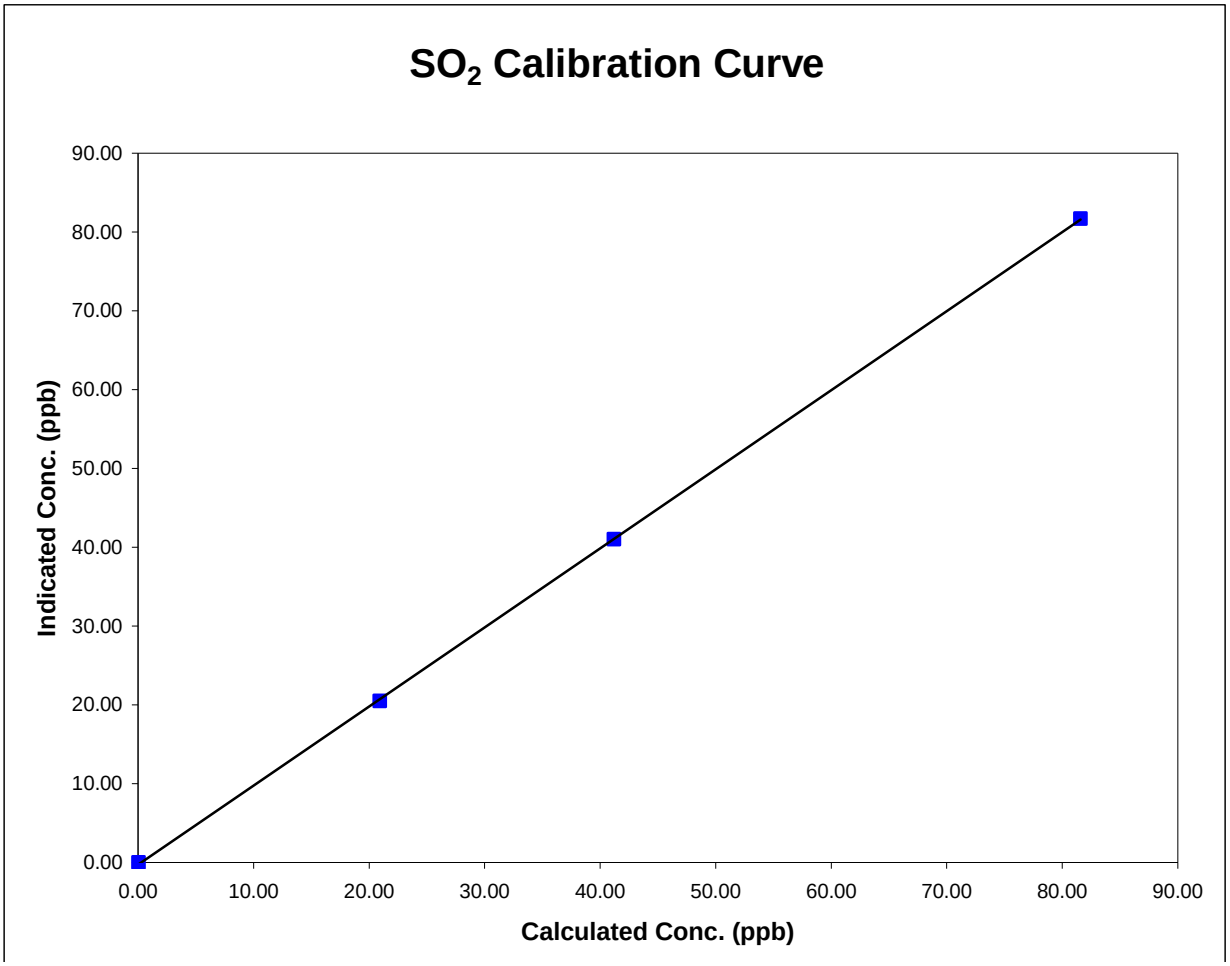
FOCUS AIR QUALITY MONITORING

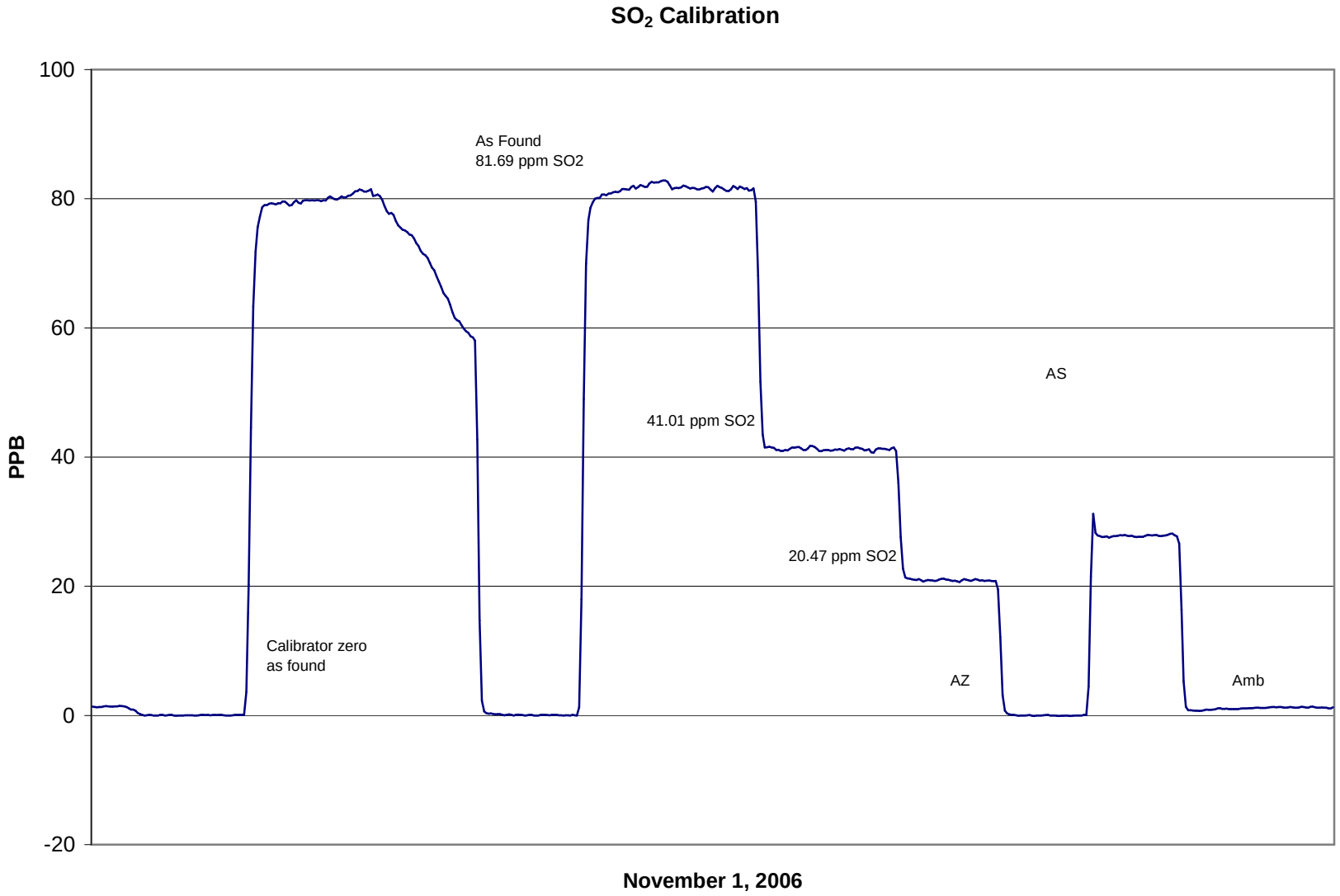
***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 1, 2006 | Previous Calibration | October 16, 2006 |
| Station Number | 4 | Station Location | Beaverlodge |
| Start Time (MST) | 12:13 | End Time (MST) | 16:03 |
| Analyzer make/model | TEI Model 43CTL | Analyzer serial # | 43CTL-74200-376 |

***Calibration Data***

| Calculated concentration (ppm) (Cc) | Indicated concentration (ppm) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.000 | 0.042 | N/A | | |
| 81.689 | 81.582 | 1.0013 | Correlation Coefficient | 0.999965 |
| 41.007 | 41.212 | 0.9950 | | |
| 20.473 | 20.921 | 0.9786 | Slope | 1.003322 |
| | | | | |
| | | | Intercept | -0.266499 |
| | | | | |




SO2 Calibration
100
80
60
40
20
0
-20
PPB
As Found
81.69 ppm SO2
41.01 ppm SO2
20.47 ppm SO2
AS
Calibrator zero
as found
AZ
Amb
November 1, 2006

# Calibration Report

Parameter **NOx-NO-$NO_2$**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 21, 2006 | Previous Calibration | October 16, 2006 |
| Station Number | 4 | Station Location | Beaverlodge |

Reason: Routine | Installation | Removal | Other:

| | | | | | |
|---|---|---|---|---|---|
| Start Time (MST) | 11:10 | | End Time (MST) | 15:30 | |
| Barometric Pressure | 0.912 | Atm | Station Temperature | 20.0 | Deg C |
| Calibrator | Environics 6103 | | Serial Number | 2488 | |
| NO Cal Gas Conc | 50.3 | ppm | Cal Gas Expiry Date | Nov 22/06 | |
| NOx Cal Gas Conc | 50.5 | ppm | Cal Gas Serial # | BAL786 | |

## *DACS Information*

| | | | |
|---|---|---|---|
| DACS make | FOCUS AP1000 | DACS serial No. | 45269 |

| Parameter | | NO2 | NOx | NO |
|---|---|---|---|---|
| Before | Data Slope | 1.007267 | 1.001916 | 1.002111 |
| | Data Offset | -1.162457 | 2.404885 | 3.100921 |
| After | Data Slope | 1.002202 | 0.998524 | 0.998565 |
| | Data Offset | -0.327911 | 1.089197 | 1.297218 |
| Channel # | | 8 | 6 | 7 |
| Voltage Range | | 0 - 10 VDC | 0 - 10 VDC | 0 - 10 VDC |

## *Analyzer Information*

| | | | |
|---|---|---|---|
| Analyzer make/model | TEI Model 42 | Analyzer serial # | 42-28486-231 |

| Test Point | before | | after | |
|---|---|---|---|---|
| Concentration range | 0-1000 | ppb | 0-1000 | ppb |
| NO background | 1.3 | ppb | 1.4 | mV |
| NOx background | 1.3 | ppb | 1.9 | mV |
| NO coefficient | 1.062 | | 1.047 | |
| NOx coefficient | 0.983 | | 0.995 | |
| Box Temp | 34.8 | ccm | 30.3 | ccm |
| Chamber Temp | 49.2 | Deg C | 49.1 | Deg C |
| Cooler Temp | -2.2 | Deg C | -2.2 | Deg C |
| Converter Temp | 323.0 | Deg C | 324.0 | Deg C |
| Sample Flow | 787.0 | LPM | 799.0 | LPM |
| Ozonator Flow | 0.086 | LPM | 0.086 | LPM |
| Pressure | 170.0 | inches HG | 167.0 | inches Hg |

Notes: Adjusted span and zero.

