



# Palliser Airshed Society

## Ambient Air Monitoring Network Summary

February 2008

Prepared By:



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March 24, 2008

**Alberta Environment**  
12th Floor, Oxbridge Place  
9820-106 Street  
Edmonton Alberta T6B 2X3

**Attention: Director of Monitoring and Evaluation**

**RE: Palliser Airshed Society (PAS) Ambient Air Monitoring Report – February 2008**

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Enclosed is the PAS Ambient Monitoring Report for the month of **February 2008**.

**Continuous Monitoring – Crescent Heights and Portable-Brooks**

Included in this report are; monthly sampling table, detailed hourly average reports and multipoint calibration reports of all instruments.

**Crescent Heights:**

- ◆ All analyzers and instruments at the Crescent Heights Station were greater than 90% operational for for the month of February
- ◆ The measured ambient air quality was within the Provincial and Federal guidelines with no exceedences recorded at the Crescent Heights Station
- ◆ The following is a summary of the monthly averages recorded during sampling:
  - Monthly average concentrations of NO<sub>2</sub> was 12.7 ppb
  - Monthly average concentrations for O<sub>3</sub> was 22.3 ppb
  - Monthly average concentrations for CO was 0.24 ppm
  - Monthly average concentrations for THC was 2.33 ppm
  - Monthly average concentrations for PM<sub>2.5</sub> was 3.5 µg/m<sup>3</sup>
- ◆ The Air Quality Index (AQI) recorded 705 hours of Good readings for the month of February.

**Portable-Brooks:**

- ◆ All pollutant analyzers at the Portable Brooks Station were 100% operational for the month of February.
- ◆ There were ten 1-hr exceedences of the Alberta Objective (10 ppb) for H<sub>2</sub>S, and one 24-hr exceedence of the Alberta Objective (3 ppb) in February:
  1. February 4<sup>th</sup> (23:00-24:00): H<sub>2</sub>S 12.6 ppb: **Alberta Environment reference # 197398.**
  2. February 22<sup>nd</sup> (23:00-24:00): H<sub>2</sub>S 22.7 ppb: **Alberta Environment reference # 198130.**
  3. February 23<sup>rd</sup> (01:00-02:00): H<sub>2</sub>S 26.2 ppb: **Alberta Environment reference # 198130.**
  4. February 23<sup>rd</sup> (02:00-03:00): H<sub>2</sub>S 12.9 ppb. **Alberta Environment reference # 198130.**
  5. February 25<sup>th</sup> (04:00-05:00): H<sub>2</sub>S 30.6 ppb: **Alberta Environment reference # 197930.**
  6. February 25<sup>th</sup> (05:00-06:00): H<sub>2</sub>S 21.0 ppb: **Alberta Environment reference # 197930.**
  7. February 25<sup>th</sup> (06:00-07:00): H<sub>2</sub>S 17.7 ppb: **Alberta Environment reference # 197930.**
  8. February 25<sup>th</sup> (07:00-08:00): H<sub>2</sub>S 20.6 ppb: **Alberta Environment reference # 197930.**
  9. February 26<sup>th</sup> (06:00-07:00): H<sub>2</sub>S 12.7 ppb: **Alberta Environment reference # 197963.**
  10. February 27<sup>th</sup> (23:00-24:00): H<sub>2</sub>S 14.0 ppb: **Alberta Environment reference # 197970.**
  11. February 25<sup>th</sup> (24-hr) H<sub>2</sub>S 4.6 ppb: **Alberta Environment reference # 198616.**
- ◆ The following is a summary of the monthly averages recorded during sampling:
  - Monthly average concentrations of SO<sub>2</sub> was 0.8 ppb
  - Monthly average concentrations for H<sub>2</sub>S was 0.6 ppb
  - Monthly average concentrations for O<sub>3</sub> was 22.4 ppb



### Passive Monitoring – Twenty Sites throughout the PAS zone:

The passive sample analyses were performed by MAXXAM Analytics Inc. There are no results for Site 1 as the samples were not collected due to road closure. There were two duplicate sites sampled in the month of February: Site 6 and Site 16. The following are the ranges for February 2008 recorded by the twenty passive stations located throughout the PAS zone.

- ◆ Average concentrations for SO<sub>2</sub> passives ranged from 0.3 to 0.8 ppb with a mean of 0.5 ppb.
- ◆ Average concentrations for NO<sub>2</sub> passives ranged from 0.4 to 8.9 ppb with a mean of 3.3 ppb.
- ◆ Average concentrations for O<sub>3</sub> passives ranged from 29.9 to 49.2 ppb with a mean of 40.9 ppb.

If you have any questions, please contact the Focus office at 1-888-466-6555 or 1-888-869-2252.

Sharon Whiteley, B.Sc.  
AQM Data Specialist

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AQM Environmental Engineer



# Continuous Monitoring

## Ambient Air Monitoring Network

### Crescent Heights Station

#### General Station Issues

Routine monthly calibrations were performed on February 20<sup>th</sup> (NO<sub>x</sub> and O<sub>3</sub>), February 21<sup>st</sup> (CO) and February 29<sup>th</sup> (THC and PM<sub>2.5</sub>).

Parameter	Make	Model	Units	Notes
Ozone	TECO	43I	ppb	No operational problems observed.
Nitrogen Dioxide	Teledyne - API	200E	ppb	No operational problems observed.
Total Hydrocarbons	Bendix	400A	ppm	No operational problems observed.
Carbon Monoxide	TEI	49C	ppm	No operational problems observed.
PM <sub>2.5</sub>	R&P TEOM	1400ab	µg/m <sup>3</sup>	Three (3) hours were flagged for excessive baseline drift. No other operational problems observed.
Wind Speed	Met One	010C	kph	No operational problems observed.
Wind Direction	Met One	020C	Deg	No operational problems observed.
Ambient Temperature	Met One	083D	DegC	No operational problems observed.
Relative Humidity	Met One	083D	%	No operational problems observed.
Solar Radiation	Met One	096-1	W/m <sup>2</sup>	No operational problems observed.
Data Acquisition System	Titan Logix	AP1000		No operational problems observed.



# Continuous Monitoring

## Ambient Air Monitoring Network

### Portable-Brooks Station

#### General Station Issues

Routine monthly calibrations were performed on February 21<sup>st</sup> (O<sub>3</sub>, SO<sub>2</sub> and H<sub>2</sub>S).

Parameter	Make	Model	Units	Notes
Ozone	Teledyne - API	400E	ppb	No operational problems observed.
Sulphur Dioxide	TEI	43A	ppb	No operational problems observed.
Hydrogen Sulphide	TEI	43A	ppb	<p>There were ten 1-hr exceedences of the Alberta Objective (10 ppb) for H<sub>2</sub>S, and one 24-hr exceedence of the Alberta Objective (3 ppb) in February:</p> <p>February 4<sup>th</sup> H<sub>2</sub>S 12.6 ppb: <b>Alberta Environment reference # 197398.</b></p> <p>February 22<sup>nd</sup> H<sub>2</sub>S 22.7 ppb: <b>Alberta Environment reference # 198130.</b></p> <p>February 23<sup>rd</sup> H<sub>2</sub>S 26.2 ppb: <b>Alberta Environment reference # 198130.</b></p> <p>February 23<sup>rd</sup> H<sub>2</sub>S 12.9 ppb: <b>Alberta Environment reference # 198130.</b></p> <p>February 25<sup>th</sup> H<sub>2</sub>S 30.6 ppb: <b>Alberta Environment reference # 197930.</b></p> <p>February 25<sup>th</sup> H<sub>2</sub>S 21.0 ppb: <b>Alberta Environment reference # 197930.</b></p> <p>February 25<sup>th</sup> H<sub>2</sub>S 17.7 ppb: <b>Alberta Environment reference # 197930.</b></p> <p>February 25<sup>th</sup> H<sub>2</sub>S 20.6 ppb: <b>Alberta Environment reference # 197930.</b></p> <p>February 26<sup>th</sup> H<sub>2</sub>S 12.7 ppb: <b>Alberta Environment reference # 197963.</b></p> <p>February 27<sup>th</sup> H<sub>2</sub>S 14.0 ppb: <b>Alberta Environment reference # 197970.</b></p> <p>February 25<sup>th</sup> (24-hr) H<sub>2</sub>S 4.6 ppb: <b>Alberta Environment reference # 197930.</b></p> <p>No operational problems observed.</p>
Wind Speed	Blue Sky		kph	No operational problems observed.
Wind Direction	Blue Sky		Deg	No operational problems observed.
Data Acquisition System	Titan Logix	AP1000		No operational problems observed.





# **PAS - Crescent Heights**

## **Monthly Summary Tables, Graphs and Roses**



# PAS - Crescent Heights - AQI Monthly Summary

Station: Crescent Heights  
Station Owner: PAS

## Air Quality Index (AQI)

Monitoring Dates: February 1, 2008 to March 1, 2008

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:	661
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-Feb-08	10	N	8	8	7	8	6	6	8	10	9	10	11	10	10	9	8	8	5	5	6	6	6	6
2-Feb-08	N	7	7	7	7	5	5	6	6	8	9	8	8	8	8	8	7	8	8	8	8	7	5	N
3-Feb-08	5	4	4	5	4	4	4	5	7	7	8	8	11	9	8	8	7	6	6	7	7	8	N	12
4-Feb-08	12	13	11	10	9	7	5	8	6	9	11	10	10	13	14	14	12	10	9	8	9	N	7	8
5-Feb-08	6	6	8	7	7	7	7	7	7	9	6	15	18	19	18	18	17	17	17	18	N	17	18	18
6-Feb-08	18	18	N	18	18	17	16	15	16	16	14	18	18	17	13	14	14	7	9	N	14	15	16	14
7-Feb-08	17	17	18	17	18	18	16	12	14	16	16	17	17	17	15	13	10	7	N	7	6	8	8	7
8-Feb-08	5	6	15	16	17	17	18	16	12	9	11	13	13	13	13	13	13	N	14	13	13	13	13	13
9-Feb-08	13	15	15	15	14	14	15	15	15	16	15	15	15	15	14	15	N	13	13	11	11	13	13	11
10-Feb-08	13	13	15	16	15	15	14	15	15	15	16	17	16	17	16	N	14	13	12	11	12	10	9	13
11-Feb-08	13	13	14	10	11	11	10	9	10	11	13	13	15	16	N	17	18	17	14	15	12	13	12	15
12-Feb-08	14	11	13	13	12	11	8	6	7	11	14	16	17	N	16	13	13	13	N	12	16	20	19	19
13-Feb-08	19	19	18	18	13	14	14	14	14	15	15	16	N	16	16	14	14	14	11	9	10	14	14	13
14-Feb-08	13	11	10	10	11	10	8	7	7	10	10	N	18	18	18	17	16	13	11	13	16	16	17	16
15-Feb-08	17	16	15	17	18	18	17	16	16	16	N	18	18	18	18	17	17	16	16	16	17	16	16	15
16-Feb-08	15	13	11	13	13	7	6	9	11	N	19	19	18	17	18	19	16	13	14	15	14	15	14	15
17-Feb-08	15	14	15	13	13	12	11	11	N	14	15	17	18	17	18	18	17	15	15	14	13	16	12	12
18-Feb-08	12	12	11	11	8	6	6	N	10	13	15	15	15	17	18	20	19	18	16	18	16	18	17	14
19-Feb-08	12	13	6	7	8	9	N	8	7	10	10	11	13	16	18	19	19	17	16	9	7	9	7	9
20-Feb-08	8	7	7	9	5	N	6	8	13	8	15	15	16	16	15	14	13	10	9	N	3	5	6	7
21-Feb-08	6	11	N	6	6	6	6	8	12	7	11	12	15	16	16	18	18	12	7	10	10	9	9	8
22-Feb-08	7	7	N	8	9	8	9	15	15	13	12	15	14	11	11	12	11	8	7	7	6	7	6	8
23-Feb-08	7	N	9	12	20	9	7	5	7	8	7	9	8	10	10	11	12	8	9	10	9	10	6	4
24-Feb-08	N	8	7	8	9	14	12	10	10	8	11	10	10	15	17	18	20	20	18	17	15	17	17	N
25-Feb-08	14	14	11	10	8	9	6	8	6	9	11	13	13	14	15	15	16	15	14	13	12	11	N	7
26-Feb-08	10	9	8	10	12	14	14	9	7	11	11	13	14	15	16	17	17	13	12	12	11	N	8	11
27-Feb-08	11	9	10	9	13	13	12	11	13	15	16	17	18	19	19	16	14	7	9	9	N	7	6	4
28-Feb-08	5	6	6	4	4	5	10	17	18	17	16	17	18	19	19	18	18	14	13	N	11	11	8	8
29-Feb-08	9	6	N	10	6	6	8	7	9	13	18	19	20	N	20	17	17	16	15	16	18	17	17	16





# PAS - Crescent Heights Nitrogen Dioxide Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

## HOURLY AVERAGE TABLE

## Nitrogen Dioxide (NO<sub>2</sub>)

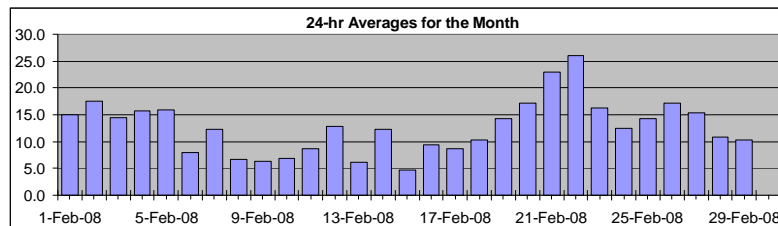
Monitoring Dates: February 1, 2008 to March 1, 2008

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:	41.5	ppb	26-Feb	3:00 4:00
Maximum 24-hr Average:	26.1	ppb	22-Feb	

AIC Time:	31 hrs		Operational Time:	661 hrs					
Calibration Time:	4 hrs		AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average	Median
	37.6	31.2	17.5	9.9	5.8	3.2	2.2	12.7 ppb	9.9 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																								24-hour Average	Daily Maximum
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-Feb-08	8	A	14	14	15	13	17	18	13	7	12	10	6	8	9	10	14	19	19	19	27	23	27	21	14.9	27.1
2-Feb-08	A	24	21	24	25	19	22	23	12	8	7	8	7	9	10	10	16	24	25	27	25	19	21	A	17.5	26.6
3-Feb-08	19	18	17	16	18	16	16	19	23	15	8	9	5	7	8	9	12	15	19	26	18	13	A	7	14.4	25.6
4-Feb-08	8	6	9	12	12	16	22	32	21	15	9	10	11	5	4	3	7	12	15	32	37	A	29	32	15.6	37.3
5-Feb-08	25	27	32	30	30	27	28	30	25	25	27	13	5	4	5	6	6	6	4	3	A	4	3	2	16.0	32.4
6-Feb-08	2	2	2	2	2	5	6	7	5	5	10	5	3	5	15	13	12	27	20	A	11	6	5	11	7.9	26.9
7-Feb-08	3	4	2	4	2	3	7	15	10	6	4	4	3	5	9	13	18	23	A	30	21	35	32	28	12.2	34.9
8-Feb-08	19	20	8	4	3	4	3	6	12	8	5	4	4	3	4	4	A	A	6	7	7	7	6	6	6.7	20.4
9-Feb-08	7	5	4	4	4	5	4	3	4	4	4	4	3	5	7	6	A	10	9	11	12	10	8	12	6.3	12.5
10-Feb-08	8	6	3	2	5	6	8	7	6	5	4	2	3	2	3	A	9	9	11	12	10	13	17	7	6.9	17.3
11-Feb-08	7	6	4	13	10	8	9	11	9	7	5	5	7	7	A	10	8	8	12	10	14	11	14	8	8.7	13.7
12-Feb-08	10	15	10	11	14	15	21	26	28	16	10	7	7	A	10	14	15	15	11	21	13	4	4	2	12.9	27.8
13-Feb-08	2	2	4	4	8	4	4	4	4	3	3	A	4	4	5	10	8	9	12	16	14	6	4	6	6.1	16.2
14-Feb-08	5	8	11	10	9	11	14	29	31	31	18	A	5	4	5	7	9	14	17	13	9	9	5	7	12.2	31.2
15-Feb-08	4	8	9	5	3	3	5	6	7	6	A	4	4	4	4	5	5	5	4	5	2	4	4	4	4.7	9.3
16-Feb-08	4	7	9	7	7	19	24	17	13	A	4	4	7	7	7	4	9	14	12	8	10	8	9	7	9.4	24.2
17-Feb-08	6	7	6	9	9	11	13	14	A	9	6	3	4	4	4	4	6	9	11	13	16	9	13	11	8.6	15.6
18-Feb-08	10	11	13	13	19	26	27	A	16	8	6	5	4	4	4	4	6	7	11	8	12	8	7	9	10.3	26.6
19-Feb-08	13	8	22	21	32	38	A	33	18	9	9	7	6	4	3	3	5	4	4	16	22	18	19	13	14.3	38.2
20-Feb-08	16	19	31	13	20	A	26	34	35	23	5	6	3	2	3	C	C	C	C	A	13	20	22	20	17.2	34.9
21-Feb-08	24	11	A	26	23	18	25	32	33	28	14	14	9	10	10	9	9	18	28	40	40	37	36	35	23.0	40.3
22-Feb-08	29	29	A	35	40	33	36	28	27	37	31	12	15	14	16	16	16	22	28	26	23	28	25	32	26.1	39.9
23-Feb-08	31	A	29	28	29	30	29	21	11	9	8	7	8	7	9	11	12	13	14	12	15	12	14	16	16.3	31.4
24-Feb-08	A	14	11	9	18	18	25	20	19	16	13	12	12	12	12	9	7	7	9	9	11	6	5	A	12.4	24.9
25-Feb-08	12	10	14	15	20	16	24	35	23	13	7	6	7	9	9	11	8	11	11	13	14	16	A	24	14.3	35.0
26-Feb-08	41	38	32	42	17	11	9	17	18	7	6	6	6	6	7	7	9	16	18	16	20	A	25	19	17.1	41.5
27-Feb-08	17	23	18	19	10	9	11	14	9	7	6	5	4	4	4	9	12	24	37	36	A	29	26	19	15.3	36.6
28-Feb-08	13	16	24	19	18	20	12	7	8	8	9	7	6	3	3	4	3	9	11	A	11	9	15	15	10.9	24.0
29-Feb-08	13	19	16	15	25	27	16	20	18	11	4	4	3	2	4	8	5	6	7	8	4	4	2	4	10.3	27.2
Hourly Avg	13.2	13.4	13.9	14.6	15.4	15.4	16.5	18.8	16.4	12.4	9.1	6.7	6.0	5.7	6.9	8.2	9.3	13.1	14.2	16.8	15.9	13.7	14.7	13.9		
Hourly Max	41.3	37.8	32.4	41.5	39.9	38.2	35.8	35.0	34.9	36.7	31.2	14.0	15.3	13.7	16.1	16.0	17.7	26.9	36.6	40.3	40.0	37.4	36.0	35.0		

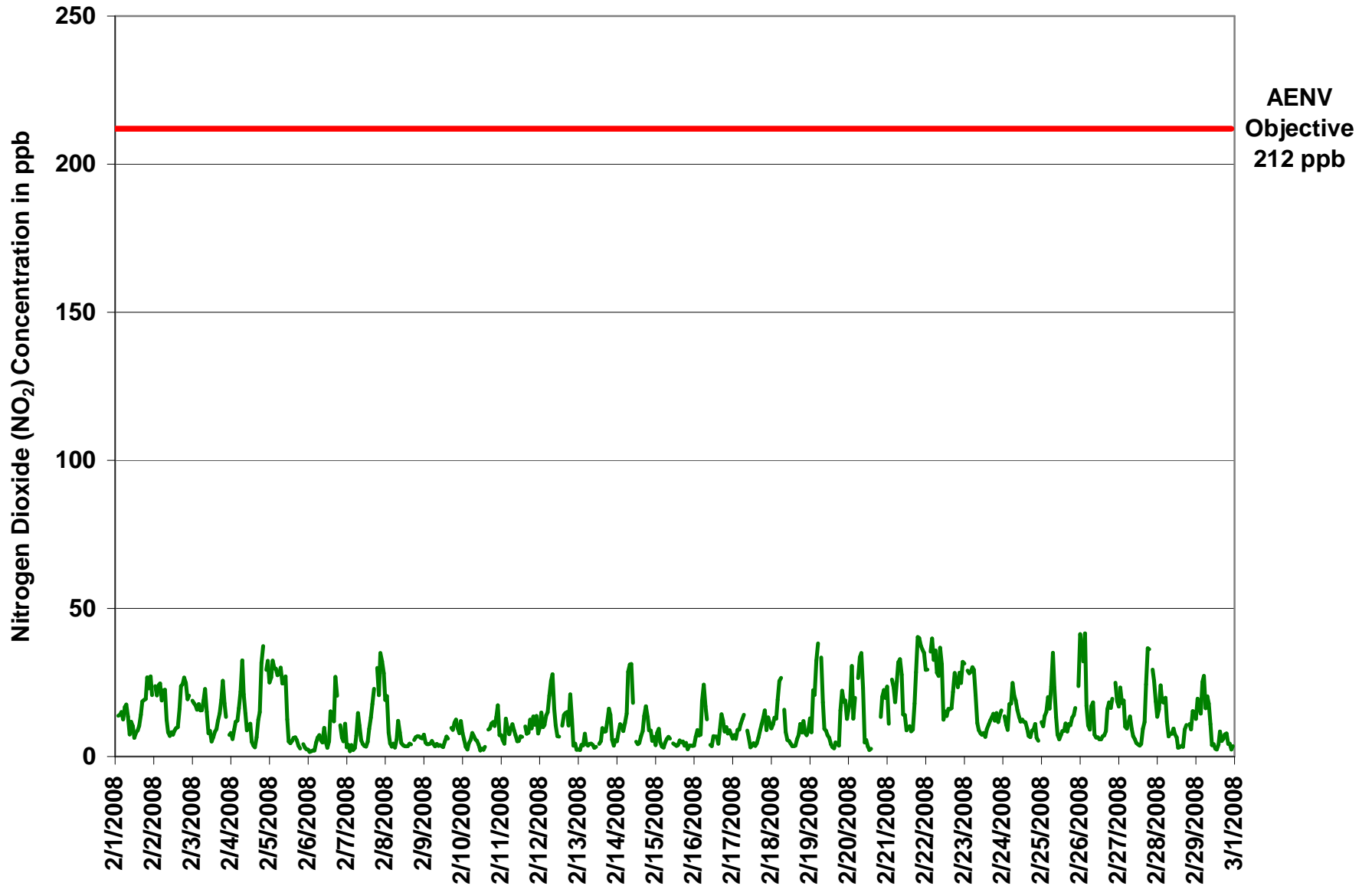


Figure 1. PAS - Crescent Heights Nitrogen Dioxide 1-hr Average Monthly Trend



Station: Crescent Heights  
 Station Owner: PAS

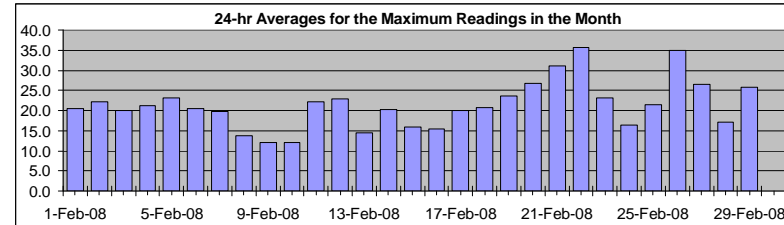
**INSTANTANEOUS (30 Second) MAXIMUM TABLE**

**Nitrogen Dioxide (NO<sub>2</sub>)**

Monitoring Dates: February 1, 2008 to March 1, 2008

**Summary**

Maximum 1-hr Value:	103.7	ppb	26-Feb	0:00 1:00
Maximum 24-hr Value:	35.8	ppb	22-Feb	



AIC Time:	31 hrs	Operational Time:	661 hrs						
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	59.6	45.8	30.4	18.6	10.4	4.9	3.7	21.3 ppb	18.6 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-Feb-08	9	A	19	18	17	18	21	19	17	11	15	14	7	11	10	12	24	22	24	25	40	26	66	24	20.5	66.4
2-Feb-08	A	28	24	25	29	27	26	26	15	11	10	11	8	12	25	18	21	41	26	28	28	24	22	A	22.1	40.8
3-Feb-08	23	21	22	21	21	21	20	25	26	24	11	23	8	8	11	11	13	18	28	30	26	40	A	11	20.0	39.7
4-Feb-08	12	9	14	15	14	19	25	37	33	26	12	14	36	7	6	5	9	16	20	43	41	A	36	37	21.1	43.4
5-Feb-08	33	30	44	35	31	31	31	33	31	30	30	28	48	24	7	22	17	7	5	4	A	5	4	4	23.2	48.3
6-Feb-08	20	2	2	20	3	33	25	18	8	9	20	9	4	10	34	31	17	44	37	A	18	46	9	50	20.5	49.9
7-Feb-08	7	6	22	7	4	4	14	37	14	22	15	10	4	6	27	16	28	26	A	39	29	43	38	32	19.7	43.3
8-Feb-08	43	29	34	30	25	16	5	14	15	11	9	5	5	5	6	6	9	A	8	8	9	8	9	8	13.8	43.5
9-Feb-08	9	7	6	6	6	7	7	5	6	5	7	5	4	7	9	11	A	59	18	16	16	24	11	30	12.2	58.9
10-Feb-08	13	7	6	4	6	9	13	11	8	7	7	5	5	3	6	A	11	12	30	19	13	41	32	10	12.1	40.7
11-Feb-08	14	7	8	18	43	13	14	33	27	34	16	15	17	9	A	55	11	12	38	35	44	14	19	13	22.1	55.1
12-Feb-08	21	25	40	37	26	23	25	36	39	27	17	18	10	A	15	18	19	26	14	36	22	5	28	3	23.0	39.7
13-Feb-08	9	6	31	29	9	8	10	9	6	5	4	5	A	10	20	18	47	23	16	21	19	12	5	9	14.4	46.9
14-Feb-08	9	13	15	15	13	15	24	39	36	36	33	A	22	6	7	43	12	17	19	33	13	11	9	28	20.3	43.2
15-Feb-08	6	27	43	8	41	5	7	7	9	48	A	24	13	5	5	7	16	7	5	33	8	16	20	6	15.8	48.5
16-Feb-08	12	13	14	12	11	28	31	21	17	A	6	6	23	29	9	7	19	19	16	12	14	11	14	14	15.5	30.7
17-Feb-08	10	12	8	15	11	12	26	21	A	10	9	4	12	23	37	7	33	12	14	37	50	40	38	15	19.9	50.1
18-Feb-08	11	15	20	16	23	37	33	A	27	13	24	27	6	5	4	4	7	10	14	12	47	36	49	35	20.7	49.4
19-Feb-08	52	10	30	37	75	48	A	37	34	11	11	8	7	6	4	5	8	6	7	39	37	29	29	16	23.6	75.3
20-Feb-08	21	23	36	27	30	A	51	49	38	32	7	8	39	3	4	C	C	C	C	A	19	33	31	29	26.8	50.8
21-Feb-08	35	19	A	34	28	28	30	38	37	35	23	31	37	14	12	13	13	24	44	46	46	44	45	42	31.2	46.1
22-Feb-08	42	50	A	38	50	37	66	30	35	53	42	32	25	19	20	18	20	28	40	32	33	36	30	43	35.8	66.2
23-Feb-08	40	A	31	30	31	32	43	56	19	14	13	17	10	11	12	15	14	15	21	17	21	31	24	17	23.2	56.4
24-Feb-08	A	35	21	11	21	22	27	27	21	19	18	13	13	13	13	11	9	8	11	10	18	17	7	A	16.4	35.5
25-Feb-08	14	17	18	18	29	18	34	48	35	25	12	8	8	18	11	21	10	14	27	29	24	20	A	33	21.4	47.7
26-Feb-08	104	54	40	79	45	27	14	46	40	18	8	8	14	17	31	17	10	22	36	28	50	A	61	31	34.9	103.7
27-Feb-08	38	51	24	28	21	21	24	34	17	9	9	6	15	6	7	37	14	37	40	46	A	61	39	24	26.5	60.8
28-Feb-08	18	25	36	24	22	24	19	12	11	12	12	13	11	5	7	7	4	23	12	A	19	35	21	20	17.0	35.7
29-Feb-08	34	40	32	37	43	53	21	41	27	23	6	37	5	11	24	33	14	25	24	27	7	19	6	28	25.8	53.4
Hourly Avg	24.5	21.5	23.7	23.9	25.1	22.6	24.5	29.0	23.1	20.8	14.5	14.4	14.9	10.8	13.7	17.4	16.0	21.2	22.0	27.1	26.3	26.9	26.1	22.7		
Hourly Max	103.7	54.1	44.3	79.3	75.3	53.4	66.2	56.4	39.8	53.3	42.1	36.8	48.3	28.9	37.0	55.1	46.9	58.9	43.7	46.4	50.4	60.8	66.4	49.9		

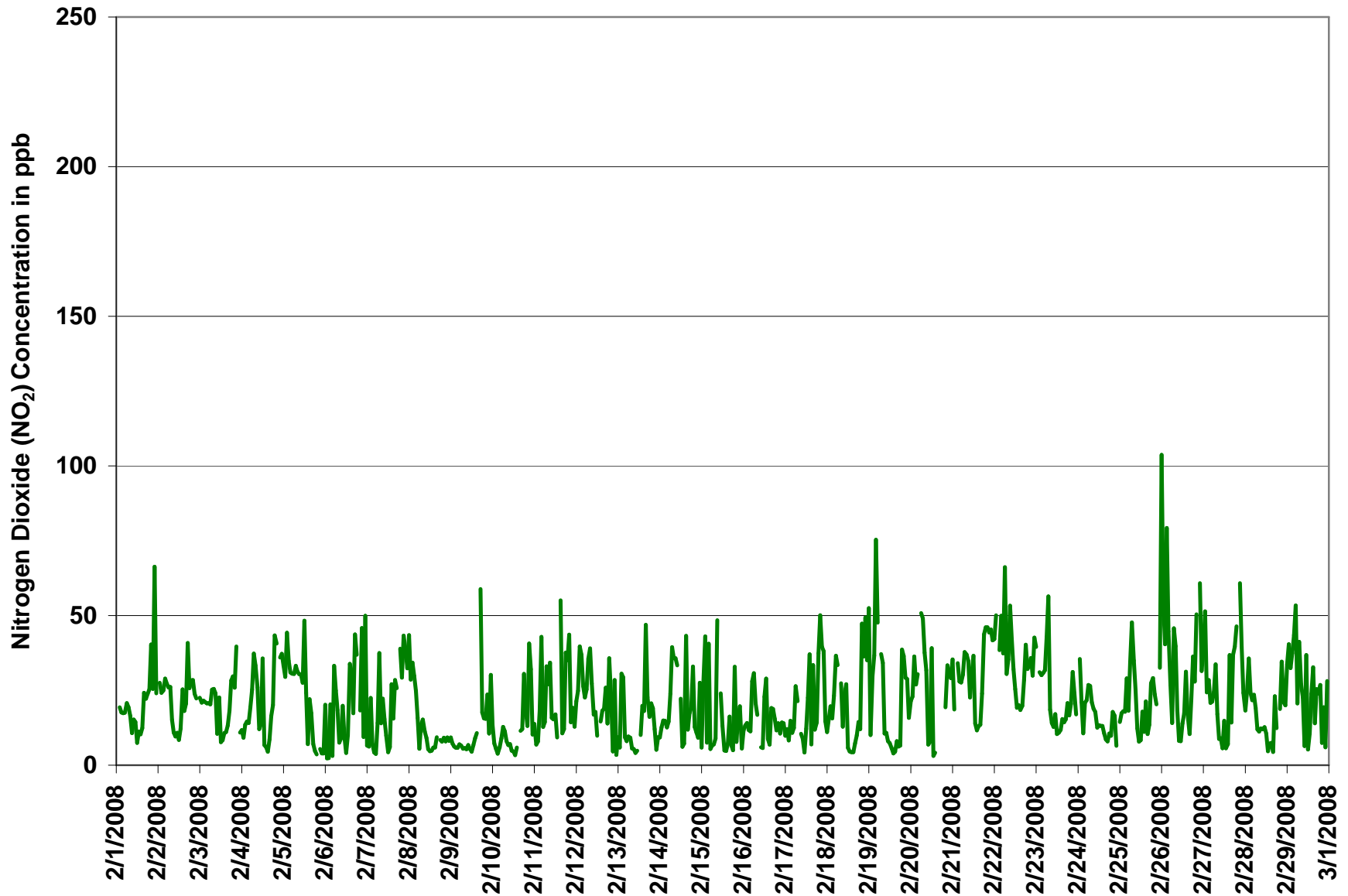
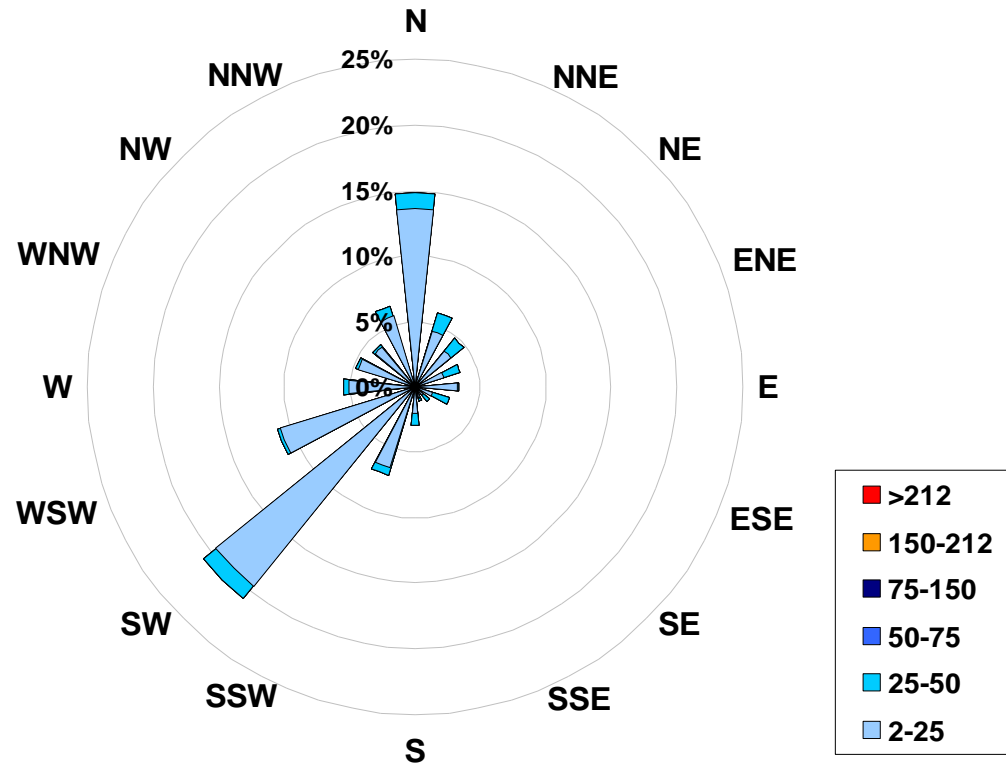


Figure 2. PAS - Crescent Heights Nitrogen Dioxide Instantaneous (30 Second) Maximum Value Monthly Trend



**1-hr Average Concentration Rose for Nitrogen Dioxide (in ppb) Located at the Crescent Heights Site for February 2008**



**Calms: 0%**

Frequency Distribution of NO <sub>2</sub> in ppb			
Range		Frequency (hrs)	
2.0	< 25	635	
25	to 50	19	
50	to 75	6	
75	to 150	1	
150	to 212	0	
	> 212	0	
Total Non-Zero Values			661



# PAS - Crescent Heights Nitric Oxide Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

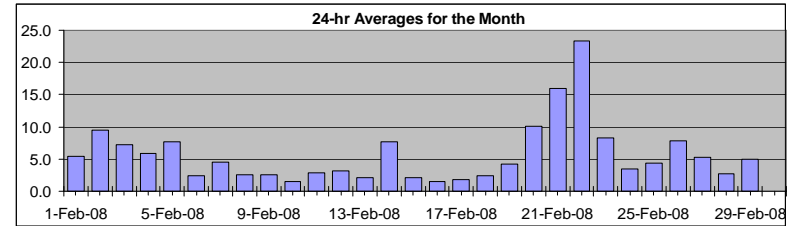
## HOURLY AVERAGE TABLE

## Nitric Oxide (NO)

Monitoring Dates: February 1, 2008 to March 1, 2008

Guideline Limit: 1-hr na ppb 24-hr na ppb  
 Summary

Maximum 1-hr Average:	94.7	ppb	22-Feb	9:00 10:00
Maximum 24-hr Average:	23.3	ppb	22-Feb	



AIC Time:	31 hrs	Operational Time:	661 hrs						
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	51.5	19.8	5.6	2.6	1.3	0.5	0.2	5.6 ppb	2.6 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																							24-hour Average	Daily Maximum	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00		
1-Feb-08	1	A	1	1	1	1	2	1	4	4	10	10	6	8	8	7	7	4	7	5	13	7	14	2	5.4	14.4
2-Feb-08	A	5	4	8	12	8	9	8	5	7	9	12	15	16	17	10	10	9	7	18	12	2	3	A	9.5	17.5
3-Feb-08	2	3	3	2	5	3	3	8	24	24	11	17	8	9	10	9	5	3	4	5	2	7	A	0	7.2	24.0
4-Feb-08	1	1	2	2	1	2	2	12	10	12	9	14	16	5	3	1	1	0	13	14	A	5	8	5.9	16.4	
5-Feb-08	4	2	16	6	4	2	4	15	16	33	46	13	3	3	2	2	1	1	0	0	A	0	0	0	7.6	45.6
6-Feb-08	1	0	0	1	0	2	2	1	1	1	3	2	1	1	8	6	3	7	2	A	1	2	0	9	2.4	8.9
7-Feb-08	0	0	1	0	1	0	1	5	3	4	4	3	3	3	5	6	5	3	A	6	3	22	19	10	4.6	21.5
8-Feb-08	4	2	3	3	1	1	1	1	4	5	4	3	2	3	4	4	2	A	2	2	3	2	2	2	2.6	5.1
9-Feb-08	3	3	2	2	3	3	2	2	3	3	4	3	3	4	6	4	A	3	1	1	1	2	1	1	2.6	5.6
10-Feb-08	0	0	0	0	0	1	1	1	1	2	3	2	2	2	2	A	2	2	2	3	3	3	2	1	1.6	3.4
11-Feb-08	1	0	0	1	1	1	1	4	6	8	6	6	7	5	A	4	1	1	4	2	6	1	1	1	2.9	8.1
12-Feb-08	1	0	3	2	1	1	1	3	13	6	7	6	6	A	4	5	3	2	1	4	1	1	1	1	3.2	13.2
13-Feb-08	2	1	4	2	1	1	1	2	3	2	2	4	A	2	3	4	3	2	2	2	2	2	1	1	2.1	4.1
14-Feb-08	1	1	1	1	1	2	4	14	32	63	28	A	4	3	3	7	3	2	2	2	1	1	1	2	7.6	62.7
15-Feb-08	1	3	5	1	2	1	1	1	2	6	A	3	3	2	2	2	2	1	1	2	1	2	2	1	2.1	5.9
16-Feb-08	1	1	1	1	1	2	3	1	1	A	2	2	3	3	2	2	2	2	1	1	1	1	1	1	1.5	3.5
17-Feb-08	1	1	1	1	0	1	1	1	A	3	3	2	3	5	3	2	3	1	1	2	3	2	2	1	1.8	5.0
18-Feb-08	0	1	1	0	1	3	2	A	7	5	5	4	4	3	2	2	2	1	1	1	4	2	1	2	2.4	6.8
19-Feb-08	9	1	2	2	9	16	A	13	9	5	5	4	3	2	1	1	1	1	0	4	3	2	2	1	4.2	16.3
20-Feb-08	1	1	4	1	2	A	36	32	49	28	4	5	4	2	2	C	C	C	C	A	2	5	3	2	10.1	49.1
21-Feb-08	3	0	A	2	1	1	6	20	58	46	13	13	7	7	6	3	2	2	5	27	46	37	33	28	15.9	58.3
22-Feb-08	10	11	A	6	56	22	62	47	63	95	54	10	13	14	16	11	8	6	5	3	4	8	3	7	23.3	94.7
23-Feb-08	17	A	21	20	23	16	11	6	8	11	13	10	7	4	4	4	3	2	2	1	1	2	1	1	8.3	22.8
24-Feb-08	A	2	1	0	2	2	2	4	9	11	12	11	10	5	3	1	1	1	1	1	0	0	0	A	3.5	11.5
25-Feb-08	0	1	2	2	5	1	3	17	12	8	5	5	7	7	6	6	3	2	1	2	1	1	A	1	4.3	16.7
26-Feb-08	50	8	3	35	4	3	1	8	12	6	5	6	4	4	5	4	3	2	2	1	4	A	7	1	7.8	49.9
27-Feb-08	3	5	0	1	1	1	2	4	2	3	3	2	2	2	2	4	3	6	9	25	A	17	20	3	5.2	25.4
28-Feb-08	1	1	10	2	3	4	2	2	2	2	4	5	4	2	2	2	2	3	2	A	2	3	2	1	2.8	9.8
29-Feb-08	4	4	2	4	11	33	1	8	8	8	3	4	2	2	3	5	2	2	2	2	1	2	1	3	4.9	33.5
Hourly Avg	4.6	2.2	3.4	3.7	5.2	4.8	6.1	8.6	13.1	14.6	9.9	6.5	5.5	4.6	4.7	4.4	3.0	2.6	2.5	5.2	5.1	5.0	4.8	3.3		
Hourly Max	49.9	11.2	21.5	34.5	56.2	33.5	61.8	47.4	63.3	94.7	53.9	16.7	16.4	16.5	16.7	11.2	10.5	9.3	8.7	27.2	45.6	36.7	32.9	27.7		



# PAS - Crescent Heights Oxides of Nitrogen Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

## HOURLY AVERAGE TABLE

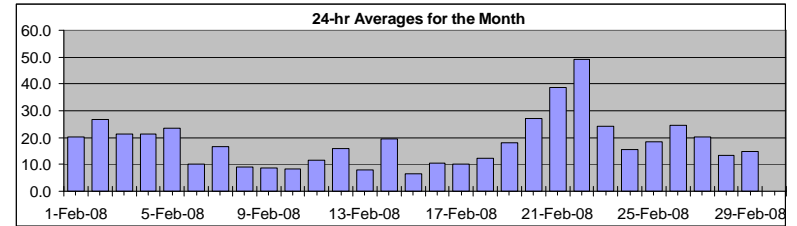
## Oxides of Nitrogen (NO<sub>x</sub>)

Monitoring Dates: February 1, 2008 to March 1, 2008

Guideline Limit: Alberta Environment: 1-hr na ppb 24-hr na ppb  
 Summary

Maximum 1-hr Average:	131.1	ppb	22-Feb	9:00 10:00
Maximum 24-hr Average:	49.1	ppb	22-Feb	

AIC Time:	31 hrs	Operational Time:	661 hrs						
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	87.3	50.1	22.2	13.2	7.7	4.2	2.6	18.0 ppb	13.2 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																							24-hour Average	Daily Maximum	
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-Feb-08	8	A	15	15	16	13	18	18	17	11	22	20	12	15	17	17	21	22	26	25	40	30	41	23	20.1	41.3
2-Feb-08	A	29	24	32	37	27	32	31	18	15	16	20	22	25	26	20	26	33	31	44	37	21	23	A	26.8	44.2
3-Feb-08	20	21	20	18	23	18	19	27	47	39	18	25	12	16	18	17	17	23	30	20	21	A	7	21.5	46.7	
4-Feb-08	9	7	11	13	13	18	24	44	31	26	17	24	27	10	6	4	8	13	15	44	52	A	34	40	21.4	51.5
5-Feb-08	29	28	48	36	33	30	32	45	41	58	73	25	8	7	7	8	7	6	4	3	A	4	3	2	23.4	72.8
6-Feb-08	3	1	1	3	2	6	8	8	7	6	12	7	4	6	23	19	14	34	22	A	11	8	5	20	10.1	34.1
7-Feb-08	3	4	2	4	2	3	8	19	13	9	8	7	6	8	14	19	22	26	A	36	24	57	51	38	16.6	56.5
8-Feb-08	23	22	10	7	4	5	4	7	16	13	8	7	6	6	7	8	6	A	7	8	9	9	8	8	9.0	23.3
9-Feb-08	10	7	6	6	7	8	6	5	6	6	7	6	6	9	12	10	A	13	10	12	14	12	9	13	8.6	13.7
10-Feb-08	8	6	3	2	5	6	9	8	7	7	7	4	5	4	6	A	11	11	13	14	13	17	20	8	8.4	19.6
11-Feb-08	8	6	5	14	11	8	10	15	14	15	11	11	14	11	A	14	9	9	16	11	19	11	14	8	11.5	19.0
12-Feb-08	10	15	13	12	15	16	22	28	41	22	17	12	12	A	14	19	18	16	11	25	14	4	5	3	15.9	40.8
13-Feb-08	4	3	7	6	8	5	5	6	7	6	5	6	A	6	8	14	11	11	13	18	16	8	5	6	7.9	18.4
14-Feb-08	6	8	11	11	9	13	18	42	63	94	46	A	9	7	7	14	12	16	18	15	10	9	6	9	19.7	94.1
15-Feb-08	4	11	14	5	5	3	5	7	8	12	A	7	6	6	6	7	7	6	5	7	3	5	5	4	6.5	14.3
16-Feb-08	4	7	9	8	8	20	27	18	14	A	6	5	9	10	9	6	11	16	13	9	11	8	9	8	10.6	27.0
17-Feb-08	6	7	6	9	9	12	14	15	A	11	9	5	7	9	6	6	9	10	12	15	18	11	15	12	10.2	18.4
18-Feb-08	10	12	14	13	20	28	28	A	22	13	11	9	8	6	6	5	7	8	12	9	16	9	8	10	12.4	28.4
19-Feb-08	22	9	24	22	41	54	A	46	27	14	14	11	9	5	4	3	5	5	4	19	25	20	21	14	18.2	54.3
20-Feb-08	16	20	35	13	21	A	62	65	84	51	8	11	7	3	4	C	C	C	C	A	15	25	26	22	27.2	83.9
21-Feb-08	27	11	A	27	24	19	30	51	90	73	27	27	16	16	16	12	11	19	33	67	85	74	69	62	38.5	90.5
22-Feb-08	39	40	A	41	96	55	97	75	90	131	85	23	28	28	31	27	24	28	33	29	27	36	28	38	49.1	131.1
23-Feb-08	48	A	50	47	51	46	40	27	19	19	21	17	15	11	13	15	15	15	16	13	15	13	15	16	24.2	51.1
24-Feb-08	A	15	11	9	19	19	27	24	27	27	25	22	22	16	15	10	7	7	9	9	11	7	5	A	15.7	27.3
25-Feb-08	12	11	16	17	25	17	27	51	35	21	12	11	14	15	15	17	11	12	12	14	15	17	A	24	18.3	51.3
26-Feb-08	91	46	34	76	21	13	10	25	30	13	12	12	10	9	11	11	11	18	20	17	24	A	32	20	24.5	90.9
27-Feb-08	20	28	18	19	11	10	13	17	11	9	9	6	6	5	6	13	14	30	45	61	A	46	45	21	20.2	61.3
28-Feb-08	15	17	34	21	21	24	14	9	10	9	13	12	10	4	5	5	5	12	12	A	13	11	17	16	13.4	33.6
29-Feb-08	17	23	18	18	36	60	17	28	25	18	6	8	4	4	7	13	7	8	9	10	5	6	3	6	14.8	60.2
Hourly Avg	17.5	15.3	17.1	18.1	20.4	19.9	22.3	27.2	29.3	26.8	18.7	12.9	11.3	10.0	11.3	12.4	12.1	15.5	16.5	21.7	20.8	18.5	19.3	17.0		
Hourly Max	90.9	45.5	50.1	75.6	95.8	60.2	97.3	75.3	90.5	131.1	84.8	26.6	28.5	27.7	31.3	26.9	26.4	34.1	44.8	67.2	85.2	73.7	68.5	62.4		

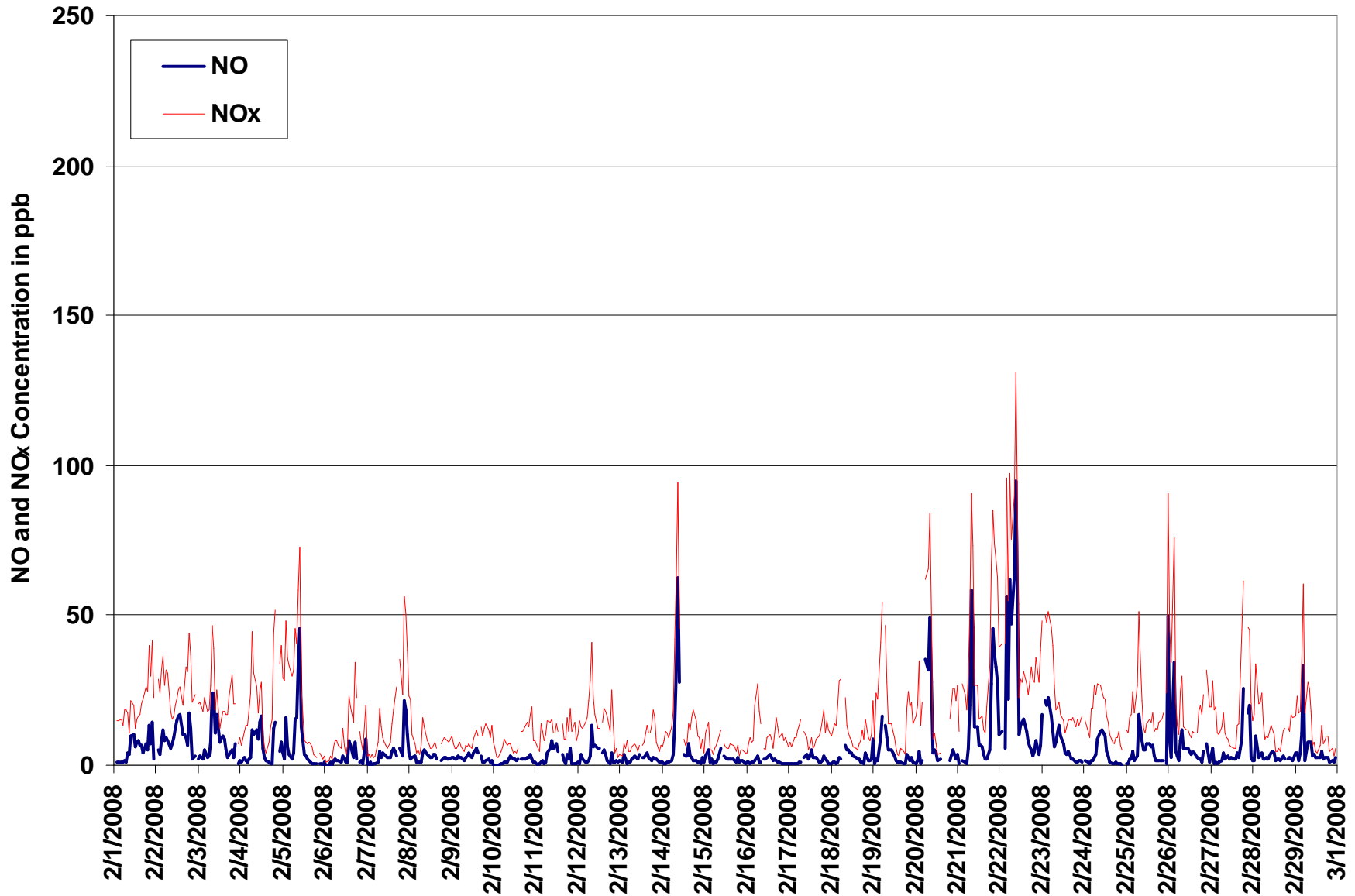


Figure 3. PAS - Crescent Heights Oxides of Nitrogen 1-hr Average Monthly Trend





Station: Crescent Heights  
 Station Owner: PAS

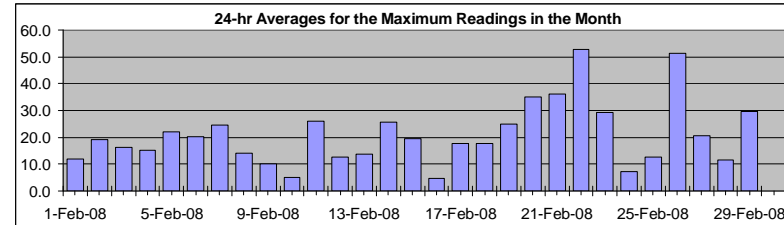
**INSTANTANEOUS (30 Second) MAXIMUM TABLE**

**Nitric Oxide (NO)**

Monitoring Dates: February 1, 2008 to March 1, 2008

**Summary**

Maximum 1-hr Value:	283.6	ppb	26-Feb	0:00 1:00
Maximum 24-hr Value:	52.7	ppb	22-Feb	



