



# Palliser Airshed Society

## Ambient Air Monitoring Network Summary

December 2007

Prepared By:



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January 23, 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 – December 2007**

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Enclosed is the PAS Ambient Monitoring Report for the month of **December 2007**.

**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.

On December 4<sup>th</sup>, 2007 an Alberta Environment Calibration audit was performed. For information concerning the audit please contact Kevin McCullum, Program Manager.

**Crescent Heights:**

- ◆ All analyzers and instruments at the Crescent Heights Station were greater than 90% operational for for the month of December
- ◆ 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 12.0 ppb
  - Monthly average concentrations for O<sub>3</sub> was 18.5 ppb
  - Monthly average concentrations for CO was 0.20 ppm
  - Monthly average concentrations for THC was 2.21 ppm
  - Monthly average concentrations for PM<sub>2.5</sub> was 2.5 µg/m<sup>3</sup>
- ◆ The Air Quality Index (AQI) recorded 633 hours of Good readings for the month of December.

**Portable-Brooks:**

- ◆ All analyzers and instruments at the Portable Brooks Station were 100% operational for the month of December.
- ◆ There was one exceedences of the Alberta Objective (10 ppb) for H<sub>2</sub>S in December:
  1. December 29<sup>th</sup> (5:00-6:00): H<sub>2</sub>S 12.3 ppb: Wind speed 3 km/hr: Wind direction 338 degrees: **Alberta Environment reference # 196800.**
- ◆ The following is a summary of the monthly averages recorded during sampling:
  - Monthly average concentrations of SO<sub>2</sub> was 0.6 ppb
  - Monthly average concentrations for H<sub>2</sub>S was 0.3 ppb
  - Monthly average concentrations for O<sub>3</sub> was 17.7 ppb



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

The passive sample analyses were performed by MAXXAM Analytics Inc. There is no results for Site 14 as passive shelter and samples were removed from operation by a disgruntled land owner the site will be relocated at the end of January. The following are the ranges for December 2007 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 0.1 to 8.9 ppb with a mean of 3.4 ppb.
- ◆ Average concentrations for O<sub>3</sub> passives ranged from 51.4 to 88.3 ppb with a mean of 68.2 ppb.

***Note – the ozone passive readings appear excessive and further investigation will be done to confirm these results.***

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

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



# Continuous Monitoring

## Ambient Air Monitoring Network

### Crescent Heights Station

#### General Station Issues

Routine monthly calibrations were performed on December 13<sup>th</sup> (THC and CO) and December 14<sup>th</sup> (NO<sub>x</sub>, O<sub>3</sub> and TEOM). An Alberta Environment Calibration Audit was performed on December 4<sup>th</sup>. Two power (communication) failures during December (5<sup>th</sup> and 11<sup>th</sup>) resulted in a total of sixty-eight (68) hours of invalid data for all analyzers and sensors.

Parameter	Make	Model	Units	Notes
Ozone	TECO	43I	ppb	Other than above noted power & communication failures - no operational problems observed.
Nitrogen Dioxide	Teledyne - API	200E	ppb	Other than above noted power & communication failures - no operational problems observed. Maintenance (moly converter replaced) on December 13 <sup>th</sup> resulted in sixteen (16) hours of invalid data.
Total Hydrocarbons	Bendix	400A	ppm	Other than above noted power & communication failures - no operational problems observed.
Carbon Monoxide	TEI	49C	ppm	Other than above noted power & communication failures - no operational problems observed.
PM <sub>2.5</sub>	R&P TEOM	1400ab	µg/m <sup>3</sup>	Other than above noted power & communication failures - no operational problems observed.
Wind Speed	Met One	010C	kph	Other than above noted power & communication failures - no operational problems observed.
Wind Direction	Met One	020C	Deg	Other than above noted power & communication failures - no operational problems observed.
Ambient Temperature	Met One	083D	DegC	Other than above noted power & communication failures - no operational problems observed.
Relative Humidity	Met One	083D	%	Other than above noted power & communication failures - no operational problems observed.
Solar Radiation	Met One	096-1	W/m <sup>2</sup>	Other than above noted power & communication failures - no operational problems observed.
Data Acquisition System	Titan Logix	AP1000		Other than above noted power & communication failures - no operational problems observed.



# Continuous Monitoring

## Ambient Air Monitoring Network

### Portable-Brooks Station

#### General Station Issues

Routine monthly calibrations were performed on December 17<sup>th</sup> (O<sub>3</sub>, SO<sub>2</sub> and H<sub>2</sub>S). An Alberta Environment Calibration Audit was performed on December 4<sup>th</sup>.

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	There was one exceedences of the Alberta Objective (10 ppb) for H <sub>2</sub> S: December 29 <sup>th</sup> : H <sub>2</sub> S 12.3 ppb: <b>Alberta Environment reference # 196800</b> . No operational problems observed.
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: December 1, 2007 to January 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:	633
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	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
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-Dec-07	6	8	7	7	7	6	6	4	5	6	8	11	12	13	16	17	16	8	6	6	5	N	5	7
2-Dec-07	5	5	5	7	6	7	12	11	11	11	12	12	12	11	11	10	10	11	12	11	N	7	5	8
3-Dec-07	8	5	7	8	10	10	11	11	10	10	10	11	10	10	10	9	8	7	9	N	9	6	6	7
4-Dec-07	7	5	7	7	7	7	8	8	N	N	N	N	N	N	N	N	10	12	13	13	12	12	12	
5-Dec-07	12	12	N	11	11	10	8	7	9	11	10	10	11	11	9	8	6	5	N	N	N	N	N	N
6-Dec-07	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	10	7	8	8	8	8	8	7	7
7-Dec-07	7	8	N	10	9	6	8	7	6	9	11	12	14	14	13	11	6	7	7	6	7	8	8	8
8-Dec-07	8	N	8	7	7	8	8	7	8	6	10	12	15	16	15	13	10	9	6	7	11	12	13	13
9-Dec-07	N	14	14	14	14	11	14	13	12	12	13	11	10	7	5	6	7	6	9	8	8	8	11	N
10-Dec-07	13	12	14	11	9	10	12	10	9	12	14	16	16	16	16	15	15	14	11	11	11	7	N	13
11-Dec-07	14	14	13	9	7	7	6	6	7	9	14	17	18	N	N	N	N	N	N	N	N	N	N	N
12-Dec-07	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
13-Dec-07	N	N	N	N	N	N	N	N	N	N	N	N	13	12	11	10	N	N	N	N	12	12	13	14
14-Dec-07	13	12	N	12	12	10	11	9	8	10	12	13	N	N	2	4	8	9	10	10	10	9	11	8
15-Dec-07	5	7	N	5	7	7	7	6	7	10	14	17	17	16	16	15	15	15	15	15	15	13	15	16
16-Dec-07	15	N	16	16	14	15	15	15	15	16	16	15	15	15	14	13	13	13	12	12	12	12	14	15
17-Dec-07	N	15	11	11	8	6	7	7	7	7	9	10	15	15	13	13	13	13	12	13	13	13	13	N
18-Dec-07	13	13	13	13	14	14	10	10	11	11	14	15	15	13	12	9	8	11	12	14	16	16	N	16
19-Dec-07	15	15	16	16	15	14	13	11	12	11	12	13	13	13	14	15	14	13	14	15	14	N	15	16
20-Dec-07	14	13	13	13	13	11	10	9	9	11	11	11	12	11	10	8	6	4	6	5	N	8	11	10
21-Dec-07	9	8	8	8	12	14	13	6	8	6	12	14	15	14	13	11	8	6	8	N	5	5	6	7
22-Dec-07	7	5	8	5	5	6	5	5	6	6	5	6	10	10	10	10	9	10	N	14	15	16	16	16
23-Dec-07	16	17	17	15	13	14	14	14	12	15	15	16	16	15	15	14	11	N	16	16	16	16	17	17
24-Dec-07	16	16	15	14	14	15	14	14	12	11	10	13	13	13	14	12	N	13	12	10	13	14	13	12
25-Dec-07	13	13	12	12	11	12	13	11	11	9	8	10	11	12	14	N	12	6	7	5	5	6	7	7
26-Dec-07	8	9	10	11	10	11	11	11	14	14	14	13	12	N	8	5	5	5	4	4	4	4	4	7
27-Dec-07	7	7	6	6	4	5	4	6	6	7	6	6	6	N	8	7	7	5	8	11	12	9	12	12
28-Dec-07	10	11	9	6	4	6	6	7	7	6	7	7	N	15	14	13	12	5	6	5	5	5	4	5
29-Dec-07	6	5	5	4	4	4	4	4	5	4	5	N	6	6	6	6	5	5	5	6	6	5	5	6
30-Dec-07	10	13	14	13	11	13	12	11	7	5	N	11	8	8	6	5	5	6	7	7	6	6	7	5
31-Dec-07	4	5	5	5	6	7	10	10	11	N	15	15	15	12	10	9	11	11	12	9	9	12	8	8





# PAS - Crescent Heights Nitrogen Dioxide Monthly Summary

Station: Crescent Heights  
Station Owner: PAS

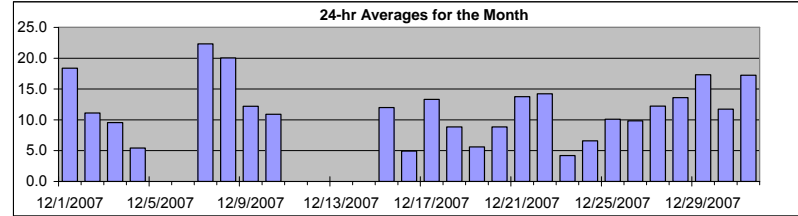
## HOURLY AVERAGE TABLE

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

Monitoring Dates: December 1, 2007 to January 1, 2008

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

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	35.6 ppb 8-Dec 8:00 9:00
Maximum 24-hr Average:	22.3 ppb 7-Dec



AIC Time:	28 hrs	Operational Time:	638 hrs						
Calibration Time:	10 hrs	AMD Operational Uptime:	90.9%						
Percentile	99	95	75	50	25	5	1	Average	Median
	33.9	28.5	17.2	9.7	5.6	2.6	1.6	12.0 ppb	9.7 ppb

### Status Flag Characters

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

Day	Mountain Standard Time																								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-Dec-07	26	29	29	31	28	26	24	19	18	17	12	7	7	3	2	3	14	27	25	20	A	23	16	18.4	30.6		
2-Dec-07	23	20	21	17	19	17	4	7	6	7	5	6	6	7	6	9	9	6	5	6	A	16	23	10	11.1	23.0	
3-Dec-07	10	15	8	10	5	8	6	6	7	7	9	6	8	9	9	10	17	13	10	A	9	14	12	11	9.6	16.8	
4-Dec-07	8	12	7	8	8	8	8	7	C	C	C	C	3	2	4	6	6	7	4	2	2	2	3	2	5.4	12.1	
5-Dec-07	2	2	A	4	4	5	8	11	8	4	5	7	5	5	9	11	13	15	P	P	P	P	P	P	N	15.4	
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	20	30	32	34	34	34	32	30	29	N	34.2	
7-Dec-07	28	32	A	14	17	21	32	31	27	15	11	10	8	9	10	14	25	24	28	26	31	35	34	32	22.3	34.7	
8-Dec-07	32	A	32	31	28	35	35	31	36	26	16	10	5	6	8	11	16	18	25	24	14	11	6	6	20.1	35.6	
9-Dec-07	A	6	4	5	4	12	5	7	8	7	6	10	14	21	22	24	30	23	13	12	12	15	10	A	12.2	30.1	
10-Dec-07	9	11	8	11	17	15	11	14	19	14	8	5	3	3	4	5	6	9	18	16	13	20	A	10	10.9	19.8	
11-Dec-07	8	7	9	17	22	30	26	26	28	23	11	4	5	P	P	P	P	P	P	P	P	P	P	P	N	30.2	
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	0.0	
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	7	9	11	C	C	M	M	M	M	M	M	N	11.0		
14-Dec-07	M	M	M	M	M	M	M	M	M	C	C	C	C	A	8	13	16	13	12	10	10	13	7	15	N	16.1	
15-Dec-07	20	28	A	22	17	18	18	18	22	26	18	13	5	4	4	4	6	5	4	4	4	8	3	2	12.0	28.1	
16-Dec-07	3	A	2	3	6	3	4	4	4	2	3	4	6	5	5	8	8	6	7	7	8	7	6	5	4.9	8.4	
17-Dec-07	A	4	12	11	17	20	22	31	29	31	17	19	9	8	10	11	8	8	9	6	5	6	3	A	13.3	30.8	
18-Dec-07	4	3	4	5	3	4	13	13	14	15	9	7	7	13	13	18	20	13	10	7	4	2	A	3	8.8	19.8	
19-Dec-07	4	4	2	4	4	4	5	8	5	7	6	7	5	9	8	6	7	9	7	5	5	A	5	3	5.6	8.8	
20-Dec-07	6	7	5	4	3	6	8	12	13	9	9	8	5	6	6	8	13	14	13	14	A	11	12	11	8.8	14.3	
21-Dec-07	9	10	11	14	8	3	5	22	36	25	9	5	4	7	6	11	16	21	14	A	23	22	24	14	13.7	35.5	
22-Dec-07	13	21	12	20	23	24	21	22	26	12	21	24	10	11	11	11	13	11	A	7	3	3	5	2	14.2	26.4	
23-Dec-07	2	1	1	6	9	5	7	4	8	2	3	2	2	6	6	6	11	A	4	3	4	2	2	1	4.2	11.2	
24-Dec-07	1	5	3	5	5	3	8	8	8	9	12	8	9	9	7	9	A	8	7	10	5	3	4	5	6.6	11.7	
25-Dec-07	3	3	3	4	7	6	5	8	6	6	9	6	4	3	2	A	6	18	17	23	22	25	16	29	10.1	29.1	
26-Dec-07	12	9	8	5	8	6	7	8	4	6	3	4	3	5	A	12	15	15	20	18	18	17	14	8	9.8	19.5	
27-Dec-07	8	8	10	10	13	13	14	13	9	7	10	11	16	A	22	26	29	20	11	6	8	11	5	3	12.2	28.5	
28-Dec-07	7	5	9	15	18	14	15	13	14	20	13	15	A	4	4	5	7	19	24	20	15	21	18	19	13.6	24.1	
29-Dec-07	24	19	14	13	17	15	13	19	21	16	14	A	11	11	10	12	20	22	22	24	24	20	21	14	17.3	24.3	
30-Dec-07	9	3	1	2	6	2	5	4	13	22	A	6	11	12	13	17	20	19	18	18	17	18	17	17	11.7	21.9	
31-Dec-07	18	18	19	20	22	22	22	22	21	A	15	14	13	12	10	11	18	20	21	19	19	15	12	14	17.2	22.1	
Hourly Avg	11.6	11.2	9.6	11.6	12.6	12.8	13.0	14.4	15.8	13.5	10.4	9.0	7.1	7.7	8.6	11.0	14.3	14.9	14.7	13.9	12.9	14.0	12.6	11.2			
Hourly Max	31.5	31.8	32.4	30.6	28.1	35.4	35.1	31.4	35.6	30.7	21.3	24.2	15.7	21.3	22.2	25.6	30.1	32.3	33.7	34.2	34.0	34.7	33.6	32.3			

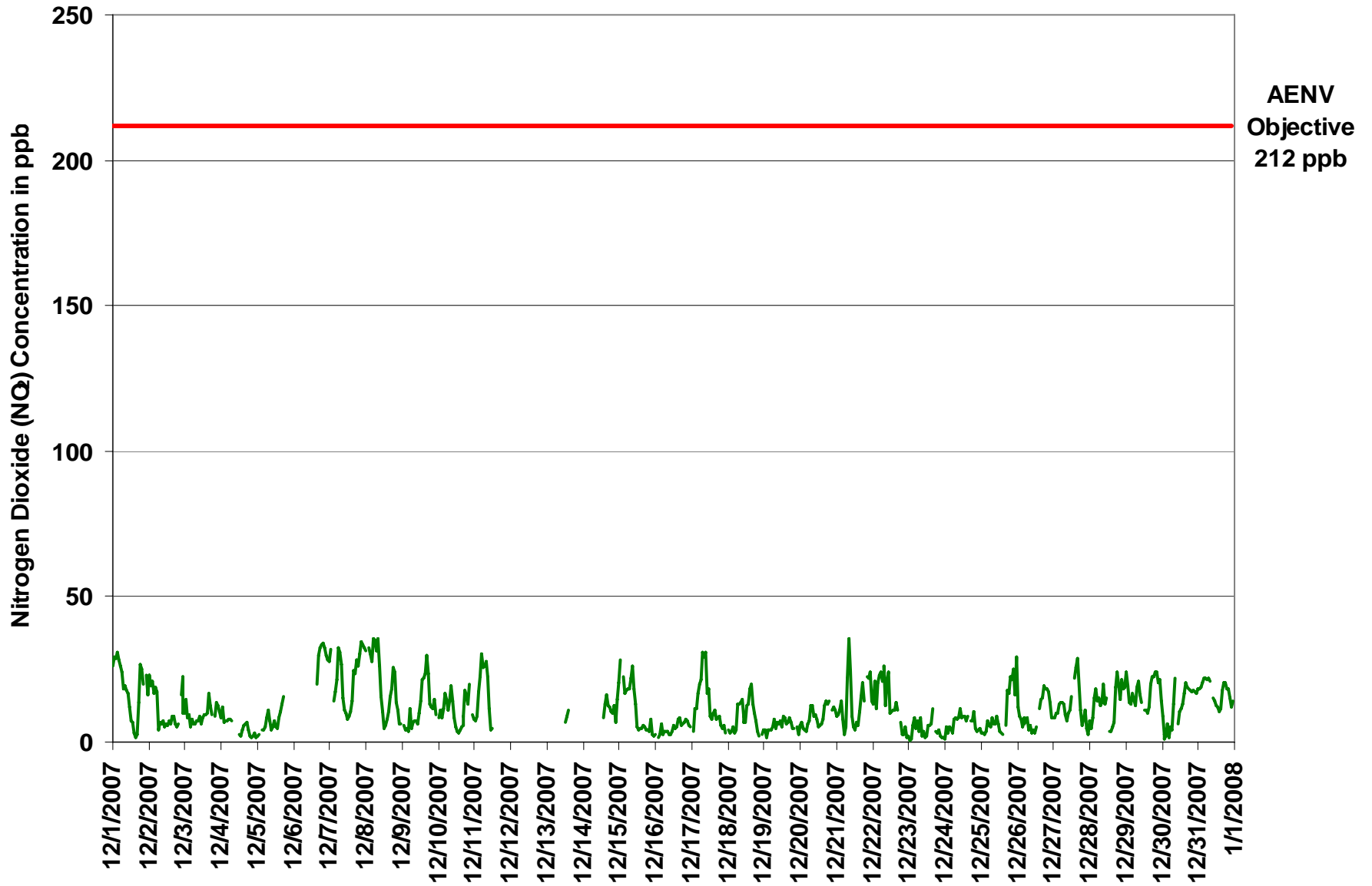


Figure 1. PAS - Crescent Heights Nitrogen Dioxide 1-hr Average Monthly Trend



Station: Crescent Heights  
Station Owner: PAS

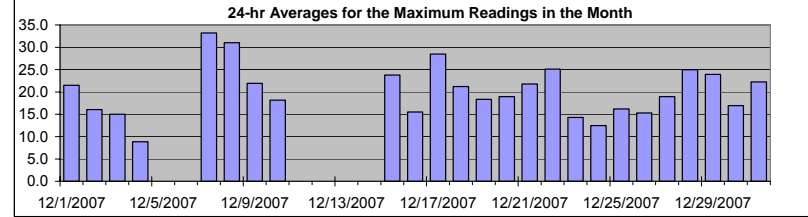
### INSTANTANEOUS (30 Second) MAXIMUM TABLE

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

Monitoring Dates: December 1, 2007 to January 1, 2008

#### Summary

Maximum 1-hr Value:	72.7	ppb	22-Dec	11:00 12:00
Maximum 24-hr Value:	33.2	ppb	7-Dec	



AIC Time:	28 hrs	Operational Time:	638 hrs						
Calibration Time:	10 hrs	AMD Operational Uptime:	90.9%						
Percentile	99	95	75	50	25	5	1	Average	Median
	56.0	43.1	28.9	18.9	10.6	4.3	2.6	20.5 ppb	18.9 ppb

#### Status Flag Characters

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

Day	Mountain Standard Time																								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-Dec-07	29	31	34	33	31	28	27	22	22	20	18	17	9	9	5	3	4	22	29	28	22	A	29	21	21.5	34.5	
2-Dec-07	26	27	26	23	32	30	5	9	10	10	9	9	9	12	8	11	11	9	7	8	A	26	36	15	16.0	35.6	
3-Dec-07	14	22	12	26	8	20	15	11	10	11	23	8	10	12	14	15	23	17	11	A	11	24	15	13	15.0	25.7	
4-Dec-07	11	17	9	10	10	10	11	10	C	C	C	C	14	10	15	7	8	11	6	4	3	3	5	3	8.8	17.3	
5-Dec-07	3	4	A	6	5	7	14	17	18	7	12	10	7	6	16	15	22	21	P	P	P	P	P	P	N	21.9	
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	21	35	46	44	62	36	48	42	43	N	61.6	
7-Dec-07	34	34	A	36	42	38	50	34	34	23	24	22	19	32	13	31	37	32	33	40	36	41	45	35	33.2	49.5	
8-Dec-07	55	A	35	41	34	51	42	37	47	31	24	24	6	7	28	15	27	27	35	38	39	32	9	32	31.0	54.9	
9-Dec-07	A	11	5	37	5	31	7	18	11	38	14	25	34	31	25	31	35	35	16	15	16	21	20	A	21.9	38.4	
10-Dec-07	17	15	12	16	20	17	14	32	28	20	11	9	5	4	11	11	7	19	35	43	30	30	A	12	18.2	43.1	
11-Dec-07	11	13	13	27	37	39	30	35	49	30	44	5	28	P	P	P	P	P	P	P	P	P	P	P	P	N	49.0
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	0.0
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	19	15	C	C	M	M	M	M	M	M	M	M	N	19.7
14-Dec-07	M	M	M	M	M	M	M	M	M	C	C	C	C	A	11	31	31	17	39	14	34	33	15	30	N	39.0	
15-Dec-07	36	58	A	28	44	24	21	22	31	56	51	28	8	6	6	6	8	19	5	30	8	44	4	3	23.8	57.7	
16-Dec-07	11	A	4	12	32	11	15	24	14	4	4	11	27	13	14	11	24	8	9	20	29	14	9	37	15.5	37.5	
17-Dec-07	A	7	23	50	67	28	45	57	43	42	38	35	19	12	11	68	11	24	18	9	5	10	5	A	28.5	68.3	
18-Dec-07	22	4	5	31	5	8	39	39	42	18	22	14	19	36	17	41	33	33	36	11	5	4	A	4	21.2	41.8	
19-Dec-07	33	29	2	28	12	6	19	19	7	10	14	40	6	24	25	9	9	49	18	29	7	A	23	5	18.3	49.1	
20-Dec-07	26	27	20	7	6	7	25	17	20	24	23	14	8	13	24	21	20	17	33	30	A	29	13	12	19.0	33.0	
21-Dec-07	10	12	12	20	18	6	8	33	39	35	19	6	23	20	7	29	21	38	21	A	37	30	38	18	21.8	38.5	
22-Dec-07	24	40	15	33	28	31	27	39	33	17	29	73	18	15	16	16	22	23	A	26	4	4	39	8	25.1	72.7	
23-Dec-07	4	1	9	11	21	9	29	5	31	5	19	3	12	18	48	11	26	A	5	12	42	4	3	3	14.3	47.6	
24-Dec-07	2	22	7	16	27	12	16	14	12	11	22	15	13	11	9	11	A	12	11	16	9	4	6	8	12.5	27.2	
25-Dec-07	5	5	4	6	11	11	7	12	8	9	11	9	6	4	3	A	10	37	36	30	41	42	30	35	16.2	42.5	
26-Dec-07	20	13	11	7	15	14	9	11	7	21	6	44	5	8	A	14	16	19	22	20	19	19	19	12	15.3	44.4	
27-Dec-07	13	10	14	13	16	19	16	17	11	9	17	34	19	A	25	29	50	32	16	9	24	33	9	5	19.0	49.7	
28-Dec-07	43	8	31	26	23	23	22	15	25	50	16	17	A	12	5	29	34	28	46	25	21	25	29	21	25.0	50.3	
29-Dec-07	30	31	22	18	19	27	26	22	22	20	19	A	13	13	11	16	31	25	24	27	31	45	37	21	23.9	44.9	
30-Dec-07	24	10	2	4	21	3	28	8	31	34	A	8	14	13	14	19	23	21	19	19	18	19	19	18	16.9	34.0	
31-Dec-07	21	19	20	22	23	23	23	24	22	A	18	29	15	21	12	36	21	21	32	24	19	18	13	35	22.2	35.9	
Hourly Avg	21.1	18.8	14.5	21.7	22.6	19.8	21.8	22.3	24.1	22.2	20.2	20.3	14.3	14.6	15.2	20.6	22.1	24.5	23.4	23.5	21.8	24.1	20.4	18.0			
Hourly Max	54.9	57.7	34.7	50.5	66.8	50.9	49.5	56.7	49.0	56.4	51.0	72.7	33.6	36.0	47.6	68.3	49.7	49.1	46.3	61.6	42.2	47.6	45.0	43.1			

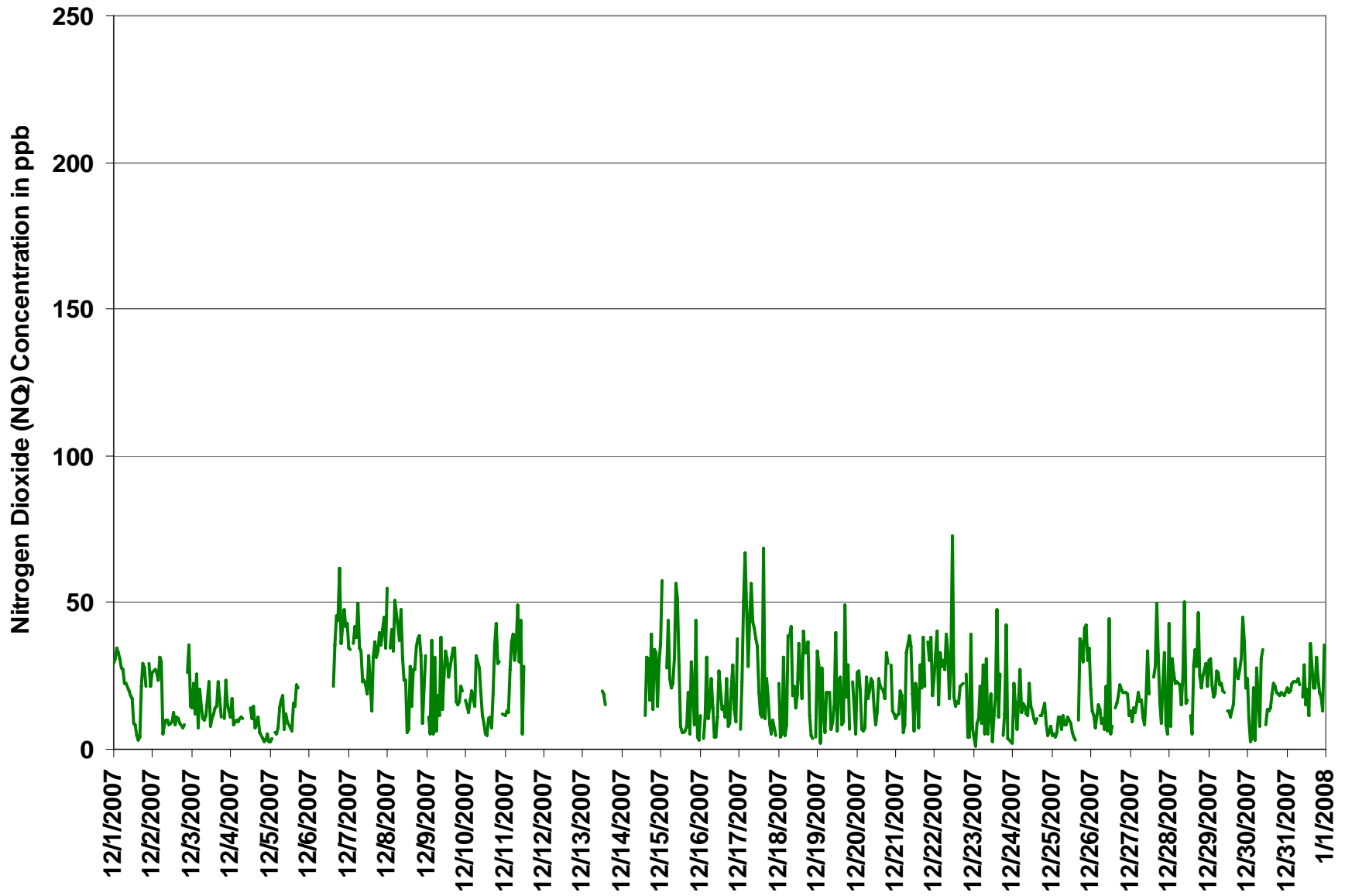
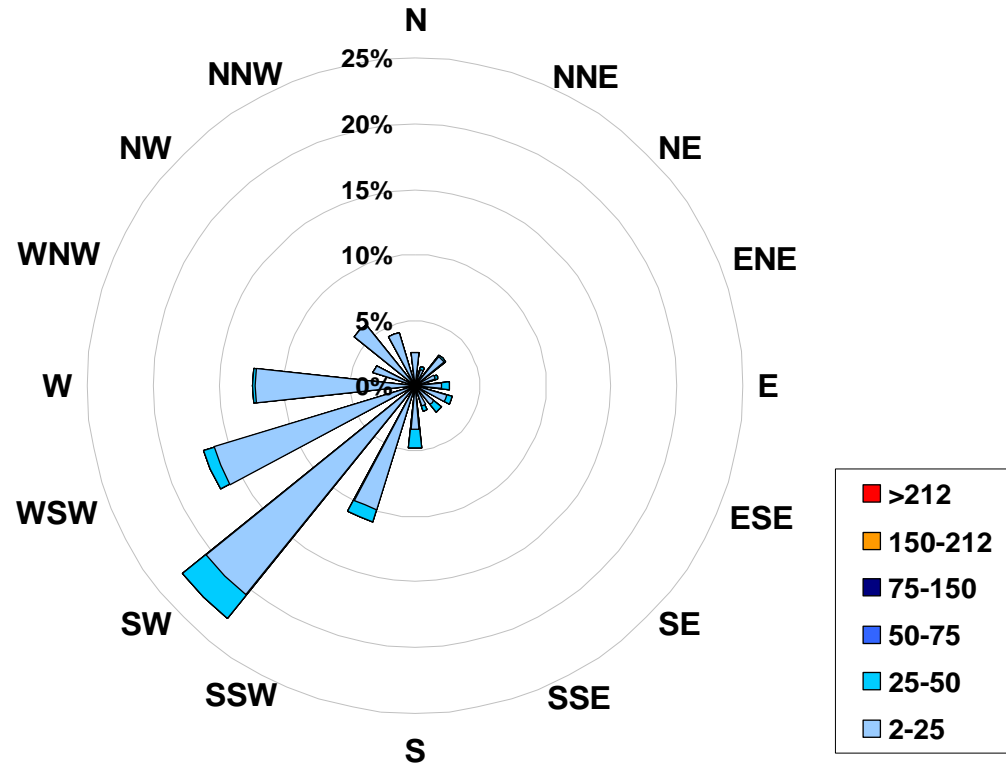


Figure 2. PAS - Crescent Heights Nitrogen Dioxide Instantaneous (30 Second) Maximum Value Monthly Trend



**1-hr Average Concentration Rose for Nitrogen Dioxide (in ppb) Located at the Crescent Heights Site for December 2007**



**Calms: 0%**

Frequency Distribution of NO <sub>2</sub> in ppb			
Range		Frequency (hrs)	
2.0	< 25	585	
25	to 50	32	
50	to 75	4	
75	to 150	1	
150	to 212	0	
	> 212	0	
Total Non-Zero Values			622



# PAS - Crescent Heights Nitric Oxide Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

## HOURLY AVERAGE TABLE

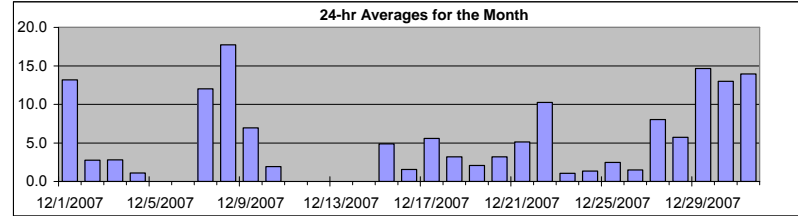
## Nitric Oxide (NO)

Monitoring Dates: December 1, 2007 to January 1, 2008

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

Maximum 1-hr Average:	89.6	ppb	8-Dec	8:00 9:00
Maximum 24-hr Average:	17.8	ppb	8-Dec	