# Calibration Report

Parameter **NOx-NO-$NO_2$**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

## *Station Information*

Calibration Date: November 21, 2006 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 | 4996 | 0.00 | 0.0 | 0.0 | 0.0 | -0.3 | -0.3 | -0.3 | N/A | N/A |
| 1 | 4996 | 79.86 | 794.5 | 791.4 | 3.1 | 795.2 | 791.8 | 2.4 | 0.9992 | 0.9995 |
| 2 | 4996 | 39.98 | 400.9 | 399.3 | 1.6 | 399.6 | 397.8 | 1.2 | 1.0034 | 1.0037 |
| 3 | 4996 | 20.00 | 201.4 | 200.6 | 0.8 | 200.1 | 198.8 | 0.9 | 1.0065 | 1.0091 |
| | | | | | | | | | | |
| AFZ | 4996 | 0.00 | 0.0 | 0.0 | 0.0 | -0.3 | -0.4 | -0.3 | 0.0000 | 0.0000 |
| AFS | 4996 | 79.86 | 794.5 | 791.4 | 3.1 | 802.0 | 809.5 | -8.5 | 0.9907 | 0.9776 |
| | | | | | | | Average Correction Factor | | 1.0030 | 1.0041 |

As Found Concentrations: $NO_X$= 804.6 NO= 813.0 As Found Percent Change $NO_X$= 1.3% NO= 2.7%

## *GPT Calibration Data*

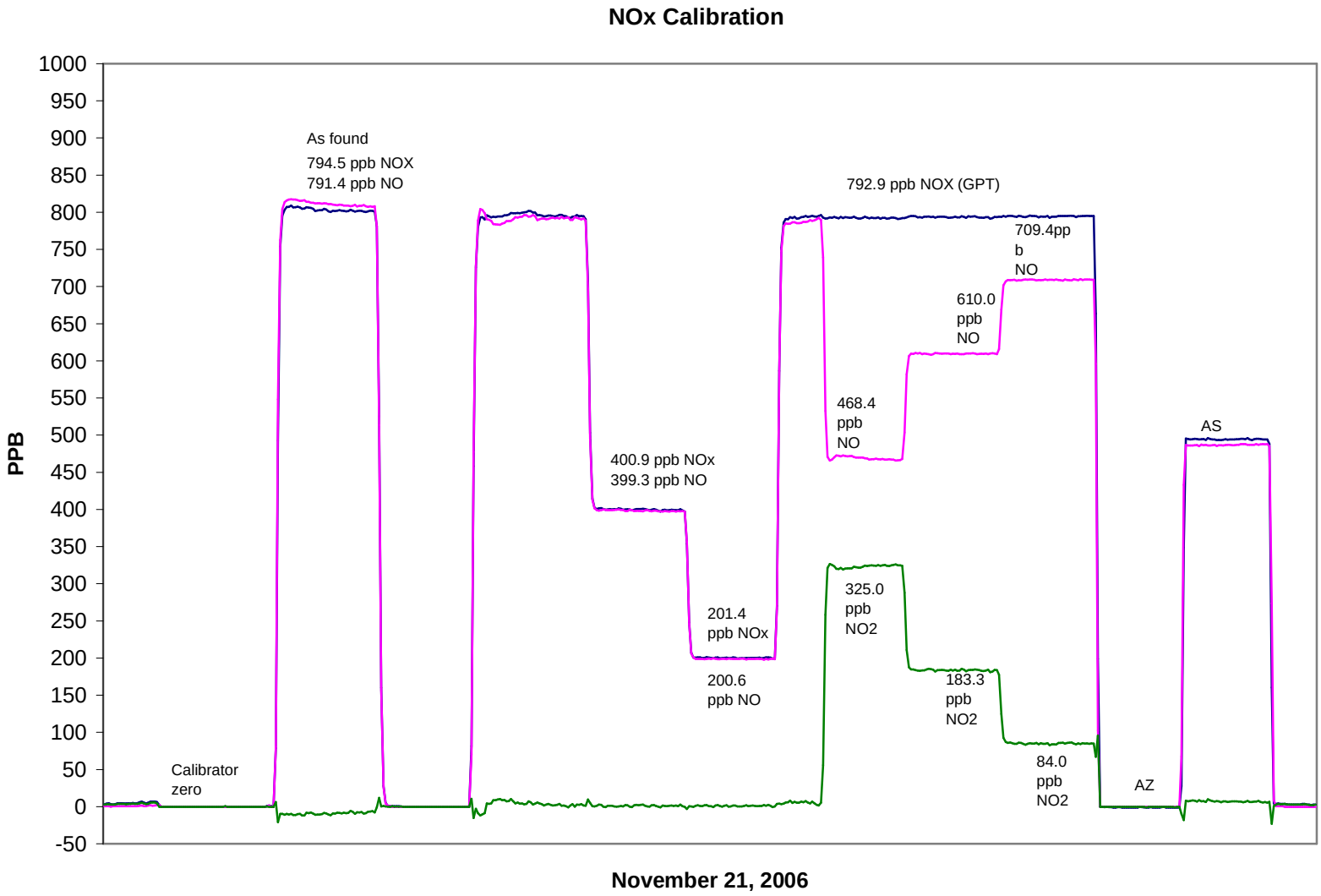
Dilution Flow 4993 ccm Source Gas Flow 39.97 ccm

| O3 Setpoint (ppb) | 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 | NO2 Correction factor | Converter Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | N/A | N/A | N/A | N/A |
| NO point | 793.3 | 787.9 | 5.4 | 793.7 | 787.8 | 5.2 | 0.9996 | 1.0002 | N/A | N/A |
| 350 | 793.3 | 468.4 | 325.0 | 792.2 | 467.7 | 324.3 | 1.0014 | 1.0013 | 1.0022 | 99.8% |
| 200 | 793.3 | 610.0 | 183.3 | 793.4 | 609.6 | 183.5 | 0.9999 | 1.0007 | 0.9991 | 100.1% |
| 100 | 793.3 | 709.4 | 84.0 | 794.6 | 709.1 | 84.9 | 0.9984 | 1.0004 | 0.9894 | 101.1% |
| | | | | | Average Correction Factor | | 0.9999 | 1.0008 | 0.9969 | 100.3% |

## *AIC Data*

| | Previous calibration | | | | Current calibration | | | |
|---|---|---|---|---|---|---|---|---|
| Parameter | NOx | NO2 | NO | | NOx | NO2 | NO | |
| Auto zero | 2.2 | -1.5 | 2.8 | ppb | 0.0 | -0.7 | 1.0 | ppb |
| Auto span | 490.6 | 7.6 | 482.1 | ppb | 494.8 | 6.3 | 487.8 | ppb |

Calibration Performed By: Dawn Ewan


NOx Calibration
PPB
1000
950
900
850
800
750
700
650
600
550
500
450
400
350
300
250
200
150
100
50
0
-50
As found
794.5 ppb NOX
791.4 ppb NO
Calibrator
zero
400.9 ppb NOx
399.3 ppb NO
201.4
ppb NOx
200.6
ppb NO
792.9 ppb NOX (GPT)
468.4
ppb
NO
610.0
ppb
NO
709.4pp
b
NO
325.0
ppb
NO2
183.3
ppb
NO2
84.0
ppb
NO2
AZ
AS
November 21, 2006

# Calibration Summary

Parameter **$NO_2$**

Air Monitoring Network **PASZA**

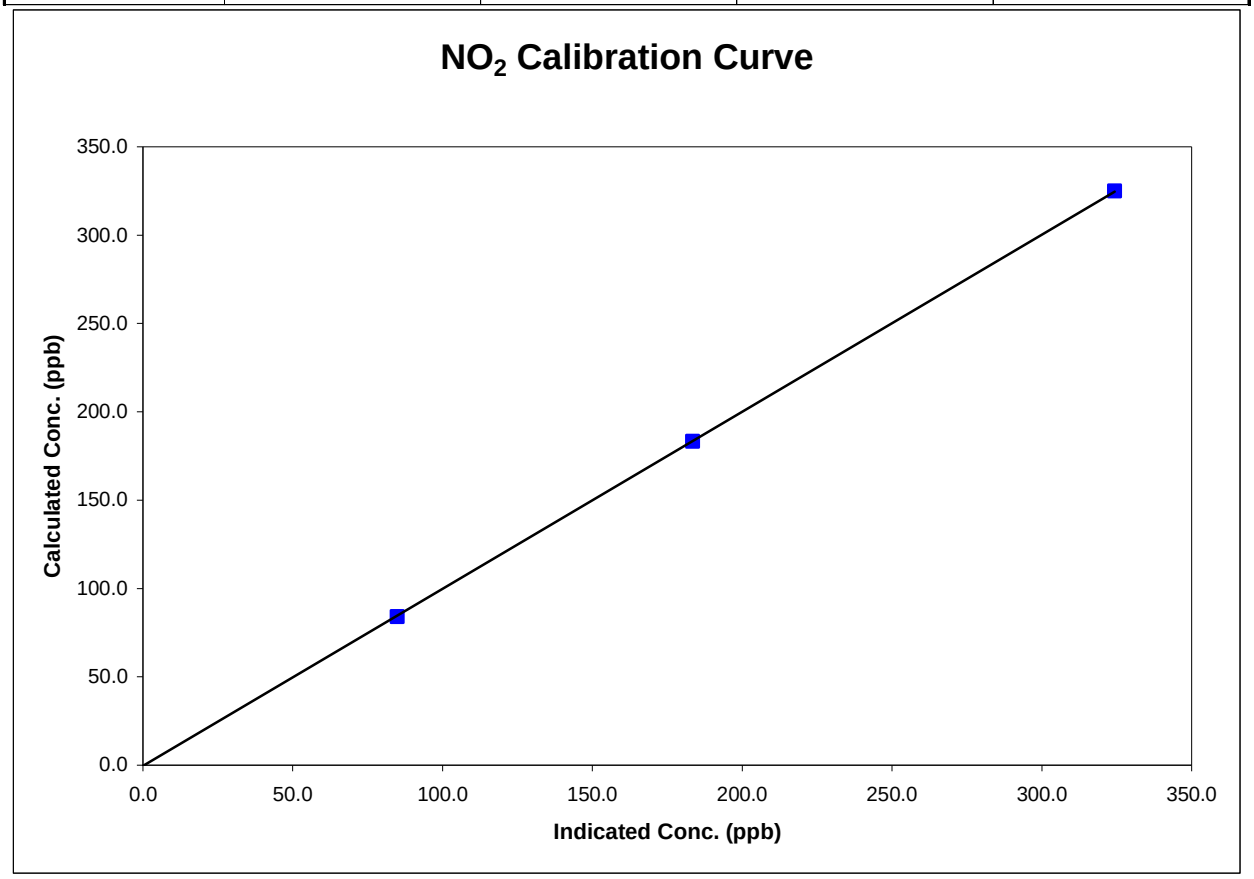
FOCUS AIR QUALITY MONITORING

***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 21, 2006 | Previous Calibration | October 16, 2006 |
| Station Number | 4 | Station Location | Beaverlodge |
| Start Time (MST) | 11:10 | End Time (MST) | 15:30 |
| Analyzer make | TEI Model 42 | Analyzer serial # | 42-28486-231 |

***Calibration Data***

| Calculated conc (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | -0.3 | 0.0000 | | |
| 325.0 | 324.3 | 1.0022 | Correlation Coefficient | 0.999980 |
| 183.3 | 183.5 | 0.9991 | | |
| 84.0 | 84.9 | 0.9894 | Slope | 1.002202 |
| | | | | |
| | | | Intercept | -0.327911 |
| | | | | |



# Calibration Summary

Parameter **$NO_x$**

Air Monitoring Network **PASZA**

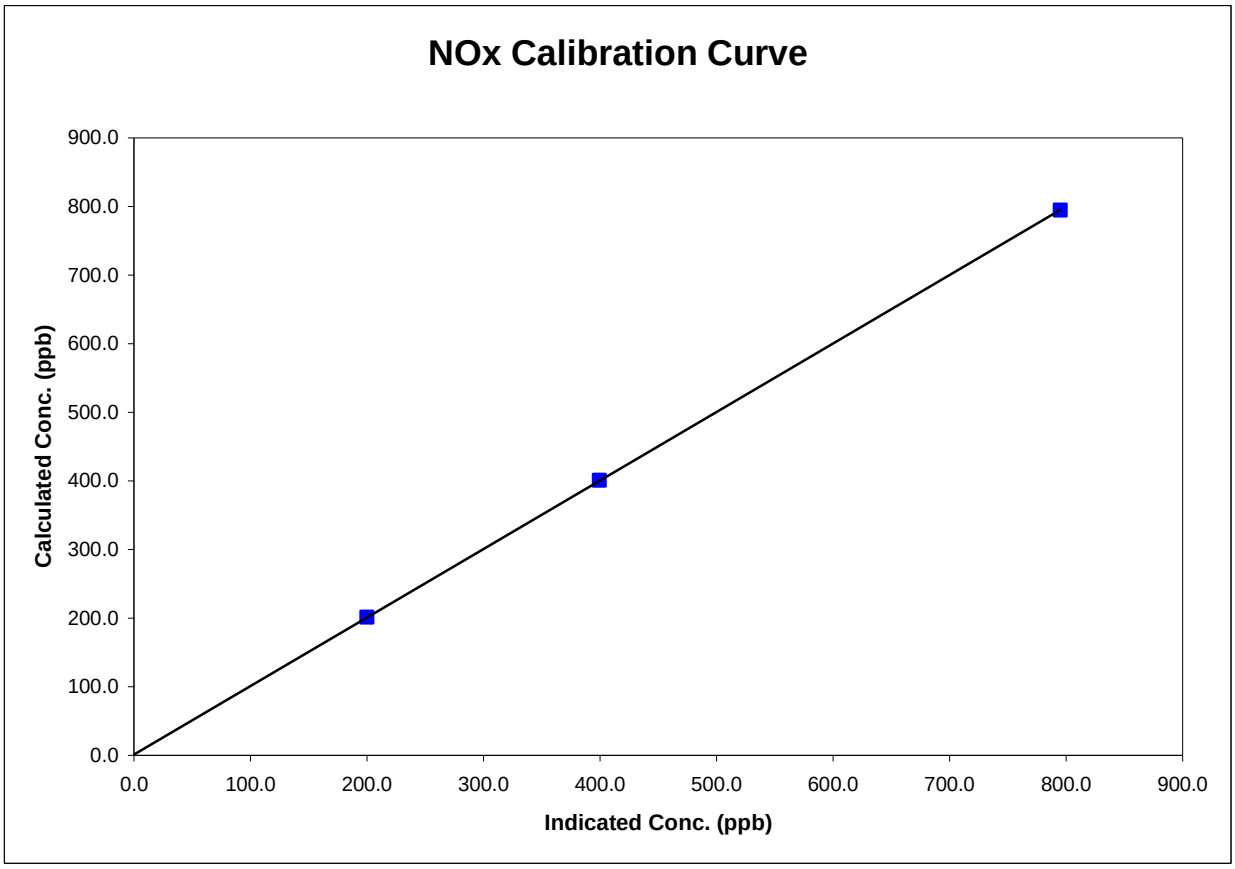
FOCUS AIR QUALITY MONITORING

***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 21, 2006 | Previous Calibration | October 16, 2006 |
| Station Number | 4 | Station Location | Beaverlodge |
| Start Time (MST) | 11:10 | End Time (MST) | 15:30 |
| Analyzer make | TEI Model 42 | Analyzer serial # | 42-28486-231 |