AIC Time:	31 hrs	Operational Time:	661 hrs						
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	142.0	77.4	28.0	7.7	3.2	1.3	0.8	20.9 ppb	7.7 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-Feb-08	2	A	2	2	2	3	4	5	7	8	15	14	8	13	11	9	18	6	18	13	37	29	50	4	12.1	50.1
2-Feb-08	A	11	9	15	27	16	19	13	7	11	13	26	16	28	60	32	14	26	9	29	28	7	5	A	19.2	59.8
3-Feb-08	4	7	7	5	8	5	5	27	30	61	18	62	13	12	13	11	7	4	7	8	6	54	A	1	16.3	62.0
4-Feb-08	4	2	4	5	4	4	6	32	52	25	13	22	71	7	5	3	2	2	2	41	24	A	10	13	15.3	70.9
5-Feb-08	13	5	48	24	8	3	10	35	24	66	53	39	67	72	3	21	7	1	1	1	A	1	1	1	21.9	71.7
6-Feb-08	43	1	0	32	1	30	14	4	2	3	7	6	2	3	44	31	4	42	9	A	3	55	26	108	20.4	108.0
7-Feb-08	1	1	47	1	1	1	13	151	6	56	34	11	4	3	21	12	20	6	A	14	11	77	47	26	24.5	150.8
8-Feb-08	70	5	51	61	19	25	2	3	6	8	10	6	4	5	10	9	5	A	3	3	5	4	6	4	14.0	69.9
9-Feb-08	4	5	4	3	5	5	4	3	4	5	9	5	4	6	9	8	A	82	15	3	4	27	3	17	10.2	81.8
10-Feb-08	1	1	1	1	1	2	3	3	2	3	5	6	4	3	5	A	4	4	10	5	5	37	7	2	5.0	37.1
11-Feb-08	4	1	1	4	48	1	3	59	50	89	33	29	24	10	A	66	3	2	34	31	99	2	2	2	25.9	99.2
12-Feb-08	2	2	45	35	2	3	3	9	38	12	10	25	14	A	6	8	7	4	1	32	2	2	28	2	12.6	45.0
13-Feb-08	46	10	54	28	1	2	7	8	5	4	3	6	A	8	13	20	37	25	4	5	4	17	3	2	13.6	54.5
14-Feb-08	2	1	1	3	2	4	39	66	46	81	75	A	38	4	5	128	5	4	3	32	2	2	44	25.6	128.2	
15-Feb-08	1	31	70	2	74	2	2	2	3	97	A	22	15	3	3	19	2	2	33	6	14	40	2	2	19.5	97.2
16-Feb-08	2	2	1	1	2	4	6	3	2	A	4	6	13	41	3	3	4	4	2	2	1	1	1	1	4.7	41.1
17-Feb-08	1	1	2	1	1	1	9	3	A	5	5	3	17	60	20	4	46	2	18	24	67	81	33	1	17.6	80.8
18-Feb-08	1	3	2	1	2	9	6	A	73	8	41	25	5	4	3	3	3	2	2	2	71	39	37	61	17.6	73.1
19-Feb-08	178	3	24	20	102	39	A	39	30	7	7	5	4	3	1	2	2	2	2	66	26	5	7	3	25.1	178.1
20-Feb-08	2	9	10	2	4	A	197	109	60	45	7	8	96	3	3	C	C	C	C	A	5	31	35	6	35.0	196.8
21-Feb-08	10	2	A	4	2	6	11	40	71	71	34	39	35	10	8	7	4	3	20	71	77	78	75	156	36.3	156.1
22-Feb-08	59	73	A	11	131	44	136	54	109	205	102	54	31	19	21	18	10	14	17	8	17	30	8	42	52.7	205.1
23-Feb-08	45	A	35	32	37	37	100	125	46	23	28	34	13	6	6	19	5	4	4	2	3	49	22	3	29.4	125.4
24-Feb-08	A	36	14	1	5	3	4	6	11	14	17	14	12	8	4	2	2	1	2	1	1	1	1	A	7.2	36.0
25-Feb-08	1	3	4	8	17	7	11	41	33	25	8	8	8	21	7	19	5	2	21	25	13	4	A	1	12.8	40.9
26-Feb-08	284	45	10	130	56	19	3	87	84	19	8	7	14	15	59	38	4	4	30	2	95	A	166	6	51.4	283.6
27-Feb-08	43	27	2	3	12	10	13	24	3	4	5	3	16	3	4	45	11	37	17	48	A	82	57	6	20.7	81.8
28-Feb-08	5	14	85	7	8	8	4	5	5	3	6	8	7	3	11	4	2	12	3	A	5	45	7	3	11.5	85.3
29-Feb-08	50	36	8	29	95	112	3	56	14	17	5	32	5	22	33	34	16	20	40	20	2	22	2	45	29.8	111.8
Hourly Avg	32.5	12.4	20.1	16.2	23.4	14.6	22.7	36.2	29.4	34.8	20.5	18.7	20.0	14.1	14.0	20.5	9.8	11.7	11.0	20.0	23.0	29.4	25.2	20.8		
Hourly Max	283.6	73.4	85.3	129.7	131.4	111.8	196.8	150.8	108.9	205.1	101.8	62.0	95.6	71.7	59.8	128.2	45.9	81.8	39.9	70.6	99.2	81.8	166.3	156.1		



Station: Crescent Heights  
 Station Owner: PAS

**INSTANTANEOUS (30 Second) MAXIMUM TABLE**

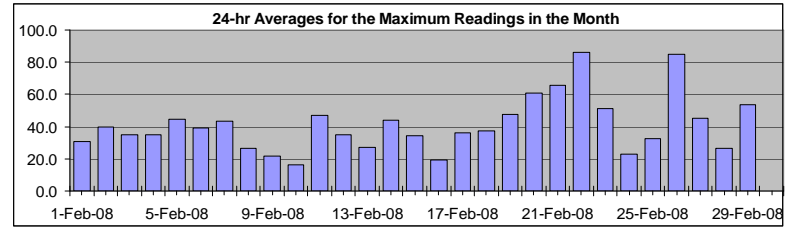
**Oxides of Nitrogen (NO<sub>x</sub>)**

Monitoring Dates: February 1, 2008 to March 1, 2008

**Summary**

Maximum 1-hr Value:	385.0	ppb	26-Feb	0:00 1:00
Maximum 24-hr Value:	86.0	ppb	22-Feb	

AIC Time:	31 hrs	Operational Time:	661 hrs						
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	196.1	121.4	55.6	26.1	13.9	6.8	4.3	40.9 ppb	26.1 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-Feb-08	10	A	21	19	18	20	23	22	22	19	29	27	14	22	20	20	39	28	38	35	69	52	108	27	30.5	107.5
2-Feb-08	A	38	33	40	51	43	44	39	21	21	22	35	23	40	77	50	31	64	34	57	56	31	27	A	39.8	76.8
3-Feb-08	25	26	28	25	26	25	25	52	53	85	29	80	20	20	23	20	20	20	35	37	31	92	A	11	35.1	91.8
4-Feb-08	14	11	18	20	18	22	28	69	84	51	23	35	101	14	10	6	9	18	21	80	64	A	45	49	35.2	100.8
5-Feb-08	45	31	92	58	38	34	40	68	55	97	83	68	116	96	9	43	24	8	5	4	A	6	4	4	44.7	116.0
6-Feb-08	62	2	2	51	3	59	38	22	9	11	26	13	5	12	78	61	19	79	45	A	21	98	36	142	38.9	141.8
7-Feb-08	7	6	70	7	5	4	26	186	20	78	50	19	7	9	47	28	45	30	A	53	40	122	85	56	43.5	186.4
8-Feb-08	114	32	83	85	42	41	7	14	20	17	19	10	7	8	16	15	14	A	10	10	13	12	15	10	26.7	114.3
9-Feb-08	12	12	9	8	10	11	10	8	9	10	15	10	8	12	17	16	A	141	32	18	20	50	12	47	21.7	141.0
10-Feb-08	13	7	6	4	6	10	15	14	10	9	12	11	8	6	9	A	14	16	39	23	17	75	38	12	16.4	75.3
11-Feb-08	17	7	9	22	86	13	16	89	75	122	45	44	41	19	A	121	13	12	71	62	144	16	20	14	46.9	143.8
12-Feb-08	23	25	83	69	27	25	27	44	74	38	27	43	22	A	20	26	25	29	14	66	24	6	56	4	34.6	83.3
13-Feb-08	55	15	77	55	10	9	15	17	10	9	7	11	A	18	33	38	84	48	18	24	21	28	6	11	27.0	84.5
14-Feb-08	11	13	15	16	14	18	56	84	81	117	109	A	60	10	12	171	15	20	22	65	14	12	9	71	44.1	171.1
15-Feb-08	7	55	105	8	117	7	8	8	11	146	A	42	28	8	7	10	33	8	6	61	12	30	59	7	34.1	146.2
16-Feb-08	13	15	15	12	13	30	35	23	18	A	8	11	35	65	11	9	23	22	16	13	15	11	15	14	19.3	64.9
17-Feb-08	10	12	9	16	11	13	36	23	A	14	13	7	28	76	57	10	76	14	24	62	118	121	65	15	36.1	120.9
18-Feb-08	12	19	22	16	24	45	39	A	98	20	61	52	10	8	7	6	9	12	16	13	111	70	86	96	37.1	111.4
19-Feb-08	224	12	50	56	179	86	A	76	64	17	17	13	11	8	4	5	10	7	6	105	63	33	35	19	47.8	224.1
20-Feb-08	23	30	46	29	34	A	240	159	95	77	13	15	135	5	7	C	C	C	C	A	24	64	66	31	60.7	239.8
21-Feb-08	42	21	A	37	29	34	40	75	104	105	56	69	71	24	19	19	17	26	62	116	121	122	114	193	65.8	192.9
22-Feb-08	95	123	A	49	173	77	201	84	139	256	143	85	56	38	41	36	27	42	51	37	50	64	37	75	86.0	256.2
23-Feb-08	80	A	64	62	67	68	141	180	64	33	39	47	23	16	17	31	19	18	24	18	21	74	46	19	50.9	179.6
24-Feb-08	A	71	34	11	25	23	30	30	32	32	34	26	24	20	17	13	10	8	12	10	18	17	7	A	22.8	71.1
25-Feb-08	15	18	21	23	42	23	44	88	65	47	20	15	16	39	18	40	14	15	43	48	37	24	A	32	32.4	87.7
26-Feb-08	385	99	50	208	98	44	15	132	123	36	15	14	27	31	90	52	13	24	58	29	145	A	226	35	84.7	385.0
27-Feb-08	72	78	24	30	33	31	37	57	20	13	13	8	30	8	8	81	24	72	54	86	A	141	95	26	45.3	141.1
28-Feb-08	23	39	114	27	27	31	21	14	14	15	18	20	18	6	18	11	6	34	15	A	23	73	28	21	26.8	113.7
29-Feb-08	84	74	36	66	135	154	22	92	40	38	10	69	9	31	57	65	29	44	60	44	9	40	7	64	53.4	154.2
Hourly Avg	55.3	33.0	42.0	38.9	46.9	35.7	45.7	63.1	51.0	54.8	34.2	32.0	34.2	23.9	26.7	37.1	24.5	31.7	30.9	45.2	48.3	54.9	49.9	40.9		
Hourly Max	385.0	123.0	113.7	207.7	178.7	154.2	239.8	186.4	139.2	256.2	142.8	85.4	135.1	96.4	89.6	171.1	84.5	141.0	70.6	115.9	145.3	141.1	225.9	192.9		

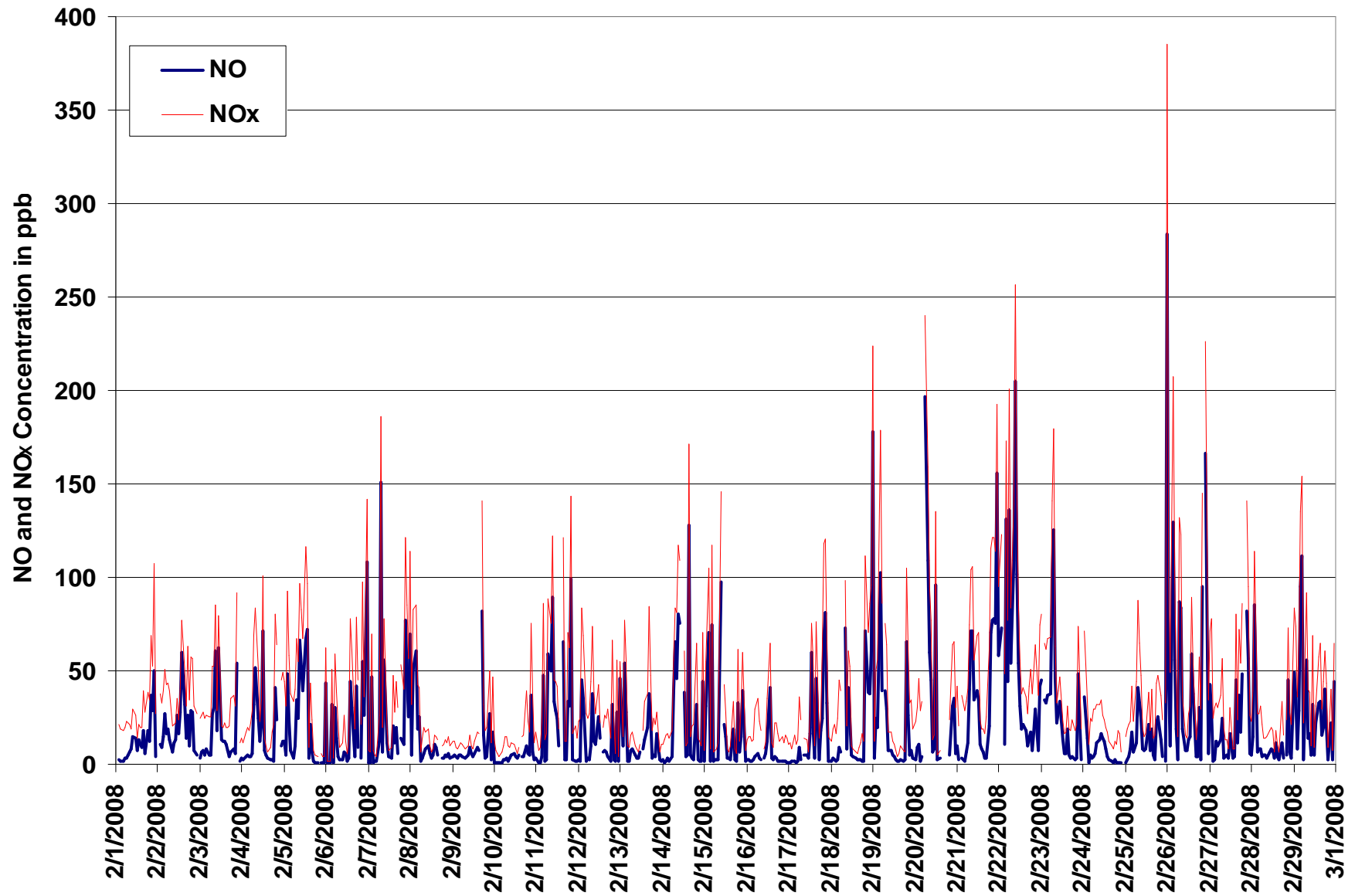


Figure 4. PAS - Crescent Heights Oxides of Nitrogen Instantaneous (30 Second) Maximum Value Monthly Trend



# PAS - Crescent Heights Ozone Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

## HOURLY AVERAGE TABLE

## Ozone (O<sub>3</sub>)

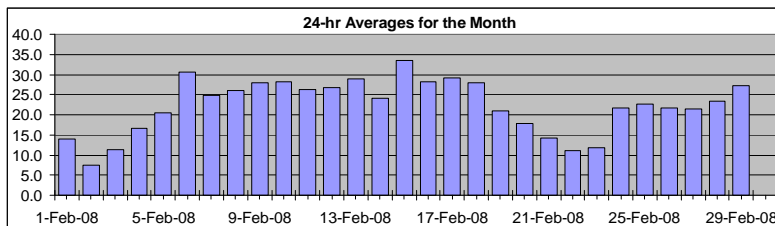
Monitoring Dates: February 1, 2008 to March 1, 2008

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

### Summary

Number of 1-hr Exceedances:	0		
Maximum 1-hr Average:	41.3 ppb	29-Feb	13:00 14:00
Maximum 24-hr Average:	33.4 ppb	15-Feb	

AIC Time:	30 hrs	Operational Time:	663 hrs						
Calibration Time:	3 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	38.8	36.4	31.3	25.0	14.6	1.3	0.0	22.3 ppb	25.0 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																								24-hour Average	Daily Maximum	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00		
1-Feb-08	21	A	16	15	14	15	12	11	15	20	17	19	22	21	20	18	15	11	10	10	4	6	4	5		14.0	22.0
2-Feb-08	A	1	3	0	0	6	3	3	11	16	17	16	16	16	16	15	10	3	1	0	1	5	4	A		7.4	17.1
3-Feb-08	6	7	8	9	6	7	8	5	3	9	16	16	21	19	17	16	14	13	8	3	10	16	A	24		11.3	24.0
4-Feb-08	23	25	22	20	19	15	10	1	11	17	22	21	21	25	27	28	25	20	18	5	0	A	5	2		16.7	28.4
5-Feb-08	8	4	0	2	1	2	2	0	7	11	13	30	37	37	36	36	34	34	35	35	A	35	35	36		20.4	37.4
6-Feb-08	36	36	37	36	36	33	32	30	32	32	29	36	36	34	25	29	28	14	19	A	27	31	32	28		30.7	36.6
7-Feb-08	35	34	36	34	36	36	31	25	28	32	33	34	35	33	29	26	21	14	A	6	11	0	0	2		24.8	36.4
8-Feb-08	9	13	29	33	34	34	35	32	24	17	22	26	26	26	26	27	A	28	27	26	26	26	26	26		26.0	35.1
9-Feb-08	26	29	30	29	29	29	30	31	31	31	30	31	31	30	28	30	A	27	26	23	22	25	26	22		28.0	31.0
10-Feb-08	25	27	30	31	29	30	29	30	31	31	32	33	33	33	33	A	28	26	25	23	24	20	18	26		28.1	33.3
11-Feb-08	25	26	27	19	21	23	20	18	19	22	25	27	30	32	A	35	35	33	29	29	25	26	25	30		26.3	35.2
12-Feb-08	28	23	26	26	23	22	17	12	12	22	28	32	34	A	32	27	26	26	31	23	32	39	37	38		26.8	39.5
13-Feb-08	38	38	37	36	26	27	28	28	28	29	31	32	A	33	32	27	28	27	23	18	19	27	28	25		29.0	38.4
14-Feb-08	26	22	19	20	22	19	16	3	4	6	20	A	36	37	36	34	32	26	22	26	32	32	34	32		24.2	36.7
15-Feb-08	34	31	30	33	35	36	34	32	31	31	A	35	36	37	37	35	34	32	33	33	34	32	32	31		33.4	37.0
16-Feb-08	31	27	23	26	26	14	11	18	23	A	38	39	36	35	36	38	32	27	27	30	28	30	28	31		28.3	38.6
17-Feb-08	30	29	29	26	26	24	22	22	A	28	30	34	35	35	36	36	34	30	29	29	26	31	25	23		29.2	36.4
18-Feb-08	23	25	22	22	15	10	9	A	19	26	29	31	31	34	36	39	37	36	33	36	33	35	34	28		27.9	39.1
19-Feb-08	24	26	13	14	7	1	A	1	13	19	20	23	25	32	36	38	38	33	32	18	15	18	14	18		20.9	37.9
20-Feb-08	16	14	3	17	10	A	6	0	5	16	30	30	33	33	30	28	25	20	18	C	C	C	11	14		17.9	32.8
21-Feb-08	11	22	A	7	8	12	3	1	4	12	21	25	31	33	33	36	35	25	12	0	0	0	0	0		14.3	35.7
22-Feb-08	6	6	A	1	0	0	0	0	3	6	15	29	28	22	21	23	23	17	12	14	11	6	8	2		11.0	29.5
23-Feb-08	0	A	0	0	0	1	5	10	14	15	15	16	19	18	13	14	16	17	21	19	21	13	8		11.7	20.9	
24-Feb-08	A	11	14	15	8	6	1	5	8	11	14	18	21	30	33	37	39	39	35	33	30	34	34	A		21.6	39.5
25-Feb-08	29	28	22	19	16	18	11	4	11	18	23	25	27	29	30	31	33	30	28	26	24	22	A	15		22.5	32.9
26-Feb-08	10	2	6	6	24	28	27	18	14	21	23	26	29	31	33	35	34	26	23	25	22	A	17	21		21.8	34.6
27-Feb-08	23	18	20	19	26	26	24	23	27	29	31	33	36	37	38	32	28	14	2	0	A	1	2	5		21.4	37.8
28-Feb-08	11	11	3	4	5	4	20	34	35	34	31	34	36	38	37	37	36	29	25	A	21	22	16	15		23.4	38.0
29-Feb-08	18	13	18	19	8	8	17	15	18	27	35	37	39	41	39	35	34	32	30	32	36	34	34	32		27.2	41.3
Hourly Avg	21.1	20.2	19.4	18.6	17.6	17.3	16.5	14.7	17.1	21.0	24.7	28.1	29.8	30.8	30.4	29.9	28.5	24.3	22.5	20.1	20.6	22.1	20.1	20.0			
Hourly Max	38.3	38.4	36.9	35.8	36.4	35.6	35.1	33.6	35.3	34.1	37.6	38.6	39.2	41.3	39.2	39.1	39.5	39.1	35.1	35.6	36.2	39.5	37.0	38.3			

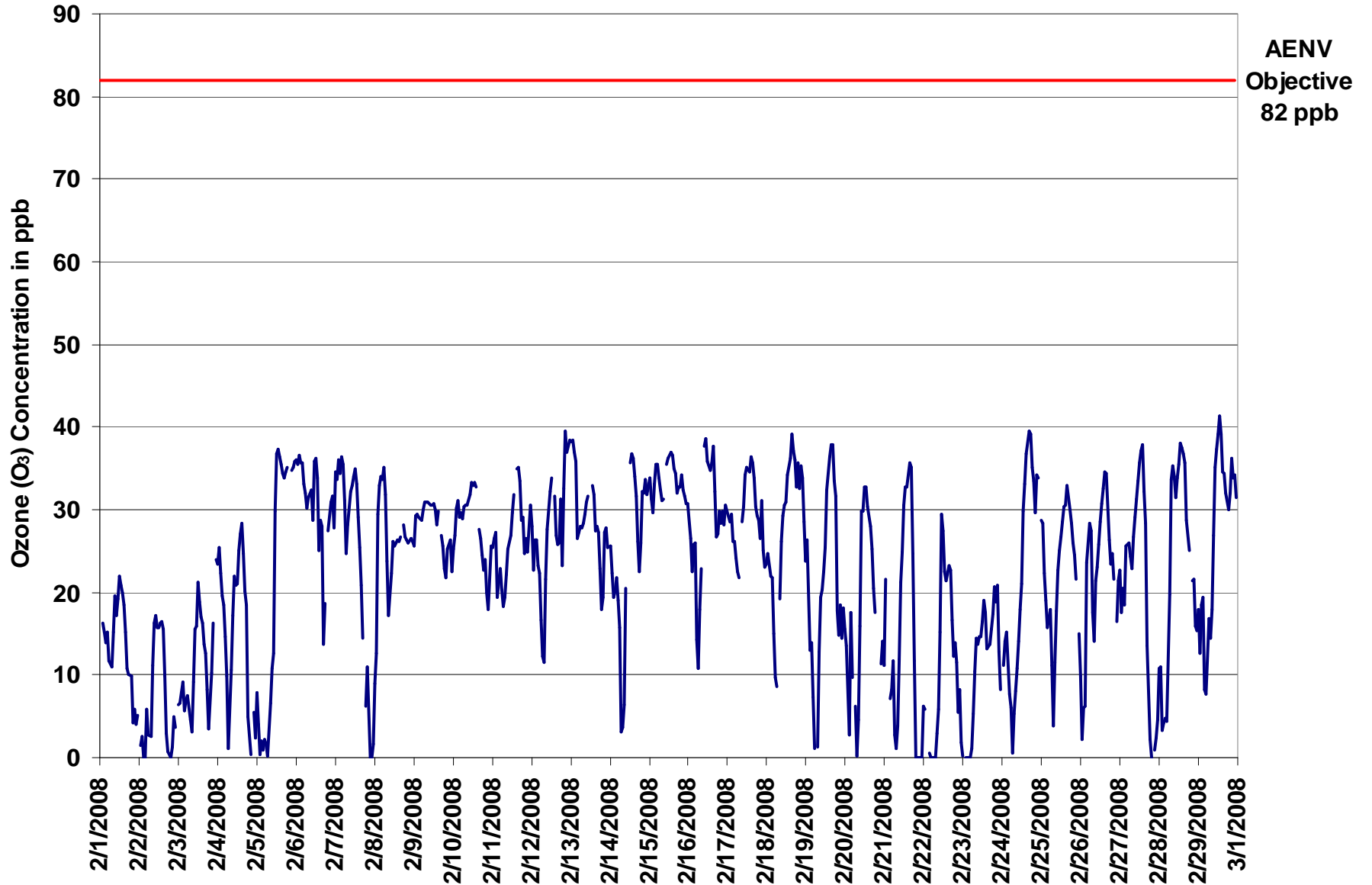


Figure 5. PAS - Crescent Heights Ozone 1-hr Average Monthly Trend



Station: Crescent Heights  
 Station Owner: PAS

### INSTANTANEOUS (30 Second) MAXIMUM TABLE

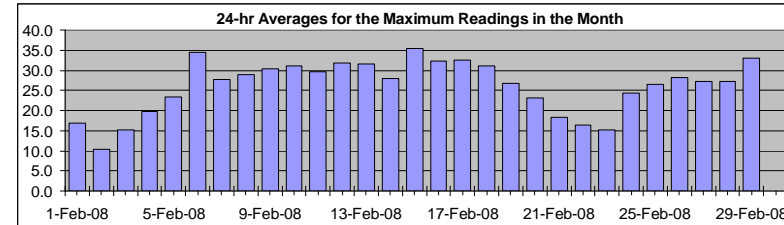
### Ozone (O<sub>3</sub>)

Monitoring Dates: February 1, 2008 to March 1, 2008

**Summary**

Maximum 1-hr Value:	44.0	ppb	29-Feb	13:00 14:00
Maximum 24-hr Value:	35.5	ppb	15-Feb	

AIC Time:	30 hrs	Operational Time:	663 hrs						
Calibration Time:	3 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	40.8	38.9	34.2	28.9	19.7	5.6	0.0	26.1 ppb	28.9 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-Feb-08	22	A	18	18	17	17	16	14	20	21	21	22	23	22	21	20	17	14	14	17	9	10	8	9	17.0	22.6
2-Feb-08	A	5	8	0	2	10	4	10	15	19	19	19	17	18	19	18	14	7	2	1	6	8	6	A	10.3	19.5
3-Feb-08	9	8	12	13	8	10	10	8	5	16	17	21	24	23	18	19	15	21	23	8	20	19	A	26	15.3	26.1
4-Feb-08	26	27	25	22	21	18	13	4	18	21	24	23	24	27	28	29	26	24	21	16	2	A	11	7	19.9	29.4
5-Feb-08	14	13	4	5	7	8	3	1	12	13	18	36	39	39	38	38	36	36	36	A	35	36	37	7	23.4	38.7
6-Feb-08	37	36	37	37	37	37	35	35	34	34	35	39	39	37	31	34	32	25	26	A	32	34	34	35	34.4	39.1
7-Feb-08	36	36	37	37	38	37	36	31	31	35	35	35	36	35	34	27	25	20	A	11	15	2	2	9	27.8	37.5
8-Feb-08	15	27	33	35	35	37	36	35	29	23	25	27	26	27	28	27	28	A	31	29	28	27	28	27	29.0	36.9
9-Feb-08	29	31	31	31	31	32	32	33	32	33	32	32	32	32	30	32	A	29	28	27	24	28	29	28	30.3	33.0
10-Feb-08	30	30	32	32	30	32	33	33	32	34	35	34	34	34	34	A	31	29	28	29	27	28	25	30	31.0	34.8
11-Feb-08	28	28	29	25	26	27	25	21	22	24	27	29	32	35	A	37	38	36	35	33	29	31	30	33	29.6	37.8
12-Feb-08	32	31	30	32	29	30	22	23	18	25	32	34	36	A	35	30	31	31	36	32	41	41	39	39	31.7	41.3
13-Feb-08	39	40	39	39	32	28	29	29	30	31	32	33	A	34	34	33	32	31	28	23	24	29	29	27	31.6	39.7
14-Feb-08	28	25	25	23	25	23	20	13	7	9	33	A	37	38	39	38	35	29	26	29	36	34	35	36	28.0	38.6
15-Feb-08	36	35	35	36	38	37	36	33	33	34	A	37	38	38	38	36	37	34	34	36	36	34	33	33	35.5	38.1
16-Feb-08	33	31	26	31	30	22	19	23	30	A	40	41	40	38	38	39	38	31	31	33	31	32	32	32	32.2	40.8
17-Feb-08	31	32	32	29	27	26	26	27	A	31	33	36	37	37	39	38	36	34	35	36	35	34	32	27	32.5	38.8
18-Feb-08	25	28	25	24	19	16	17	A	23	30	31	32	32	36	38	41	40	38	36	39	39	40	37	32	31.2	40.6
19-Feb-08	29	29	24	24	25	11	A	6	20	21	21	24	29	35	38	39	43	37	33	32	26	25	19	21	26.7	42.7
20-Feb-08	21	20	8	23	20	A	19	2	9	32	33	31	35	34	31	30	29	24	22	C	C	C	19	21	23.1	34.7
21-Feb-08	22	25	A	11	14	16	7	5	8	23	26	30	34	34	36	39	39	33	19	0	0	0	0	0	18.3	39.4
22-Feb-08	18	21	A	6	0	0	9	1	6	7	27	31	31	26	26	27	26	21	18	21	15	16	16	9	16.4	30.9
23-Feb-08	2	A	0	0	0	5	15	17	17	18	17	18	19	22	19	17	17	20	21	24	23	24	18	11	15.1	24.1
24-Feb-08	A	14	16	17	14	9	3	7	10	13	17	20	25	35	35	40	41	41	38	35	34	38	38	A	24.4	40.7
25-Feb-08	33	34	26	24	19	21	21	12	16	19	26	26	28	31	32	36	36	34	31	30	27	26	A	23	26.5	35.7
26-Feb-08	25	9	11	26	35	34	32	24	21	24	24	28	30	32	35	37	36	33	31	33	27	A	26	31	28.1	37.3
27-Feb-08	32	32	26	28	32	30	32	32	31	32	34	35	38	39	39	38	33	31	12	1	A	5	8	8	27.3	39.2
28-Feb-08	14	16	7	10	8	8	32	39	38	37	34	36	39	39	39	38	38	36	29	A	26	25	19	20	27.3	39.2
29-Feb-08	23	22	28	29	22	28	23	21	24	34	38	39	41	44	42	39	39	34	33	39	39	39	36	34	33.0	44.0
Hourly Avg	25.6	25.3	23.1	22.9	22.1	21.7	21.6	19.4	21.1	24.7	28.1	30.3	31.9	32.9	32.7	32.8	31.7	29.0	27.0	24.9	25.1	25.5	23.9	23.9		
Hourly Max	39.4	39.7	38.8	38.6	37.7	37.2	36.5	38.9	37.8	36.9	39.6	40.8	41.0	44.0	42.5	40.6	42.7	40.6	37.7	39.1	41.3	41.0	39.3	39.2		

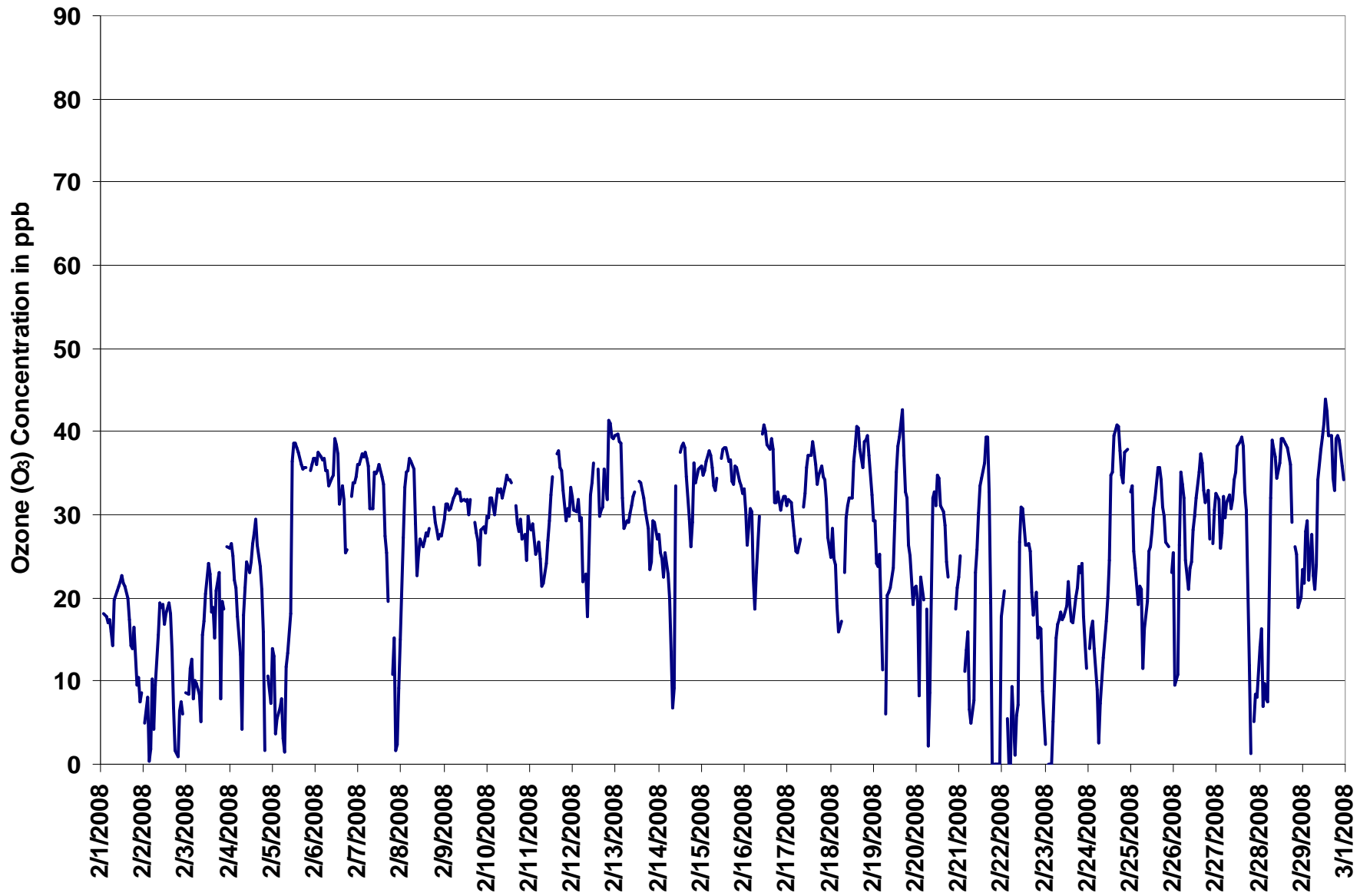
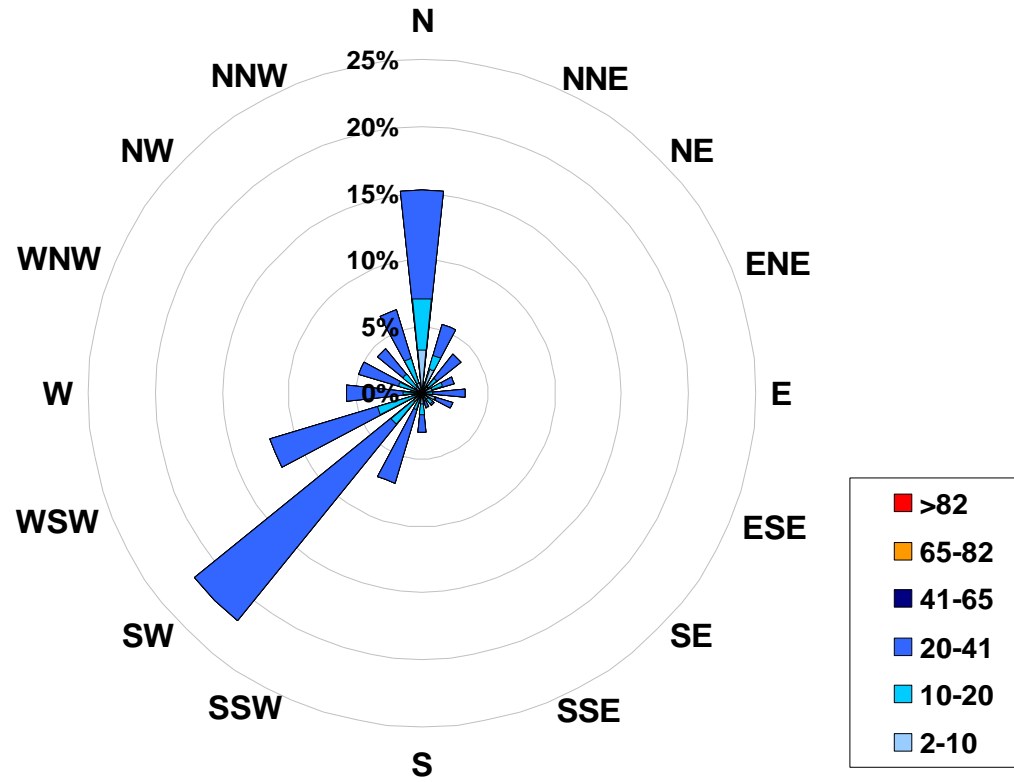


Figure 6. PAS - Crescent Heights Ozone Instantaneous (30 Second) Maximum Value Monthly Trend



**1-hr Average Concentration Rose for Ozone (in ppb) Located at the Crescent Heights Site for February 2008**



**Calms: 0%**

Frequency Distribution of O <sub>3</sub> in ppb			
Range		Frequency (hrs)	
2.0	< 10	114	
10	to 20	134	
20	to 41	414	
41	to 65	1	
65	to 82	0	
	> 82	0	
Total Non-Zero Values			663





# PAS - Crescent Heights Ozone Eight Hour Average Summary

## EIGHT HOUR RUNNING AVERAGE TABLE

### Ozone (O<sub>3</sub>)

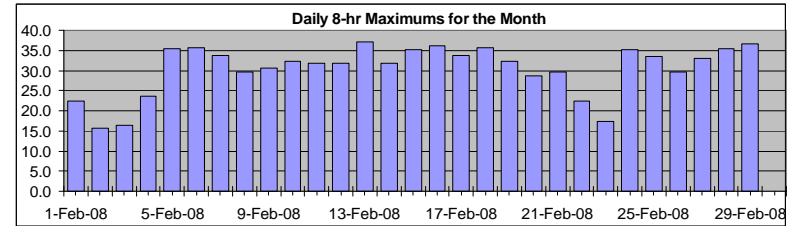
Station: Crescent Heights  
 Station Owner: PAS

Monitoring Dates: February 1, 2008 to March 1, 2008

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

Number of 8-hr Exceedances:	0						
Maximum 8-hr Average:	37.1	ppb	13-Feb	3:00	4:00		

Percentile	99	95	75	50	25	5	1
	35.7	34.8	30.0	24.2	15.1	4.6	1.8



#### 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																							Daily Maximum	
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-Feb-08	22	22	22	20	19	18	17	15	14	15	15	15	16	17	18	19	19	18	17	16	14	12	10	8	22.3
2-Feb-08	7	6	5	3	3	3	3	2	3	5	7	9	11	12	14	16	15	14	12	10	8	6	5	3	15.5
3-Feb-08	3	3	4	6	6	7	7	7	6	7	8	9	11	12	13	15	16	16	15	14	13	12	12	13	16.4
4-Feb-08	14	16	18	20	21	21	20	17	15	14	14	14	15	16	18	22	23	24	23	21	19	18	15	11	23.7
5-Feb-08	9	6	4	3	3	3	3	2	2	3	5	8	13	17	21	26	29	32	35	35	35	35	35	35	35.5
6-Feb-08	35	35	36	36	36	35	35	34	34	33	32	32	32	33	32	32	31	29	28	26	25	25	26	25	35.7
7-Feb-08	26	29	32	32	33	34	34	33	33	32	32	32	32	31	31	31	30	28	27	23	20	15	11	8	33.8
8-Feb-08	6	6	9	12	15	19	24	27	29	30	29	28	27	26	25	24	25	26	26	26	27	27	27	27	29.7
9-Feb-08	26	27	27	27	28	28	28	29	30	30	30	30	30	31	30	30	30	30	29	28	26	26	25	24	30.6
10-Feb-08	25	25	25	26	27	28	28	29	30	30	30	31	31	31	32	32	32	31	30	29	27	25	23	24	32.2
11-Feb-08	23	23	24	23	23	23	24	23	22	21	21	22	23	24	25	27	29	31	32	32	31	30	30	29	31.8
12-Feb-08	28	27	27	26	26	26	25	22	20	20	20	21	22	22	24	26	28	29	30	28	28	30	30	32	31.7
13-Feb-08	33	35	36	37	36	35	34	32	31	30	29	29	29	30	30	30	30	30	29	27	26	25	25	24	37.1
14-Feb-08	24	24	23	23	24	23	21	18	16	14	14	13	15	17	20	25	29	32	32	31	31	30	30	29	31.8
15-Feb-08	30	30	31	32	33	33	33	33	33	33	33	34	34	34	34	35	35	35	35	35	34	34	33	33	35.2
16-Feb-08	32	31	30	29	28	26	23	22	21	20	22	24	25	28	32	35	36	35	34	32	32	31	30	29	36.1
17-Feb-08	29	29	29	29	29	28	27	26	26	26	26	27	28	30	32	34	34	34	34	33	32	32	30	29	33.8
18-Feb-08	27	26	26	25	23	21	19	18	17	17	19	20	22	26	30	31	33	34	35	35	35	36	35	34	35.6
19-Feb-08	32	31	29	26	23	18	16	12	11	10	11	12	15	19	21	26	29	31	32	32	30	29	26	23	32.3
20-Feb-08	21	18	14	14	14	13	12	9	8	8	12	14	17	19	22	26	28	29	27	27	N	N	N	N	28.7
21-Feb-08	N	N	N	N	N	12	11	9	8	7	8	11	13	16	20	24	28	30	29	25	22	18	13	9	29.7
22-Feb-08	5	3	2	2	2	2	2	2	1	1	3	7	10	13	16	19	21	22	22	20	18	16	14	12	22.3
23-Feb-08	9	8	6	4	2	2	1	2	4	6	7	9	11	14	15	15	15	16	16	17	17	17	17	16	17.2
24-Feb-08	16	16	15	14	13	11	9	9	8	8	8	9	10	13	18	21	25	29	32	33	35	35	35	35	35.2
25-Feb-08	33	32	30	28	26	24	20	18	16	15	15	16	17	18	21	24	27	28	29	29	29	28	28	25	33.5
26-Feb-08	22	18	15	12	12	13	15	15	16	18	20	23	23	24	24	26	29	30	30	29	29	28	26	24	29.6
27-Feb-08	22	21	21	20	20	21	22	22	23	24	26	27	29	30	32	33	33	31	28	23	22	16	11	7	33.1
28-Feb-08	5	5	5	5	5	6	8	11	15	17	21	25	28	33	35	35	35	35	34	34	32	30	26	23	35.3
29-Feb-08	21	19	18	18	16	14	15	14	14	16	18	21	24	29	31	34	36	37	36	35	35	34	33	33	36.7

Hourly Max 35.0 35.3 35.6 37.1 36.3 35.4 35.0 34.3 33.8 33.4 33.2 33.5 33.7 33.9 34.9 35.3 36.1 36.7 36.0 35.5 35.5 35.6 35.3 35.0



# PAS - Crescent Heights Carbon Monoxide Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

## HOURLY AVERAGE TABLE

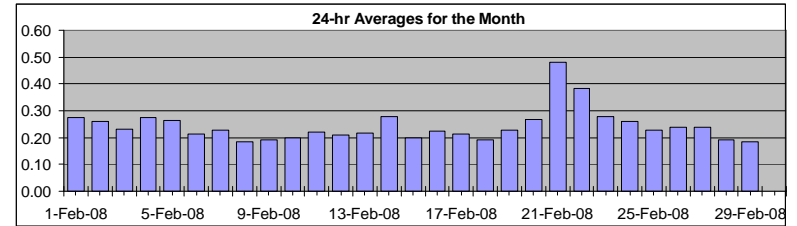
## Carbon Monoxide (CO)

Monitoring Dates: February 1, 2008 to March 1, 2008

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

Number of 1-hr Exceedances:	0			
Maximum 1-hr Average:	0.9	ppm	22-Feb	9:00 10:00
Maximum 24-hr Value:	0.5	ppm	21-Feb	

AIC Time:	31 hrs		Operational Time:	663 hrs					
Calibration Time:	2 hrs		AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average	Median
	0.7	0.5	0.3	0.2	0.2	0.2	0.1	0.2 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																								24-hour Average	Daily Maximum
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-Feb-08	0.2	A	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.5	0.3	0.5	0.3	0.28	0.50
2-Feb-08	A	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.3	0.2	0.3	A	0.26	0.40
3-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	A	0.2	0.23	0.36	
4-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.5	A	0.4	0.6	0.27	0.56
5-Feb-08	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.26	0.52	
6-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.4	0.3	A	0.2	0.2	0.2	0.21	0.39	
7-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.3	0.3	A	0.3	0.2	0.5	0.3	0.23	0.45	
8-Feb-08	0.2	0.2	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	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.19	0.35	
9-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.22	
10-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.23	
11-Feb-08	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.29	
12-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.21	0.43	
13-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.22	0.33	
14-Feb-08	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.4	0.6	0.8	0.4	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.28	0.75	
15-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.24	
16-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.22	0.27	
17-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.21	0.31	
18-Feb-08	0.2	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	0.2	0.2	0.2	0.2	0.2	0.19	0.26	
19-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	A	0.5	0.4	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	0.2	0.23	0.46	
20-Feb-08	0.2	0.2	0.3	0.2	0.2	A	0.3	0.5	0.7	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.27	0.73	
21-Feb-08	0.3	0.2	A	0.2	0.2	0.2	0.3	0.6	C	C	A	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.8	0.8	0.7	0.6	0.48	0.83	
22-Feb-08	0.3	0.3	A	0.2	0.3	0.3	0.8	0.5	0.6	0.9	0.6	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.38	0.86	
23-Feb-08	0.4	A	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.28	0.41	
24-Feb-08	A	0.3	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	0.3	0.2	0.2	0.2	0.2	0.2	0.2	A	0.26	0.33	
25-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	A	0.2	0.23	0.41	
26-Feb-08	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	A	0.2	0.24	0.32	
27-Feb-08	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.6	A	0.6	0.4	0.24	0.60	
28-Feb-08	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.19	0.26	
29-Feb-08	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.18	0.28
Hourly Avg	0.21	0.20	0.20	0.20	0.22	0.21	0.24	0.30	0.32	0.29	0.25	0.24	0.22	0.22	0.23	0.23	0.24	0.25	0.25	0.28	0.27	0.25	0.25	0.23		
Hourly Max	0.41	0.28	0.34	0.36	0.40	0.33	0.83	0.56	0.73	0.86	0.58	0.65	0.61	0.57	0.53	0.51	0.49	0.51	0.62	0.78	0.83	0.67	0.60	0.56		

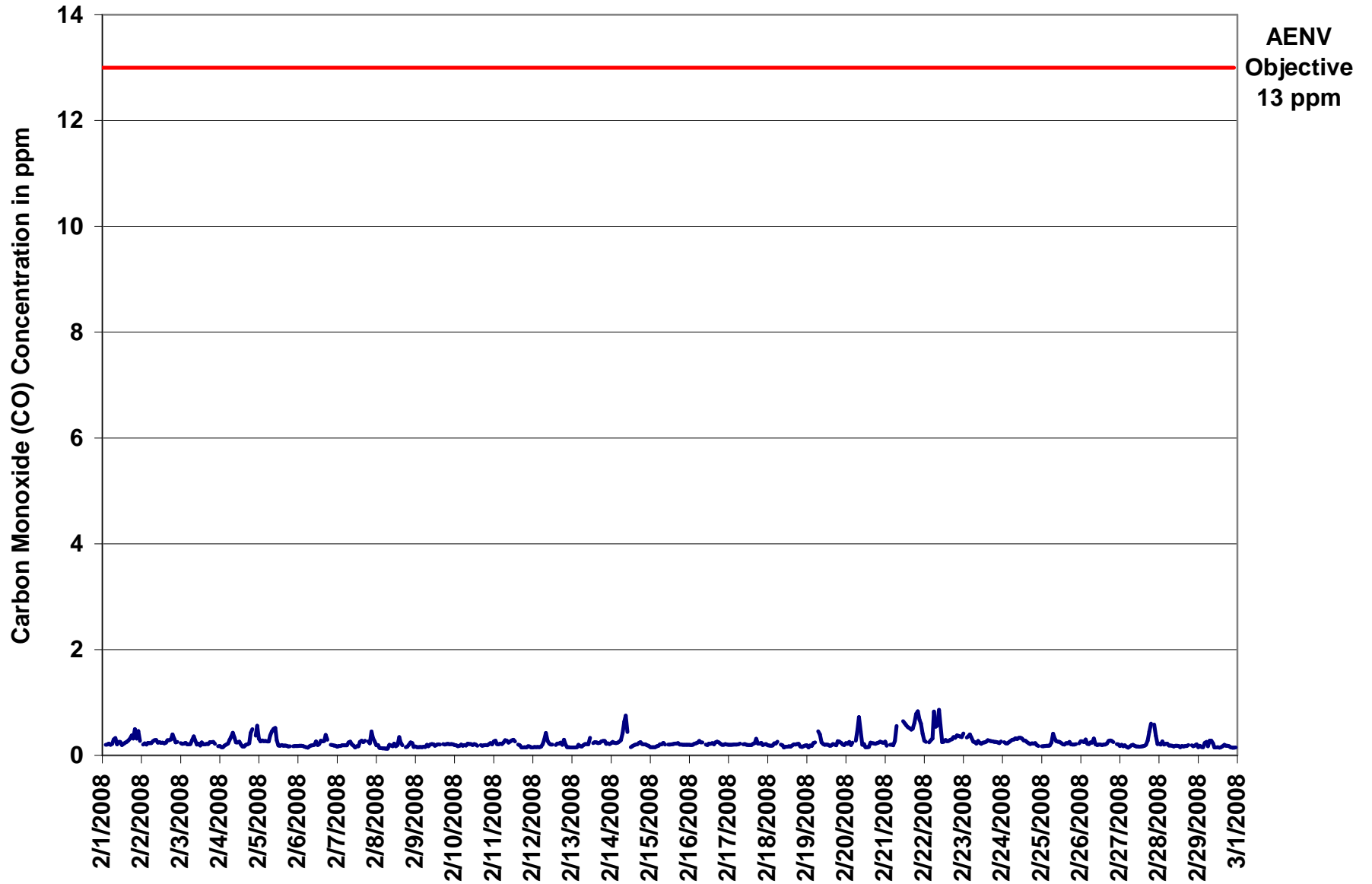


Figure 7. PAS - Crescent Heights Carbon Monoxide 1-hr Average Monthly Trend



Station: Crescent Heights  
 Station Owner: PAS

### INSTANTANEOUS (30 Second) MAXIMUM TABLE

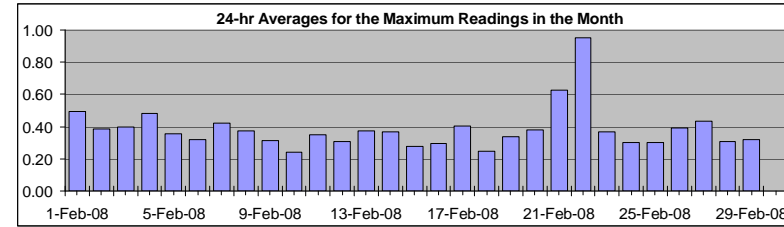
### Carbon Monoxide (CO)