AIC Time:	28 hrs	Operational Time:	638 hrs						
Calibration Time:	10 hrs	AMD Operational Uptime:	90.9%						
Percentile	99	95	75	50	25	5	1	Average	Median
	46.7	26.3	6.4	2.6	1.0	0.1	0.0	6.3 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 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-Dec-07	20	49	47	67	28	15	7	2	5	10	16	9	5	3	1	0	0	1	5	2	A	7	1	1	13.2	67.1
2-Dec-07	3	2	1	1	6	3	0	1	1	3	3	6	4	5	3	3	2	1	0	0	A	2	10	2	2.8	10.5
3-Dec-07	2	2	2	8	1	4	3	2	2	2	6	3	4	4	4	2	3	2	1	A	1	4	2	1	2.8	7.7
4-Dec-07	1	2	1	1	1	2	2	2	C	C	C	C	2	2	3	2	1	1	0	0	0	0	0	0	1.1	2.5
5-Dec-07	0	0	A	0	0	0	1	2	3	2	3	5	3	3	3	3	4	P	P	P	P	P	P	P	N	4.6
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	7	10	24	42	38	20	19	26	15	N	42.3
7-Dec-07	5	10	A	2	13	4	21	15	18	10	11	8	6	7	5	5	7	4	8	9	9	43	34	24	12.0	43.1
8-Dec-07	32	A	19	9	7	71	55	20	90	38	15	12	3	3	4	3	3	2	6	5	5	4	1	2	17.8	89.6
9-Dec-07	A	1	1	2	1	8	1	2	1	4	4	9	17	26	20	17	20	13	1	1	1	1	1	A	7.0	26.3
10-Dec-07	1	1	1	1	1	1	1	2	4	3	3	3	1	1	2	1	0	1	3	7	3	3	A	1	1.9	6.7
11-Dec-07	0	0	0	1	2	5	2	3	27	15	11	2	3	P	P	P	P	P	P	P	P	P	P	P	N	27.4
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	0.0
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	2	3	1	C	C	M	M	M	M	M	M	M	N	2.6
14-Dec-07	M	M	M	M	M	M	M	M	M	C	C	C	C	A	6	8	7	3	6	2	4	5	1	4	N	8.2
15-Dec-07	8	26	A	1	5	1	0	0	5	29	20	6	1	1	1	1	1	2	0	1	0	3	1	1	4.9	28.8
16-Dec-07	1	A	0	1	3	1	1	1	1	1	1	2	4	4	2	2	2	1	1	1	2	1	0	2	1.6	4.2
17-Dec-07	A	0	1	3	6	2	4	17	21	25	10	9	4	3	3	4	2	3	3	1	1	1	1	A	5.6	24.5
18-Dec-07	1	0	0	2	0	1	4	3	4	5	5	4	4	9	6	9	4	3	5	1	1	1	A	1	3.2	9.2
19-Dec-07	1	3	1	2	1	1	2	2	2	3	5	2	4	5	2	1	3	1	2	1	1	A	1	1	2.1	5.0
20-Dec-07	2	4	0	1	1	1	3	2	3	5	5	3	3	3	4	6	4	4	10	5	A	3	1	1	3.2	9.8
21-Dec-07	1	0	0	1	1	0	1	5	27	14	5	3	3	3	3	3	3	11	3	A	13	4	13	1	5.1	26.7
22-Dec-07	1	16	0	11	7	13	5	13	30	9	37	53	11	11	8	3	2	0	A	2	0	0	4	0	10.3	53.2
23-Dec-07	0	0	0	0	0	0	1	0	5	1	2	1	1	3	2	1	1	A	0	0	4	0	0	0	1.0	5.1
24-Dec-07	0	1	0	1	2	0	1	1	1	2	4	3	3	3	2	2	A	1	1	1	1	1	0	1	1.3	4.5
25-Dec-07	0	1	1	0	0	0	0	0	1	1	4	3	2	1	1	A	1	4	3	4	9	10	3	7	2.5	10.3
26-Dec-07	1	0	0	0	0	0	0	0	0	2	1	2	2	2	A	3	3	2	3	2	2	2	4	1	1.5	3.6
27-Dec-07	1	1	1	1	2	2	2	3	2	3	7	10	11	A	37	40	43	9	1	0	4	3	0	0	8.0	43.2
28-Dec-07	3	0	3	4	2	1	1	0	2	16	16	22	A	3	2	3	3	5	22	4	1	6	7	6	5.7	22.1
29-Dec-07	24	9	2	2	3	8	6	4	11	16	26	A	18	17	10	6	18	29	25	44	34	10	13	4	14.7	44.2
30-Dec-07	4	0	0	0	2	0	3	0	4	21	A	4	9	11	12	16	21	31	30	27	27	33	23	20	13.0	33.0
31-Dec-07	17	11	10	5	10	18	17	26	25	A	19	20	20	19	11	8	11	18	28	16	6	2	1	4	14.0	28.0
Hourly Avg	5.1	5.6	3.9	4.7	3.9	6.0	5.3	4.8	11.3	9.5	9.5	8.3	5.5	5.9	5.9	6.0	6.5	6.8	8.1	7.1	6.0	6.4	6.2	3.9		
Hourly Max	32.4	48.6	47.4	67.1	28.2	71.2	55.3	25.8	89.6	38.4	36.7	53.2	20.3	26.3	37.2	40.1	43.2	31.2	42.3	44.2	33.8	43.1	34.0	24.2		



# PAS - Crescent Heights Oxides of Nitrogen Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

## HOURLY AVERAGE TABLE

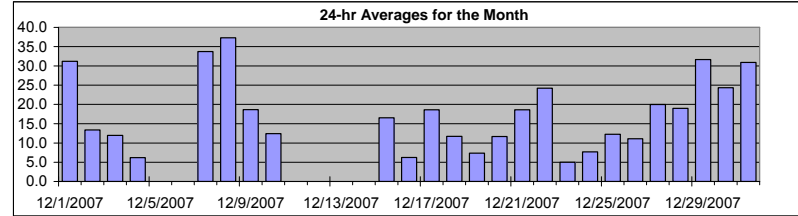
## Oxides of Nitrogen (NO<sub>x</sub>)

Monitoring Dates: December 1, 2007 to January 1, 2008

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

Maximum 1-hr Average:	124.6	ppb	8-Dec	8:00 9:00
Maximum 24-hr Average:	37.3	ppb	8-Dec	

AIC Time:	28 hrs	Operational Time:	638 hrs						
Calibration Time:	10 hrs	AMD Operational Uptime:	90.9%						
Percentile	99	95	75	50	25	5	1	Average	Median
	76.8	51.3	23.2	12.3	7.1	2.9	1.2	18.0 ppb	12.3 ppb



### Status Flag Characters

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

Day	Mountain Standard Time																								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-Dec-07	45	78	76	97	56	41	30	20	24	27	32	21	12	10	4	2	2	15	31	26	21	A	29	17	31.2	97.5	
2-Dec-07	25	21	21	17	24	20	4	7	7	10	8	12	10	12	9	12	10	6	5	6	A	18	33	11	13.4	32.5	
3-Dec-07	11	17	10	17	6	12	9	8	9	9	15	9	12	13	13	12	19	14	10	A	9	17	14	12	11.9	18.9	
4-Dec-07	9	14	8	8	9	9	9	9	C	C	C	C	5	3	6	7	7	7	4	2	1	2	3	1	6.2	13.6	
5-Dec-07	1	2	A	4	4	5	9	13	10	6	8	12	8	7	11	13	15	19	P	P	P	P	P	P	N	19.4	
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	39	56	75	72	54	51	56	43	N	75.4	
7-Dec-07	32	41	A	16	29	25	52	45	44	25	22	18	13	16	15	18	31	27	36	34	39	77	67	56	33.8	77.2	
8-Dec-07	63	A	51	39	34	106	90	51	125	64	31	22	7	8	11	13	18	20	31	28	18	15	7	7	37.3	124.6	
9-Dec-07	A	6	4	6	4	19	5	9	9	11	9	18	31	47	42	40	50	36	14	13	12	15	10	A	18.7	49.7	
10-Dec-07	9	12	9	12	17	15	12	16	23	17	11	8	5	3	5	6	6	9	21	22	15	22	A	10	12.4	22.7	
11-Dec-07	7	7	8	18	24	35	27	29	55	37	22	6	7	P	P	P	P	P	P	P	P	P	P	P	N	54.9	
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	0.0	
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	9	12	13	C	C	M	M	M	M	M	M	N	13.1		
14-Dec-07	M	M	M	M	M	M	M	M	M	C	C	C	C	A	14	20	23	15	17	12	14	17	7	18	N	22.5	
15-Dec-07	28	53	A	23	21	18	18	18	26	55	38	19	6	5	5	5	6	6	5	5	4	11	3	2	16.5	54.7	
16-Dec-07	3	A	2	3	9	3	5	5	4	3	3	6	10	9	7	9	10	6	7	8	9	8	6	7	6.2	10.4	
17-Dec-07	A	4	12	15	23	21	25	47	50	55	27	27	12	10	13	15	9	11	11	7	5	6	4	A	18.6	55.0	
18-Dec-07	5	3	4	7	4	5	17	16	17	19	13	10	11	21	18	27	24	16	14	8	4	3	A	3	11.7	27.1	
19-Dec-07	5	6	2	6	5	5	6	10	6	8	9	12	7	13	13	8	8	11	8	6	5	A	6	3	7.4	13.0	
20-Dec-07	7	11	5	5	4	6	11	14	15	14	14	11	7	8	10	14	16	18	23	19	A	14	13	11	11.7	22.6	
21-Dec-07	9	10	11	15	8	3	6	26	62	39	13	8	7	9	8	14	19	32	17	A	36	26	36	16	18.6	61.9	
22-Dec-07	14	36	12	31	30	37	26	35	56	21	58	77	20	21	18	14	15	11	A	8	2	2	9	1	24.2	77.1	
23-Dec-07	2	0	1	5	9	5	8	4	13	3	5	2	3	8	8	7	12	A	4	3	8	2	1	1	4.9	13.0	
24-Dec-07	1	6	3	5	6	3	8	9	8	10	16	11	12	11	10	11	A	8	8	11	5	4	4	5	7.7	15.9	
25-Dec-07	4	4	3	4	7	6	5	8	7	8	12	9	5	4	3	A	6	21	19	26	30	35	19	36	12.3	36.0	
26-Dec-07	13	9	8	5	9	6	7	8	4	7	4	6	5	7	A	15	17	17	23	20	20	20	17	9	11.1	22.6	
27-Dec-07	10	9	11	11	14	15	15	16	11	10	16	21	26	A	59	65	71	29	12	6	11	14	5	2	20.0	71.4	
28-Dec-07	9	4	11	19	20	15	15	13	16	36	28	37	A	7	5	8	10	24	46	24	15	27	25	25	19.0	45.9	
29-Dec-07	48	29	15	14	19	22	19	22	32	32	40	A	29	28	19	17	38	51	48	68	58	30	34	18	31.7	68.1	
30-Dec-07	12	2	1	2	8	1	7	4	17	42	A	10	20	23	25	33	41	50	47	45	44	51	40	37	24.4	50.6	
31-Dec-07	35	28	28	25	32	39	38	48	46	A	34	34	33	31	21	19	29	38	48	35	25	17	13	17	30.9	48.4	
Hourly Avg	16.3	16.4	13.1	15.9	16.1	18.4	17.9	18.8	26.8	22.6	19.6	17.0	12.2	13.3	14.3	16.7	20.4	21.3	22.4	20.6	18.6	20.1	18.4	14.8			
Hourly Max	63.3	77.5	75.8	97.5	56.0	106.0	89.8	50.5	124.6	63.6	57.8	77.1	32.7	47.0	58.7	65.5	71.4	56.0	75.4	71.9	57.7	77.2	67.0	55.9			

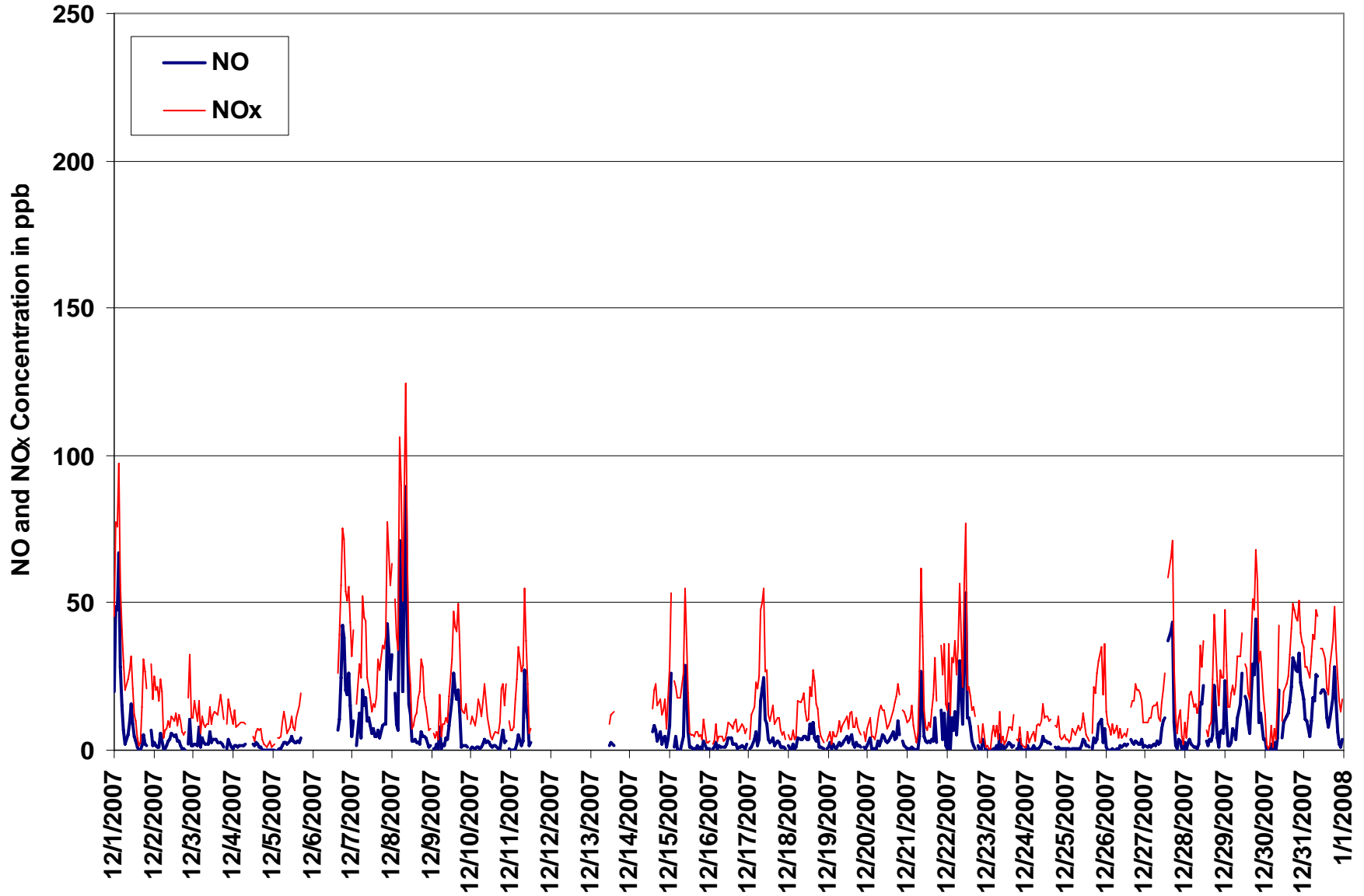


Figure 3. PAS - Crescent Heights Oxides of Nitrogen 1-hr Average Monthly Trend





Station: Crescent Heights  
Station Owner: PAS

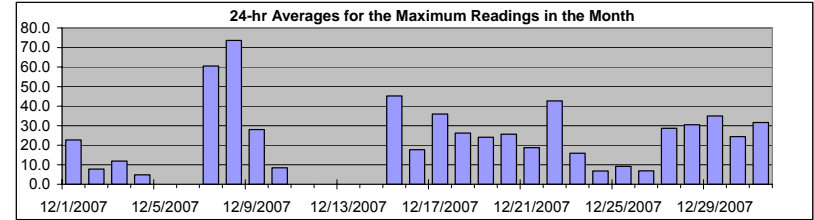
### INSTANTANEOUS (30 Second) MAXIMUM TABLE

### Nitric Oxide (NO)

Monitoring Dates: December 1, 2007 to January 1, 2008

#### Summary

Maximum 1-hr Value:	333.1	ppb	8-Dec	5:00 6:00
Maximum 24-hr Value:	73.6	ppb	8-Dec	



AIC Time:	28 hrs	Operational Time:	638 hrs						
Calibration Time:	10 hrs	AMD Operational Uptime:	90.9%						
Percentile	99	95	75	50	25	5	1	Average	Median
	215.2	98.3	33.6	9.6	2.7	0.9	0.6	26.9 ppb	9.6 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	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-Dec-07	48	78	104	93	47	19	19	4	11	13	20	17	6	6	3	1	1	3	8	4	3	A	15	3	22.7	103.7	
2-Dec-07	4	4	3	3	52	13	1	2	4	5	5	9	7	10	4	4	5	3	2	1	A	5	31	4	7.9	51.8	
3-Dec-07	3	5	4	63	2	22	12	4	3	5	32	4	5	6	8	5	16	16	4	A	2	45	4	2	11.9	63.4	
4-Dec-07	2	3	2	3	5	5	8	3	C	C	C	C	C	13	17	17	9	2	3	1	1	1	1	1	4.8	17.4	
5-Dec-07	1	1	A	1	2	2	5	16	15	5	8	7	6	6	17	9	8	7	P	P	P	P	P	P	N	16.8	
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	11	25	78	165	184	31	92	216	122	N	216.1	
7-Dec-07	13	18	A	28	141	30	180	55	110	18	101	19	8	66	14	52	45	14	53	80	19	98	172	57	60.5	180.3	
8-Dec-07	265	A	42	41	62	333	101	66	325	55	32	36	4	4	40	4	8	7	18	29	75	101	3	43	73.6	333.1	
9-Dec-07	A	2	1	60	2	44	2	22	4	61	17	41	67	56	28	55	60	51	3	3	3	4	32	A	28.0	66.6	
10-Dec-07	3	4	1	2	2	2	2	11	7	4	7	5	3	2	8	8	1	2	26	64	22	8	A	2	8.5	64.1	
11-Dec-07	1	1	1	4	13	13	4	20	245	27	104	3	36	P	P	P	P	P	P	P	P	P	P	P	N	245.1	
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	0.0	
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	A	4	C	C	M	M	M	M	M	M	M	N	39.7	
14-Dec-07	M	M	M	M	M	M	M	M	M	C	C	C	C	A	9	66	75	6	90	3	82	61	3	30	N	90.3	
15-Dec-07	206	133	A	6	118	2	1	1	37	113	251	31	3	2	1	2	1	52	1	36	3	37	2	2	45.2	251.3	
16-Dec-07	5	A	2	4	25	3	14	12	6	2	3	10	45	85	15	3	32	2	2	19	40	7	2	72	17.7	85.4	
17-Dec-07	A	2	2	56	135	5	22	116	74	83	92	29	15	6	4	71	3	49	19	2	2	2	1	A	35.9	134.9	
18-Dec-07	26	1	2	53	1	2	51	72	44	7	27	12	15	73	9	91	15	15	78	3	2	1	A	1	26.2	91.2	
19-Dec-07	17	86	1	48	7	2	15	15	3	3	10	65	3	41	108	4	2	62	11	28	2	A	19	1	24.1	108.3	
20-Dec-07	42	64	5	1	1	1	45	3	16	111	31	13	4	7	29	30	21	7	81	31	A	42	2	2	25.6	110.8	
21-Dec-07	2	2	2	4	1	1	2	24	41	27	30	5	34	9	4	19	7	77	11	A	56	12	59	4	18.8	77.3	
22-Dec-07	13	178	2	61	16	58	14	92	59	19	70	218	25	17	15	8	8	2	A	9	1	1	97	0	42.7	217.7	
23-Dec-07	1	0	1	1	4	1	19	1	51	2	16	2	9	14	55	15	25	A	1	9	136	2	1	1	15.9	135.9	
24-Dec-07	1	25	1	16	47	3	3	1	2	3	15	12	5	4	4	3	A	2	2	3	1	1	1	2	6.8	46.5	
25-Dec-07	1	1	1	1	1	2	1	1	2	2	5	4	3	3	2	A	2	27	24	8	48	49	10	14	9.2	49.1	
26-Dec-07	3	1	1	1	2	1	1	1	1	34	2	45	3	4	A	5	4	6	14	4	3	6	14	2	6.9	44.9	
27-Dec-07	4	2	3	2	3	5	3	11	5	3	25	73	15	A	49	81	212	42	3	2	30	80	2	1	28.7	211.7	
28-Dec-07	58	1	50	10	5	15	7	1	18	67	22	25	A	11	3	65	57	17	179	15	25	16	20	13	30.5	179.3	
29-Dec-07	50	63	10	3	5	71	59	8	24	24	44	A	24	23	12	9	33	51	31	63	70	52	66	8	35.0	70.8	
30-Dec-07	66	1	0	1	21	0	35	1	34	46	A	7	14	14	15	30	31	40	32	33	33	48	35	25	24.4	65.6	
31-Dec-07	60	15	14	7	16	20	25	29	31	A	21	33	27	49	14	71	18	22	96	61	10	4	2	80	31.6	96.4	
Hourly Avg	35.8	27.7	10.6	21.2	27.2	25.1	24.1	22.0	45.0	29.6	39.7	28.8	16.0	22.1	18.3	27.1	26.5	24.5	36.7	27.7	28.0	31.0	32.4	19.6			
Hourly Max	265.3	178.3	103.7	93.2	140.5	333.1	180.3	116.2	325.4	112.5	251.3	217.7	66.6	85.4	108.3	91.2	211.7	78.4	179.3	183.9	135.9	100.6	216.1	121.6			



Station: Crescent Heights  
 Station Owner: PAS

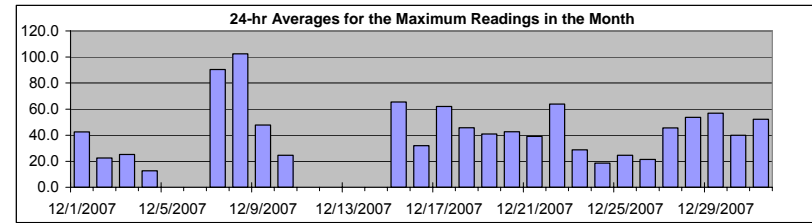
**INSTANTANEOUS (30 Second) MAXIMUM TABLE**

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

Monitoring Dates: December 1, 2007 to January 1, 2008

**Summary**

Maximum 1-hr Value:	377.5	ppb	8-Dec	5:00 6:00
Maximum 24-hr Value:	102.5	ppb	8-Dec	



AIC Time:	28 hrs	Operational Time:	638 hrs						
Calibration Time:	10 hrs	AMD Operational Uptime:	90.9%						
Percentile	99	95	75	50	25	5	1	Average	Median
	252.0	129.3	60.3	28.3	12.7	5.0	2.6	45.5 ppb	28.3 ppb

**Status Flag Characters**

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

Day	Mountain Standard Time																							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		
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-Dec-07	76	105	125	124	77	46	45	25	30	32	38	33	14	13	7	3	4	23	34	31	24	A	43	23	42.5	125.4
2-Dec-07	30	30	28	24	78	42	5	9	14	14	12	16	16	21	11	14	15	9	8	8	A	30	65	18	22.5	78.0
3-Dec-07	16	26	14	85	8	41	25	13	13	16	54	11	15	18	22	18	37	29	14	A	12	60	18	15	25.1	84.6
4-Dec-07	12	20	9	12	13	14	18	13	C	C	C	C	27	27	32	15	9	11	5	3	2	3	5	2	12.7	31.9
5-Dec-07	2	4	A	5	7	8	15	32	32	10	18	15	11	12	31	23	28	27	P	P	P	P	P	P	N	32.2
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	30	59	118	205	224	66	139	254	156	N	253.5
7-Dec-07	45	51	A	61	179	67	212	84	143	40	120	40	25	92	24	82	81	44	81	115	52	138	209	90	90.3	211.8
8-Dec-07	308	A	76	80	95	377	140	102	371	86	56	58	9	11	67	18	32	31	52	65	111	129	11	73	102.5	377.5
9-Dec-07	A	12	6	97	6	72	7	40	14	99	27	62	94	87	51	81	89	84	18	17	16	24	50	A	47.9	98.5
10-Dec-07	19	18	13	17	21	18	15	41	34	23	16	12	7	5	18	18	7	20	44	98	51	37	A	14	24.5	98.3
11-Dec-07	10	12	13	30	49	52	34	53	288	52	147	7	62	P	P	P	P	P	P	P	P	P	P	P	N	288.4
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	0.0
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	46	59	20	C	C	M	M	M	M	M	M	N	59.3
14-Dec-07	M	M	M	M	M	M	M	M	M	C	C	C	C	A	19	92	104	22	128	16	104	94	17	60	N	128.3
15-Dec-07	241	166	A	33	151	26	21	23	61	156	297	54	8	7	7	7	9	69	6	66	12	80	5	4	65.4	296.9
16-Dec-07	16	A	4	14	53	12	28	35	19	5	5	18	71	96	29	13	56	9	10	38	68	18	10	110	32.0	110.1
17-Dec-07	A	8	23	103	201	33	59	164	116	123	127	53	33	18	14	139	13	70	34	10	6	12	6	A	62.0	201.2
18-Dec-07	48	5	6	84	6	10	90	105	86	25	48	24	33	100	26	122	47	47	108	13	6	5	A	5	45.7	122.4
19-Dec-07	49	110	3	64	19	7	33	34	9	12	22	104	9	60	133	12	10	111	28	55	8	A	42	5	40.9	132.8
20-Dec-07	64	87	24	7	6	8	65	19	34	129	51	24	11	19	52	49	41	24	113	57	A	71	14	13	42.6	129.1
21-Dec-07	11	12	12	23	19	6	9	51	78	60	49	10	55	26	11	48	28	114	30	A	89	40	95	21	39.1	113.6
22-Dec-07	37	208	16	88	43	77	40	130	91	36	98	275	43	30	31	24	29	24	A	33	4	4	103	7	64.0	275.1
23-Dec-07	4	1	9	11	24	9	46	6	74	5	34	3	20	32	103	19	51	A	5	21	172	5	3	3	28.7	172.1
24-Dec-07	2	48	7	32	73	15	18	15	14	13	37	26	17	14	12	14	A	12	12	18	9	5	6	9	18.5	72.9
25-Dec-07	6	6	4	6	11	12	7	13	9	10	15	12	8	7	5	A	10	62	59	37	87	91	40	50	24.5	91.1
26-Dec-07	23	13	12	7	17	14	9	11	6	56	8	89	7	11	A	18	19	24	34	24	22	25	31	12	21.4	88.9
27-Dec-07	17	11	17	14	18	22	18	27	15	11	42	105	33	A	73	104	246	70	17	9	48	113	8	6	45.5	246.1
28-Dec-07	95	7	75	36	27	38	29	15	43	116	37	42	A	22	7	94	90	44	214	40	42	41	48	33	53.7	213.6
29-Dec-07	78	91	31	20	23	94	85	29	45	41	63	A	36	36	22	23	63	74	53	88	93	90	100	28	56.9	100.0
30-Dec-07	85	11	2	3	41	2	63	9	64	76	A	14	25	26	28	46	53	58	49	50	51	67	54	41	39.9	85.1
31-Dec-07	80	33	31	28	38	43	47	51	52	A	38	51	42	66	25	107	39	41	122	85	29	21	15	115	52.2	122.3
Hourly Avg	55.0	43.8	23.4	41.0	48.3	43.2	43.8	42.6	67.6	49.9	58.3	46.4	28.8	35.2	32.6	45.7	47.0	47.0	57.1	48.8	47.4	53.6	50.0	36.5		
Hourly Max	308.4	208.1	125.4	124.1	201.2	377.5	211.8	163.9	371.1	155.7	296.9	275.1	93.9	100.4	132.8	138.6	246.1	117.6	213.6	223.5	172.1	139.1	253.5	156.0		

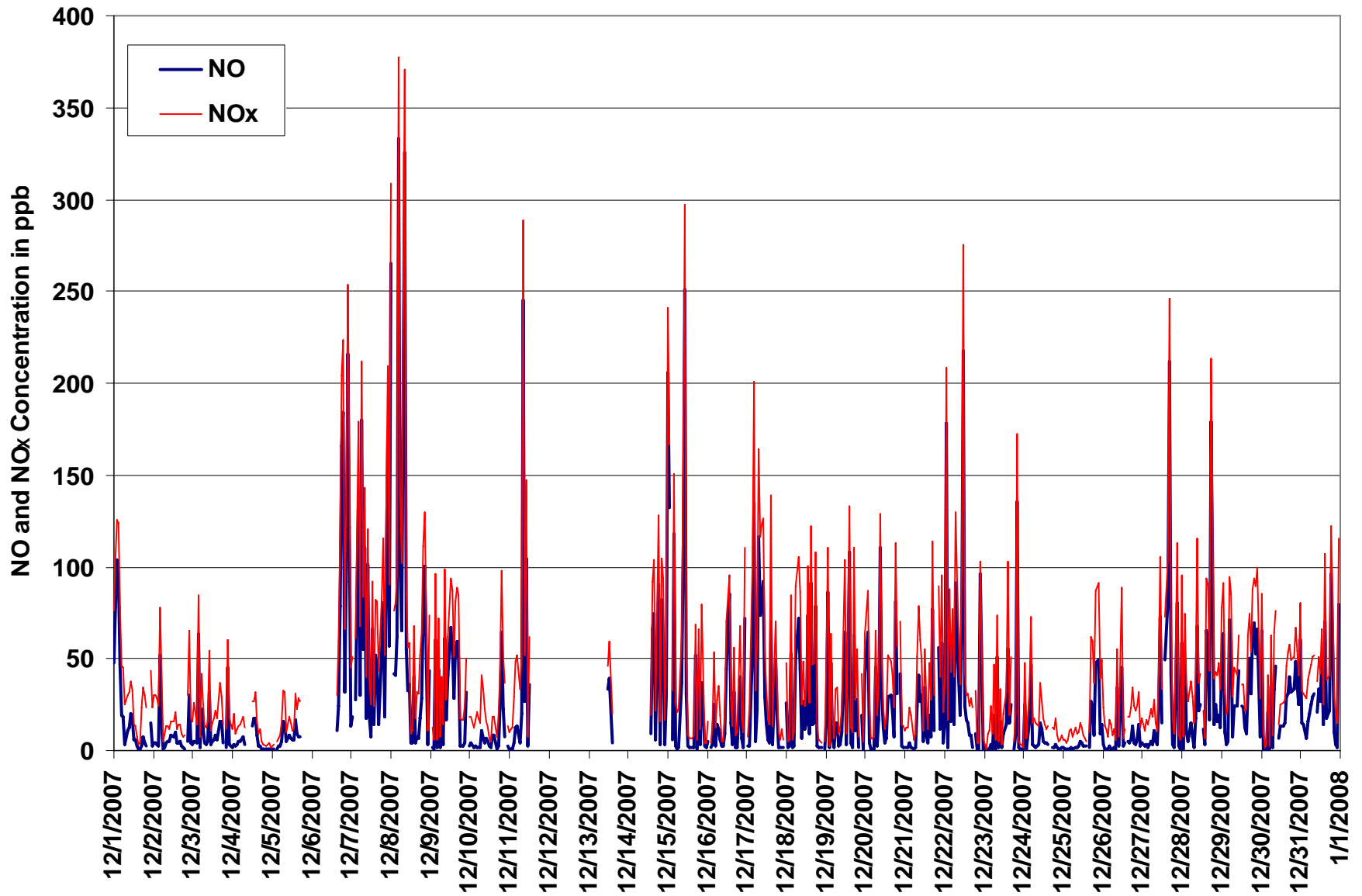


Figure 4. PAS - Crescent Heights Oxides of Nitrogen Instantaneous (30 Second) Maximum Value Monthly Trend



# PAS - Crescent Heights Ozone Monthly Summary

Station: Crescent Heights  
Station Owner: PAS

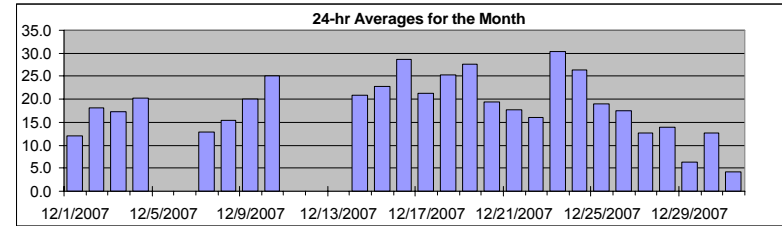
## HOURLY AVERAGE TABLE

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

Monitoring Dates: December 1, 2007 to January 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:	35.1 ppb	11-Dec	12:00 13:00
Maximum 24-hr Average:	30.3 ppb	23-Dec	



AIC Time:	29 hrs	Operational Time:	644 hrs						
Calibration Time:	3 hrs	AMD Operational Uptime:	90.9%						
Percentile	99	95	75	50	25	5	1	Average	Median
	33.9	31.6	25.9	20.7	11.6	1.7	0.4	18.5 ppb	20.7 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	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-Dec-07	2	1	2	1	1	1	3	8	8	12	16	22	23	26	32	33	32	16	5	6	9	A	8	13	12.1	33.2	
2-Dec-07	7	10	9	14	11	14	24	21	22	22	24	24	24	23	23	20	20	23	23	22	A	15	8	17	18.2	24.5	
3-Dec-07	15	11	14	17	21	20	21	21	21	19	22	21	20	20	18	12	15	17	A	17	12	12	13	17.3	22.1		
4-Dec-07	14	11	15	14	14	15	16	16	15	23	24	24	C	26	25	22	21	21	24	25	25	24	25	20.2	26.2		
5-Dec-07	25	23	A	22	22	20	17	15	18	21	20	19	21	22	18	16	13	10	P	P	P	P	P	P	N	24.6	
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	19	8	4	3	2	1	3	5	6	N	19.3	
7-Dec-07	6	2	A	20	19	12	5	3	7	17	22	25	27	27	26	22	12	13	8	8	5	2	2	2	12.8	27.5	
8-Dec-07	3	A	2	4	3	2	2	2	3	9	19	25	29	32	31	27	21	18	10	13	21	24	26	27	15.4	32.3	
9-Dec-07	A	28	28	28	29	22	28	26	24	25	26	23	19	13	10	8	3	10	18	17	16	16	21	A	20.0	29.0	
10-Dec-07	26	24	28	22	18	19	24	21	18	23	29	32	32	33	32	30	30	28	22	21	22	14	A	26	25.0	32.7	
11-Dec-07	28	28	27	18	13	9	12	13	11	18	28	35	35	P	P	P	P	P	P	P	P	P	P	P	N	35.1	
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	0.0	
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	26	24	22	20	21	17	18	21	24	25	26	28	N	27.6
14-Dec-07	25	23	A	24	24	21	22	17	15	20	25	25	28	C	C	A	16	19	19	19	19	20	18	22	15	20.9	27.8
15-Dec-07	11	5	A	8	14	13	14	14	12	15	21	27	35	35	33	32	29	30	30	29	29	26	30	31	22.7	34.8	
16-Dec-07	31	A	32	31	29	31	30	30	29	31	32	31	30	29	29	26	26	26	25	24	24	25	28	29	28.6	32.1	
17-Dec-07	A	30	22	23	17	12	13	7	6	7	19	20	31	30	27	26	27	25	24	25	26	25	27	A	21.3	30.5	
18-Dec-07	25	26	25	25	27	27	20	21	22	21	27	29	30	25	23	18	16	23	24	28	32	32	A	32	25.2	32.3	
19-Dec-07	31	30	32	32	29	28	27	23	24	22	24	26	27	26	27	29	28	26	27	29	29	A	30	32	27.7	32.1	
20-Dec-07	27	27	27	26	25	22	21	18	18	22	21	22	23	23	21	16	11	9	12	10	A	15	14	15	19.4	27.2	
21-Dec-07	17	16	15	15	24	29	26	12	2	11	25	28	29	28	27	22	16	12	17	A	9	8	6	13	17.7	29.1	
22-Dec-07	14	8	15	8	4	3	4	4	3	13	9	12	21	20	20	21	17	21	A	28	31	31	32	32	16.0	32.2	
23-Dec-07	31	35	35	29	26	29	28	29	24	30	30	32	32	30	29	29	22	A	32	33	32	33	34	34	30.3	34.9	
24-Dec-07	33	32	30	28	28	30	28	28	24	22	20	26	26	25	27	23	A	25	25	20	27	27	26	25	26.3	32.7	
25-Dec-07	26	25	25	23	22	25	26	23	23	18	17	21	22	24	27	A	24	13	14	6	8	9	14	3	19.0	27.1	
26-Dec-07	17	19	20	23	20	23	22	22	29	27	28	28	26	24	A	15	11	10	6	6	3	3	7	14	17.4	28.5	
27-Dec-07	13	15	12	12	9	9	8	7	12	13	11	11	7	A	5	4	4	11	17	23	23	18	23	25	12.7	24.6	
28-Dec-07	21	22	18	12	8	12	12	14	14	12	14	14	A	30	29	26	24	10	5	5	10	5	5	2	13.9	29.6	
29-Dec-07	0	7	10	8	5	8	8	2	2	6	8	A	11	11	12	12	3	1	1	1	2	6	6	13	6.3	12.6	
30-Dec-07	20	26	28	26	22	27	24	23	14	8	A	22	16	15	11	6	1	0	0	1	0	0	0	0	12.7	27.9	
31-Dec-07	0	0	1	1	1	0	0	0	1	A	7	8	10	12	13	11	3	0	0	0	1	5	9	8	4.1	12.8	
Hourly Avg	18.0	18.7	19.6	18.4	17.3	17.3	17.3	15.7	15.0	18.1	21.0	23.4	24.5	24.3	23.0	20.5	16.7	15.5	15.7	16.3	17.2	16.3	17.2	18.4			
Hourly Max	32.7	34.9	34.5	31.6	29.4	30.8	29.6	29.8	29.5	31.4	31.6	34.6	35.1	34.6	32.8	33.2	31.6	29.7	31.9	33.0	31.9	33.0	34.0	33.9			