***Calibration Data***

| Calculated conc (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | -0.3 | 0.0000 | | |
| 794.5 | 795.2 | 0.9992 | Correlation Coefficient | 0.999994 |
| 400.9 | 399.6 | 1.0034 | | |
| 201.4 | 200.1 | 1.0065 | Slope | 0.998524 |
| | | | | |
| | | | Intercept | 1.089197 |
| | | | | |



# Calibration Summary

Parameter **NO**

Air Monitoring Network **PASZA**

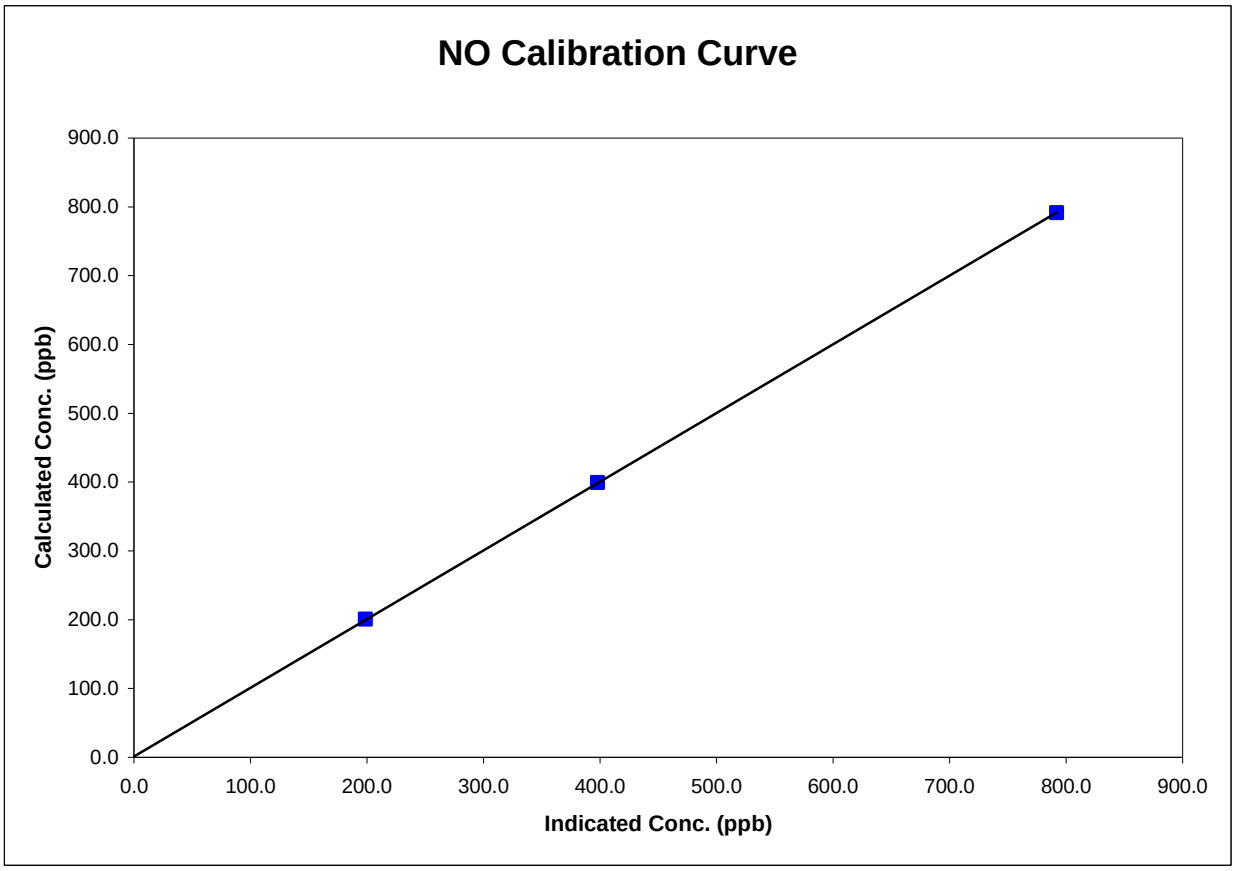
FOCUS AIR QUALITY MONITORING

### *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 21, 2006 | Previous Calibration | October 16, 2006 |
| Station Number | 4 | Station Location | Beaverlodge |
| Start Time (MST) | 11:10 | End Time (MST) | 15:30 |
| Analyzer make | TEI Model 42 | Analyzer serial # | 42-28486-231 |

### *Calibration Data*

| Calculated conc (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | -0.3 | N/A | | |
| 791.4 | 791.8 | 0.9995 | Correlation Coefficient | 0.999993 |
| 399.3 | 397.8 | 1.0037 | | |
| 200.6 | 198.8 | 1.0091 | Slope | 0.998565 |
| | | | | |
| | | | Intercept | 1.297218 |
| | | | | |



# Calibration Report

Parameter **O3**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 24, 2006 | Previous Calibration | October 16, 2006 |
| Station Number | 4 | Station Location | Beaverlodge |
| Reason: | Routine | Install | Removal | Other: |
| Start Time (MST) | 11:07 | End Time (MST) | 14:18 |
| Barometric Pressure | 0.922 atm | Station Temperature | 20.0 Deg C |
| Calibrator | Environics 6103 | Serial Number | 2977 |
| Cal Gas Concentration | NA | Cal Gas Expiry Date | NA |
| DACS make | Focus AP1000 | DACS serial No. | 45269 |
| DACS voltage range | 0 - 1 volt | DACS channel # | 5 |
| | Before | | After |
| Calculated slope | 0.996060 | Calculated slope | 0.998732 |
| Calculated intercept | -0.076880 | Calculated intercept | -0.048270 |
| Analyzer make | Teco 49C | Analyzer serial # | 49C-76443-383 |

| | before | | after | |
|---|---|---|---|---|
| Concentration range | 0 - 500 | ppb | 0 - 500 | ppb |
| offset | -0.30 | ppb | -0.70 | ppb |
| slope | 1.07 | | 1.04 | |
| Lamp temp | 71 | mV | 71 | mV |
| Lamp Intensity A/B | 87000/85700 | mV | 84500/83000 | mV |
| Pressure | 691 | inches Hg | 696 | inches Hg |
| Flow A | 755 | ccm | 757 | ccm |
| Flow B | 710 | Deg C | 714 | Deg C |

## *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) |
|---|---|---|---|---|
| 4992 | 0.00 | 0.0 | 0.0 | N/A |
| 4992 | 0.00 | 325.0 | 325.5 | 0.9984 |
| 4992 | 0.00 | 183.3 | 183.4 | 0.9996 |
| 4992 | 0.00 | 84.0 | 84.3 | 0.9960 |
| | | | | |
| 4992 | 0.00 | 0.0 | -0.4 | As found zero |
| 4992 | 0.00 | 325.0 | 329.1 | As found span |
| | | | Average Correction Factor | 0.9980 |

Calculated value of As Found Response: 328.2 ppm Percent Change of As Found: 1.0%

| | before calibration | | after calibration | |
|---|---|---|---|---|
| Auto zero | -0.1 | ppb | 0.4 | ppb |
| Auto span | 112.6 | ppb | 114.0 | ppb |

Notes:

Calibration Performed By: Dawn Ewan

## Calibration Summary

Parameter **O3**

Air Monitoring Network **PASZA**

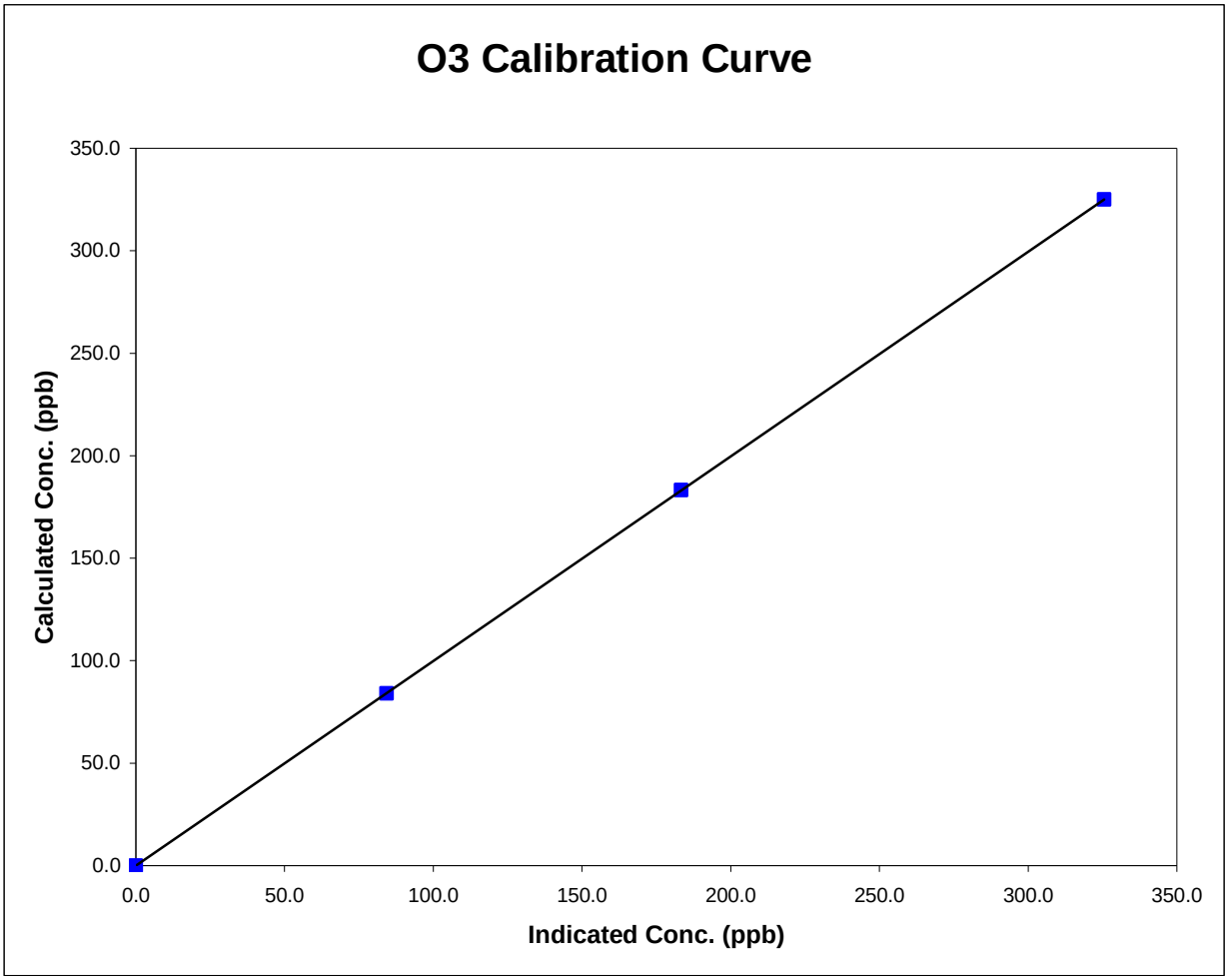
FOCUS AIR QUALITY MONITORING

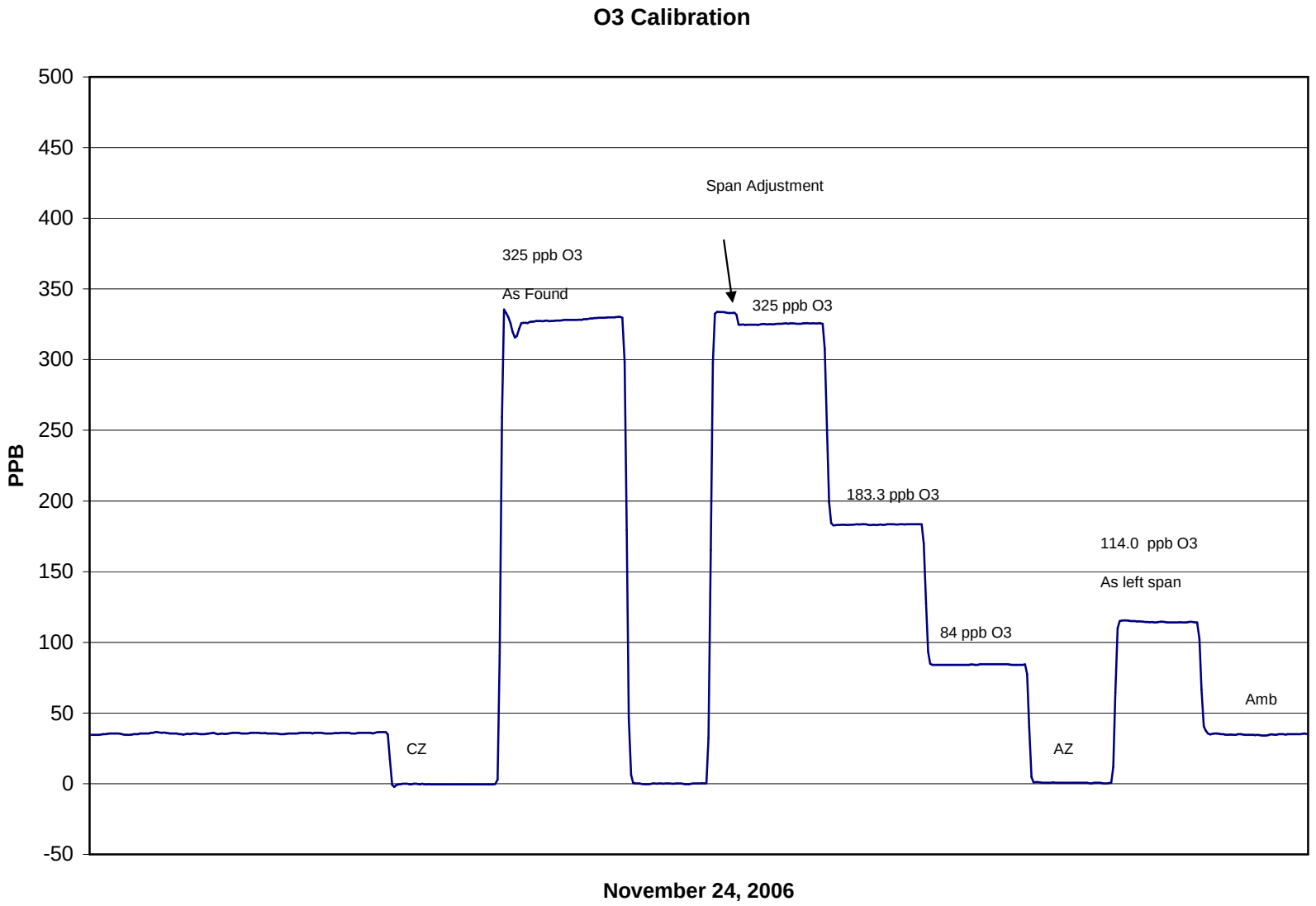
***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 24, 2006 | Previous Calibration | October 16, 2006 |
| Station Number | 4 | Station Location | Beaverlodge |
| Start Time (MST) | 11:07 | End Time (MST) | 14:18 |
| Analyzer make/model | Teco 49C | Analyzer serial # | 49C-76443-383 |

***Calibration Data***

| Calculated concentration (ppm) (Cc) | Indicated concentration (ppm) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | 0.0 | NA | | |
| 325.0 | 325.5 | 0.9984 | Correlation Coefficient | 0.999999 |
| 183.3 | 183.4 | 0.9996 | | |
| 84.0 | 84.3 | 0.9960 | Slope | 0.998732 |
| | | | | |
| | | | Intercept | -0.048270 |
| | | | | |




O3 Calibration
500
450
400
350
300
250
200
150
100
50
0
-50
PPB
Span Adjustment
325 ppb O3
As Found
325 ppb O3
183.3 ppb O3
114.0 ppb O3
As left span
84 ppb O3
Amb
CZ
AZ
November 24, 2006

# Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **PM2.5**

Air Monitoring Network **PASZA**

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 21, 2006 | Previous Calibration | September 18, 2006 |
| Station Number | 4 | Station Location | Beaverlodge |

Reason: [Routine] [Install] [Removal] [Other:]

| | | | |
|---|---|---|---|
| Start Time (MST) | 14:21 | End Time (MST) | 16:00 |
| Barometric Pressure | 0.919 ATM | Station Temperature | 20.0 Deg C |
| Flow Calibrator | BIOS Drycal DCL-MH | Serial Number | 101780 |
| DACS make | AP 1000 | DACS serial No. | 45269 |
| DACS voltage range | 0 - 1 V | DACS channel # | 10 |

## *Analyzer Information*

| | | | |
|---|---|---|---|
| Analyzer make | R&P | Control Unit serial # | 140AB246340305 |
| Analyzer model | TEOM 1400AB | Sensor Unit serial # | 140AB246340305 |

| | before | | after | |
|---|---|---|---|---|
| Main Flow Set Point | 3.000 | SLPM | 3.000 | SLPM |
| Aux Flow Set Point | 13.68 | SLPM | 13.67 | SLPM |
| Filter Load | 43 | % | 19 | % |
| Ko Factor | 14287 | | 14287 | |
| Temperature | -13.4 | Deg C | -13.4 | Deg C |
| Pressure | 0.911 | ATM | 0.911 | ATM |

## *Calibration Data*

| Parameter | Set Point | Teom Reading (As Found) | Tolerance | Teom Reading (After Adjustments) |
|---|---|---|---|---|
| zero flow - main | 0.0 | 0.03 | | 0.09 |
| zero flow - auxillary | 0.0 | 0.10 | | 0.21 |
| flow recovery - main | 45 - 60 Seconds | 35.00 | 45 - 60 Seconds | 38.00 |
| flow recovery - aux | 46 - 60 Seconds | 48.00 | 46 - 60 Seconds | 43.00 |
| Temperature | measured | -13.8 | +/- 1.0 Deg C | -13.8 |
| Pressure | measured | 0.911 | +/- 1.5% $\Delta_{ATM}$ | 0.911 |
| Total Flow | 16.67 SLPM | | | |
| Auxillary Flow | 13.67 SLPM | 14.88 | +/- 1.0 SLPM | 14.03 |
| Main Flow | 3.0 SLPM | 3.278 | +/- 0.2 SLPM | 3.046 |
| Leak Check - main | 0.0 | | <0.15 SLPM | 0.07 |
| Leak Check - aux | 0.0 | | <0.15 SLPM | 0.26 |
| Ko Factor (w/o filter) | measured | | filter weight (g) | |
| Ko Factor (w/ filter) | measured | | % Ko difference | N/A |

Notes: New mass filter.
Adjusted fows aux on hardware. Had to adjust flow aux with slope .96
Main flows adju hardware only.
Cleaned head.

Calibration Performed By: Dawn Ewan

# Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **$SO_2$**

Air Monitoring Network **PASZA**

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 17, 2006 | Previous Calibration | October 3, 2006 |
| Station Number | 1 | Station Location | Falher |

Reason: Routine | **Install** | Removal | Other:

| | | | |
|---|---|---|---|
| Start Time (MST) | 15:19 | End Time (MST) | 18:45 |
| Barometric Pressure | 27.5 inches Hg | Station Temperature | 20.0 Deg C |
| Calibrator | VICI Metronics | Serial Number | 111-1695 |
| Perm-tube Conc | 1,946 ng/min | Perm-tube Date | 8/8/2006 |
| Correction factor | 0.936162 | Perm-tube Cert # | 19-25218 |
| DACS make | Focus AP1000 | DACS serial No. | 52662 |
| DACS voltage range | 0 - 10 volt | DACS channel # | 5 |
| | Before | | After |
| Calculated slope | 1.036074 | Calculated slope | 0.996123 |
| Calculated intercept | -3.126732 | Calculated intercept | -3.356822 |

Analyzer make: TEI Model 43C APS1AB — Analyzer serial #: 609716238

| | before | | after | |
|---|---|---|---|---|
| Concentration range | 0 - 500 | ppb | 0 - 500 | ppb |
| Background | 7.8 | | 7.8 | |
| Coefficient | 1.131 | | 1.131 | |
| UV Lamp voltage | 758 | V | 758 | V |
| Chamber Temperature | 44.7 | C | 44.7 | C |
| Perm gas Temp | 45 | C | 45 | C |
| Pressure | 700.4 | "Hg | 700.4 | "Hg |
| Sample Flow | 501 | LPM | 501 | LPM |
| Lamp Intensity | 34100 | Hz | 34100 | Hz |

## *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) |
|---|---|---|---|---|
| zero | 2340.4 | 0.0 | -0.4 | N/A |
| 2500 | 2340.4 | 317.4 | 319.4 | 0.9938 |
| 5000 | 4680.8 | 158.7 | 165.4 | 0.9597 |
| 8000 | 7489.3 | 99.2 | 106.6 | 0.9302 |
| | | | | |
| | | | | |
| zero | 2340.4 | 0.0 | -0.4 | As Found Zero |
| 2500 | 2340.4 | 317.4 | 330.8 | As Found Span |
| | | | Average Correction Factor | 0.9612 |

Calculated value of As Found Response: 339.971 ppm  Percent Change of As Found: -7.1%

| | before calibration | | after calibration | |
|---|---|---|---|---|
| Auto zero | -3.0 | ppm | -3.7 | ppm |
| Auto span | 304.3 | ppm | 278.7 | ppm |

Notes: Adjusted span and zero.