Monitoring Dates: February 1, 2008 to March 1, 2008

#### Summary

Maximum 1-hr Value:	9.9	ppm	22-Feb	6:00 7:00
Maximum 24-hr Value:	1.0	ppm	22-Feb	

AIC Time:	31 hrs	Operational Time:	663 hrs						
Calibration Time:	2 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	1.4	0.9	0.4	0.3	0.2	0.2	0.2	0.4 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	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	24-hour Average	Daily Maximum
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Feb-08	0.3	A	0.2	0.3	0.3	0.2	0.3	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.9	0.6	2.0	0.7	1.2	0.4	0.50	2.02	
2-Feb-08	A	0.2	0.3	0.3	0.3	0.3	0.3	0.5	0.5	0.5	0.4	0.3	0.4	0.3	0.5	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.3	A	0.38	0.57	
3-Feb-08	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.5	0.3	0.3	0.3	2.0	0.3	0.3	0.3	0.3	0.3	0.3	0.8	0.3	A	0.2	0.40	1.96	
4-Feb-08	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.5	1.4	0.8	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	1.0	1.3	A	0.9	0.9	0.48	1.42	
5-Feb-08	1.1	0.3	0.4	0.3	0.3	0.3	0.3	0.6	0.6	0.6	0.6	0.5	0.2	0.2	0.2	0.2	0.3	0.2	0.2	A	0.2	0.2	0.2	0.2	0.35	1.06	
6-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.3	1.3	0.3	0.3	0.4	0.3	0.3	0.5	0.4	A	0.2	0.2	0.2	0.3	0.32	1.33	
7-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.2	0.2	1.3	1.2	0.3	0.3	A	0.6	0.4	1.4	0.5	0.4	0.42	1.44	
8-Feb-08	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.9	0.3	0.4	1.4	0.5	0.3	A	0.2	0.2	0.5	0.7	0.6	0.3	0.37	1.42	
9-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.7	0.6	0.5	0.3	0.4	0.3	0.4	A	0.5	0.3	0.3	0.3	0.3	0.4	0.3	0.31	0.68	
10-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.3	0.3	0.2	0.3	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.24	0.46	
11-Feb-08	0.4	0.4	0.3	0.2	0.3	0.3	0.3	1.0	0.4	0.3	0.5	0.9	0.3	0.4	A	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.4	0.2	0.35	0.96	
12-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.7	0.4	0.3	0.3	0.3	A	0.3	0.4	0.3	0.4	0.3	0.8	0.4	0.2	0.2	0.2	0.31	0.75	
13-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	1.4	A	0.7	0.7	0.5	0.3	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.37	1.41	
14-Feb-08	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.8	0.9	0.9	0.9	A	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.2	0.37	0.93	
15-Feb-08	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.3	1.0	0.3	A	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.28	0.95	
16-Feb-08	0.3	0.2	0.3	0.3	0.3	0.3	0.5	0.3	0.4	A	0.3	0.3	0.3	0.5	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.30	0.48	
17-Feb-08	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.5	A	0.3	0.3	0.3	0.3	0.3	0.2	0.5	0.3	3.0	0.3	0.6	0.3	0.3	0.2	0.2	0.40	3.00	
18-Feb-08	0.2	0.2	0.3	0.2	0.3	0.3	0.3	A	0.2	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.4	0.2	0.2	0.2	0.3	0.25	0.36	
19-Feb-08	0.3	0.2	0.3	0.2	0.4	0.3	A	1.1	1.0	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.4	0.4	0.3	0.3	0.3	0.34	1.13	
20-Feb-08	0.3	0.3	0.3	0.3	0.4	A	0.5	0.7	0.8	0.6	0.4	0.8	0.2	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.4	0.4	0.3	0.4	0.38	0.83	
21-Feb-08	0.4	0.2	A	0.3	0.2	0.2	0.3	1.4	C	C	A	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.9	1.1	1.2	0.9	0.8	0.5	0.63	1.37	
22-Feb-08	0.4	0.3	A	0.3	0.3	0.4	9.9	0.6	0.9	1.0	0.9	0.3	0.3	0.4	0.5	0.5	0.4	0.4	1.0	0.5	0.8	0.6	0.8	0.8	0.95	9.90	
23-Feb-08	0.6	A	0.4	0.5	0.5	0.5	0.3	0.4	0.3	0.4	0.3	0.2	0.5	0.3	0.3	0.6	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.37	0.62	
24-Feb-08	A	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.3	0.2	0.2	A	0.30	0.38	
25-Feb-08	0.2	0.2	0.3	0.2	0.2	0.3	0.4	0.7	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	A	A	0.30	0.70	
26-Feb-08	0.5	0.3	0.3	0.5	0.3	0.7	0.6	0.4	0.8	0.3	0.2	0.6	0.5	0.3	0.4	0.3	0.3	0.3	0.4	0.5	0.3	A	0.3	0.2	0.39	0.77	
27-Feb-08	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.5	0.6	1.3	A	2.5	0.7	0.4	0.44	2.51	
28-Feb-08	0.4	0.3	0.7	0.3	0.3	0.3	0.3	0.5	0.2	0.4	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.3	0.3	A	0.3	0.2	0.2	0.7	0.31	0.74	
29-Feb-08	0.2	0.3	0.2	0.2	1.8	0.5	0.3	0.4	0.4	0.5	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.32	1.83	
Hourly Avg	0.30	0.24	0.26	0.24	0.32	0.30	0.65	0.50	0.53	0.42	0.35	0.46	0.29	0.36	0.39	0.35	0.30	0.42	0.37	0.45	0.47	0.47	0.39	0.33			
Hourly Max	1.06	0.42	0.74	0.45	1.83	0.73	9.90	1.37	1.42	1.00	0.88	1.41	0.64	1.96	1.42	1.17	0.53	3.00	1.04	1.29	2.02	2.51	1.17	0.93			

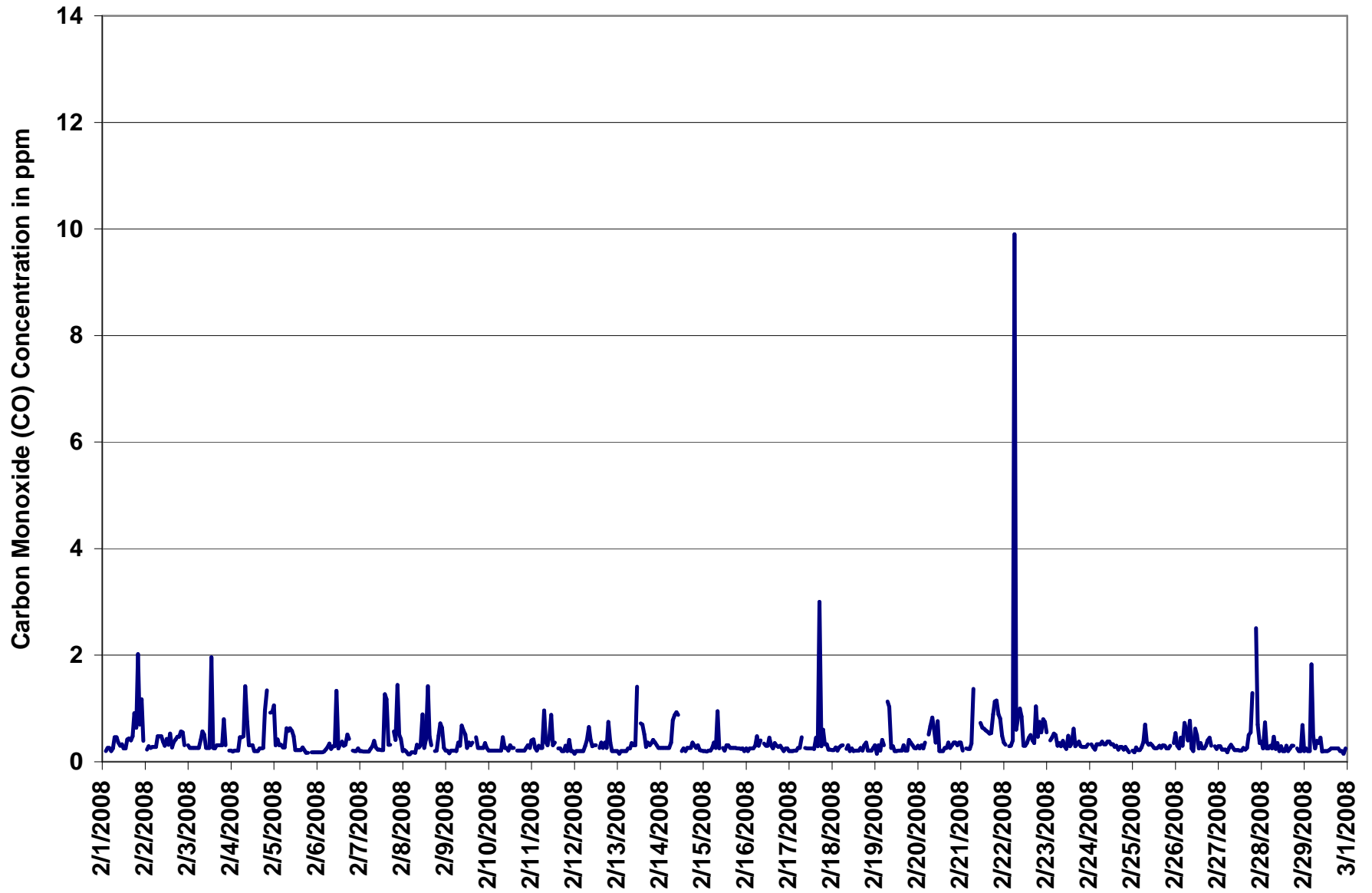
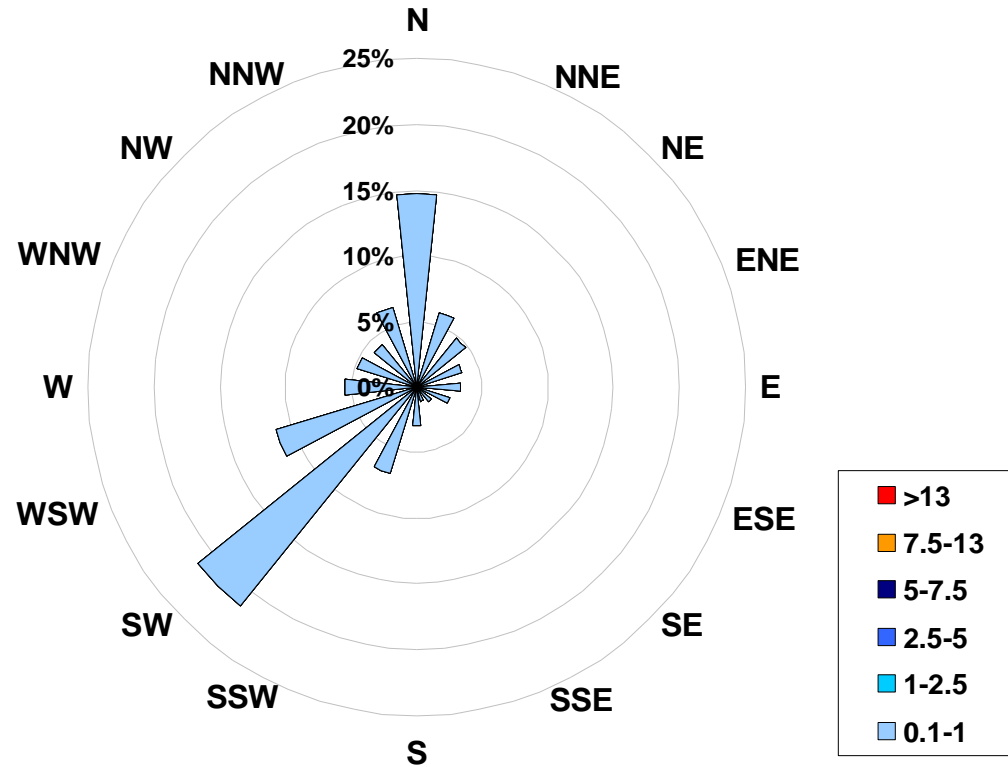


Figure 8. PAS - Crescent Heights Carbon Monoxide Instantaneous (30 Second) Maximum Value Monthly Trend



**1-hr Average Concentration Rose for Carbon Monoxide (in ppm) Located at the Crescent Heights Site for February 2008**



**Calms: 0%**

Frequency Distribution of CO in ppm			Frequency (hrs)
Range			
0.1	<	1	663
1	to	2.5	0
2.5	to	5	0
5	to	7.5	0
7.5	to	13	0
	>	13	0
Total Non-Zero Values			663



# PAS - Crescent Heights Carbon Monoxide Eight Hour Average Summary

Station: Crescent Heights  
Station Owner: PAS

## EIGHT HOUR RUNNING AVERAGE TABLE

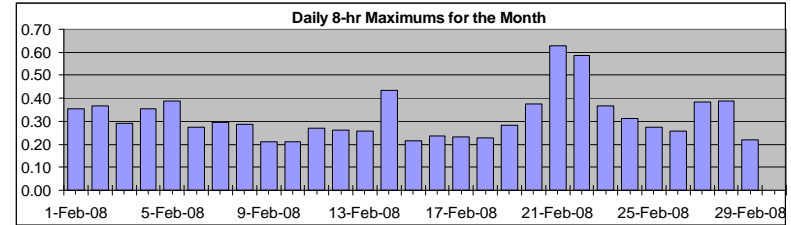
## Carbon Monoxide (CO)

Monitoring Dates: February 1, 2008 to March 1, 2008

Objective Limit: Alberta Environment: 8-hr 5 ppm

### Summary

Number of 8-hr Exceedances:	0						
Maximum 8-hr Average:	0.6	ppm	21-Feb	22:00	23:00		



Percentile	99	95	75	50	25	5	1
	0.6	0.4	0.3	0.2	0.2	0.2	0.2

### 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-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.36
2-Feb-08	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.37
3-Feb-08	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.29
4-Feb-08	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	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.36
5-Feb-08	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.39
6-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.27
7-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.30
8-Feb-08	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.29
9-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
10-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
11-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.27
12-Feb-08	0.2	0.2	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
13-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.26
14-Feb-08	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	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.43
15-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
16-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
17-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
18-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
19-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.28
20-Feb-08	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	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.38
21-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	N	N	N	N	N	N	N	N	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.63
22-Feb-08	0.6	0.6	0.5	0.5	0.4	0.3	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.59
23-Feb-08	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.37
24-Feb-08	0.3	0.3	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	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.31
25-Feb-08	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.27
26-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
27-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.39
28-Feb-08	0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.39
29-Feb-08	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22

Hourly Max	0.59	0.56	0.55	0.47	0.39	0.36	0.37	0.39	0.43	0.52	0.53	0.53	0.52	0.52	0.45	0.42	0.38	0.55	0.56	0.58	0.61	0.62	0.63	0.61
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# PAS - Crescent Heights Total Hydrocarbons Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

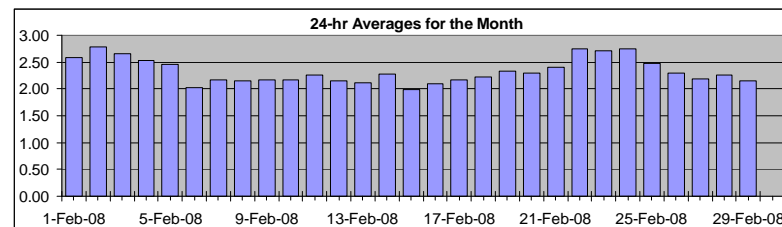
## HOURLY AVERAGE TABLE

## Total Hydrocarbons (THC)

Monitoring Dates: February 1, 2008 to March 1, 2008

Objective Limit: Alberta Environment: 1-hr na ppm 24-hr na ppm  
 Summary

Maximum 1-hr Average:	3.3	ppm	1-Feb	23:00 0:00
Maximum 24-hr Value:	2.8	ppm	2-Feb	



AIC Time:	31 hrs	Operational Time:	661 hrs						
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	3.2	2.9	2.5	2.2	2.1	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																							24-hour Average	Daily Maximum	
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-Feb-08	2.3	A	2.4	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	2.7	2.6	2.8	2.8	2.9	3.3	2.58	3.33
2-Feb-08	A	2.6	2.9	2.7	3.1	3.0	2.8	2.8	2.8	2.8	2.7	2.7	2.8	2.7	2.6	2.7	2.9	2.9	3.0	2.9	2.8	2.7	A	2.7	2.79	3.07
3-Feb-08	2.7	2.7	2.7	2.7	2.8	2.7	2.8	2.9	2.9	2.7	2.6	2.7	2.5	2.6	2.7	2.7	2.6	2.6	2.6	2.6	2.6	2.6	A	2.3	2.66	2.94
4-Feb-08	2.3	2.3	2.3	2.4	2.5	2.5	2.5	2.6	2.8	2.8	2.5	2.5	2.6	2.4	2.3	2.3	2.5	2.6	2.5	2.6	2.8	A	2.8	3.1	2.54	3.11
5-Feb-08	2.9	3.2	3.1	3.0	3.2	3.1	3.0	2.8	2.6	2.6	2.7	2.2	2.1	2.0	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	1.9	2.46	3.16	
6-Feb-08	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	A	2.1	2.1	2.1	2.1	2.02	2.15
7-Feb-08	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.2	2.3	A	2.6	2.5	2.7	2.9	2.8	2.17	2.88
8-Feb-08	2.5	2.3	2.0	1.9	1.9	1.8	1.8	1.9	2.0	2.5	2.4	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.2	2.2	2.2	2.2	2.15	2.55
9-Feb-08	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.1	2.2	2.1	A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.17	2.23
10-Feb-08	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2	A	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.18	2.35
11-Feb-08	2.4	2.4	2.3	2.3	2.4	2.4	2.4	2.4	2.5	2.5	2.4	2.4	2.3	2.2	A	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.25	2.49
12-Feb-08	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.2	2.2	A	2.2	2.2	2.1	2.2	2.2	2.4	1.9	1.9	1.8	1.8	2.15	2.44
13-Feb-08	1.8	1.8	1.8	1.8	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.2	A	2.1	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.3	2.3	2.4	2.12	2.37
14-Feb-08	2.4	2.5	2.4	2.4	2.3	2.3	2.4	2.4	2.5	2.6	2.3	A	2.1	2.2	2.1	2.2	2.2	2.3	2.3	2.2	2.1	2.1	2.1	2.1	2.28	2.56
15-Feb-08	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.99	2.10
16-Feb-08	1.9	2.0	2.0	2.1	2.1	2.1	2.2	2.1	2.1	A	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.2	2.2	2.1	2.2	2.2	2.4	2.1	2.10	2.39
17-Feb-08	2.1	2.2	2.2	2.3	2.2	2.2	2.2	2.2	A	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.16	2.25
18-Feb-08	2.3	2.3	2.3	2.4	2.5	2.4	2.4	A	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.21	2.48
19-Feb-08	2.1	2.1	2.2	2.3	2.4	2.4	A	2.7	2.5	2.4	2.6	2.6	2.5	2.3	2.2	2.2	2.1	2.1	2.2	2.3	2.4	2.2	2.3	2.4	2.32	2.74
20-Feb-08	2.5	2.5	2.8	2.4	2.4	A	2.5	2.6	2.6	2.3	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.29	2.83
21-Feb-08	2.3	2.2	A	2.3	2.3	2.4	2.6	2.5	2.6	2.5	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.4	2.9	2.7	2.8	2.7	2.7	2.5	2.41	2.90
22-Feb-08	2.4	2.4	A	2.6	2.7	2.8	3.0	3.1	3.2	3.1	2.6	2.3	2.2	2.8	2.8	2.6	2.5	2.5	2.6	2.5	2.8	3.2	3.1	3.1	2.74	3.23
23-Feb-08	3.3	A	3.1	3.3	3.1	2.8	2.4	2.4	2.4	2.5	2.5	2.6	2.6	2.6	2.6	2.8	2.7	2.6	2.6	2.6	2.6	2.6	2.7	2.9	2.72	3.31
24-Feb-08	A	2.7	2.7	2.7	2.8	3.0	3.0	3.1	3.1	3.1	3.0	3.0	3.1	3.0	2.9	2.7	2.4	2.3	2.4	2.3	2.4	2.3	2.3	A	2.75	3.10
25-Feb-08	2.4	2.3	2.5	2.6	2.6	2.6	2.6	2.7	2.7	2.5	2.6	2.6	2.6	2.4	2.4	2.4	2.3	2.3	2.4	2.3	2.3	2.4	A	2.4	2.47	2.71
26-Feb-08	2.6	2.5	2.5	2.6	2.4	2.3	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.2	2.2	2.30	2.63
27-Feb-08	2.3	2.2	2.1	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.6	A	2.7	2.8	2.7	2.18	2.81
28-Feb-08	2.6	2.4	2.4	2.6	2.7	3.0	2.5	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	2.2	2.2	2.2	2.25	2.97
29-Feb-08	2.2	2.3	2.2	2.3	2.4	2.5	2.3	2.3	2.3	2.3	2.3	2.3	C	C	C	C	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.15	2.47
Hourly Avg	2.32	2.31	2.35	2.37	2.39	2.41	2.37	2.40	2.41	2.40	2.34	2.29	2.27	2.26	2.26	2.25	2.25	2.26	2.29	2.34	2.33	2.32	2.35	2.36		
Hourly Max	3.26	3.16	3.12	3.31	3.16	3.14	3.02	3.13	3.23	3.10	3.04	3.00	3.07	3.00	2.90	2.79	2.85	2.85	2.97	2.93	2.85	3.19	3.11	3.33		



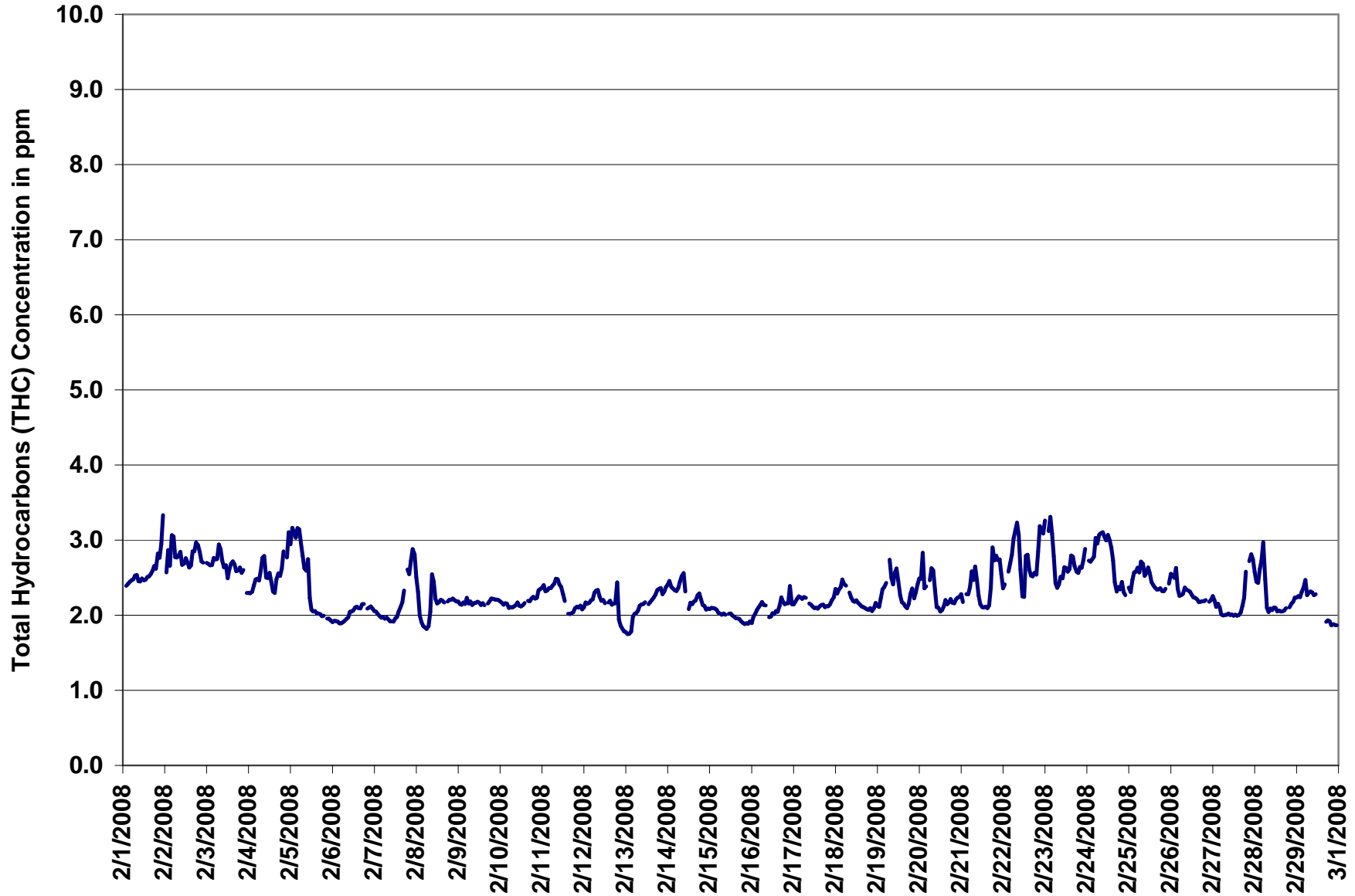


Figure 9. PAS - Crescent Heights Total Hydrocarbons 1-hr Average Monthly Trend



Station: Crescent Heights  
 Station Owner: PAS

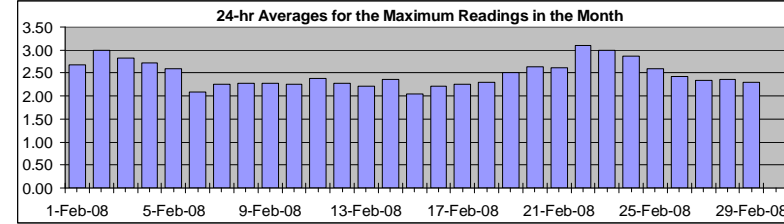
### INSTANTANEOUS (30 Second) MAXIMUM TABLE

### Total Hydrocarbons (THC)

Monitoring Dates: February 1, 2008 to March 1, 2008

**Summary**

Maximum 1-hr Value:	8.2	ppm	20-Feb	2:00 3:00
Maximum 24-hr Value:	3.1	ppm	22-Feb	



AIC Time:	31 hrs	Operational Time:	661 hrs						
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	3.6	3.2	2.7	2.3	2.2	2.0	1.9	2.5 ppm	2.3 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-Feb-08	2.4	A	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.7	2.5	2.6	2.5	2.5	2.6	2.6	2.6	2.7	2.9	2.8	3.1	3.0	3.2	3.5	2.68	3.45
2-Feb-08	A	2.9	3.0	2.9	3.6	3.7	2.9	3.0	2.9	3.0	2.8	2.8	2.8	2.8	2.7	2.8	3.2	3.1	3.1	3.4	3.1	2.9	2.8	A	3.00	3.70
3-Feb-08	2.8	2.8	2.9	2.8	2.9	2.8	2.9	3.1	3.0	2.8	2.7	2.7	2.7	3.3	2.8	2.8	2.8	2.7	2.9	2.7	2.9	2.8	A	2.5	2.81	3.25
4-Feb-08	2.5	2.4	2.4	2.6	3.0	2.7	2.6	2.8	3.2	3.0	2.7	2.6	2.6	2.5	2.5	2.4	2.6	2.6	2.6	2.8	3.2	A	3.0	3.3	2.72	3.31
5-Feb-08	3.4	3.3	3.2	3.3	3.3	3.5	3.1	3.0	2.7	2.8	2.9	2.6	2.1	2.1	2.1	2.1	2.1	2.0	2.0	A	2.0	2.0	2.0	2.0	2.59	3.49
6-Feb-08	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.3	2.1	2.2	2.2	2.2	2.2	2.2	2.2	A	2.1	2.2	2.2	2.2	2.09	2.29
7-Feb-08	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.2	2.3	2.4	A	2.7	2.7	2.9	3.1	3.1	2.26	3.09
8-Feb-08	3.3	2.5	2.1	1.9	1.9	1.9	1.9	2.0	2.3	2.6	2.6	2.3	2.2	2.2	2.6	2.3	2.2	A	2.3	2.2	2.3	2.3	2.4	2.2	2.28	3.30
9-Feb-08	2.3	2.2	2.2	2.2	2.2	2.8	2.2	2.3	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.2	A	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.27	2.82
10-Feb-08	2.3	2.2	2.2	2.3	2.2	2.1	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.2	A	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.5	2.26	2.46
11-Feb-08	2.5	2.6	2.5	2.4	2.5	2.5	2.5	2.8	2.5	2.5	2.7	2.9	2.4	2.3	A	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.37	2.89
12-Feb-08	2.2	2.3	2.2	2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.2	A	2.3	2.3	2.3	2.3	2.7	2.8	2.2	1.9	1.9	1.8	2.27	2.83
13-Feb-08	1.8	1.8	1.8	1.9	2.1	2.1	2.1	2.1	2.4	2.2	2.2	2.4	A	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.4	2.4	2.21	2.43
14-Feb-08	2.5	2.5	2.4	2.5	2.4	2.4	2.5	2.5	2.6	2.7	2.6	A	2.1	2.5	2.3	2.2	2.3	2.3	2.4	2.3	2.2	2.2	2.1	2.1	2.37	2.66
15-Feb-08	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	A	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.04	2.18
16-Feb-08	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.2	2.2	A	2.0	2.1	2.2	2.1	2.1	2.1	2.3	2.3	2.2	2.2	2.3	2.2	3.3	2.3	2.22	3.28
17-Feb-08	2.2	2.3	2.3	2.3	2.3	2.2	2.3	2.3	A	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.8	2.2	2.2	2.3	2.3	2.4	2.3	2.26	2.83
18-Feb-08	2.4	2.4	2.5	2.5	2.7	2.5	2.5	A	2.4	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.1	2.2	2.29	2.66
19-Feb-08	2.2	2.2	2.3	2.6	2.6	2.5	A	3.3	3.1	2.6	2.6	2.7	2.6	2.4	2.2	2.3	2.2	2.2	2.2	2.6	2.7	2.6	2.4	2.8	2.51	3.32
20-Feb-08	2.8	2.7	8.2	2.5	2.5	A	2.6	2.8	2.7	2.5	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.4	2.63	8.15
21-Feb-08	2.4	2.2	A	2.3	2.4	2.6	2.9	2.7	3.1	2.7	2.3	2.2	2.2	2.2	2.2	2.1	2.2	3.3	3.4	3.1	3.0	2.9	2.9	2.7	2.61	3.36
22-Feb-08	2.5	2.5	A	2.7	2.9	2.9	7.2	3.2	3.5	3.3	3.0	2.3	2.3	3.0	2.9	2.7	2.7	2.6	3.0	2.6	3.1	3.6	3.5	3.2	3.10	7.19
23-Feb-08	4.3	A	4.0	5.3	3.2	3.2	2.6	2.4	2.5	2.7	2.6	2.8	2.7	2.6	2.7	2.9	2.9	2.7	2.8	2.6	2.7	2.7	2.8	3.0	2.99	5.27
24-Feb-08	A	2.8	2.8	2.8	3.2	3.2	3.1	3.4	3.2	3.2	3.1	3.1	3.2	3.0	3.0	2.9	2.5	2.4	2.5	2.4	2.5	2.4	2.3	A	2.87	3.35
25-Feb-08	2.5	2.5	2.6	2.7	2.9	2.8	2.7	2.9	2.9	2.6	2.7	2.7	3.1	2.5	2.4	2.4	2.4	2.4	2.5	2.4	2.4	2.4	A	2.8	2.60	2.93
26-Feb-08	2.8	2.8	2.6	2.9	2.6	2.4	2.3	2.3	2.6	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.3	2.3	A	2.3	2.4	2.42	2.86
27-Feb-08	2.4	2.4	2.2	2.3	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.1	2.4	2.6	3.1	A	3.2	3.2	2.8	2.33	3.24
28-Feb-08	2.8	2.5	2.5	2.9	3.0	3.2	3.0	2.2	2.1	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	A	2.2	2.2	2.2	2.4	2.37	3.19
29-Feb-08	2.3	2.3	2.4	3.1	2.8	2.9	2.3	2.4	2.4	2.5	2.3	2.3	C	C	C	C	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.29	3.12
Hourly Avg	2.50	2.42	2.66	2.57	2.57	2.57	2.63	2.53	2.58	2.51	2.44	2.41	2.34	2.37	2.35	2.32	2.34	2.40	2.43	2.48	2.46	2.45	2.50	2.48		
Hourly Max	4.28	3.34	8.15	5.27	3.57	3.70	7.19	3.35	3.54	3.25	3.16	3.11	3.14	3.25	3.01	2.94	3.16	3.34	3.36	3.39	3.17	3.55	3.54	3.45		

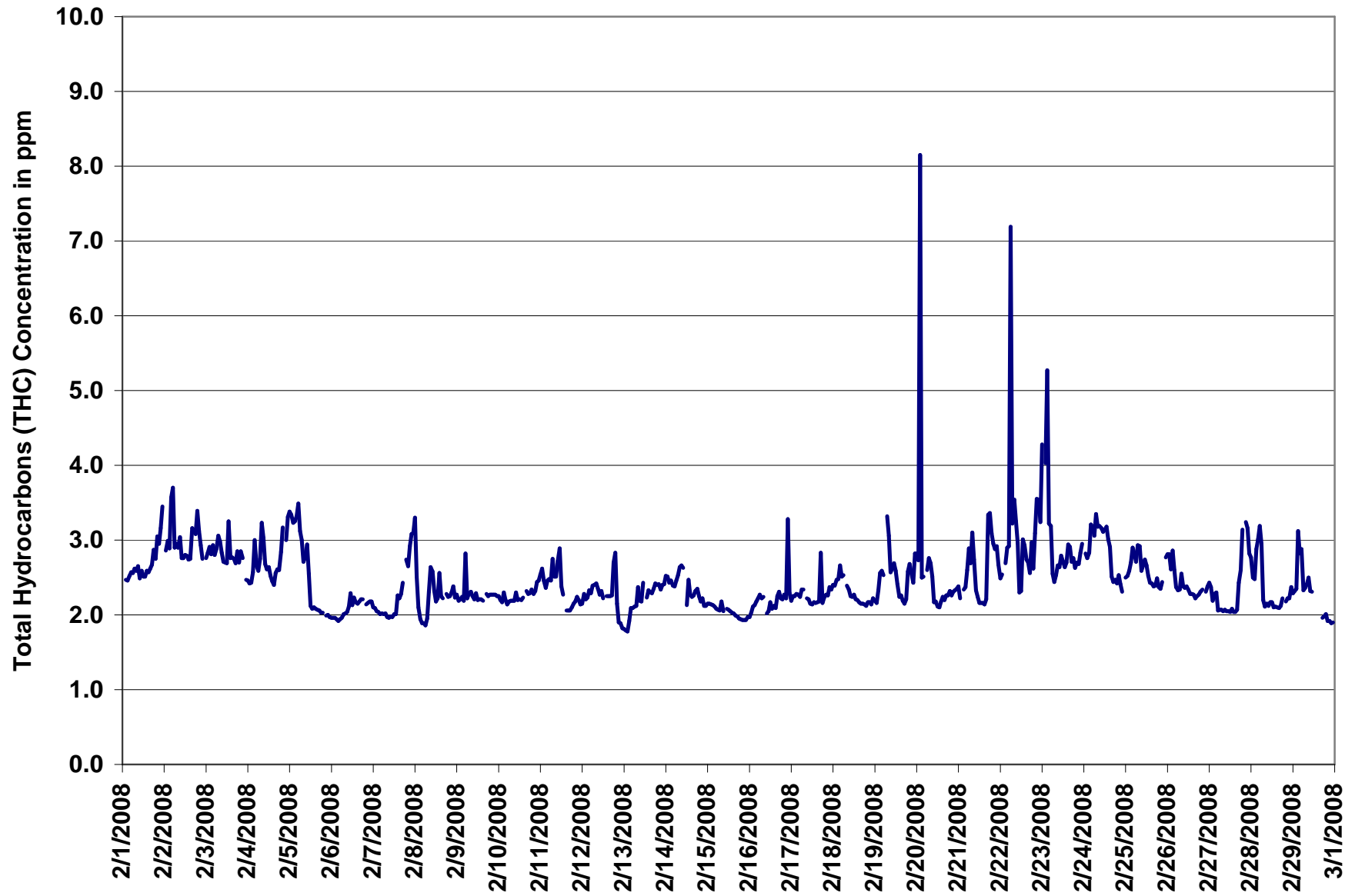
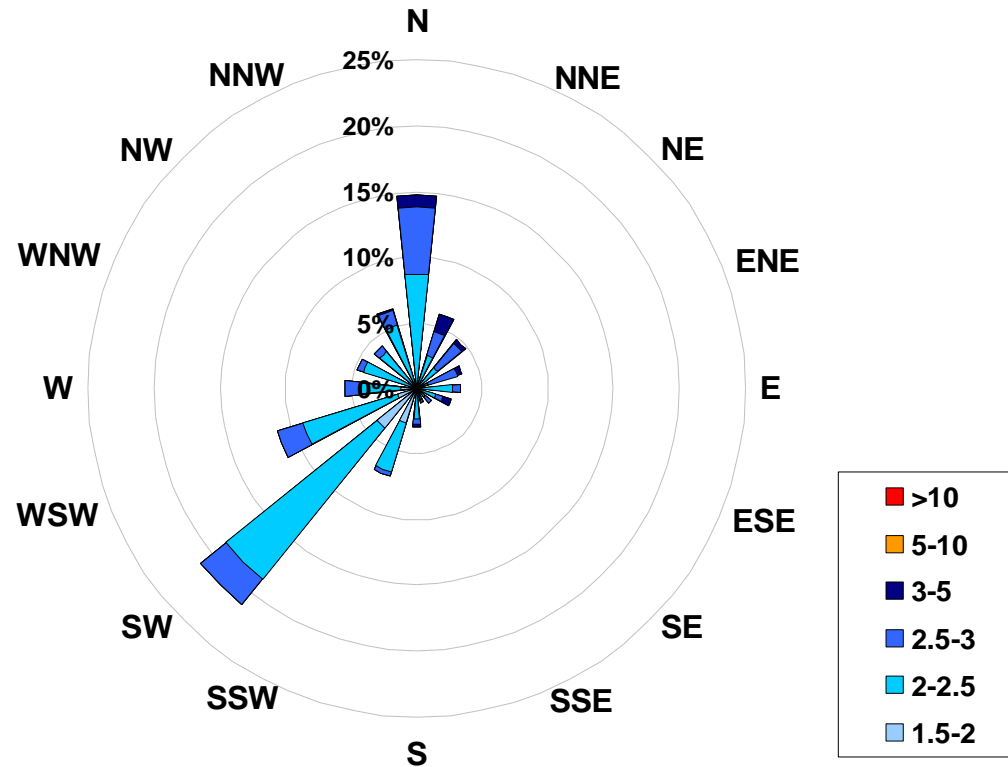


Figure 10. PAS - Crescent Heights Total Hydrocarbons Instantaneous (30 Second) Maximum Value Monthly Trend



**1-hr Average Concentration Rose for Total Hydrocarbons (in ppm)  
Located at the Crescent Heights Site for February 2008**



**Calms: 0%**

Frequency Distribution of THC in ppm			Frequency (hrs)
Range			
1.5	<	2	66
2	to	2.5	421
2.5	to	3	148
3	to	5	26
5	to	10	0
	>	10	0
Total Non-Zero Values			661



## PAS - Crescent Heights Particulate Matter (less than 2.5 microns) Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

### HOURLY AVERAGE TABLE

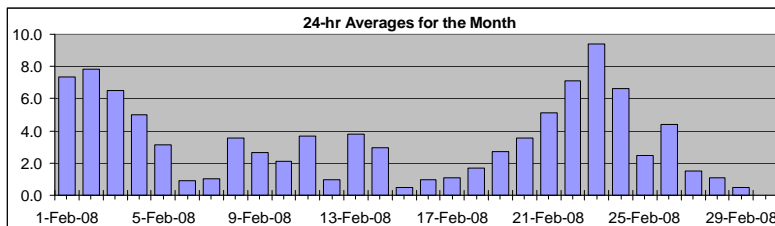
### Particulate Matter (PM<sub>2.5</sub>)

Monitoring Dates: February 1, 2008 to March 1, 2008

Draft Objective Limit: Alberta Environment: 1-hr - µg/m<sup>3</sup> 24-hr 30 µg/m<sup>3</sup>  
 Summary

Number of 24-hr Exceedances (draft):	0
Maximum 1-hr Average:	24.3 µg/m <sup>3</sup> 23-Feb 4:00 5:00
Maximum 24-hr Value:	9.4 µg/m <sup>3</sup> 23-Feb

AIC Time:	0 hrs	Operational Time:	692 hrs
Calibration Time:	1 hrs	AMD Operational Uptime:	99.6%
Percentile	99	95	75
	14.8	9.6	5.5
	2.5	0.7	0.0
	5	1	0.0
	Average / Median		
	3.5		3 µg/m <sup>3</sup>
	Geomean		2.6 µg/m <sup>3</sup>



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																								24-hour Average	Daily Maximum		
	Hour Start	Hour End	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00			22:00	23:00
1-Feb-08	6	8	7	7	8	6	7	8	7	7	9	8	6	7	9	10	10	10	5	5	7	7	7	7	7	7	7.4	10.2
2-Feb-08	9	8	8	8	8	6	6	7	6	8	7	7	7	8	8	9	8	10	10	9	9	8	7	7	7	7	7.9	10.0
3-Feb-08	6	5	5	5	2	4	4	6	9	8	8	8	5	7	8	7	7	7	9	8	7	7	6	6	6	6.5	8.6	
4-Feb-08	4	4	5	4	4	4	5	7	7	6	7	6	6	4	5	4	4	5	6	5	5	5	5	5	5	5.0	7.2	
5-Feb-08	4	4	9	7	6	6	5	5	9	11	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3.2	10.9	
6-Feb-08	0	0	D	0	0	0	0	2	2	3	3	1	3	3	2	1	0	0	0	0	0	0	0	0	0	0.9	3.1	
7-Feb-08	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	2	3	3	3	3	1	0	1	2	1	1.0	3.4	
8-Feb-08	0	2	1	0	1	6	0	1	1	0	6	6	6	6	4	5	5	7	4	6	3	4	4	5	5	3.6	7.0	
9-Feb-08	3	2	3	3	3	3	2	3	2	3	3	4	2	2	6	2	3	2	3	3	4	1	0	2	2	2.7	5.9	
10-Feb-08	1	0	0	0	0	0	0	0	1	1	3	4	2	3	3	1	4	2	4	4	3	3	5	5	5	2.1	5.0	
11-Feb-08	5	5	5	6	5	5	4	4	8	4	5	6	7	5	5	1	1	0	1	1	1	1	2	2	2	3.7	7.8	
12-Feb-08	1	1	1	1	1	2	2	3	3	1	1	1	0	1	1	1	0	0	D	0	0	0	0	0	0	1.0	3.2	
13-Feb-08	0	0	0	0	1	1	3	4	6	6	5	6	4	4	4	6	4	6	7	7	7	2	3	4	4	3.8	7.4	
14-Feb-08	2	4	3	4	4	2	3	7	7	12	8	0	0	1	1	2	2	2	2	2	2	1	1	0	0	2.9	11.9	
15-Feb-08	0	0	0	0	0	1	1	1	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	2.8	
16-Feb-08	0	1	1	0	1	1	2	2	1	1	4	0	1	1	0	1	2	1	0	0	1	0	1	2	2	1.0	3.8	
17-Feb-08	1	0	1	1	1	1	1	4	0	0	0	0	0	0	1	1	2	1	2	1	2	2	2	3	3	1.1	3.5	
18-Feb-08	0	0	0	1	1	3	2	2	2	3	2	3	3	2	2	2	3	1	3	2	2	1	0	1	1	1.7	3.1	
19-Feb-08	3	0	1	3	2	4	3	5	8	5	5	4	5	3	2	2	3	0	0	2	2	1	3	0	2.7	8.1		
20-Feb-08	0	0	0	0	1	2	5	9	16	6	1	4	1	2	4	7	4	5	4	3	3	3	3	3	3	3.6	15.5	
21-Feb-08	3	1	2	3	3	5	4	6	14	7	5	4	5	6	5	4	4	3	7	10	8	7	5	2	5.1	14.5		
22-Feb-08	1	3	5	5	6	7	9	18	18	15	5	5	11	7	6	6	4	5	7	5	2	0	3	3	7.1	18.3		
23-Feb-08	7	15	10	14	24	11	3	2	7	10	9	10	10	9	12	13	14	9	7	6	8	6	5	2	9.4	24.3		
24-Feb-08	7	10	1	2	10	17	14	13	11	9	13	12	11	6	8	7	2	2	2	1	2	1	0	0	6.6	17.2		
25-Feb-08	0	0	0	0	1	0	2	6	7	10	8	8	5	2	2	3	2	1	0	0	0	0	1	1	2.5	9.9		
26-Feb-08	7	3	3	10	7	3	3	5	9	7	6	5	6	5	5	4	3	3	2	2	3	2	1	1	4.4	10.3		
27-Feb-08	1	2	1	0	0	0	1	0	0	1	1	1	1	1	2	0	1	1	3	4	4	3	4	3	1.5	4.3		
28-Feb-08	2	1	3	2	2	3	6	0	0	0	1	2	0	0	0	0	0	0	0	2	1	1	0	0	1.1	5.5		
29-Feb-08	0	0	D	0	0	1	1	1	2	2	0	1	1	C	0	0	0	0	0	0	0	1	0	0	0.5	2.2		
Hourly Avg	2.6	2.7	2.8	3.0	3.5	3.6	3.4	4.5	5.8	5.2	4.9	4.2	3.5	3.6	3.7	3.5	3.3	3.0	3.1	3.2	3.1	2.5	2.4	2.2				
Hourly Max	8.8	14.9	10.2	14.3	24.3	17.2	14.4	18.3	17.8	15.0	14.8	11.8	10.9	10.9	11.8	13.4	14.2	10.0	9.9	9.5	9.2	7.9	7.4	7.3				

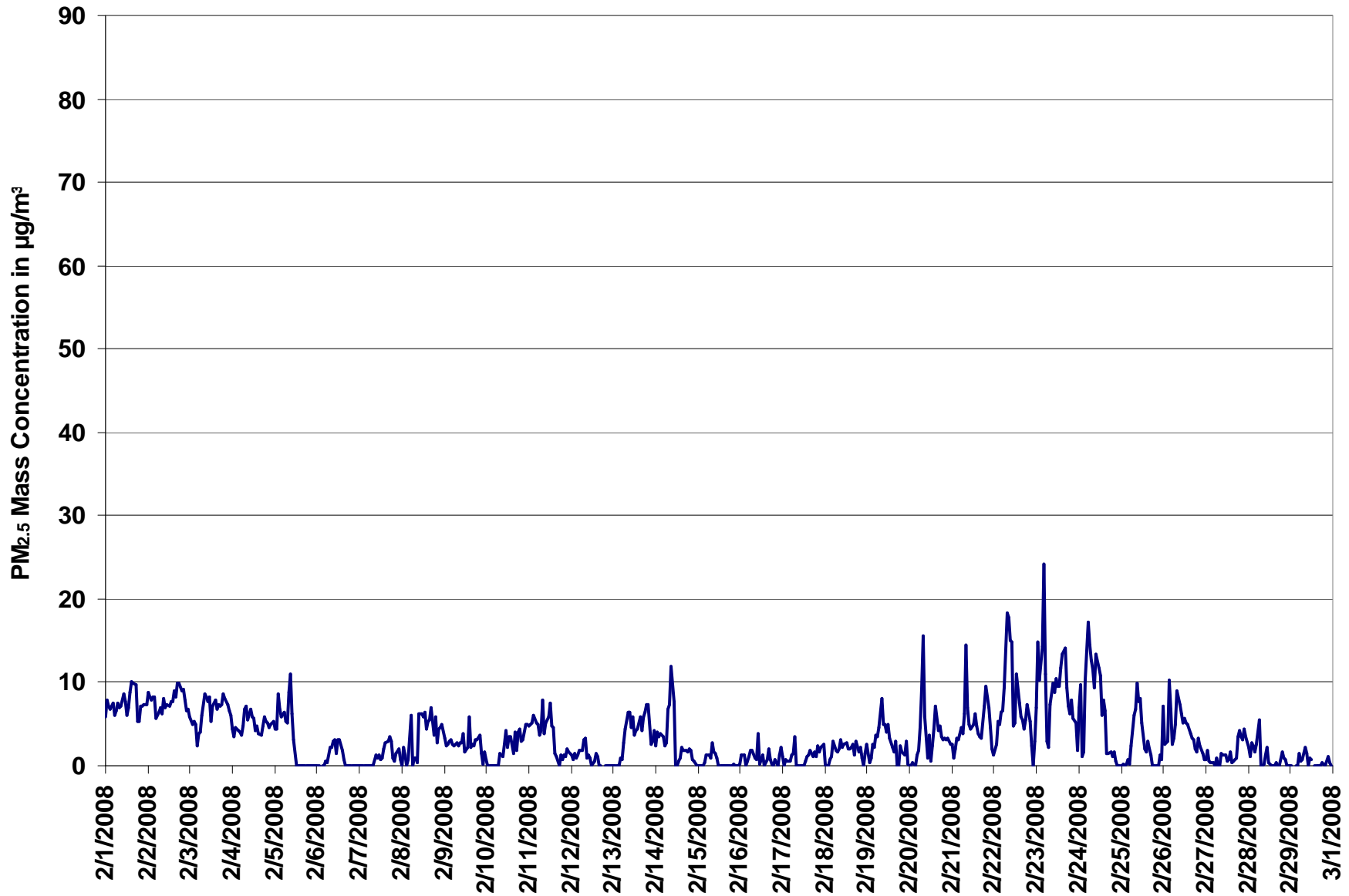


Figure 11. PAS - Crescent Heights Particulate Matter (less than 2.5 microns) 1-hr Average Monthly Trend



Station: Crescent Heights  
 Station Owner: PAS

**INSTANTANEOUS (30 Second) MAXIMUM TABLE**

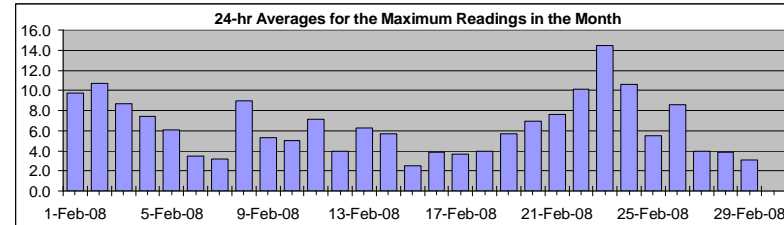
**Particulate Matter (PM<sub>2.5</sub>)**

Monitoring Dates: February 1, 2008 to March 1, 2008

**Summary**

Maximum 1-hr Average:	36.8	µg/m <sup>3</sup>	8-Feb	5:00 6:00
Maximum 24-hr Value:	14.5	µg/m <sup>3</sup>	23-Feb	

AIC Time:	0 hrs	Operational Time:	695 hrs						
Calibration Time:	1 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average / Median	Geommean
	22.3	15.4	8.5	5.5	3.2	0.5	0.0	6.4	6 µg/m <sup>3</sup>
									5.8 µg/m <sup>3</sup>



**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	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum	
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Feb-08	9	11	10	9	9	9	9	9	9	10	11	10	8	8	11	12	12	12	7	8	11	10	11	10	9.8	12.4	
2-Feb-08	11	10	10	11	11	11	8	10	10	11	10	10	9	11	11	13	12	13	12	12	12	11	8	9	10.7	13.0	
3-Feb-08	9	7	9	7	4	6	6	8	10	12	9	10	8	11	10	8	9	10	9	10	9	9	9	8	8.6	11.9	
4-Feb-08	7	7	7	6	6	6	7	10	10	9	13	10	8	6	7	5	5	6	8	8	8	7	6	7	7.5	13.3	
5-Feb-08	8	8	20	9	8	8	8	7	10	17	19	10	5	2	0	1	0	2	0	1	2	1	0	0	6.0	20.0	
6-Feb-08	0	0	0	0	1	3	2	6	6	7	7	7	15	7	4	4	3	2	0	0	0	0	0	0	7	3.4	15.0
7-Feb-08	0	0	0	0	1	1	0	0	2	3	4	3	5	3	6	6	7	7	5	5	3	7	5	3	3.2	7.4	
8-Feb-08	3	6	11	1	2	37	1	9	6	9	10	10	9	9	9	8	15	12	8	10	6	10	6	8	9.0	36.8	
9-Feb-08	6	5	6	5	6	5	5	6	5	5	5	6	4	4	10	4	6	5	6	5	6	5	2	5	5.3	9.9	
10-Feb-08	2	2	2	0	1	2	3	5	3	3	6	7	6	6	9	5	8	5	6	7	5	8	12	7	5.0	12.0	
11-Feb-08	7	8	6	8	7	8	7	8	27	6	7	9	10	8	8	3	3	3	4	5	4	4	5	7	7.1	27.4	
12-Feb-08	5	4	4	6	4	5	5	7	7	6	6	5	4	4	7	4	2	1	0	3	2	3	1	1	4.0	7.4	
13-Feb-08	1	1	0	0	6	4	5	7	8	9	8	10	10	7	8	8	6	9	8	9	9	5	6	6	6.2	10.1	
14-Feb-08	4	6	6	6	5	4	5	12	12	15	13	2	2	6	5	5	4	3	3	4	4	5	2	2	5.7	15.3	
15-Feb-08	2	2	1	2	2	4	3	3	10	6	5	5	4	1	1	0	2	0	1	0	2	2	1	2	2.5	10.3	
16-Feb-08	4	3	3	2	3	3	9	8	3	3	9	3	3	4	4	3	4	3	2	1	4	1	4	4	3.8	9.1	
17-Feb-08	3	1	3	2	3	3	7	8	2	2	3	2	3	4	5	5	4	2	4	4	5	3	4	6	3.6	8.5	
18-Feb-08	2	1	3	2	4	5	4	4	4	5	8	8	6	5	4	5	5	3	5	5	4	2	1	3	4.0	7.9	
19-Feb-08	9	3	3	4	4	5	5	8	9	7	6	7	8	7	8	7	7	0	2	6	6	6	6	3	5.6	9.5	
20-Feb-08	2	2	2	1	4	4	13	14	20	19	3	8	6	5	7	11	6	7	7	5	5	6	5	4	6.9	20.4	
21-Feb-08	4	2	3	5	5	7	6	10	19	13	7	6	7	9	7	5	5	6	11	14	10	11	7	4	7.6	18.7	
22-Feb-08	3	4	8	6	8	10	12	22	21	21	24	7	7	16	10	8	8	7	8	10	7	5	5	5	10.1	23.9	
23-Feb-08	9	20	20	21	31	21	9	5	14	23	20	12	11	12	16	17	17	13	11	8	14	11	8	5	14.5	31.5	
24-Feb-08	17	20	5	4	19	20	21	17	14	13	17	15	16	14	11	11	4	4	4	3	3	2	1	2	10.6	20.9	
25-Feb-08	2	2	1	1	2	2	8	8	16	14	12	11	13	5	6	8	7	3	1	0	1	1	3	3	5.5	16.0	
26-Feb-08	22	11	6	16	10	6	6	13	24	9	8	8	10	8	8	6	6	5	4	5	6	4	3	3	8.6	24.2	
27-Feb-08	2	6	3	3	4	3	3	1	2	5	3	3	2	3	3	2	2	3	6	8	6	5	7	6	3.9	7.9	
28-Feb-08	5	4	5	5	4	6	11	4	4	3	4	5	4	2	3	4	5	1	1	5	3	4	0	0	3.9	10.7	
29-Feb-08	2	0	0	6	2	5	5	3	4	6	2	3	3	C	2	5	2	0	3	3	3	4	3	3	3.1	6.4	
Hourly Avg	5.5	5.3	5.4	5.1	6.2	7.3	6.7	8.0	10.1	9.3	9.0	7.3	7.1	6.6	6.8	6.4	6.1	5.1	5.0	5.6	5.4	5.3	4.5	4.6			
Hourly Max	22.4	19.9	20.0	20.9	31.5	36.8	20.9	22.3	27.4	23.2	23.9	15.1	15.9	16.0	15.7	17.1	16.6	13.3	11.5	14.0	14.3	11.5	12.0	9.5			