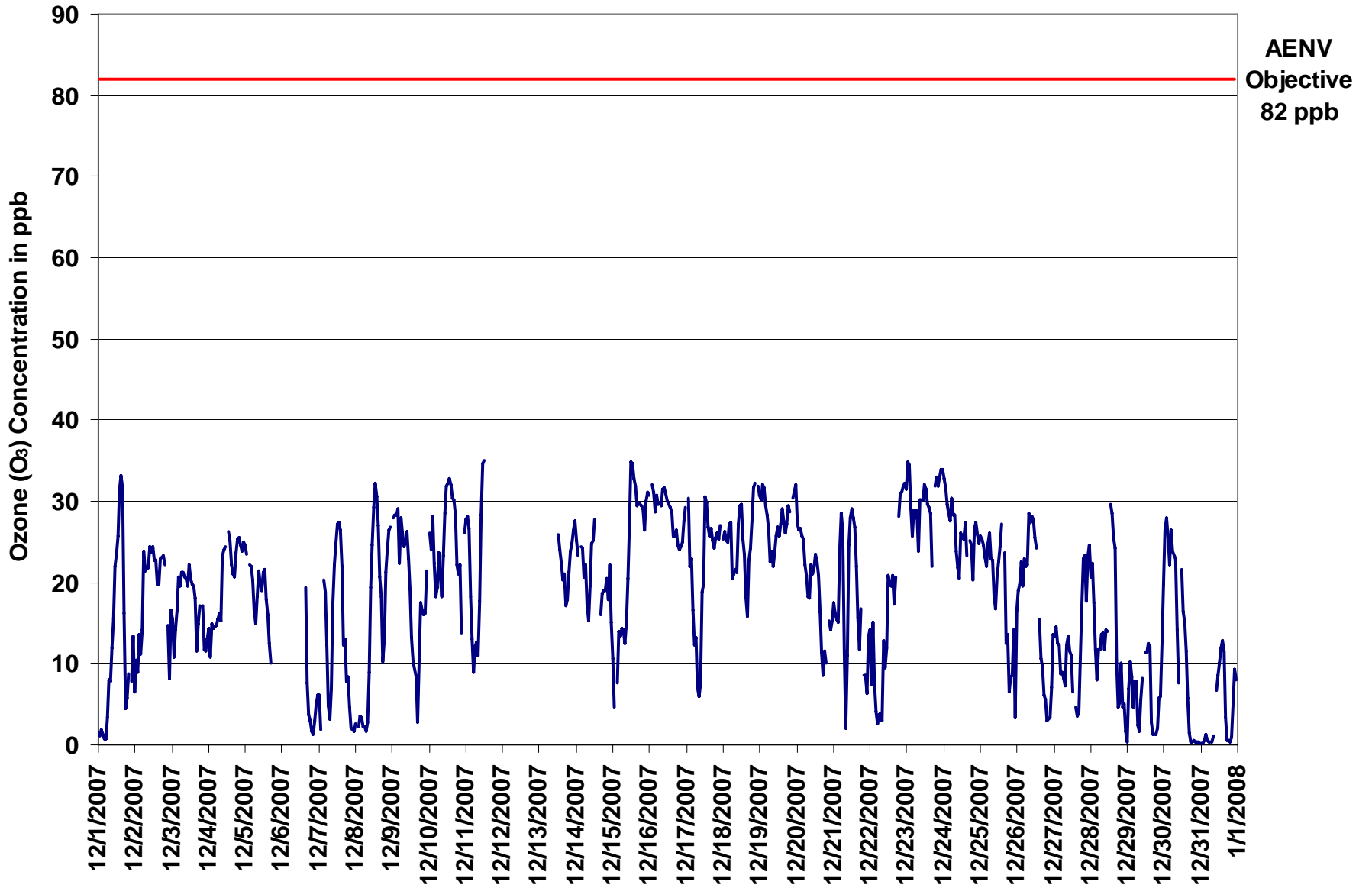


Figure 5. PAS - Crescent Heights Ozone 1-hr Average Monthly Trend



Station: Crescent Heights  
 Station Owner: PAS

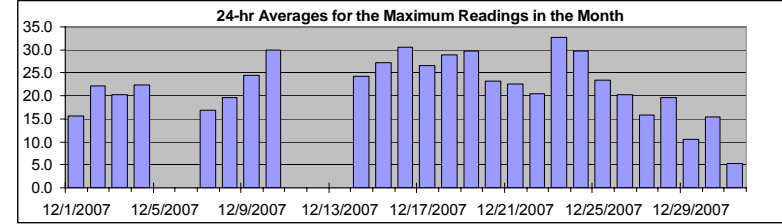
**INSTANTANEOUS (30 Second) MAXIMUM TABLE**

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

Monitoring Dates: December 1, 2007 to January 1, 2008

**Summary**

Maximum 1-hr Value:	37.8	ppb	11-Dec	12:00 13:00
Maximum 24-hr Value:	32.7	ppb	23-Dec	



AIC Time:	29 hrs	Operational Time:	644 hrs						
Calibration Time:	3 hrs	AMD Operational Uptime:	90.9%						
Percentile	99	95	75	50	25	5	1	Average	Median
	35.5	33.6	29.0	24.3	17.1	3.3	0.7	22.2 ppb	24.3 ppb

**Status Flag Characters**

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

**Day Mountain Standard Time**

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Dec-07	4	2	5	2	2	3	9	13	13	19	19	25	25	31	34	36	35	26	8	9	10	A	15	17	15.7	35.5
2-Dec-07	9	20	13	22	20	25	25	23	24	24	26	26	27	26	25	22	22	24	25	24	A	20	17	20	22.2	26.5
3-Dec-07	18	17	18	21	22	22	24	24	24	24	24	24	23	21	23	21	15	18	19	A	19	17	13	16	20.3	24.5
4-Dec-07	17	16	16	17	17	17	18	19	20	26	25	25	C	27	27	25	23	23	25	27	26	25	26	26	22.3	27.3
5-Dec-07	26	25	A	24	23	22	21	20	22	23	22	23	24	23	18	18	13	P	P	P	P	P	P	P	N	25.6
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	23	21	11	7	3	2	8	8	13	N	23.1
7-Dec-07	11	3	A	24	27	27	9	5	12	23	25	27	29	30	28	26	21	19	14	14	8	3	2	2	16.9	29.7
8-Dec-07	5	A	4	8	6	4	5	4	4	14	24	31	31	35	33	32	29	23	18	25	30	30	29	30	19.7	34.7
9-Dec-07	A	30	30	30	31	28	30	29	28	29	29	28	25	22	15	16	6	28	20	20	19	22	24	A	24.4	30.6
10-Dec-07	28	28	32	29	21	21	27	28	24	29	32	35	33	35	35	32	34	35	30	31	29	27	A	29	29.8	35.5
11-Dec-07	31	33	29	27	20	20	18	22	21	23	34	36	38	P	P	P	P	P	P	P	P	P	P	P	N	37.8
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	0.0
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	28	27	27	25	24	22	22	26	26	28	30	29	N	29.5
14-Dec-07	29	25	A	26	27	24	25	21	19	24	27	27	29	C	C	A	21	22	22	22	24	23	26	21	24.2	29.1
15-Dec-07	21	23	A	12	18	17	19	18	20	26	29	34	37	36	35	33	31	31	31	31	30	30	31	32	27.2	37.3
16-Dec-07	32	A	33	32	33	32	32	32	32	33	32	33	32	31	31	29	29	28	28	26	26	27	29	31	30.6	32.9
17-Dec-07	A	32	30	29	29	20	21	18	17	16	23	27	34	33	29	29	30	28	28	28	27	28	29	A	26.5	33.7
18-Dec-07	27	27	27	27	28	29	27	28	30	29	31	32	32	30	27	23	22	27	28	32	34	33	A	34	28.8	33.9
19-Dec-07	32	32	33	33	32	30	29	25	25	24	26	28	28	28	30	31	30	28	31	31	30	A	34	34	29.8	34.2
20-Dec-07	32	30	29	28	28	24	24	23	23	25	24	26	26	25	25	22	17	13	19	19	A	18	16	17	23.1	31.5
21-Dec-07	20	18	17	20	31	30	30	23	5	23	28	30	31	29	29	27	22	20	20	A	19	17	15	18	22.6	31.4
22-Dec-07	17	16	18	18	7	8	8	7	10	17	12	19	24	24	24	25	24	26	A	32	32	32	34	34	20.5	34.2
23-Dec-07	35	36	36	34	30	30	31	31	29	32	32	33	33	32	32	32	29	A	33	34	34	34	35	35	32.7	36.0
24-Dec-07	33	34	32	31	32	33	34	35	30	25	25	29	28	29	30	26	A	29	26	27	29	29	27	27	29.6	35.3
25-Dec-07	27	27	26	25	26	26	28	28	25	21	20	24	24	27	28	A	26	21	19	18	14	18	24	16	23.5	28.3
26-Dec-07	24	22	23	24	23	25	24	26	30	29	30	29	27	26	A	20	14	12	7	8	6	6	10	16	20.1	30.2
27-Dec-07	16	16	14	15	11	12	10	11	14	15	14	14	10	A	5	5	11	18	21	26	29	22	26	26	15.8	28.9
28-Dec-07	25	25	25	21	14	18	18	20	20	21	19	16	A	32	31	29	28	26	13	11	15	12	10	5	19.7	31.8
29-Dec-07	2	17	17	14	8	15	12	6	5	8	12	A	13	13	13	17	9	4	2	2	4	11	12	24	10.4	23.8
30-Dec-07	26	29	29	29	27	28	27	25	22	14	A	24	20	18	13	10	3	1	1	2	1	1	1	1	15.3	29.3
31-Dec-07	0	1	1	2	1	1	1	1	2	A	8	10	12	14	14	14	8	1	1	1	2	9	11	11	5.4	14.1
Hourly Avg	21.0	22.4	22.4	22.2	21.2	21.1	20.9	20.2	19.7	22.7	24.2	26.6	26.7	27.1	25.7	23.9	21.5	20.7	19.3	20.3	20.3	20.4	20.5	21.7		
Hourly Max	34.9	36.0	36.0	33.5	32.7	33.1	34.5	35.3	31.5	32.6	34.2	36.1	37.8	36.2	35.0	35.5	34.5	35.5	33.1	34.1	33.6	34.2	35.4	35.2		

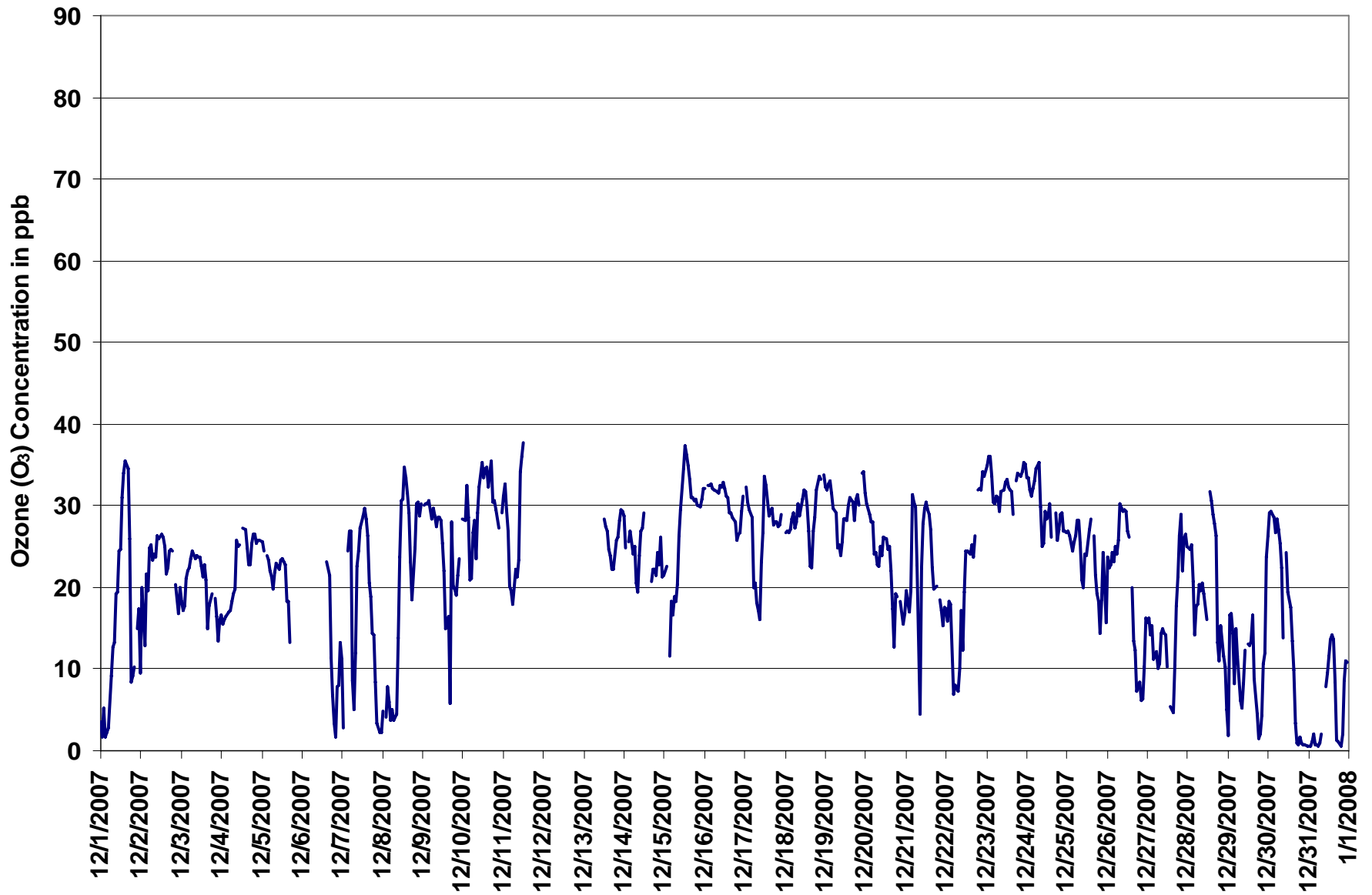
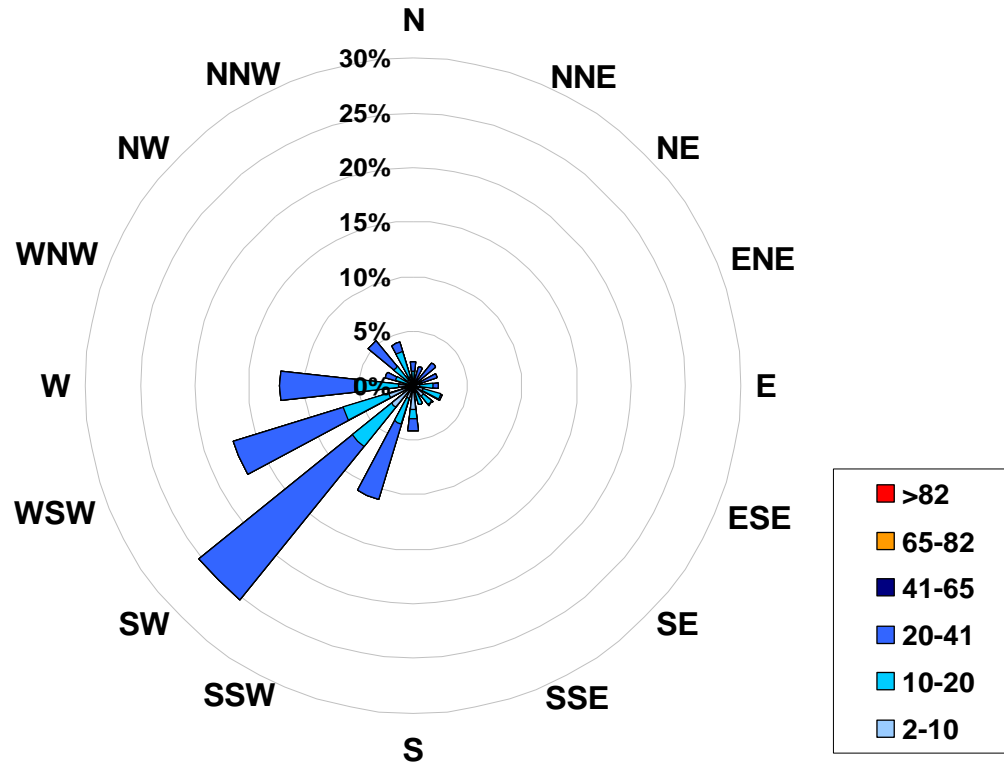


Figure 6. PAS - Crescent Heights Ozone Instantaneous (30 Second) Maximum Value Monthly Trend



**1-hr Average Concentration Rose for Ozone (in ppb) Located at the Crescent Heights Site for December 2007**



**Calms: 0%**

Frequency Distribution of O <sub>3</sub> in ppb			
Range		Frequency (hrs)	
2.0	< 10	136	
10	to 20	173	
20	to 41	335	
41	to 65	0	
65	to 82	0	
	> 82	0	
Total Non-Zero Values			644





# PAS - Crescent Heights Ozone Eight Hour Average Summary

Station: Crescent Heights  
Station Owner: PAS

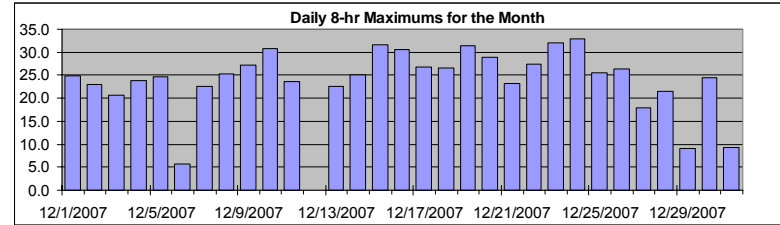
## EIGHT HOUR RUNNING AVERAGE TABLE

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

Monitoring Dates: December 1, 2007 to January 1, 2008

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

Number of 8-hr Exceedances:	0		
Maximum 8-hr Average:	32.9 ppb	24-Dec	0:00 1:00



Percentile	99	95	75	50	25	5	1
	31.5	30.2	24.7	20.1	12.5	3.9	0.5

### Status Flag Characters

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

Day	Mountain Standard Time																							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	0:00
1-Dec-07	10	8	6	4	3	2	2	2	3	4	6	9	12	15	18	21	24	25	24	22	20	19	15	13	24.9	
2-Dec-07	9	8	9	10	10	11	13	14	16	17	19	20	22	23	23	23	22	23	22	22	22	21	19	18	23.1	
3-Dec-07	18	16	15	14	15	15	17	17	18	19	20	21	21	21	20	20	19	18	18	17	17	16	15	14	20.7	
4-Dec-07	14	14	13	13	13	13	14	14	15	16	17	18	19	21	22	23	24	23	23	24	24	24	23	24	23.8	
5-Dec-07	24	25	25	24	24	23	22	21	20	19	19	19	19	19	19	19	19	17	17	N	N	N	N	N	24.6	
6-Dec-07	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	6	6	4	5.7	
7-Dec-07	4	4	4	6	9	10	10	10	10	12	13	14	15	17	19	22	22	22	20	18	15	12	9	7	22.5	
8-Dec-07	5	4	3	3	2	2	3	3	3	6	8	11	15	19	22	24	25	24	23	22	21	20	20	20	25.3	
9-Dec-07	20	21	24	26	27	27	27	27	27	26	26	25	24	23	21	19	16	14	13	12	12	12	14	14	27.2	
10-Dec-07	18	20	21	22	22	23	23	23	22	22	22	23	25	26	27	29	30	31	30	29	27	25	24	23	30.8	
11-Dec-07	23	23	24	23	22	21	20	18	16	15	15	17	20	22	N	N	N	N	N	N	N	N	N	N	23.6	
12-Dec-07	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0	
13-Dec-07	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	21	21	21	22	22	22.5	
14-Dec-07	23	24	25	25	25	25	24	22	21	21	21	21	22	22	N	N	N	N	N	N	N	N	19	19	25.1	
15-Dec-07	18	16	16	14	13	13	11	11	12	13	14	16	19	22	24	26	28	30	31	32	31	30	29	29	31.5	
16-Dec-07	30	29	30	30	30	31	31	30	30	30	30	30	30	30	30	30	29	29	28	27	26	26	25	26	30.6	
17-Dec-07	26	26	26	26	25	23	21	18	16	13	13	13	14	17	18	21	23	25	26	27	26	26	26	26	26.8	
18-Dec-07	25	26	26	26	26	26	25	25	24	24	24	24	25	24	25	25	24	24	24	23	24	24	25	27	26.6	
19-Dec-07	29	30	31	31	31	31	30	29	28	27	26	25	25	25	25	26	26	26	27	27	28	28	28	29	31.5	
20-Dec-07	29	29	29	28	28	27	26	24	23	22	22	21	21	21	21	21	20	18	17	16	14	13	12	12	28.8	
21-Dec-07	13	14	15	16	17	18	20	19	17	17	18	20	20	20	20	21	23	23	22	21	19	16	13	12	23.2	
22-Dec-07	11	11	11	10	10	9	9	7	6	7	6	6	9	11	13	15	17	18	19	21	22	24	26	27	27.5	
23-Dec-07	29	31	32	32	31	31	31	30	29	29	28	28	29	29	29	29	29	29	29	29	29	30	31	31	32.0	
24-Dec-07	33	33	32	32	31	31	30	30	28	27	26	26	26	25	25	24	24	25	25	25	25	25	25	25	32.9	
25-Dec-07	25	25	25	25	25	25	25	24	24	23	22	22	22	22	22	22	22	21	21	19	17	14	12	11	25.4	
26-Dec-07	10	11	12	14	15	17	18	21	22	23	24	25	26	26	26	25	23	20	17	14	11	8	8	7	26.3	
27-Dec-07	8	8	9	10	11	11	12	11	11	10	10	10	10	10	10	9	8	7	8	10	12	13	15	18	17.9	
28-Dec-07	20	21	22	20	18	17	16	15	14	12	12	12	13	15	18	20	21	21	20	18	17	14	11	8	21.5	
29-Dec-07	5	5	6	6	5	6	6	6	6	6	6	5	6	7	8	9	9	9	8	7	6	5	4	4	9.1	
30-Dec-07	6	9	13	16	18	21	23	24	24	21	20	20	19	17	16	13	11	10	9	6	4	3	1	1	24.4	
31-Dec-07	0	0	0	0	0	0	0	1	1	1	2	3	4	6	7	9	9	8	7	6	5	4	4	4	9.3	

Hourly Max 32.9 32.7 32.5 32.0 31.3 31.1 30.6 30.4 30.2 30.4 30.3 30.3 30.4 30.3 30.2 29.7 30.2 30.8 31.2 31.5 30.8 29.9 30.6 31.4



# PAS - Crescent Heights Carbon Monoxide Monthly Summary

Station: Crescent Heights  
Station Owner: PAS

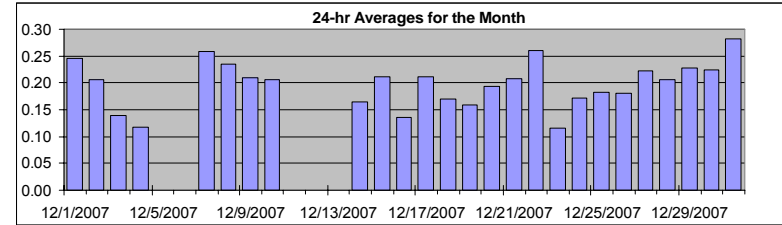
## HOURLY AVERAGE TABLE

## Carbon Monoxide (CO)

Monitoring Dates: December 1, 2007 to January 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:	0.8	ppm	15-Dec	9:00 10:00
Maximum 24-hr Value:	0.3	ppm	31-Dec	



AIC Time:	29 hrs	Operational Time:	641 hrs						
Calibration Time:	6 hrs	AMD Operational Uptime:	90.9%						
Percentile	99	95	75	50	25	5	1	Average	Median
	0.5	0.4	0.2	0.2	0.1	0.1	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	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-Dec-07	0.3	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.2	A	0.3	0.2		0.24	0.39	
2-Dec-07	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	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	0.3	0.1		0.21	0.33	
3-Dec-07	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	A	0.1	0.2	0.1	0.1		0.14	0.26	
4-Dec-07	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	C	C	C	0.2	0.1	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		0.12	0.26	
5-Dec-07	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	P	P	P	P	P	P		N	0.20
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2		N	0.33	
7-Dec-07	0.2	0.2	A	0.2	0.2	0.2	0.3	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.4	0.3	0.3		0.26	0.43	
8-Dec-07	0.2	A	0.2	0.2	0.2	0.3	0.3	0.3	0.5	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1		0.24	0.49	
9-Dec-07	A	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.2	0.2	0.2	0.2	0.2	A		0.21	0.44	
10-Dec-07	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	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2		0.21	0.30	
11-Dec-07	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.6	0.4	0.3	0.2	0.2	P	P	P	P	P	P	P	P	P	P	P		N	0.62	
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		N	0.00	
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	0.5	0.5	0.4	C	C	C	A	0.2	0.2	0.1	0.1		N	0.49	
14-Dec-07	0.1	0.1	A	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2		0.16	0.27	
15-Dec-07	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.3	0.8	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1		0.21	0.76	
16-Dec-07	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1		0.14	0.18	
17-Dec-07	A	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.5	0.5	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	A		0.21	0.49	
18-Dec-07	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	A	0.1		0.17	0.29	
19-Dec-07	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	A	0.1	0.1		0.16	0.19	
20-Dec-07	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2		0.19	0.25	
21-Dec-07	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.5	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.3	0.2		0.21	0.54	
22-Dec-07	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.4	0.3	0.5	0.5	0.3	0.3	0.3	0.2	0.2	0.2	A	0.2	0.1	0.2	0.1	0.1		0.26	0.53	
23-Dec-07	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.1	0.1	0.1	0.1	0.1	0.1		0.12	0.18	
24-Dec-07	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.1		0.17	0.23	
25-Dec-07	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	A	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3		0.18	0.33	
26-Dec-07	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2		0.18	0.26	
27-Dec-07	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.5	0.5	0.4	0.2	0.2	0.1	0.1	0.2	0.1	0.1		0.22	0.51	
28-Dec-07	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.5	0.3	0.4	A	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.2	0.2	0.1		0.21	0.45	
29-Dec-07	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	A	0.2	0.2	0.2	0.2	0.2	0.5	0.4	0.5	0.3	0.2	0.2	0.2		0.23	0.47	
30-Dec-07	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4	A	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3		0.22	0.41	
31-Dec-07	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	A	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2		0.28	0.38	
Hourly Avg	0.17	0.16	0.16	0.16	0.16	0.17	0.18	0.22	0.28	0.27	0.23	0.21	0.20	0.19	0.21	0.21	0.23	0.23	0.21	0.20	0.18	0.19	0.19	0.17				
Hourly Max	0.30	0.39	0.37	0.38	0.30	0.31	0.31	0.41	0.62	0.76	0.53	0.50	0.49	0.47	0.48	0.51	0.44	0.46	0.36	0.47	0.34	0.42	0.33	0.33				

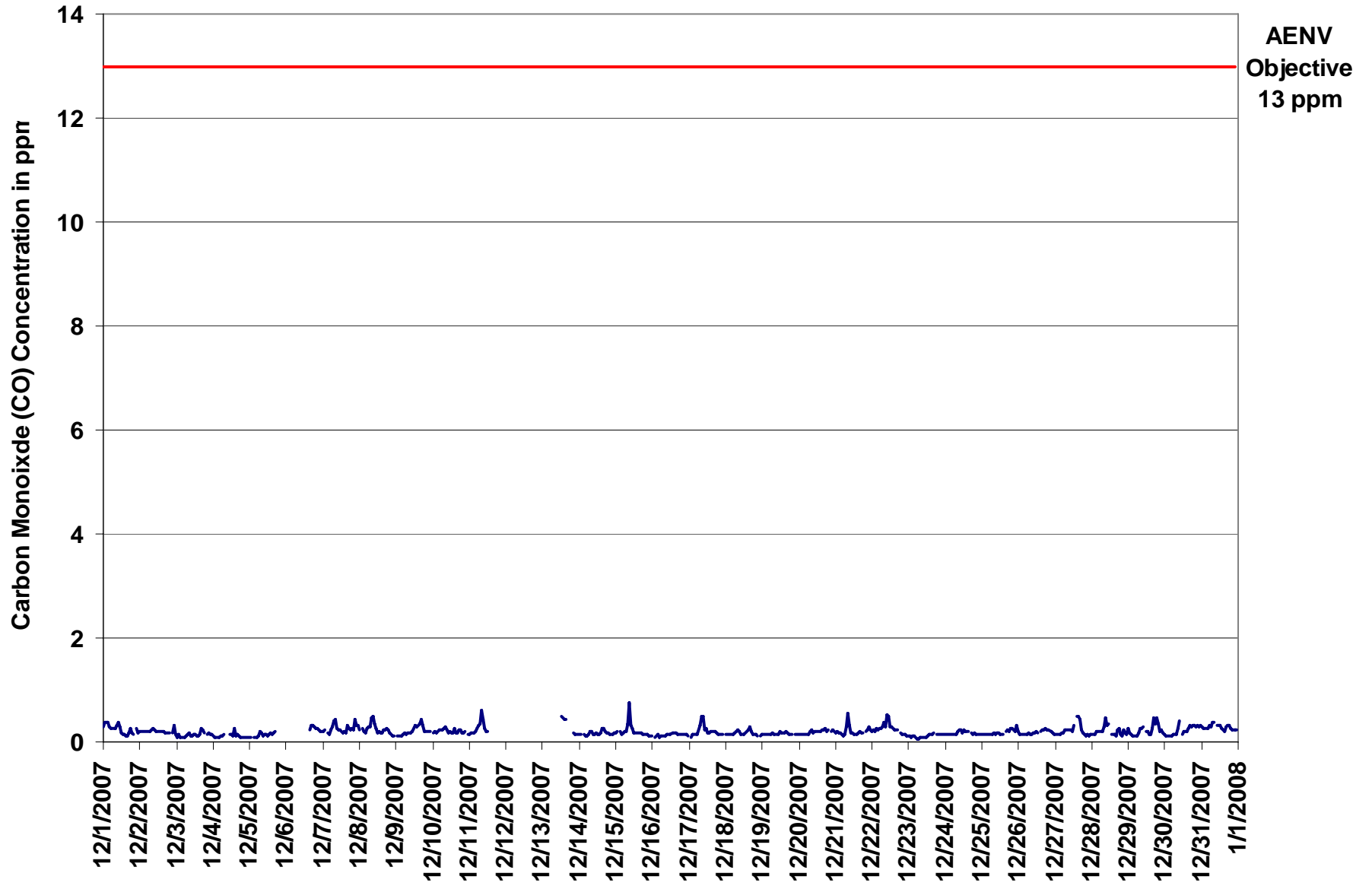


Figure 7. PAS - Crescent Heights Carbon Monoxide 1-hr Average Monthly Trend



Station: Crescent Heights  
 Station Owner: PAS

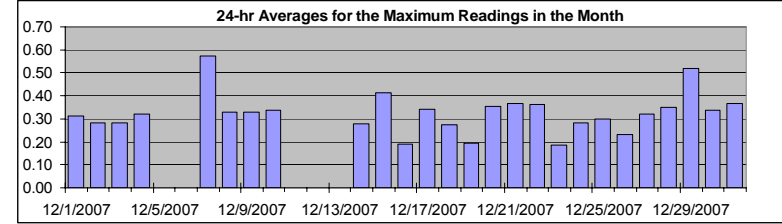
**INSTANTANEOUS (30 Second) MAXIMUM TABLE**

**Carbon Monoxide (CO)**

Monitoring Dates: December 1, 2007 to January 1, 2008

**Summary**

Maximum 1-hr Value:	3.9	ppm	29-Dec	17:00 18:00
Maximum 24-hr Value:	0.6	ppm	7-Dec	



AIC Time:	29 hrs	Operational Time:	641 hrs						
Calibration Time:	6 hrs	AMD Operational Uptime:	90.9%						
Percentile	99	95	75	50	25	5	1	Average	Median
	1.3	0.7	0.4	0.3	0.2	0.1	0.1	0.3 ppm	0.3 ppm

**Status Flag Characters**

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

**Day Mountain Standard Time**

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Dec-07	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.5	0.3	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.3	0.2	A	0.5	0.3	0.3	0.3	0.28	0.51
2-Dec-07	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	A	0.3	0.8	0.3	0.28	0.69
3-Dec-07	0.1	0.2	0.1	0.1	0.1	0.3	0.3	0.5	0.5	0.2	0.2	0.6	0.2	0.2	0.3	0.2	0.4	0.4	0.4	A	0.2	0.7	0.2	0.3	0.28	0.69
4-Dec-07	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.3	C	C	C	0.7	0.3	0.3	1.8	0.5	0.7	0.4	0.1	0.1	0.1	0.1	0.2	0.1	0.32	1.82
5-Dec-07	0.1	0.1	A	0.1	0.1	0.2	0.2	0.5	0.4	0.3	0.3	0.3	0.2	0.5	0.6	0.5	0.3	0.3	P	P	P	P	P	P	N	0.64
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0.7	1.1	0.7	1.3	0.4	0.4	0.4	0.4	0.3	N	1.34
7-Dec-07	0.3	0.3	A	0.4	0.2	0.4	0.4	0.5	1.9	0.4	0.2	0.4	0.4	0.3	0.7	0.2	2.2	0.9	0.6	0.8	0.4	0.7	0.4	0.5	0.57	2.15
8-Dec-07	0.3	A	0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.6	0.4	0.4	0.2	0.2	0.2	0.2	0.4	0.6	0.4	0.4	0.3	0.2	0.2	0.2	0.33	0.60
9-Dec-07	A	0.2	0.2	0.2	0.2	0.2	0.8	0.2	0.3	0.2	0.3	0.3	0.4	0.4	0.4	0.5	0.7	0.6	0.3	0.3	0.4	0.3	0.3	A	0.33	0.82
10-Dec-07	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.5	0.3	0.3	0.7	0.5	0.2	0.7	0.4	0.3	0.3	0.3	A	0.2	0.34	0.73
11-Dec-07	0.2	0.2	0.2	0.2	0.3	0.3	0.5	0.6	2.3	0.6	0.4	0.3	0.4	P	P	P	P	P	P	P	P	P	P	P	N	2.31
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	0.00
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	0.5	0.5	0.5	0.5	C	C	C	A	0.2	0.2	0.2	0.2	N	0.50
14-Dec-07	0.2	0.1	A	0.1	0.2	0.2	0.2	0.4	0.4	0.3	0.2	0.3	0.4	0.5	0.4	0.4	0.5	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.28	0.48
15-Dec-07	0.3	0.3	A	0.2	0.2	0.2	0.2	0.3	1.3	2.5	0.6	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.7	0.5	0.3	0.41	2.48
16-Dec-07	0.2	A	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	0.3	0.2	0.2	0.2	0.2	0.19	0.34
17-Dec-07	A	0.1	0.2	0.2	0.3	0.2	0.6	0.7	0.9	0.6	0.3	0.5	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	A	0.34	0.88
18-Dec-07	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.2	0.5	0.3	0.2	0.4	0.7	0.3	0.4	0.3	0.5	0.5	0.2	0.2	0.2	0.2	A	0.2	0.27	0.70
19-Dec-07	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	A	0.2	0.2	0.19	0.37
20-Dec-07	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.8	0.7	0.3	0.4	0.5	0.8	0.4	0.3	0.3	0.3	A	0.3	0.3	0.4	0.36	0.83
21-Dec-07	0.2	0.2	0.2	0.2	0.2	0.1	0.4	0.7	0.9	0.5	0.2	0.2	0.2	0.4	0.2	0.3	0.4	0.3	0.7	A	0.8	0.4	0.4	0.6	0.37	0.85
22-Dec-07	0.3	0.4	0.2	0.4	0.3	0.3	0.3	0.4	0.5	0.4	0.7	0.8	0.4	0.4	0.4	0.4	0.4	0.4	A	0.3	0.2	0.2	0.2	0.4	0.36	0.77
23-Dec-07	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.4	0.2	0.5	A	0.2	0.2	0.2	0.3	0.2	0.2	0.18	0.49
24-Dec-07	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.4	0.2	0.4	0.5	0.4	0.2	A	0.3	0.2	0.2	0.2	0.3	0.6	0.2	0.28	0.59
25-Dec-07	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.9	0.2	0.2	0.2	0.2	0.2	0.2	A	0.6	0.3	0.3	0.5	0.4	0.3	0.4	0.6	0.30	0.86
26-Dec-07	0.3	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	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.23	0.32
27-Dec-07	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.7	0.4	0.5	0.3	0.4	A	0.6	0.7	0.7	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.32	0.72
28-Dec-07	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.4	0.8	0.6	0.5	0.5	A	0.3	0.2	0.5	0.2	0.4	0.6	0.3	0.2	0.5	0.5	0.2	0.35	0.77
29-Dec-07	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.5	0.8	0.7	A	0.3	0.2	0.2	0.5	3.9	0.4	0.7	0.5	0.3	0.6	0.3	0.52	3.90	
30-Dec-07	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.8	0.8	A	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.34	0.83
31-Dec-07	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.7	0.5	A	0.5	0.4	0.4	0.4	0.3	0.3	0.6	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.37	0.68
Hourly Avg	0.21	0.20	0.20	0.20	0.21	0.21	0.30	0.36	0.62	0.46	0.36	0.38	0.32	0.31	0.40	0.36	0.48	0.51	0.36	0.31	0.26	0.31	0.33	0.26		
Hourly Max	0.41	0.46	0.47	0.44	0.36	0.35	0.82	0.72	2.31	2.48	0.83	0.77	0.70	0.50	1.82	0.81	2.15	3.90	1.34	0.78	0.75	0.69	0.81	0.59		