Calibration Performed By: Dawn Ewan

## Calibration Summary

FOCUS AIR QUALITY MONITORING

Parameter **SO2**

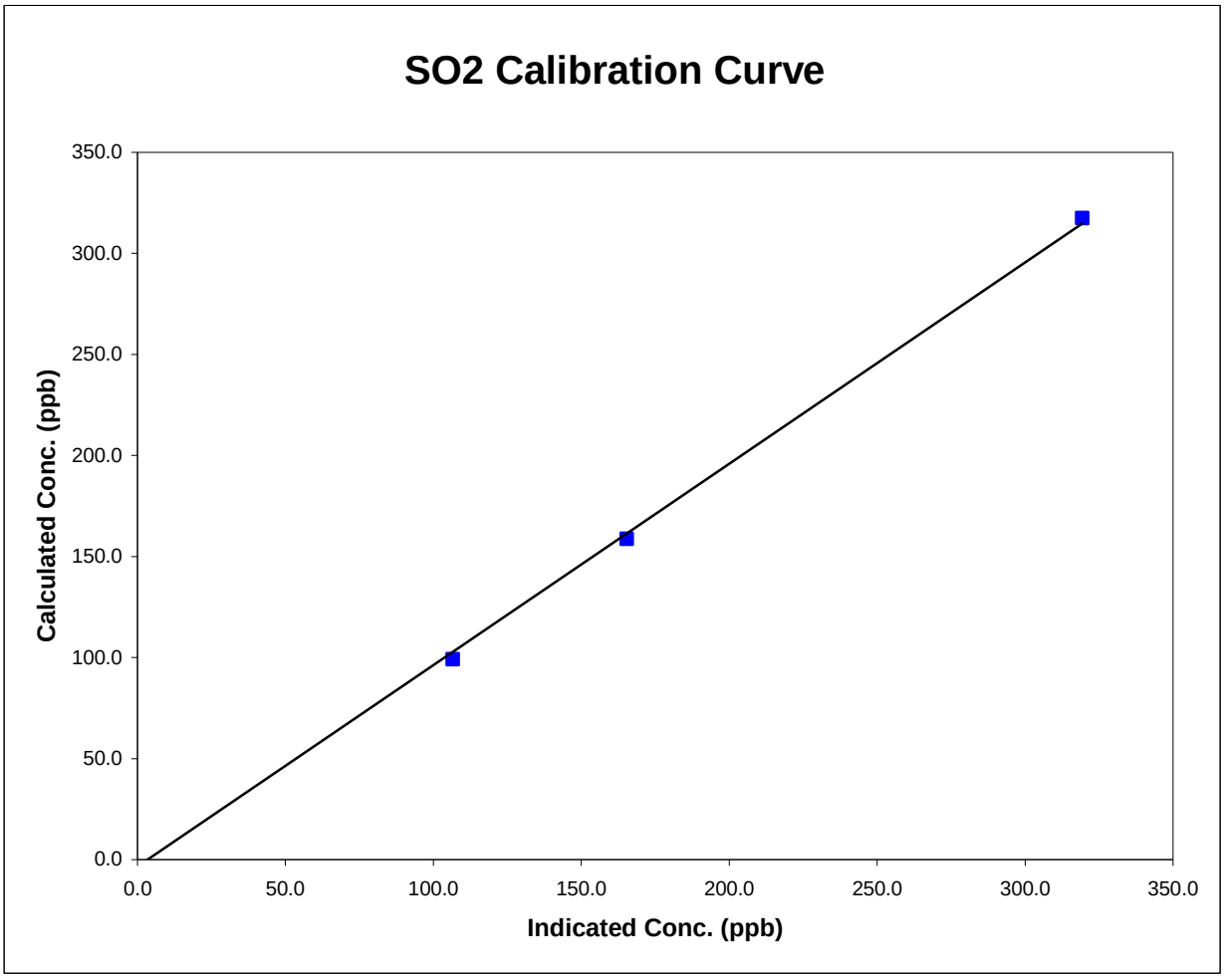
Air Monitoring Network **PASZA**

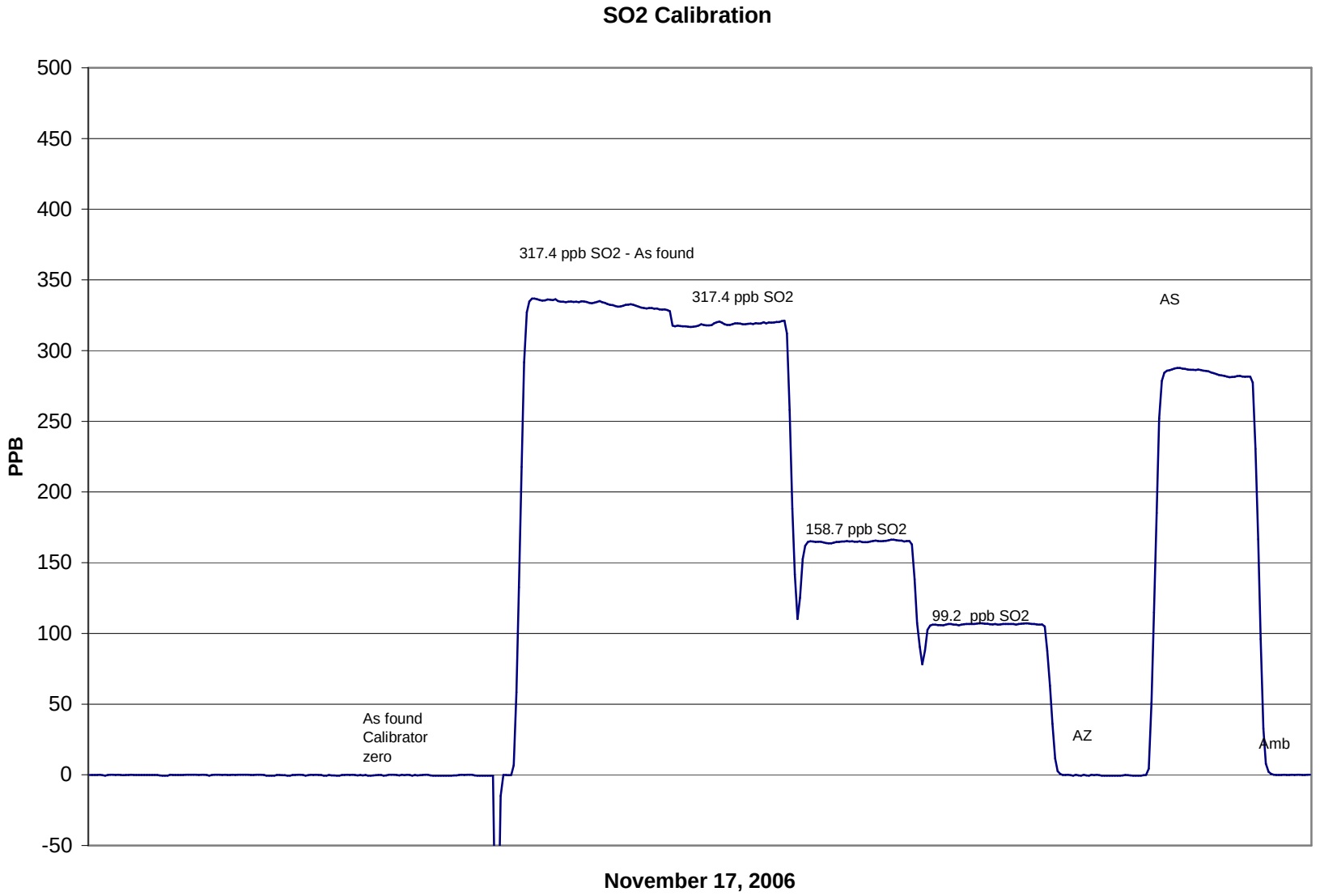
***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 17, 2006 | Previous Calibration | October 3, 2006 |
| Station Number | 1 | Station Location | Falher |
| Start Time (MST) | 15:19 | End Time (MST) | 18:45 |
| Analyzer make/model | TEI Model 43C APS1AB | Analyzer serial # | 609716238 |

***Calibration Data***

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | -0.4 | N/A | | |
| 317.4 | 319.4 | 0.9938 | Correlation Coefficient | 0.999221 |
| 158.7 | 165.4 | 0.9597 | | |
| 99.2 | 106.6 | 0.9302 | Slope | 0.996123 |
| | | | | |
| | | | Intercept | -3.356822 |
| | | | | |




SO2 Calibration
500
450
400
350
300
250
200
150
100
50
0
-50
PPB
317.4 ppb SO2 - As found
317.4 ppb SO2
158.7 ppb SO2
99.2 ppb SO2
AS
As found
Calibrator
zero
AZ
Amb
November 17, 2006

# Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **TRS**

Air Monitoring Network **PASZA**

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 17, 2006 | Previous Calibration | October 3, 2006 |
| Station Number | 5 | Station Location | Faher |

Reason: [Routine] [Install] [Removal] [Other:]

| | | | |
|---|---|---|---|
| Start Time (MST) | 15:19 | End Time (MST) | 18:45 |
| Barometric Pressure | 27.5 inches Hg | Station Temperature | 20.0 Deg C |
| Calibrator | VICI Metronics | Serial Number | 111-1695 |
| Perm-tube Conc | 235 ng/min | Perm-tube Date | 8/8/2006 |
| Correction factor | 0.936162 | Perm-tube Cert # | T-25214 |
| DACS make | Focus AP1000 | DACS serial No. | 52662 |
| DACS voltage range | 0 - 1 volt | DACS channel # | 6 |
| | Before | | After |
| Calculated slope | 1.035347 | Calculated slope | 1.019240 |
| Calculated intercept | -0.039567 | Calculated intercept | -0.225159 |

Analyzer make: TEI Model 43C APS1AB  Analyzer serial #: 609716238

| | before | | after | |
|---|---|---|---|---|
| Concentration range | 0 - 100 | ppb | 0 - 100 | ppb |
| Background | 10.2 | ppb | 10.2 | ppb |
| coefficient | 1.911 | | 1.911 | |
| Lamp Voltage | 820 | volts | 820 | volts |
| Chamber Temp | 43.9 | Deg C | 43.9 | Deg C |
| Perm Gas Temp | 45 | Deg C | 45 | Deg C |
| Pressure | 685.1 | mm Hg | 685.1 | mm Hg |
| Sample Flow | 444 | ccm | 444 | ccm |
| Lamp Intensity | 39,000 | mv | 39,000 | 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) |
|---|---|---|---|---|
| zero | 2340.4 | 0.0 | -0.1 | N/A |
| 2500 | 2340.4 | 72.2 | 70.9 | 1.0182 |
| 5000 | 4680.8 | 36.1 | 35.7 | 1.0120 |
| 8000 | 7489.3 | 22.6 | 22.8 | 0.9909 |
| | | | | |
| | | | | |
| zero | 2340.4 | 0.0 | -0.1 | As Found Zero |
| 2500 | 2340.4 | 72.2 | 62.2 | As Found Span |
| | | | Average Correction Factor | 1.0070 |

Calculated value of As Found Response: 64.41 ppm  Percent Change of As Found: 10.8%

| | before calibration | | after calibration | |
|---|---|---|---|---|
| Auto zero | -0.5 | ppm | -0.1 | ppm |
| Auto span | 82.1 | ppm | 88.5 | ppm |

Notes:

Calibration Performed By: Dawn Ewan

## Calibration Summary

FOCUS AIR QUALITY MONITORING

Parameter **TRS**

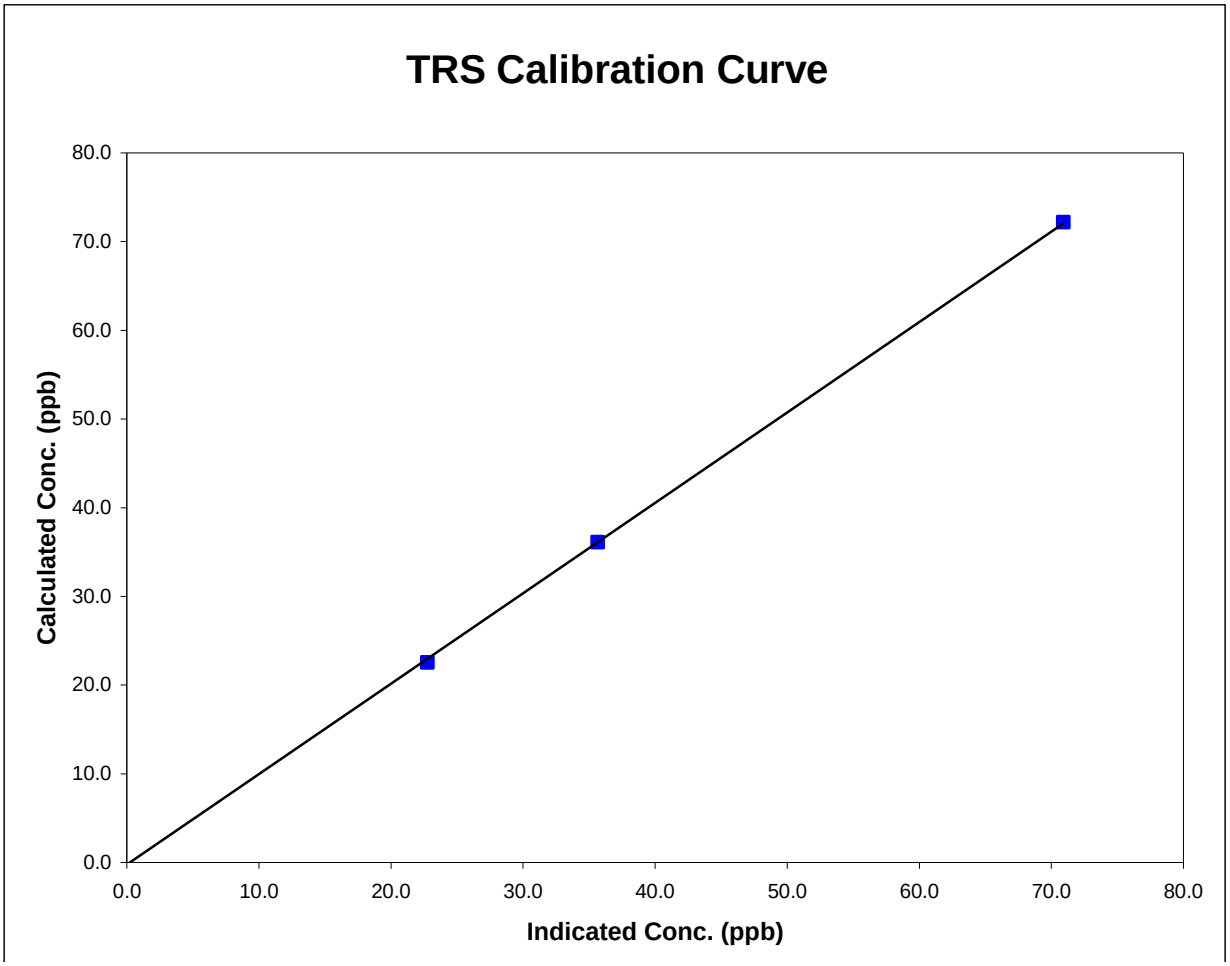
Air Monitoring Network **PASZA**

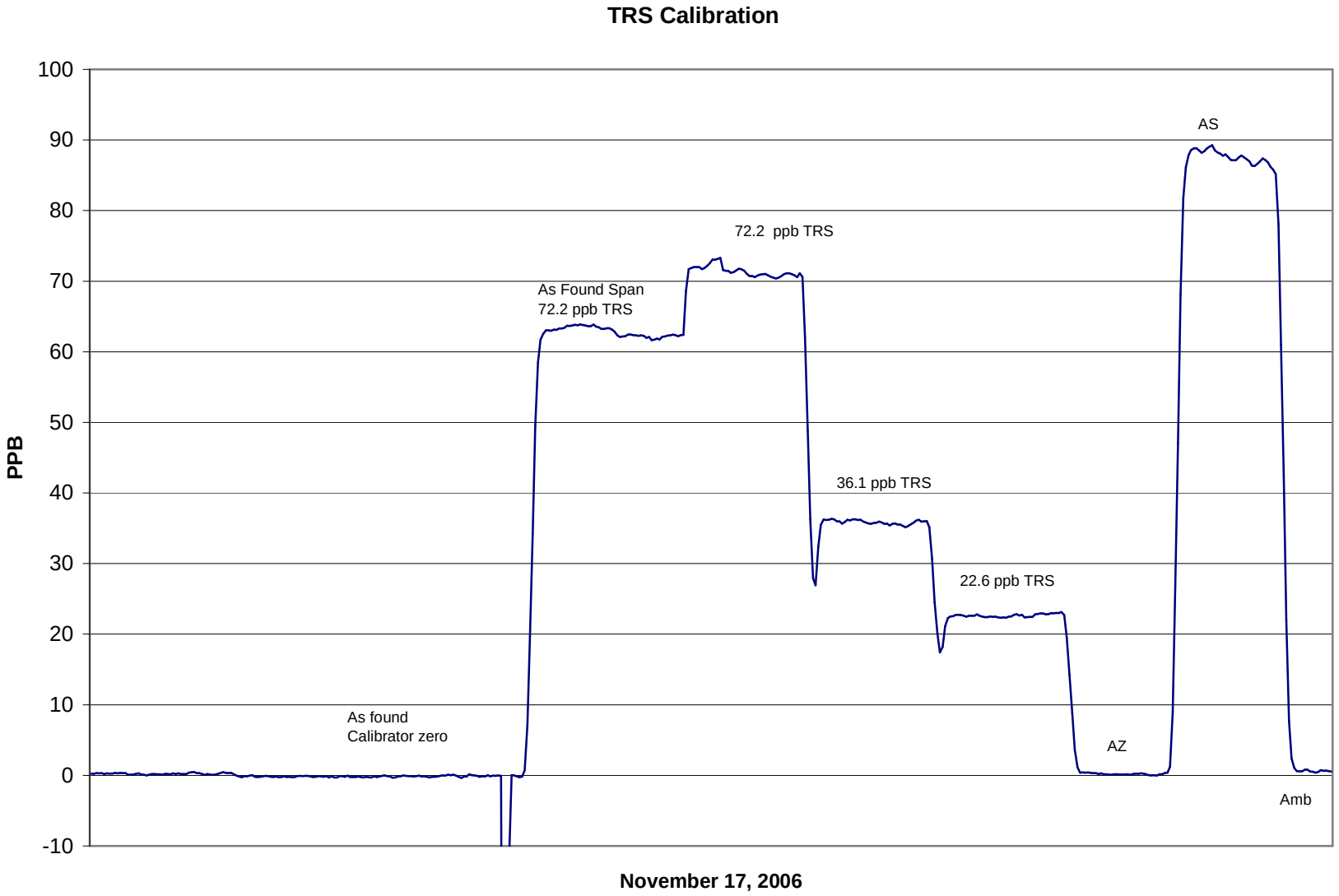
***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 17, 2006 | Previous Calibration | October 3, 2006 |
| Station Number | 5 | Station Location | Faher |
| Start Time (MST) | 15:19 | End Time (MST) | 18:45 |
| Analyzer make/model | TEI Model 43C APS1AB | Analyzer serial # | 609716238 |

***Calibration Data***

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | -0.1 | N/A | | |
| 72.2 | 70.9 | 1.0182 | Correlation Coefficient | 0.999894 |
| 36.1 | 35.7 | 1.0120 | | |
| 22.6 | 22.8 | 0.9909 | Slope | 1.019240 |
| | | | | |
| | | | Intercept | -0.225159 |
| | | | | |




TRS Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
AS
72.2 ppb TRS
As Found Span
72.2 ppb TRS
36.1 ppb TRS
22.6 ppb TRS
As found
Calibrator zero
AZ
Amb
November 17, 2006

# Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **O3**

Air Monitoring Network **PASZA**

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 17, 2006 | Previous Calibration | October 3, 2006 |
| Station Number | 6 | Station Location | Falher |

Reason: Routine | Install | Removal | Other:

| | | | |
|---|---|---|---|
| Start Time (MST) | 15:19 | End Time (MST) | 18:45 |
| Barometric Pressure | 0.920 atm | Station Temperature | 20.0 Deg C |
| Calibrator | Environics 6103 | Serial Number | 2488 |
| Cal Gas Concentration | NA | Cal Gas Expiry Date | NA |
| DACS make | Focus AP1000 | DACS serial No. | 52662 |
| DACS voltage range | 0 - 1 volt | DACS channel # | 7 |
| | Before | | After |
| Calculated slope | 1.003489 | Calculated slope | 0.996664 |
| Calculated intercept | 0.039485 | Calculated intercept | 2.445609 |
| Analyzer make | TEI 49C a3C1AB | Analyzer serial # | 609716240 |

| | before | | after | |
|---|---|---|---|---|
| Concentration range | 0 - 500 | ppb | 0 - 500 | ppb |
| offset | -0.3 | | -0.3 | |
| slope | 1.067 | | 1.067 | |
| Cell A | 88443 | mV | 88443 | mV |
| Cell B | 87723 | mV | 87723 | mV |
| Pressure | 698.1 | inches Hg | 698.1 | inches Hg |
| Cell A Flow | 665 | mL/min | 665 | mL/min |
| Cell B Flow | 664 | mL/min | 664 | mL/min |

## *Calibration Data*

| Dilution air flow rate (cc/min) | Source gas flow rate (cc/min) | Calculated concentration (ppm) (Cc) | Indicated concentration (ppm) (Ic) | Correction factor (Cc/Ic) |
|---|---|---|---|---|
| 4996 | 0.00 | 0.0 | 0.2 | N/A |
| 4996 | 0.00 | 288.8 | 288.4 | 1.0012 |
| 4996 | 0.00 | 192.0 | 190.3 | 1.0093 |
| 4996 | 0.00 | 92.8 | 86.8 | 1.0695 |
| | | | | |
| 4996 | 0.00 | 0.0 | 0.2 | As found zero |
| 4996 | 0.00 | 288.8 | 276.2 | As found span |
| | | | Average Correction Factor | 1.0267 |

Calculated value of As Found Response: 276.9 ppm Percent Change of As Found: -4.1%

| | before calibration | | after calibration | |
|---|---|---|---|---|
| Auto zero | 8.8 | ppb | 3.5 | ppb |
| Auto span | 274.3 | ppb | 331.6 | ppb |

Notes: Adjusted span.