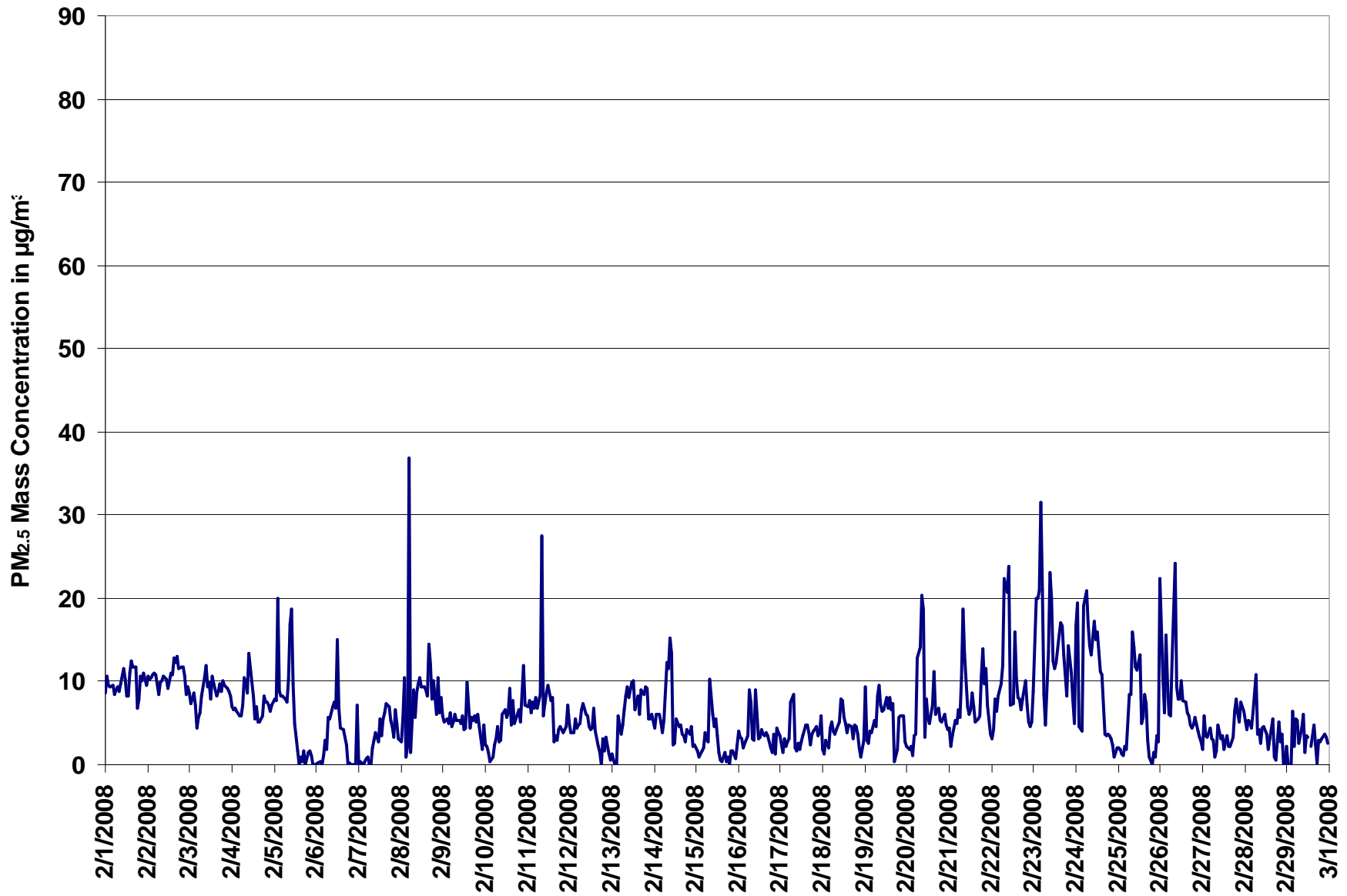
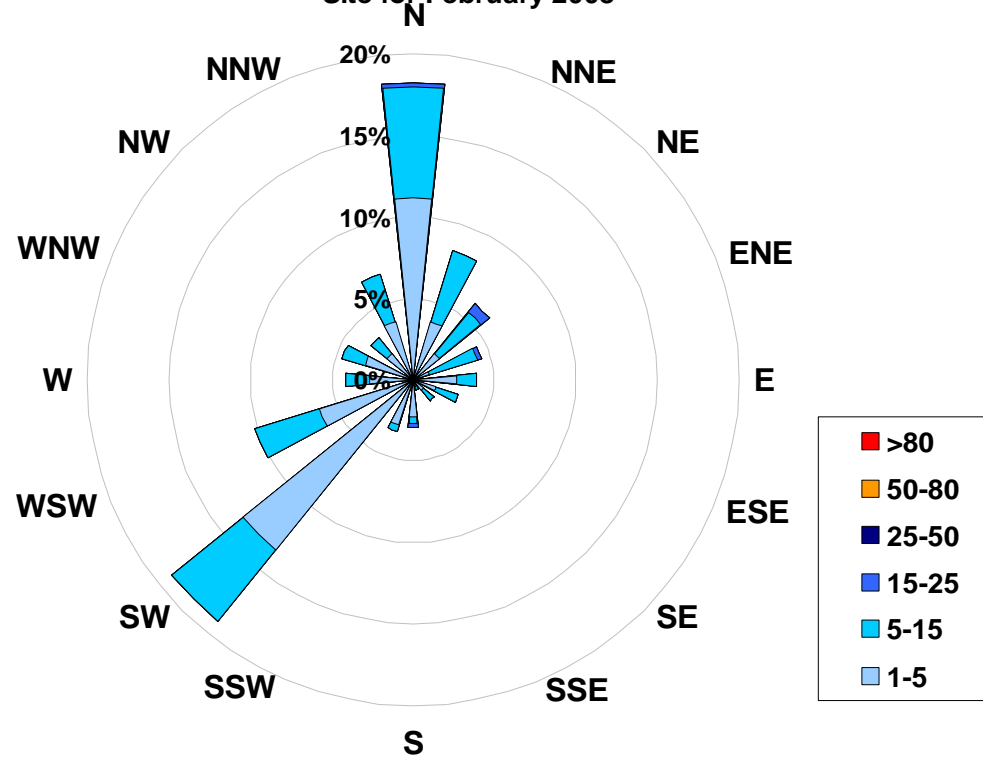


Figure 12. PAS - Crescent Heights Particulate Matter (less than 2.5 microns) Instantaneous (30 Second) Maximum Value Monthly Trend





**1-hr Average Concentration Rose for Particulate Matter (less than 2.5 microns) (in micrograms per cubic meter) Located at the Crescent Heights Site for February 2008**



**Calms: 0%**

Frequency Distribution of PM <sub>2.5</sub> in μg/m <sup>3</sup>			
Range			Frequency (hrs)
1.0	<	5	496
5	to	15	190
15	to	25	6
25	to	50	0
50	to	80	0
	>	80	0
Total Non-Zero Values			692



# PAS - Crescent Heights Relative Humidity Monthly Summary

Station: Crescent Heights  
Station Owner: PAS

## HOURLY AVERAGE TABLE

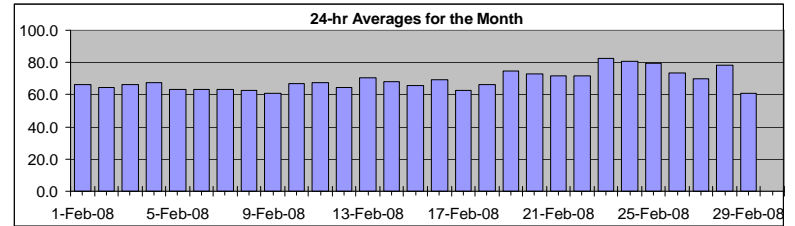
## Relative Humidity (RH)

Monitoring Dates: February 1, 2008 to March 1, 2008

### Summary

Maximum 1-hr Average:	90.3	%	28-Feb	7:00 8:00
Maximum 24-hr Value:	82.6	%	23-Feb	

AIC Time:	0 hrs	Operational Time:	696 hrs						
Calibration Time:	0 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	86.8	82.8	75.2	68.3	62.5	54.9	50.3	68.8 %	68.3 %



### 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																							24-hour Average	Daily Maximum		
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
1-Feb-08	68	68	68	68	68	68	68	68	68	67	65	63	61	59	61	63	64	67	68	67	69	68	69	69	69	66.3	68.7
2-Feb-08	68	67	67	67	67	68	67	66	66	64	65	66	62	57	54	53	55	64	67	68	69	67	68	68	68	64.6	69.2
3-Feb-08	68	69	69	69	68	68	69	70	69	65	61	58	57	57	58	56	63	66	68	68	71	72	72	73	73	66.1	73.0
4-Feb-08	73	72	71	71	71	71	71	71	70	68	66	59	56	57	58	60	63	67	69	71	72	72	71	71	71	67.5	73.3
5-Feb-08	70	69	69	69	69	69	69	69	71	73	64	53	51	53	54	55	59	60	60	62	61	61	60	63	63.0	73.1	
6-Feb-08	64	64	57	63	65	65	61	53	54	55	51	45	58	73	81	77	75	74	68	64	61	62	64	63	63.2	81.2	
7-Feb-08	60	64	64	62	60	60	61	58	56	56	55	57	53	52	54	57	58	64	69	74	77	80	81	80	63.0	80.7	
8-Feb-08	77	75	62	61	65	63	57	56	64	63	62	62	66	65	65	66	63	59	57	58	56	57	60	61	62.6	77.4	
9-Feb-08	64	64	64	64	65	65	64	63	62	60	58	58	57	56	55	55	57	58	60	60	60	60	61	63	60.6	64.7	
10-Feb-08	65	65	65	66	67	69	70	70	70	68	65	63	61	57	57	62	65	68	70	72	72	74	73	73	66.9	73.5	
11-Feb-08	73	73	73	72	71	71	72	71	68	64	60	60	60	61	63	62	62	65	67	71	73	73	66	66	67.3	73.4	
12-Feb-08	65	66	68	67	65	63	66	68	67	66	59	55	52	51	57	64	70	74	73	71	66	64	63	64	64.4	74.2	
13-Feb-08	63	65	69	71	80	81	79	76	74	72	68	65	62	63	62	65	69	73	74	74	72	69	68	70	70.3	81.5	
14-Feb-08	71	72	72	73	74	75	75	74	73	65	59	61	57	59	62	62	63	66	69	71	71	71	70	72	68.1	75.4	
15-Feb-08	70	70	68	69	66	67	69	68	67	63	61	60	60	59	60	59	60	65	66	66	66	70	70	69	65.4	70.4	
16-Feb-08	65	69	72	69	68	69	68	65	64	66	81	85	82	79	68	65	69	70	69	68	65	64	65	65	69.5	85.3	
17-Feb-08	65	62	63	63	63	62	62	64	64	60	55	51	49	51	50	55	64	68	69	70	72	74	76	73	62.6	75.6	
18-Feb-08	67	63	62	62	64	65	69	71	68	63	61	63	62	62	61	61	64	69	71	73	72	72	75	77	66.5	77.2	
19-Feb-08	78	78	78	77	77	78	80	80	80	78	77	74	71	66	63	62	61	70	74	77	75	72	78	80	74.4	80.4	
20-Feb-08	81	81	81	81	81	81	79	79	71	62	61	60	62	62	64	66	69	72	76	76	75	75	77	78	72.9	81.1	
21-Feb-08	78	78	78	78	79	78	79	80	72	65	62	60	56	52	54	58	60	67	70	78	82	84	85	83	71.5	84.6	
22-Feb-08	81	79	80	79	81	82	82	82	76	65	56	51	47	54	58	61	62	70	74	76	79	82	83	84	71.8	83.5	
23-Feb-08	85	84	83	83	83	82	81	81	79	76	72	79	79	81	82	84	85	85	86	87	88	87	85	84	82.6	87.6	
24-Feb-08	82	82	81	80	81	81	81	82	81	81	82	82	82	82	80	78	79	79	79	80	80	81	81	82	80.8	82.4	
25-Feb-08	83	84	83	83	82	81	80	80	80	81	81	82	80	75	68	62	68	75	83	84	83	82	82	81	79.4	84.3	
26-Feb-08	82	82	83	83	83	75	75	76	74	73	69	66	66	64	63	63	63	67	74	75	75	76	76	76	73.3	83.5	
27-Feb-08	74	74	75	75	74	72	70	70	67	61	60	58	57	57	59	64	69	73	78	79	79	79	81	83	69.9	82.8	
28-Feb-08	83	83	84	83	83	83	88	90	90	89	88	82	74	67	63	60	61	67	69	76	79	80	78	79	78.3	90.3	
29-Feb-08	79	76	71	67	71	76	74	71	65	57	52	50	50	48	50	52	56	56	56	57	51	55	59	61	60.9	78.7	
Hourly Avg	72.5	72.4	71.8	71.6	72.1	72.1	71.8	71.4	70.1	67.4	64.8	63.1	61.7	61.3	61.4	62.2	64.5	68.2	70.0	71.4	71.5	71.7	72.2	72.7			
Hourly Max	84.6	84.3	83.8	83.5	83.3	83.4	87.9	90.3	90.0	89.5	87.6	85.3	82.3	81.1	82.3	84.3	85.3	85.4	86.1	87.4	87.6	86.7	85.3	83.9			

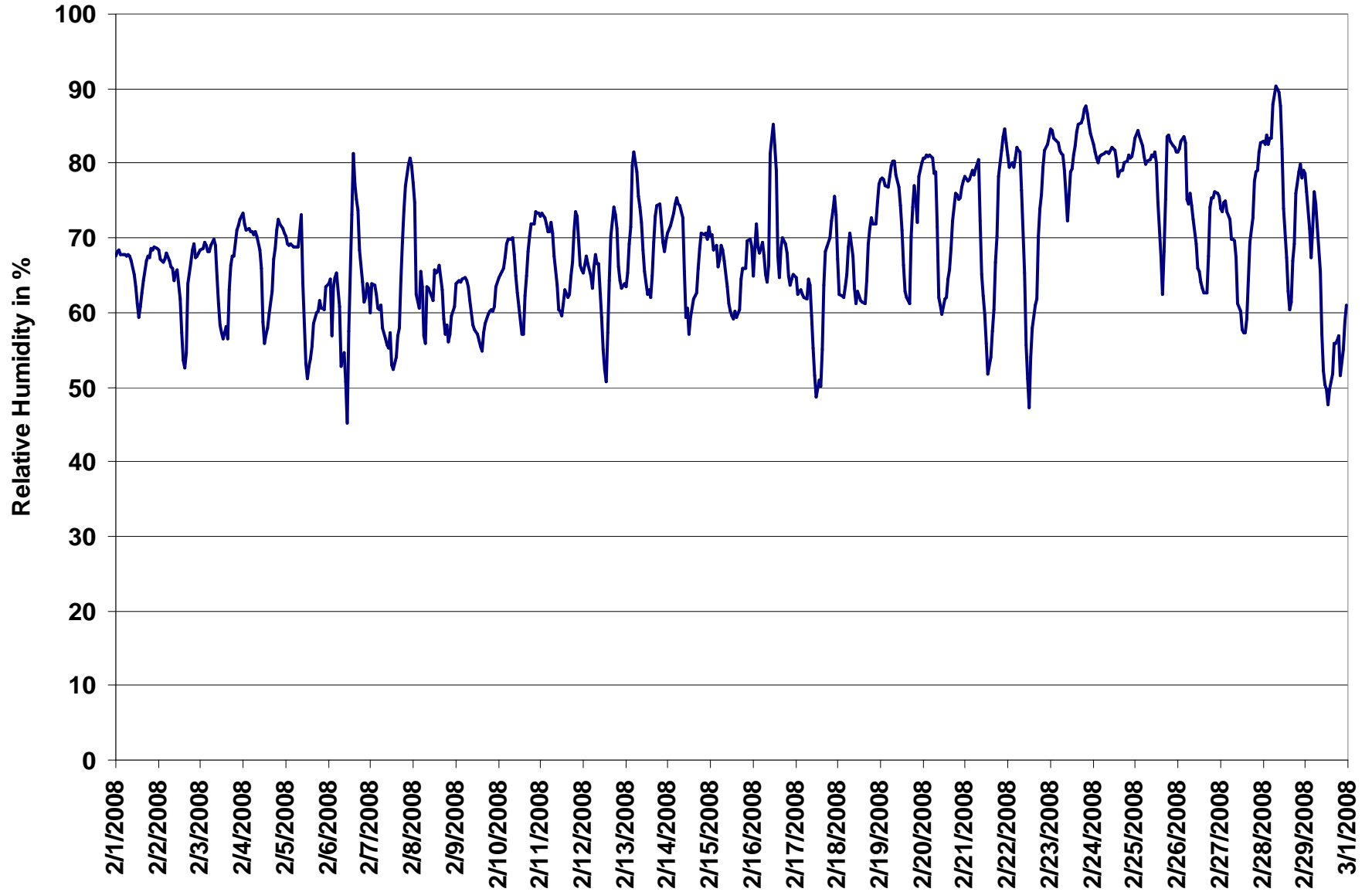


Figure 13. PAS - Crescent Heights Relative Humidity 1-hr Average Monthly Trend



# PAS - Crescent Heights Temperature Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

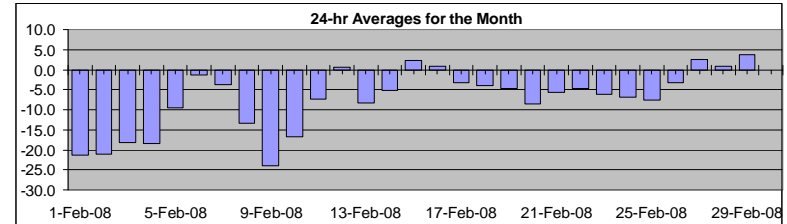
## HOURLY AVERAGE TABLE

## Ambient Temperature (T)

Monitoring Dates: February 1, 2008 to March 1, 2008

### Summary

Maximum 1-hr Average:	9.6 °C	29-Feb	13:00 14:00
Maximum 24-hr Value:	3.8 °C	29-Feb	



AIC Time:	0 hrs	Operational Time:	696 hrs						
Calibration Time:	0 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	7.8	4.7	-0.5	-5.1	-13.5	-23.4	-24.9	-7.3 °C	-5.1 °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																								24-hour Average	Daily Maximum	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
1-Feb-08	-23	-23	-23	-23	-23	-23	-23	-23	-23	-21	-19	-19	-18	-18	-18	-19	-19	-20	-21	-22	-23	-23	-24	-24	-24	-21.4	-17.8
2-Feb-08	-25	-25	-25	-25	-25	-25	-25	-25	-25	-24	-21	-19	-19	-19	-17	-15	-15	-15	-19	-19	-20	-19	-19	-19	-19	-21.1	-14.6
3-Feb-08	-19	-19	-19	-19	-21	-22	-23	-23	-23	-21	-19	-17	-16	-15	-15	-14	-16	-16	-16	-16	-16	-16	-16	-16	-16	-18.1	-14.3
4-Feb-08	-16	-17	-18	-20	-20	-22	-22	-22	-21	-21	-19	-15	-14	-14	-14	-15	-16	-18	-19	-19	-20	-21	-22	-22	-22	-18.5	-13.6
5-Feb-08	-22	-24	-24	-23	-23	-23	-23	-23	-20	-14	-10	-3	-1	0	1	1	0	0	1	1	1	1	2	2	-9.4	1.7	
6-Feb-08	1	0	1	-2	-2	-2	-1	1	1	1	2	3	1	0	0	0	-1	-2	-3	-4	-5	-6	-8	-8	-1.4	2.6	
7-Feb-08	-6	-6	-4	-4	-3	-2	-3	-3	-3	-1	0	0	2	1	0	-1	-1	-3	-4	-7	-9	-10	-12	-13	-3.8	1.8	
8-Feb-08	-12	-10	-5	-3	-2	0	0	0	-3	-14	-16	-16	-17	-18	-18	-19	-20	-20	-21	-21	-21	-22	-23	-23	-13.4	0.4	
9-Feb-08	-23	-23	-23	-24	-24	-24	-24	-25	-25	-25	-25	-24	-23	-23	-23	-23	-24	-25	-25	-25	-24	-24	-24	-23	-23	-23.9	-22.8
10-Feb-08	-24	-24	-23	-23	-23	-21	-19	-19	-18	-16	-15	-14	-14	-12	-11	-12	-13	-13	-13	-13	-14	-15	-15	-15	-15	-16.7	-11.1
11-Feb-08	-14	-14	-14	-13	-13	-13	-14	-14	-15	-14	-12	-10	-5	-3	0	1	1	0	0	-2	-3	-3	-1	-1	-7.4	0.9	
12-Feb-08	-1	-2	-2	-2	-2	-1	-1	-1	-1	-1	1	3	4	5	3	2	0	-1	-1	-1	2	3	4	5	0.6	4.6	
13-Feb-08	5	5	4	2	-1	-6	-10	-13	-15	-14	-14	-13	-12	-12	-12	-12	-12	-11	-10	-9	-8	-9	-10	-11	-8.3	5.0	
14-Feb-08	-11	-11	-11	-11	-11	-10	-10	-10	-9	-5	-1	0	-1	-1	-2	-2	-2	-4	-4	-3	-2	-2	-1	-2	-5.3	-0.4	
15-Feb-08	-3	-4	-4	-4	-3	-2	-1	0	1	3	4	5	6	6	6	6	6	5	5	5	5	4	4	4	2.2	6.1	
16-Feb-08	5	4	3	3	3	3	2	2	2	2	0	0	1	1	2	2	1	0	-1	-3	-3	-3	-4	-4	0.7	4.5	
17-Feb-08	-3	-4	-5	-5	-5	-5	-5	-4	-3	-2	-2	0	0	1	0	-2	-3	-3	-4	-4	-4	-5	-4	-4	-3.2	0.8	
18-Feb-08	-4	-4	-5	-6	-7	-7	-8	-8	-8	-6	-4	-3	-2	-1	-1	0	0	-1	-2	-2	-2	-2	-4	-6	-3.9	0.1	
19-Feb-08	-7	-7	-8	-7	-8	-9	-9	-9	-7	-6	-5	-4	-2	0	2	2	2	-1	-3	-3	-4	-5	-7	-7	-4.8	2.2	
20-Feb-08	-8	-9	-10	-10	-11	-11	-12	-13	-11	-8	-8	-6	-6	-6	-6	-5	-5	-6	-7	-8	-9	-10	-11	-11	-8.6	-4.9	
21-Feb-08	-11	-11	-11	-11	-11	-11	-12	-12	-9	-7	-6	-4	-1	2	3	2	2	0	-2	-3	-4	-5	-6	-8	-5.7	3.0	
22-Feb-08	-8	-9	-10	-10	-10	-11	-11	-11	-8	-5	-1	1	4	3	2	1	1	-1	-3	-3	-4	-5	-6	-7	-4.6	3.7	
23-Feb-08	-7	-8	-9	-10	-10	-10	-10	-10	-9	-7	-5	-5	-4	-3	-3	-3	-3	-3	-4	-4	-4	-5	-6	-8	-6.2	-2.6	
24-Feb-08	-9	-10	-11	-11	-11	-10	-10	-10	-10	-10	-9	-7	-6	-4	-3	-2	-3	-3	-3	-3	-4	-4	-4	-5	-6	-6.9	-2.2
25-Feb-08	-7	-7	-9	-10	-11	-12	-12	-11	-11	-9	-9	-7	-4	-3	-1	0	-2	-4	-8	-8	-9	-9	-10	-10	-7.6	-0.2	
26-Feb-08	-10	-10	-9	-8	-6	-5	-6	-7	-6	-5	-3	-1	0	2	3	3	3	2	0	-1	-2	-3	-3	-4	-3.2	3.3	
27-Feb-08	-4	-4	-3	-3	-2	-1	1	1	1	2	5	6	7	8	8	8	6	5	4	3	2	2	2	1	2.4	8.3	
28-Feb-08	1	0	0	0	-1	-1	0	0	0	0	1	2	3	3	4	4	4	2	2	1	0	0	0	-1	1.0	4.1	
29-Feb-08	-2	-2	-2	-2	-3	-3	-1	0	2	5	7	8	9	10	9	8	7	7	6	6	7	7	6	5	3.8	9.6	
Hourly Avg	-9.3	-9.5	-9.6	-9.8	-9.9	-10.0	-10.1	-10.2	-9.5	-8.4	-7.0	-5.5	-4.4	-3.7	-3.4	-3.5	-4.2	-5.3	-6.1	-6.6	-6.9	-7.2	-7.7	-8.1			
Hourly Max	5.0	4.8	3.6	3.5	3.2	2.7	2.3	2.0	1.9	5.2	7.0	8.0	8.8	9.6	9.0	8.5	7.0	6.7	6.3	5.9	7.0	6.6	5.6	4.8			

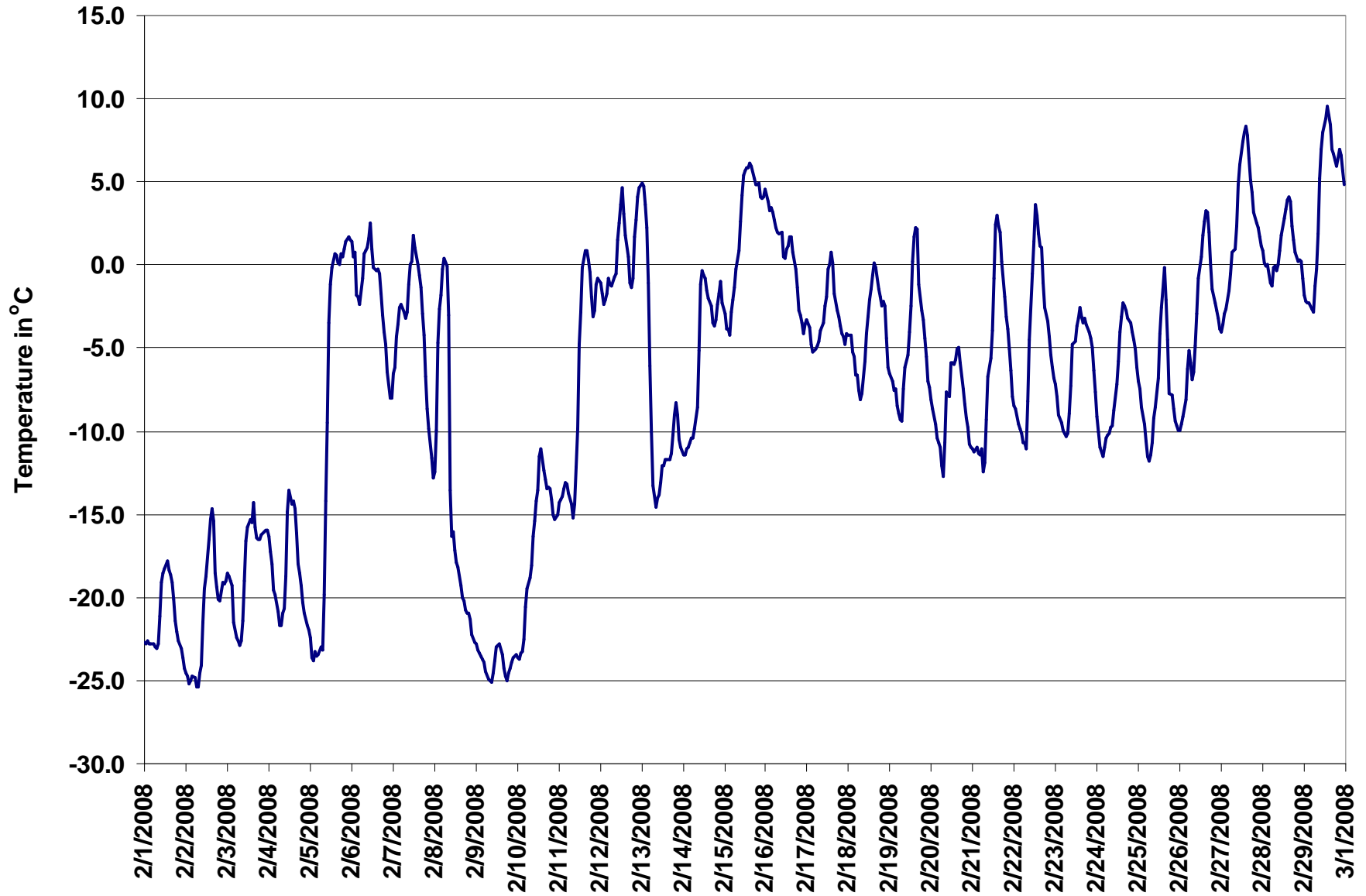


Figure 14. PAS - Crescent Heights Temperature 1-hr Average Monthly Trend



# PAS - Crescent Heights Solar Radiation Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

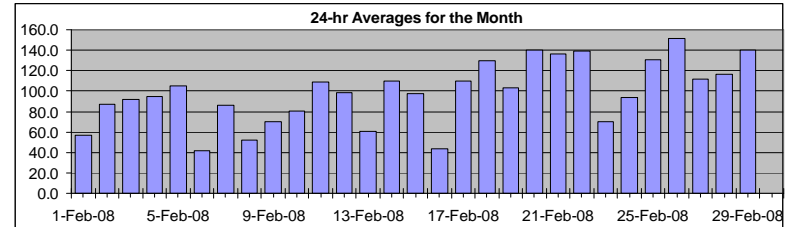
## HOURLY AVERAGE TABLE

## Solar Radiation (SR)

Monitoring Dates: February 1, 2008 to March 1, 2008

### Summary

Maximum 1-hr Average:	572.5	W/m <sup>2</sup>	29-Feb	11:00 12:00
Maximum 24-hr Value:	151.8	W/m <sup>2</sup>	26-Feb	



AIC Time:	0 hrs	Operational Time:	696 hrs						
Calibration Time:	0 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	547.8	451.1	160.1	0.0	0.0	0.0	0.0	98.6 W/m <sup>2</sup>	0.0 W/m <sup>2</sup>

### 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																								24-hour Average	Daily Maximum	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Feb-08	0	0	0	0	0	0	0	1	39	89	144	210	261	244	195	121	54	4	0	0	0	0	0	0	0	56.7	261.0
2-Feb-08	0	0	0	0	0	0	0	1	50	171	244	261	379	421	281	184	97	4	0	0	0	0	0	0	0	87.2	421.1
3-Feb-08	0	0	0	0	0	0	0	0	26	134	281	427	369	339	253	281	91	7	0	0	0	0	0	0	0	92.0	426.7
4-Feb-08	0	0	0	0	0	0	0	1	46	104	242	442	412	441	295	173	104	5	0	0	0	0	0	0	0	94.4	441.9
5-Feb-08	0	0	0	0	0	0	0	2	91	241	348	444	461	459	292	131	48	4	0	0	0	0	0	0	0	105.0	461.3
6-Feb-08	0	0	0	0	0	0	0	1	32	76	112	169	145	113	140	126	77	14	0	0	0	0	0	0	0	41.9	169.3
7-Feb-08	0	0	0	0	0	0	0	2	58	229	370	419	399	241	165	120	57	4	0	0	0	0	0	0	0	86.0	419.2
8-Feb-08	0	0	0	0	0	0	0	2	59	99	273	233	129	149	177	78	36	7	0	0	0	0	0	0	0	51.8	273.0
9-Feb-08	0	0	0	0	0	0	0	2	43	128	201	251	303	273	261	173	47	5	0	0	0	0	0	0	0	70.2	303.0
10-Feb-08	0	0	0	0	0	0	0	2	38	114	213	325	298	391	315	95	110	38	0	0	0	0	0	0	0	80.8	391.5
11-Feb-08	0	0	0	0	0	0	0	2	98	256	382	475	496	396	284	158	68	7	0	0	0	0	0	0	0	109.3	496.3
12-Feb-08	0	0	0	0	0	0	0	3	45	122	323	460	493	431	244	154	79	10	0	0	0	0	0	0	0	98.5	493.3
13-Feb-08	0	0	0	0	0	0	0	1	26	83	164	322	351	220	146	86	41	8	0	0	0	0	0	0	0	60.4	350.6
14-Feb-08	0	0	0	0	0	0	0	4	58	219	310	443	484	441	261	271	137	11	0	0	0	0	0	0	0	110.0	484.3
15-Feb-08	0	0	0	0	0	0	0	8	61	204	362	495	400	306	221	157	94	23	0	0	0	0	0	0	0	97.2	495.0
16-Feb-08	0	0	0	0	0	0	0	2	16	46	74	160	136	167	153	196	78	11	0	0	0	0	0	0	0	43.3	195.6
17-Feb-08	0	0	0	0	0	0	0	11	54	148	274	439	544	513	314	235	94	15	0	0	0	0	0	0	0	110.1	543.7
18-Feb-08	0	0	0	0	0	0	0	19	146	296	406	410	539	509	304	326	154	14	0	0	0	0	0	0	0	130.1	539.3
19-Feb-08	0	0	0	0	0	0	0	9	85	190	264	334	386	410	328	278	162	37	0	0	0	0	0	0	0	103.5	410.0
20-Feb-08	0	0	0	0	0	0	0	14	125	279	429	522	548	536	350	339	186	28	0	0	0	0	0	0	0	139.9	547.6
21-Feb-08	0	0	0	0	0	0	0	18	190	307	314	418	543	569	386	319	171	34	0	0	0	0	0	0	0	136.2	568.9
22-Feb-08	0	0	0	0	0	0	0	20	159	317	460	536	520	497	364	267	184	23	0	0	0	0	0	0	0	139.4	535.8
23-Feb-08	0	0	0	0	0	0	0	12	137	213	383	303	242	174	93	61	43	15	0	0	0	0	0	0	0	69.9	383.0
24-Feb-08	0	0	0	0	0	0	0	8	48	99	203	399	500	390	315	183	77	18	0	0	0	0	0	0	0	93.4	499.9
25-Feb-08	0	0	0	0	0	0	0	13	69	147	255	419	570	568	450	374	216	53	1	0	0	0	0	0	0	130.6	570.4
26-Feb-08	0	0	0	0	0	0	0	33	173	321	464	564	540	546	412	363	181	45	0	0	0	0	0	0	0	151.8	564.1
27-Feb-08	0	0	0	0	0	0	0	13	70	218	400	359	455	472	363	204	108	21	1	0	0	0	0	0	0	112.0	472.3
28-Feb-08	0	0	0	0	0	0	0	6	40	95	251	423	544	443	428	342	186	39	1	0	0	0	0	0	0	116.6	543.6
29-Feb-08	0	0	0	0	0	0	0	40	145	335	487	573	551	562	333	210	97	32	2	0	0	0	0	0	0	140.4	572.5
Hourly Avg	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.7	76.8	182.1	297.6	387.4	413.8	387.0	280.1	207.1	106.2	18.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0		
Hourly Max	0.0	0.0	0.0	0.0	0.0	0.3	0.3	40.3	190.1	335.2	487.3	572.5	570.4	568.9	449.7	374.1	216.2	52.7	1.9	0.3	0.0	0.0	0.0	0.0	0.0		

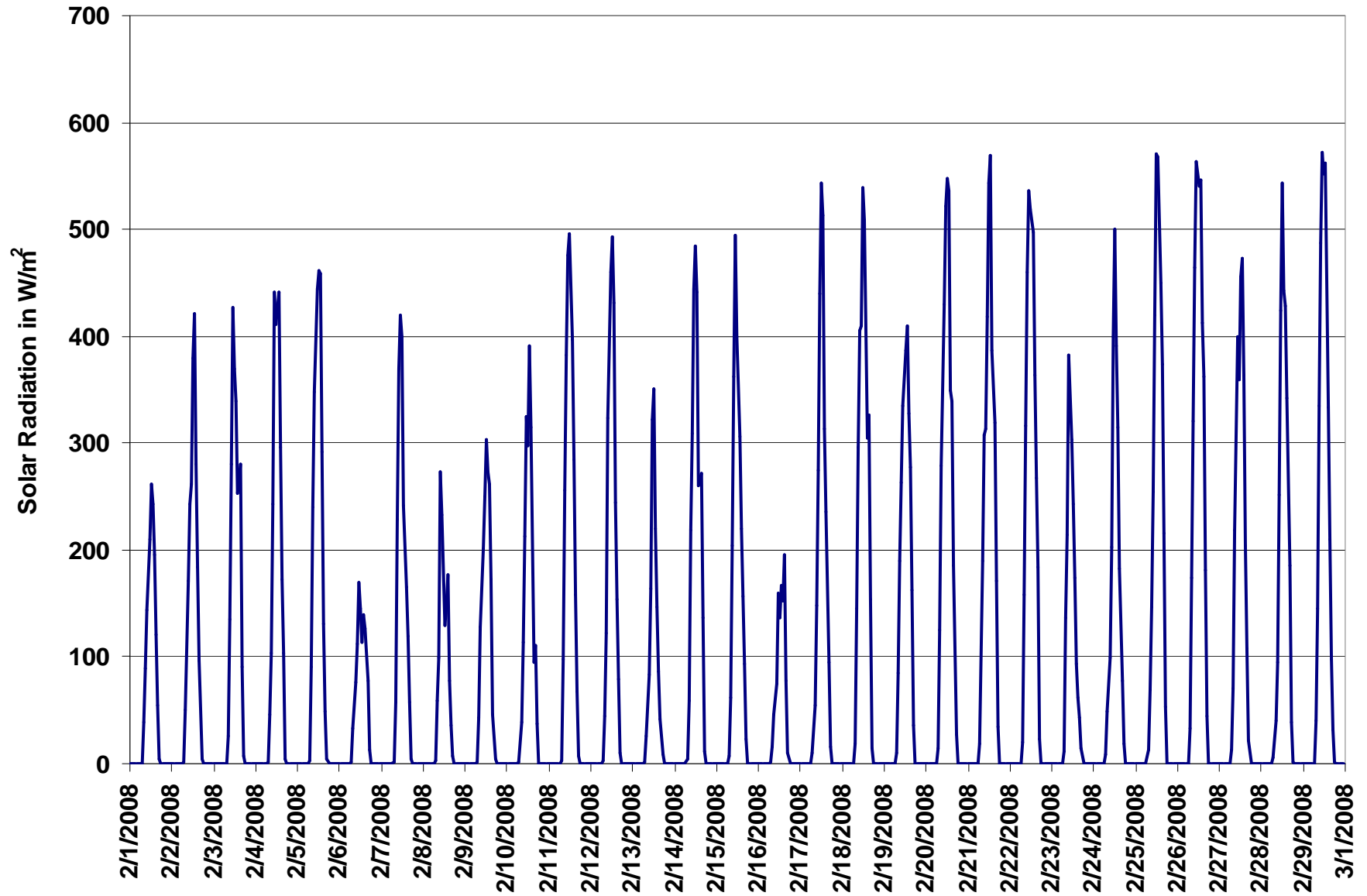


Figure 15. PAS - Crescent Heights Solar Radiation 1-hr Average Monthly Trend



# PAS - Crescent Heights Scalar Wind Speed Monthly Summary

Station: Crescent Heights  
Station Owner: PAS

## HOURLY AVERAGE TABLE

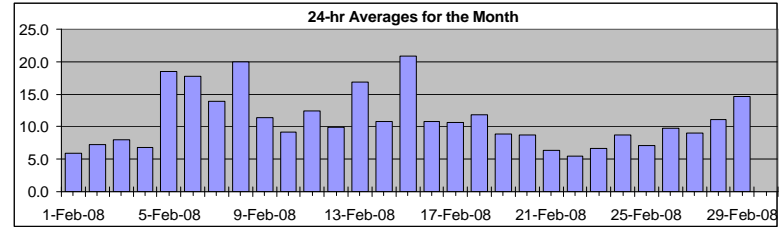
## Wind Speed (WSs)

Monitoring Dates: February 1, 2008 to March 1, 2008

### Summary

Maximum 1-hr Average:	39.5	km/hr	5-Feb	19:00 20:00
Maximum 24-hr Value:	20.8	km/hr	15-Feb	

Calm Time:	0 hrs	0% calms	Operational Time:	694 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	99.7%				
Percentile	99	95	75	50	25	5	1	AverageS
	32.9	24.7	14.0	9.0	6.3	4.1	3.7	11.0 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																							24-hr Scalar Average	Daily Max		
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00		
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Feb-08	10	8	6	5	4	5	4	5	7	4	4	5	6	6	7	6	6	6	8	7	6	6	5	5	6.0	9.9	
2-Feb-08	5	6	5	4	4	10	8	5	4	7	7	11	13	10	7	5	6	8	7	6	6	9	10	11	7.2	12.5	
3-Feb-08	12	12	12	11	12	8	6	4	4	7	7	8	8	8	9	8	8	5	5	5	6	8	8	9	7.9	12.1	
4-Feb-08	9	10	9	8	7	8	4	4	4	7	5	5	6	9	10	12	11	9	7	4	4	5	4	4	6.8	11.9	
5-Feb-08	6	4	6	6	5	6	8	8	7	5	6	17	24	26	25	30	27	34	40	34	33	31	33	33	18.6	39.5	
6-Feb-08	37	34	36	26	23	17	21	17	15	17	16	13	12	7	10	12	8	8	11	13	15	19	18	21	17.7	37.4	
7-Feb-08	14	9	22	22	27	23	25	21	22	22	15	15	10	10	9	9	8	9	6	10	5	6	5	7	13.8	26.8	
8-Feb-08	7	10	17	14	18	19	24	19	13	31	25	26	26	26	24	23	25	22	22	15	17	18	21	17	20.0	30.8	
9-Feb-08	13	15	13	13	14	15	17	18	15	15	12	10	11	12	12	13	10	7	4	5	7	7	7	6	11.3	18.3	
10-Feb-08	14	14	14	13	10	8	7	6	6	5	10	11	11	7	7	6	8	9	7	11	12	7	9	8	9.2	14.4	
11-Feb-08	7	4	5	5	7	11	17	17	14	18	22	22	17	10	12	18	15	16	14	12	9	7	8	10	12.4	21.8	
12-Feb-08	9	7	8	9	5	5	6	6	5	9	7	7	9	8	11	12	11	10	8	5	9	23	24	27	10.0	27.4	
13-Feb-08	23	29	27	20	19	21	24	26	26	22	21	18	15	9	6	7	13	13	9	6	10	16	15	11	16.9	28.9	
14-Feb-08	6	4	4	7	8	7	9	6	6	5	9	17	18	14	15	16	14	12	9	11	12	11	15	21	10.8	21.0	
15-Feb-08	17	16	17	13	19	18	20	20	19	22	24	23	24	21	18	21	28	27	23	20	29	23	21	16	20.8	28.6	
16-Feb-08	14	10	5	8	6	7	7	6	7	14	19	13	9	12	14	13	11	12	9	11	11	14	13	16	10.8	18.6	
17-Feb-08	16	16	17	16	15	12	8	8	9	10	10	13	12	12	11	10	10	8	8	7	9	9	6	6	10.7	17.0	
18-Feb-08	8	9	10	7	7	6	7	8	8	11	14	15	16	17	19	16	14	15	13	13	15	15	13	8	11.9	19.2	
19-Feb-08	9	6	6	7	6	6	6	4	7	10	11	15	14	14	14	10	12	13	9	6	6	5	9	9	8.8	14.5	
20-Feb-08	5	6	4	4	4	5	6	4	4	6	10	10	19	19	18	15	14	8	9	12	8	7	7	6	8.7	19.1	
21-Feb-08	8	7	8	7	6	8	7	4	5	8	9	10	8	6	7	8	6	4	4	4	4	4	5	5	6.3	10.4	
22-Feb-08	6	7	4	5	3	3	4	3	4	4	4	5	4	8	9	9	7	8	7	6	6	5	4	3	5.5	9.4	
23-Feb-08	4	4	4	4	4	5	6	7	7	6	6	9	8	7	6	9	8	6	7	6	8	10	8	9	6.6	9.8	
24-Feb-08	8	7	8	7	4	4	3	4	4	6	6	6	11	14	14	11	14	12	11	10	9	12	13	11	8.7	14.5	
25-Feb-08	7	6	7	7	9	8	3	4	5	5	9	8	7	8	7	7	10	11	10	11	8	5	4	6	7.2	11.1	
26-Feb-08	4	4	5	8	10	12	10	8	10	15	14	13	15	14	15	11	10	10	9	9	7	7	7	8	9.8	15.2	
27-Feb-08	8	6	7	9	14	11	11	12	11	13	9	9	10	14	13	9	9	7	6	5	7	4	7	8	9.1	14.1	
28-Feb-08	7	6	7	7	9	7	16	21	15	9	9	14	16	16	18	16	15	11	9	8	8	6	5	11.0	21.2		
29-Feb-08	5	6	5	5	4	10	4	8	6	13	25	28	25	M	M	14	21	22	16	15	19	26	27	17	14.6	28.4	
1-hr Average	10.3	9.7	10.2	9.5	9.8	9.8	10.2	9.8	9.3	11.2	11.9	13.1	13.2	12.3	12.4	12.1	12.5	11.5	10.4	10.2	10.6	11.3	11.5	11.0			
Hourly Max	37.4	33.8	35.8	26.1	26.8	22.6	25.3	25.6	26.4	30.8	25.3	28.4	25.5	26.5	25.0	24.8	30.0	27.3	34.5	39.5	33.9	32.8	31.1	33.4			





# PAS - Crescent Heights Vector Wind Speed Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

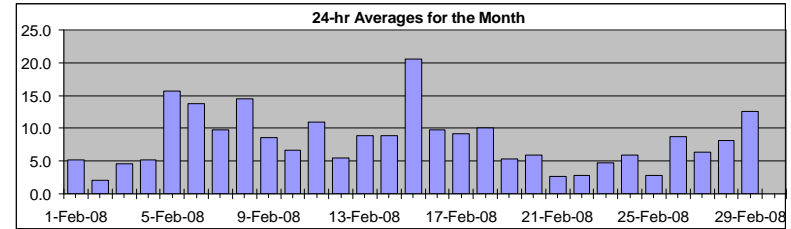
## HOURLY AVERAGE TABLE

## Wind Speed (WSv)

Monitoring Dates: February 1, 2008 to March 1, 2008

### Summary

Maximum 1-hr Average:	39.4	km/hr	5-Feb	19:00 20:00
Maximum 24-hr Value:	20.5	km/hr	15-Feb	



Calm Time:	0 hrs	0% calms	Operational Time:	694 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	99.7%				
Percentile	99	95	75	50	25	5	1	AverageV
	32.7	24.6	13.7	8.6	5.5	2.7	1.1	18.2 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																							24-hr Vector Average	Daily Max		
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Feb-08	10	7	6	5	4	4	4	5	7	4	3	5	6	6	7	6	6	6	8	7	6	6	5	5	5.2	9.8	
2-Feb-08	4	6	5	4	4	10	8	5	4	7	6	10	12	9	6	3	6	8	7	5	6	9	10	11	2.1	12.3	
3-Feb-08	12	12	11	11	12	8	5	4	4	7	7	8	7	6	8	7	7	4	4	5	4	8	8	9	4.6	12.0	
4-Feb-08	9	10	9	8	7	8	4	3	3	7	4	4	6	9	10	12	11	9	7	4	4	5	4	4	5.2	11.8	
5-Feb-08	5	4	5	6	5	5	7	8	6	4	4	17	24	26	25	30	27	34	39	34	33	31	33	33	15.7	39.4	
6-Feb-08	37	34	36	26	23	17	21	17	15	17	15	11	11	2	9	11	8	8	10	12	14	19	18	20	13.8	37.3	
7-Feb-08	12	7	21	22	27	22	25	21	22	22	15	14	8	9	9	8	8	9	6	10	5	4	3	6	9.8	26.7	
8-Feb-08	6	9	16	13	17	19	24	18	12	31	25	26	25	26	24	23	25	22	22	15	17	18	21	17	14.4	30.7	
9-Feb-08	13	15	12	13	14	14	16	18	15	14	12	10	11	12	11	13	10	7	4	3	7	6	6	6	8.6	18.3	
10-Feb-08	14	14	14	12	10	8	7	5	6	5	10	11	11	7	7	5	8	9	6	11	12	5	9	7	6.7	14.3	
11-Feb-08	7	4	5	3	7	10	16	16	13	17	22	22	17	9	9	18	15	16	13	12	9	7	7	10	11.0	21.7	
12-Feb-08	8	5	8	7	1	3	5	2	0	8	6	6	8	6	11	12	10	10	8	4	7	23	24	27	5.5	27.3	
13-Feb-08	23	29	27	19	18	20	24	25	26	22	21	18	14	9	6	5	12	13	9	5	9	16	14	11	8.8	28.7	
14-Feb-08	6	1	1	5	7	6	9	4	5	2	8	17	18	14	15	16	14	12	9	11	12	10	15	21	8.9	20.9	
15-Feb-08	17	16	16	13	19	18	20	20	19	22	24	23	24	21	17	20	28	26	23	20	28	23	21	15	20.5	28.3	
16-Feb-08	14	9	4	8	5	7	6	5	6	14	18	13	7	12	14	13	10	11	9	10	11	14	13	16	9.8	18.4	
17-Feb-08	16	16	17	16	14	12	8	7	9	10	10	13	11	11	10	9	10	8	7	7	9	9	6	5	9.2	16.8	
18-Feb-08	8	8	10	7	7	5	4	8	8	11	14	15	16	17	19	16	14	15	13	13	15	14	13	8	10.1	19.1	
19-Feb-08	9	4	3	6	3	6	6	4	7	9	11	14	14	13	10	12	12	9	4	5	5	9	8	5.4	14.3		
20-Feb-08	4	6	4	3	3	3	4	2	2	1	9	9	19	18	17	15	14	7	8	11	8	7	6	4	6.0	18.9	
21-Feb-08	7	7	7	7	6	8	7	3	2	7	8	10	8	4	6	8	5	3	4	4	4	4	3	1	2.7	10.2	
22-Feb-08	4	7	2	2	3	3	3	3	4	1	1	1	1	7	9	9	7	8	7	6	6	5	4	3	2.8	9.3	
23-Feb-08	3	2	1	3	3	3	5	7	6	5	5	8	7	5	8	7	5	6	5	7	10	8	9	4.8	9.6		
24-Feb-08	8	7	8	6	3	2	3	4	4	6	5	6	10	13	14	10	14	12	11	10	9	12	13	10	5.9	14.1	
25-Feb-08	6	5	7	7	9	8	3	2	4	3	8	8	5	8	5	5	10	11	10	11	8	4	2	5	2.8	10.9	
26-Feb-08	4	3	2	6	9	12	10	8	10	15	14	13	15	14	15	10	9	10	8	8	7	7	7	7	8.8	15.0	
27-Feb-08	8	2	5	8	14	9	10	12	11	12	9	9	10	14	12	8	9	1	3	5	6	3	5	6	6.4	13.6	
28-Feb-08	4	4	6	4	9	7	16	21	15	9	9	14	16	16	18	16	14	11	9	7	7	8	5	3	8.2	21.1	
29-Feb-08	3	4	4	3	1	9	1	6	3	12	25	28	25	M	M	14	21	22	15	13	18	25	27	16	12.5	28.2	
1-hr Vector	3.4	2.8	3.4	3.4	3.3	4.2	4.0	4.0	2.9	4.6	5.2	6.3	6.0	5.3	4.9	5.0	5.1	4.4	4.3	4.7	4.8	4.5	4.6	4.2			
Hourly Max	37.3	33.7	35.7	26.0	26.7	22.5	25.3	25.5	26.3	30.7	25.2	28.2	25.4	26.3	24.8	24.6	29.9	27.1	34.4	39.4	33.8	32.7	31.0	33.2			