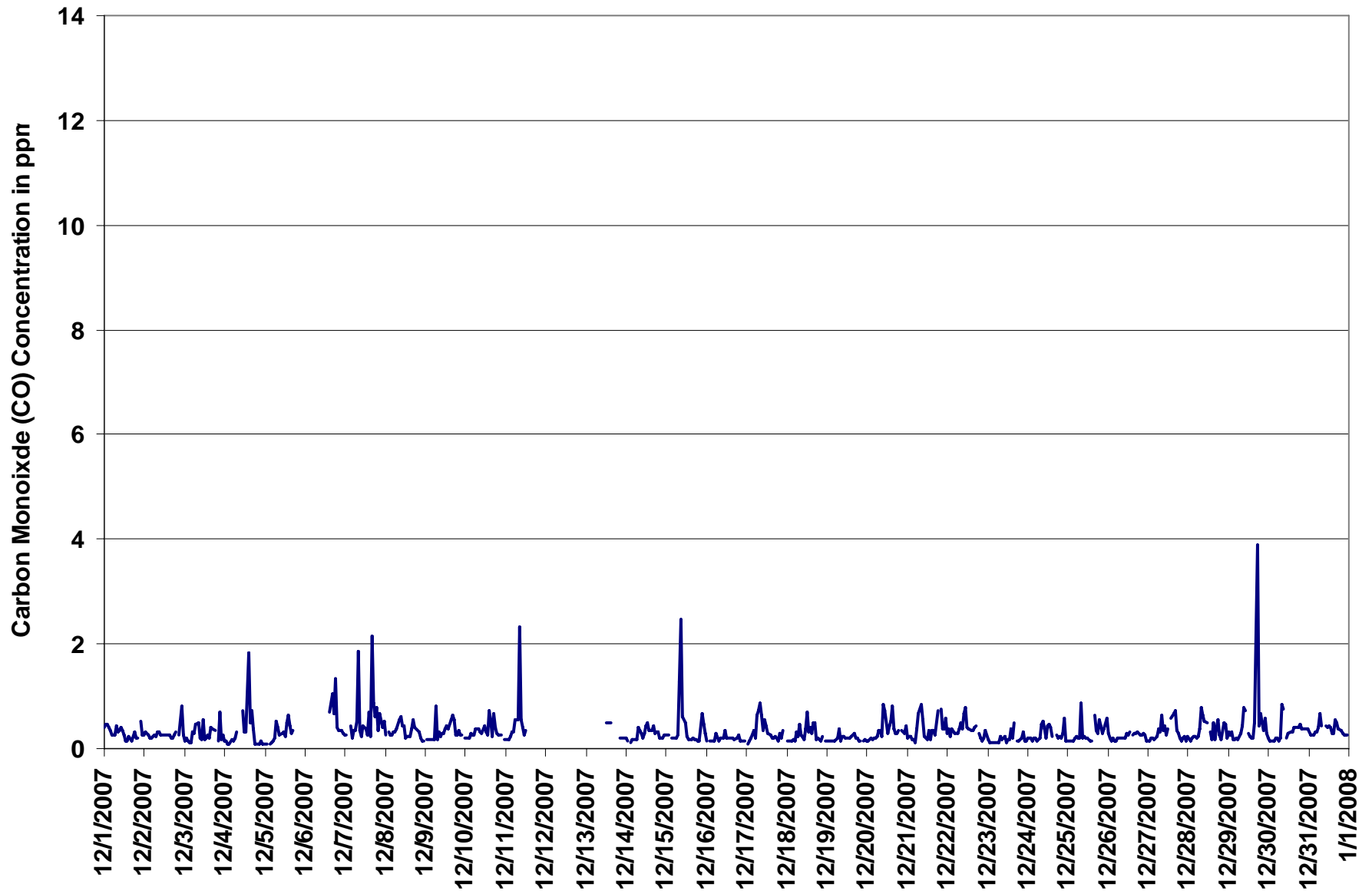
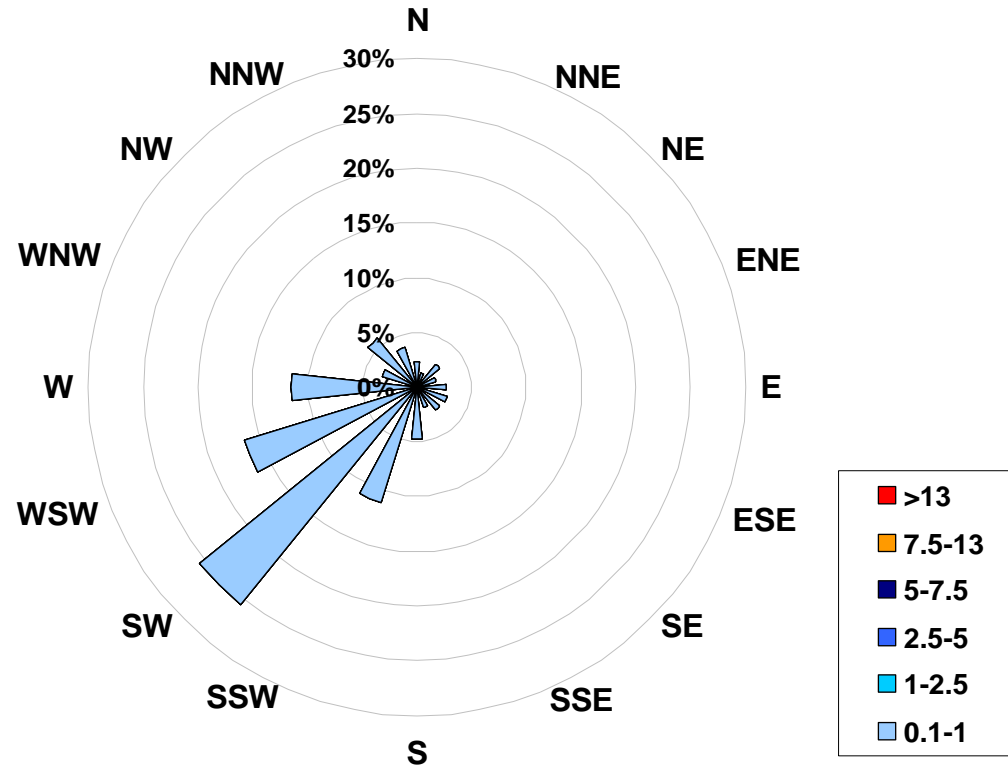


Figure 8. PAS - Crescent Heights Carbon Monoxide Instantaneous (30 Second) Maximum Value Monthly Trend



### 1-hr Average Concentration Rose for Carbon Monoxide (in ppm) Located at the Crescent Heights Site for December 2007



**Calms: 0%**

Frequency Distribution of CO in ppm			
Range		Frequency (hrs)	
0.1	< 1	641	
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		641	



# PAS - Crescent Heights Carbon Monoxide Eight Hour Average Summary

Station: Crescent Heights  
Station Owner: PAS

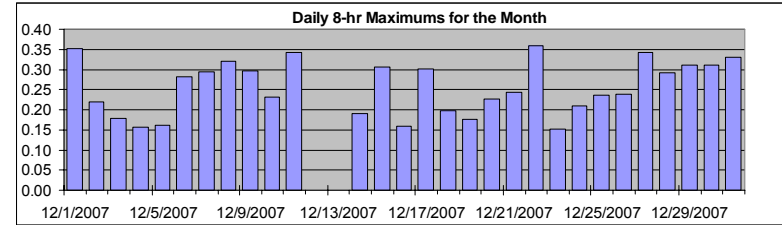
## EIGHT HOUR RUNNING AVERAGE TABLE

## Carbon Monoxide (CO)

Monitoring Dates: December 1, 2007 to January 1, 2008

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

Number of 8-hr Exceedances:	0						
Maximum 8-hr Average:	0.4	ppm	22-Dec	14:00	15:00		



Percentile	99	95	75	50	25	5	1
	0.3	0.3	0.2	0.2	0.2	0.1	0.1

### Status Flag Characters

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

Day	Mountain Standard Time																							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	Hour End	0:00
1-Dec-07	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.35
2-Dec-07	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
3-Dec-07	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18
4-Dec-07	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	N	N	N	N	N	N	N	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.16
5-Dec-07	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	N	N	N	N	N	N	0.16
6-Dec-07	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.3	0.3	0.3	0.3	0.28
7-Dec-07	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.29
8-Dec-07	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.32
9-Dec-07	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.30
10-Dec-07	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
11-Dec-07	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	N	N	N	N	N	N	N	N	N	N	N	0.34
12-Dec-07	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.00
13-Dec-07	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.00
14-Dec-07	N	N	N	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19
15-Dec-07	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.31
16-Dec-07	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.16
17-Dec-07	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.30
18-Dec-07	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
19-Dec-07	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18
20-Dec-07	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.23
21-Dec-07	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
22-Dec-07	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.36
23-Dec-07	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.15
24-Dec-07	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
25-Dec-07	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
26-Dec-07	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
27-Dec-07	0.2	0.2	0.2	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	0.3	0.3	0.3	0.2	0.2	0.34
28-Dec-07	0.2	0.1	0.1	0.1	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.29
29-Dec-07	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.31
30-Dec-07	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.31
31-Dec-07	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	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.33
Hourly Max	0.31	0.33	0.34	0.35	0.35	0.34	0.33	0.31	0.31	0.31	0.33	0.35	0.35	0.36	0.36	0.35	0.34	0.34	0.33	0.32	0.30	0.30	0.31	0.31		



# PAS - Crescent Heights Total Hydrocarbons Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

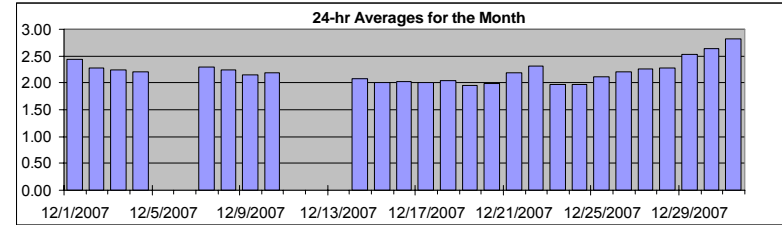
## HOURLY AVERAGE TABLE

## Total Hydrocarbons (THC)

Monitoring Dates: December 1, 2007 to January 1, 2008

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

Maximum 1-hr Average:	3.5	ppm	30-Dec	17:00 18:00
Maximum 24-hr Value:	2.8	ppm	31-Dec	



AIC Time:	29 hrs	Operational Time:	641 hrs						
Calibration Time:	6 hrs	AMD Operational Uptime:	90.9%						
Percentile	99	95	75	50	25	5	1	Average	Median
	3.2	2.7	2.3	2.1	2.0	1.9	1.9	2.2 ppm	2.1 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	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-Dec-07	2.6	2.7	2.7	2.7	2.6	2.6	2.7	2.6	2.5	2.5	2.5	2.4	2.4	2.2	2.1	2.1	2.1	2.2	2.3	2.4	2.4	A	2.4	2.3		2.44	2.75	
2-Dec-07	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.3	2.2	2.3	2.2	2.3	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.2	A	2.2	2.4	2.3		2.27	2.36	
3-Dec-07	2.4	2.4	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3	2.2	A	2.2	2.3	2.4	2.3		2.24	2.38	
4-Dec-07	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.1	C	C	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1		2.20	2.34
5-Dec-07	2.1	2.1	A	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	P	P	P	P	P	P		N	2.25	
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	2.2	2.4	2.5	2.6	2.7	2.7	2.6	2.4	2.4		N	2.73	
7-Dec-07	2.5	2.5	A	2.2	2.2	2.3	2.4	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.4	2.4	2.5		2.29	2.52	
8-Dec-07	2.4	A	2.4	2.3	2.5	2.5	2.6	2.5	2.6	2.5	2.2	2.2	2.1	2.1	2.0	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.0	2.0		2.23	2.56	
9-Dec-07	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.2	2.3	2.4	2.3	2.4	2.3	2.3	2.3	A		2.15	2.41	
10-Dec-07	2.2	2.2	2.2	2.3	2.4	2.3	2.3	2.2	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.3	A	2.2		2.18	2.35	
11-Dec-07	2.1	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.1	2.1	1.9	1.9	1.9	P	P	P	P	P	P	P	P	P	P	P		N	2.18	
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P		N	0.00	
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	C	C	C	C	A	2.1	2.1	2.1	2.1	2.1	2.0	2.0		N	2.09	
14-Dec-07	2.0	2.1	A	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1		2.08	2.22	
15-Dec-07	2.2	2.2	A	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9		2.01	2.23	
16-Dec-07	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0		2.02	2.08	
17-Dec-07	A	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.2	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	A		2.00	2.21	
18-Dec-07	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	1.9	A	1.9		2.05	2.11	
19-Dec-07	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	A	1.9	1.9		1.95	2.00	
20-Dec-07	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	A	2.3	2.5	2.4		1.99	2.46	
21-Dec-07	2.3	2.3	2.4	2.3	2.2	2.2	2.1	2.2	2.3	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	A	2.2	2.2	2.4	2.3		2.19	2.37	
22-Dec-07	2.3	2.3	2.3	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.5	2.4	2.4	2.4	2.6	2.5	2.4	2.1	A	2.0	1.9	1.9	1.9	1.9		2.31	2.59	
23-Dec-07	1.9	1.9	1.9	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	2.1	1.9		1.98	2.07	
24-Dec-07	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1	A	2.0	2.0	2.0	2.0	2.0	2.1	2.1		1.98	2.10	
25-Dec-07	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.1	2.0	2.0	A	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.2		2.11	2.22	
26-Dec-07	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	A	2.4	2.5	2.4	2.5	2.6	2.6	2.5	2.4	2.4		2.20	2.61	
27-Dec-07	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	A	2.5	2.4	2.3	2.1	2.1	2.0	2.0	2.1	2.1	2.0		2.26	2.47	
28-Dec-07	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.2	2.4	2.6	2.6	A	2.0	2.0	2.0	2.0	2.1	2.4	2.6	2.5	2.4	2.6	2.6		2.28	2.64	
29-Dec-07	2.8	2.3	2.2	2.4	2.5	2.3	2.3	2.4	2.4	2.4	2.7	A	2.7	2.7	2.6	2.5	2.9	2.9	3.1	2.9	2.6	2.3	2.2	2.2		2.53	3.07	
30-Dec-07	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.4	A	2.2	2.4	2.5	2.7	3.1	3.2	3.5	3.4	3.5	3.5	3.4	3.3	3.3		2.64	3.55	
31-Dec-07	3.1	3.1	2.9	2.8	3.0	3.1	3.0	3.1	3.1	A	2.8	2.8	2.7	2.7	2.6	2.5	2.7	2.8	2.9	2.8	2.7	2.6	2.5	2.5		2.81	3.11	
Hourly Avg	2.22	2.20	2.18	2.19	2.21	2.21	2.20	2.21	2.22	2.20	2.20	2.15	2.15	2.14	2.16	2.19	2.23	2.24	2.25	2.26	2.24	2.23	2.24	2.22				
Hourly Max	3.11	3.05	2.95	2.77	2.98	3.08	2.98	3.09	3.07	2.53	2.83	2.76	2.73	2.68	2.66	3.06	3.21	3.55	3.44	3.49	3.49	3.39	3.27	3.28				



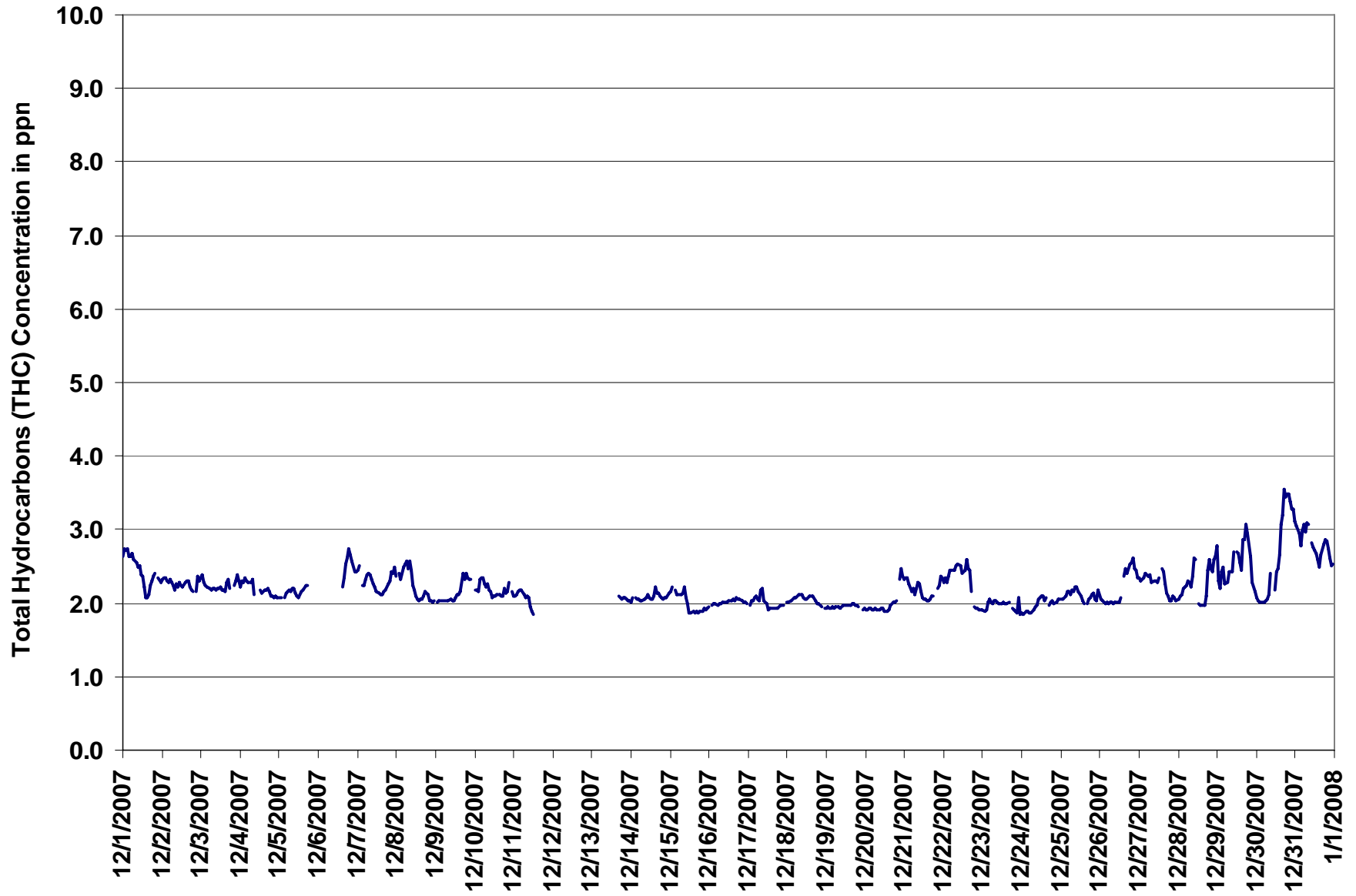


Figure 9. PAS - Crescent Heights Total Hydrocarbons 1-hr Average Monthly Trend



Station: Crescent Heights  
 Station Owner: PAS

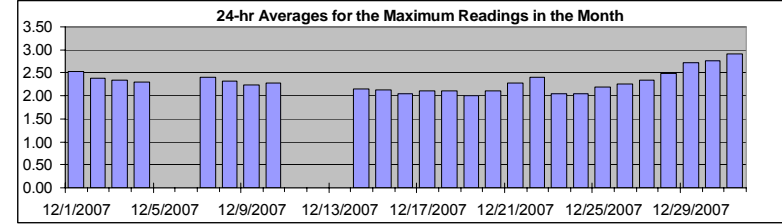
**INSTANTANEOUS (30 Second) MAXIMUM TABLE**

**Total Hydrocarbons (THC)**

Monitoring Dates: December 1, 2007 to January 1, 2008

**Summary**

Maximum 1-hr Value:	3.8	ppm	30-Dec	20:00 21:00
Maximum 24-hr Value:	2.9	ppm	31-Dec	



AIC Time:	29 hrs	Operational Time:	641 hrs						
Calibration Time:	6 hrs	AMD Operational Uptime:	90.9%						
Percentile	99	95	75	50	25	5	1	Average	Median
	3.4	2.9	2.5	2.2	2.1	2.0	1.9	2.3 ppm	2.2 ppm

**Status Flag Characters**

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

**Day Mountain Standard Time**

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Dec-07	2.8	2.8	2.8	2.9	2.7	2.8	2.8	2.7	2.7	2.6	2.6	2.5	2.5	2.4	2.2	2.1	2.2	2.3	2.3	2.4	2.5	A	2.4	2.4	2.54	2.85
2-Dec-07	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.2	2.4	2.4	2.5	2.4	2.3	2.4	2.4	2.3	2.2	2.2	A	2.3	2.7	2.6	2.38	2.68	
3-Dec-07	2.6	2.8	2.3	2.3	2.3	2.3	2.2	2.3	2.3	2.2	2.2	2.2	2.3	2.2	2.2	2.2	2.4	2.5	2.3	A	2.4	2.5	2.5	2.6	2.34	2.77
4-Dec-07	2.3	2.5	2.4	2.4	2.4	2.3	2.4	2.4	2.4	2.2	C	C	2.2	2.3	2.4	2.3	2.4	2.3	2.2	2.1	2.1	2.1	2.2	2.1	2.29	2.54
5-Dec-07	2.1	2.1	A	2.1	2.2	2.4	2.2	2.3	2.6	2.5	2.3	2.2	2.1	2.2	2.3	2.4	2.3	2.3	P	P	P	P	P	P	N	2.56
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	2.4	2.7	2.7	2.9	2.9	2.8	2.7	2.6	2.5	N	2.91
7-Dec-07	2.6	2.6	A	2.3	2.3	2.5	2.5	2.5	2.6	2.4	2.3	2.3	2.2	2.2	2.2	2.5	2.4	2.3	2.4	2.4	2.6	2.5	2.7	2.40	2.66	
8-Dec-07	2.5	A	2.5	2.4	2.6	2.8	2.8	2.6	2.6	2.6	2.3	2.3	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.1	2.0	2.1	2.33	2.78	
9-Dec-07	A	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.5	2.6	2.4	2.5	2.4	2.4	A	2.23	2.64	
10-Dec-07	2.2	2.2	2.3	2.5	2.4	2.4	2.3	2.4	2.4	2.2	2.3	2.2	2.2	2.2	2.3	2.2	2.1	2.2	2.4	2.2	2.2	2.5	A	2.2	2.27	2.52
11-Dec-07	2.2	2.2	2.2	2.2	2.3	2.4	2.5	2.2	2.8	2.2	2.1	2.0	1.9	P	P	P	P	P	P	P	P	P	P	P	N	2.80
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	0.00
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	C	C	C	C	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	N	2.14
14-Dec-07	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.2	2.3	2.2	2.3	2.2	2.1	2.1	2.1	2.2	2.3	2.15	2.32
15-Dec-07	2.2	2.4	A	2.2	2.2	2.2	2.2	2.2	2.4	3.0	2.5	2.3	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.12	2.96
16-Dec-07	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.05	2.14
17-Dec-07	A	2.1	2.1	2.3	2.2	2.2	2.4	2.2	2.5	2.4	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.11	2.46
18-Dec-07	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.0	2.0	2.0	2.0	A	2.0	2.11	2.24
19-Dec-07	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.0	A	1.9	2.0	2.00	2.05	
20-Dec-07	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.4	1.9	2.0	2.2	2.0	2.0	2.1	2.1	2.2	A	2.5	2.5	2.4	2.10	2.52
21-Dec-07	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.3	2.5	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.2	2.2	A	2.3	2.4	2.5	2.5	2.28	2.50
22-Dec-07	2.3	2.4	2.4	2.5	2.5	2.5	2.5	2.5	2.6	2.6	2.6	2.6	2.5	2.7	2.8	2.7	2.5	2.2	A	2.2	2.0	2.0	2.0	2.0	2.40	2.75
23-Dec-07	2.0	1.9	2.0	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.0	2.1	A	2.0	2.0	1.9	1.9	2.6	1.9	2.04	2.60
24-Dec-07	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.1	2.1	A	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.04	2.17
25-Dec-07	2.1	2.1	2.1	2.2	2.2	2.3	2.2	2.3	2.2	2.3	2.3	2.2	2.2	2.1	2.0	A	2.1	2.1	2.1	2.3	2.3	2.2	2.2	2.3	2.19	2.34
26-Dec-07	2.2	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.2	A	2.4	2.5	2.5	2.6	2.7	2.7	2.6	2.5	2.4	2.26	2.66
27-Dec-07	2.4	2.4	2.4	2.4	2.5	2.5	2.4	2.4	2.4	2.4	2.3	2.3	2.4	A	2.6	2.6	2.5	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.34	2.64
28-Dec-07	2.1	2.1	2.2	2.3	2.4	2.4	2.6	2.4	2.8	2.8	2.8	2.8	A	2.2	2.1	2.1	2.0	2.2	2.8	2.8	2.7	2.8	2.9	2.8	2.48	2.87
29-Dec-07	2.9	2.7	2.6	2.7	2.6	2.4	2.3	2.5	2.6	2.6	2.9	A	2.8	2.8	2.6	2.5	3.1	3.6	3.2	3.1	2.9	2.5	2.5	2.3	2.73	3.62
30-Dec-07	2.2	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.4	2.9	A	2.3	2.6	2.6	2.8	3.3	3.4	3.7	3.6	3.6	3.8	3.6	3.4	3.3	2.77	3.75
31-Dec-07	3.2	3.1	3.1	2.9	3.1	3.2	3.1	3.3	3.2	A	3.0	2.8	2.8	2.8	2.7	2.5	2.9	2.9	3.0	3.0	2.8	2.7	2.5	2.6	2.91	3.27
Hourly Avg	2.29	2.29	2.26	2.27	2.28	2.30	2.29	2.30	2.37	2.33	2.32	2.26	2.23	2.23	2.25	2.27	2.34	2.37	2.34	2.35	2.33	2.33	2.35	2.31		
Hourly Max	3.24	3.14	3.14	2.86	3.05	3.17	3.08	3.27	3.18	2.96	3.04	2.80	2.82	2.79	2.79	3.33	3.36	3.67	3.58	3.64	3.75	3.58	3.37	3.32		

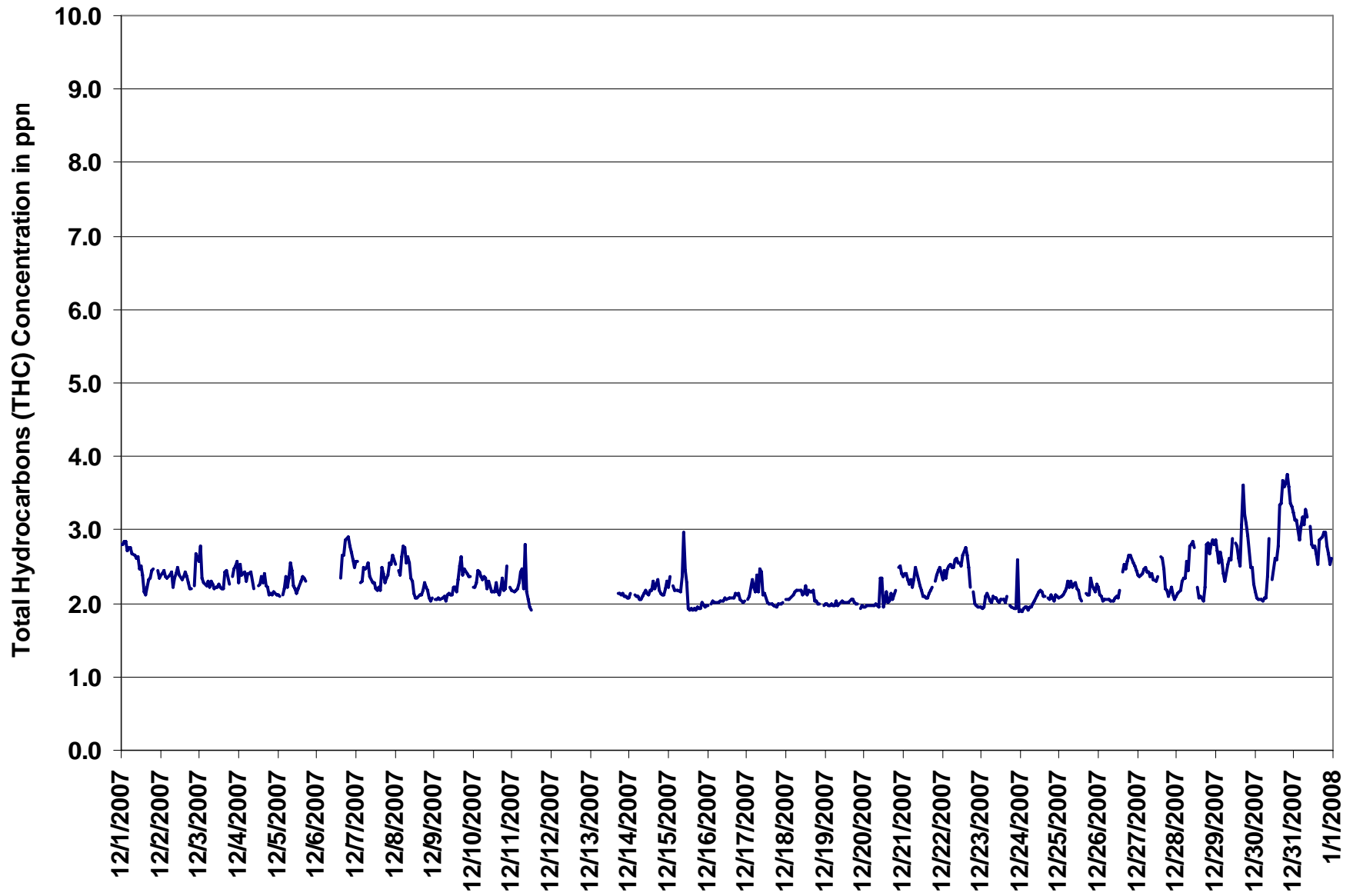
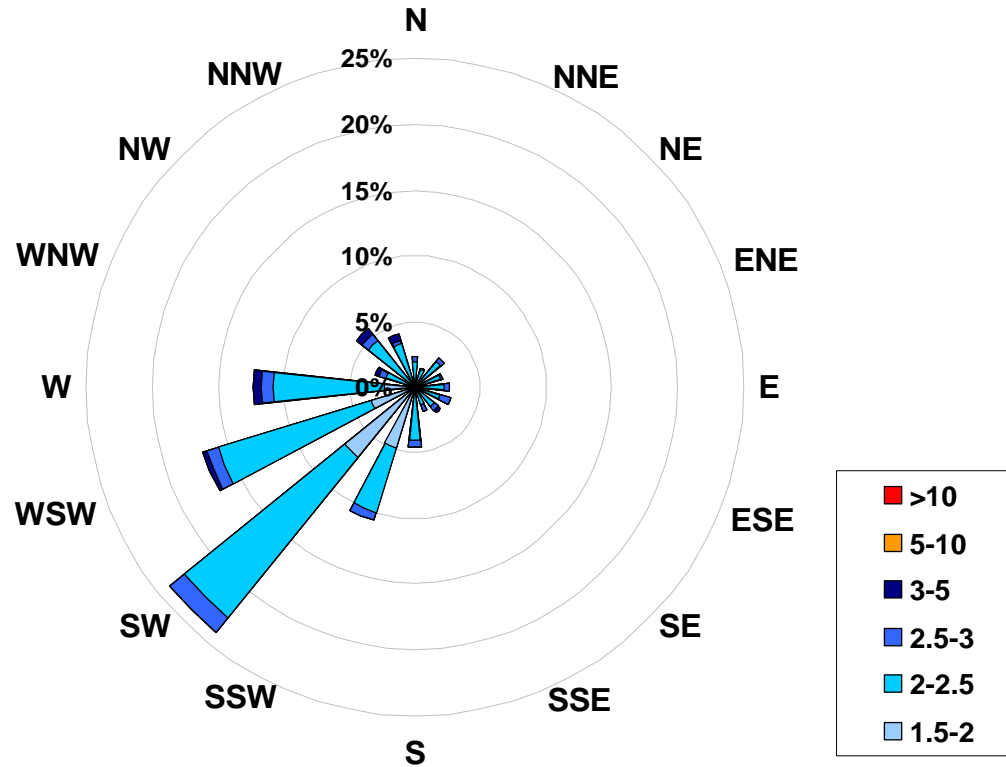


Figure 10. PAS - Crescent Heights Total Hydrocarbons Instantaneous (30 Second) Maximum Value Monthly Trend



**1-hr Average Concentration Rose for Total Hydrocarbons (in ppm)  
Located at the Crescent Heights Site for December 2007**



**Calms: 0%**

Frequency Distribution of THC in ppm			Frequency (hrs)
Range			
1.5	<	2	113
2	to	2.5	452
2.5	to	3	58
3	to	5	15
5	to	10	0
	>	10	0
Total Non-Zero Values			641