Calibration Performed By: Dawn Ewan

## Calibration Summary

Parameter **O3**

Air Monitoring Network **PASZA**

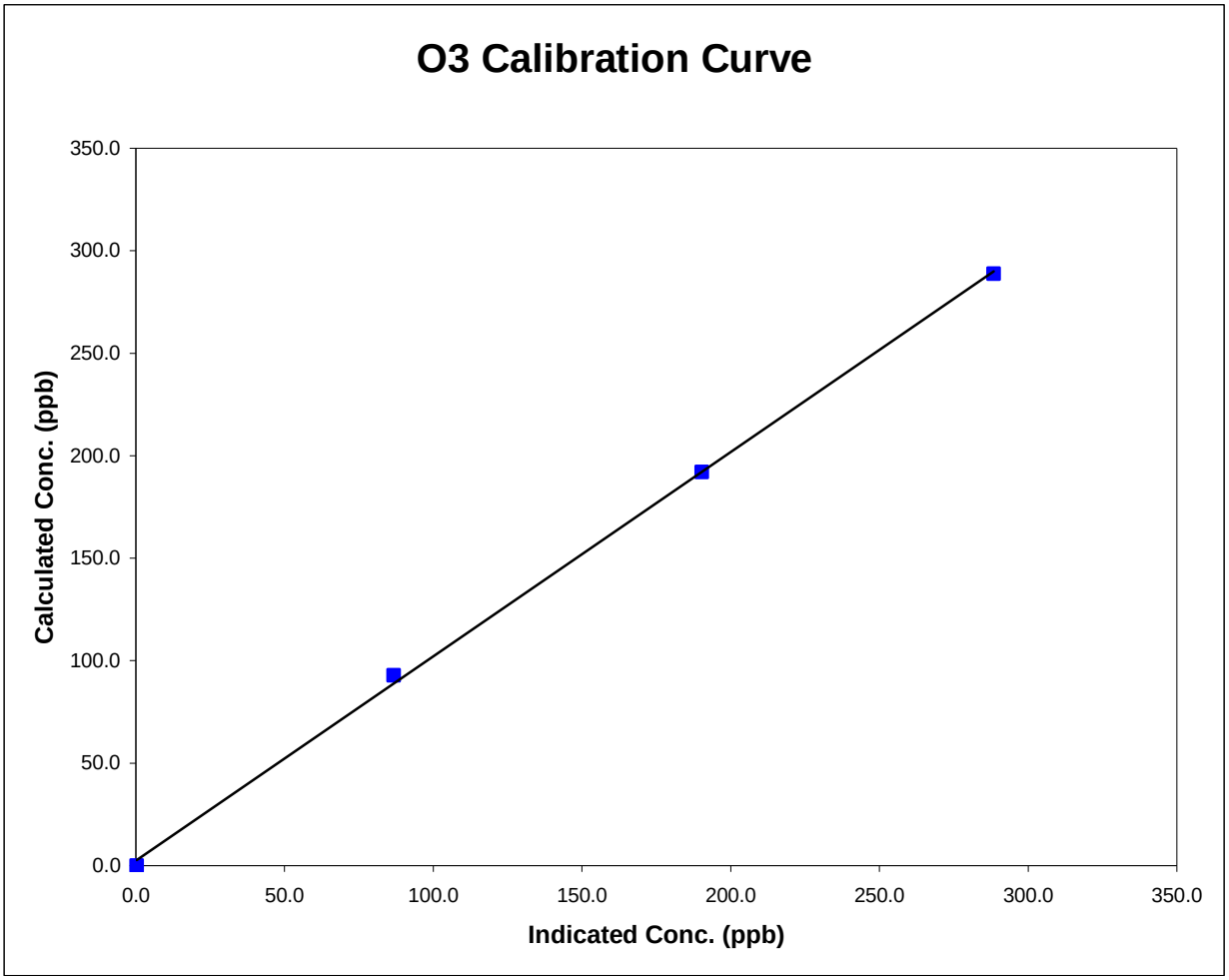
FOCUS AIR QUALITY MONITORING

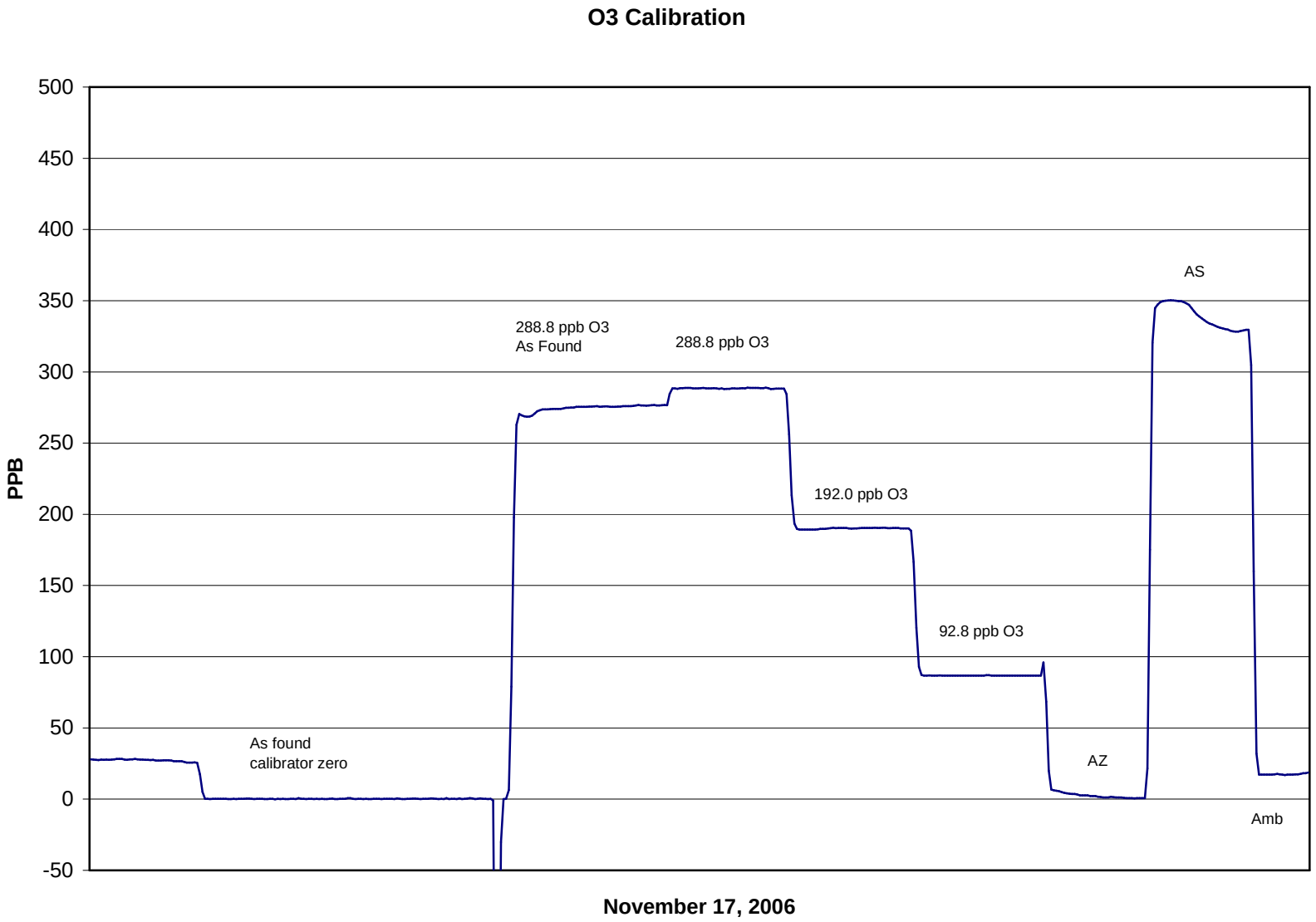
***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 17, 2006 | Previous Calibration | October 3, 2006 |
| Station Number | 6 | Station Location | Falher |
| Start Time (MST) | 15:19 | End Time (MST) | 18:45 |
| Analyzer make/model | TEI 49C a3C1AB | Analyzer serial # | 609716240 |

***Calibration Data***

| Calculated concentration (ppm) (Cc) | Indicated concentration (ppm) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | 0.2 | NA | | |
| 288.8 | 288.4 | 1.0012 | Correlation Coefficient | 0.999495 |
| 192.0 | 190.3 | 1.0093 | | |
| 92.8 | 86.8 | 1.0695 | Slope | 0.996664 |
| | | | | |
| | | | Intercept | 2.445609 |
| | | | | |




O3 Calibration
500
450
400
350
300
250
200
150
100
50
0
-50
PPB
As found
calibrator zero
288.8 ppb O3
As Found
288.8 ppb O3
192.0 ppb O3
92.8 ppb O3
AZ
AS
Amb
November 17, 2006

# Calibration Report

Parameter **$SO_2$**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 17, 2006 | Previous Calibration | October 13, 2006 |
| Station Number | 5 | Station Location | Valleyview |
| Reason: | Routine ☒ Install ☐ | Removal ☐ | Other: ☐ |
| Start Time (MST) | 7:00 | End Time (MST) | 11:43 |
| Barometric Pressure | 27.9 inches Hg | Station Temperature | 20.0 Deg C |
| Calibrator | VICI Metronics | Serial Number | 111-1695 |
| Perm-tube Conc | 1,946 ng/min | Perm-tube Date | 8/8/2006 |
| Correction factor | 0.948399 | Perm-tube Cert # | 19-25218 |
| DACS make | Focus AP1000 | DACS serial No. | 45274 |
| DACS voltage range | 0 - 10 volt | DACS channel # | 4 |
| | Before | | After |
| Calculated slope | 1.019081 | Calculated slope | 0.994900 |
| Calculated intercept | -2.591743 | Calculated intercept | 0.912140 |
| Analyzer make | Monitor Labs | Analyzer serial # | 332 |

| | before | | after | |
|---|---|---|---|---|
| Concentration range | 1000 | ppb | 1000 | ppb |
| Sample Flow | 325 | ccm | 325 | ccm |
| Span Pot | 50 | | 46 | |
| Zero Pot | 340 | | 348 | |
| T1 | 90 | % | 90 | % |
| T2 | 39 | % | 39 | % |
| T3 | 65 | % | 65 | % |
| | | | | |
| | | | | |

## *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) |
|---|---|---|---|---|
| zero | 2371.0 | 0.0 | -0.4 | N/A |
| 2500 | 2371.0 | 313.3 | 314.0 | 0.9976 |
| 5020 | 4761.0 | 156.0 | 156.3 | 0.9982 |
| 9500 | 9009.8 | 82.4 | 80.9 | 1.0185 |
| | | | | |
| | | | | |
| zero | 2371.0 | 0.0 | -4.7 | As Found Zero |
| 2500 | 2371.0 | 313.3 | 296.4 | As Found Span |
| | | | Average Correction Factor | 1.0048 |

Calculated value of As Found Response: 304.271 ppm Percent Change of As Found: 2.9%

| | before calibration | | after calibration | |
|---|---|---|---|---|
| Auto zero | -0.1 | ppm | 0.9 | ppm |
| Auto span | 315.4 | ppm | 539.9 | ppm |

Notes:

Calibration Performed By: Dawn Ewan

## Calibration Summary

FOCUS AIR QUALITY MONITORING

Parameter **SO2**

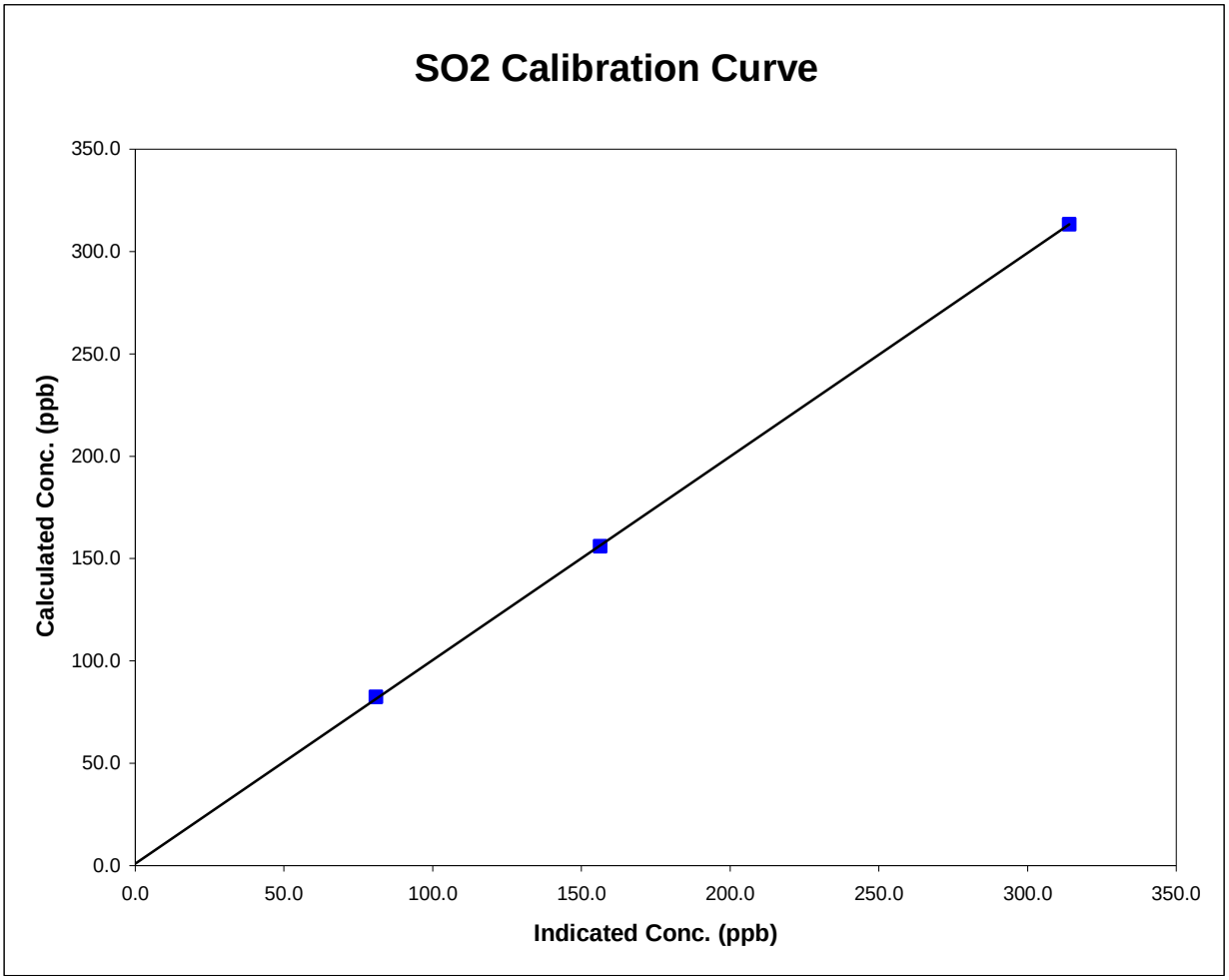
Air Monitoring Network **PASZA**

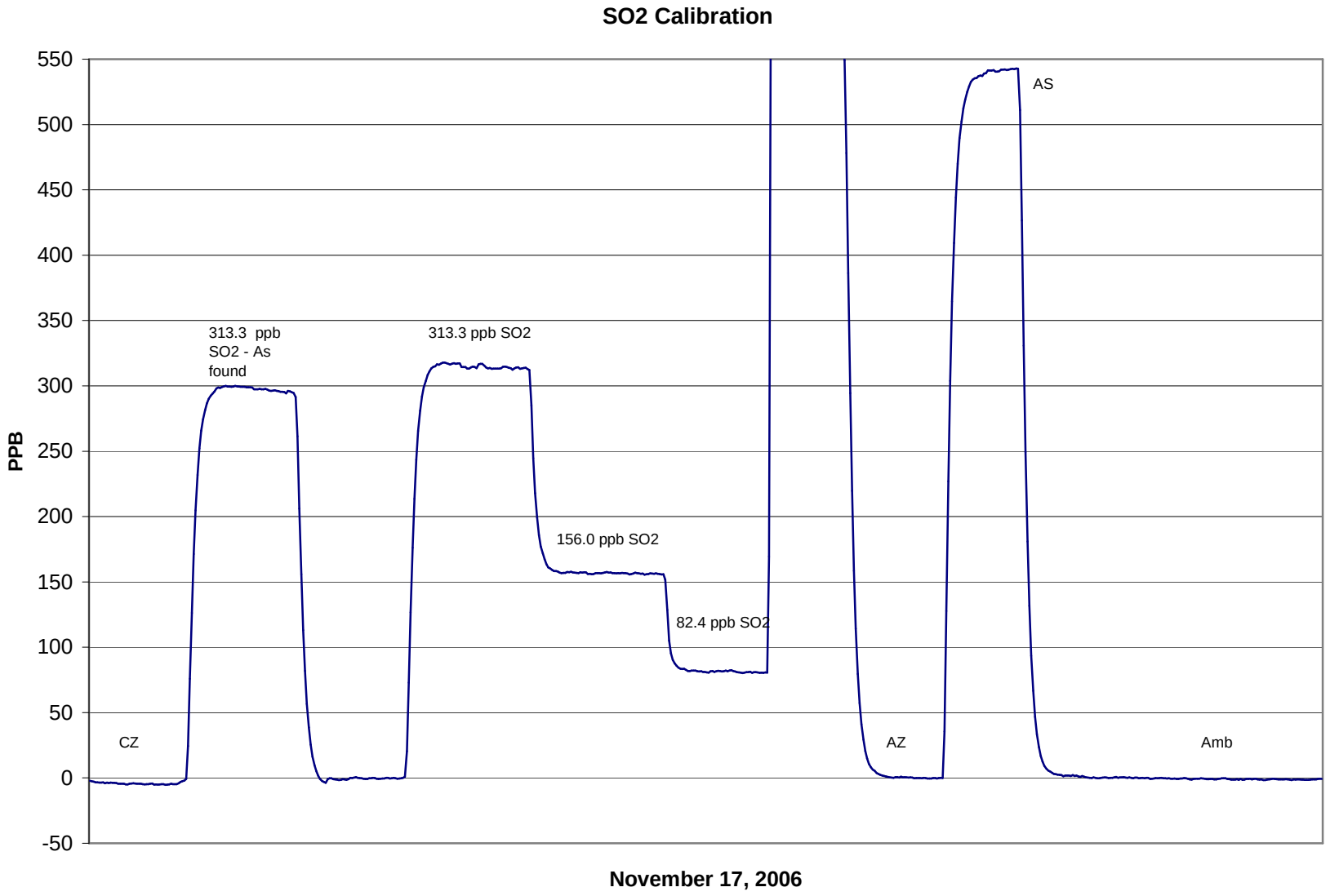
***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 17, 2006 | Previous Calibration | October 13, 2006 |
| Station Number | 5 | Station Location | Valleyview |
| Start Time (MST) | 7:00 | End Time (MST) | 11:43 |
| Analyzer make/model | Monitor Labs | Analyzer serial # | 332 |