# PAS - Crescent Heights Wind Direction Monthly Summary

Station: Crescent Heights  
Station Owner: PAS

## HOURLY AVERAGE TABLE

Wind Direction (WD)

Monitoring Dates: February 1, 2008 to March 1, 2008

### Summary


Calm Time:	0 hrs	0% calms	Operational Time:	694 hrs				
Calibration Time:	2 hrs		AMD Operational Uptime:	100.0%				
Percentile	99	95	75	50	25	5	1	Average
	358.5	354.3	275.7	227.0	103.9	7.7	0.8	259 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																								24-hour Average	WD Sector	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00		
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Feb-08	324	311	292	339	357	328	356	37	38	53	52	21	16	358	357	357	358	3	358	8	2	5	15	59	1	N	
2-Feb-08	99	97	85	66	25	1	360	348	356	335	244	226	222	241	236	216	34	43	69	54	62	64	40	33	27	NNE	
3-Feb-08	32	19	33	24	358	350	352	353	353	251	264	251	321	267	242	257	255	288	317	333	349	22	32	36	339	NNW	
4-Feb-08	11	17	5	356	355	354	27	69	61	11	36	99	91	85	101	93	93	72	65	31	22	1	7	8	44	NE	
5-Feb-08	18	73	103	102	102	113	117	129	125	142	166	206	204	211	210	203	207	210	205	209	209	212	211	216	201	SSW	
6-Feb-08	221	221	222	228	227	242	261	273	272	281	297	339	43	141	155	154	182	228	242	243	232	227	237	237	236	SW	
7-Feb-08	249	269	215	206	208	200	208	204	206	217	239	239	276	314	324	333	319	311	329	338	360	281	223	193	234	SW	
8-Feb-08	177	220	241	235	233	256	269	275	355	348	348	351	350	346	348	349	344	348	346	350	357	351	351	356	330	NNW	
9-Feb-08	359	357	6	354	2	356	355	350	1	1	357	341	330	329	335	350	6	22	45	112	187	182	186	113	356	N	
10-Feb-08	104	110	109	98	64	29	3	358	354	41	12	14	20	30	53	44	8	0	11	356	359	15	326	353	33	NNE	
11-Feb-08	353	7	344	293	220	250	228	227	245	237	236	230	230	268	230	217	233	238	252	249	250	243	264	276	242	WSW	
12-Feb-08	284	209	234	226	171	356	9	253	179	223	232	227	181	145	112	114	100	103	82	9	209	195	202	209	191	S	
13-Feb-08	200	213	217	243	298	316	340	339	353	5	11	3	2	1	354	259	225	232	248	284	325	345	347	339	311	NW	
14-Feb-08	355	16	340	201	202	183	214	126	104	188	224	229	235	236	234	236	237	241	233	232	242	229	226	235	229	SW	
15-Feb-08	241	245	235	243	223	240	232	236	232	226	217	222	227	235	240	222	218	214	228	236	226	216	211	229	228	SW	
16-Feb-08	276	291	341	347	338	296	293	315	311	333	355	3	291	264	292	306	302	295	307	320	305	311	302	293	309	NW	
17-Feb-08	299	304	303	303	299	299	298	287	272	275	274	265	257	242	254	230	219	228	255	242	234	222	227	337	272	W	
18-Feb-08	324	323	329	332	310	302	227	246	233	238	237	236	232	233	235	227	234	236	238	241	235	230	222	213	244	WSW	
19-Feb-08	215	166	165	253	140	93	87	44	72	65	75	82	86	94	90	78	92	63	81	157	314	346	354	342	81	E	
20-Feb-08	342	339	348	335	351	305	279	74	53	201	232	232	223	228	230	224	221	255	245	230	215	182	204	138	234	SW	
21-Feb-08	179	207	179	111	90	106	120	27	112	205	217	230	219	226	247	230	276	22	61	68	66	71	194	228	184	S	
22-Feb-08	219	225	84	138	45	36	21	45	60	187	182	286	313	21	7	1	1	2	359	7	3	3	6	25	7	N	
23-Feb-08	343	27	29	0	40	215	186	224	254	288	284	253	267	274	277	254	300	273	269	241	224	228	243	232	259	W	
24-Feb-08	234	224	218	215	0	359	34	18	20	15	19	23	28	46	44	55	51	53	19	23	43	58	53	24	36	NE	
25-Feb-08	38	27	4	357	360	354	10	347	244	258	221	220	223	216	209	214	233	229	237	218	214	182	100	92	241	WSW	
26-Feb-08	72	17	181	221	251	253	265	257	238	232	232	217	225	226	231	224	229	228	227	233	202	205	204	200	229	SW	
27-Feb-08	190	184	239	238	225	240	237	226	248	227	238	242	234	230	231	235	243	318	276	6	358	42	21	2	243	WSW	
28-Feb-08	305	343	209	315	350	354	0	358	352	320	303	280	280	276	280	275	271	262	259	240	214	239	259	283	295	WNW	
29-Feb-08	168	124	86	39	318	202	84	201	196	198	206	211	218	C	C	244	222	220	227	242	224	218	217	243	216	SW	
Hourly Avg	261	261	242	262	272	283	283	286	293	273	265	255	253	256	256	243	246	257	261	259	249	237	243	256			



# PAS - Crescent Heights Standard Deviation of Wind Direction Monthly Summary

Station: Crescent Heights  
Station Owner: PAS

## HOURLY AVERAGE TABLE

Wind Direction (WD)

Monitoring Dates: February 1, 2008 to March 1, 2008

### Summary


Determined by the Yamartino 15-min interval calculation

Calm Time:	0 hrs	0% calms	Operational Time:	694 hrs			
Calibration Time:	2 hrs		AMD Operational Uptime:	100.0%			
Percentile	99	95	75	50	25	5	1
	90.0	64.9	28.9	14.6	8.3	5.3	4.4

### 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

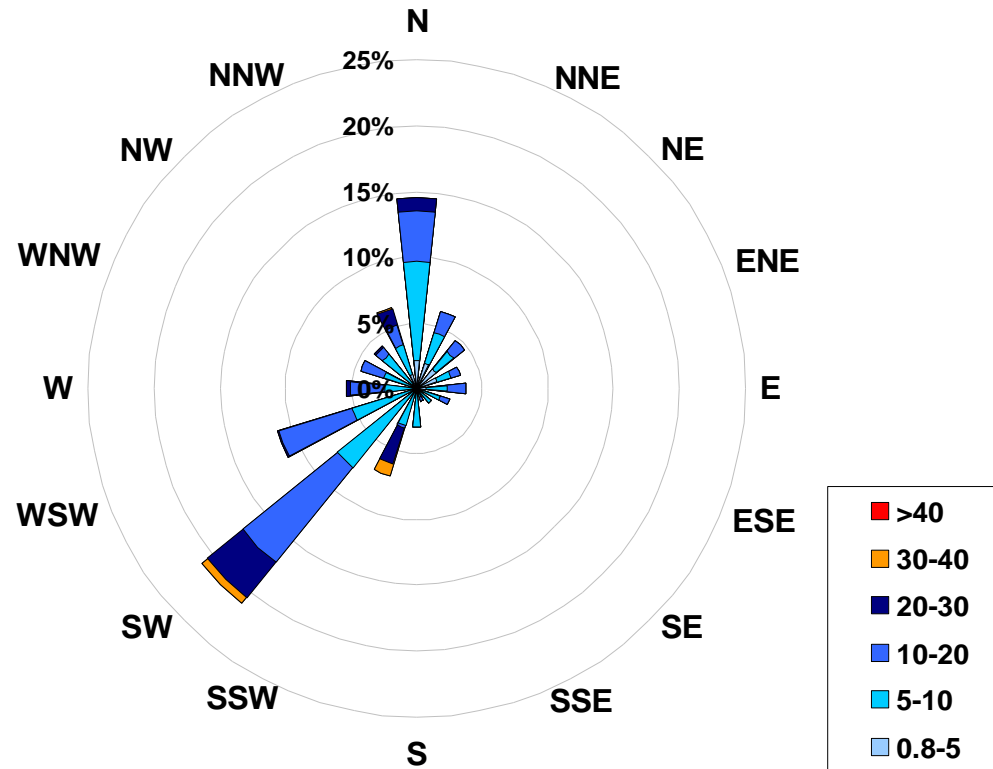
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	
1-Feb-08	10	19	29	19	14	39	32	10	16	26	39	20	19	19	17	12	7	7	6	8	11	7	8	16	
2-Feb-08	37	11	16	25	23	5	11	27	18	11	40	18	11	31	53	91	14	7	9	19	16	15	9	9	
3-Feb-08	7	8	14	9	9	10	11	17	16	27	30	26	38	42	29	33	24	45	32	18	42	7	10	9	
4-Feb-08	9	7	6	6	7	5	31	20	30	8	22	29	26	11	12	10	8	10	8	15	10	7	13	16	
5-Feb-08	13	22	17	12	16	15	19	9	15	50	59	8	6	7	7	5	7	5	5	5	5	5	5	5	
6-Feb-08	4	4	4	6	7	14	6	9	6	6	14	34	16	76	31	16	22	21	20	12	11	6	5	6	
7-Feb-08	35	45	8	5	4	6	4	5	6	6	21	10	38	14	15	20	25	10	16	15	30	61	72	46	
8-Feb-08	41	35	23	17	7	18	5	19	22	6	6	5	5	5	5	8	5	7	9	10	8	7	6	6	
9-Feb-08	7	5	6	6	6	7	5	5	6	8	10	12	15	11	14	12	9	16	13	56	27	40	38	29	
10-Feb-08	6	6	6	11	19	18	18	16	11	14	11	8	12	19	18	35	26	15	14	8	8	48	8	23	
11-Feb-08	15	24	17	49	31	20	15	19	14	7	5	8	14	24	56	7	11	10	11	7	8	31	34	8	
12-Feb-08	16	64	31	58	84	54	19	90	91	12	48	51	35	42	9	8	13	8	19	45	60	8	6	5	
13-Feb-08	6	5	6	15	9	9	6	6	6	5	8	8	9	15	21	47	12	9	28	32	21	9	7	9	
14-Feb-08	21	74	76	54	28	31	25	52	28	79	56	9	8	14	10	9	8	9	15	13	16	25	5	5	
15-Feb-08	8	10	8	14	10	11	8	8	9	7	5	7	8	8	14	17	6	7	6	9	8	6	4	22	
16-Feb-08	25	23	29	9	25	21	22	50	51	13	7	8	39	16	13	12	13	11	12	11	11	10	13	7	
17-Feb-08	8	9	7	8	9	11	19	24	12	12	16	15	19	23	22	23	10	22	22	22	8	10	36	24	
18-Feb-08	19	24	20	19	18	37	74	23	9	9	6	8	9	9	8	9	10	6	7	7	6	12	6	8	
19-Feb-08	10	54	71	49	56	16	15	19	17	11	9	9	14	12	11	17	20	8	8	61	40	23	5	13	
20-Feb-08	34	16	28	40	34	51	42	57	71	84	23	30	8	12	9	12	10	30	19	12	15	23	42	41	
21-Feb-08	32	14	26	14	16	5	10	39	72	32	15	13	30	74	38	26	37	48	15	23	18	16	69	95	
22-Feb-08	60	39	56	66	5	20	44	9	19	91	92	77	82	37	10	7	6	4	5	6	5	7	9	7	
23-Feb-08	48	65	79	36	33	81	52	38	43	36	36	23	27	57	40	29	23	35	37	37	21	11	20	8	
24-Feb-08	11	13	6	60	42	59	15	10	13	13	16	11	12	16	13	18	12	6	10	6	10	5	10	10	
25-Feb-08	9	26	4	5	5	5	7	51	52	60	16	19	69	34	60	72	19	11	13	8	11	53	60	18	
26-Feb-08	24	49	85	53	26	9	11	16	7	6	9	12	11	12	12	26	44	11	36	24	18	8	30	26	
27-Feb-08	26	92	63	39	16	30	22	13	20	10	19	18	15	10	10	37	16	76	74	32	50	26	45	44	
28-Feb-08	65	49	57	57	19	17	6	5	10	17	15	9	10	9	8	8	9	10	16	45	44	29	39	48	
29-Feb-08	74	40	24	50	79	31	84	62	90	30	8	7	7	C	C	17	7	7	12	35	14	13	6	20	

Daily Maximum
39.4
91.1
44.5
31.1
58.5
76.3
72.5
41.4
55.9
48.1
55.8
91.1
46.6
78.6
22.0
51.4
36.1
74.0
71.1
83.9
94.6
91.7
80.6
59.9
71.8
84.7
91.9
64.9
90.0

Hourly Max	74	92	85	66	84	81	84	90	91	91	92	77	82	76	60	91	44	76	74	61	60	61	72	95
------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----



**1-hr Average Wind Rose (in km/hr) Located at the Crescent Heights Site for February 2008**



**Calms: 0%**

Frequency Distribution of Wind in km/hr Range			Frequency (hrs)
0.8	<	5	78
5	to	10	320
10	to	20	221
20	to	30	64
30	to	40	11
	>	40	0
Total Non-Zero Values			694



# **PAS – Portable-Brooks**

## **Monthly Summary Tables, Graphs and Roses**



## PAS – Brooks Sulphur Dioxide Monthly Summary

Station: Portable-Brooks  
 Station Owner: PAS

### HOURLY AVERAGE TABLE

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

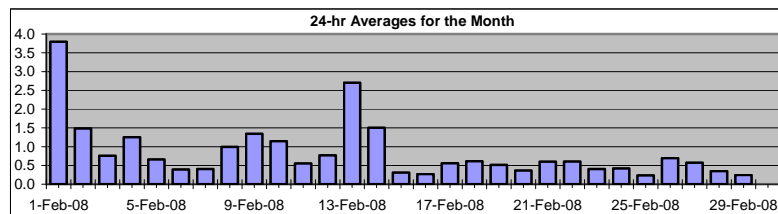
Monitoring Dates: February 1, 2008 to March 1, 2008

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:	8.2 ppb 1-Feb 11:00 12:00
Maximum 24-hr Average:	3.8 ppb 1-Feb

AIC Time:	31 hrs	Operational Time:	663 hrs
Calibration Time:	2 hrs	AMD Operational Uptime:	100.0%
Percentile	99 95 75 50 25 5 1	Average	Median
	4.9 3.0 1.0 0.5 0.3 0.1 0.0	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																								24-hour Average	Daily Maximum		
	Hour Start	Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00			23:00	0:00
1-Feb-08	0:00	1:00	3	4	4	5	4	3	3	2	2	3	6	8	6	5	A	4	4	4	2	2	3	3	3	4	3.8	8.2
2-Feb-08	1:00	2:00	2	2	2	1	1	1	1	1	1	1	2	2	2	A	2	2	3	2	2	2	1	1	1	1	1.5	2.5
3-Feb-08	2:00	3:00	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.3
4-Feb-08	3:00	4:00	1	1	1	1	1	1	1	3	1	1	1	A	1	2	3	3	1	1	2	1	1	2	1	0	1.3	3.2
5-Feb-08	4:00	5:00	1	1	0	0	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	0	0	0	0	0.7	1.1
6-Feb-08	5:00	6:00	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	1	1	0	0	0	0	0	0	0	0.4	1.3
7-Feb-08	6:00	7:00	0	0	0	0	0	1	0	0	A	0	1	0	0	0	0	1	1	0	1	1	1	1	1	1	0.4	1.2
8-Feb-08	7:00	8:00	1	0	0	1	0	0	0	A	4	1	1	1	1	2	2	1	1	1	1	1	1	1	1	0	1.0	3.5
9-Feb-08	8:00	9:00	0	1	1	1	3	4	A	2	1	1	1	1	1	2	2	2	2	2	2	1	1	1	1	2	1.3	3.6
10-Feb-08	9:00	10:00	2	2	2	2	3	A	2	1	1	1	1	1	1	1	1	1	2	1	2	1	1	0	0	0	1.1	2.6
11-Feb-08	10:00	11:00	0	0	1	0	A	0	1	1	1	0	0	0	1	1	1	1	1	1	1	0	0	1	1	1	0.6	1.2
12-Feb-08	11:00	12:00	1	1	1	A	1	1	1	0	0	1	1	1	1	1	1	1	1	2	1	1	0	0	0	0	0.8	1.7
13-Feb-08	12:00	13:00	0	0	A	0	1	1	1	4	4	3	6	5	4	3	4	3	3	2	1	3	3	3	5	5	2.7	5.7
14-Feb-08	13:00	14:00	5	A	3	3	3	2	2	2	2	2	2	2	2	2	1	1	0	0	0	0	0	0	0	0	1.5	5.4
15-Feb-08	14:00	15:00	A	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	A	0.3	0.6
16-Feb-08	15:00	16:00	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.3	0.8
17-Feb-08	16:00	17:00	0	0	0	1	1	1	0	0	0	1	1	1	1	1	1	1	1	1	1	0	0	A	0	0	0.6	1.1
18-Feb-08	17:00	18:00	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	0	A	0	0	0	0.6	1.3
19-Feb-08	18:00	19:00	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	A	1	2	1	0	0	0.5	2.2
20-Feb-08	19:00	20:00	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	A	1	1	1	0	0	0	0.4	1.3
21-Feb-08	20:00	21:00	0	0	0	0	0	0	0	1	1	1	1	1	1	C	C	A	2	1	0	0	1	2	1	1	0.6	1.6
22-Feb-08	21:00	22:00	1	A	0	0	0	0	0	0	0	0	1	3	2	2	1	1	1	1	1	1	0	0	0	0	0.6	2.6
23-Feb-08	22:00	23:00	A	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	A	0	0.4	0.8
24-Feb-08	23:00	0:00	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	0	0	0	0	0	A	0	0.4	1.0
25-Feb-08	0:00	1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.4
26-Feb-08	1:00	2:00	0	1	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.7	1.3
27-Feb-08	2:00	3:00	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0	0	0.6	0.8
28-Feb-08	3:00	4:00	0	1	0	0	0	0	0	1	1	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0.3	0.6
29-Feb-08	4:00	5:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.2	0.6
Hourly Avg			0.8	0.6	0.7	0.7	0.8	0.7	0.6	0.8	0.9	0.7	1.1	1.2	1.2	1.1	1.1	1.1	1.0	0.8	0.8	0.7	0.7	0.8	0.7	0.7		
Hourly Max			5.4	4.1	4.1	5.1	4.3	3.6	2.9	3.9	4.1	3.4	5.8	8.2	6.3	4.8	3.5	4.4	4.1	3.5	2.3	2.5	3.2	3.4	4.6	5.2		

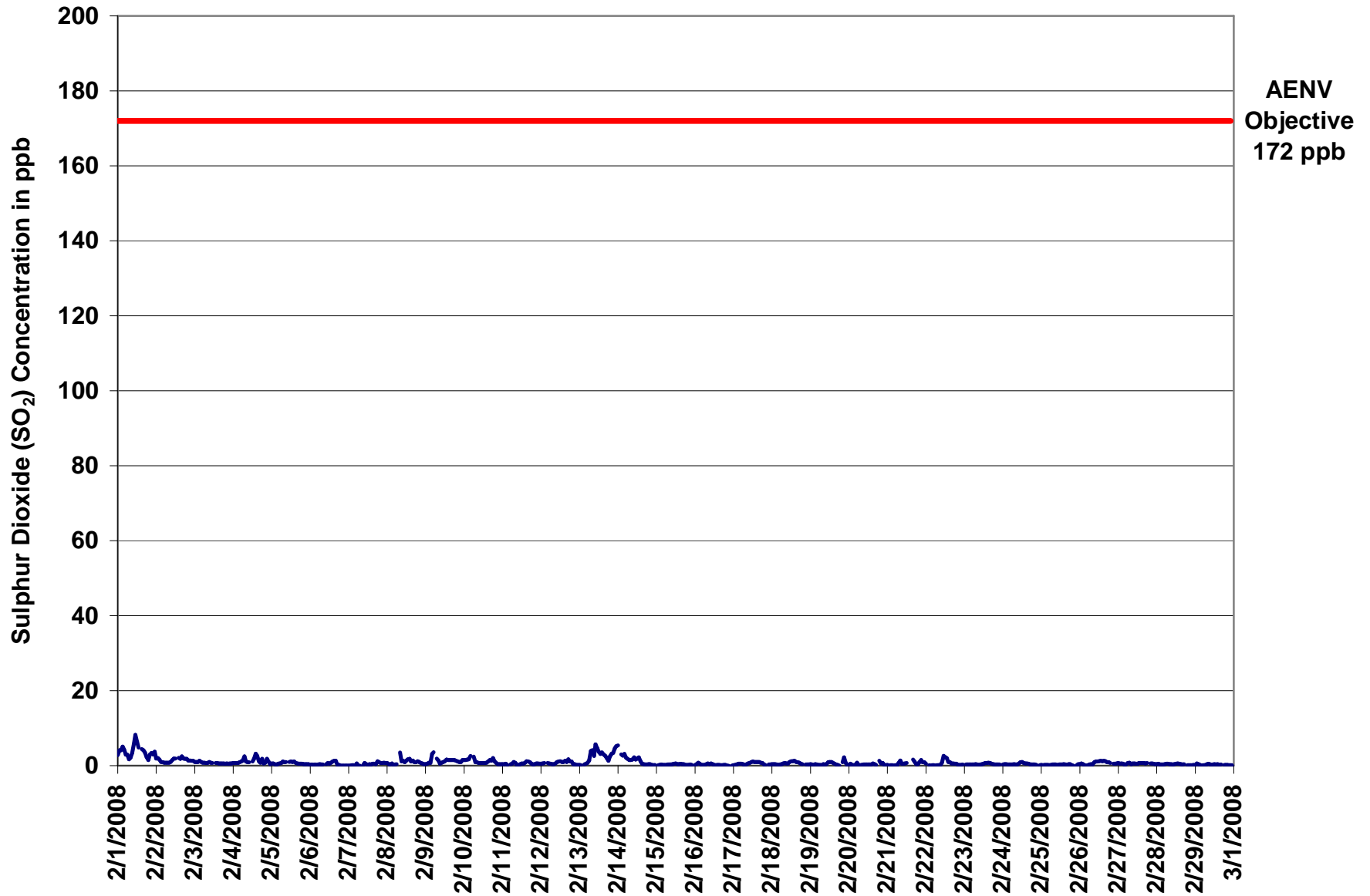


Figure 16. PAS – Brooks Sulphur Dioxide 1-hr Average Monthly Trend



Station: Portable-Brooks  
 Station Owner: PAS

**INSTANTANEOUS (30 Second) MAXIMUM TABLE**

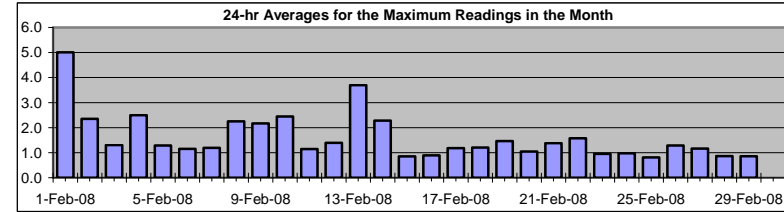
**Sulphur Dioxide (SO<sub>2</sub>)**

Monitoring Dates: February 1, 2008 to March 1, 2008

**Summary**

Maximum 1-hr Value:	17.7	ppb	8-Feb	8:00 9:00
Maximum 24-hr Value:	5.0	ppb	1-Feb	

AIC Time:	31 hrs	Operational Time:	663 hrs						
Calibration Time:	2 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	7.5	4.5	1.7	1.1	0.8	0.6	0.4	1.6 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																								24-hour Average	Daily Maximum
	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		
1-Feb-08	4	5	5	6	5	4	4	3	4	5	8	10	7	7	A	7	6	5	3	2	4	4	4	6	5.0	9.5
2-Feb-08	3	4	3	2	2	1	1	1	2	2	2	3	3	A	3	2	5	4	3	3	2	2	2	2	2.4	4.5
3-Feb-08	2	1	2	2	2	1	2	1	1	1	1	1	A	2	1	1	1	1	1	1	1	1	1	1.3	1.9	
4-Feb-08	1	2	1	1	2	2	7	8	2	2	1	A	2	4	4	3	3	2	4	1	1	3	2	1	2.5	7.5
5-Feb-08	1	1	1	1	1	1	1	2	2	2	A	2	2	2	3	1	1	1	1	1	1	1	1	1.3	2.8	
6-Feb-08	1	1	1	1	1	1	1	1	1	A	1	1	1	3	3	2	2	1	1	1	1	0	0	1	1.2	3.4
7-Feb-08	0	1	1	1	1	1	1	0	A	1	2	2	1	1	1	1	1	1	4	2	2	1	2	1	1.2	3.6
8-Feb-08	1	1	1	1	1	1	2	A	18	2	3	1	2	2	2	2	2	2	2	2	2	1	1	1	2.3	17.7
9-Feb-08	1	1	1	1	5	8	A	5	2	1	1	2	2	2	2	2	2	2	2	2	2	2	1	2	2.2	7.7
10-Feb-08	2	2	2	3	3	A	4	1	1	1	1	1	2	1	1	5	6	3	7	5	1	1	1	1	2.4	6.9
11-Feb-08	1	1	1	1	A	1	1	2	2	0	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1.1	2.2
12-Feb-08	1	1	1	A	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1	1	1.4	2.3
13-Feb-08	1	1	A	1	1	2	3	6	5	5	8	5	5	4	4	4	3	3	2	4	4	5	5	7	3.7	7.8
14-Feb-08	8	A	4	4	4	3	2	2	2	2	3	2	3	3	3	1	1	1	1	1	1	1	1	1	2.3	8.2
15-Feb-08	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.9	1.1
16-Feb-08	1	1	3	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	0	A	1	0.9	2.5
17-Feb-08	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	1	1	A	1	1	1.2	2.1
18-Feb-08	1	1	1	1	1	1	1	1	2	1	1	2	2	2	2	2	2	2	1	1	A	1	1	1	1.2	2.0
19-Feb-08	1	1	1	1	1	1	1	1	1	1	1	2	1	2	1	1	1	1	1	A	3	8	4	1	1.5	7.8
20-Feb-08	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	A	3	1	2	1	1	1.0	3.1
21-Feb-08	1	1	1	1	0	1	1	3	3	1	1	1	1	C	C	A	2	3	1	1	2	3	2	2	1.4	3.4
22-Feb-08	1	A	1	1	1	1	0	1	1	1	3	5	4	7	2	2	1	1	2	1	1	1	1	1	1.6	7.2
23-Feb-08	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	A	1.0	1.5
24-Feb-08	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	A	1	1.0	1.8
25-Feb-08	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.8	1.2
26-Feb-08	2	1	1	1	0	1	1	1	1	2	2	2	2	2	2	2	2	1	1	2	A	1	1	1	1.3	1.9
27-Feb-08	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1.2	1.8
28-Feb-08	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0.9	1.3
29-Feb-08	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	1.5
Hourly Avg	1.5	1.3	1.4	1.3	1.4	1.4	1.5	1.7	2.1	1.4	1.8	1.9	1.9	2.1	1.8	1.9	1.8	1.6	1.7	1.5	1.4	1.7	1.3	1.4		
Hourly Max	8.2	5.1	5.1	5.7	5.3	7.7	7.4	7.5	17.7	5.0	7.8	9.5	7.1	7.2	4.2	7.0	5.8	4.5	6.9	4.5	4.0	7.8	5.1	6.8		





Station: Portable-Brooks  
 Station Owner: PAS

**INSTANTANEOUS (30 Second) MAXIMUM TABLE**

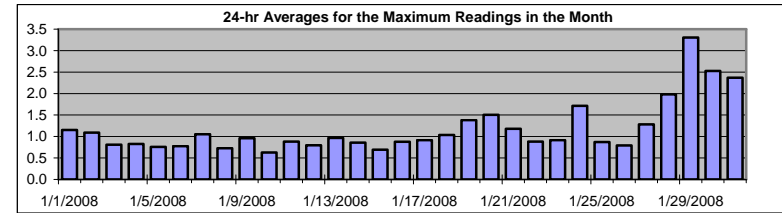
**Sulphur Dioxide (SO<sub>2</sub>)**

Monitoring Dates: January 1, 2008 to February 1, 2008

**Summary**

Maximum 1-hr Value:	8.5	ppb	31-Jan	21:00 22:00
Maximum 24-hr Value:	3.3	ppb	29-Jan	

AIC Time:	32 hrs	Operational Time:	709 hrs						
Calibration Time:	3 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	5.1	3.1	1.2	0.9	0.7	0.5	0.5	1.2 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-Jan-08	1	1	1	1	1	1	1	1	1	1	1	1	1	3	2	3	2	A	2	1	1	1	1	1	1.2	2.8
2-Jan-08	1	1	1	1	1	1	1	1	2	2	1	2	2	1	1	1	A	1	1	1	1	1	1	1	1.1	2.0
3-Jan-08	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.1
4-Jan-08	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	1.3
5-Jan-08	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	0.9
6-Jan-08	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.8	1.3
7-Jan-08	1	1	1	1	1	1	1	1	1	1	1	A	1	1	2	1	1	1	1	1	1	1	1	1	1.1	1.5
8-Jan-08	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.4
9-Jan-08	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	2	2	1	1	1	1	1	1.0	1.6
10-Jan-08	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0.6	1.1
11-Jan-08	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
12-Jan-08	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	A	1	0.8	2.0
13-Jan-08	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	A	1	1	1.0	2.2
14-Jan-08	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
15-Jan-08	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	0.7	1.7
16-Jan-08	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.9	2.0
17-Jan-08	1	1	1	1	1	1	1	1	1	1	2	C	C	C	A	1	1	1	2	1	1	1	1	1	0.9	2.1
18-Jan-08	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1.0	1.9
19-Jan-08	A	1	1	1	1	2	1	3	2	1	1	1	1	2	3	2	1	2	2	1	1	1	1	A	1.4	2.9
20-Jan-08	1	1	1	1	1	3	3	1	1	2	2	2	1	1	3	3	2	2	1	1	1	1	A	1	1.5	3.4
21-Jan-08	2	1	1	3	2	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1.2	3.1
22-Jan-08	1	A	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	0.9	1.7
23-Jan-08	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	1.4
24-Jan-08	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	3	4	5	4	1	1	A	1	1.7	4.9
25-Jan-08	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.4
26-Jan-08	1	1	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0	1	1	0.8	1.9
27-Jan-08	1	1	1	1	1	0	1	1	1	1	1	5	7	2	2	1	1	1	1	A	1	1	1	1	1.3	7.0
28-Jan-08	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	3	3	A	3	2	3	3	3	2.0	3.1
29-Jan-08	3	3	2	2	2	2	3	3	3	3	4	7	4	6	8	3	2	A	2	2	2	2	4	3	3.3	8.4
30-Jan-08	3	3	2	2	2	2	2	2	2	2	4	2	3	3	5	4	A	1	4	1	2	2	1	1	2.5	5.1
31-Jan-08	3	4	1	1	1	2	2	1	1	1	1	1	1	1	1	A	3	3	2	1	3	9	6	5	2.4	8.5
Hourly Avg	1.1	1.1	0.9	1.0	0.9	1.0	1.0	1.0	1.1	1.0	1.3	1.4	1.4	1.4	1.6	1.4	1.4	1.2	1.3	1.1	1.1	1.3	1.2	1.1		
Hourly Max	3.2	3.9	2.4	3.1	2.3	2.7	2.8	2.9	3.3	3.3	4.2	7.2	7.0	6.2	8.4	4.3	3.2	3.7	4.9	3.8	3.2	8.5	6.3	5.3		

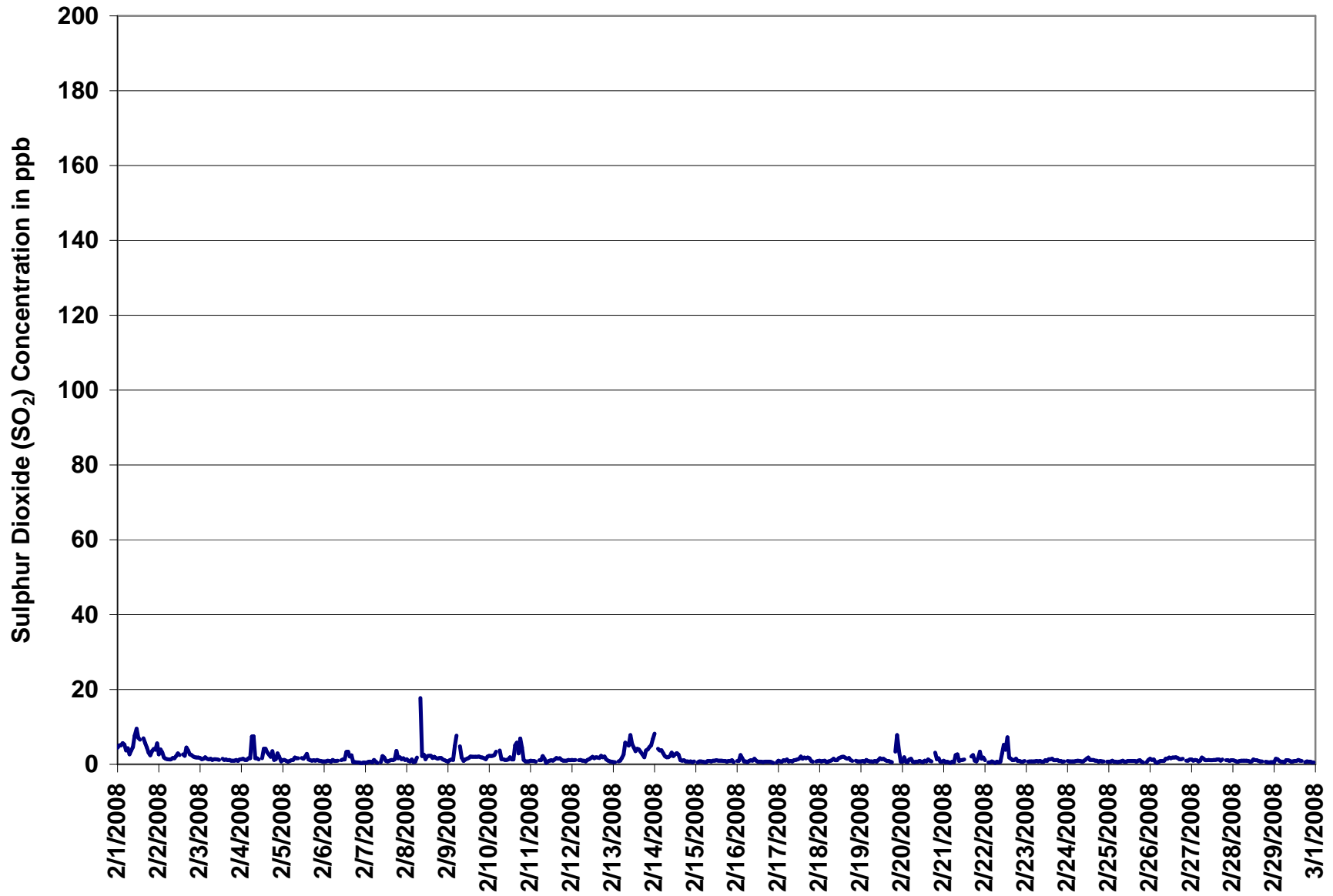
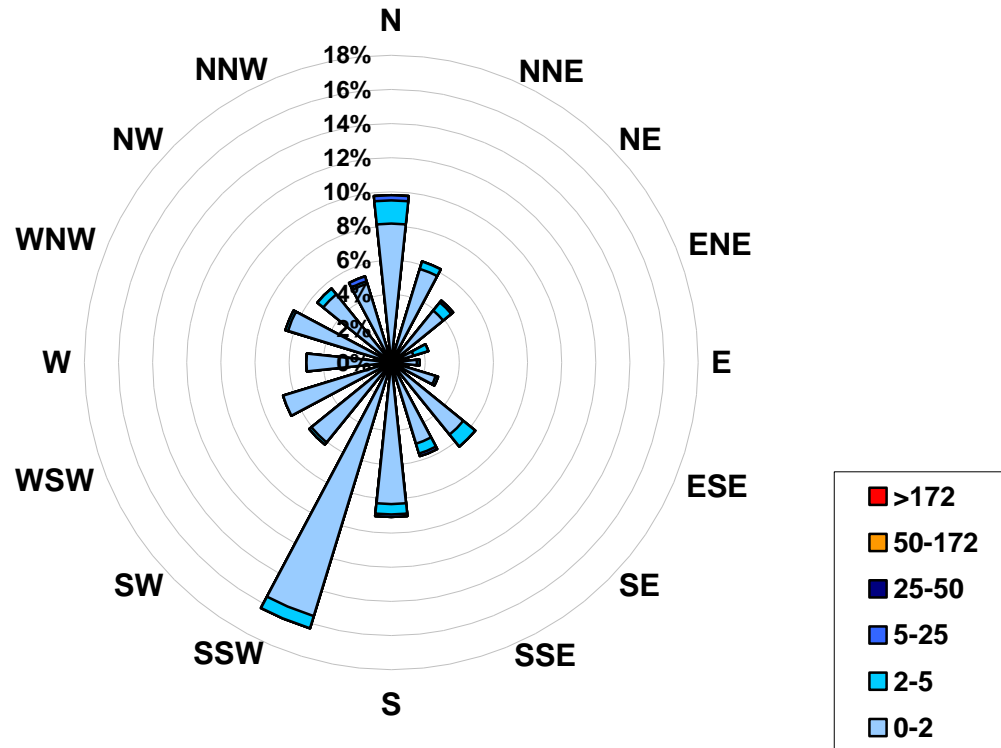


Figure 17. PAS – Brooks Sulphur Dioxide Instantaneous (30 Second) Maximum Value Monthly Trend



**1-hr Average Concentration Rose for Sulphur Dioxide (in ppb) Located at the Portable-Brooks Site for February 2008**



**Calms: 0%**

Frequency Distribution of SO <sub>2</sub> in ppb			
Range	Frequency (hrs)		
0.0 < 2	603		
2 to 5	49		
5 to 25	7		
25 to 50	0		
50 to 172	0		
> 172	0		
<b>Total Non-Zero Values</b>	<b>663</b>		



# PAS – Brooks Ozone Monthly Summary

Station: Portable-Brooks  
 Station Owner: PAS

## HOURLY AVERAGE TABLE

## Ozone (O<sub>3</sub>)

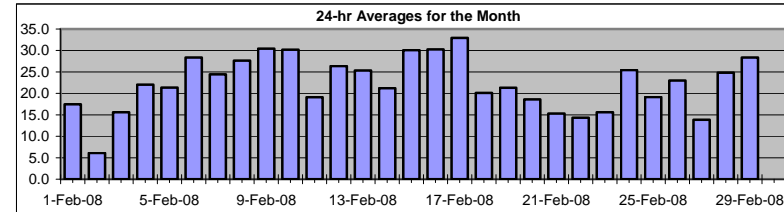
Monitoring Dates: February 1, 2008 to March 1, 2008

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

### Summary

Number of 1-hr Exceedances:	0		
Maximum 1-hr Average:	47.6 ppb	23-Feb	15:00 16:00
Maximum 24-hr Average:	32.9 ppb	17-Feb	

AIC Time:	32 hrs	Operational Time:	662 hrs						
Calibration Time:	2 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	42.0	37.7	30.7	24.6	15.1	0.7	0.0	22.4 ppb	24.6 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																								24-hour Average	Daily Maximum
	Hour Start	Hour End	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00		
1-Feb-08	22	22	22	20	19	18	15	14	14	23	24	25	26	26	A	24	22	18	20	19	7	3	0	1	17.5	26.3
2-Feb-08	1	2	3	2	1	4	6	2	4	10	14	15	17	A	19	18	12	7	2	0	1	0	0	0	6.1	19.1
3-Feb-08	0	0	0	0	0	0	1	6	10	16	20	21	A	24	26	27	27	26	27	28	25	25	27	26	15.6	27.7
4-Feb-08	26	27	25	25	25	25	24	19	21	24	28	A	29	28	28	27	24	22	20	25	19	15	1	0	22.0	29.0
5-Feb-08	0	0	4	7	6	7	4	3	7	15	A	28	31	33	33	33	34	34	36	36	35	35	35	34	21.4	36.0
6-Feb-08	34	37	37	37	35	33	28	24	21	A	23	23	35	30	31	32	25	18	21	24	26	26	26	29	28.4	36.9
7-Feb-08	29	27	31	30	35	36	33	26	A	22	26	28	30	30	27	26	22	22	19	20	14	15	7	9	24.4	35.5
8-Feb-08	13	12	19	36	37	35	30	A	18	24	26	29	29	29	29	29	29	29	29	29	31	31	32	31	27.6	36.8
9-Feb-08	30	29	31	29	26	29	A	30	31	33	33	32	32	32	32	32	32	30	30	29	29	29	30	29	30.4	33.1
10-Feb-08	30	31	31	31	27	A	28	33	32	33	32	33	33	33	33	32	31	30	28	27	25	27	28	27	30.2	33.0
11-Feb-08	27	29	27	24	A	24	22	18	19	21	25	26	28	29	29	27	25	12	1	2	1	9	10	6	19.1	29.1
12-Feb-08	4	16	27	A	22	23	18	22	20	23	24	30	29	29	32	33	31	34	35	31	31	32	30	30	26.4	35.2
13-Feb-08	20	27	A	31	30	28	28	27	30	32	30	32	33	33	30	29	26	13	5	17	19	23	22	20	25.3	33.0
14-Feb-08	18	A	23	24	22	23	20	12	12	17	21	24	23	25	25	23	22	15	16	26	30	25	22	22	21.2	30.0
15-Feb-08	A	28	23	26	26	23	25	28	26	30	30	32	33	31	32	33	34	34	36	35	35	32	30	A	30.1	35.7
16-Feb-08	27	21	25	27	22	17	6	13	30	34	39	42	43	42	41	38	38	34	33	33	29	32	A	32	30.3	42.9
17-Feb-08	29	31	34	34	34	33	28	31	31	34	35	37	39	40	43	42	41	37	23	21	19	A	32	27	32.9	42.6
18-Feb-08	28	26	22	13	5	13	16	13	15	15	20	27	29	32	33	31	29	30	20	15	A	7	11	14	20.1	32.6
19-Feb-08	16	10	9	1	1	5	8	8	8	16	25	27	30	33	36	39	40	39	36	A	26	28	25	26	21.3	40.4
20-Feb-08	30	29	33	32	32	27	19	9	13	15	19	19	20	21	22	21	18	9	A	12	8	7	4	10	18.6	33.2
21-Feb-08	7	8	12	15	13	9	16	6	10	18	23	23	23	A	27	C	C	A	22	18	24	14	12	7	15.3	26.6
22-Feb-08	5	A	15	14	13	10	10	10	12	12	15	18	19	20	23	26	24	17	13	16	13	15	10	0	14.3	26.2
23-Feb-08	A	0	0	0	0	1	1	1	6	15	23	22	25	26	37	48	44	33	34	16	7	3	1	A	15.6	47.6
24-Feb-08	6	12	11	10	12	14	15	18	23	25	30	34	34	37	42	42	36	40	36	34	28	28	A	20	25.4	42.2
25-Feb-08	10	11	6	4	1	1	6	2	8	22	28	28	27	28	31	30	25	28	26	33	31	A	26	29	19.1	32.7
26-Feb-08	28	29	23	17	10	2	0	2	11	21	28	32	37	38	40	39	32	26	22	22	A	23	24	23	23.0	40.4
27-Feb-08	23	18	18	16	15	17	16	12	17	15	12	17	21	22	21	21	17	14	6	A	0	0	1	0	13.8	22.6
28-Feb-08	0	1	1	1	1	20	37	38	38	35	36	38	39	39	41	41	40	34	A	25	22	17	13	16	24.8	41.4
29-Feb-08	20	20	21	18	15	14	16	16	21	25	26	34	41	41	40	38	35	A	33	37	36	34	35	38	28.4	41.4
Hourly Avg	17.8	18.5	19.0	18.7	17.3	17.4	16.9	15.8	18.1	22.3	25.5	27.6	29.8	30.8	31.6	31.5	29.1	25.3	23.2	23.3	21.0	19.8	18.2	18.7		
Hourly Max	34.2	36.6	36.9	36.5	36.8	35.5	36.6	38.2	37.5	35.2	38.5	41.6	42.9	42.4	42.6	47.6	44.1	39.6	35.8	37.3	35.9	35.3	35.1	37.6		

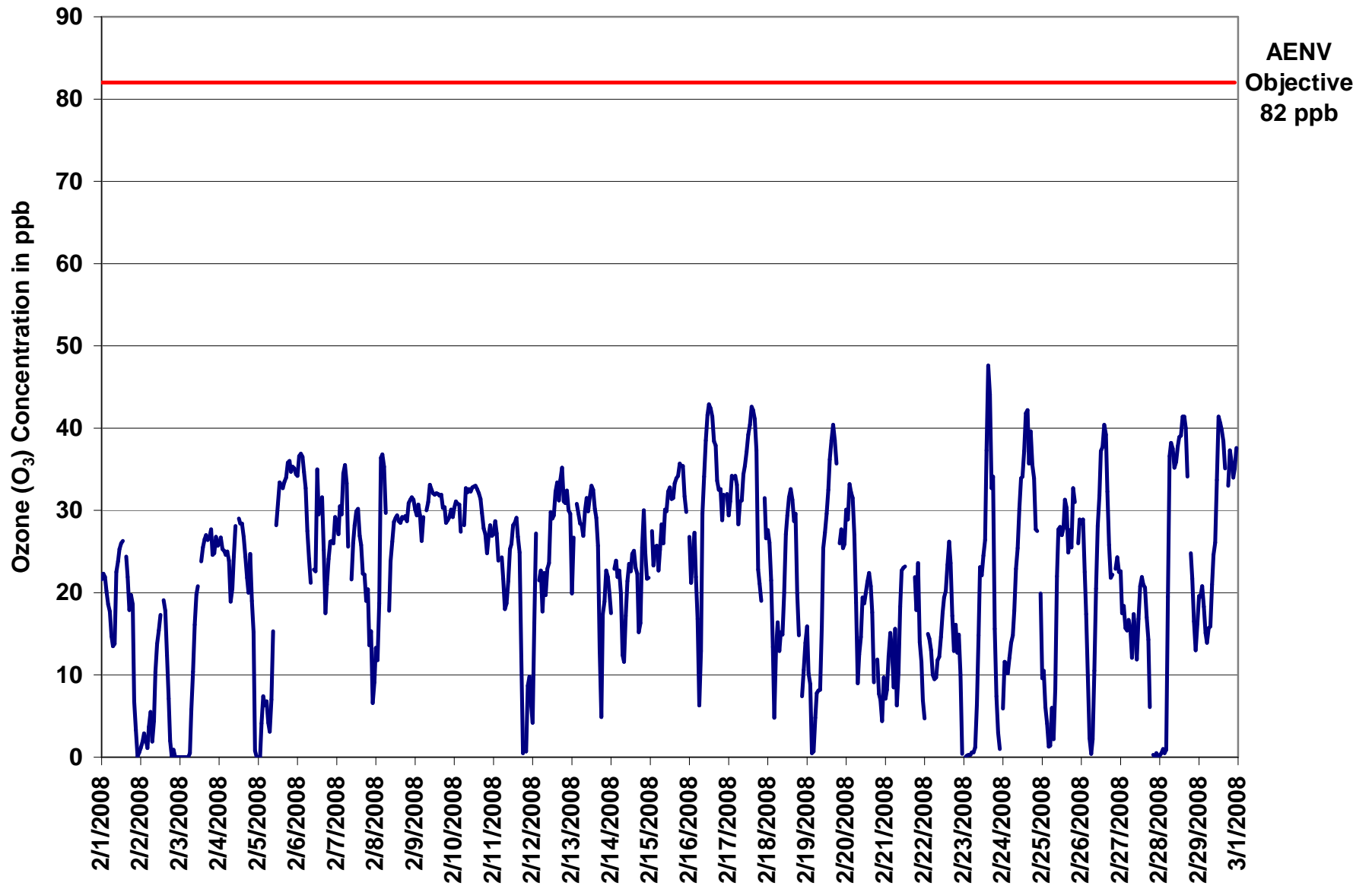


Figure 18. PAS – Brooks Ozone 1-hr Average Monthly Trend



Station: Portable-Brooks  
 Station Owner: PAS

**INSTANTANEOUS (30 Second) MAXIMUM TABLE**

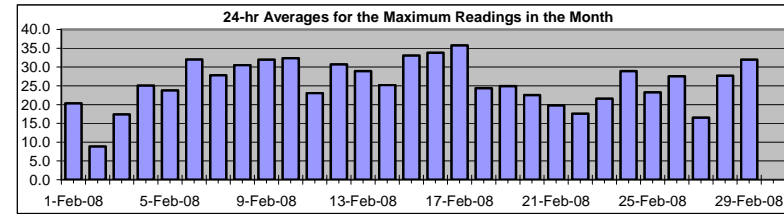
**Ozone (O<sub>3</sub>)**

Monitoring Dates: February 1, 2008 to March 1, 2008

**Summary**

Maximum 1-hr Value:	54.8	ppb	23-Feb	16:00 17:00
Maximum 24-hr Value:	35.8	ppb	17-Feb	

AIC Time:	32 hrs	Operational Time:	662 hrs						
Calibration Time:	2 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	45.3	40.9	33.2	27.7	19.3	3.1	0.6	25.8 ppb	27.7 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																								24-hour Average	Daily Maximum
	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		
1-Feb-08	24	24	24	22	20	20	19	19	21	24	26	27	28	28	A	26	24	21	23	24	12	10	2	2	20.3	27.6
2-Feb-08	5	6	10	8	4	6	8	6	9	12	16	17	20	A	20	20	17	10	8	1	3	1	0	0	8.8	20.1
3-Feb-08	1	0	1	0	1	2	1	12	14	19	21	22	A	26	27	28	29	29	28	29	27	27	29	27	17.4	29.3
4-Feb-08	28	29	27	27	27	27	27	23	25	26	30	A	31	30	30	29	27	26	26	26	26	25	8	0	25.1	30.9
5-Feb-08	1	0	9	9	10	9	9	5	12	22	A	31	34	35	35	36	35	36	38	37	36	37	36	36	23.8	37.6
6-Feb-08	36	38	38	38	37	35	31	27	27	A	26	27	43	34	34	35	30	24	26	30	29	30	30	32	32.0	42.5
7-Feb-08	32	31	32	34	37	38	36	31	A	26	29	31	32	32	28	30	25	25	21	23	20	19	16	13	27.8	37.5
8-Feb-08	15	15	31	39	39	37	35	A	25	26	29	32	31	31	31	31	30	32	31	32	32	33	33	33	30.5	39.4
9-Feb-08	32	32	32	31	29	31	A	31	33	34	34	34	33	33	33	33	33	32	32	30	31	31	32	31	32.0	34.3
10-Feb-08	33	34	32	32	30	A	33	34	34	34	34	34	34	34	34	34	33	34	33	31	32	27	30	30	32.4	34.2
11-Feb-08	31	32	32	26	A	27	24	21	21	25	27	28	30	30	30	31	30	28	2	5	4	17	18	12	23.1	32.3
12-Feb-08	8	27	29	A	28	26	23	25	22	31	28	35	39	35	36	37	35	37	37	33	36	36	32	32	30.7	39.3
13-Feb-08	27	31	A	33	31	31	31	30	31	34	32	33	34	34	31	30	30	24	19	24	24	25	24	23	28.9	34.4
14-Feb-08	20	A	26	27	27	26	25	22	16	21	25	25	24	28	28	27	26	20	21	32	33	28	27	29	25.2	32.5
15-Feb-08	A	33	29	31	30	30	30	31	29	32	32	34	34	33	33	34	35	36	37	37	37	36	32	A	33.1	37.1
16-Feb-08	31	27	29	32	25	19	13	29	36	36	41	44	44	44	43	41	40	38	36	34	32	34	A	34	33.8	44.2
17-Feb-08	34	34	35	36	36	35	34	34	34	36	37	39	41	42	44	44	43	42	31	25	23	A	36	31	35.8	44.4
18-Feb-08	30	28	26	23	13	21	19	17	17	19	23	31	31	33	34	34	32	32	29	17	A	16	17	18	24.4	34.3
19-Feb-08	21	17	14	4	4	7	10	11	11	22	28	29	31	35	39	41	42	40	38	A	36	32	30	31	24.9	42.0
20-Feb-08	35	35	35	34	34	31	26	19	16	18	22	21	21	24	26	23	21	14	A	16	13	13	11	12	22.5	35.3
21-Feb-08	13	16	18	19	16	13	19	16	15	22	25	24	27	A	28	C	C	A	25	24	31	20	16	12	19.8	30.6
22-Feb-08	10	A	17	16	16	12	11	12	15	14	17	19	21	22	26	28	27	22	18	24	17	19	20	4	17.6	27.8
23-Feb-08	A	1	1	2	1	2	2	3	11	22	25	23	27	30	47	55	55	47	50	28	27	16	2	A	21.6	54.8
24-Feb-08	11	13	13	15	16	16	17	24	24	29	34	35	36	39	46	45	39	42	39	37	33	31	A	32	28.9	45.5
25-Feb-08	29	16	8	6	3	5	13	5	17	27	30	30	29	30	33	33	28	33	29	35	34	A	30	32	23.3	35.0
26-Feb-08	32	31	26	23	22	6	2	6	14	26	31	34	41	41	45	46	38	32	29	27	A	28	26	26	27.5	46.1
27-Feb-08	25	21	20	19	17	19	19	16	21	18	16	20	23	24	23	23	20	17	14	A	2	1	2	2	16.5	25.1
28-Feb-08	1	2	3	2	4	33	39	40	39	38	38	39	40	41	43	43	42	38	A	29	26	21	17	21	27.7	43.3
29-Feb-08	26	25	25	21	19	17	18	18	24	27	28	41	43	43	42	41	39	A	44	42	38	39	37	41	32.0	44.1
Hourly Avg	21.7	22.1	22.2	21.7	20.6	20.7	20.5	20.2	21.8	25.7	27.8	29.9	32.2	32.9	33.9	34.1	32.4	29.9	28.2	27.1	25.4	24.1	21.9	22.0		
Hourly Max	35.8	38.3	38.2	39.2	39.4	37.5	38.6	40.1	38.8	37.7	40.9	43.6	44.2	43.8	46.8	54.5	54.8	47.4	49.9	42.3	38.0	38.5	37.1	40.9		