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

Station: Crescent Heights  
 Station Owner: PAS

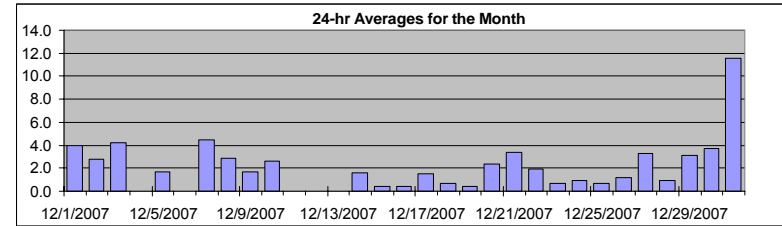
### HOURLY AVERAGE TABLE

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

Monitoring Dates: December 1, 2007 to January 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:	18.1 µg/m <sup>3</sup> 31-Dec 11:00 12:00
Maximum 24-hr Value:	11.5 µg/m <sup>3</sup> 31-Dec



AIC Time:	0 hrs	Operational Time:	666 hrs
Calibration Time:	10 hrs	AMD Operational Uptime:	90.9%
Percentile	99	95	75
	7.8	3.7	1.5
	0.3	0.0	0.0
	Average / Median		Geomean
	2.5		1.7 µg/m <sup>3</sup>

<b>Status Flag Characters</b>			
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		
1-Dec-07	8	9	8	7	6	4	5	3	3	4	5	0	1	0	0	1	1	4	5	4	5	5	5	3	3.9	9.2
2-Dec-07	5	4	3	3	3	3	2	2	3	2	3	2	4	1	3	4	3	3	2	2	2	2	4	3	2.8	4.8
3-Dec-07	2	6	4	5	4	4	7	5	4	4	3	5	6	4	3	9	4	1	2	3	4	5	4	4.3	9.4	
4-Dec-07	3	5	4	5	4	4	5	7	C	C	C	C	C	C	C	C	C	3	4	2	2	1	1	N	6.6	
5-Dec-07	2	1	1	1	1	1	1	1	1	1	2	1	1	2	4	4	4	5	P	P	P	P	P	P	1.7	5.2
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	4	5	5	6	7	6	6	6	9	N	8.6
7-Dec-07	4	2	4	2	3	3	4	6	7	6	4	4	3	4	3	4	4	4	5	5	5	7	7	7	4.4	7.4
8-Dec-07	6	4	6	5	3	8	10	4	9	5	4	0	0	2	0	0	1	2	0	0	1	0	0	0	2.9	9.7
9-Dec-07	0	0	0	0	0	0	0	0	0	0	0	0	1	3	3	4	5	3	2	4	3	3	4	3	1.6	5.3
10-Dec-07	3	4	3	3	5	4	4	4	4	2	2	3	2	2	2	3	2	2	1	2	1	2	1	1	2.6	5.3
11-Dec-07	2	0	1	0	2	4	0	2	4	2	0	0	0	P	P	P	P	P	P	P	P	P	P	P	N	4.4
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	0.0
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	3	0	2	1	0	0	0	0	0	0	0	1	N	2.9
14-Dec-07	2	2	2	1	2	2	2	3	2	3	1	2	C	3	2	5	0	0	1	1	1	0	0	0	1.6	5.4
15-Dec-07	0	1	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	2	1	1	0.4	2.4
16-Dec-07	0	0	1	0	1	0	2	0	1	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0.4	2.3
17-Dec-07	0	0	0	0	0	0	1	5	2	5	3	4	2	2	2	1	1	1	1	1	1	1	1	1	1.5	5.2
18-Dec-07	0	1	1	1	0	1	2	1	1	1	1	1	1	1	2	2	0	0	0	0	0	0	0	0	0.7	2.4
19-Dec-07	1	1	0	1	1	0	1	0	0	2	1	0	0	1	1	1	0	1	0	0	0	0	0	0	0.5	1.8
20-Dec-07	0	0	0	0	0	0	2	0	0	3	1	1	2	1	1	2	1	1	3	3	4	5	13	12	2.4	13.3
21-Dec-07	9	10	8	5	0	1	0	3	5	3	3	1	1	2	1	1	2	2	2	3	5	5	4	5	3.4	9.7
22-Dec-07	4	5	4	3	2	3	1	4	6	5	3	5	0	0	0	0	0	0	1	0	1	0	1	1	2.0	6.2
23-Dec-07	0	0	2	4	3	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.7	4.0
24-Dec-07	0	1	0	0	1	0	1	0	3	2	2	0	2	1	1	2	1	1	0	1	0	0	1	1	0.9	3.0
25-Dec-07	1	1	2	1	1	1	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	1	0	1	0.6	1.6
26-Dec-07	0	0	0	0	0	0	0	0	0	1	0	2	2	0	2	4	3	4	4	2	2	1	1	0	1.2	3.8
27-Dec-07	2	2	2	2	2	3	4	7	4	4	5	5	7	8	9	9	5	0	0	0	0	0	0	0	3.3	9.1
28-Dec-07	0	0	0	0	0	0	0	0	0	2	2	2	2	0	1	1	0	1	3	1	1	1	2	2	1.0	2.5
29-Dec-07	3	2	2	2	1	1	1	2	3	4	6	3	5	4	4	5	4	6	5	7	4	0	0	1	3.1	6.5
30-Dec-07	0	0	0	0	0	0	1	1	2	4	2	1	3	5	5	6	6	7	8	9	8	7	8	6	3.7	8.7
31-Dec-07	5	6	6	6	7	8	12	12	13	16	18	18	18	14	12	11	13	13	14	11	11	14	10	10	11.5	18.1
Hourly Avg	2.2	2.4	2.2	2.0	1.8	2.1	2.5	2.6	2.9	3.1	2.8	2.2	2.4	2.3	2.4	2.9	2.5	2.5	2.4	2.5	2.3	2.6	2.7	2.6		
Hourly Max	8.8	9.7	7.8	7.1	7.0	8.0	12.3	11.9	12.9	15.5	17.6	18.1	17.9	14.3	11.5	10.7	12.6	13.3	13.8	11.0	10.6	14.4	13.3	12.4		

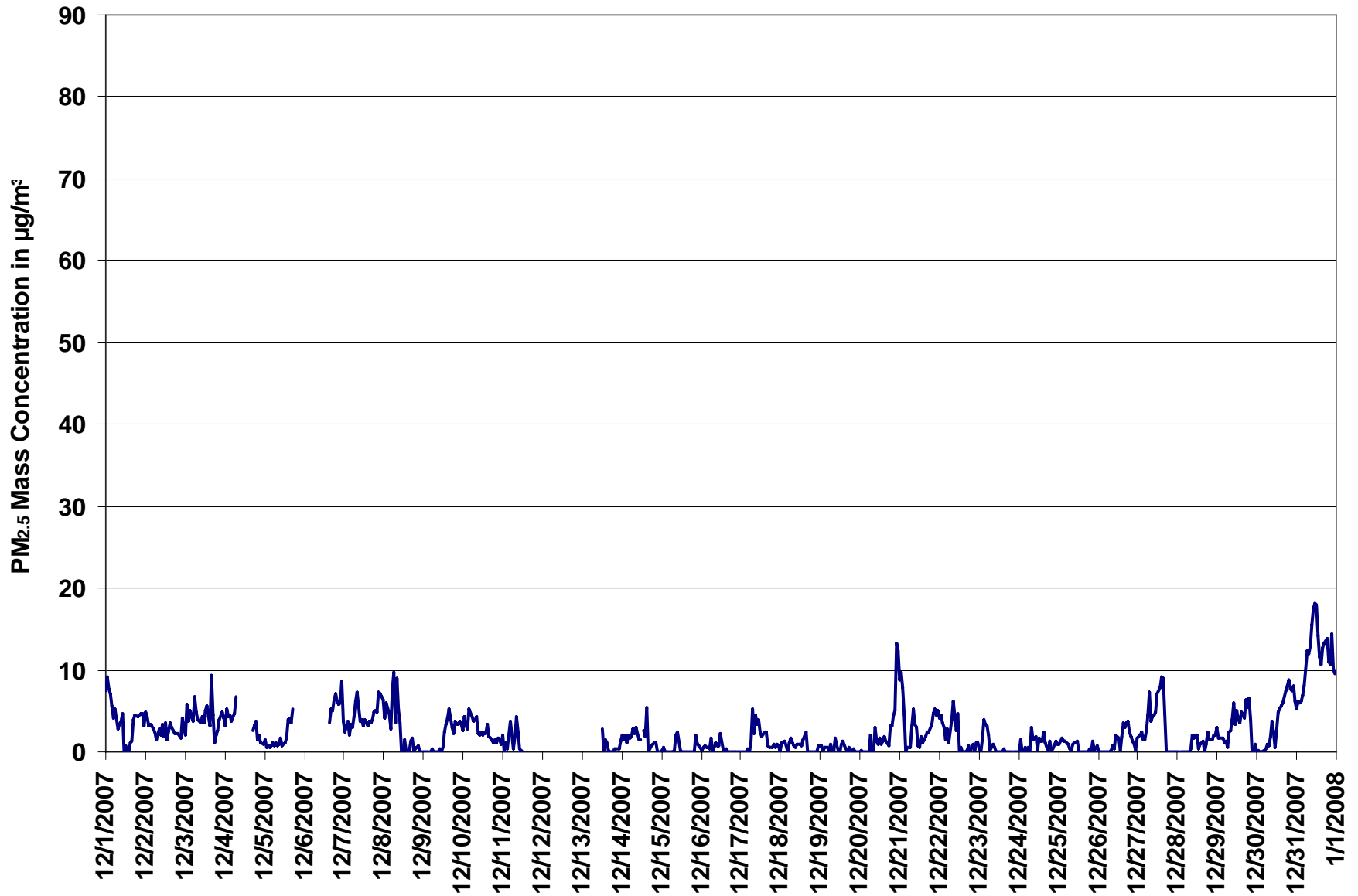


Figure 11. PAS - Crescent Heights Particulate Matter (less than 2.5 microns) 1-hr Average Monthly Trend



Station: Crescent Heights  
 Station Owner: PAS

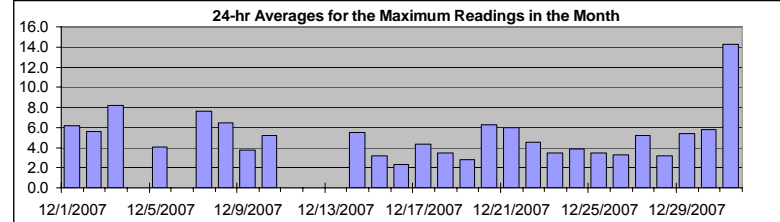
**INSTANTANEOUS (30 Second) MAXIMUM TABLE**

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

Monitoring Dates: December 1, 2007 to January 1, 2008

**Summary**

Maximum 1-hr Average:	21.0	µg/m <sup>3</sup>	31-Dec	10:00 11:00
Maximum 24-hr Value:	14.2	µg/m <sup>3</sup>	31-Dec	



AIC Time:	0 hrs	Operational Time:	666 hrs						
Calibration Time:	10 hrs	AMD Operational Uptime:	90.9%						
Percentile	99	95	75	50	25	5	1	Average / Median	Geomean
	18.6	12.4	6.8	4.5	2.7	1.1	0.4	5.2 4 µg/m <sup>3</sup>	4.7 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 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-Dec-07	9	12	10	11	8	6	8	6	6	6	8	4	2	2	4	4	5	6	6	6	7	7	5	6.2	12.2	
2-Dec-07	6	6	6	7	8	5	6	4	6	4	5	5	6	3	4	7	5	7	5	5	4	5	7	7	5.6	8.0
3-Dec-07	4	9	7	9	8	7	14	9	6	6	7	7	8	9	10	8	19	9	6	6	5	6	7	7	8.2	18.8
4-Dec-07	5	8	8	7	6	7	9	10	C	C	C	C	C	C	C	C	5	5	7	4	5	3	3	N	10.3	
5-Dec-07	4	3	4	3	3	3	3	3	3	3	5	3	4	4	6	7	6	P	P	P	P	P	P	4.0	7.0	
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	5	9	6	12	10	8	8	19	20	N	20.2
7-Dec-07	7	6	6	4	7	6	9	10	11	9	7	6	6	6	6	6	5	6	8	8	8	12	13	11	7.6	13.3
8-Dec-07	13	6	9	9	7	14	15	6	17	10	9	3	1	3	2	2	4	4	3	2	3	6	2	2	6.5	16.9
9-Dec-07	2	2	3	1	0	4	1	2	3	2	3	3	3	6	4	6	9	6	4	6	6	5	5	5	3.8	9.0
10-Dec-07	4	9	5	8	8	6	6	7	8	4	4	4	5	4	4	6	5	5	5	4	4	4	4	3	5.2	8.8
11-Dec-07	6	3	4	6	6	8	6	5	9	6	3	2	1	P	P	P	P	P	P	P	P	P	P	P	N	8.9
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	0.0
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	8	2	4	5	3	2	6	3	4	3	3	4	N	8.4
14-Dec-07	7	5	5	4	8	4	5	7	4	8	6	5	C	7	14	15	2	2	3	2	4	3	3	2	5.5	15.4
15-Dec-07	4	4	5	2	2	2	2	2	4	7	9	4	2	3	2	3	3	2	1	1	1	12	2	2	3.2	11.7
16-Dec-07	3	2	2	3	3	2	5	1	2	2	3	2	12	2	1	2	1	2	1	2	1	1	1	1	2.3	11.7
17-Dec-07	1	1	1	1	9	3	3	18	5	8	6	7	4	4	5	5	3	3	3	2	3	3	3	4	4.3	17.9
18-Dec-07	4	4	4	4	2	5	6	3	3	4	3	4	4	3	5	7	1	1	1	1	2	3	4	4	3.5	7.0
19-Dec-07	5	4	2	5	2	2	3	2	2	5	3	2	2	5	4	3	2	3	2	2	2	2	1	1	2.8	5.3
20-Dec-07	1	2	5	4	2	3	12	3	2	6	5	4	4	4	4	6	5	4	10	7	13	14	18	15	6.3	17.5
21-Dec-07	11	12	10	7	4	3	3	7	8	6	5	3	3	4	5	5	6	5	5	5	8	7	6	6	6.0	12.2
22-Dec-07	6	7	6	5	6	5	3	8	9	7	7	11	4	3	2	1	1	2	4	2	2	2	3	3	4.5	10.6
23-Dec-07	3	2	5	6	6	5	10	3	11	6	2	7	5	1	0	3	1	1	0	2	0	2	2	2	3.5	10.8
24-Dec-07	2	5	2	3	2	3	5	2	6	5	6	4	5	4	4	5	3	4	4	5	4	4	4	3	3.9	6.4
25-Dec-07	5	4	5	7	5	5	5	3	3	4	3	5	1	0	1	1	2	3	2	2	5	5	2	3	3.5	6.7
26-Dec-07	0	0	1	1	1	0	1	2	1	2	2	10	3	2	7	9	6	7	6	5	4	2	3	2	3.3	10.2
27-Dec-07	3	4	4	3	4	5	7	9	7	6	7	7	9	10	10	11	11	2	1	1	1	2	1	1	5.2	11.1
28-Dec-07	1	2	2	2	2	2	2	1	3	4	3	5	4	2	3	3	2	4	6	7	3	3	5	5	3.2	6.7
29-Dec-07	5	5	4	3	3	2	3	6	5	7	9	6	8	7	5	6	7	10	7	9	7	1	2	2	5.4	9.8
30-Dec-07	1	2	2	0	3	1	3	3	4	8	4	3	5	8	7	8	8	9	10	11	10	11	10	9	5.8	11.0
31-Dec-07	7	8	9	9	9	13	15	16	17	20	21	20	20	16	15	13	16	15	16	13	13	18	12	11	14.2	21.0
Hourly Avg	4.6	4.8	4.8	4.8	4.7	4.7	6.1	5.7	6.1	6.1	5.7	5.4	5.2	4.6	5.0	5.7	5.3	4.9	5.0	4.8	4.8	5.5	5.5	5.2		
Hourly Max	12.6	12.2	10.1	10.6	9.0	13.7	15.4	17.9	16.9	19.7	21.0	20.0	19.8	16.4	14.6	15.4	18.8	14.8	16.3	13.3	13.0	18.5	18.8	20.2		

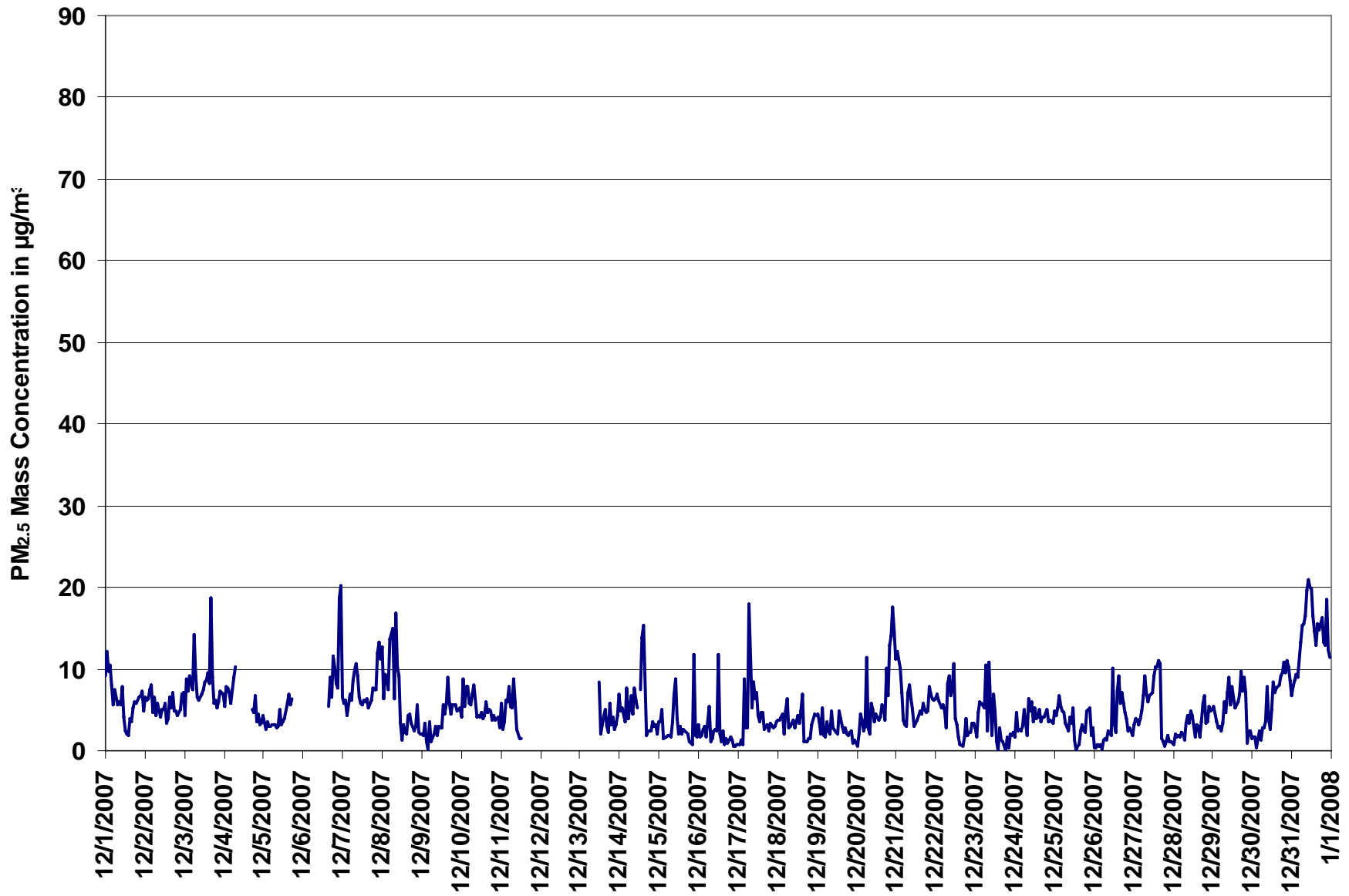
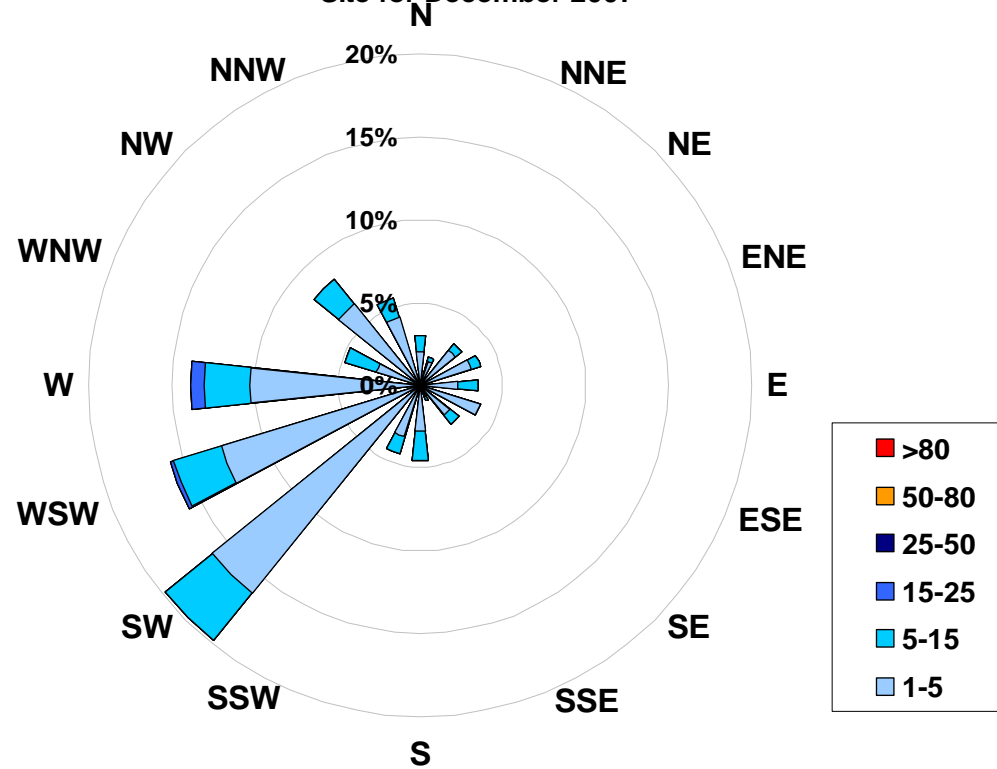


Figure 12. PAS - Crescent Heights Particulate Matter (less than 2.5 microns) Instantaneous (30 Second) Maximum Value Monthly Trend





**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 December 2007**



**Calms: 0%**

Frequency Distribution of PM <sub>2.5</sub> in µg/m <sup>3</sup>			
Range		Frequency (hrs)	
1.0	< 5	574	
5	to 15	88	
15	to 25	4	
25	to 50	0	
50	to 80	0	
	> 80	0	
Total Non-Zero Values			666



## PAS - Crescent Heights Relative Humidity Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

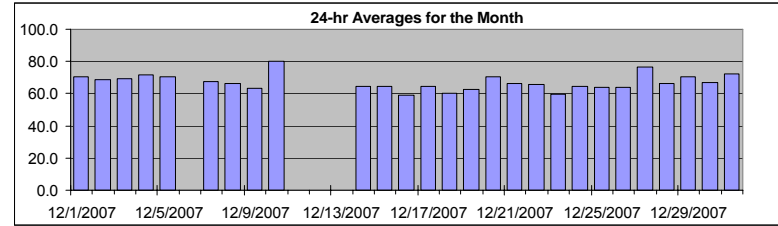
### HOURLY AVERAGE TABLE

### Relative Humidity (RH)

Monitoring Dates: December 1, 2007 to January 1, 2008

**Summary**

Maximum 1-hr Average:	85.8 %	10-Dec	7:00 8:00
Maximum 24-hr Value:	79.8 %	10-Dec	



AIC Time:	0 hrs	Operational Time:	676 hrs						
Calibration Time:	0 hrs	AMD Operational Uptime:	90.9%						
Percentile	99	95	75	50	25	5	1	Average	Median
	83.0	77.8	72.2	67.5	61.8	54.7	51.7	67.0 %	67.5 %

**Status Flag Characters**

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

Day	Mountain Standard Time																								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-Dec-07	72	72	72	73	73	74	74	74	74	74	67	62	67	65	62	63	66	72	74	74	73	72	70	68	70.3	74.5	
2-Dec-07	69	70	72	72	71	70	68	68	67	66	65	65	62	64	65	67	70	69	69	69	70	71	74	75	68.7	75.1	
3-Dec-07	75	74	72	72	72	72	71	71	70	69	66	65	65	64	64	65	66	68	69	70	72	73	74	74	69.5	75.0	
4-Dec-07	74	74	74	73	73	73	75	73	74	74	74	73	71	68	67	68	69	71	71	71	70	70	69	69	71.5	74.6	
5-Dec-07	71	71	71	71	70	71	71	71	71	71	69	66	65	63	63	69	76	77	77	P	P	P	P	P	70.2	77.5	
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	52	61	67	68	72	73	72	71	71	N	72.9	
7-Dec-07	71	71	69	66	67	69	70	71	70	66	64	62	60	58	59	60	65	67	71	73	74	76	74	73	67.7	75.8	
8-Dec-07	72	71	71	71	70	70	70	70	71	71	73	67	60	56	55	56	63	67	68	68	65	64	64	63	66.4	72.7	
9-Dec-07	63	64	62	61	61	62	61	61	61	57	55	53	52	56	59	62	66	67	71	71	72	70	77	82	63.5	81.8	
10-Dec-07	83	84	84	83	81	82	85	86	84	80	76	72	76	76	76	78	77	75	75	81	82	80	78	77	79.8	85.8	
11-Dec-07	78	78	78	78	77	78	77	74	70	65	60	56	53	P	P	P	P	P	P	P	P	P	P	P	N	78.4	
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	0.0	
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	56	58	60	62	65	65	66	67	64	62	60	N	66.8
14-Dec-07	63	68	66	65	64	65	65	66	66	64	60	58	55	55	57	60	65	67	69	70	69	72	71	72	64.6	72.3	
15-Dec-07	73	72	74	74	71	71	71	70	69	60	55	54	56	57	60	60	63	65	67	68	64	59	58	55	64.3	73.6	
16-Dec-07	56	56	56	57	57	56	57	56	56	52	51	51	55	56	56	59	63	66	67	68	68	67	65	64	58.9	68.1	
17-Dec-07	63	62	64	65	66	70	67	65	66	63	60	59	57	59	61	62	65	67	67	66	68	67	68	70	64.6	70.3	
18-Dec-07	72	71	71	71	69	68	68	66	61	60	56	56	58	57	56	59	60	57	57	52	49	50	52	53	60.4	71.6	
19-Dec-07	58	62	63	62	64	66	70	73	71	69	65	62	60	57	54	54	59	62	63	62	61	63	65	63	62.9	73.1	
20-Dec-07	66	68	69	70	72	73	74	69	69	67	68	67	67	67	70	74	78	78	74	72	75	69	70	68	70.6	78.3	
21-Dec-07	67	76	83	82	66	58	53	56	58	57	59	58	56	59	58	58	66	70	74	75	77	78	77	75	66.5	82.9	
22-Dec-07	75	75	74	74	73	72	71	71	71	70	71	66	59	54	55	61	65	64	62	58	57	59	59	62	65.8	75.3	
23-Dec-07	65	57	54	62	66	67	65	66	64	55	54	52	50	53	60	60	63	59	57	57	58	58	61	62	59.4	66.8	
24-Dec-07	66	65	69	68	68	63	56	55	66	69	63	63	64	62	64	69	76	76	73	70	61	54	56	56	64.7	75.7	
25-Dec-07	56	56	59	60	62	65	68	69	71	71	68	64	66	59	53	56	62	65	66	68	70	64	64	68	63.7	70.6	
26-Dec-07	66	65	65	64	64	61	61	61	56	54	54	55	59	54	54	61	66	69	69	70	73	75	75	75	63.6	75.1	
27-Dec-07	77	76	76	76	78	78	77	78	78	78	79	80	81	80	79	80	81	78	76	72	68	72	68	65	76.3	80.8	
28-Dec-07	67	67	67	69	72	73	72	72	71	66	61	60	53	52	55	58	60	66	70	73	74	73	73	74	66.5	74.1	
29-Dec-07	75	72	73	73	74	74	75	76	77	74	66	63	61	59	61	62	67	73	75	76	73	72	72	73	70.7	76.9	
30-Dec-07	69	65	63	66	67	64	66	68	71	69	59	57	59	56	61	67	70	72	72	72	72	71	71	72	66.7	72.5	
31-Dec-07	74	75	74	76	76	75	74	76	75	73	70	67	66	62	60	61	68	75	78	78	77	77	76	76	72.5	78.1	
Hourly Avg	69.2	69.3	69.5	69.8	69.4	69.4	69.0	69.0	68.8	66.6	63.7	61.6	60.8	60.2	61.0	63.1	67.0	68.7	69.2	69.3	68.9	68.2	68.3	68.4			
Hourly Max	83.4	84.4	84.2	83.4	81.5	82.3	85.2	85.8	84.2	80.5	78.5	79.6	80.8	80.2	79.3	80.1	80.5	78.3	77.5	81.1	82.4	79.6	78.1	81.8			

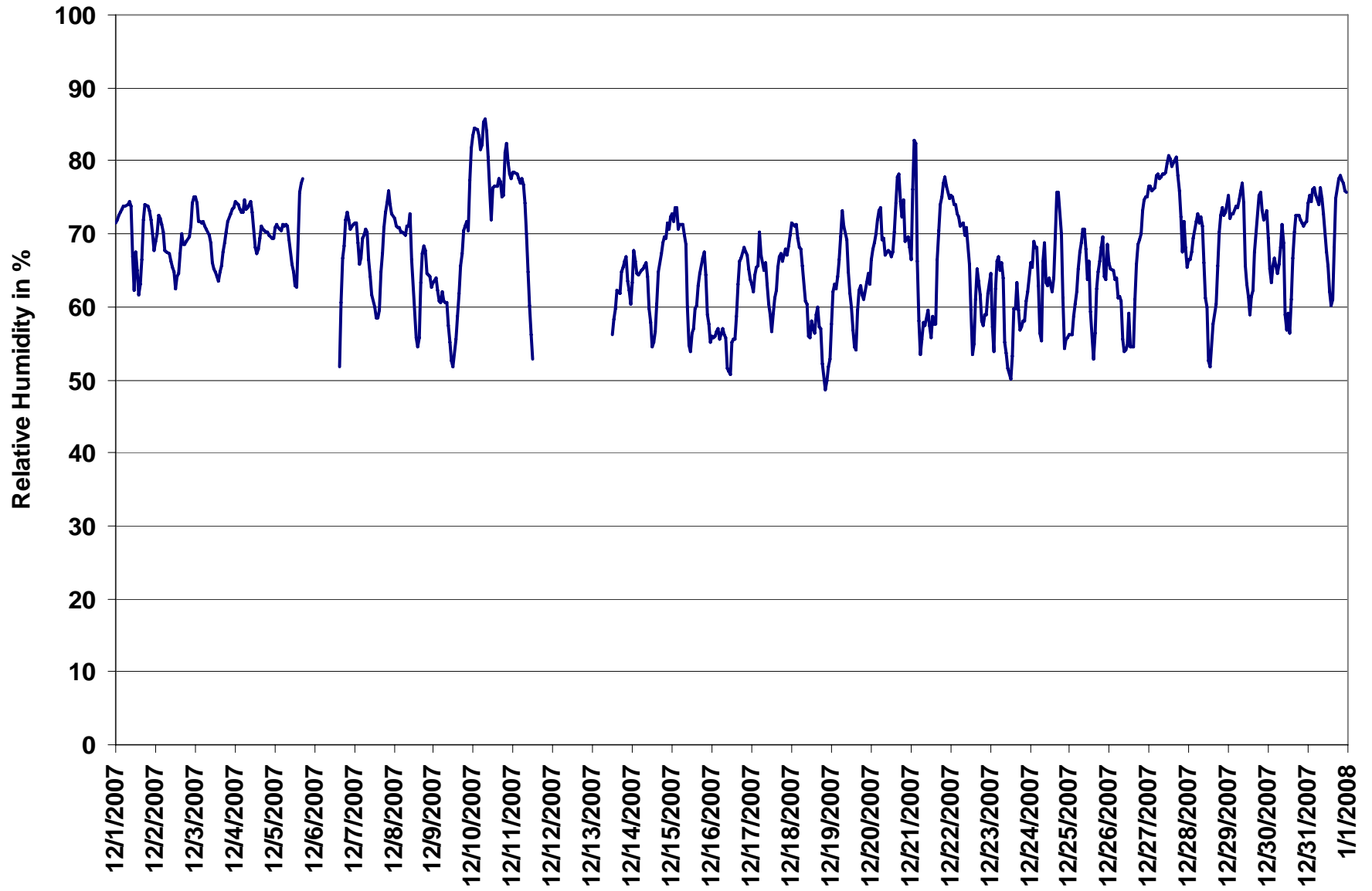


Figure 13. PAS - Crescent Heights Relative Humidity 1-hr Average Monthly Trend



# PAS - Crescent Heights Temperature Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

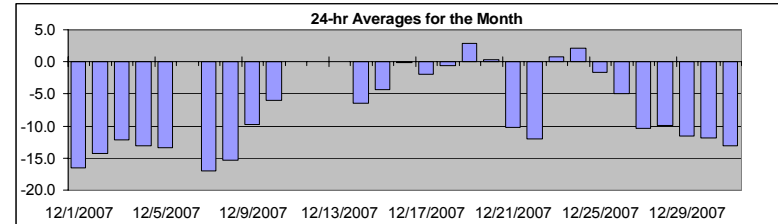
## HOURLY AVERAGE TABLE

## Ambient Temperature (T)

Monitoring Dates: December 1, 2007 to January 1, 2008

### Summary

Maximum 1-hr Average:	5.3 °C	19-Dec	15:00 16:00
Maximum 24-hr Value:	2.9 °C	19-Dec	



AIC Time:	0 hrs	Operational Time:	676 hrs						
Calibration Time:	0 hrs	AMD Operational Uptime:	90.9%						
Percentile	99	95	75	50	25	5	1	Average	Median
	4.3	3.2	-1.7	-8.8	-12.9	-19.2	-21.5	-7.9 °C	-8.8 °C