***Calibration Data***

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | -0.4 | N/A | | |
| 313.3 | 314.0 | 0.9976 | Correlation Coefficient | 0.999973 |
| 156.0 | 156.3 | 0.9982 | | |
| 82.4 | 80.9 | 1.0185 | Slope | 0.994900 |
| | | | | |
| | | | Intercept | 0.912140 |
| | | | | |




SO2 Calibration
550
500
450
400
350
300
250
200
150
100
50
0
-50
PPB
313.3 ppb SO2 - As found
313.3 ppb SO2
156.0 ppb SO2
82.4 ppb SO2
AS
CZ
AZ
Amb
November 17, 2006

# Calibration Report

Parameter **H2S**

Air Monitoring Network **PASZA**

FOCUS AIR QUALITY MONITORING

## *Station Information*

| | | | |
|---|---|---|---|
| Calibration Date | November 17, 2006 | Previous Calibration | October 13, 2006 |
| Station Number | 5 | Station Location | Valleyview |

Reason: Routine | **Install** | Removal | Other:

| | | | |
|---|---|---|---|
| Start Time (MST) | 7:00 | End Time (MST) | 11:43 |
| Barometric Pressure | 27.90 inches Hg | Station Temperature | 20.0 Deg C |
| Calibrator | VICI Metronics | Serial Number | 111-1695 |
| Perm-tube Conc | 235 ng/min | Perm-tube Expiry Date | 8/8/2006 |
| Correction factor | 0.948399 | Perm-tube Cert # | T-25214 |
| DACS make | Focus AP1000 | DACS serial No. | 1 |
| DACS voltage range | 0 - 10 volt | DACS channel # | 9 |
| | Before | | After |
| Calculated slope | 1.005957 | Calculated slope | 1.001664 |
| Calculated intercept | 0.237375 | Calculated intercept | 0.220992 |

Analyzer make: TECO 43C — Analyzer serial #: 45C-57351-313

| | before | | after | |
|---|---|---|---|---|
| Concentration range | 100 | ppb | 100 | ppb |
| Background | 28.8 | ppb | 30.9 | ppb |
| coefficient | 0.788 | | 0.825 | |
| Lamp Voltage | 690 | volts | 685 | volts |
| Chamber Temp | 44.4 | Deg C | 45 | Deg C |
| | | | | |
| Pressure | 609 | mm Hg | 600 | mm Hg |
| Sample Flow | 456 | ccm | 450 | ccm |
| Lamp Intesity | 44,900 | mv | 44,800 | 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) |
|---|---|---|---|---|
| zero | 2371.0 | 0.0 | 0.0 | N/A |
| 2500 | 2371.0 | 71.3 | 70.9 | 1.0051 |
| 5020 | 4761.0 | 35.5 | 35.5 | 1.0002 |
| 9500 | 9009.8 | 18.8 | 18.0 | 1.0390 |
| | | | | |
| | | | | |
| zero | 2371.0 | 0.0 | 0.8 | As Found Zero |
| 2500 | 2371.0 | 71.3 | 64.3 | As Found Span |
| | | | Average Correction Factor | 1.0148 |

Calculated value of As Found Response: 64.16 ppm  Percent Change of As Found: 10.0%

| | before calibration | | after calibration | |
|---|---|---|---|---|
| Auto zero | -0.2 | ppm | 0.3 | ppm |
| Auto span | 34.9 | ppm | 36.5 | ppm |

Notes:

Calibration Performed By: Dawn Ewan

## Calibration Summary

FOCUS AIR QUALITY MONITORING

Parameter **H2S**

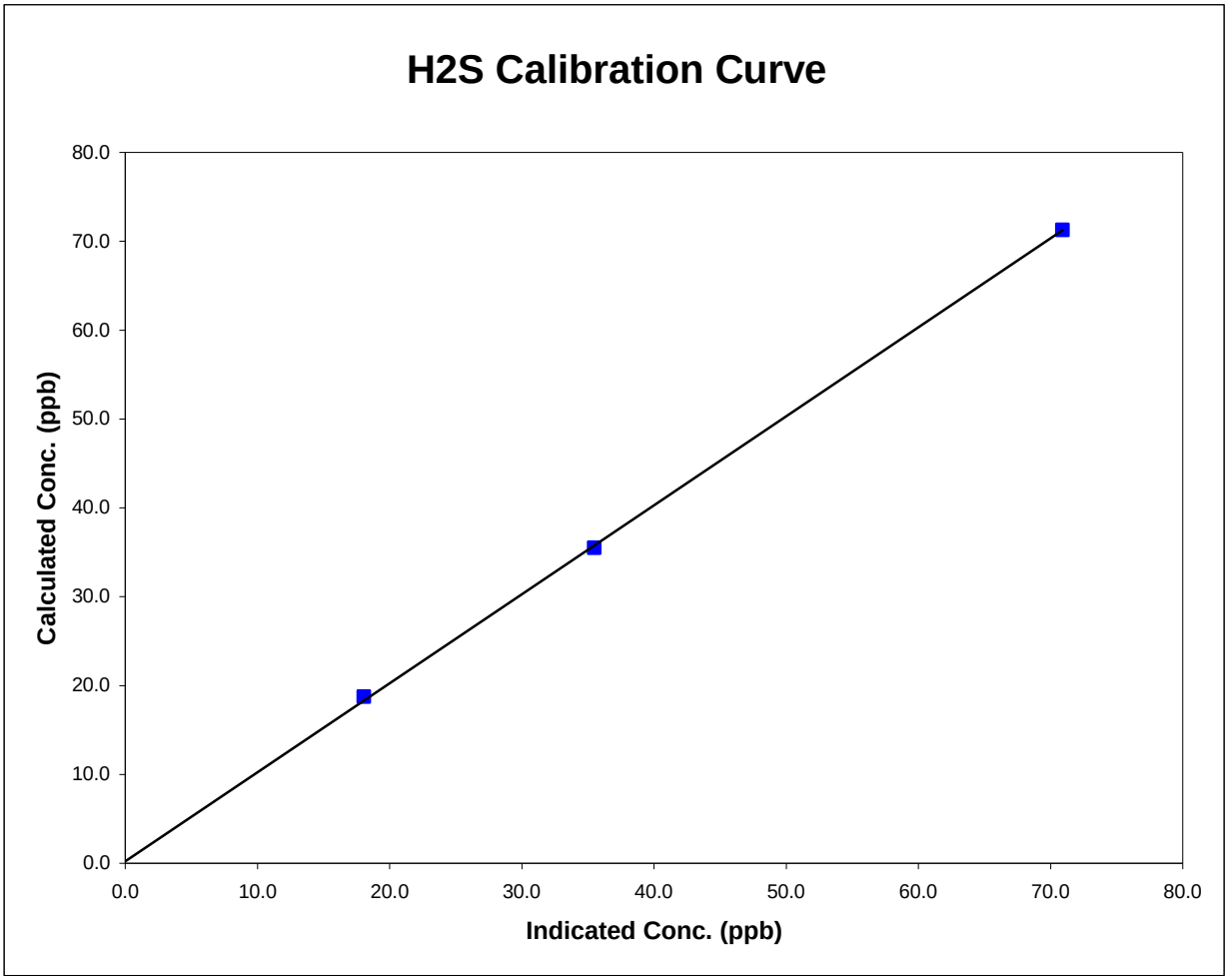
Air Monitoring Network **PASZA**

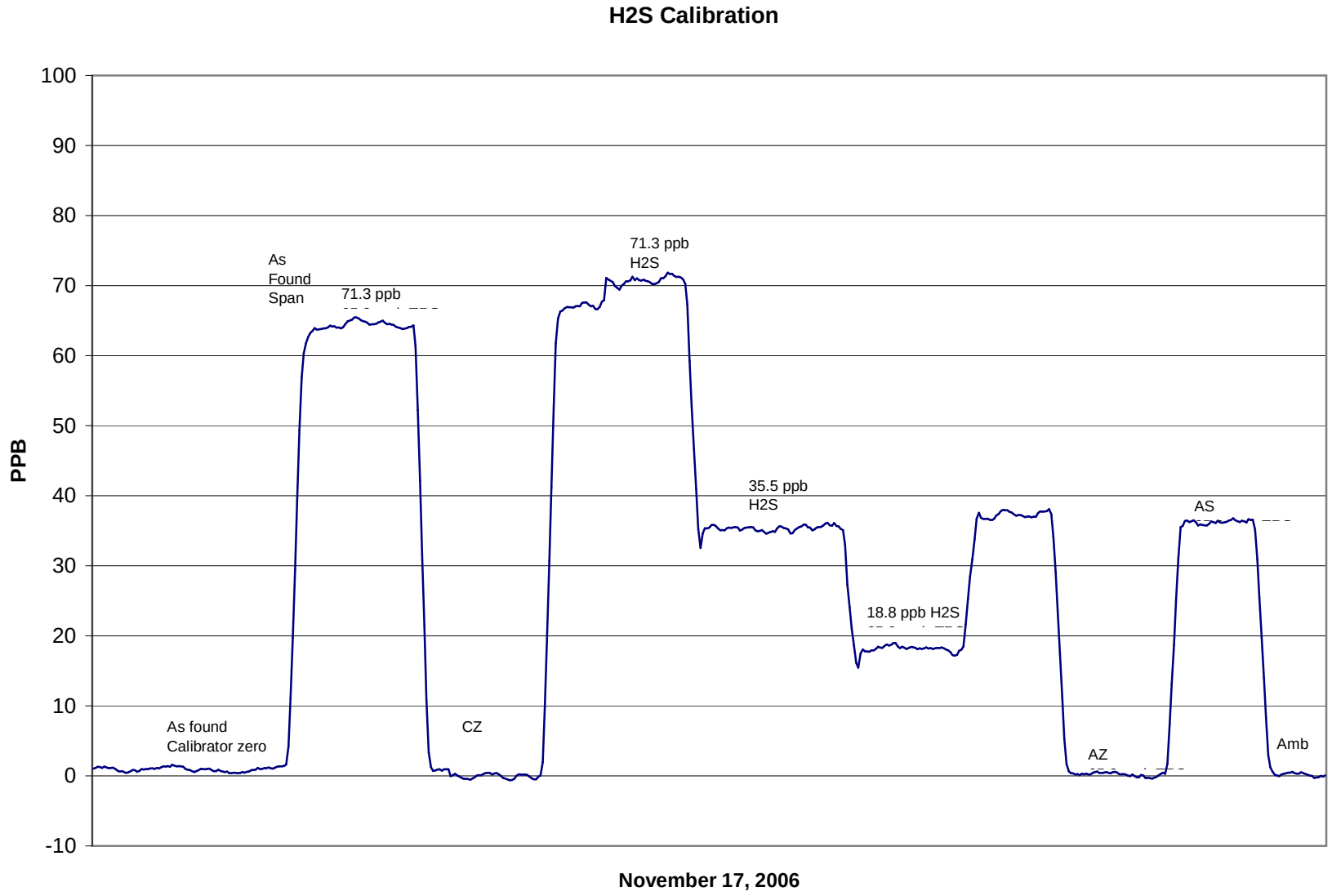
***Station Information***

| | | | |
|---|---|---|---|
| Calibration Date | November 17, 2006 | Previous Calibration | October 13, 2006 |
| Station Number | 5 | Station Location | Valleyview |
| Start Time (MST) | 7:00 | End Time (MST) | 11:43 |
| Analyzer make/model | TECO 43C | Analyzer serial # | 45C-57351-313 |

***Calibration Data***

| Calculated concentration (ppb) (Cc) | Indicated concentration (ppb) (Ic) | Correction factor (Cc/Ic) | Statistical Evaluation | |
|---|---|---|---|---|
| 0.0 | 0.0 | N/A | | |
| 71.3 | 70.9 | 1.0051 | Correlation Coefficient | 0.999883 |
| 35.5 | 35.5 | 1.0002 | | |
| 18.8 | 18.0 | 1.0390 | Slope | 1.001664 |
| | | | | |
| | | | Intercept | 0.220992 |
| | | | | |




H2S Calibration
100
90
80
70
60
50
40
30
20
10
0
-10
PPB
As
Found
Span
71.3 ppb
71.3 ppb
H2S
35.5 ppb
H2S
18.8 ppb H2S
AS
As found
Calibrator zero
CZ
AZ
Amb
November 17, 2006