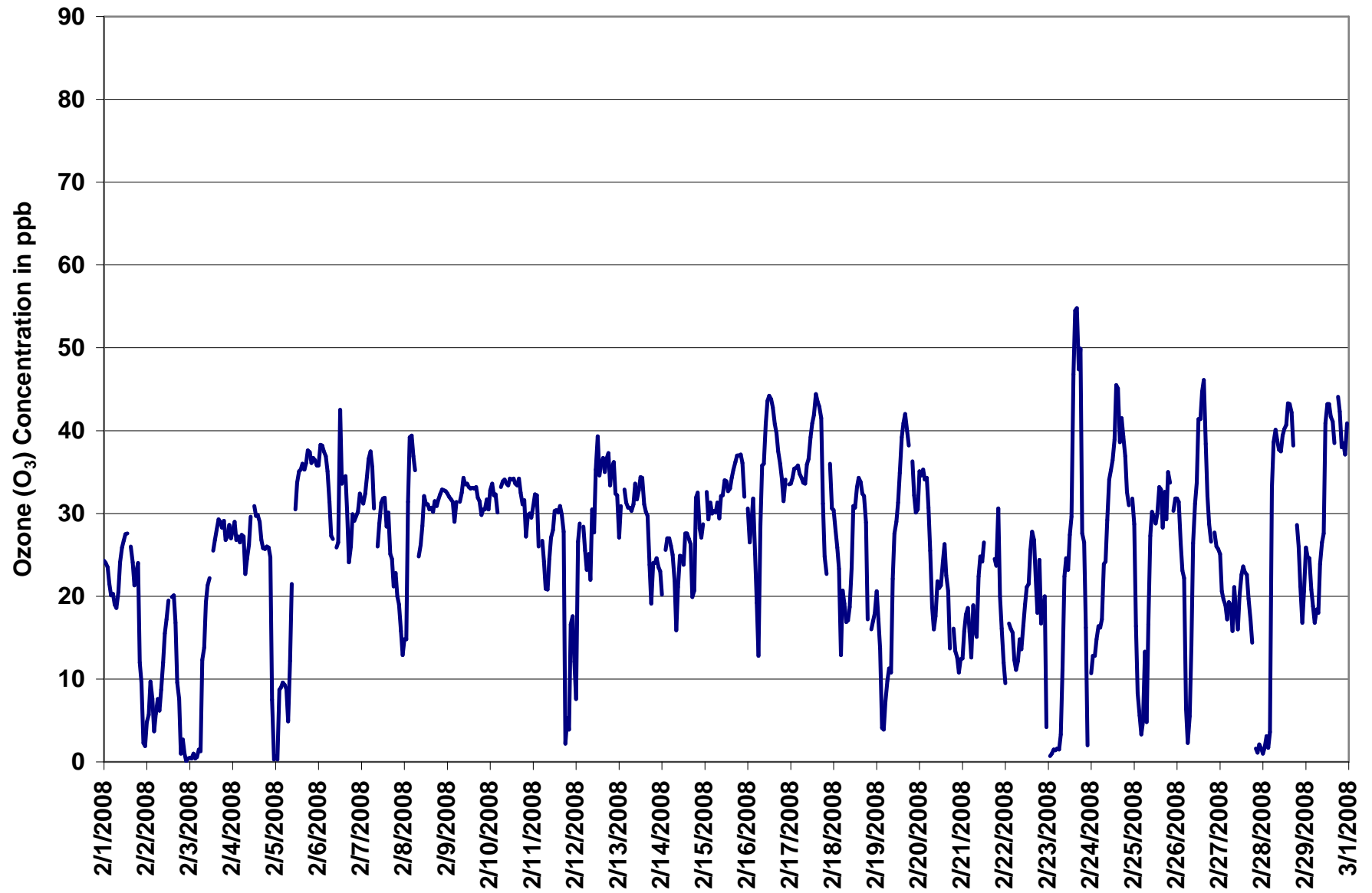
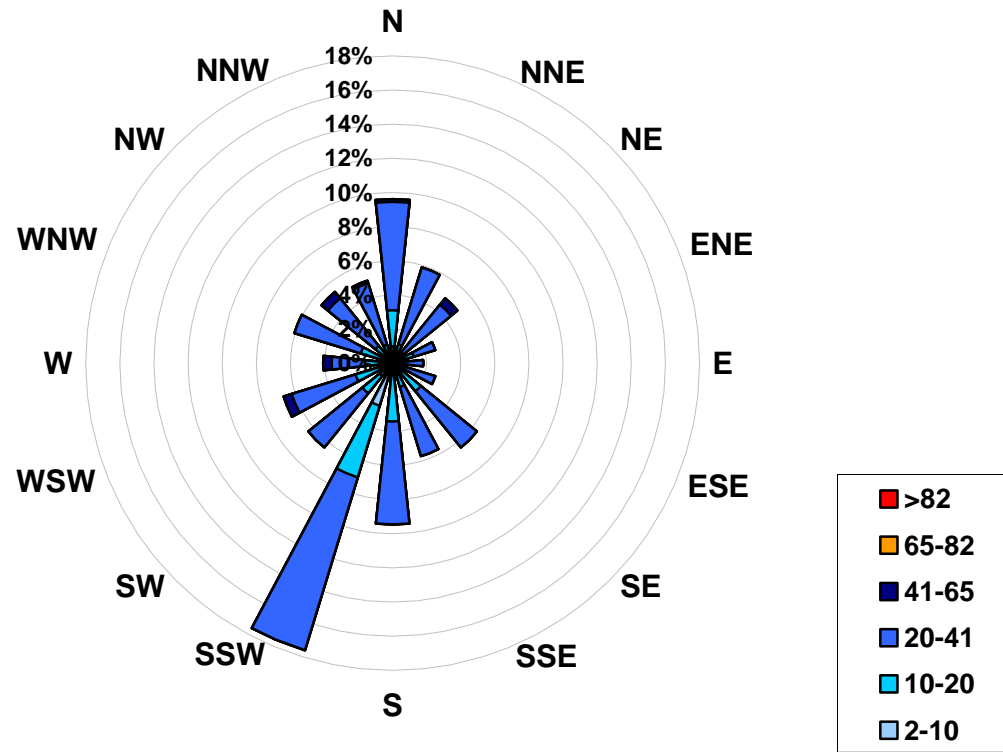


Figure 19. PAS – Brooks Ozone Instantaneous (30 Second) Maximum Value Monthly Trend



**1-hr Average Concentration Rose for Ozone (in ppb) Located at the Portable-Brooks Site for February 2008**



**Calms: 0%**

Frequency Distribution of O <sub>3</sub> in ppb			Frequency (hrs)
Range			
2.0	< 10		108
10	to 20		133
20	to 41		405
41	to 65		14
65	to 82		0
	> 82		0
Total Non-Zero Values			662





## PAS – Brooks Ozone Eight Hour Average Summary

Station: Portable-Brooks  
 Station Owner: PAS

### EIGHT HOUR RUNNING AVERAGE TABLE

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

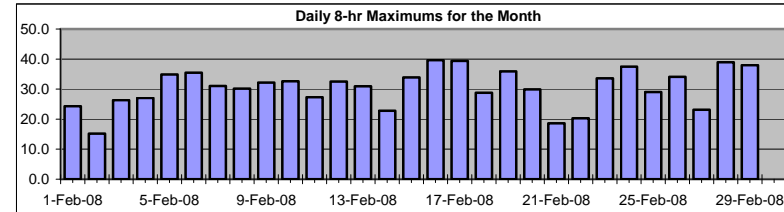
Monitoring Dates: February 1, 2008 to March 1, 2008

Objective Limit: Alberta Environment: 8-hr 65 ppb

**Summary**

Number of 8-hr Exceedances:	0
Maximum 8-hr Average:	39.7 ppb 16-Feb 16:00 17:00

Percentile	99	95	75	50	25	5	1
	38.6	35.4	29.8	24.0	16.1	4.5	0.4



**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																								Daily Maximum
	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	
1-Feb-08	21	22	22	22	22	21	20	19	18	18	18	19	20	21	22	23	24	24	23	22	19	16	14	11	24.3
2-Feb-08	9	7	4	2	2	2	2	3	3	4	5	7	9	10	12	14	15	15	13	11	8	7	5	3	15.2
3-Feb-08	1	0	0	0	0	0	0	1	2	4	7	9	10	14	17	20	23	24	25	26	26	26	26	26	26.3
4-Feb-08	26	26	26	26	26	26	25	24	24	23	24	24	24	25	25	27	27	27	26	25	24	23	19	16	27.1
5-Feb-08	13	10	8	6	4	3	4	4	5	7	7	10	14	17	22	26	30	32	33	34	34	34	35	35	34.9
6-Feb-08	35	35	35	35	35	35	34	33	31	31	29	27	27	26	27	28	28	27	27	27	26	25	25	24	35.5
7-Feb-08	25	26	27	28	29	30	31	31	30	29	29	29	29	28	27	27	26	26	25	23	21	18	16	31.0	
8-Feb-08	15	14	14	16	19	21	24	26	27	28	29	28	27	26	26	27	28	29	29	29	29	30	30	30	30.2
9-Feb-08	30	30	31	31	30	30	29	29	29	30	30	31	31	32	32	32	32	32	32	31	31	30	30	30	32.2
10-Feb-08	30	30	30	30	30	30	30	30	30	31	31	31	32	32	33	33	32	32	32	31	30	29	29	28	32.6
11-Feb-08	27	27	27	27	27	26	24	23	22	22	22	23	23	23	24	25	26	25	22	19	16	13	11	8	27.3
12-Feb-08	6	6	9	10	13	15	17	19	21	22	22	23	23	24	26	28	29	30	32	32	32	33	32	32	32.5
13-Feb-08	30	29	29	29	28	28	28	27	29	29	29	30	30	30	31	31	30	28	25	23	21	20	19	18	31.0
14-Feb-08	17	18	20	21	22	22	21	20	19	19	19	19	19	19	20	21	22	22	22	23	23	22	22	22	22.8
15-Feb-08	22	24	25	25	24	24	25	25	26	26	27	28	28	30	30	31	32	32	33	34	34	34	34	34	33.9
16-Feb-08	33	31	29	28	26	24	21	20	20	22	23	25	28	31	35	39	40	40	39	38	36	35	34	33	39.7
17-Feb-08	32	31	31	32	32	33	32	32	32	33	33	33	34	35	36	38	39	39	38	36	33	32	31	28	39.4
18-Feb-08	27	25	25	24	22	21	19	17	15	14	14	16	19	21	23	25	27	29	29	27	27	23	20	18	28.8
19-Feb-08	16	13	12	10	9	8	8	7	6	7	9	12	16	19	23	27	31	34	35	36	35	33	31	31	35.9
20-Feb-08	30	29	28	29	29	29	28	26	24	22	21	19	17	17	17	19	19	19	18	18	16	14	11	10	29.9
21-Feb-08	8	8	9	9	10	10	11	11	11	12	14	15	16	17	19	N	N	N	N	N	N	N	N	N	18.6
22-Feb-08	14	14	13	13	11	11	11	11	12	12	12	12	13	14	16	18	20	20	20	20	19	18	17	13	20.3
23-Feb-08	12	10	8	6	4	2	0	0	1	3	6	9	12	15	19	25	30	32	34	33	31	28	23	20	33.6
24-Feb-08	14	11	8	7	8	9	11	12	14	16	18	21	24	27	30	33	35	37	38	38	37	35	35	31	37.5
25-Feb-08	28	24	19	15	11	8	7	5	5	6	9	12	15	19	22	25	27	28	28	28	29	29	28	28	29.0
26-Feb-08	29	29	28	26	23	21	17	14	12	11	11	13	17	21	26	31	33	34	33	32	31	29	27	25	34.1
27-Feb-08	23	22	21	21	20	19	18	17	16	16	15	15	16	16	17	18	18	18	17	17	14	11	8	6	23.2
28-Feb-08	3	1	0	0	0	3	7	12	17	21	26	30	35	37	38	38	39	39	39	37	35	31	27	24	39.0
29-Feb-08	21	19	19	18	17	17	17	17	18	18	19	21	24	27	30	33	35	36	37	38	37	36	36	35	37.9

Hourly Max 34.9 35.3 35.4 35.5 35.5 35.1 34.2 32.9 32.1 32.6 32.7 33.1 35.0 37.4 38.0 38.6 39.7 39.6 39.0 37.9 37.2 36.2 35.5 35.4



# PAS – Brooks Hydrogen Sulphide Monthly Summary

## HOURLY AVERAGE TABLE

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

Station: Portable-Brooks  
 Station Owner: PAS

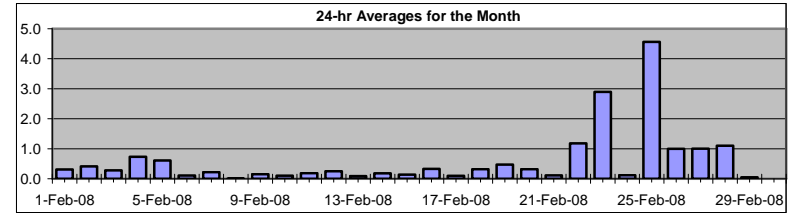
Monitoring Dates: February 1, 2008 to March 1, 2008

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

**Summary**

Number of 1-hr Exceedances:	10
Number of 24-hr Exceedances:	1
Maximum 1-hr Average:	30.6 ppb 25-Feb 4:00 5:00
Maximum 24-hr Value:	4.6 ppb 25-Feb

AIC Time:	31 hrs	Operational Time:	662 hrs						
Calibration Time:	3 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	13.3	1.5	0.3	0.1	0.0	0.0	0.0	0.6 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																								24-hour Average	Daily Maximum	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00		
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Feb-08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	1	1	1	0.3	1.0	
2-Feb-08	1	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	1	1	1	1	0.4	0.9	
3-Feb-08	1	1	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.3	0.8	
4-Feb-08	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	3	13	0.7	12.6	
5-Feb-08	6	3	1	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	6.2	
6-Feb-08	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
7-Feb-08	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0.2	0.8	
8-Feb-08	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1	
9-Feb-08	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
10-Feb-08	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.3	
11-Feb-08	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0.2	0.7	
12-Feb-08	0	0	0	A	2	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0.3	1.9	
13-Feb-08	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0.1	0.8	
14-Feb-08	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	
15-Feb-08	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.3	
16-Feb-08	0	0	0	0	2	2	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	A	0	0.3	1.7	
17-Feb-08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.3	
18-Feb-08	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0.3	0.8	
19-Feb-08	1	1	1	2	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.5	2.6	
20-Feb-08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	2	1	1	1	0.3	1.7	
21-Feb-08	0	0	0	0	0	0	0	0	0	0	0	C	C	C	A	0	0	0	0	0	0	0	0	0	0.1	0.4	
22-Feb-08	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	23	1.2	22.7	
23-Feb-08	A	26	13	3	1	1	2	9	1	5	0	0	0	0	0	0	0	0	1	2	1	1	A	2.9	26.2		
24-Feb-08	2	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	2.3	
25-Feb-08	0	0	2	8	31	21	18	21	1	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	4.6	30.6	
26-Feb-08	0	0	0	0	0	0	13	6	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	1.0	12.7		
27-Feb-08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	A	1	2	2	14	1.0	14.0	
28-Feb-08	9	3	1	3	4	4	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	1.1	9.1	
29-Feb-08	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.0	0.2	
Hourly Avg	0.8	1.3	0.7	0.7	1.5	1.1	1.3	1.5	0.2	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.4	2.0			
Hourly Max	9.1	26.2	12.9	8.2	30.6	21.0	17.7	20.6	1.2	4.8	0.4	0.4	0.5	0.5	0.8	0.8	0.7	0.6	1.4	1.7	1.5	1.8	2.5	22.7			

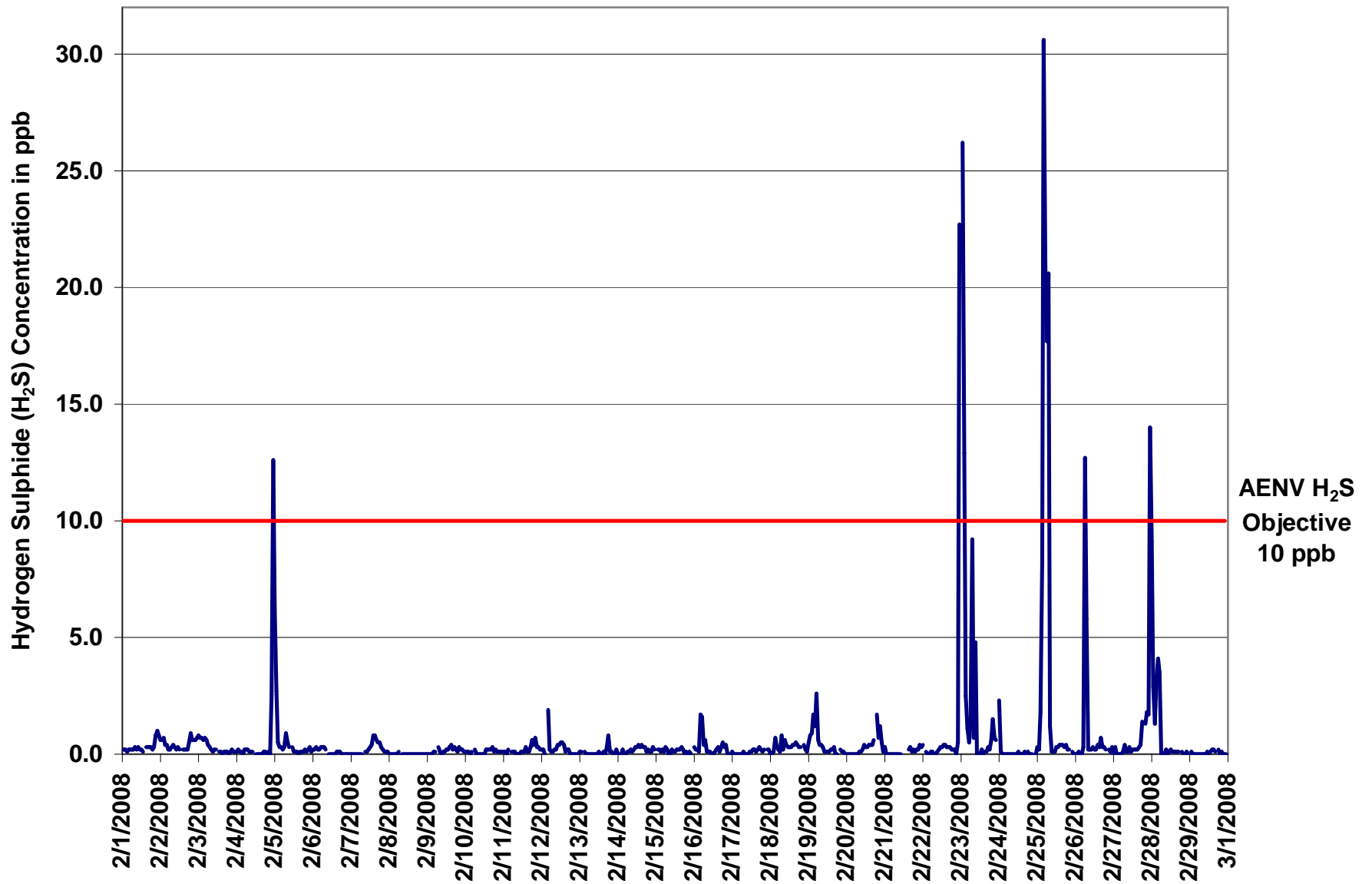


Figure 20. PAS – Brooks Hydrogen Sulphide 1-hr Average Monthly Trend



Station: Portable-Brooks  
 Station Owner: PAS

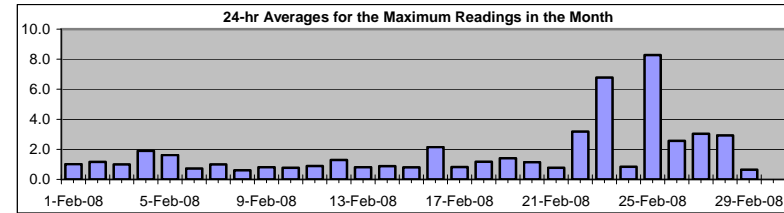
**INSTANTANEOUS (30 Second) MAXIMUM TABLE**

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

Monitoring Dates: February 1, 2008 to March 1, 2008

**Summary**

Maximum 1-hr Value:	52.3	ppb	22-Feb	23:00 0:00
Maximum 24-hr Value:	8.3	ppb	25-Feb	



AIC Time:	31 hrs	Operational Time:	662 hrs						
Calibration Time:	3 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	27.5	4.5	1.0	0.8	0.7	0.5	0.3	1.8 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-Feb-08	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	2	2	1.0	2.1
2-Feb-08	2	1	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	2	1	1	1	2	1.2	1.8
3-Feb-08	2	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5
4-Feb-08	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	13	16	1.9	15.6
5-Feb-08	10	7	1	1	1	1	1	2	2	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1.6	10.4
6-Feb-08	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	1	1	0	0.7	1.1	
7-Feb-08	0	0	1	0	1	0	1	1	A	1	1	1	1	1	2	3	3	1	1	1	1	1	1	1	1.0	3.2
8-Feb-08	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	0.6	0.9
9-Feb-08	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
10-Feb-08	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	1.3
11-Feb-08	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	0.9	1.5
12-Feb-08	1	1	1	A	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.3	10.6
13-Feb-08	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	0.8	2.2
14-Feb-08	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
15-Feb-08	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.3
16-Feb-08	1	1	1	1	13	12	1	3	1	1	1	1	1	1	1	1	1	1	2	1	3	1	A	1	2.2	12.7
17-Feb-08	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	A	1	2	0.8	2.3
18-Feb-08	1	1	1	2	1	1	1	5	1	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.2	4.8
19-Feb-08	2	2	3	3	2	5	2	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1.4	5.1
20-Feb-08	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	3	2	4	1	1	1.1	4.3
21-Feb-08	1	1	1	1	1	1	1	1	1	0	1	C	C	C	A	1	1	1	1	1	1	1	1	1	0.8	1.2
22-Feb-08	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	52	3.2	52.3	
23-Feb-08	A	34	22	6	2	1	20	32	3	11	1	1	1	1	1	1	1	1	1	3	5	2	1	A	6.8	34.1
24-Feb-08	6	1	1	1	1	1	1	1	0	1	1	0	1	1	1	1	1	1	1	1	1	A	1	0.8	6.2	
25-Feb-08	1	1	11	16	50	28	33	31	7	1	1	1	1	1	1	1	1	1	1	1	A	1	1	8.3	49.7	
26-Feb-08	1	1	1	1	1	1	25	15	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2.6	25.3	
27-Feb-08	1	2	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	2	8	A	3	3	12	27	3.0	27.1
28-Feb-08	15	6	4	4	8	18	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	2.9	18.3	
29-Feb-08	0	1	1	1	1	0	0	1	0	1	1	1	1	1	1	1	A	1	1	1	1	1	0	0.6	1.1	
Hourly Avg	2.0	2.5	2.1	1.7	3.6	2.9	3.5	3.8	1.1	1.2	0.8	0.8	0.8	0.9	1.0	0.9	0.9	0.9	1.2	1.0	1.2	1.1	1.9	4.3		
Hourly Max	15.1	34.1	21.9	15.7	49.7	28.2	32.7	32.1	7.0	11.3	1.2	1.3	1.2	1.3	2.3	3.2	2.9	1.6	8.0	3.4	4.5	4.3	12.8	52.3		

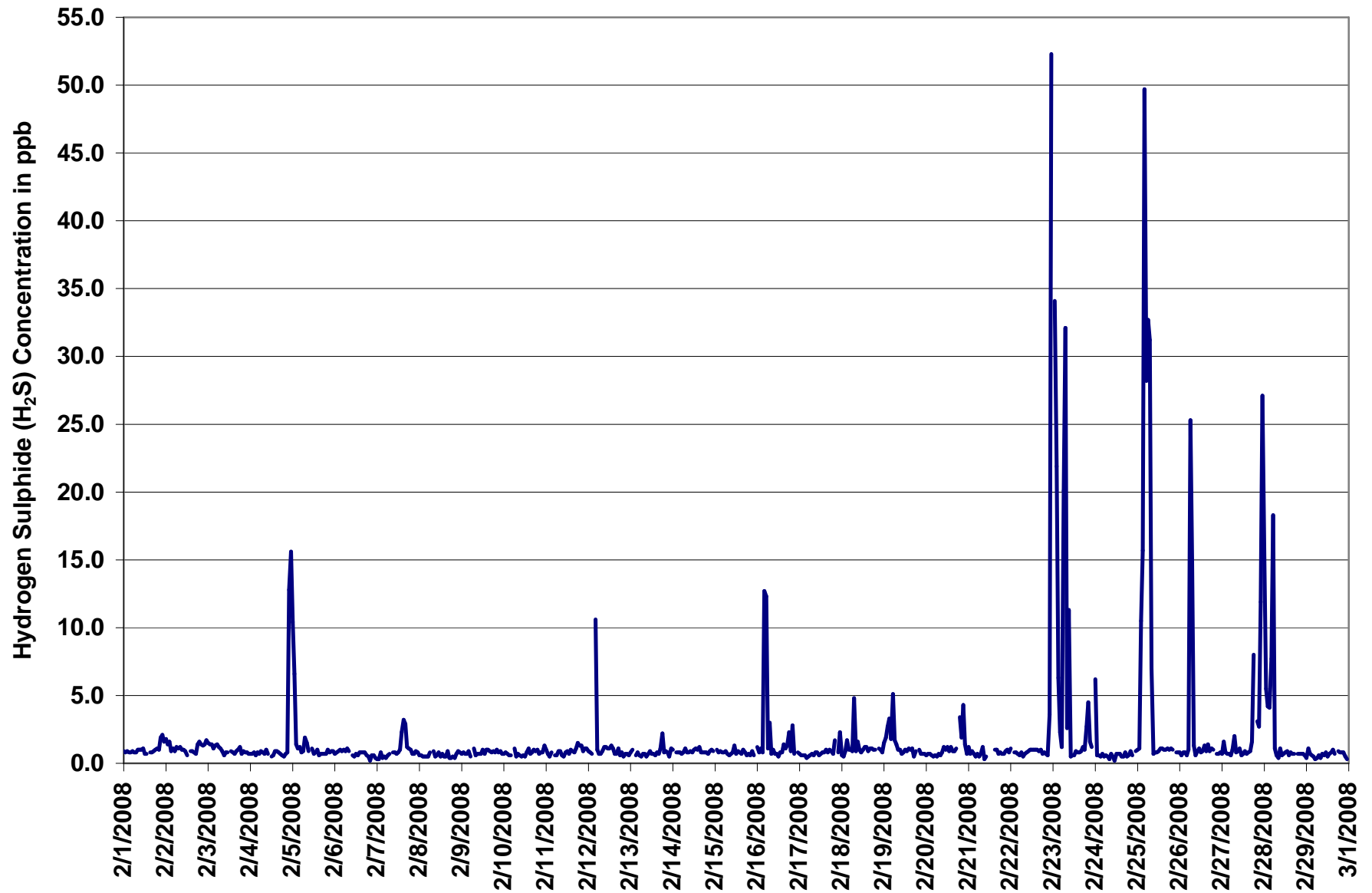
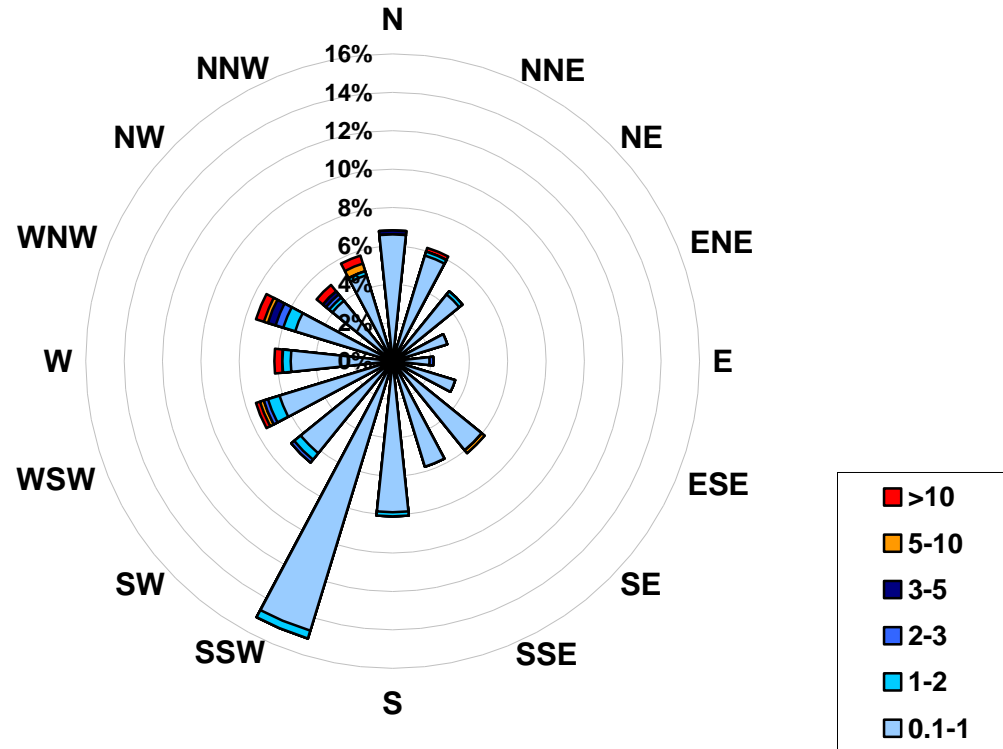


Figure 21. PAS – Brooks Hydrogen Sulphide Instantaneous (30 Second) Maximum Value Monthly Trend



**1-hr Average Concentration Rose for Hydrogen Sulphide (in ppb) Located at the Portable-Brooks Site for February 2008**



**Calms: 0%**

Frequency Distribution of H <sub>2</sub> S in ppb			
Range			Frequency (hrs)
0.1	<	1	619
1	to	2	17
2	to	3	6
3	to	5	4
5	to	10	5
	>	10	10
Total Non-Zero Values			662



# PAS – Brooks Scalar Wind Speed Monthly Summary

Station: Portable-Brooks  
 Station Owner: PAS

## HOURLY AVERAGE TABLE

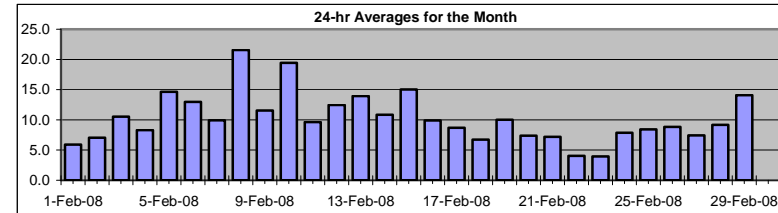
## Wind Speed (WSs)

Monitoring Dates: February 1, 2008 to March 1, 2008

### Summary

Maximum 1-hr Average:	39.3	km/hr	10-Feb	7:00 8:00
Maximum 24-hr Value:	21.6	km/hr	8-Feb	

Calm Time:	0 hrs	0% calms	Operational Time:	696 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%				
Percentile	99	95	75	50	25	5	1	AverageS
	29.8	23.5	13.0	8.7	5.7	3.2	2.0	10.3 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																								24-hr Scalar Average	Daily Max	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Feb-08	8	4	6	6	5	5	5	6	3	5	5	5	5	6	5	5	4	7	9	10	9	8	6	6	5.9	10.4	
2-Feb-08	6	4	4	6	9	7	6	4	5	4	5	8	7	9	12	10	9	9	11	7	9	7	7	3	7.0	12.2	
3-Feb-08	6	8	7	9	8	8	8	9	8	13	13	10	11	13	13	15	15	15	13	11	11	10	11	9	10.5	15.3	
4-Feb-08	8	7	5	3	3	5	8	7	8	9	9	8	10	12	15	15	13	10	13	14	12	5	3	2	8.3	14.8	
5-Feb-08	3	5	9	11	13	10	8	11	12	9	10	11	15	16	17	19	23	19	20	22	28	20	20	22	14.6	27.8	
6-Feb-08	17	24	27	25	21	15	9	7	8	7	6	5	11	12	12	14	13	11	12	12	11	11	12	12	13.0	27.3	
7-Feb-08	12	11	13	16	9	14	9	12	7	6	4	6	8	8	7	8	8	15	19	16	7	6	8	12	9.9	19.4	
8-Feb-08	17	16	13	25	23	21	17	30	31	28	34	25	22	24	18	24	17	18	17	21	21	16	11	21.6	34.0		
9-Feb-08	14	15	15	16	19	16	16	13	13	14	9	6	7	7	7	6	4	2	3	9	13	16	17	21	11.5	20.8	
10-Feb-08	24	25	27	30	29	26	27	39	33	29	27	24	21	12	15	12	12	13	10	14	5	5	4	5	19.4	39.3	
11-Feb-08	8	7	6	7	9	13	11	15	13	15	19	18	16	17	13	9	4	4	3	2	6	6	5	5	9.6	18.9	
12-Feb-08	8	7	8	8	8	6	6	8	5	6	4	5	8	13	18	21	20	25	27	24	23	19	14	9	12.5	27.1	
13-Feb-08	9	12	15	20	25	31	30	32	31	25	17	15	10	6	5	4	5	5	7	10	10	6	3	4	13.9	31.6	
14-Feb-08	9	11	13	16	20	18	12	9	8	5	7	9	7	7	12	10	10	9	11	11	8	12	13	14	10.8	20.1	
15-Feb-08	16	11	13	11	12	14	14	13	15	16	14	15	19	20	15	20	13	15	24	25	19	10	9	7	15.0	24.6	
16-Feb-08	9	5	6	6	6	5	5	5	15	15	19	14	14	12	10	10	11	7	8	8	9	11	13	13	9.9	18.5	
17-Feb-08	10	12	14	15	13	10	9	10	7	10	11	9	7	6	7	6	5	5	6	6	7	7	9	9	8.7	14.7	
18-Feb-08	7	5	4	4	5	5	7	5	3	8	9	9	10	11	10	10	9	7	8	7	5	6	6	4	6.7	11.2	
19-Feb-08	5	5	5	6	4	7	6	5	5	6	9	12	17	21	19	17	14	13	14	15	11	11	7	8	10.0	21.0	
20-Feb-08	9	13	17	11	6	4	8	6	4	5	5	6	5	5	4	5	6	8	8	8	6	9	12	8	7.4	17.3	
21-Feb-08	8	8	11	11	7	3	4	5	5	8	7	3	5	5	6	6	8	9	11	7	8	12	10	6	7.2	12.3	
22-Feb-08	3	5	6	3	2	3	2	3	3	2	4	5	3	6	8	8	7	6	3	4	3	3	3	3	4.0	8.1	
23-Feb-08	3	3	3	4	3	4	3	3	4	3	4	3	4	5	4	4	5	5	4	2	4	5	5	7	4.0	6.7	
24-Feb-08	7	6	5	5	5	4	9	11	9	10	12	12	10	12	12	12	7	11	9	4	4	5	2	4	7.9	12.4	
25-Feb-08	4	4	3	2	2	2	2	2	2	2	6	7	9	11	12	12	13	13	18	19	17	15	13	13	8.4	18.8	
26-Feb-08	10	9	8	5	4	6	5	5	5	6	7	7	8	6	9	9	9	13	17	15	10	13	15	11	8.8	16.5	
27-Feb-08	9	7	8	12	10	8	8	12	11	6	7	10	9	7	8	6	4	5	6	6	5	5	6	4	7.4	12.3	
28-Feb-08	6	7	7	5	6	17	15	9	7	6	11	11	10	9	10	10	10	8	6	8	10	12	11	12	9.2	17.3	
29-Feb-08	13	12	11	10	11	12	17	16	18	18	17	12	14	12	11	15	10	13	12	17	20	19	14	14	14.1	19.6	
1-hr Average	9.2	9.2	9.9	10.6	10.2	10.3	9.8	10.6	10.2	10.3	10.4	10.4	10.6	10.5	11.0	10.9	10.2	10.3	11.3	11.3	10.6	10.1	9.4	8.9			
Hourly Max	23.6	25.3	27.3	29.6	29.0	30.8	29.5	39.3	33.4	30.7	27.8	34.0	25.3	21.7	23.9	20.8	23.5	25.3	27.1	24.6	27.8	20.9	20.0	21.9			



# PAS – Brooks Vector Wind Speed Monthly Summary

Station: Portable-Brooks  
 Station Owner: PAS

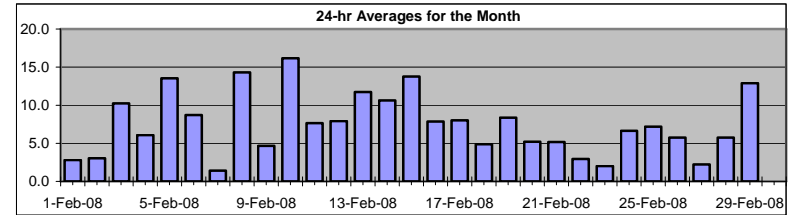
## HOURLY AVERAGE TABLE

## Wind Speed (WSv)

Monitoring Dates: February 1, 2008 to March 1, 2008

### Summary

Maximum 1-hr Average:	39.2	km/hr	10-Feb	7:00 8:00
Maximum 24-hr Value:	16.2	km/hr	10-Feb	



Calm Time:	0 hrs	0% calms	Operational Time:	696 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%				
Percentile	99	95	75	50	25	5	1	AverageV
	29.7	23.4	12.8	8.6	5.3	2.5	1.3	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																								24-hr Vector Average	Daily Max		
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00	0:00		
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00				
1-Feb-08	8	4	6	5	5	5	5	5	3	4	5	5	5	5	4	4	4	7	9	10	9	8	6	5		2.8	10.3	
2-Feb-08	5	4	4	5	9	7	6	3	5	4	5	8	7	9	12	10	9	9	11	6	8	7	7	3		3.0	12.0	
3-Feb-08	6	8	7	9	8	7	7	9	8	13	13	10	11	13	13	15	15	15	13	10	11	10	11	9		10.2	15.2	
4-Feb-08	8	7	5	2	3	4	7	7	8	9	9	8	9	12	15	15	13	10	13	14	12	4	3	2		6.1	14.8	
5-Feb-08	1	5	9	10	13	10	8	11	12	8	10	11	15	16	17	19	23	18	20	22	28	20	20	22		13.5	27.7	
6-Feb-08	17	24	27	25	21	15	9	7	8	4	6	2	10	9	11	13	13	11	12	12	11	11	12	11		8.7	27.2	
7-Feb-08	12	11	13	16	9	14	9	12	6	3	3	5	8	8	7	8	8	15	19	15	7	5	7	12		1.4	19.3	
8-Feb-08	17	16	13	25	23	21	10	29	30	31	28	34	25	22	24	18	23	17	18	17	21	21	16	11		14.3	33.8	
9-Feb-08	14	15	15	16	19	15	16	13	13	14	9	6	7	7	6	5	4	2	3	8	13	15	17	21		4.7	20.7	
10-Feb-08	24	25	27	30	29	26	27	39	33	29	27	24	19	10	12	12	12	13	10	14	4	5	4	4		16.2	39.2	
11-Feb-08	8	6	6	7	8	13	11	15	13	15	19	18	16	17	13	8	4	4	2	1	5	6	5	4		7.6	18.9	
12-Feb-08	8	6	8	8	7	6	6	8	4	5	3	5	8	13	18	21	20	25	27	24	23	19	14	9		7.9	27.0	
13-Feb-08	7	12	15	19	25	31	29	32	31	24	17	15	9	5	5	2	5	5	6	10	10	6	2	4		11.7	31.5	
14-Feb-08	9	11	12	16	20	18	12	9	8	5	7	9	7	7	11	10	10	9	11	11	7	12	13	14		10.6	20.1	
15-Feb-08	16	11	13	11	12	14	13	13	15	16	14	15	19	20	15	20	13	15	24	25	19	9	9	7		13.8	24.5	
16-Feb-08	9	5	6	6	6	5	5	4	15	15	18	14	14	12	10	10	11	7	8	8	9	11	12	13		7.9	17.7	
17-Feb-08	10	12	14	15	13	10	9	10	7	10	10	9	7	6	7	6	5	5	6	6	6	7	9	9		8.0	14.7	
18-Feb-08	7	4	3	4	5	5	3	4	2	8	8	9	10	11	10	10	9	7	8	6	5	6	6	4		4.9	11.1	
19-Feb-08	4	4	5	6	2	7	6	4	4	6	9	11	17	21	19	17	14	13	14	14	11	11	6	8		8.4	21.0	
20-Feb-08	8	12	17	11	6	3	8	5	4	4	5	6	4	4	2	5	5	7	8	8	6	8	12	8		5.2	17.3	
21-Feb-08	8	8	11	11	6	3	3	4	5	8	6	3	5	4	6	6	8	9	11	6	7	12	10	6		5.2	12.3	
22-Feb-08	1	5	6	3	1	3	2	3	2	2	3	5	3	5	8	8	7	6	1	2	2	3	3	3		2.9	8.0	
23-Feb-08	3	3	3	4	3	4	3	3	4	3	3	3	3	4	4	3	4	5	3	2	4	5	5	7		2.0	6.6	
24-Feb-08	7	6	5	5	5	4	9	11	9	10	12	12	10	12	12	12	7	11	9	4	4	5	1	4		6.6	12.3	
25-Feb-08	4	4	3	1	2	2	2	2	2	2	6	7	9	11	12	12	13	13	18	19	17	15	13	13		7.2	18.7	
26-Feb-08	10	9	8	5	4	5	4	5	5	6	7	7	8	6	9	8	9	13	16	15	9	13	15	11		5.8	16.4	
27-Feb-08	9	7	8	12	10	8	8	11	11	4	7	10	8	6	8	5	3	5	5	1	4	2	3	2		2.2	12.2	
28-Feb-08	6	6	5	4	5	17	15	9	6	6	11	11	10	9	10	10	10	8	6	8	10	12	11	11		5.7	16.8	
29-Feb-08	13	12	11	10	11	12	17	16	18	18	17	12	14	12	10	15	10	13	12	17	20	19	14	14		12.9	19.5	
1-hr Vector	3.5	3.2	3.3	3.6	3.5	2.1	1.3	1.0	1.0	0.7	1.1	0.9	0.8	1.0	2.1	2.6	2.9	3.3	3.4	3.8	3.7	4.0	4.8	4.4				
Hourly Max	23.5	25.3	27.2	29.5	28.9	30.7	29.4	39.2	33.1	30.6	27.6	33.8	25.0	21.5	23.8	20.7	23.3	25.1	27.0	24.5	27.7	20.9	19.9	21.8				





# PAS – Brooks Wind Direction Monthly Summary

Station: Portable-Brooks  
Station Owner: PAS

## HOURLY AVERAGE TABLE

### Wind Direction (WD)

Monitoring Dates: February 1, 2008 to March 1, 2008

#### Summary


Calm Time:	0 hrs	0% calms	Operational Time:	696 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%				
Percentile	99	95	75	50	25	5	1	Average
	359.5	346.8	267.0	201.4	132.6	10.6	2.4	209 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																								24-hour Average	WD Sector
	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		
1-Feb-08	4	12	57	44	57	60	74	86	52	35	343	349	348	348	18	62	100	110	126	146	161	161	181	166	78	ENE
2-Feb-08	163	173	131	20	18	3	355	310	272	264	249	209	200	188	188	183	163	152	140	155	128	118	116	14	163	SSE
3-Feb-08	360	17	0	8	3	360	358	7	0	8	6	7	8	11	31	33	27	44	35	23	15	20	22	28	17	NNE
4-Feb-08	39	21	28	41	149	143	154	177	181	182	192	177	140	131	133	133	133	136	137	131	134	218	288	14	140	SE
5-Feb-08	141	219	207	206	209	203	201	187	206	193	199	187	176	177	168	186	200	218	236	235	220	230	236	241	209	SSW
6-Feb-08	240	244	247	250	254	264	270	272	267	340	210	240	331	55	125	146	171	190	192	206	206	206	205	210	230	SW
7-Feb-08	202	197	172	166	219	238	227	210	206	101	106	343	354	340	310	315	339	12	34	26	54	157	199	198	221	SW
8-Feb-08	203	206	228	252	249	248	320	12	4	2	359	5	360	358	3	357	12	1	360	360	5	5	360	353	346	NNW
9-Feb-08	360	3	12	15	30	15	17	23	15	15	355	334	331	331	334	348	347	317	211	202	193	183	179	168	8	N
10-Feb-08	163	159	151	147	143	135	142	155	152	153	151	142	132	114	134	67	85	81	64	65	36	349	341	343	137	SE
11-Feb-08	360	340	282	295	239	226	219	200	209	205	205	197	191	190	192	198	189	229	272	269	262	249	235	218	216	SW
12-Feb-08	227	267	289	297	303	296	283	296	274	227	174	178	175	141	156	148	140	140	137	135	144	169	187	194	166	SSE
13-Feb-08	216	334	342	351	359	2	2	5	10	11	5	10	4	321	305	295	222	228	6	7	10	44	325	177	358	N
14-Feb-08	166	179	190	209	209	201	200	202	212	225	211	212	223	213	203	210	203	203	203	213	218	203	200	206	204	SSW
15-Feb-08	205	206	207	204	207	207	206	213	209	208	211	218	209	211	217	210	228	238	256	258	258	280	277	278	224	SW
16-Feb-08	349	342	338	326	301	252	247	320	32	41	28	345	326	315	312	308	315	311	302	304	299	296	295	295	326	NNW
17-Feb-08	302	310	315	314	315	309	303	295	281	291	293	291	289	277	251	248	262	260	240	233	295	310	309	312	294	WNW
18-Feb-08	304	323	304	251	283	288	329	339	268	210	205	202	210	204	202	201	205	221	219	228	233	222	246	138	230	SW
19-Feb-08	68	292	292	222	249	89	102	146	85	78	104	105	110	107	107	107	96	99	108	125	128	128	101	113	109	ESE
20-Feb-08	147	184	191	178	168	153	191	217	257	255	305	285	297	288	353	107	144	176	175	171	184	197	206	197	193	SSW
21-Feb-08	201	197	207	210	196	57	142	204	196	204	198	116	86	112	73	85	106	125	120	131	162	146	168	189	160	SSE
22-Feb-08	192	49	41	22	317	351	339	350	347	351	32	53	62	55	44	39	38	57	353	144	12	332	307	296	29	NNE
23-Feb-08	309	277	289	289	277	272	306	337	313	312	319	357	349	65	10	350	47	114	144	236	236	253	265	300	309	NW
24-Feb-08	312	311	335	3	353	9	32	22	21	37	49	51	61	40	40	49	45	22	32	14	357	40	192	281	27	NNE
25-Feb-08	266	294	284	329	308	342	277	237	216	210	208	192	184	188	187	155	161	172	171	180	194	191	181	176	186	S
26-Feb-08	171	184	199	245	260	278	308	286	287	259	257	264	268	243	210	163	150	142	145	154	163	149	162	171	188	S
27-Feb-08	185	161	188	193	199	182	184	191	202	244	1	18	31	44	39	34	157	181	204	214	53	32	269	338	182	S
28-Feb-08	238	254	332	282	291	9	2	338	326	290	295	293	285	280	272	267	258	239	233	209	212	212	205	200	273	W
29-Feb-08	181	184	176	193	195	177	188	178	173	186	192	210	240	248	255	244	222	202	216	224	216	200	217	234	205	SSW
Hourly Avg	211	230	231	241	248	261	268	246	263	282	254	274	249	168	162	154	150	156	162	183	197	198	215	217		



# PAS – Brooks Standard Deviation of Wind Direction Monthly Summary

Station: Portable-Brooks  
Station Owner: PAS

## HOURLY AVERAGE TABLE

## Wind Direction (WD)

Monitoring Dates: February 1, 2008 to March 1, 2008

### Summary


Determined by the Yamartino 15-min interval calculation

Calm Time:	0 hrs	0% calms	Operational Time:	696 hrs			
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%			
Percentile	99	95	75	50	25	5	1
	73.2	44.5	17.8	9.3	5.8	3.5	2.8

### 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

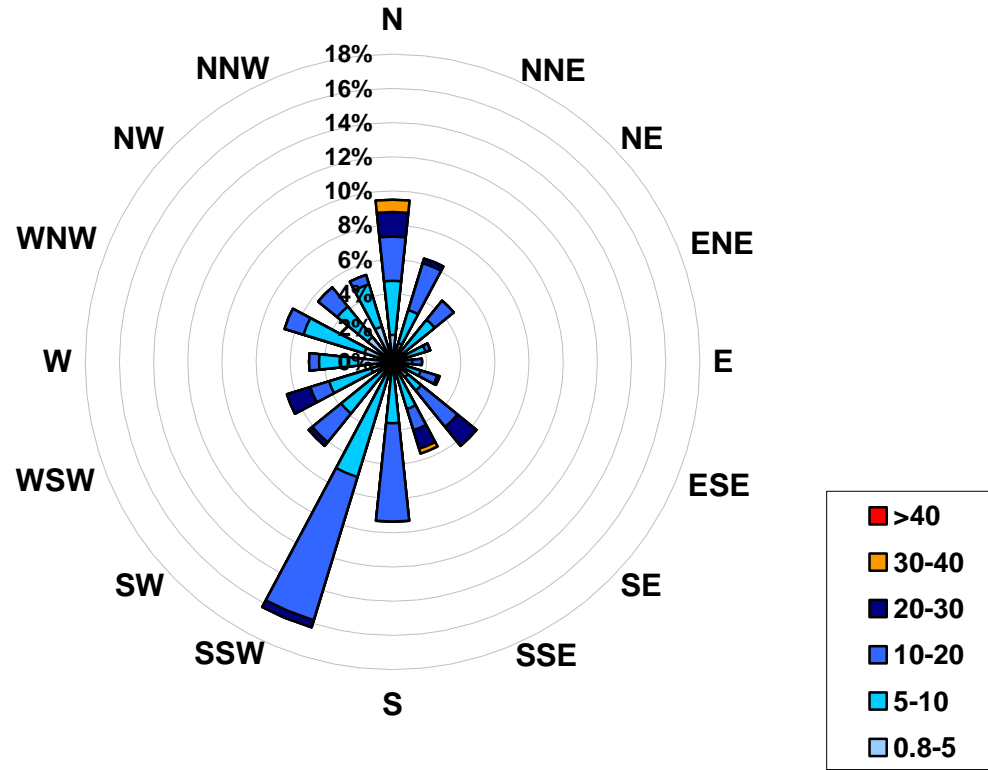
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	
1-Feb-08	9	15	16	12	9	21	16	19	10	17	22	23	32	22	33	29	8	4	10	5	6	8	10	28	
2-Feb-08	33	17	39	38	20	10	10	18	20	20	19	6	10	10	9	12	8	7	4	30	12	31	11	44	
3-Feb-08	11	9	14	6	4	5	5	6	4	6	5	9	8	6	7	5	7	7	8	9	4	5	7	5	
4-Feb-08	7	9	10	27	22	12	17	8	8	9	9	17	13	6	5	4	4	9	3	3	5	28	20	53	
5-Feb-08	61	6	6	6	4	6	6	8	5	6	6	11	7	6	6	13	5	18	7	6	3	6	5	6	
6-Feb-08	4	4	3	4	4	7	7	8	5	61	20	74	37	43	23	6	11	5	4	5	6	10	10	3	
7-Feb-08	7	8	10	6	14	6	10	6	52	63	29	17	13	12	16	5	9	10	7	8	26	40	12	5	
8-Feb-08	3	6	19	3	3	4	53	6	5	5	6	5	9	6	5	8	7	9	6	10	7	4	5	8	
9-Feb-08	6	4	6	7	10	10	6	6	4	8	13	17	16	15	15	18	16	35	26	11	7	5	6	4	
10-Feb-08	3	3	5	4	5	4	8	3	9	4	6	7	26	29	37	8	11	10	8	16	43	26	23	17	
11-Feb-08	9	18	14	7	24	12	9	6	8	4	5	4	5	4	5	6	12	25	43	70	43	8	22	50	
12-Feb-08	7	25	7	14	10	11	8	6	15	14	39	25	14	12	8	3	3	6	5	4	6	7	4	12	
13-Feb-08	35	10	5	8	5	5	4	4	3	9	8	10	18	23	20	69	26	11	40	9	7	13	41	25	
14-Feb-08	6	7	8	4	3	3	4	5	8	13	9	7	15	13	5	4	2	5	3	5	11	4	4	4	
15-Feb-08	3	7	5	6	3	4	21	5	4	6	9	6	4	5	4	6	11	6	5	3	5	30	9	12	
16-Feb-08	20	23	14	17	18	23	22	50	8	6	17	9	9	7	5	7	5	6	7	5	7	4	4	5	
17-Feb-08	5	7	3	3	4	6	6	6	10	6	4	9	9	20	13	19	14	7	7	6	20	5	5	5	
18-Feb-08	5	38	40	25	16	13	53	38	58	9	5	7	5	5	6	6	8	7	11	12	10	9	10	44	
19-Feb-08	32	41	17	15	61	20	18	25	34	9	8	10	8	3	4	4	4	4	8	9	5	5	42	16	
20-Feb-08	20	16	3	8	11	45	20	31	17	21	18	24	37	33	69	19	25	18	8	6	8	13	5	13	
21-Feb-08	10	6	5	4	54	37	37	20	12	4	19	25	12	39	14	12	10	8	3	36	18	4	15	15	
22-Feb-08	81	19	8	13	81	13	27	13	22	18	22	12	38	22	9	7	9	9	77	63	67	23	26	19	
23-Feb-08	33	34	14	9	13	14	26	14	12	23	28	37	45	40	28	67	29	16	42	33	13	11	9	11	
24-Feb-08	14	4	22	27	19	38	5	5	7	7	6	6	18	7	7	5	16	3	8	16	11	12	82	10	
25-Feb-08	12	13	18	53	48	42	17	17	18	20	7	10	7	8	8	17	15	5	2	5	4	4	8	4	
26-Feb-08	6	10	8	14	28	20	32	16	7	12	10	12	10	22	6	23	11	11	3	9	10	4	8	10	
27-Feb-08	11	21	10	7	14	13	22	11	6	59	8	10	17	22	11	31	73	18	38	93	48	77	55	58	
28-Feb-08	13	17	48	44	20	21	10	8	11	11	7	7	8	7	7	6	7	9	9	9	8	5	3	7	
29-Feb-08	5	4	8	10	12	10	4	4	2	6	3	17	6	8	10	4	9	11	20	10	7	7	6	8	