### Status Flag Characters

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

Day	Mountain Standard Time																								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
1-Dec-07	-20	-19	-19	-18	-18	-17	-17	-17	-16	-15	-13	-12	-14	-14	-14	-14	-15	-15	-16	-17	-18	-19	-19	-19	-16.5	-12.5	
2-Dec-07	-20	-20	-20	-21	-21	-20	-19	-19	-18	-17	-15	-13	-12	-12	-12	-11	-11	-11	-10	-10	-9	-8	-8	-9	-10	-14.3	-7.7
3-Dec-07	-10	-10	-13	-14	-14	-14	-14	-14	-14	-13	-12	-12	-12	-12	-11	-11	-11	-11	-11	-11	-11	-11	-12	-13	-12.2	-9.8	
4-Dec-07	-14	-14	-14	-14	-13	-13	-12	-12	-12	-12	-12	-13	-12	-12	-13	-13	-14	-14	-14	-14	-13	-13	-13	-13	-14	-13.0	-11.6
5-Dec-07	-14	-14	-14	-14	-14	-14	-14	-14	-14	-14	-13	-13	-12	-12	-12	-13	-13	-12	P	P	P	P	P	P	-13.3	-12.3	
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	-9	-12	-14	-16	-18	-19	-20	-20	N	-9.2
7-Dec-07	-20	-21	-20	-18	-19	-19	-20	-21	-21	-18	-16	-14	-13	-11	-11	-11	-13	-14	-15	-17	-18	-18	-19	-20	-16.9	-10.8	
8-Dec-07	-21	-21	-22	-22	-22	-22	-23	-23	-21	-17	-14	-12	-10	-8	-7	-8	-8	-10	-12	-13	-12	-12	-11	-11	-15.4	-7.3	
9-Dec-07	-11	-12	-11	-11	-11	-12	-12	-12	-12	-11	-10	-8	-7	-7	-8	-7	-8	-8	-8	-10	-10	-9	-9	-8	-7	-9.7	-6.8
10-Dec-07	-7	-6	-6	-6	-4	-4	-4	-3	-3	-3	-3	-3	-4	-4	-4	-4	-5	-6	-7	-9	-10	-13	-14	-14	-6.1	-3.3	
11-Dec-07	-14	-13	-14	-14	-15	-14	-14	-13	-11	-9	-7	-6	-4	P	P	P	P	P	P	P	P	P	P	P	N	-3.9	
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	0.0	
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	-2	-2	-2	-2	-3	-5	-7	-8	-9	-8	-8	-7	N	-1.9	
14-Dec-07	-7	-8	-8	-8	-7	-7	-6	-6	-6	-6	-5	-4	-3	-2	-3	-3	-5	-7	-8	-9	-9	-9	-9	-11	-6.5	-2.3	
15-Dec-07	-12	-12	-13	-13	-13	-12	-12	-11	-10	-6	-3	0	2	3	2	3	2	1	0	0	0	0	1	1	-4.3	2.7	
16-Dec-07	0	1	0	0	0	0	0	0	-1	1	2	3	3	3	3	3	1	-1	-2	-4	-4	-4	-3	-3	-0.1	3.4	
17-Dec-07	-4	-4	-5	-6	-6	-8	-6	-5	-5	-4	-1	1	4	4	4	4	3	1	0	-1	-1	-2	-3	-3	-1.9	4.0	
18-Dec-07	-4	-4	-4	-5	-5	-5	-6	-6	-4	-4	-2	-1	1	2	3	3	1	2	2	3	4	4	4	4	-0.6	4.3	
19-Dec-07	4	4	4	4	3	3	2	0	1	1	3	4	5	5	5	5	3	2	1	1	2	2	2	3	2.9	5.3	
20-Dec-07	2	1	1	1	1	0	-1	1	1	2	2	3	4	4	3	2	1	0	0	-2	-4	-6	-7	0.3	3.9		
21-Dec-07	-7	-8	-7	-7	-8	-10	-11	-11	-11	-10	-10	-8	-8	-8	-7	-7	-10	-11	-12	-12	-13	-14	-16	-16	-10.2	-7.0	
22-Dec-07	-17	-18	-18	-19	-20	-21	-21	-22	-21	-19	-17	-14	-12	-8	-7	-8	-9	-6	-4	-3	-2	-1	0	-1	-12.0	-0.3	
23-Dec-07	-1	0	0	-1	-1	-1	0	-1	-2	-1	0	1	2	2	1	1	0	2	2	3	3	3	3	4	0.8	3.6	
24-Dec-07	3	4	3	3	4	4	5	5	3	3	3	2	2	3	2	2	0	0	-1	-1	0	1	0	0	2.1	5.1	
25-Dec-07	-1	-1	-1	-1	-1	-1	-1	-1	-1	-2	-1	0	0	1	2	2	-1	-2	-4	-5	-6	-5	-4	-5	-1.6	2.4	
26-Dec-07	-5	-6	-6	-6	-6	-5	-5	-4	-3	-2	-2	-1	-2	-1	-2	-4	-5	-6	-6	-7	-8	-9	-10	-11	-5.0	-1.1	
27-Dec-07	-12	-11	-11	-12	-13	-14	-14	-14	-13	-13	-12	-11	-9	-8	-6	-5	-5	-6	-8	-9	-9	-11	-11	-11	-10.4	-5.4	
28-Dec-07	-12	-12	-12	-13	-14	-14	-13	-13	-13	-11	-9	-7	-3	-2	-3	-4	-5	-7	-9	-10	-11	-11	-13	-14	-9.9	-2.1	
29-Dec-07	-13	-11	-12	-12	-12	-12	-13	-13	-14	-14	-11	-10	-9	-8	-8	-8	-11	-12	-13	-13	-12	-12	-12	-13	-11.5	-7.8	
30-Dec-07	-12	-10	-9	-11	-11	-9	-9	-10	-11	-10	-7	-8	-9	-9	-11	-12	-14	-15	-17	-16	-16	-16	-16	-16	-11.8	-7.0	
31-Dec-07	-15	-15	-14	-13	-12	-13	-14	-15	-14	-13	-12	-11	-11	-9	-9	-10	-11	-13	-14	-14	-15	-15	-16	-16	-13.0	-9.0	
Hourly Avg	-9.3	-9.3	-9.5	-9.7	-9.8	-9.7	-9.8	-9.8	-9.5	-8.6	-7.1	-6.0	-5.0	-4.4	-4.3	-4.9	-6.2	-7.0	-7.5	-7.9	-8.0	-8.3	-8.7	-9.0			
Hourly Max	3.9	3.8	4.0	4.0	3.5	4.3	5.1	4.8	3.2	2.7	2.9	4.0	4.5	4.6	5.2	5.3	3.2	2.0	2.4	3.3	4.1	3.8	4.0	4.3			

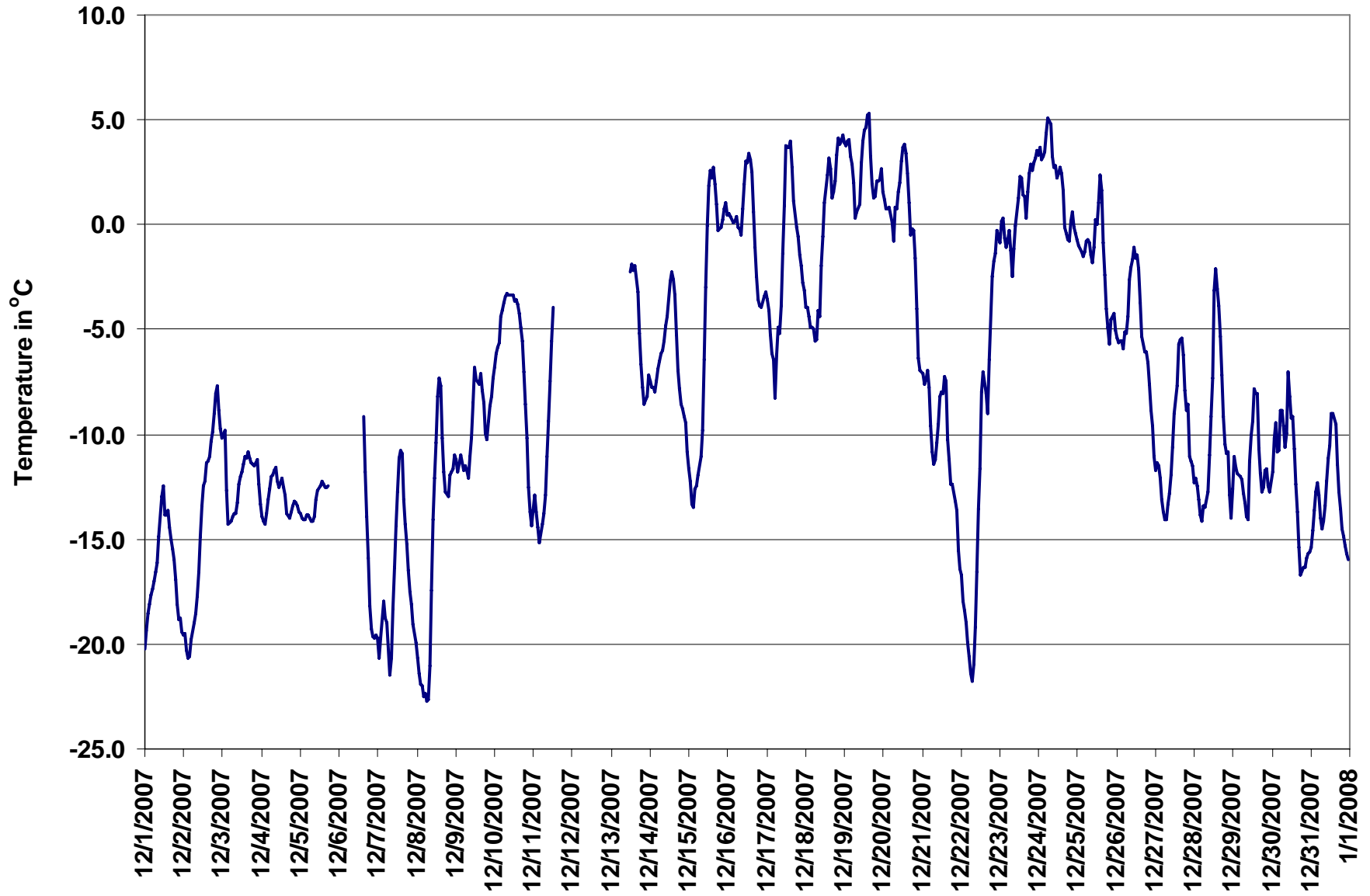


Figure 14. PAS - Crescent Heights Temperature 1-hr Average Monthly Trend



# PAS - Crescent Heights Solar Radiation Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

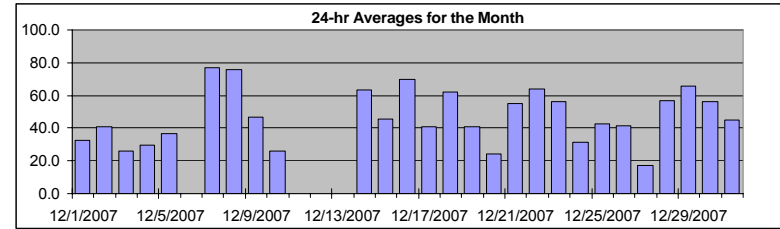
## HOURLY AVERAGE TABLE

## Solar Radiation (SR)

Monitoring Dates: December 1, 2007 to January 1, 2008

### Summary

Maximum 1-hr Average:	367.9	W/m <sup>2</sup>	14-Dec	12:00 13:00
Maximum 24-hr Value:	76.9	W/m <sup>2</sup>	7-Dec	



AIC Time:	0 hrs	Operational Time:	676 hrs						
Calibration Time:	0 hrs	AMD Operational Uptime:	90.9%						
Percentile	99	95	75	50	25	5	1	Average	Median
	333.4	253.7	61.9	0.0	0.0	0.0	0.0	47.4 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-Dec-07	0	0	0	0	0	0	0	0	10	52	129	170	126	137	120	36	3	0	0	0	0	0	0	0	0	32.7	170.4
2-Dec-07	0	0	0	0	0	0	0	1	40	68	160	194	178	178	113	40	3	0	0	0	0	0	0	0	0	40.6	193.6
3-Dec-07	0	0	0	0	0	0	0	0	9	46	129	123	106	95	84	32	2	0	0	0	0	0	0	0	0	26.0	129.1
4-Dec-07	0	0	0	0	0	0	0	0	9	59	64	105	180	150	111	35	3	0	0	0	0	0	0	0	0	29.8	179.8
5-Dec-07	0	0	0	0	0	0	0	0	18	58	135	138	155	108	27	22	1	0	P	P	P	P	P	P	36.8	155.1	
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	53	4	0	0	0	0	0	0	0	0	N	52.5
7-Dec-07	0	0	0	0	0	0	0	1	46	189	288	343	345	313	209	102	8	0	0	0	0	0	0	0	0	76.9	345.1
8-Dec-07	0	0	0	0	0	0	0	0	35	180	283	344	345	315	211	99	8	0	0	0	0	0	0	0	0	75.9	345.0
9-Dec-07	0	0	0	0	0	0	0	1	49	133	230	213	213	144	94	49	4	0	0	0	0	0	0	0	0	47.0	229.6
10-Dec-07	0	0	0	0	0	0	0	0	16	36	86	142	132	101	81	26	3	0	0	0	0	0	0	0	0	26.0	142.2
11-Dec-07	0	0	0	0	0	0	0	0	33	165	257	329	334													N	334.4
12-Dec-07																										N	0.0
13-Dec-07													247	212	107	82	9	0	0	0	0	0	0	0	0	N	246.9
14-Dec-07	0	0	0	0	0	0	0	0	13	61	226	282	368	272	209	85	7	0	0	0	0	0	0	0	0	63.5	367.9
15-Dec-07	0	0	0	0	0	0	0	1	35	127	140	126	172	194	147	130	16	0	0	0	0	0	0	0	0	45.3	194.3
16-Dec-07	0	0	0	0	0	0	0	0	27	150	253	318	325	298	212	85	4	0	0	0	0	0	0	0	0	69.7	325.3
17-Dec-07	0	0	0	0	0	0	0	0	21	80	139	125	247	121	116	116	8	0	0	0	0	0	0	0	0	40.6	247.2
18-Dec-07	0	0	0	0	0	0	0	0	17	131	245	315	271	261	199	44	3	0	0	0	0	0	0	0	0	62.0	315.4
19-Dec-07	0	0	0	0	0	0	0	0	28	70	183	138	143	117	209	86	3	0	0	0	0	0	0	0	0	40.7	208.8
20-Dec-07	0	0	0	0	0	0	0	0	13	41	72	90	125	117	80	44	5	0	0	0	0	0	0	0	0	24.4	125.3
21-Dec-07	0	0	0	0	0	0	0	0	13	64	175	256	329	162	212	106	9	0	0	0	0	0	0	0	0	55.3	329.3
22-Dec-07	0	0	0	0	0	0	0	0	27	148	193	300	273	341	203	40	4	0	0	0	0	0	0	0	0	63.7	341.1
23-Dec-07	0	0	0	0	0	0	0	0	26	129	247	318	304	165	109	46	3	0	0	0	0	0	0	0	0	56.2	318.1
24-Dec-07	0	0	0	0	0	0	0	0	5	36	84	172	136	132	94	79	9	0	0	0	0	0	0	0	0	31.1	172.4
25-Dec-07	0	0	0	0	0	0	0	0	9	62	121	171	148	229	220	64	4	0	0	0	0	0	0	0	0	42.9	228.7
26-Dec-07	0	0	0	0	0	0	0	0	10	62	129	216	137	159	186	81	10	0	0	0	0	0	0	0	0	41.3	215.8
27-Dec-07	0	0	0	0	0	0	0	0	6	36	57	65	46	69	66	48	15	0	0	0	0	0	0	0	0	17.0	69.5
28-Dec-07	0	0	0	0	0	0	0	0	13	78	180	224	294	309	159	97	11	0	0	0	0	0	0	0	0	56.8	309.0
29-Dec-07	0	0	0	0	0	0	0	0	11	57	240	299	333	307	219	95	12	0	0	0	0	0	0	0	0	65.6	333.1
30-Dec-07	0	0	0	0	0	0	0	0	10	134	309	239	186	246	160	52	6	0	0	0	0	0	0	0	0	55.9	308.7
31-Dec-07	0	0	0	0	0	0	0	0	8	40	96	146	177	299	216	94	10	0	0	0	0	0	0	0	0	45.3	298.8
Hourly Avg	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	19.9	89.0	173.1	210.8	219.9	198.3	149.0	67.9	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Hourly Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	49.0	188.6	308.7	344.3	367.9	341.1	219.9	129.8	15.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1		

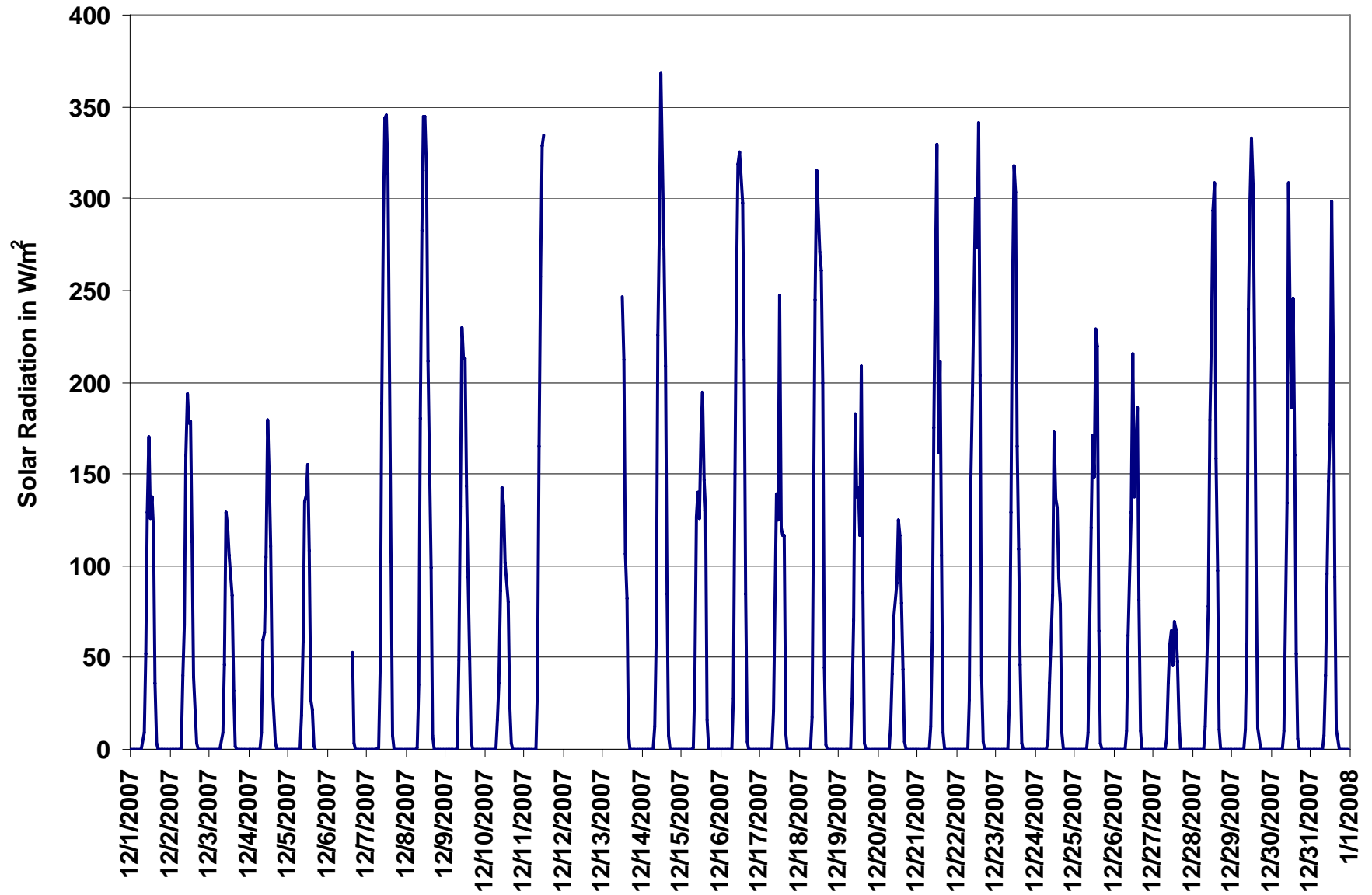


Figure 15. PAS - Crescent Heights Solar Radiation 1-hr Average Monthly Trend



# PAS - Crescent Heights Scalar Wind Speed Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

## HOURLY AVERAGE TABLE

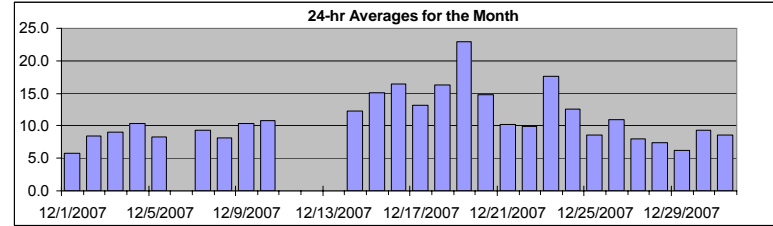
## Wind Speed (WSs)

Monitoring Dates: December 1, 2007 to January 1, 2008

### Summary

Maximum 1-hr Average:	31.9	km/hr	19-Dec	2:00 3:00
Maximum 24-hr Value:	22.9	km/hr	19-Dec	

Calm Time:	0 hrs	0% calms	Operational Time:	676 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	90.9%				
Percentile	99	95	75	50	25	5	1	AverageS
	28.7	22.4	13.5	9.6	7.1	4.7	3.6	11.1 km/hr



### Status Flag Characters

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

Day	Mountain Standard Time																							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-Dec-07	4	4	4	4	4	7	5	4	3	3	4	5	9	8	7	7	7	7	6	7	8	8	8	7	5.7	8.6	
2-Dec-07	4	5	7	5	6	7	8	8	7	7	11	12	11	12	8	10	12	12	11	8	9	5	7	11	8.4	12.3	
3-Dec-07	10	9	11	12	12	12	12	12	9	7	6	7	8	6	6	5	6	10	10	11	10	7	13	8	9.1	13.0	
4-Dec-07	6	8	8	6	7	8	8	12	11	10	14	13	11	12	12	12	12	13	13	12	9	10	9	10.4	14.3		
5-Dec-07	8	8	8	7	7	7	7	6	8	9	8	9	10	10	10	10	8	10	P	P	P	P	P	P	8.3	10.2	
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	8	6	7	7	7	8	9	9	8	N	8.9	
7-Dec-07	7	5	13	12	8	5	8	8	10	13	14	16	14	12	11	11	9	8	8	6	6	6	6	6	9.3	15.8	
8-Dec-07	8	5	5	4	6	5	5	6	5	5	6	13	13	11	9	8	7	7	7	8	9	12	15	15	8.1	15.4	
9-Dec-07	9	11	16	21	22	13	16	15	11	11	11	6	6	6	6	5	4	8	9	11	6	7	9	11	10.4	21.6	
10-Dec-07	9	8	9	9	9	9	11	9	11	13	16	19	15	13	13	11	10	9	9	8	8	8	11	9	10.7	18.7	
11-Dec-07	11	9	10	8	7	6	6	10	8	10	12	15	17	P	P	P	P	P	P	P	P	P	P	P	N	16.7	
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	0.0	
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	15	14	11	8	12	10	8	10	17	20	17	17	N	19.5	
14-Dec-07	12	9	12	12	12	11	13	12	13	13	14	14	14	11	14	12	13	12	12	14	14	9	14	9	12.2	14.5	
15-Dec-07	8	7	7	7	7	6	5	5	5	6	9	16	22	29	29	28	26	23	20	21	19	18	20	19	15.0	28.9	
16-Dec-07	19	19	19	19	19	19	17	18	16	18	19	16	20	18	17	14	18	17	12	9	14	9	15	15	16.5	19.9	
17-Dec-07	12	9	6	9	10	6	5	7	7	9	11	9	16	16	21	21	21	17	13	17	17	12	24	23	13.2	24.3	
18-Dec-07	19	18	18	16	17	14	10	19	15	17	14	15	16	12	9	7	10	14	10	15	18	30	26	31	16.2	31.2	
19-Dec-07	28	29	32	30	29	26	18	12	21	12	19	27	26	23	22	23	20	19	22	22	22	22	25	22	22.9	31.9	
20-Dec-07	19	17	18	16	18	16	17	14	14	17	13	13	12	12	13	13	11	10	9	6	8	29	26	16	14.8	29.1	
21-Dec-07	10	8	8	7	15	18	11	5	7	10	14	14	18	14	12	8	8	9	10	9	8	6	8	10	10.2	18.4	
22-Dec-07	9	9	9	7	6	6	7	7	6	6	3	4	5	4	6	7	8	7	8	21	23	18	25	26	9.9	26.0	
23-Dec-07	18	20	22	17	14	14	12	10	10	14	16	17	16	12	15	17	9	20	21	26	24	27	26	25	17.7	27.4	
24-Dec-07	25	21	16	13	13	13	13	13	10	8	9	12	8	8	11	13	11	10	13	8	11	15	15	12	12.6	24.8	
25-Dec-07	11	9	10	7	7	14	12	8	8	8	8	8	10	10	11	12	9	7	6	6	5	9	6	4	8.6	14.0	
26-Dec-07	5	8	6	11	6	9	8	11	16	19	23	22	15	13	13	12	10	7	6	9	10	8	9	10	11.0	23.2	
27-Dec-07	8	12	10	10	6	8	7	7	8	8	7	5	3	4	3	5	7	9	10	11	13	9	12	12	8.0	13.1	
28-Dec-07	8	10	11	10	6	6	7	4	4	4	6	5	5	14	10	12	13	6	6	5	4	5	8	5	7.3	14.1	
29-Dec-07	7	7	5	6	4	6	6	4	3	5	5	6	8	6	8	8	7	4	7	6	7	7	7	10	6.2	9.9	
30-Dec-07	13	16	17	11	12	13	12	11	6	4	7	8	9	10	11	11	6	9	7	6	6	5	7	8	9.3	17.5	
31-Dec-07	7	6	8	8	7	7	8	7	7	7	8	9	9	10	9	9	7	8	8	12	14	12	10	9	8.5	13.5	
1-hr Average	11.3	11.0	11.6	10.8	10.5	10.3	9.7	9.4	9.2	9.6	11.0	12.0	12.4	11.9	11.6	11.2	10.6	10.5	10.3	11.1	11.7	12.2	13.8	13.1			
Hourly Max	28.0	29.3	31.9	30.2	28.6	25.8	18.1	18.9	21.2	19.1	23.2	26.8	26.4	28.9	28.7	27.8	25.8	22.6	21.7	25.9	24.2	30.0	26.3	31.2			





# PAS - Crescent Heights Vector Wind Speed Monthly Summary

Station: Crescent Heights  
 Station Owner: PAS

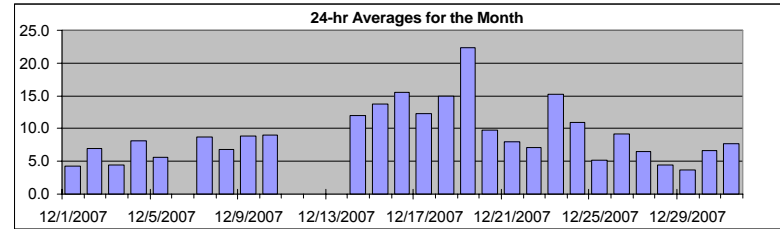
## HOURLY AVERAGE TABLE

## Wind Speed (WSv)

Monitoring Dates: December 1, 2007 to January 1, 2008

### Summary

Maximum 1-hr Average:	31.8	km/hr	19-Dec	2:00 3:00
Maximum 24-hr Value:	22.4	km/hr	19-Dec	



Calm Time:	0 hrs	0% calms	Operational Time:	676 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	90.9%				
Percentile	99	95	75	50	25	5	1	AverageV
	28.6	22.3	13.2	9.4	6.8	3.3	1.7	40.3 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 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		
1-Dec-07	2	2	3	3	3	7	4	4	3	1	3	5	8	8	6	6	7	7	5	7	8	8	8	7	7	4.3	8.4
2-Dec-07	3	5	6	5	5	6	8	7	7	7	11	12	11	12	8	10	11	12	11	8	8	5	7	11	11	6.9	12.2
3-Dec-07	9	8	11	11	12	11	12	12	8	6	6	7	7	4	3	3	4	9	10	11	10	7	13	8	8	4.5	12.8
4-Dec-07	4	7	8	5	7	7	8	12	11	9	14	13	11	12	12	12	12	12	13	12	11	9	10	8	8	8.2	14.3
5-Dec-07	8	8	8	7	6	6	7	6	8	9	8	9	9	10	10	10	8	9	P	P	P	P	P	P	P	5.6	10.0
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	7	6	7	7	7	9	9	8	8	N	8.9
7-Dec-07	7	5	13	11	8	4	8	8	10	13	13	16	14	12	11	11	9	8	8	5	6	6	6	6	6	8.8	15.6
8-Dec-07	8	4	4	4	6	5	3	5	4	5	6	11	13	10	9	7	7	7	6	7	9	12	15	15	15	6.8	15.2
9-Dec-07	8	10	16	21	22	13	15	15	11	10	10	6	5	6	5	1	3	6	9	11	5	7	8	11	11	8.9	21.5
10-Dec-07	9	5	8	9	9	9	10	9	11	13	16	19	15	13	12	11	10	8	7	8	8	8	11	9	9	9.0	18.5
11-Dec-07	11	8	9	7	7	2	5	9	8	10	11	15	16	P	P	P	P	P	P	P	P	P	P	P	P	N	16.4
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	0.0
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	14	14	10	7	12	10	8	10	17	19	17	17	N	19.4
14-Dec-07	12	9	12	12	12	11	13	12	13	13	14	14	14	10	13	12	13	12	12	14	13	8	13	9	9	12.0	14.2
15-Dec-07	8	5	7	6	7	5	4	3	5	6	9	15	21	29	29	28	26	23	20	21	19	17	20	19	19	13.7	28.8
16-Dec-07	19	19	19	19	19	19	17	18	16	18	19	14	20	17	17	14	17	16	11	7	14	8	15	14	14	15.6	19.6
17-Dec-07	12	7	5	7	8	4	2	7	7	9	11	8	15	16	21	21	21	17	12	17	16	12	24	22	22	12.3	24.1
18-Dec-07	19	18	18	15	17	12	10	19	14	16	14	14	16	12	9	7	10	13	10	14	18	30	26	31	31	14.9	31.1
19-Dec-07	28	29	32	30	29	26	17	11	21	11	19	27	26	23	22	23	20	19	22	22	22	25	22	22	22	22.4	31.8
20-Dec-07	19	17	18	16	18	16	17	14	14	17	12	13	11	12	12	13	11	10	9	3	5	29	26	16	16	9.7	28.9
21-Dec-07	10	6	7	7	15	18	11	3	7	9	13	14	18	14	12	7	8	9	10	9	7	3	7	10	10	8.0	18.3
22-Dec-07	9	8	8	7	6	5	7	7	4	5	2	4	5	3	6	7	8	5	8	21	23	18	24	26	26	7.0	25.8
23-Dec-07	18	20	22	17	14	14	12	9	10	14	16	17	16	10	14	17	9	20	21	26	24	27	26	25	25	15.2	27.3
24-Dec-07	25	21	16	13	13	12	12	10	7	6	12	7	8	11	13	11	9	13	6	11	14	15	12	12	12	11.0	24.7
25-Dec-07	11	9	10	7	6	14	12	8	8	7	8	7	10	10	10	11	9	5	6	4	2	9	6	1	1	5.2	13.9
26-Dec-07	5	7	5	11	4	9	8	11	15	19	23	22	15	12	12	11	9	6	6	9	10	8	8	10	10	9.2	23.1
27-Dec-07	8	12	10	9	6	8	6	7	8	8	7	3	2	3	2	4	6	8	9	11	13	8	11	12	12	6.5	12.6
28-Dec-07	8	9	11	9	6	6	7	2	2	2	6	5	4	14	10	12	12	5	4	5	3	3	8	2	2	4.4	13.8
29-Dec-07	6	6	4	6	4	5	5	1	2	3	2	5	7	5	8	6	7	2	6	5	7	7	6	9	9	3.7	8.8
30-Dec-07	12	16	17	11	12	13	11	10	4	0	4	8	9	10	11	11	6	9	6	5	5	4	6	7	7	6.7	17.2
31-Dec-07	7	6	8	7	7	7	7	7	7	7	7	8	9	10	9	8	7	8	8	12	13	12	10	9	9	7.7	13.5
1-hr Vector	8.8	8.4	8.5	7.6	6.7	6.0	5.9	6.7	6.6	6.5	7.3	7.2	8.1	7.4	7.1	6.6	6.1	6.5	5.8	6.8	7.4	7.1	8.8	9.0	9.0		
Hourly Max	27.9	29.2	31.8	30.1	28.6	25.6	17.3	18.8	20.9	19.0	23.1	26.6	26.3	28.8	28.5	27.7	25.6	22.6	21.6	25.8	24.1	29.8	26.1	31.1	31.1		



# PAS - Crescent Heights Wind Direction Monthly Summary

Station: Crescent Heights  
Station Owner: PAS

## HOURLY AVERAGE TABLE

Wind Direction (WD)

Monitoring Dates: December 1, 2007 to January 1, 2008

### Summary


Calm Time:	0 hrs	0% calms	Operational Time:	676 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	90.9%				
Percentile	99	95	75	50	25	5	1	Average
	344.4	325.5	259.3	229.9	199.0	50.3	8.9	238 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	23:00 0:00			
1-Dec-07	14	90	50	88	86	119	352	4	68	84	110	65	8	36	21	67	92	114	109	98	113	115	123	118	80	E	
2-Dec-07	97	99	109	96	109	85	64	51	50	31	3	0	1	11	40	15	38	54	53	59	65	58	341	348	40	NE	
3-Dec-07	340	282	273	253	257	254	261	264	270	271	273	272	304	298	272	192	84	19	61	76	104	13	332	333	294	WNW	
4-Dec-07	277	322	340	334	353	336	328	322	336	15	12	17	9	30	37	42	35	50	55	74	83	56	51	65	21	NNE	
5-Dec-07	65	79	74	49	24	22	3	335	328	325	311	311	312	321	316	316	303	276	P	P	P	P	P	P	340	NNW	
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	331	259	250	P	P	230	222	222	227	221	N	-
7-Dec-07	198	160	229	239	251	232	204	213	230	230	225	228	233	222	227	230	236	247	234	191	182	189	181	188	222	SW	
8-Dec-07	224	183	129	116	138	197	135	145	177	176	218	216	236	228	232	229	240	245	228	236	238	223	230	210	214	SW	
9-Dec-07	239	235	239	236	233	249	246	243	240	220	209	187	168	177	131	50	61	221	218	228	238	238	233	219	228	SW	
10-Dec-07	238	250	297	275	294	308	315	301	290	309	332	332	325	316	317	317	309	304	259	258	217	226	248	296	WNW		
11-Dec-07	235	227	212	194	141	174	193	221	244	218	220	222	226	P	P	P	P	P	P	P	P	P	P	P	N	-	
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	N	-	
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	225	221	229	237	232	239	255	240	234	229	236	226	N	-	
14-Dec-07	228	214	236	225	227	220	225	228	231	230	232	225	231	244	225	240	239	241	237	235	232	216	221	193	229	SW	
15-Dec-07	206	171	139	148	187	164	182	210	203	202	185	203	201	208	209	212	215	222	225	225	232	248	255	255	215	SW	
16-Dec-07	260	262	264	260	263	265	259	263	261	265	268	246	229	225	213	218	227	237	269	263	226	278	225	229	249	WSW	
17-Dec-07	238	241	180	213	198	143	268	252	228	220	223	233	216	221	210	211	221	234	264	251	251	264	233	234	229	SW	
18-Dec-07	240	242	243	239	234	248	244	227	239	230	225	240	224	224	213	182	175	178	191	173	183	196	198	209	217	SW	
19-Dec-07	211	211	212	212	211	213	235	275	237	259	222	216	212	208	211	218	221	223	221	223	215	212	211	213	218	SW	
20-Dec-07	223	227	222	221	223	222	233	226	229	218	234	228	245	248	248	237	234	243	243	268	12	354	358	357	247	WSW	
21-Dec-07	343	316	272	288	325	324	338	246	216	231	237	243	236	237	233	261	260	255	246	249	234	241	212	246	261	W	
22-Dec-07	232	237	228	190	189	165	130	146	147	113	103	117	108	89	104	93	112	141	182	194	196	199	219	236	186	S	
23-Dec-07	244	263	272	292	280	277	269	257	250	263	266	265	273	234	207	208	201	203	197	206	209	212	217	219	237	WSW	
24-Dec-07	224	234	235	235	241	276	283	288	250	249	307	342	268	237	238	238	236	237	240	189	254	275	280	278	253	WSW	
25-Dec-07	266	266	260	241	309	322	320	280	253	239	233	227	219	212	204	208	227	165	133	169	163	146	138	93	234	SW	
26-Dec-07	258	203	219	227	194	219	207	209	211	216	217	218	237	258	268	264	269	255	272	321	316	310	265	277	240	WSW	
27-Dec-07	262	275	276	289	288	310	268	254	271	272	259	256	41	71	83	228	239	249	243	240	230	200	236	226	255	WSW	
28-Dec-07	222	251	212	203	187	154	152	150	118	73	155	138	212	214	256	243	242	210	172	129	93	223	349	49	203	SSW	
29-Dec-07	200	251	259	333	336	270	243	264	4	288	253	305	312	291	231	269	326	206	132	176	187	195	173	221	250	WSW	
30-Dec-07	221	226	230	232	235	240	244	243	268	265	282	331	332	320	331	337	336	326	324	339	325	303	281	266	275	W	
31-Dec-07	243	251	281	295	290	300	306	279	281	267	258	272	275	261	276	250	243	244	232	234	229	230	224	208	256	WSW	
Hourly Avg	237	239	239	239	241	251	257	251	247	245	246	248	245	240	234	237	236	232	228	219	218	228	234	233			