Daily Maximum
33.1
43.9
13.5
53.2
60.6
74.1
62.8
52.9
34.5
43.2
70.4
38.7
69.4
14.8
29.8
49.9
19.7
57.6
60.8
69.2
53.9
80.9
67.4
82.1
53.4
31.6
92.5
48.0
19.6

Hourly Max	81	41	48	53	81	45	53	50	58	63	39	74	45	43	69	69	73	35	77	93	67	77	82	58
------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----



1-hr Average Wind Rose (in km/hr) Located at the Portable-Brooks Site for February 2008



Calms: 0%

Frequency Distribution of Wind in km/hr Range			Frequency (hrs)
0.8	<	5	119
5	to	10	282
10	to	20	239
20	to	30	46
30	to	40	7
	>	40	0
Total Non-Zero Values			696



# **Palliser Airshed Society**

## **Passive Monitoring – February 2008**

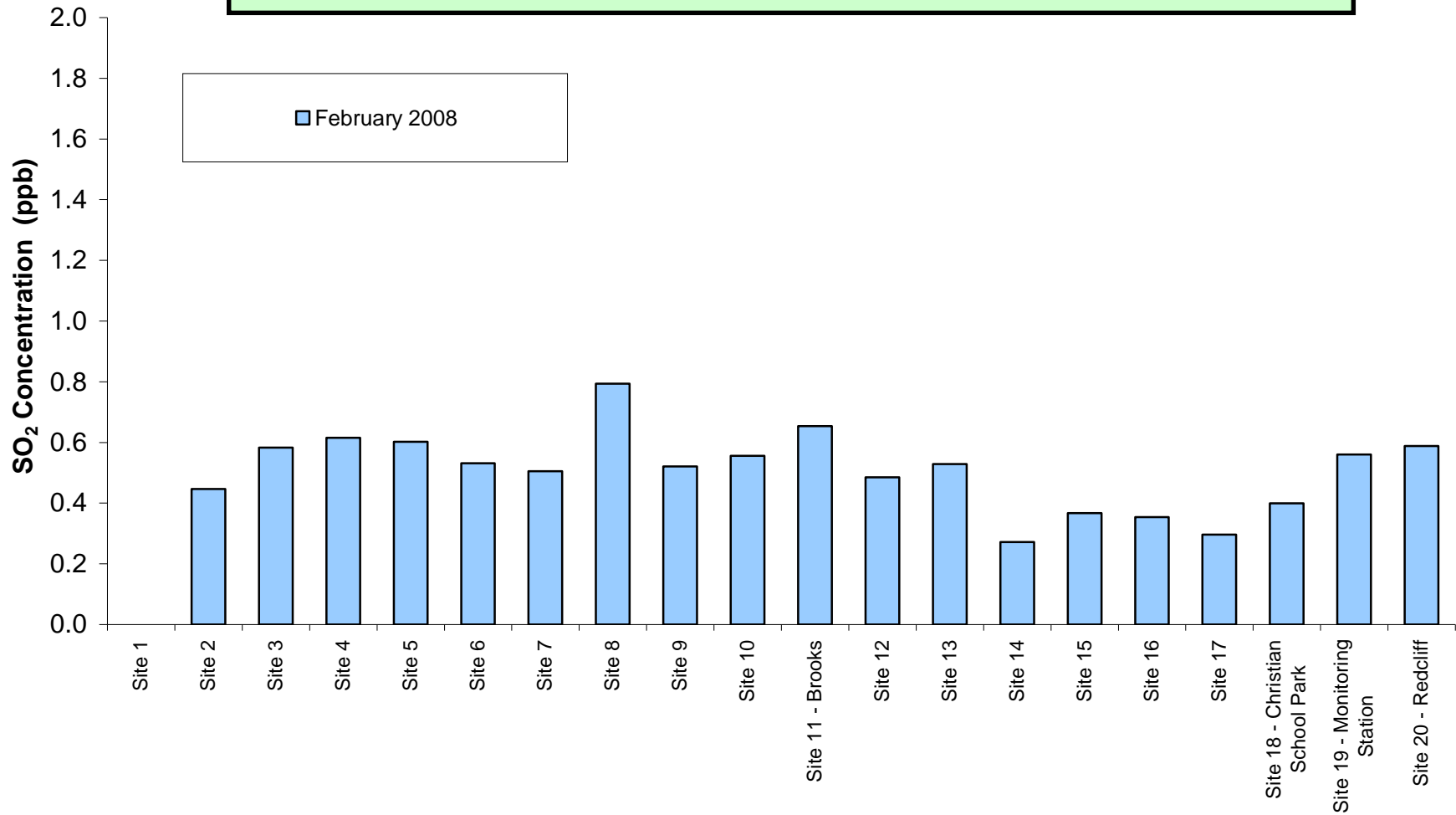


**Palliser Airshed Society - Palliser Passive Stations for February 2008**  
**Palliser Passive Monitoring Expansion**

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Location		Elevation meter
					Easting	Northing	
<b>Duplicates</b>							
6a	Site 6	0.5	38.8	3.6			
6b	Site 6	0.5	36.5	3.1			
16a	Site 16	0.3	34.5	0.4			
16b	Site 16	0.4	38.0	0.5			
1	Site 1	n/a	n/a	n/a	562434	5583139	719
2	Site 2	0.4	45.6	1.8	565416	5616277	
3	Site 3	0.6	45.6	1.7	533794	5675379	779
4	Site 4	0.6	44.2	1.9	554771	5717338	718
5	Site 5	0.6	42.0	2.2	494218	5715862	735
6	Site 6	0.5	37.6	3.3	433039	5673766	818
7	Site 7	0.5	29.9	4.2	400808	5620907	780
8	Site 8	0.8	47.2	3.2	498530	5621839	747
9	Site 9	0.5	47.5	3.8	487701	5591707	763
10	Site 10	0.6	49.2	3.8	478223	5613583	774
11	Site 11 - Brooks	0.7	33.8	8.9	439773	5604548	736
12	Site 12	0.5	38.4	3.6	450287	5587201	726
13	Site 13	0.5	41.3	1.9	464279	5548934	
14	Site 14	0.3	45.9	0.7	493206	5521201	870
15	Site 15	0.4	45.9	0.7	465824	5485742	874
16	Site 16	0.4	36.3	0.5	503827	5446942	903
17	Site 17	0.3	42.2	0.4	557668	5452307	942
18	Site 18 - Christian School Park	0.4	33.6	7.5	526575	5538135	709
19	Site 19 - Monitoring Station	0.6	31.9	8.9	522813	5544137	714
20	Site 20 - Redcliff	0.6	38.1	4.6	517479	5546059	725



**Alberta Ambient Air Quality Objective - Annual SO<sub>2</sub> Objective is 11 ppb**



**Figure 22. PAS – Sulphur Dioxide Passive Summary Chart**

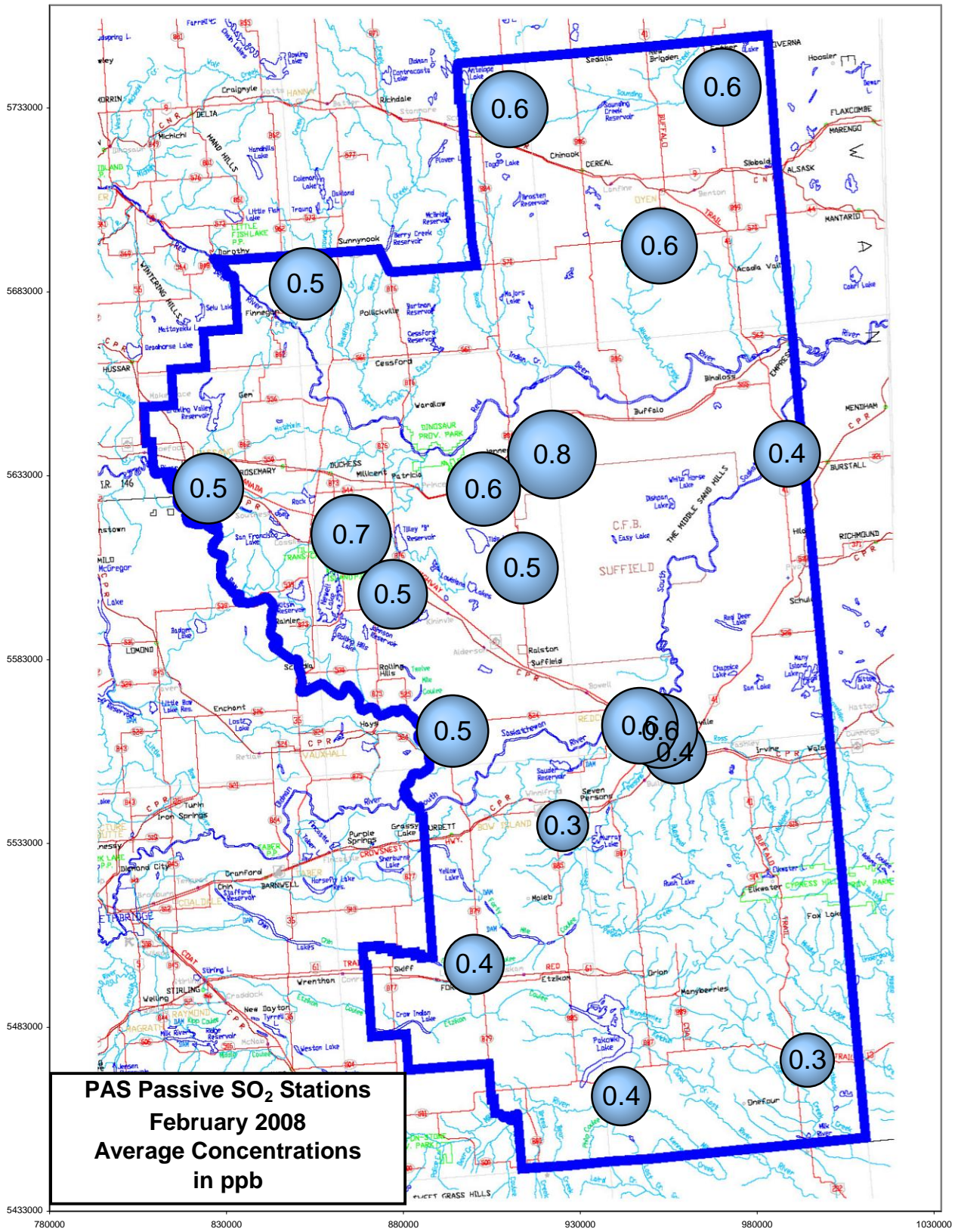


Figure 53. PAS – Sulphur Dioxide Passive Summary Bubble Chart

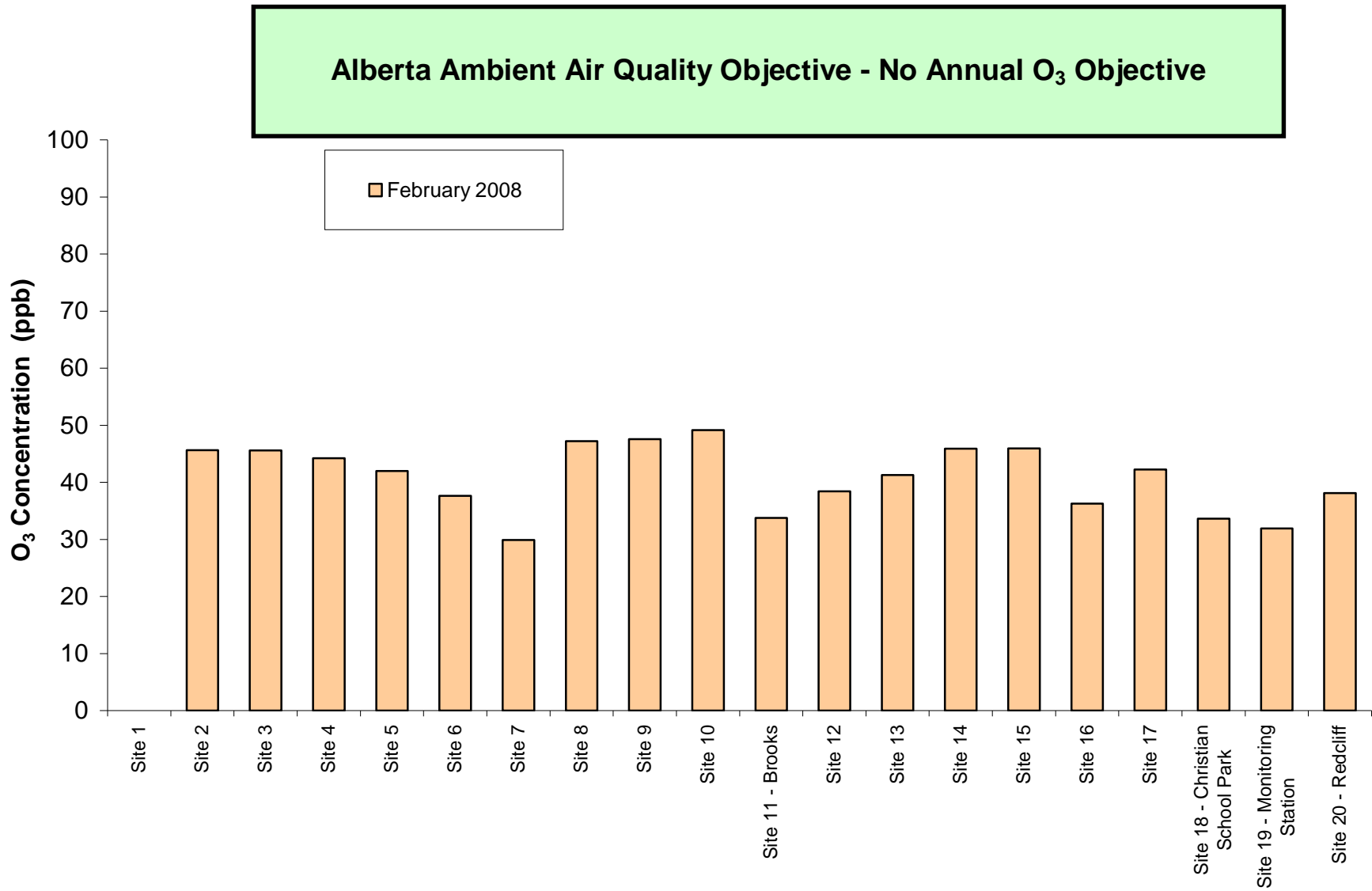


Figure 54. PAS – Ozone Passive Summary Chart



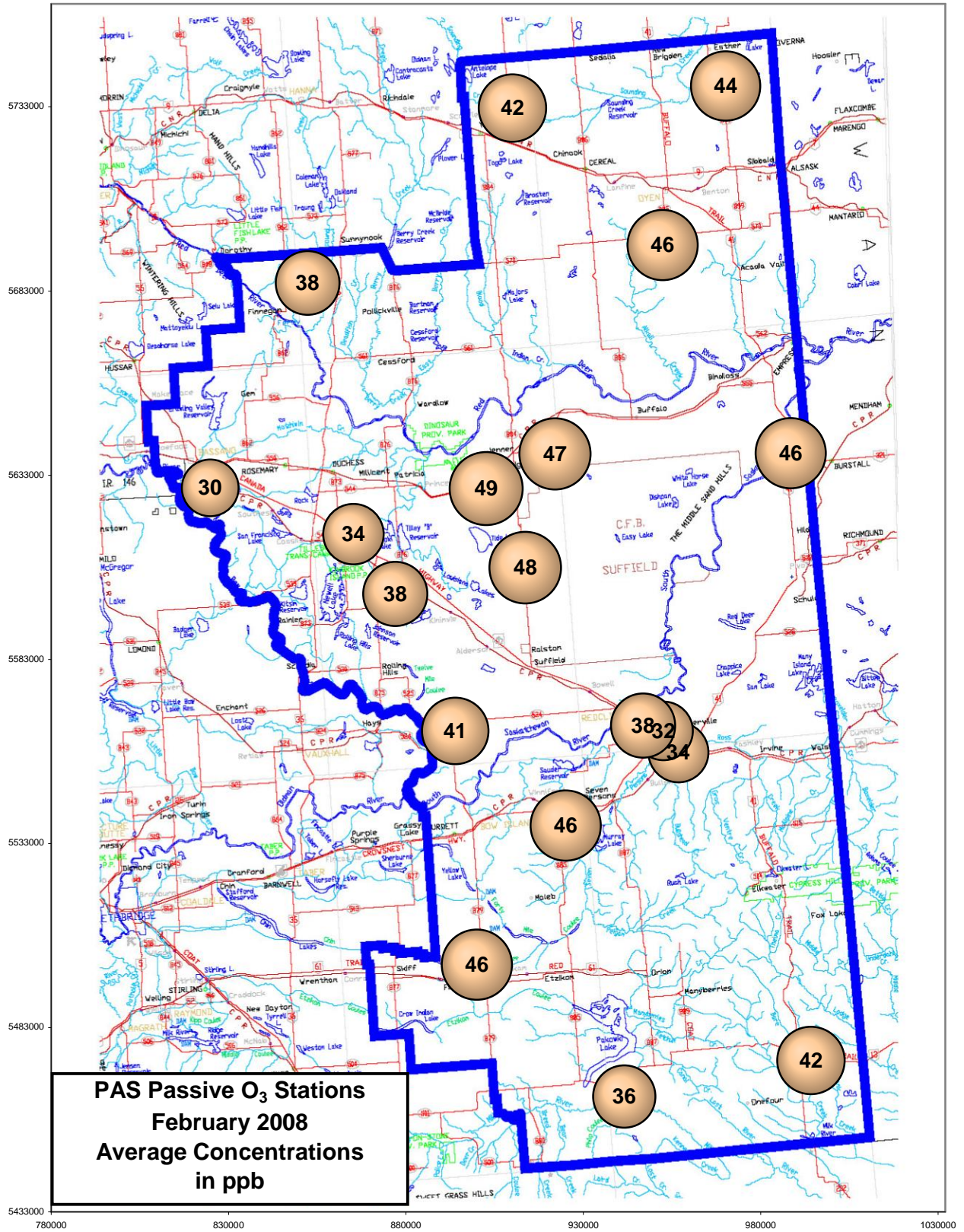
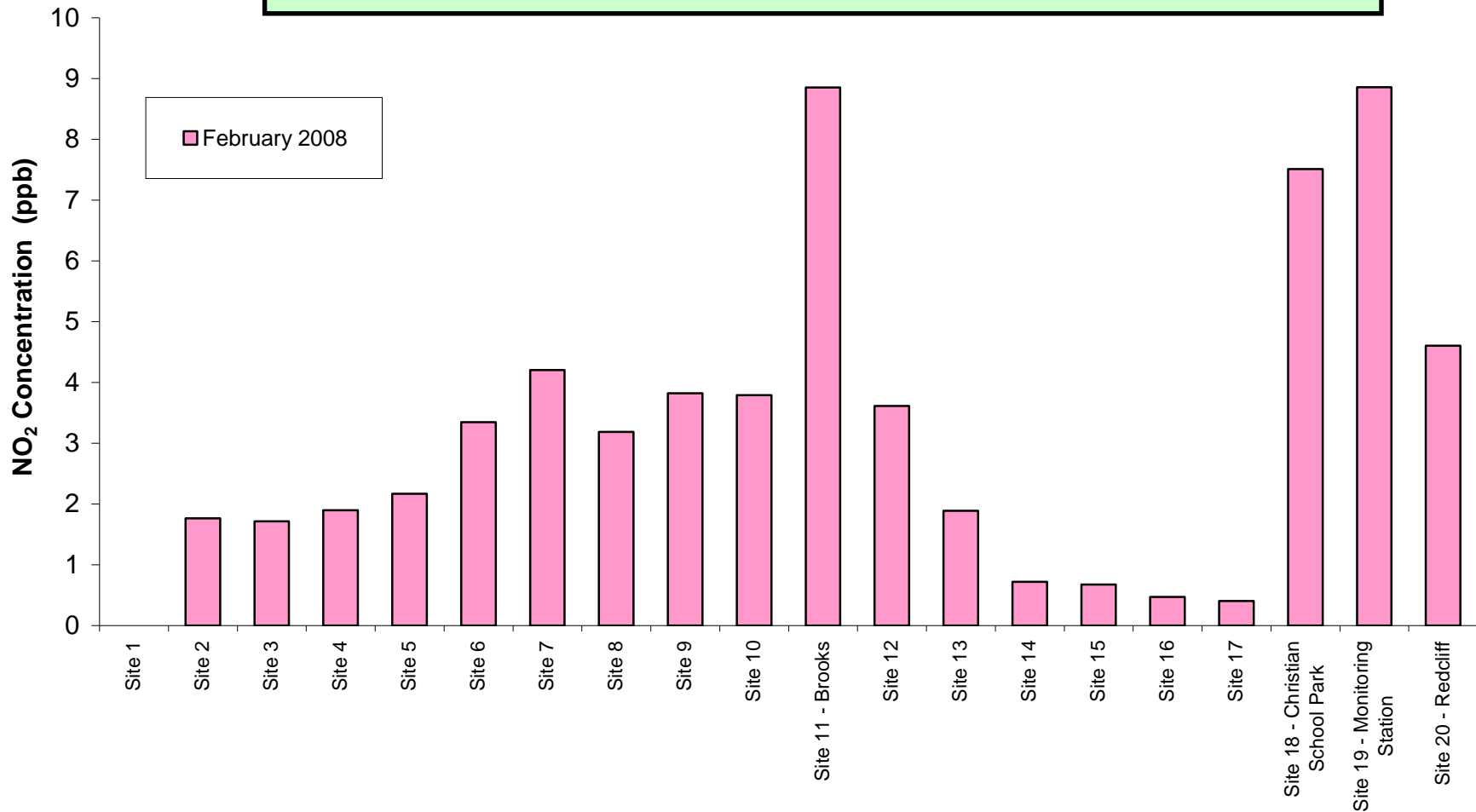


Figure 55. PAS – Ozone Passive Summary Bubble Chart



**Alberta Ambient Air Quality Objective - Annual NO<sub>2</sub> Objective is 32 ppb**



**Figure 56. PAS – Nitrogen Dioxide Passive Summary Chart**

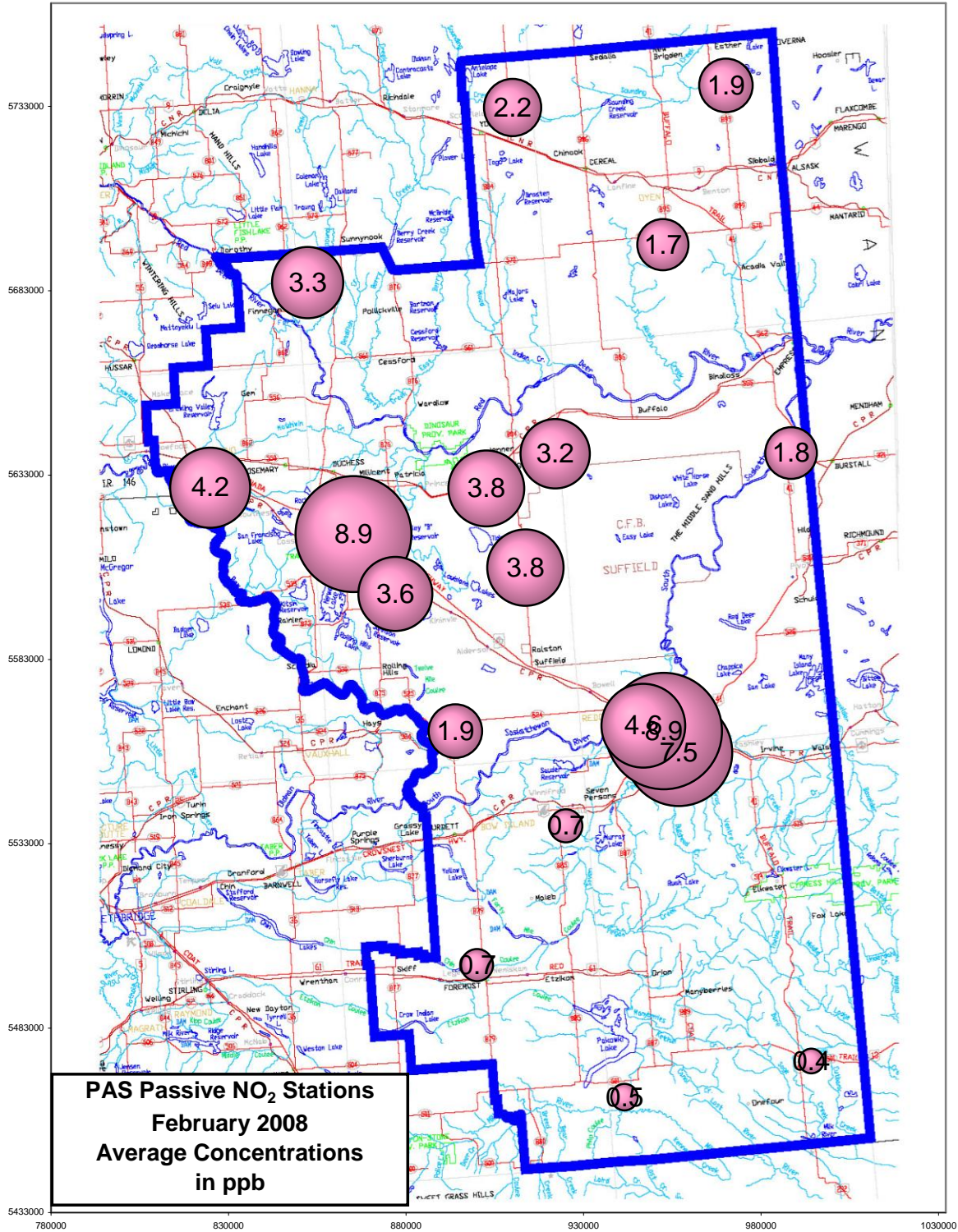


Figure 23. PAS – Nitrogen Dioxide Passive Summary Bubble Chart

# **Palliser Airshed Society**

## **February 2008 - Calibration Reports**

**Crescent Heights Station: O<sub>3</sub>, NO<sub>x</sub>, NO, NO<sub>2</sub>, THC, CO and PM<sub>2.5</sub>**

**Portable-Brooks: O<sub>3</sub>, SO<sub>2</sub>, and H<sub>2</sub>S**

# Calibration Report



Parameter **O3**  
 Air Monitoring Network **Palliser Airshed**

## Station Information

Calibration Date	February 20, 2008	Previous Calibration	January 30, 2008
Station Number	101	Station Location	Crescent Heights
Reason:	<b>Routine</b>	Calibration	Removal
			Other:
Start Time (MST)	19:10	End Time (MST)	21:55
Barometric Pressure	27.4 inches Hg	Station Temperature	21.0 Deg C
Calibrator	Envionics 6103	Serial Number	2844
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45270
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	1.022171	Calculated slope	0.995967
Calculated intercept	-1.000474	Calculated intercept	-0.692125
Analyzer make	TEI 49i	Analyzer serial #	713021144

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
O3 Background	0.5	ppb	0.5	ppb
O3 Coeff	1.004		1.033	
CellA	74419	Hz	73690	Hz
CellB	105907	Hz	106923	Hz
Pressure	692.1	mmHg	698.5	mmHg
Cell A Flow	725	ccm	723	ccm
Cell B Flow	709	ccm	708	ccm
Bench	29.2	Deg C	34.7	Deg C

## Calibration Data

Dilution air flow rate (cc/min)	Ozone Set Point	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4997	0.0	0.0	-0.2	N/A
4997	300.0	316.4	317.3	0.9974
4997	150.0	150.0	153.8	0.9754
4997	50.0	42.8	43.3	0.9895
4997	0.0	0.0	-0.2	0.0000
4997	300.0	316.4	306.6	1.0320
Average Correction Factor				0.9874

Calculated value of As Found Response: 312.6 ppm      Percent Change of As Found: -1.2%

	before calibration		after calibration	
Auto zero	1.2	ppb	1.0	ppb
Auto span	288.3	ppb	157.3	ppb

Notes: A small span adjustment performed; calculated O3 input based on GPT portion of NOX calibration.  
Biased the internal span setting slightly lower.

## Calibration Summary

Parameter **O3**  
 Air Monitoring Network **Palliser Airshed**

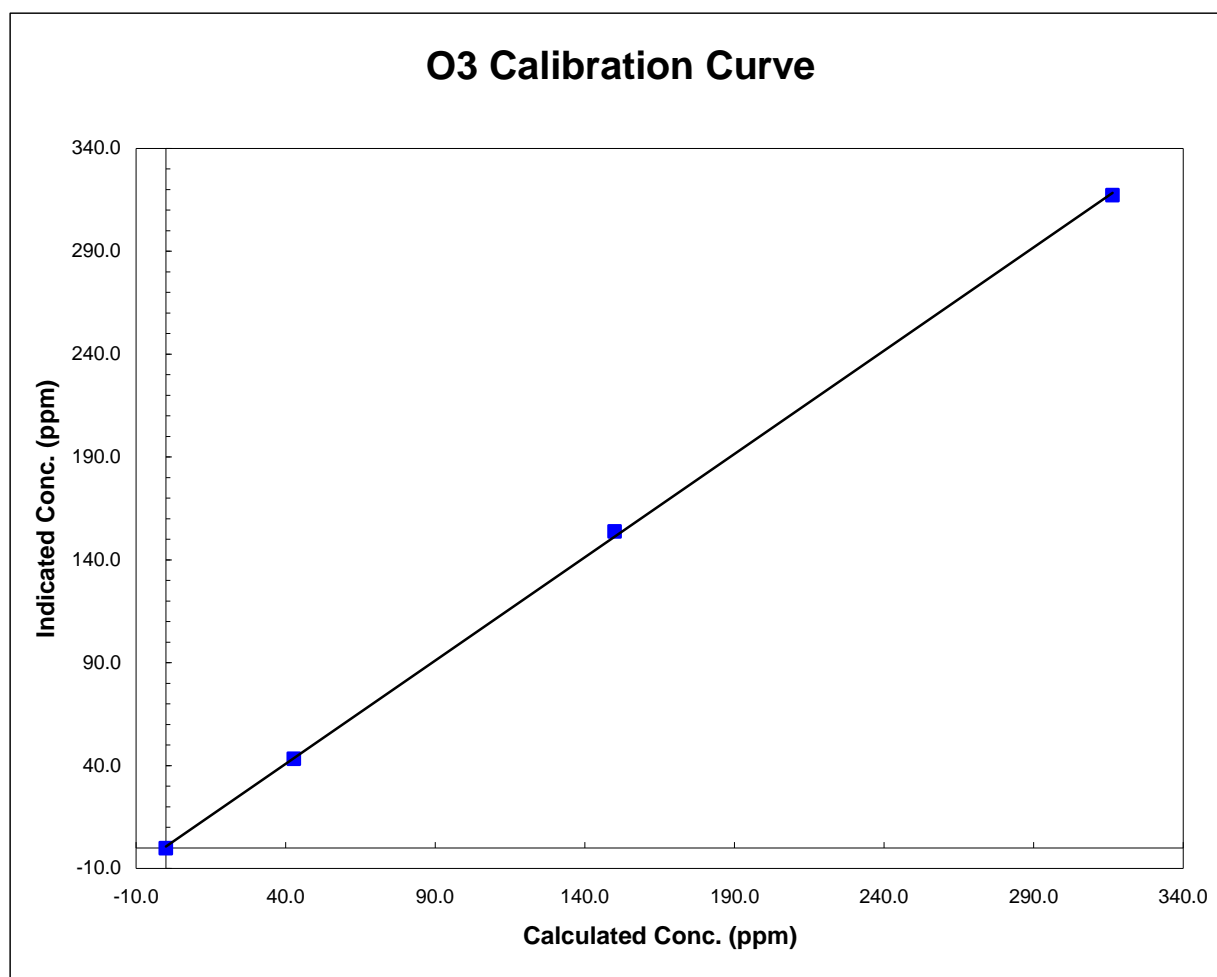


### Station Information

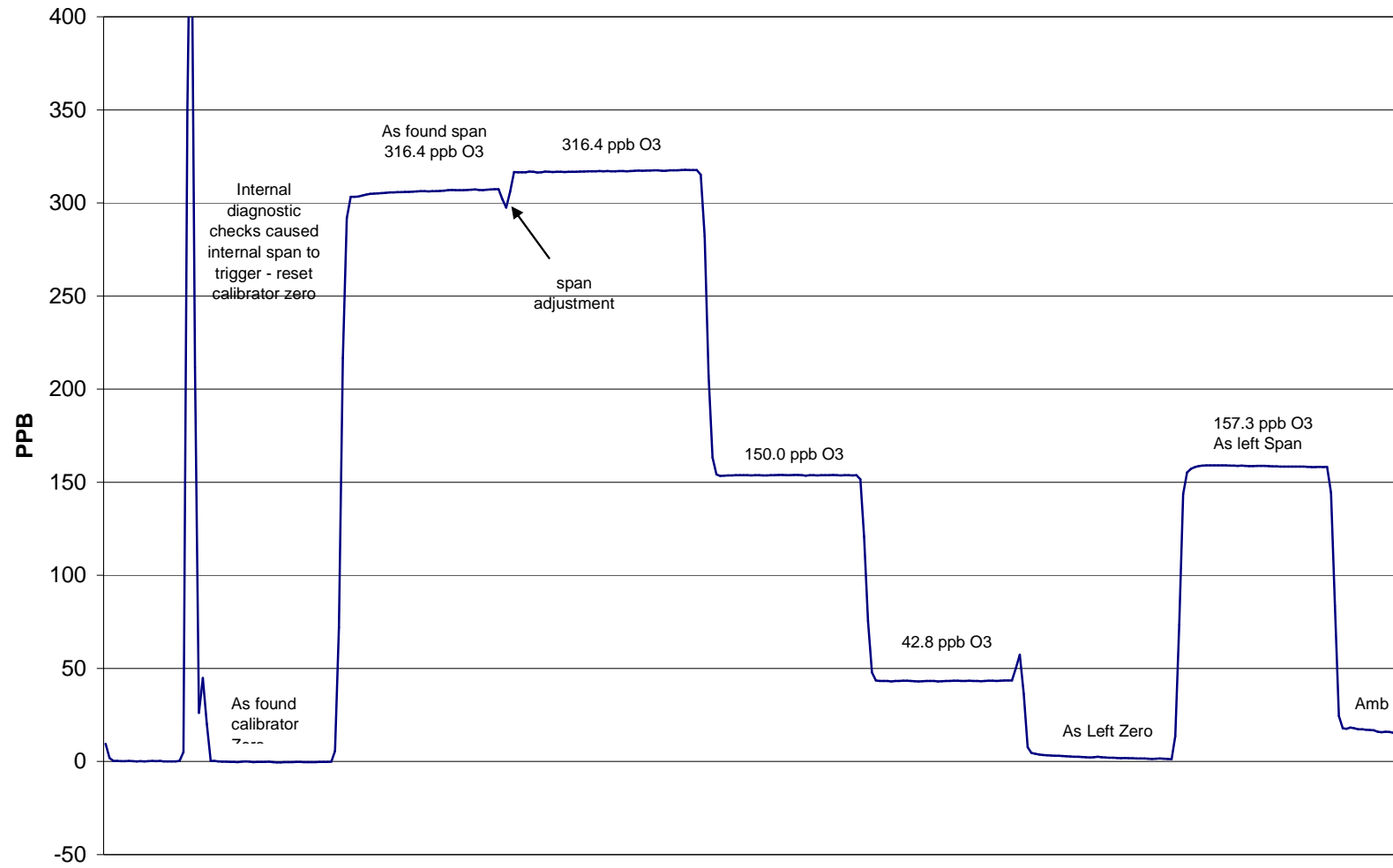
Calibration Date	February 20, 2008	Previous Calibration	January 30, 2008
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	19:10	End Time (MST)	21:55
Analyzer make/model	TEI 49i	Analyzer serial #	713021144

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
316.4	317.3	0.9974		
150.0	153.8	0.9754	Correlation Coefficient	0.999859
42.8	43.3	0.9895		
0.0	-0.2	N/A	Slope	0.995967
			Intercept	-0.692125



### Crescent Heights O3 Calibration



# Calibration Report

Parameter

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

Air Monitoring Network

Palliser Airshed



## Station Information

Calibration Date	February 20, 2008	Previous Calibration	January 29, 2008
Station Number	101	Station Location	Crescent Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Installation	<input type="checkbox"/> Removal
Start Time (MST)	15:35	End Time (MST)	19:50
Barometric Pressure	0.915	Atm	Station Temperature
Calibrator	Envionics 6103	Serial Number	2844
NO Cal Gas Conc	48.9	ppm	Cal Gas Expiry Date
NOx Cal Gas Conc	48.9	ppm	Cal Gas Serial #
			January 29, 2008
			LL-50114

## DACS Information

DACS make	FOCUS AP1000	DACS serial No.	45270
Parameter	NO2	NOx	NO
Before	Data Slope	1.002923	1.007990
	Data Offset	1.144071	2.047685
After	Data Slope	0.997913	0.994813
	Data Offset	0.027442	2.083881
Channel #	8	6	7
Voltage Range	0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

## Analyzer Information

Analyzer make/model      API Model 200E      Analyzer serial #      219

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	-9.0	mV	-9.0	mV
NOx offset	-5.5	mV	-5.5	mV
NO slope	1.237		1.258	
NOx slope	1.227		1.260	
R Cell Temp	49.6	Deg C	50.1	Deg C
PMT Temp	7.0	Deg C	7.1	Deg C
Azero	59.2	mV	58.7	mV
IZS Temp	37.1	Deg C	37.1	Deg C
R Cell Press	4.2	in Hg	4.2	in Hg
Sample Press	26.1	in Hg	26.1	in Hg
O3 Flow	75.0	ccm	75.0	ccm
Sample Flow	455.0	ccm	450.0	ccm

Notes:      Adjusted span. All diagnostics appear normal.



# Calibration Report

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



## Station Information

Calibration Date: **February 20, 2008** Station Location: **Crescent Heights**

## Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4995	0.00	0.0	0.0	0.0	-0.4	-0.7	-1.3	N/A	N/A
1	4995	39.95	388.0	388.0	0.0	388.7	387.5	0.1	0.9981	1.0010
2	4995	19.96	194.6	194.6	0.0	192.7	191.3	-0.1	1.0097	1.0174
3	4995	9.98	97.5	97.5	0.0	94.2	93.3	-0.6	1.0354	1.0451
AFZ	4995	0.00	0.0	0.0	0.0	-0.4	-0.7	-1.3	0.0000	0.0000
AFS	4995	39.95	388.0	388.0	0.0	378.8	380.4	-2.6	1.0242	1.0198
<b>Average Correction Factor</b>									1.0144	1.0212

As Found Concentrations: NO<sub>x</sub>= 381.2 NO= 383.5 As Found Percent Change NO<sub>x</sub>= -1.7% NO= -1.2%

## GPT Calibration Data

Dilution Flow 4995 ccm Source Gas Flow 39.95 ccm

O3 Setpoint (ppb)	Indicated NO high point (ppb)	Indicated NO drop conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	-0.7	-0.7	0.0	-0.4	-0.7	-1.3	N/A	N/A	N/A	N/A
NO point	384.3	384.3	0.0	386.5	384.3	1.3	0.9944	1.0000	N/A	N/A
300	384.3	67.9	316.4	385.9	67.9	316.4	0.9957	1.0000	1.0001	100.0%
200	384.3	234.3	150.0	386.9	234.3	151.4	0.9933	1.0000	0.9907	100.9%
100	384.3	341.5	42.8	386.4	341.5	43.7	0.9944	1.0000	0.9800	102.0%
<b>Average Correction Factor</b>							0.9945	1.0000	0.9903	101.0%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.4	-0.9	0.6	ppb	1.7	-1.5	1.9	ppb
Auto span	284.6	277.3	5.3	ppb	285.8	279.7	5.8	ppb

Calibration Performed By: Kelly Baragar

## Calibration Summary

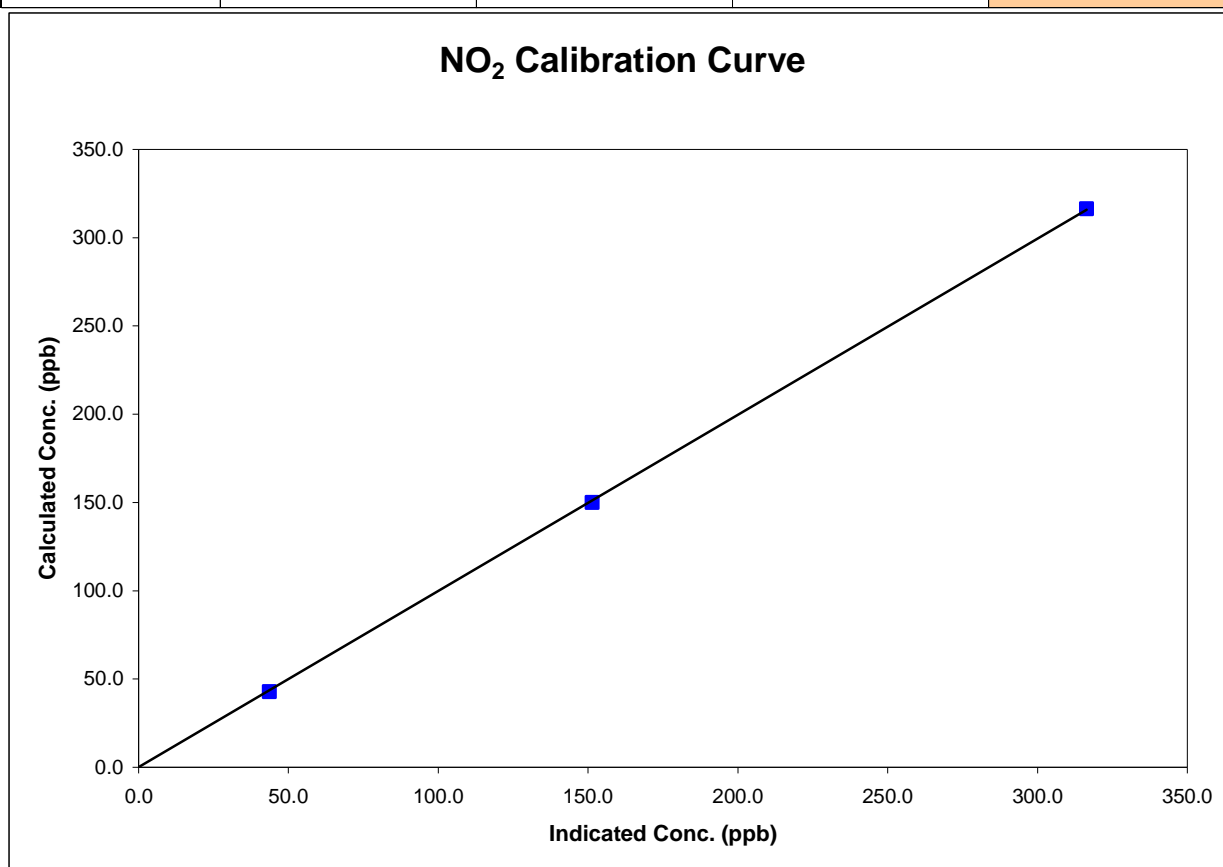
Parameter **NO<sub>2</sub>**Air Monitoring Network **Palliser Airshed**

### Station Information

Calibration Date	February 20, 2008	Previous Calibration	January 29, 2008
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	15:35	End Time (MST)	19:50
Analyzer make	API Model 200E	Analyzer serial #	219

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-1.3	N/A		
316.4	316.4	1.0001	Correlation Coefficient	0.999934
150.0	151.4	0.9907		
42.8	43.7	0.9800	Slope	0.997913
			Intercept	0.027442



## Calibration Summary

Parameter

**NO<sub>x</sub>**

Air Monitoring Network

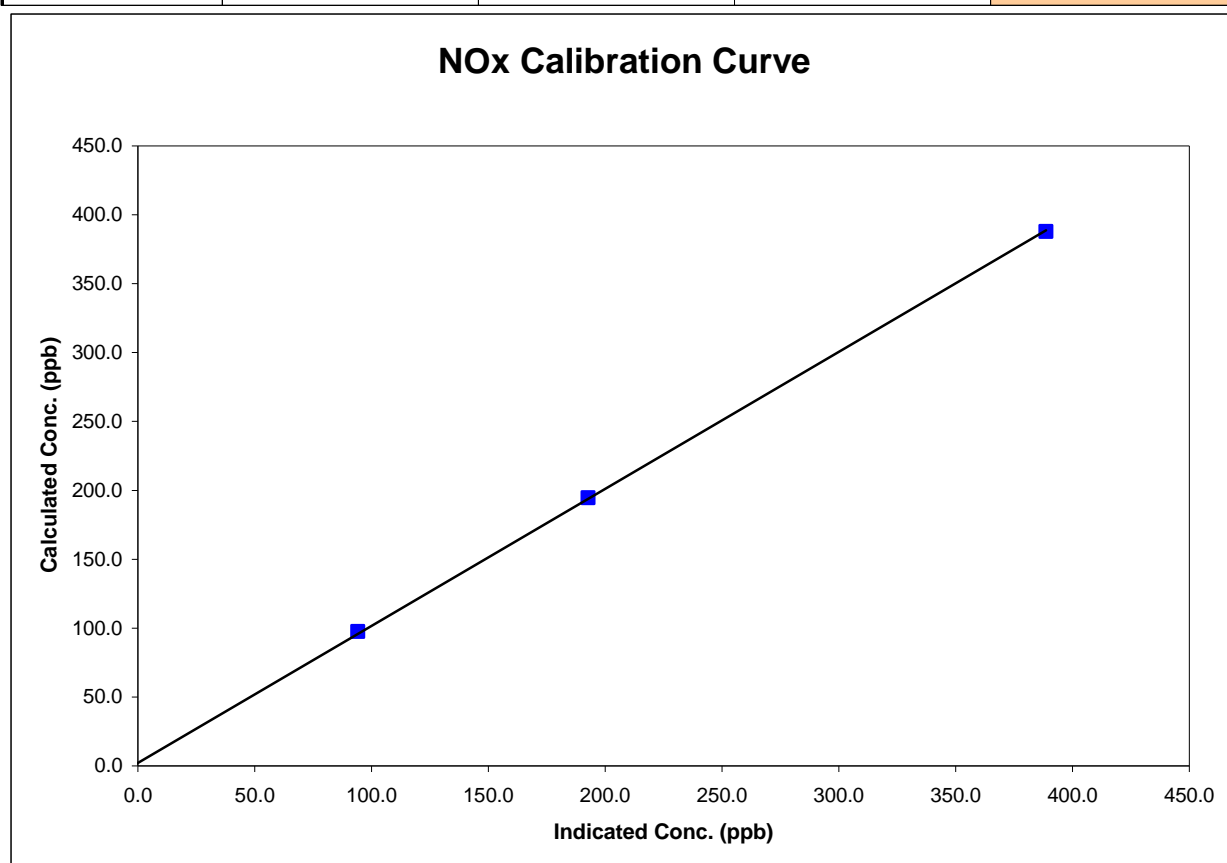
**Palliser Airshed**

### Station Information

Calibration Date	February 20, 2008	Previous Calibration	January 29, 2008
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	15:35	End Time (MST)	19:50
Analyzer make	API Model 200E	Analyzer serial #	219

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	N/A		
388.0	388.7	0.9981	Correlation Coefficient	0.999913
194.6	192.7	1.0097		
97.5	94.2	1.0354	Slope	0.994813
			Intercept	2.083881



## Calibration Summary

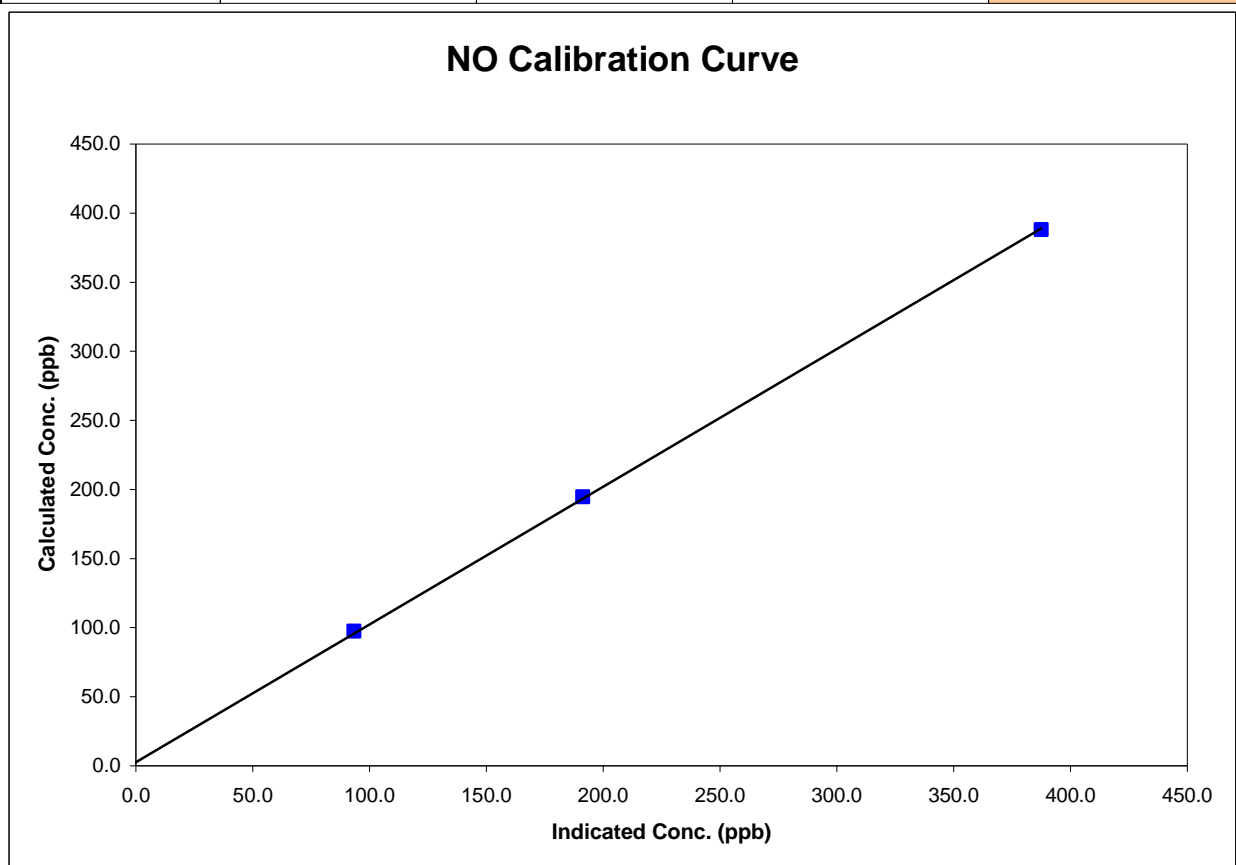
Parameter **NO**Air Monitoring Network **Palliser Airshed**

### Station Information

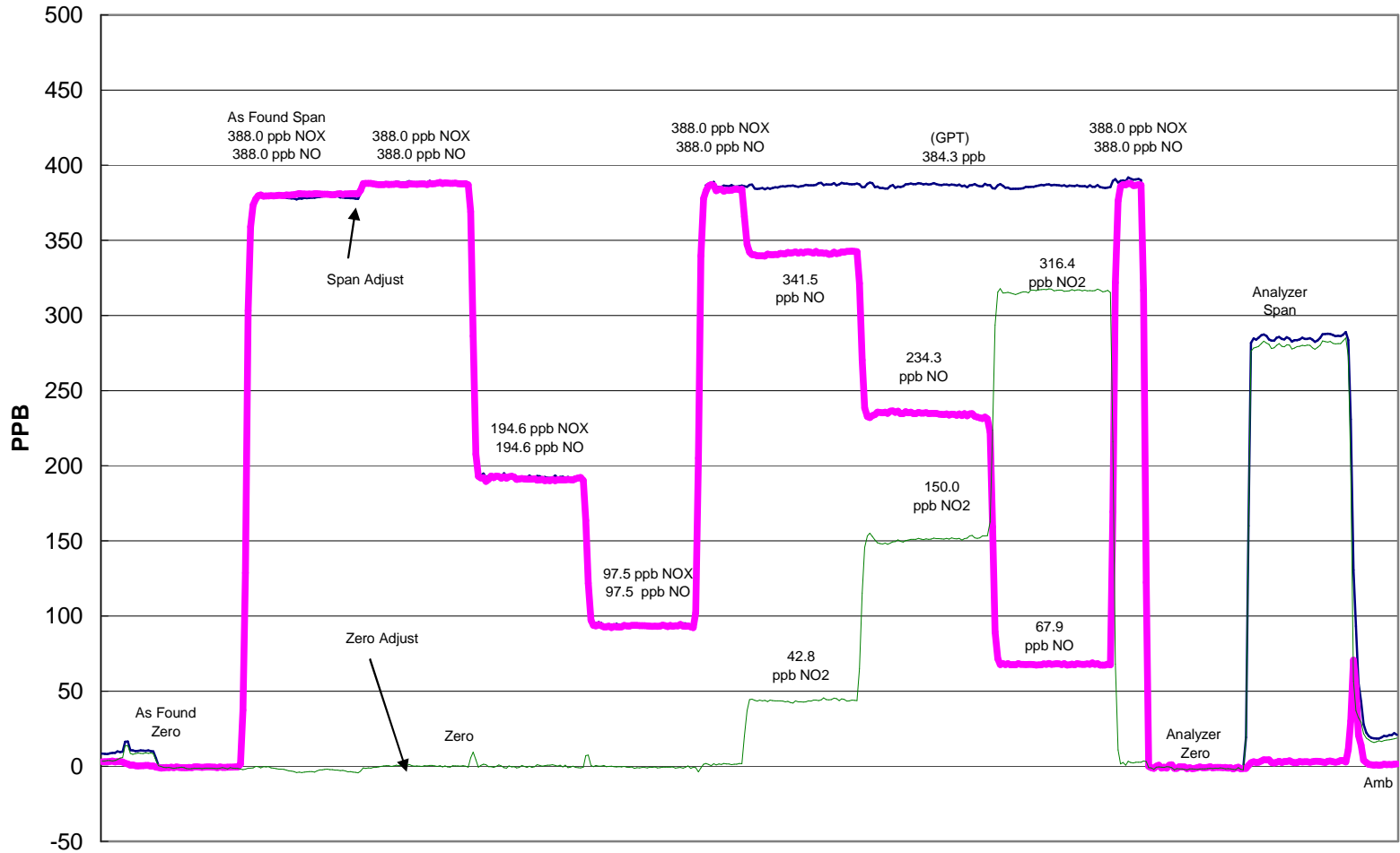
Calibration Date	February 20, 2008	Previous Calibration	January 29, 2008
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	15:35	End Time (MST)	19:50
Analyzer make	API Model 200E	Analyzer serial #	219

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.7	N/A		
388.0	387.5	1.0010	Correlation Coefficient	0.999878
194.6	191.3	1.0174		
97.5	93.3	1.0451	Slope	0.996867
			Intercept	2.677258



### Crescent Heights NOx Calibration



February 20, 2008

# Calibration Report

Parameter **THC**  
Air Monitoring Network **Palliser Airshed**



## Station Information

Calibration Date	February 29, 2008	Previous Calibration	January 29, 2008
Station Number	101	Station Location	Crescent Heights
Reason:	<b>Routine</b>	Install	Removal
			Other:
Start Time (MST)	12:20	End Time (MST)	16:45
Barometric Pressure	27.3 inches Hg	Station Temperature	20.0 Deg C
Calibrator	Dasibi 5008	Serial Number	723
Cal Gas Concentration	700 ppm CH <sub>4</sub> / 301 ppm C <sub>3</sub> H <sub>8</sub>	Cal Gas Certification	05-Sep-03
Cal Gas CH4 equiv	1527.75 ppm	Cal Gas Cylinder #	ALM030358
DACS make	Focus AP1000	DACS serial No.	45270
DACS voltage range	0 - 10 volt	DACS channel #	9
	<b>Before</b>		<b>After</b>
Calculated slope	1.026208	Calculated slope	1.008656
Calculated intercept	0.045243	Calculated intercept	-0.006346
Analyzer make	TEI 51C-LT	Analyzer serial #	0407505596

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
THC sample pressure	5.74	PSI	5.75	PSI
THC span counts	12558	raw	12033	raw
THC zero counts	1591	raw	1282	raw
V Bias	-327	Volts	-327	Volts

## 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)
5000	0.00	0.00	0.01	N/A
5000	80.00	24.06	23.88	1.0073
5000	40.00	12.13	11.97	1.0130
5000	10.10	3.08	3.09	0.9955
5000	0.00	0.00	-0.12	As Found Zero
5000	80.00	24.06	24.86	As Found Span
Average Correction Factor				1.0053

Calculated value of As Found Response: 25.680 ppm      Percent Change of As Found: -6.7%

	before calibration		after calibration	
Auto zero	-0.09	ppm	-0.03	ppm
Auto span	19.75	ppm	19.85	ppm

Notes: Analyzer response variation noted after H2 cylinder replacement (shortly after as found capture).  
Performed zero and span adjustments.

Calibration Performed By: Kelly Baragar

## Calibration Summary

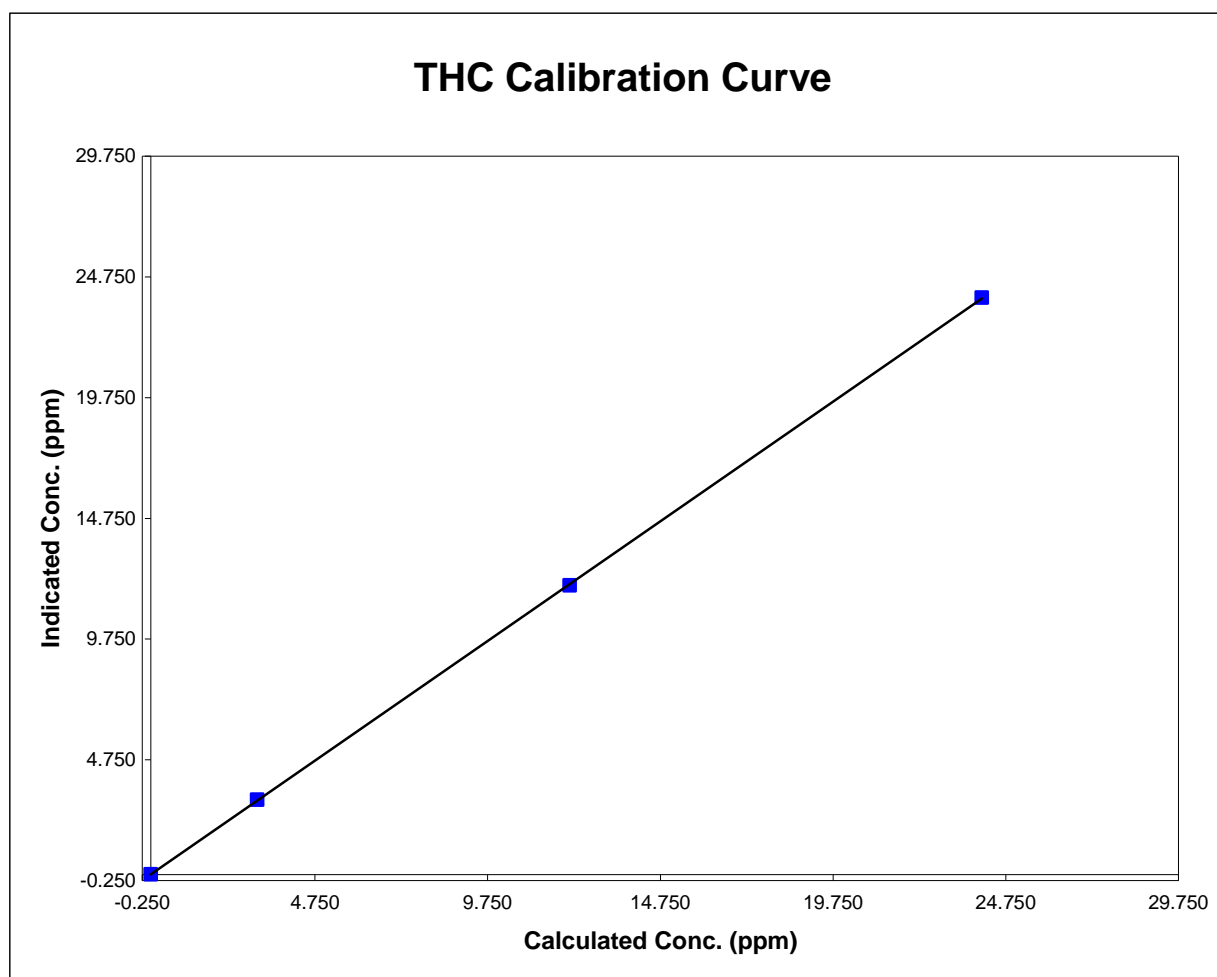
Parameter **THC**Air Monitoring Network **Palliser Airshed**

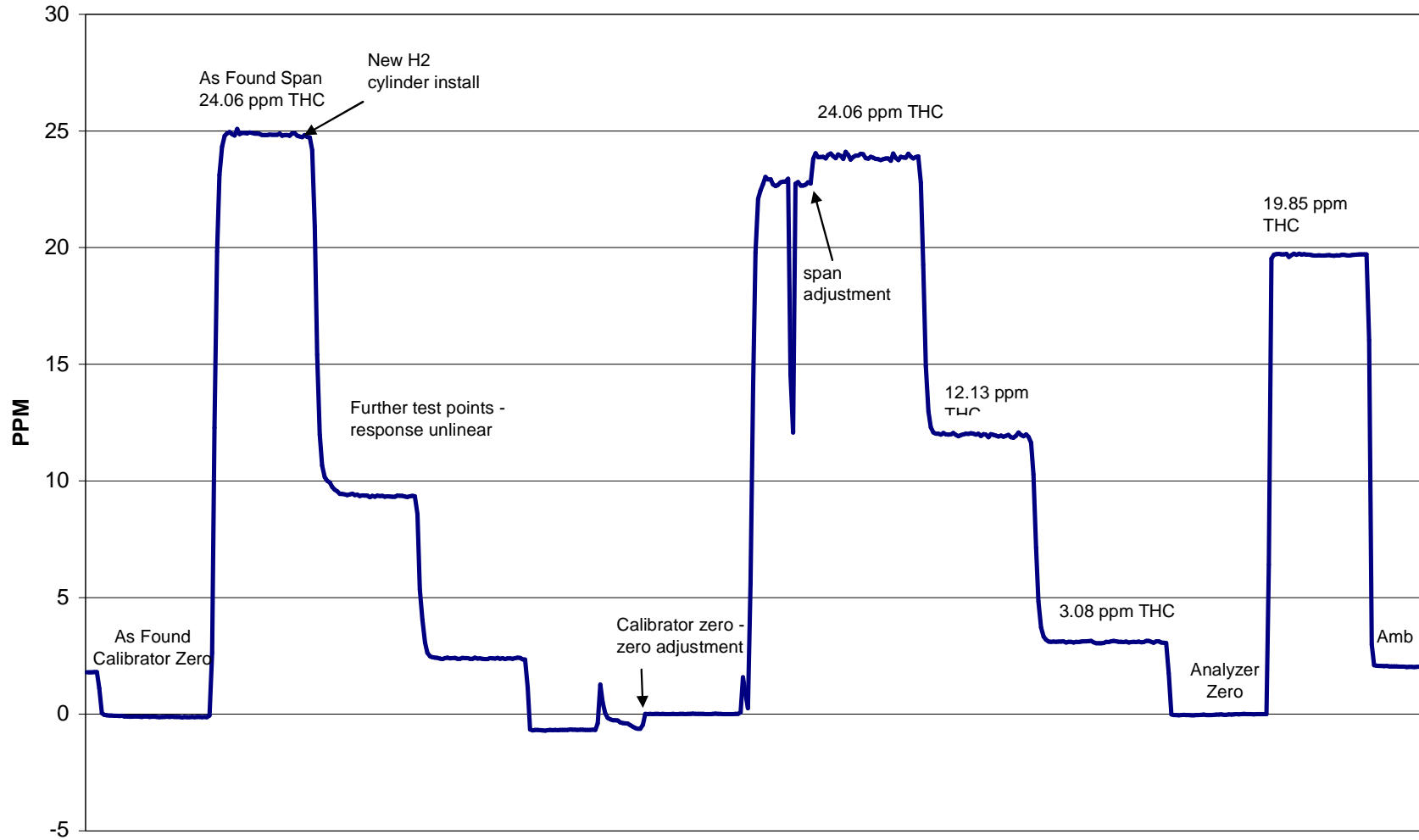
### Station Information

Calibration Date	February 29, 2008	Previous Calibration	January 29, 2008
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	12:20	End Time (MST)	16:45
Analyzer make/model	TEI 51C-LT	Analyzer serial #	0407505596

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.006	N/A		
24.059	23.884	1.0073	Correlation Coefficient	0.999985
12.125	11.969	1.0130		
3.080	3.094	0.9955	Slope	1.008656
			Intercept	-0.006346



**Crescent Heights THC Calibration**



# Calibration Report



Parameter **CO**  
 Air Monitoring Network **Palliser**

### Station Information

Calibration Date	February 21, 2008	Previous Calibration	January 30, 2008
Station Number	101	Station Location	Crescent Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	8:15	End Time (MST)	10:26
Barometric Pressure	27.28 in Hg	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	2844
Cal Gas Conc	2998 ppm	Cal Gas Expiry Date	3/14/2008
		Cal Gas Cylinder #	BLM002248
DACS make	Focus AP1000	DACS serial No.	45270
DACS voltage range	0 - 1 volt	DACS channel #	11
	<u>Before</u>		<u>After</u>
Calculated slope	1.031211	Calculated slope	0.997044
Calculated intercept	-0.407186	Calculated intercept	0.090744
Analyzer make	TEI Model 48C	Analyzer serial #	436609887

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO coefficient	1.106		1.106	
CO bkg setting	3.56		3.56	
Lamp ratio	1.138325		1.138325	
Lamp intensity	199960	Hz	199960	Hz
Sample Flow	1.008	LPM	1.008	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)
3996	0.00	0.00	0.00	N/A
3996	49.94	37.01	37.06	0.9986
3996	29.96	22.31	22.26	1.0022
3996	9.96	7.45	7.28	1.0233
3996	0.00	0.00	0.00	N/A
3996	49.94	37.01	37.06	0.9986
Average Correction Factor				1.0080

Calculated value of As Found Response: 37.808 ppm      Percent Change of As Found: -2.2%

	before calibration		after calibration	
Auto zero	-0.61	ppm	0.12	ppm
Auto span	19.08	ppm	19.32	ppm

Notes: No adjustments or maintenance performed.

Calibration Performed By: Kelly Baragar

# Calibration Summary



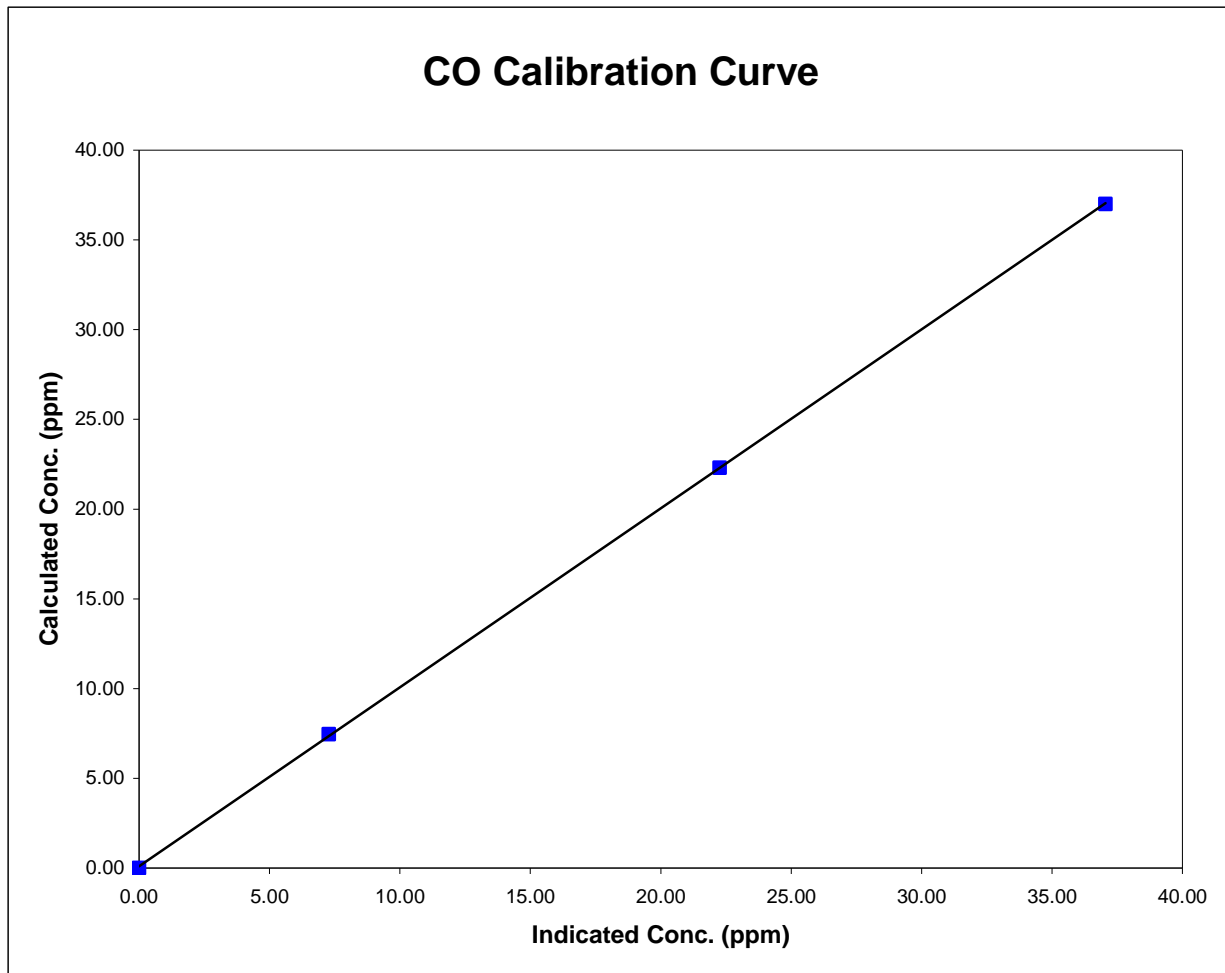
Parameter **CO**  
 Air Monitoring Network **Palliser**

### Station Information

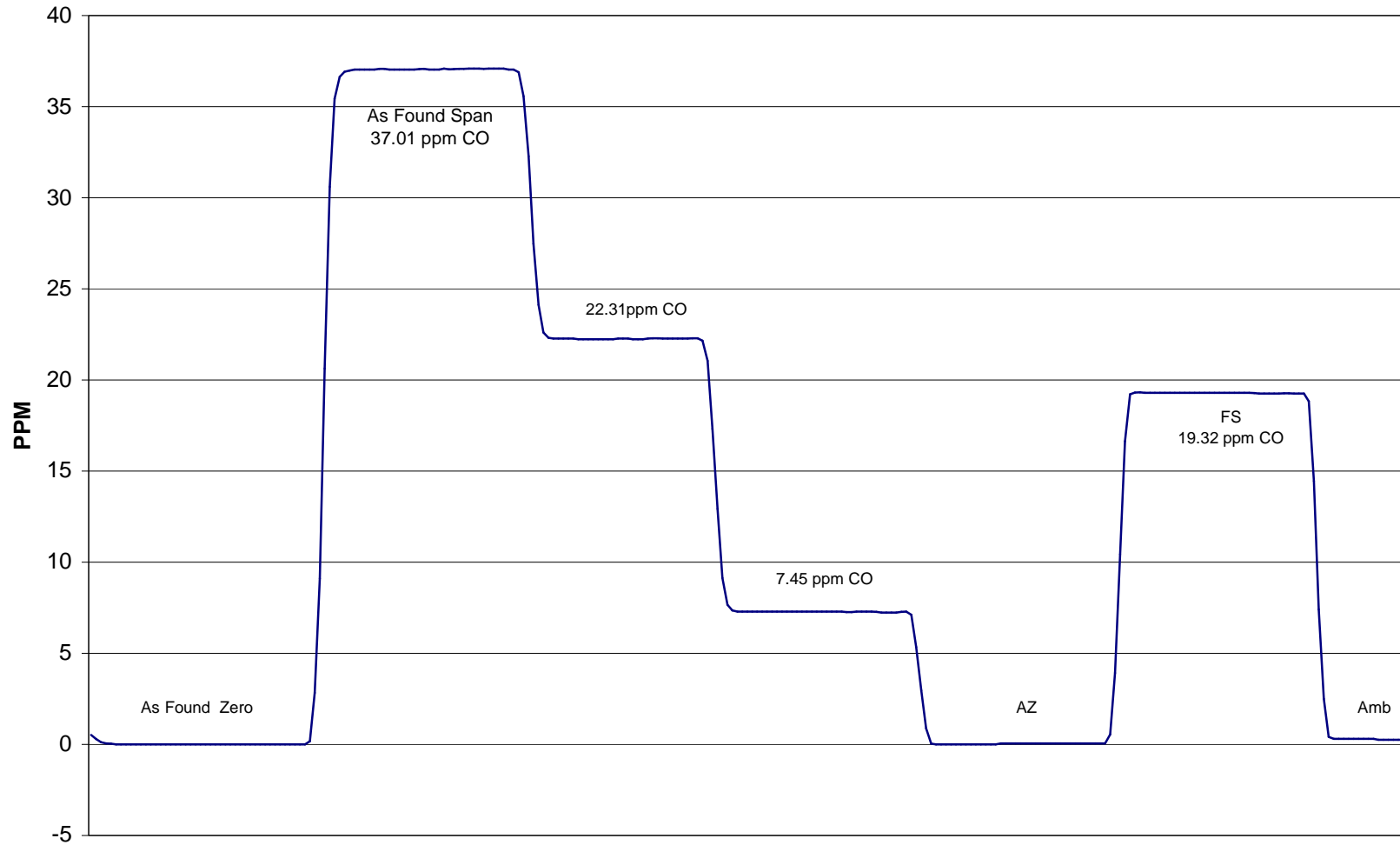
Calibration Date	February 21, 2008	Previous Calibration	January 30, 2008
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	8:15	End Time (MST)	10:26
Analyzer make/model	TEI Model 48C	Analyzer serial #	436609887

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.00	0.00	N/A		
37.01	37.06	0.9986	Correlation Coefficient	0.999975
22.31	22.26	1.0022		
7.45	7.28	1.0233	Slope	0.997044
			Intercept	0.090744



### Crescent Heights CO Calibration



February 21, 2008

# Calibration Report



Parameter **03**  
 Air Monitoring Network **PAS**

### Station Information

Calibration Date	February 21, 2008	Previous Calibration	January 17, 2008
Station Number	110	Station Location	Rover - Brooks
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			Other: <input type="checkbox"/>
Start Time (MST)	15:00	End Time (MST)	17:45
Barometric Pressure	27.5 inches Hg	Station Temperature	20.0 Deg C
Calibrator	Envionics 6103	Serial Number	2844
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45265
DACS voltage range	0 - 1 volt	DACS channel #	7
	Before		After
Calculated slope	0.966191	Calculated slope	1.008030
Calculated intercept	-1.769017	Calculated intercept	-3.042847
Analyzer make	API Model 400E	Analyzer serial #	331

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Offset	-11.0	ppb	-10.5	ppb
Slope	1.038		0.988	
Lamp measure	4479.1	mV	4328.7	mV
Lamp Reference	4478.9	mV	4329.8	mV
Pressure	26.1	inches Hg	26.5	inches Hg
Sample Flow	670	ccm	636	ccm
Sample temp	34.8	Deg C	37.0	Deg C

### Calibration Data

Dilution air flow rate (cc/min)	Ozone Set Point	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4996	0.0	0.0	2.2	N/A
4996	300.0	316.4	316.1	1.0012
4996	150.0	150.0	153.6	0.9763
4996	50.0	42.8	45.4	0.9437
4996	0.0	0.0	2.2	As Found Zero
4996	300.0	316.4	325.8	As Found Span
Average Correction Factor				0.9737

Calculated value of As Found Response: 310.9 ppm      Percent Change of As Found: -1.7%

	before calibration		after calibration	
Auto zero	3.0	ppb	2.5	ppb
Auto span	419.1	ppb	199.2	ppb

Notes: A small span adjustment was performed. Adjusted internal settings to generate a smaller internal span (from 420 ppb to 200 ppb).  
All calculated concentrations based on GPT portion of NOX cal done at CH on Feb 20.

Calibration Performed By: Kelly Baragar

# Calibration Summary



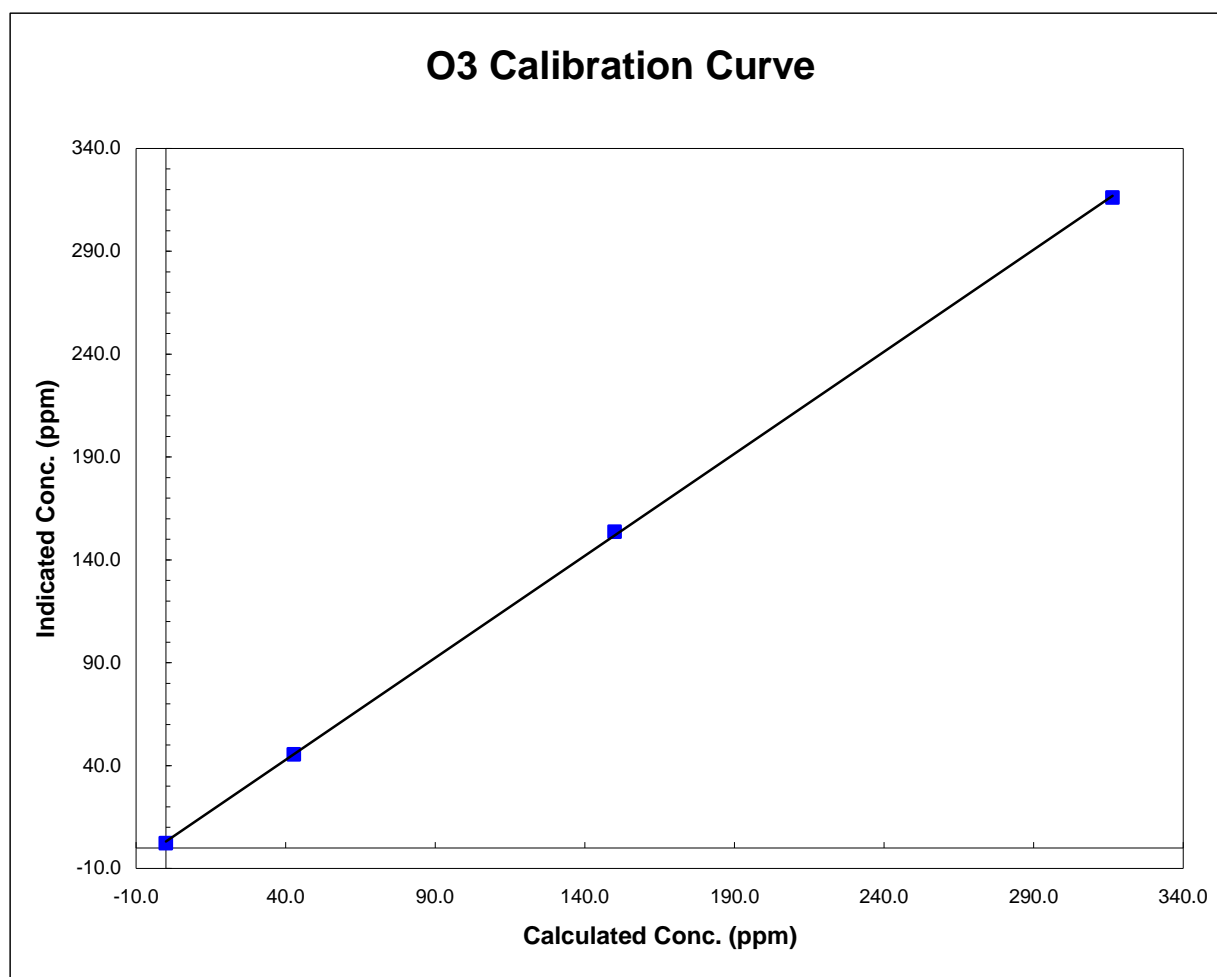
Parameter **O3**  
 Air Monitoring Network **PAS**

### Station Information

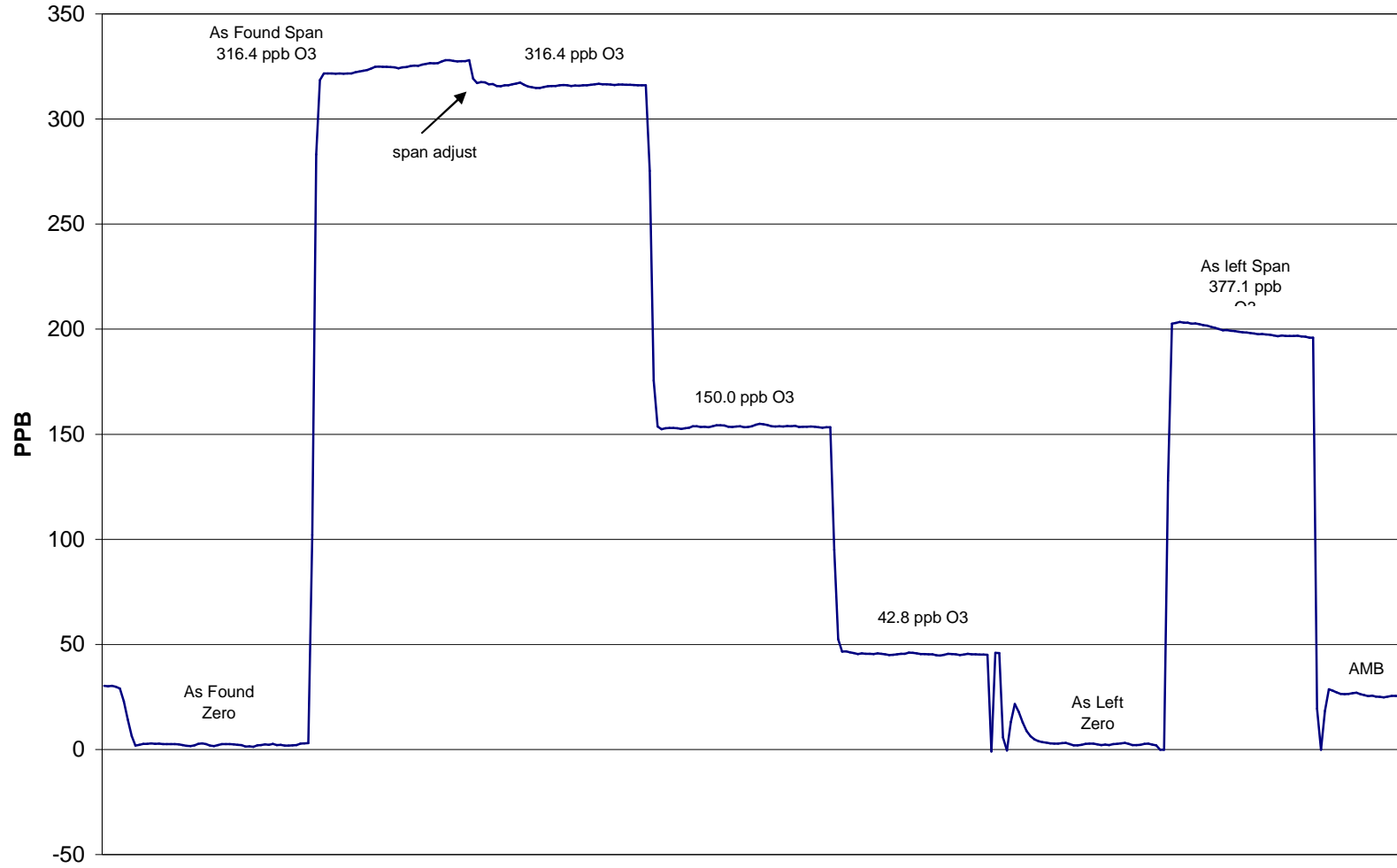
Calibration Date	February 21, 2008	Previous Calibration	January 17, 2008
Station Number	110	Station Location	Rover - Brooks
Start Time (MST)	15:00	End Time (MST)	17:45
Analyzer make/model	API Model 400E	Analyzer serial #	331

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
316.4	316.1	1.0012		
150.0	153.6	0.9763	Correlation Coefficient	0.999918
42.8	45.4	0.9437		
0.0	2.2	N/A	Slope	1.008030
			Intercept	-3.042847



Portable- Brooks O3 Calibration



February 21, 2008

# Calibration Report



Parameter **SO2**  
 Air Monitoring Network **PAS**

### Station Information

Calibration Date	February 21, 2007	Previous Calibration	January 17, 2007
Station Number	110	Station Location	Rover - Brooks
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	13:25	End Time (MST)	15:50
Barometric Pressure	27.20 inches Hg	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	2844
Cal Gas Concentration	50.3 ppm	Cal Gas Expiry Date	27-Jul-09
Gas Cert Reference	LL-16136		
DACS make	Focus AP1000	DACS serial No.	45265
DACS voltage range	0 - 10 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
DACS Scale High	500	DACS slope	500
DACS Scale Low	0	DACS intercept	0
Calculated slope	1.009239	Calculated slope	0.995437
Calculated intercept	8.139377	Calculated intercept	2.516079
Analyzer make	TEI Model 43A	Analyzer serial #	45A-43175-268

	before		after	
Concentration range	0-500	ppb	0-500	ppb
SO2 zero pot	1.5		1.5	
SO2 span pot	4.65		4.65	
Analyzer flow	4.75	LPM	4.75	LPM
UV Lamp voltage	860	V	859	V
Vacuum	22	in Hg	23.5	in Hg

### 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	-2.9	N/A
4996	39.95	399.0	398.1	1.0022
4996	19.94	200.0	198.5	1.0071
4996	9.98	100.2	98.5	1.0179
4996	0.00	0.0	-2.9	As found zero
4996	39.95	399.0	398.1	As found span
Average Correction Factor				1.0091

Calculated value of As Found Response: 412.832 ppm      Percent Change of As Found: -3.5%

	before calibration		after calibration	
Auto zero	-4.1	ppm	-1.1	ppm
Auto span	193.9	ppm	199.3	ppm

Notes: No adjustments or maintenance performed during the calibration.

Calibration Performed By: Lenin Flores

# Calibration Summary



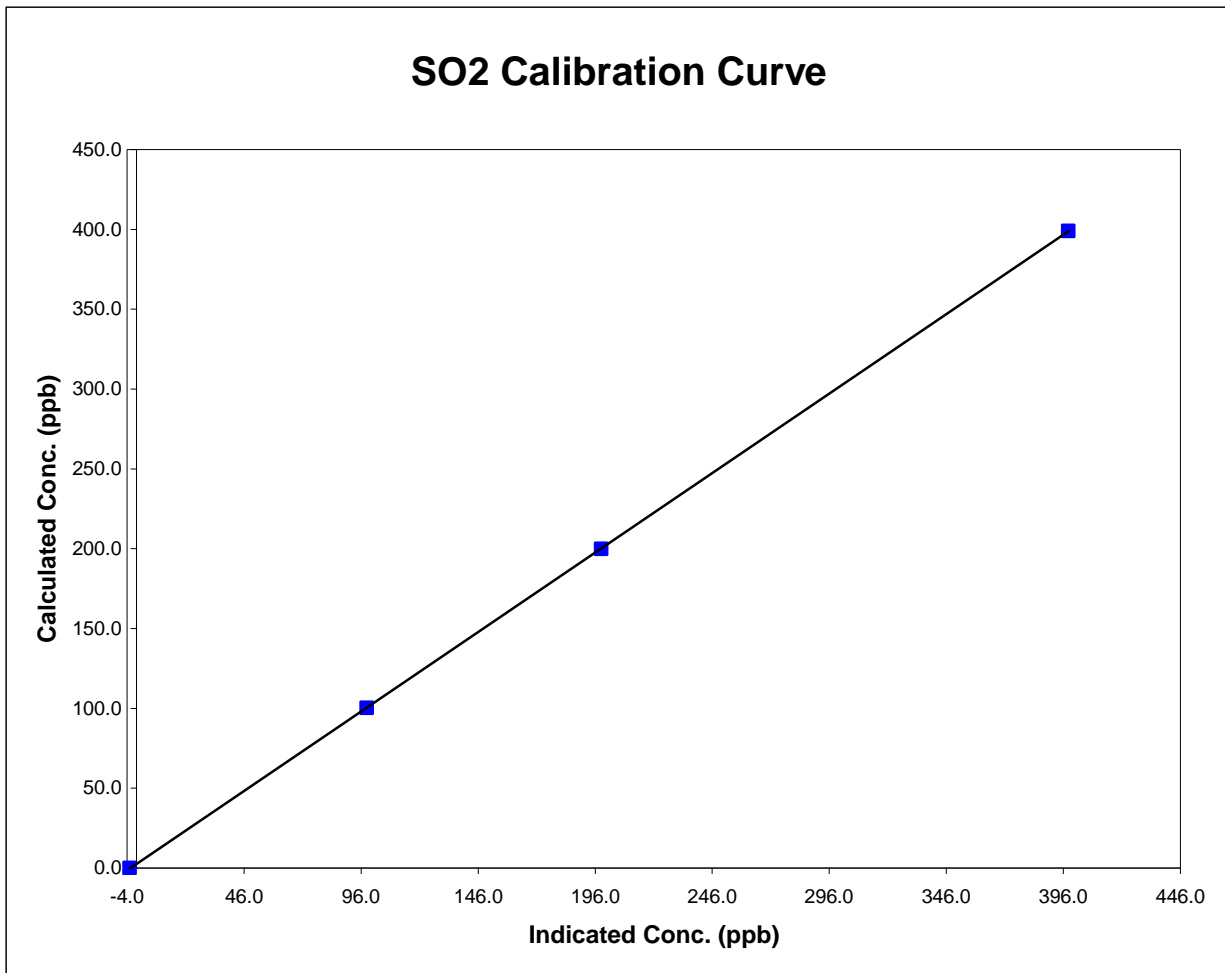
Parameter **SO2**  
 Air Monitoring Network **PAS**

### Station Information

Calibration Date	February 21, 2007	Previous Calibration	January 17, 2007
Station Number	110	Station Location	Rover - Brooks
Start Time (MST)	13:25	End Time (MST)	15:50
Analyzer make/model	TEI Model 43A	Analyzer serial #	45A-43175-268

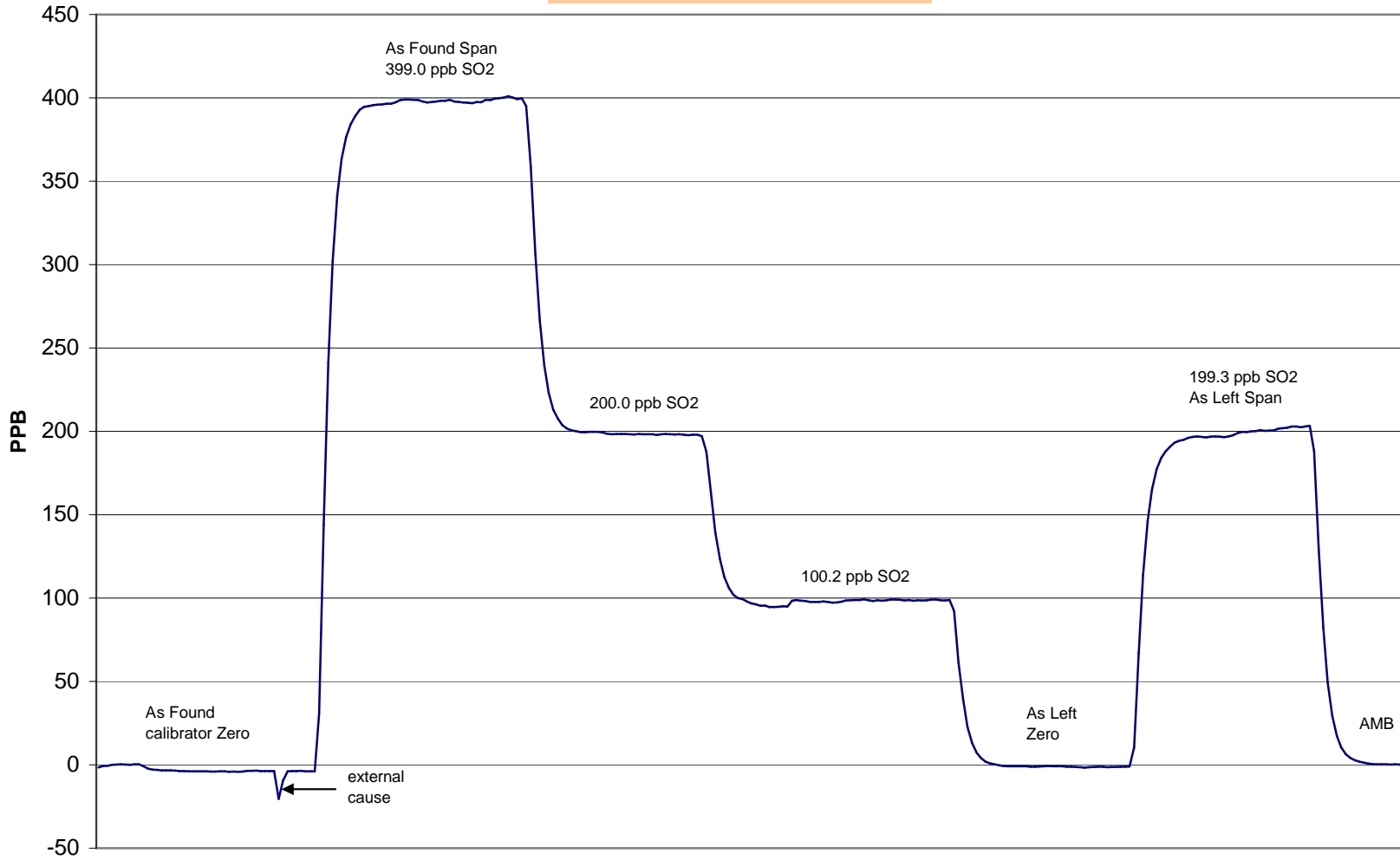
### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-2.9	N/A		
399.0	398.1	1.0022	Correlation Coefficient	0.999997
200.0	198.5	1.0071		
100.2	98.5	1.0179	Slope	0.995437
			Intercept	2.516079





### Portable-Brooks SO2 Calibration



February 21, 2007

# Calibration Report



Parameter **H2S**  
 Air Monitoring Network **PAS**

## Station Information

Calibration Date	February 21, 2008	Previous Calibration	January 17, 2008
Station Number	110	Station Location	Brooks Rover
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			Other: <input type="text"/>
Start Time (MST)	11:15	End Time (MST)	14:15
Barometric Pressure	27.2 inches Hg	Station Temperature	21.0 Deg C
Calibrator	Envionics 6103	Serial Number	2844
Cal Gas Concentration	5.02 ppm	Cal Gas Expiry Date	15-Nov-05
Gas Cert Reference	BLM003489		
DACS make	Focus AP1000	DACS serial No.	45265
DACS voltage range	0 - 10 volt	DACS channel #	6
	<u>Before</u>		<u>After</u>
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.973175	Calculated slope	1.000160
Calculated intercept	-0.482108	Calculated intercept	-0.400211
Analyzer make	TEI Model 43A	Analyzer serial #	43A-25575-221

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
H2S zero pot	959		959	
H2S span pot	587		555	
Analyzer flow	0.900	LPM	0.900	LPM
UV Lamp voltage	935	V	935	V
Vacuum	21.5	in Hg	21.5	in Hg

## 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	0.3	N/A
4996	79.89	79.0	79.3	0.9958
4996	39.94	39.8	40.3	0.9875
4996	9.94	10.0	10.4	0.9609
4996	0.00	0.0	0.3	As found zero
4996	79.89	79.0	81.7	As found span
Average Correction Factor				0.9814

Calculated value of As Found Response: 78.70 ppm      Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	0.7	ppm	0.7	ppm
Auto span	40.7	ppm	39.6	ppm

Notes: Performed small span adjustment and adjusted voltage output on analyzer.

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Calibration Performed By: Kelly Baragar

# Calibration Summary



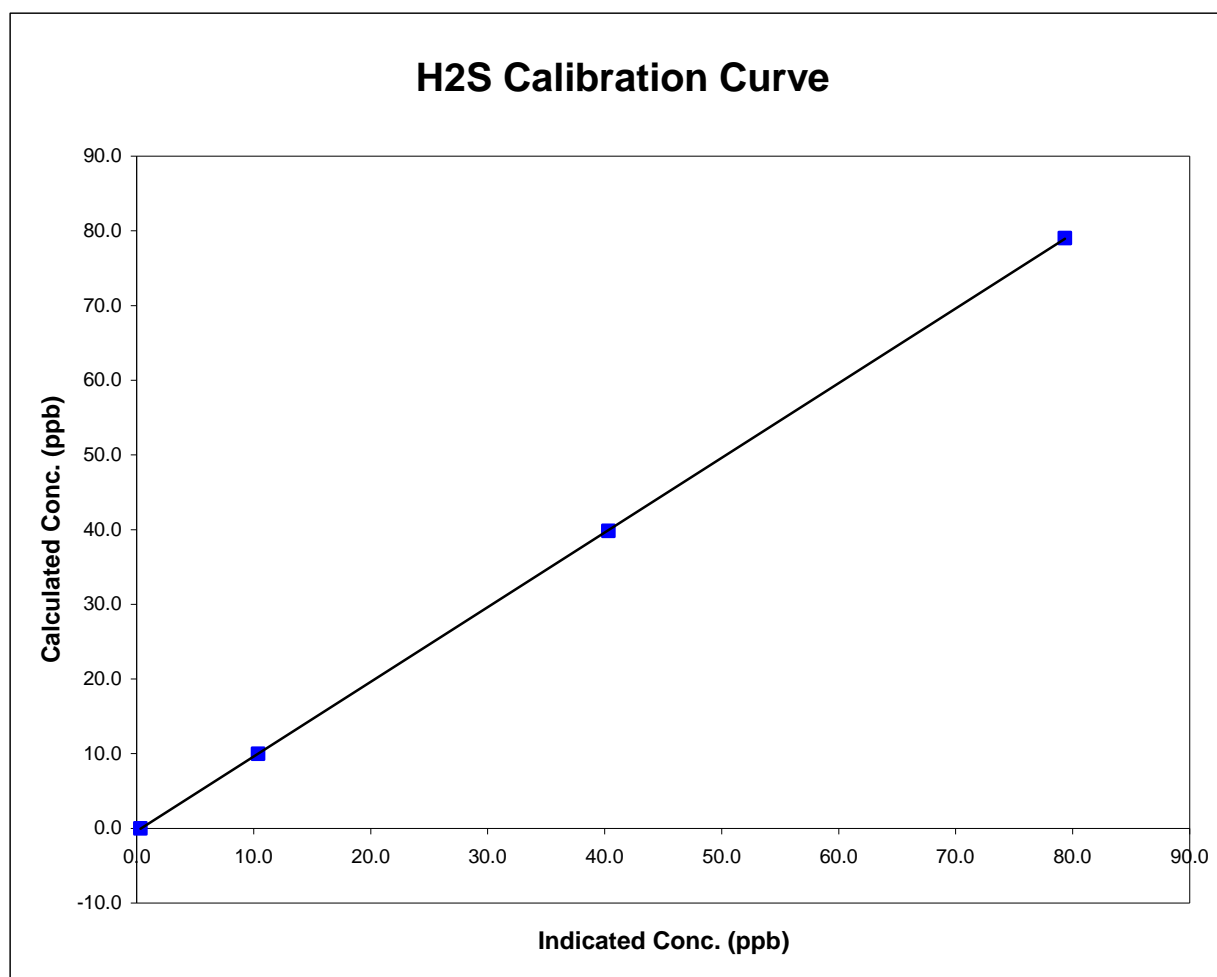
Parameter **H2S**  
 Air Monitoring Network **PAS**

### Station Information

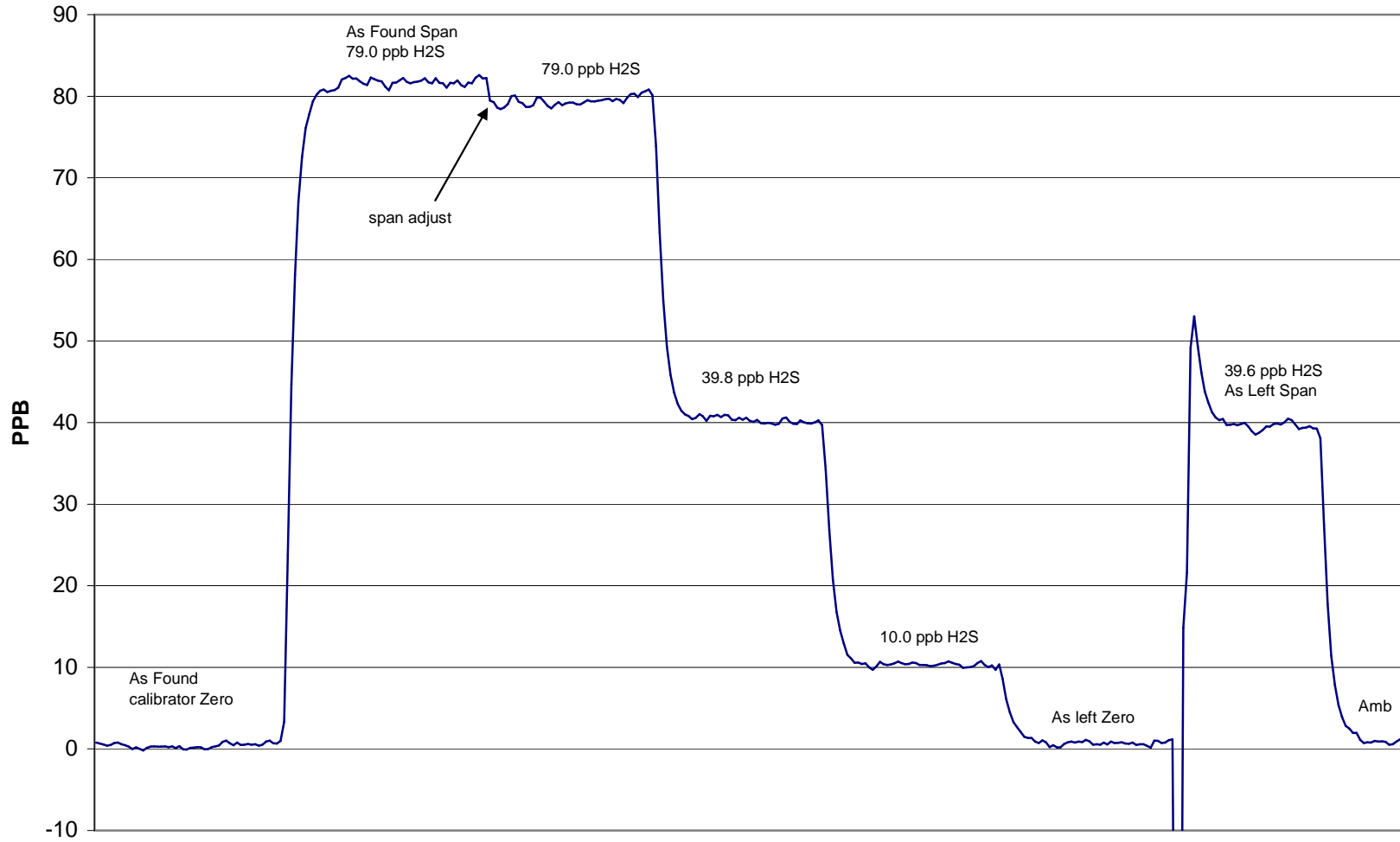
Calibration Date	February 21, 2008	Previous Calibration	January 17, 2008
Station Number	110	Station Location	Brooks Rover
Start Time (MST)	11:15	End Time (MST)	14:15
Analyzer make/model	TEI Model 43A	Analyzer serial #	43A-25575-221

### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.3	N/A		
79.0	79.3	0.9958	Correlation Coefficient	0.999995
39.8	40.3	0.9875		
10.0	10.4	0.9609		
			Slope	1.000160
			Intercept	-0.400211



### Portable-Brooks H2S Calibration



February 21, 2008