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

Station: Crescent Heights  
Station Owner: PAS

## HOURLY AVERAGE TABLE

Wind Direction (WD)

Monitoring Dates: December 1, 2007 to January 1, 2008

### Summary


Determined by the Yamartino 15-min interval calculation

Calm Time:	0 hrs	0% calms	Operational Time:	676 hrs			
Calibration Time:	0 hrs		AMD Operational Uptime:	90.9%			
Percentile	99	95	75	50	25	5	1
	77.4	58.6	22.4	13.1	8.5	5.3	4.2

### 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

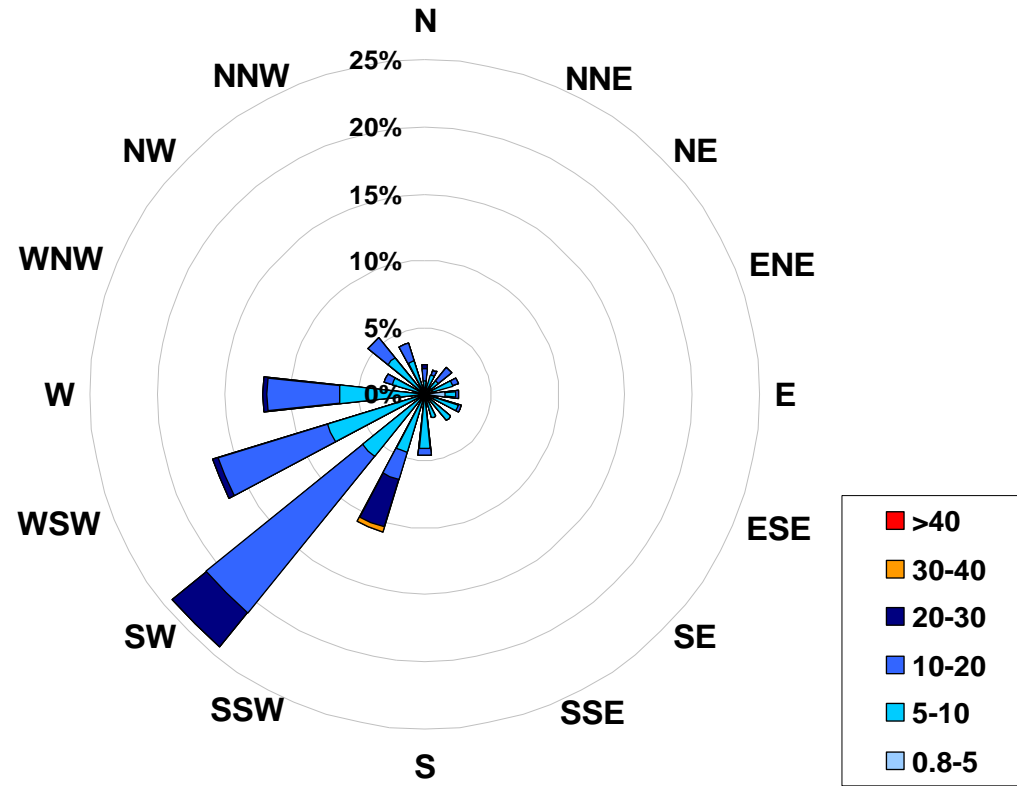
### Day Mountain Standard Time

Hour Start	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	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-Dec-07	67	59	41	35	35	19	32	12	29	66	49	24	14	17	18	17	9	10	15	10	6	11	7	10	10	67.2	
2-Dec-07	33	18	11	27	31	23	13	23	24	15	13	6	9	11	12	11	19	6	6	15	16	22	38	7	7	37.7	
3-Dec-07	16	24	14	15	11	12	11	10	14	34	27	33	30	59	58	71	45	15	10	10	16	25	9	17	17	70.8	
4-Dec-07	54	33	10	26	16	34	13	8	14	12	7	9	7	14	12	9	7	11	9	11	13	17	11	20	20	53.5	
5-Dec-07	15	14	9	14	20	14	15	16	10	11	14	18	16	14	13	9	16	10	P	P	P	P	P	P	P	20.5	
6-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	15	20	32	14	15	15	6	13	14	14	32.0	
7-Dec-07	15	25	15	11	8	59	11	7	6	7	10	7	6	10	10	9	8	12	16	36	12	23	11	10	10	59.0	
8-Dec-07	9	48	29	15	15	15	59	28	49	18	31	33	6	11	15	21	25	23	38	45	15	12	8	6	6	59.4	
9-Dec-07	25	15	6	5	6	12	10	9	11	15	11	27	40	24	33	85	49	71	18	16	59	26	18	7	7	84.7	
10-Dec-07	16	54	24	17	10	10	8	13	11	12	7	7	8	7	10	9	9	15	32	12	14	16	6	13	13	54.0	
11-Dec-07	11	45	14	23	16	73	59	33	16	7	13	10	14	P	P	P	P	P	P	P	P	P	P	P	P	72.8	
12-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0.0
13-Dec-07	P	P	P	P	P	P	P	P	P	P	P	P	8	11	22	29	9	12	11	10	6	5	8	8	8	29.3	
14-Dec-07	8	14	11	9	14	14	6	8	6	8	9	11	13	20	15	7	6	10	8	7	15	20	33	10	10	32.7	
15-Dec-07	31	42	13	24	23	33	48	71	29	50	9	21	7	6	6	5	6	4	5	6	8	12	5	5	5	70.9	
16-Dec-07	5	6	5	6	6	6	5	5	6	5	5	26	11	13	7	7	9	17	23	38	12	25	9	27	27	38.2	
17-Dec-07	16	53	55	45	35	58	84	22	15	11	9	28	18	13	6	5	7	8	13	7	10	14	8	6	6	84.5	
18-Dec-07	6	5	4	8	5	33	23	8	11	9	13	12	10	9	11	13	13	11	30	10	8	6	7	6	6	33.0	
19-Dec-07	5	4	4	4	4	6	21	14	9	19	14	8	4	6	6	5	5	4	5	7	5	5	4	4	4	20.5	
20-Dec-07	6	7	8	6	8	4	5	13	5	10	15	8	26	14	10	12	6	7	14	70	74	6	7	11	11	74.5	
21-Dec-07	13	42	28	13	12	5	9	60	11	14	6	8	7	9	17	38	18	12	6	8	29	77	33	7	7	76.8	
22-Dec-07	8	9	13	15	15	17	12	17	50	12	62	35	32	51	16	17	9	40	19	5	5	8	6	7	7	62.1	
23-Dec-07	8	6	7	10	8	6	11	10	16	15	6	7	6	33	10	6	27	6	6	6	6	5	6	5	5	33.4	
24-Dec-07	5	7	7	13	12	13	20	20	11	20	81	14	31	27	16	7	10	20	10	42	15	7	6	6	6	81.4	
25-Dec-07	11	12	12	18	47	7	9	12	12	21	21	16	12	15	17	11	12	53	20	50	79	13	40	67	67	79.2	
26-Dec-07	31	14	65	8	76	13	24	10	8	6	5	6	12	15	11	13	13	20	23	9	7	14	15	8	8	76.1	
27-Dec-07	12	6	12	8	22	12	23	16	11	12	19	57	56	36	48	47	12	10	12	10	19	20	19	9	9	57.0	
28-Dec-07	18	32	13	20	26	21	18	67	67	63	30	35	65	15	18	13	10	63	44	19	41	60	13	61	61	67.4	
29-Dec-07	18	25	45	19	29	36	44	77	55	58	80	34	21	40	20	34	29	83	21	35	22	16	22	28	28	83.0	
30-Dec-07	17	11	10	9	13	10	9	8	58	86	55	14	13	18	11	8	11	8	24	22	19	45	28	23	23	86.1	
31-Dec-07	25	36	11	15	14	16	18	15	11	18	23	13	12	15	14	21	16	8	10	6	6	5	6	11	11	35.6	

Hourly Max	67	59	65	45	76	73	84	77	67	86	81	57	65	59	58	85	49	83	44	70	79	77	40	67	67
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**1-hr Average Wind Rose (in km/hr) Located at the Crescent Heights Site  
for December 2007**



**Calms: 0%**

Frequency Distribution of Wind in km/hr Range			Frequency (hrs)
0.8	<	5	43
5	to	10	312
10	to	20	264
20	to	30	54
30	to	40	3
	>	40	0
Total Non-Zero Values			676



# **PAS – Portable-Brooks**

Monthly Summary Tables, Graphs and Roses



# PAS – Portable-Brooks Sulphur Dioxide Monthly Summary

Station: Portable-Brooks  
 Station Owner: PAS

## HOURLY AVERAGE TABLE

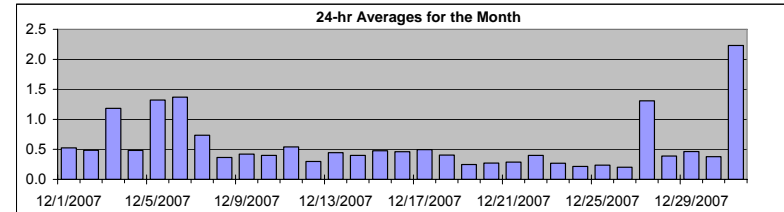
## Sulphur Dioxide (SO<sub>2</sub>)

Monitoring Dates: December 1, 2007 to January 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:	7.8 ppb	31-Dec	11:00	12:00
Maximum 24-hr Average:	2.2 ppb	31-Dec		



AIC Time:	32 hrs	Operational Time:	705 hrs						
Calibration Time:	7 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	4.1	1.6	0.6	0.4	0.2	0.1	0.0	0.6 ppb	0.4 ppb

**Status Flag Characters**

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

**Day Mountain Standard Time**

Day	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	
1-Dec-07	1:00	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	A	1	1	0	0	0	0	0	1	0.5	0.9	
2-Dec-07	1:00	1	1	0	2	1	1	1	0	0	0	0	1	0	0	A	0	0	0	1	1	0	0	0	0	0.5	1.8	
3-Dec-07	1:00	0	0	0	0	1	1	1	1	3	3	3	2	2	A	1	1	1	2	1	1	1	1	1	1	1.2	3.3	
4-Dec-07	1:00	1	1	1	1	1	0	0	1	0	0	1	0	A	0	0	C	C	C	C	0	0	0	0	0	0.5	0.9	
5-Dec-07	1:00	0	A	0	0	0	0	0	0	0	0	0	0	1	1	6	6	3	2	2	2	2	2	1	1	1.3	6.3	
6-Dec-07	1:00	1	A	1	1	2	2	2	2	1	1	1	2	2	2	2	2	1	1	2	1	1	1	1	1	1.4	2.0	
7-Dec-07	1:00	A	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	A	0.7	1.4	
8-Dec-07	1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1	A	0	0.4	0.9
9-Dec-07	1:00	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	1	1	0	1	1	0	A	1	1	0.4	0.9	
10-Dec-07	1:00	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	A	0	0	0	0.4	0.8	
11-Dec-07	1:00	0	0	0	0	0	0	1	0	0	0	1	1	2	1	1	1	1	1	1	A	0	0	1	0	0.5	1.7	
12-Dec-07	1:00	0	1	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	A	0	0	0	0	0	0.3	0.9	
13-Dec-07	1:00	0	0	1	1	1	1	1	1	1	1	1	0	1	0	1	1	0	A	0	0	0	0	0	0	0.4	0.9	
14-Dec-07	1:00	0	0	0	0	1	1	0	0	0	0	0	1	1	1	1	1	A	0	0	0	0	0	0	1	0.4	0.7	
15-Dec-07	1:00	1	1	1	1	0	0	0	1	1	1	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0.5	1.0	
16-Dec-07	1:00	1	1	0	1	0	0	1	1	1	1	1	0	0	0	A	0	0	0	1	1	1	1	1	1	0.5	0.9	
17-Dec-07	1:00	1	1	1	1	1	1	1	1	1	1	2	C	C	C	0	0	0	0	0	0	0	0	0	0	0.5	1.5	
18-Dec-07	1:00	0	A	1	0	0	0	0	0	1	1	1	1	0	0	0	1	1	0	0	0	0	0	0	0	0.4	0.8	
19-Dec-07	1:00	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	
20-Dec-07	1:00	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	A	0.3	1.0
21-Dec-07	1:00	0	0	0	1	1	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	A	0	0.3	1.0
22-Dec-07	1:00	0	0	0	0	0	0	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	1	A	0	0	0.4	1.7
23-Dec-07	1:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0.3	0.5	
24-Dec-07	1:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0.2	0.6	
25-Dec-07	1:00	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0.2	0.7	
26-Dec-07	1:00	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	0.3	
27-Dec-07	1:00	0	0	1	1	1	1	3	5	5	4	2	2	1	1	1	1	1	0	1	1	1	0	A	0	1.3	5.4	
28-Dec-07	1:00	0	1	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	1	A	1	0	0.4	1.0	
29-Dec-07	1:00	0	0	0	0	1	0	0	1	1	0	1	1	1	1	1	0	0	0	1	0	A	0	1	0	0.5	1.2	
30-Dec-07	1:00	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	A	1	1	1	1	0.4	0.9	
31-Dec-07	1:00	1	1	2	1	1	1	2	1	2	2	4	8	7	3	6	3	2	1	A	1	1	1	1	1	2.2	7.8	

Hourly Avg	0.4	0.4	0.4	0.5	0.4	0.4	0.5	0.7	0.7	0.7	0.7	0.8	0.9	0.6	0.9	0.8	0.5	0.5	0.6	0.5	0.5	0.4	0.4	0.4			
Hourly Max	1.1	1.0	1.6	1.8	1.6	1.5	2.7	4.6	5.4	4.1	4.1	7.8	7.4	3.2	6.3	6.0	2.5	2.1	2.0	1.7	2.0	1.7	0.9	0.9			

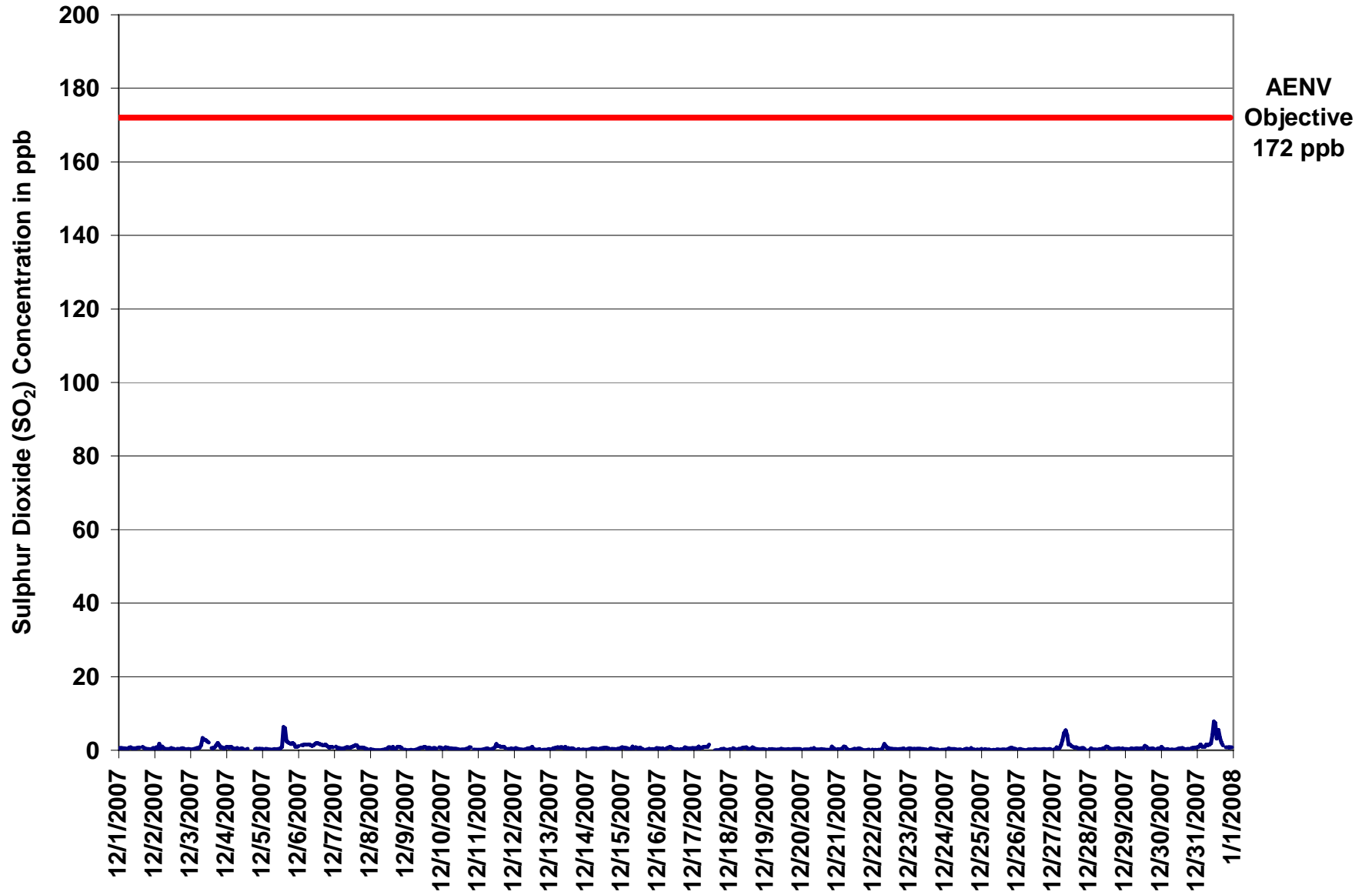


Figure 16. PAS – Brooks Sulphur Dioxide 1-hr Average Monthly Trend



Station: Portable-Brooks  
 Station Owner: PAS

**INSTANTANEOUS (30 Second) MAXIMUM TABLE**

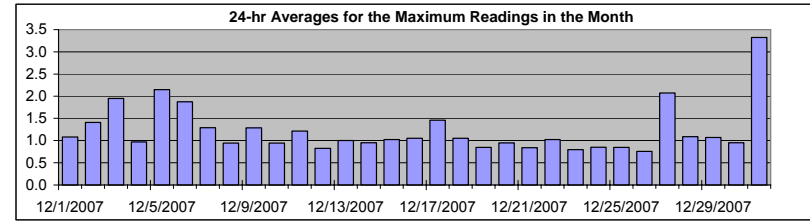
**Sulphur Dioxide (SO<sub>2</sub>)**

Monitoring Dates: December 1, 2007 to January 1, 2008

**Summary**

Maximum 1-hr Value:	11.2	ppb	5-Dec	14:00 15:00
Maximum 24-hr Value:	3.3	ppb	31-Dec	

AIC Time:	32 hrs	Operational Time:	705 hrs						
Calibration Time:	7 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	6.5	2.5	1.3	0.9	0.8	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-Dec-07	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.1	1.4
2-Dec-07	1	2	1	7	1	2	1	1	1	1	1	3	1	1	A	1	1	1	2	1	1	1	1	1	1.4	7.4
3-Dec-07	1	1	1	1	1	1	1	2	5	4	4	3	3	A	2	1	1	2	6	3	1	2	1	1	2.0	5.6
4-Dec-07	1	1	1	2	1	1	1	1	1	1	1	1	1	A	1	1	C	C	C	C	1	1	1	1	1.0	1.5
5-Dec-07	1	A	1	1	1	1	1	1	1	1	1	1	1	2	11	9	3	3	2	3	2	2	1	2	2.1	11.2
6-Dec-07	2	A	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1.9	2.4
7-Dec-07	A	2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	1	1	A	1.3	2.1
8-Dec-07	1	1	1	1	1	1	1	0	1	1	1	1	2	2	1	2	1	1	2	2	2	1	A	1	0.9	1.8
9-Dec-07	1	1	1	1	1	1	1	1	1	2	1	2	2	1	1	4	1	1	1	1	1	A	3	3	1.3	4.2
10-Dec-07	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	1.4
11-Dec-07	1	1	1	1	1	1	1	1	1	1	1	1	3	2	2	1	3	3	1	A	1	1	1	1	1.2	3.0
12-Dec-07	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	A	1	1	1	1	1	0.8	2.0
13-Dec-07	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	A	1	1	1	1	1	1	1.0	1.7
14-Dec-07	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	2	1.0	1.6
15-Dec-07	2	1	1	1	1	1	1	2	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1.0	1.6
16-Dec-07	1	1	1	1	1	1	1	2	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.1	1.9
17-Dec-07	1	1	1	2	1	1	2	2	1	2	8	C	C	C	1	1	1	1	2	2	1	1	1	1	1.5	8.4
18-Dec-07	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1.1	2.4
19-Dec-07	1	A	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.9
20-Dec-07	A	1	1	1	1	1	3	1	1	1	1	1	1	2	1	1	1	1	1	1	2	1	1	A	1.0	2.8
21-Dec-07	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	A	1	0.8	1.5
22-Dec-07	0	1	1	1	1	1	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	A	1	1	1.0	2.4
23-Dec-07	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	0.8	1.1
24-Dec-07	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	0.9	1.6
25-Dec-07	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	0.8	1.7
26-Dec-07	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	1.0
27-Dec-07	1	1	1	1	1	3	4	6	6	7	2	2	2	1	1	1	1	1	1	1	1	1	A	1	2.1	6.7
28-Dec-07	1	1	1	1	1	1	1	1	1	1	1	3	2	3	1	1	1	1	1	1	1	A	1	1	1.1	2.7
29-Dec-07	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	A	1	1	1	1.1	2.4
30-Dec-07	2	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1.0	2.4
31-Dec-07	1	2	2	2	2	2	2	3	2	3	6	11	10	5	7	5	3	2	A	1	1	2	1	2	3.3	11.1
Hourly Avg	1.0	1.0	1.0	1.2	1.0	1.0	1.2	1.2	1.3	1.4	1.6	1.6	1.6	1.4	1.7	1.6	1.1	1.2	1.3	1.1	1.1	1.0	1.0	1.0		
Hourly Max	2.4	1.8	2.2	7.4	2.2	2.7	3.9	6.1	6.2	6.7	8.4	11.1	9.9	5.1	11.2	8.5	3.1	3.0	5.6	2.7	2.4	2.4	2.7	2.7		



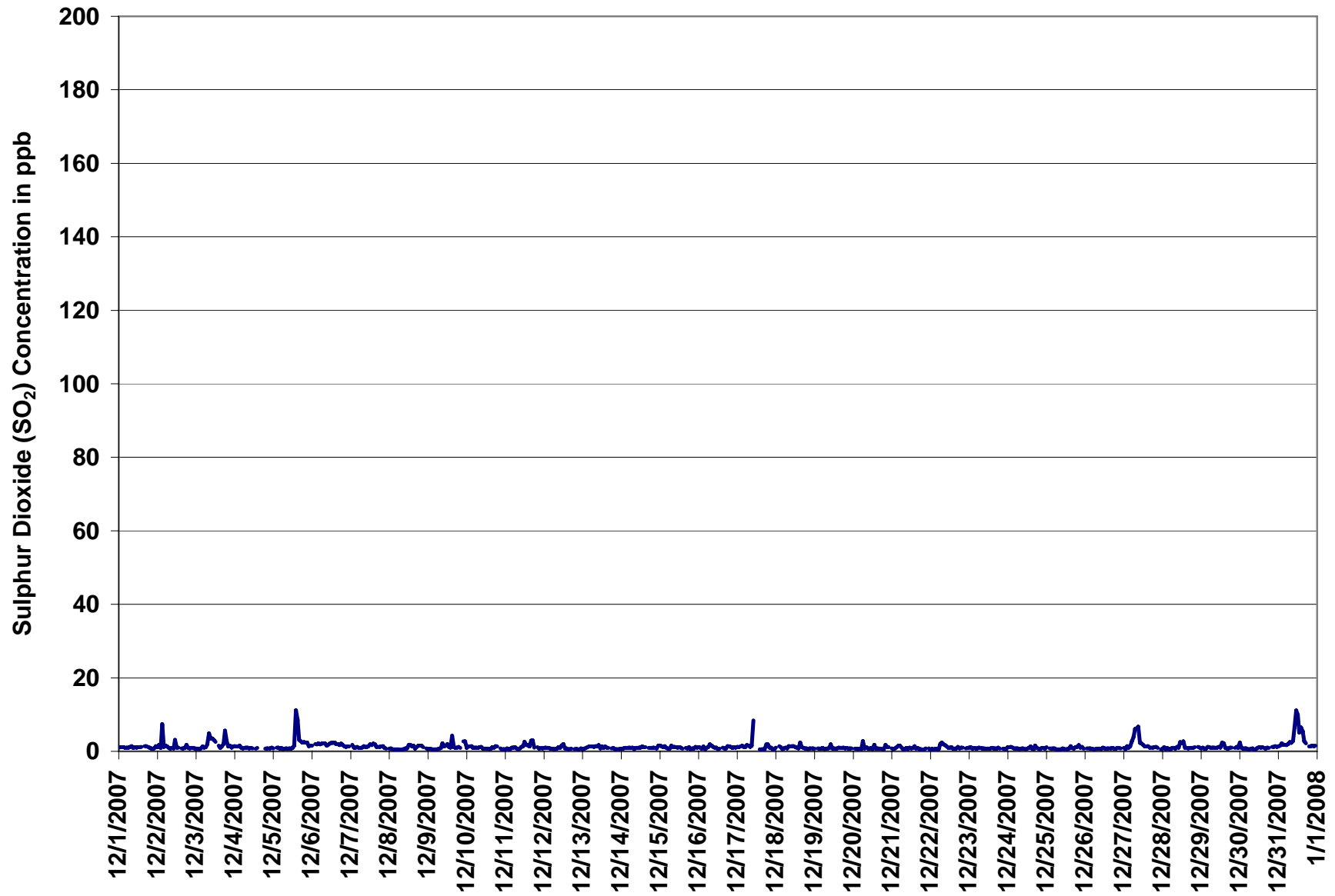
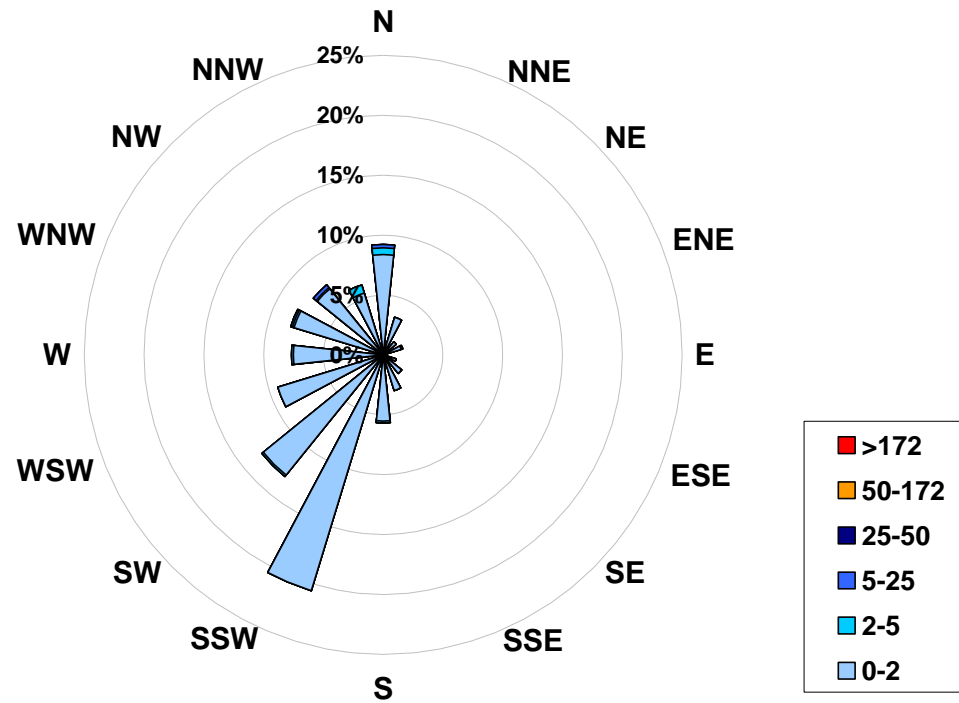


Figure 17. PAS – Brooks Sulphur Dioxide Instantaneous (30 Second) Maximum Value Monthly Trend



**1-hr Average Concentration Rose for Sulphur Dioxide (in ppb) Located at the Portable-Brooks Site for December 2007**



**Calms: 0%**

Frequency Distribution of SO <sub>2</sub> in ppb		
Range	Frequency (hrs)	
0.0 < 2	682	
2 to 5	14	
5 to 25	6	
25 to 50	0	
50 to 172	0	
> 172	0	
Total Non-Zero Values		705



### PAS – Brooks Ozone Monthly Summary

Station: Portable-Brooks  
 Station Owner: PAS

#### HOURLY AVERAGE TABLE

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

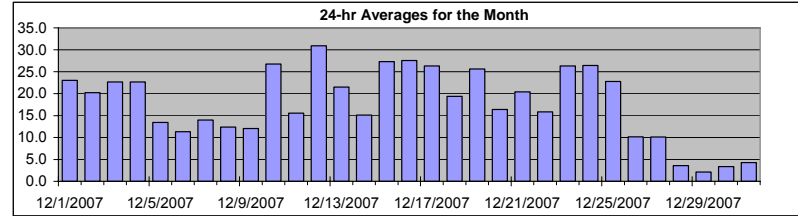
Monitoring Dates: December 1, 2007 to January 1, 2008

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

**Summary**

Number of 1-hr Exceedances:	0		
Maximum 1-hr Average:	39.9 ppb	10-Dec	14:00 15:00
Maximum 24-hr Average:	30.9 ppb	12-Dec	

AIC Time:	33 hrs	Operational Time:	705 hrs						
Calibration Time:	6 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	37.4	31.8	25.7	20.2	9.3	0.0	0.0	17.7 ppb	20.2 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	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-Dec-07	27	21	21	23	25	25	18	26	27	27	27	27	28	27	26	A	16	19	20	24	24	22	13	17	23.0	27.9	
2-Dec-07	18	16	10	16	21	23	23	13	13	21	24	24	24	25	A	21	22	21	22	23	21	22	18	24	20.2	25.0	
3-Dec-07	23	26	27	26	26	26	27	26	25	26	26	26	26	A	24	23	22	23	19	16	15	11	16	17	22.7	26.7	
4-Dec-07	22	22	20	20	20	22	25	25	24	24	25	27	A	27	26	C	C	C	15	22	23	20	22	22	22.7	26.8	
5-Dec-07	21	A	19	18	16	9	15	5	2	9	17	18	20	19	16	16	17	14	14	12	16	8	6	1	13.4	21.1	
6-Dec-07	1	A	12	9	10	5	3	0	3	11	22	27	30	34	34	30	10	3	0	0	4	7	1	5	11.3	33.9	
7-Dec-07	A	16	11	6	18	18	15	11	12	12	19	21	24	24	23	22	8	4	12	7	8	10	9	A	14.0	24.0	
8-Dec-07	12	16	12	8	8	12	3	7	9	14	17	22	24	23	23	19	9	12	8	10	9	4	A	7	12.4	23.7	
9-Dec-07	6	12	11	10	13	12	13	13	12	11	17	19	23	23	17	13	11	5	7	3	1	A	12	14	12.1	23.4	
10-Dec-07	20	23	21	32	34	32	26	29	31	34	36	36	38	39	40	38	28	9	0	9	A	21	23	20	26.8	39.9	
11-Dec-07	19	16	14	11	12	14	11	15	15	13	25	28	29	30	27	23	5	8	6	A	1	7	10	18	15.5	29.6	
12-Dec-07	26	36	39	40	39	38	36	28	27	29	31	34	32	31	29	30	29	26	A	30	27	22	25	30	30.9	39.7	
13-Dec-07	30	29	28	29	28	26	20	11	12	20	24	27	27	25	26	26	A	A	20	16	12	14	9	11	21.5	30.1	
14-Dec-07	15	12	8	14	17	19	18	18	10	11	14	21	23	20	21	13	A	7	10	13	15	14	15	19	15.1	22.5	
15-Dec-07	20	23	24	23	23	24	19	21	23	24	27	30	30	34	35	A	32	32	32	31	31	31	30	29	27.3	35.0	
16-Dec-07	28	28	28	28	29	29	27	28	29	27	31	32	32	32	A	27	24	25	26	25	26	24	25	26	27.6	32.2	
17-Dec-07	26	26	27	25	26	27	26	24	26	28	30	30	33	35	C	C	C	7	19	26	28	27	29	28	26.3	35.4	
18-Dec-07	28	25	24	24	21	9	6	0	1	4	A	A	16	21	24	23	24	26	26	25	25	23	26	28	19.4	28.1	
19-Dec-07	29	A	29	28	26	22	18	20	24	25	26	31	35	34	32	31	25	18	9	22	31	29	24	24	25.6	34.6	
20-Dec-07	A	23	22	20	25	22	24	20	16	18	19	19	19	17	12	8	3	2	3	6	16	24	21	A	16.4	25.3	
21-Dec-07	27	28	31	32	28	25	22	28	19	20	21	26	28	30	29	26	15	7	10	10	5	4	A	2	20.4	31.6	
22-Dec-07	13	11	6	9	6	2	4	3	15	19	21	24	26	27	27	26	23	24	23	22	27	A	2	6	15.9	26.9	
23-Dec-07	4	25	23	27	24	26	18	19	22	23	26	30	28	29	29	27	27	30	30	33	A	36	35	35	26.3	35.5	
24-Dec-07	33	32	30	28	30	25	24	20	18	23	31	33	30	31	29	24	25	21	21	24	28	25	22	26	26.4	33.4	
25-Dec-07	26	A	28	28	23	27	25	20	18	17	21	22	23	22	22	22	19	21	24	24	25	23	22	22	22.8	28.3	
26-Dec-07	A	23	23	22	19	17	12	4	2	4	8	14	14	13	12	8	5	7	4	3	3	3	5	A	10.1	22.8	
27-Dec-07	2	2	4	5	4	5	8	13	12	10	10	10	11	19	28	23	13	4	11	10	7	10	A	11	10.1	27.9	
28-Dec-07	7	4	0	1	1	4	2	6	1	4	5	8	10	11	11	6	2	0	0	0	0	A	0	0	3.6	11.1	
29-Dec-07	0	0	0	0	0	0	0	0	0	3	3	7	9	9	9	7	2	0	0	0	A	0	0	0	2.1	9.4	
30-Dec-07	0	0	0	1	0	2	3	0	2	7	9	12	11	12	11	7	2	0	0	A	0	0	0	0	3.4	11.9	
31-Dec-07	0	0	1	1	0	0	0	0	0	2	5	8	12	13	13	12	4	1	A	4	7	6	7	5	4.3	12.7	
Hourly Avg	17.2	18.3	17.8	18.1	18.5	17.6	15.7	14.6	14.5	16.7	20.6	23.0	23.7	24.5	23.3	20.4	15.9	12.9	13.5	15.5	15.5	15.9	15.2	15.9			
Hourly Max	33.4	35.8	38.8	39.7	39.1	37.6	36.0	29.1	30.7	34.0	35.7	36.0	37.5	38.7	39.9	38.2	32.0	31.8	31.6	32.6	30.9	35.5	35.2	35.4			

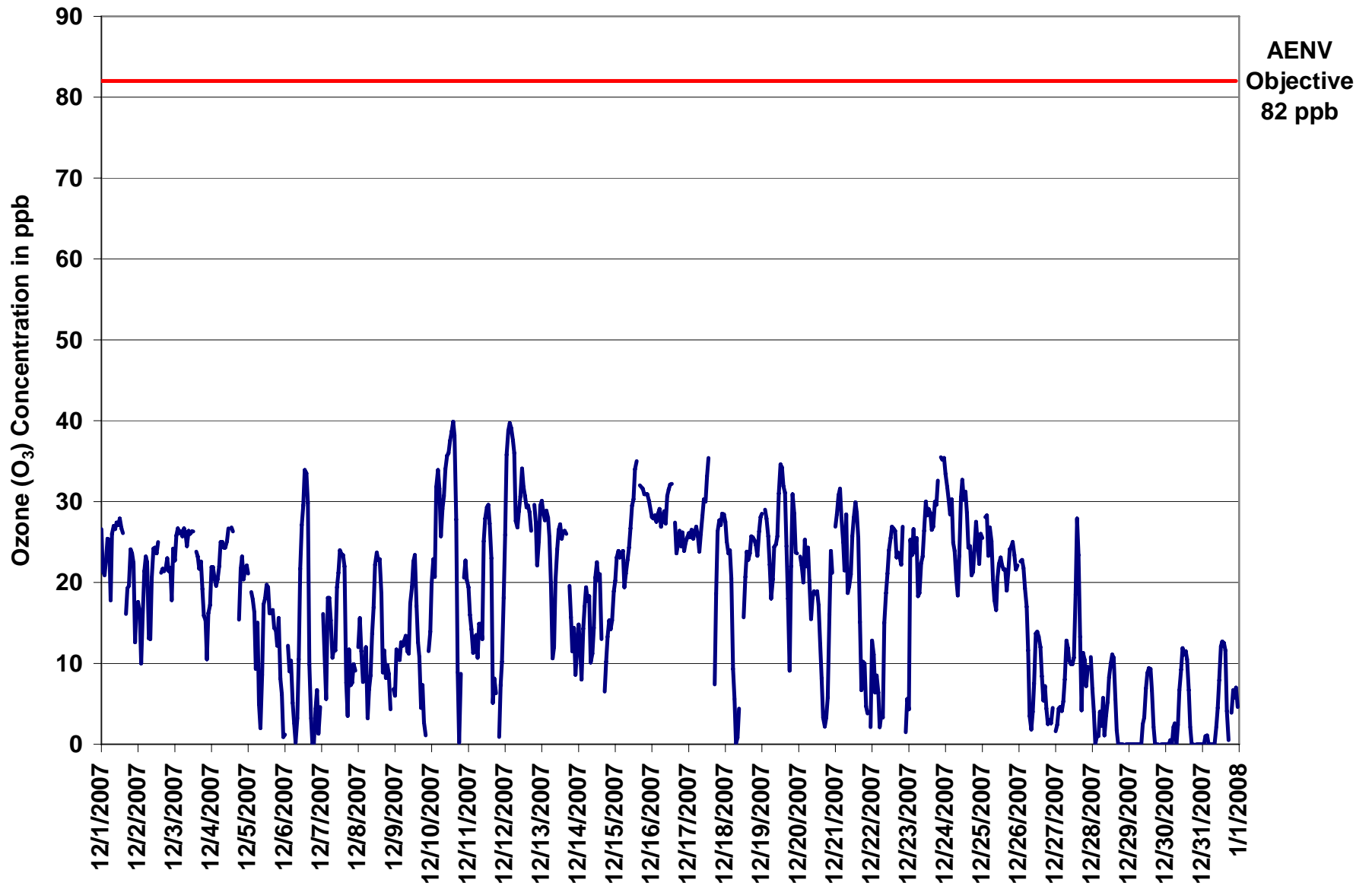


Figure 18. PAS – Brooks Ozone 1-hr Average Monthly Trend



Station: Portable-Brooks  
 Station Owner: PAS

**INSTANTANEOUS (30 Second) MAXIMUM TABLE**

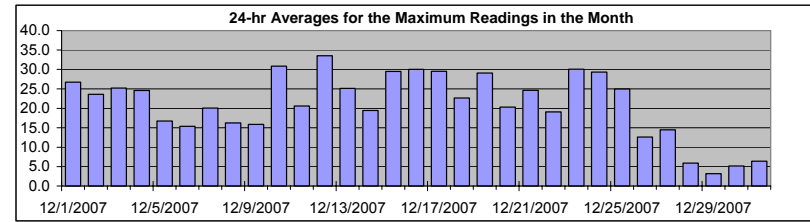
**Ozone (O<sub>3</sub>)**

Monitoring Dates: December 1, 2007 to January 1, 2008

**Summary**

Maximum 1-hr Value:	41.1	ppb	10-Dec	14:00 15:00
Maximum 24-hr Value:	33.5	ppb	12-Dec	

AIC Time:	33 hrs	Operational Time:	705 hrs						
Calibration Time:	6 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	39.3	34.7	28.1	23.4	13.8	1.3	0.4	21.0 ppb	23.4 ppb



**Status Flag Characters**

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

**Day Mountain Standard Time**

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Dec-07	29	24	22	24	29	29	23	28	30	31	29	29	30	29	28	A	22	23	24	28	28	27	25	23	26.7	30.8
2-Dec-07	21	22	15	19	24	25	28	19	20	25	26	26	27	26	A	24	24	24	23	24	25	25	26	26	23.6	27.8
3-Dec-07	25	27	28	28	28	28	28	28	27	28	27	28	28	A	25	25	24	25	23	20	21	20	20	23	25.2	28.1
4-Dec-07	25	24	22	20	22	24	26	26	25	25	27	28	A	28	28	C	C	C	19	25	25	24	23	23	24.6	28.4
5-Dec-07	23	A	22	22	21	18	19	11	7	14	19	20	21	21	21	19	19	16	15	14	17	14	9	3	16.7	22.7
6-Dec-07	4	A	14	11	13	8	8	1	8	15	28	30	34	36	35	33	25	10	1	1	12	14	6	9	15.3	35.9
7-Dec-07	A	20	19	11	23	21	19	17	20	17	22	26	27	26	26	25	16	11	23	15	19	21	19	A	20.1	26.7
8-Dec-07	16	18	16	11	13	15	10	10	13	17	21	24	26	25	25	23	16	15	13	13	14	10	A	11	16.2	26.3
9-Dec-07	12	14	13	16	17	17	16	17	14	15	21	22	26	27	19	17	17	10	12	5	3	A	16	18	15.8	27.4
10-Dec-07	25	26	27	34	35	35	31	33	32	37	37	38	38	40	41	41	35	26	4	18	A	25	27	24	30.8	41.1
11-Dec-07	22	19	18	14	16	21	19	20	18	19	28	31	32	31	31	29	15	16	19	A	6	13	15	25	20.6	31.7
12-Dec-07	31	39	40	41	41	39	39	31	31	33	33	37	34	32	31	32	31	29	A	32	29	26	29	31	33.5	41.0
13-Dec-07	32	31	29	31	30	28	24	19	15	24	26	29	29	27	30	28	28	A	26	23	18	20	13	16	25.1	32.2
14-Dec-07	18	17	15	20	19	25	24	23	16	15	19	23	25	24	23	17	A	12	14	19	20	17	19	23	19.4	24.8
15-Dec-07	23	25	26	26	26	26	25	24	25	26	32	31	32	36	37	A	34	33	33	33	32	32	31	31	29.5	36.7
16-Dec-07	30	30	31	30	30	31	30	30	31	31	34	34	34	35	A	31	27	27	28	27	28	29	27	27	30.0	34.5
17-Dec-07	28	28	28	28	29	29	29	27	29	33	39	32	35	37	C	C	C	13	28	29	30	29	30	30	29.5	39.2
18-Dec-07	29	27	25	26	26	19	17	2	2	7	A	A	22	27	26	25	28	28	28	27	27	24	28	30	22.6	29.5
19-Dec-07	30	A	30	30	27	26	22	26	26	27	27	36	36	36	33	33	30	25	19	31	33	31	25	29	29.1	36.3
20-Dec-07	A	26	25	23	29	27	27	23	21	21	21	23	20	15	14	6	8	10	14	24	26	24	A	A	20.3	29.0
21-Dec-07	30	32	33	33	30	28	29	33	23	23	25	29	30	32	31	28	24	12	15	15	10	13	A	11	24.6	33.1
22-Dec-07	16	16	13	13	14	7	7	10	20	23	23	26	27	28	29	28	26	26	24	24	29	A	3	8	19.1	29.1
23-Dec-07	20	29	30	30	27	28	25	24	26	26	30	38	30	32	31	29	29	32	31	35	A	37	37	37	30.0	37.9
24-Dec-07	35	34	32	31	35	28	26	23	22	28	38	37	32	33	31	27	22	24	28	29	27	25	28	28	29.3	37.8
25-Dec-07	29	A	30	29	28	28	27	24	21	20	23	24	24	23	24	24	21	23	27	27	28	24	23	23	24.9	29.6
26-Dec-07	A	24	24	23	21	22	18	9	5	6	10	16	15	14	14	11	8	9	8	6	5	5	6	A	12.6	23.6
27-Dec-07	4	4	7	8	11	10	14	16	15	14	11	11	14	30	30	29	21	11	15	14	11	19	A	14	14.5	30.2
28-Dec-07	11	9	2	5	4	8	5	9	4	5	7	12	13	13	13	8	5	1	0	0	1	A	1	1	5.9	13.4
29-Dec-07	0	1	1	0	1	0	0	1	1	5	4	9	10	11	11	9	5	1	0	1	A	1	1	1	3.2	10.7
30-Dec-07	1	1	2	2	1	5	6	2	7	9	13	14	13	13	13	10	5	1	0	A	1	1	1	0	5.2	13.6
31-Dec-07	0	1	2	3	2	1	0	1	1	5	6	12	16	15	14	13	11	3	A	7	9	9	10	9	6.4	15.6
Hourly Avg	20.3	21.0	20.6	20.7	21.5	21.0	20.0	18.3	18.0	20.1	23.5	25.7	26.1	27.0	25.5	23.3	20.6	16.9	17.5	19.1	19.0	20.1	18.5	19.0		
Hourly Max	35.1	39.4	39.9	40.7	41.0	39.3	39.1	32.8	32.4	36.5	39.2	38.2	38.2	39.9	41.1	40.7	35.1	33.3	32.9	34.9	33.2	37.3	36.8	36.9		

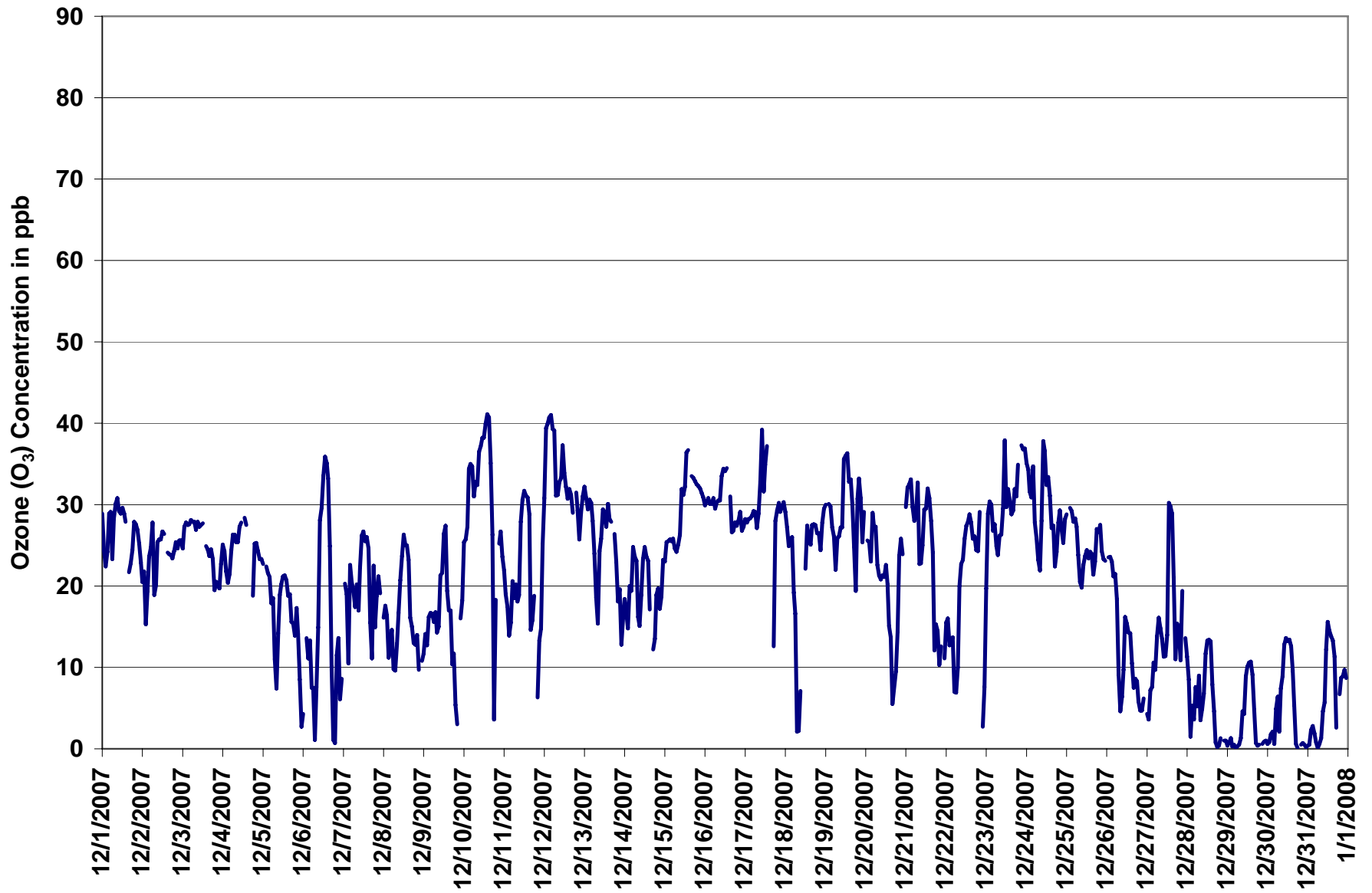


Figure 19. PAS – Brooks Ozone Instantaneous (30 Second) Maximum Value Monthly Trend



### EIGHT HOUR RUNNING AVERAGE TABLE

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

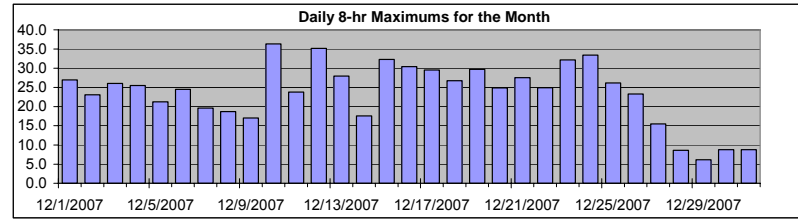
Station: Portable-Brooks  
 Station Owner: PAS

Monitoring Dates: December 1, 2007 to January 1, 2008

Objective Limit: Alberta Environment: 8-hr 65 ppb

**Summary**

Number of 8-hr Exceedances:	0			
Maximum 8-hr Average:	36.3	ppb	10-Dec	15:00 16:00



Percentile	99	95	75	50	25	5	1
	33.4	30.1	24.9	18.7	10.2	1.3	0.0

**Status Flag Characters**

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

**Day Mountain Standard Time**

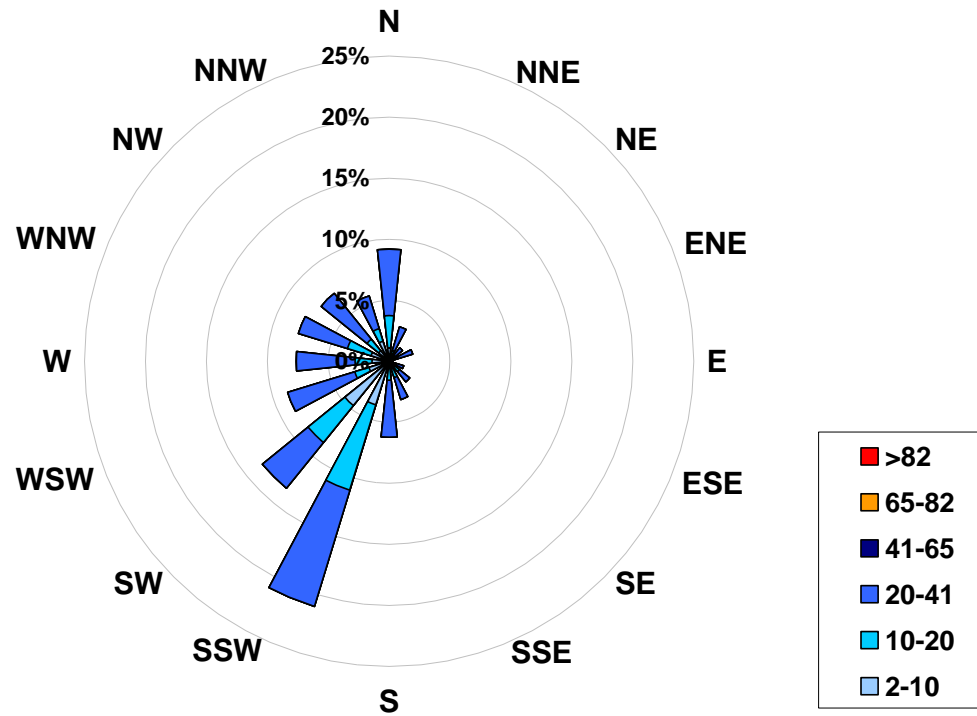
Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	
1-Dec-07	13	14	15	15	17	20	21	23	23	24	25	25	26	26	27	27	25	24	23	23	22	22	20	19	
2-Dec-07	20	19	18	17	17	17	18	17	17	17	19	20	21	21	21	22	23	23	23	23	22	22	21	22	
3-Dec-07	22	22	23	23	24	24	26	26	26	26	26	26	26	26	26	25	25	24	23	22	20	19	18	17	
4-Dec-07	17	17	17	18	19	20	21	22	22	23	23	24	25	25	26	N	N	N	N	N	N	N	N	N	
5-Dec-07	21	21	21	21	20	18	17	15	12	12	11	11	12	13	13	15	17	17	17	16	16	14	13	11	
6-Dec-07	9	8	8	8	7	6	6	6	6	7	8	10	12	16	20	24	24	24	21	17	14	11	7	4	
7-Dec-07	3	5	6	7	9	11	13	14	13	13	14	16	17	17	18	20	19	18	17	15	13	12	10	8	
8-Dec-07	9	10	10	10	11	11	10	10	9	9	10	11	13	15	17	19	19	18	17	16	14	12	10	8	
9-Dec-07	8	8	8	8	9	10	10	11	12	12	13	14	15	16	17	17	17	16	15	13	10	8	7	7	
10-Dec-07	9	11	13	17	22	23	25	27	28	30	32	32	33	33	35	36	36	33	28	25	23	21	18	16	
11-Dec-07	14	15	17	18	17	16	15	14	13	13	14	16	19	21	23	24	23	22	20	18	14	11	9	8	
12-Dec-07	11	15	20	22	27	31	34	35	35	34	33	33	32	31	30	30	30	30	30	29	29	28	27	27	
13-Dec-07	27	27	28	27	27	28	27	25	23	22	21	21	21	21	22	24	25	26	25	24	22	20	17	15	
14-Dec-07	14	13	12	12	13	13	14	15	15	15	15	16	17	17	17	18	17	16	15	14	13	13	13	13	
15-Dec-07	14	16	18	19	20	21	22	22	23	23	23	24	25	26	28	29	30	31	32	32	32	32	31	31	
16-Dec-07	30	30	30	29	29	29	28	28	28	28	28	29	29	30	30	30	30	29	29	28	27	26	25	25	
17-Dec-07	25	25	25	26	26	26	26	26	26	26	27	27	28	29	30	N	N	N	N	N	N	N	N	23	
18-Dec-07	24	26	27	26	26	23	21	17	14	11	9	N	N	N	N	N	N	N	23	23	24	24	25	25	
19-Dec-07	26	26	26	27	27	27	26	25	24	24	24	24	25	27	28	30	30	29	27	26	25	25	23	23	
20-Dec-07	22	23	25	25	24	23	23	22	22	21	21	20	20	19	17	16	14	12	11	9	9	9	10	11	
21-Dec-07	14	18	22	26	27	27	27	28	27	25	24	23	23	24	25	25	24	23	21	19	16	13	11	8	
22-Dec-07	7	8	7	7	7	7	7	7	7	8	10	12	14	17	20	23	24	25	25	25	25	25	21	18	
23-Dec-07	15	16	16	16	16	17	19	21	23	23	23	24	24	25	26	27	27	28	29	29	29	30	31	32	
24-Dec-07	33	33	33	33	33	31	30	28	26	25	25	26	26	26	27	27	28	28	27	26	25	25	24	24	
25-Dec-07	24	25	26	26	26	26	26	25	24	23	22	22	22	21	21	21	21	21	22	22	22	23	23	23	
26-Dec-07	23	23	23	23	22	21	20	17	15	13	11	10	9	9	9	9	10	10	10	8	7	6	5	4	
27-Dec-07	4	3	3	3	3	4	4	5	7	8	8	9	10	12	14	15	15	15	15	15	13	11	10		
28-Dec-07	9	9	7	6	5	4	4	3	2	2	3	4	5	6	7	7	7	6	5	4	3	1	0	0	
29-Dec-07	0	0	0	0	0	0	0	0	0	0	1	2	3	4	5	6	6	6	5	5	4	3	1	0	
30-Dec-07	0	0	0	0	0	0	1	1	1	1	2	3	4	6	7	8	9	9	8	7	6	4	3	1	0
31-Dec-07	0	0	0	0	0	0	0	0	0	1	1	2	3	5	6	8	8	8	9	8	7	6	6	5	

Daily Maximum
27.0
23.1
26.1
25.5
21.3
24.5
19.6
18.7
17.0
36.3
23.8
35.2
27.9
17.6
32.3
30.4
29.5
26.8
29.7
24.9
27.6
24.9
32.2
33.4
26.2
23.3
15.5
8.6
6.1
8.8
8.8

Hourly Max	33.1	33.4	33.4	32.8	32.5	31.2	33.9	35.1	35.2	34.3	33.3	32.6	32.5	33.4	35.2	36.3	36.0	32.8	32.0	32.2	32.3	31.9	31.2	32.2
------------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------



**1-hr Average Concentration Rose for Ozone (in ppb) Located at the Portable-Brooks Site for December 2007**



**Calms: 0%**

Frequency Distribution of O <sub>3</sub> in ppb			
Range			Frequency (hrs)
2.0	<	10	185
10	to	20	164
20	to	41	353
41	to	65	0
65	to	82	0
	>	82	0
Total Non-Zero Values			705





## PAS - Brooks Hydrogen Sulphide Monthly Summary

Station: Portable-Brooks  
 Station Owner: PAS

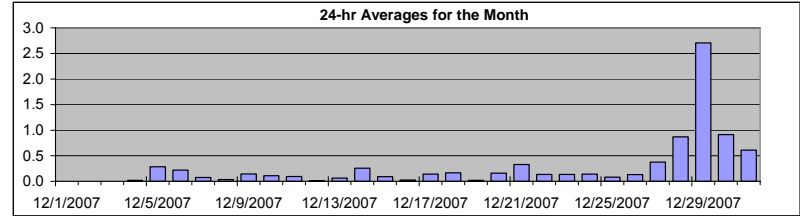
### HOURLY AVERAGE TABLE

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

Monitoring Dates: December 1, 2007 to January 1, 2008

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

<b>Summary</b>				
Number of 1-hr Exceedances:	1			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	12.3 ppb	29-Dec	5:00	6:00
Maximum 24-hr Value:	2.7 ppb	29-Dec		



AIC Time:	32 hrs	Operational Time:	704 hrs						
Calibration Time:	8 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	4.5	0.9	0.2	0.0	0.0	0.0	0.0	0.3 ppb	0.0 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	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-Dec-07	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	0	0	0	0	0.0	0.0	
2-Dec-07	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	0	0	0	0	0.0	0.0	
3-Dec-07	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	0	0	0	0	0.0	0.0	
4-Dec-07	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	0	0	0	0	0.0	0.2	
5-Dec-07	0:00	1:00	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.3	2.4	
6-Dec-07	0:00	1:00	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0.2	0.6	
7-Dec-07	0:00	1:00	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.4		
8-Dec-07	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	0	0	A	0.0	0.3		
9-Dec-07	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	3	A	0	0.1	2.5		
10-Dec-07	0:00	1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0.1	0.9		
11-Dec-07	0:00	1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0.1	0.6		
12-Dec-07	0:00	1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.0	0.2		
13-Dec-07	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	0	0	0	0.1	0.2		
14-Dec-07	0:00	1:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
15-Dec-07	0:00	1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.1	0.2		
16-Dec-07	0:00	1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.0	0.1		
17-Dec-07	0:00	1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	C	C	C	C	0	0	0	0	0	0.1	0.3		
18-Dec-07	0:00	1:00	0	A	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7	
19-Dec-07	0:00	1:00	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2		
20-Dec-07	0:00	1:00	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.2	1.3		
21-Dec-07	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	5	2	A	0.3	4.5		
22-Dec-07	0:00	1:00	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0.1	0.8		
23-Dec-07	0:00	1:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.1	0.8		
24-Dec-07	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	0	0	0	0.1	0.3		
25-Dec-07	0:00	1:00	0	A	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.6		
26-Dec-07	0:00	1:00	A	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	1.5		
27-Dec-07	0:00	1:00	3	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.4	3.3		
28-Dec-07	0:00	1:00	0	3	1	0	0	0	0	0	0	0	0	4	7	1	0	0	0	0	0	1	0	0	A	0	0.9	6.6		
29-Dec-07	0:00	1:00	4	1	2	9	7	12	5	2	9	4	1	1	1	0	0	0	0	0	0	1	0	0	A	1	1	1	2.7	12.3
30-Dec-07	0:00	1:00	1	1	1	1	1	0	0	0	7	2	0	0	0	0	0	0	0	0	0	1	A	1	0	4	2	0.9	6.7	
31-Dec-07	0:00	1:00	1	1	0	0	0	0	1	2	2	1	1	2	2	0	0	0	0	0	0	A	0	0	0	0	0	0.6	2.0	
Hourly Avg			0.4	0.4	0.3	0.4	0.3	0.5	0.3	0.3	0.8	0.3	0.3	0.4	0.1	0.1	0.0	0.0	0.1	0.2	0.2	0.1	0.3	0.2	0.2	0.2				
Hourly Max			3.8	3.0	2.3	8.7	7.4	12.3	5.4	2.4	9.3	4.0	4.3	6.6	0.7	0.3	0.2	0.2	0.4	0.9	0.6	0.5	4.5	1.6	3.6	1.7				

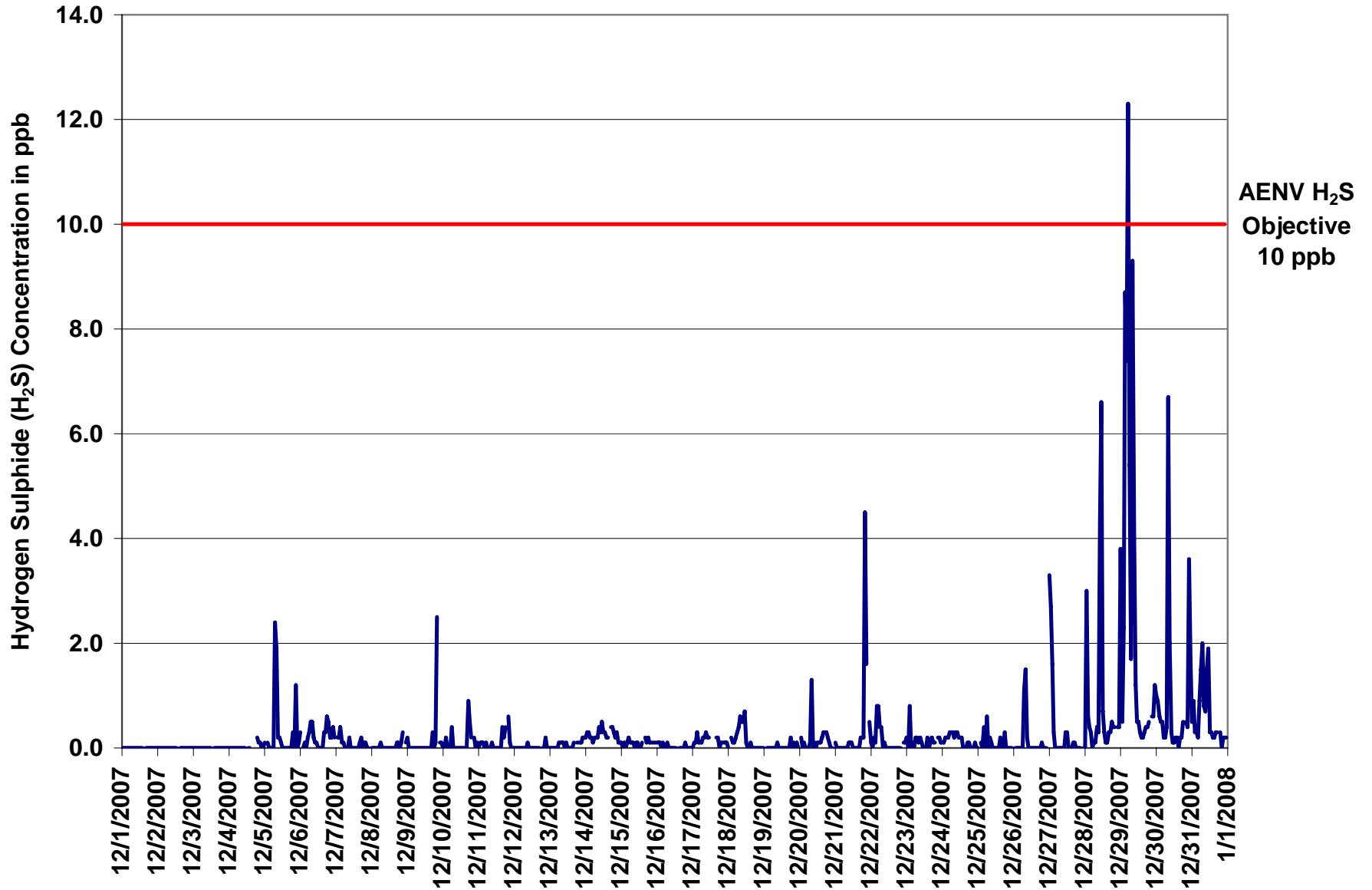


Figure 20. PAS – Brooks Hydrogen Sulphide 1-hr Average Monthly Trend



Station: Portable-Brooks  
 Station Owner: PAS

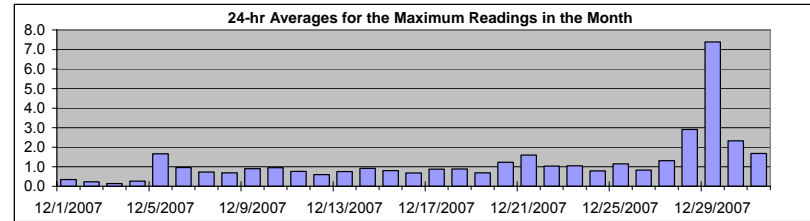
**INSTANTANEOUS (30 Second) MAXIMUM TABLE**

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

Monitoring Dates: December 1, 2007 to January 1, 2008

**Summary**

Maximum 1-hr Value:	28.3	ppb	29-Dec	0:00 1:00
Maximum 24-hr Value:	7.4	ppb	29-Dec	



AIC Time:	32 hrs	Operational Time:	704 hrs						
Calibration Time:	8 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	14.8	3.0	1.0	0.7	0.6	0.1	0.0	1.2 ppb	0.7 ppb

**Status Flag Characters**

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

Day	Mountain Standard Time																								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-Dec-07	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	A	1	1	0	0	0	1	0	0	0.3	0.6
2-Dec-07	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	A	1	0	0	0	0	0	0	0	0	0.2	0.6
3-Dec-07	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.1	0.4
4-Dec-07	0	0	0	0	0	0	0	0	0	0	0	1	A	0	0	C	C	C	C	1	1	1	1	1	1	0.3	0.8
5-Dec-07	1	A	1	1	1	1	1	1	8	7	1	1	1	0	1	1	1	1	1	3	2	6	1	1	1	1.7	7.7
6-Dec-07	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	2	1	2	2	1	1	1	1	1.0	2.1
7-Dec-07	A	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1	1	A	0.7	1.3
8-Dec-07	1	1	1	1	1	1	1	1	0	1	1	1	0	0	0	0	1	1	1	1	1	1	1	A	1	0.7	1.1
9-Dec-07	1	1	1	1	1	0	1	1	1	1	2	1	1	0	1	1	1	0	2	1	1	5	A	1	1	0.9	5.3
10-Dec-07	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	2	1	1	A	1	1	1	1.0	3.2
11-Dec-07	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	2	A	1	1	1	0.8	1.5
12-Dec-07	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.6	0.9
13-Dec-07	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	0.8	1.1
14-Dec-07	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.9	1.4
15-Dec-07	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.3
16-Dec-07	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	0.7	0.9
17-Dec-07	1	1	1	2	1	1	1	1	1	1	1	1	1	C	C	C	C	1	1	1	1	1	1	1	1	0.9	2.1
18-Dec-07	1	A	1	1	1	1	1	1	1	2	1	1	2	1	1	0	2	1	1	1	1	1	1	1	1	0.9	1.7
19-Dec-07	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.3
20-Dec-07	A	1	1	1	1	1	1	1	1	9	1	1	1	1	1	1	1	1	1	1	2	1	1	1	A	1.2	8.5
21-Dec-07	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	15	5	A	1	1.6	14.8
22-Dec-07	1	1	1	1	6	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1.0	6.0
23-Dec-07	1	1	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1.1	6.8
24-Dec-07	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.1
25-Dec-07	1	A	1	1	3	1	2	1	1	1	1	1	1	0	1	4	1	1	3	1	1	1	1	1	1	1.2	4.1
26-Dec-07	A	1	1	1	1	0	1	3	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	0.8	2.9
27-Dec-07	5	4	5	2	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	A	1	1.3	4.7
28-Dec-07	1	8	1	1	1	1	1	1	1	1	1	24	14	2	1	1	1	1	1	1	1	1	A	1	1	2.9	24.1
29-Dec-07	28	4	9	19	23	23	9	3	21	12	4	1	1	1	1	1	1	1	1	1	1	A	1	1	3	7.4	28.3
30-Dec-07	2	2	1	1	1	1	1	1	15	4	1	1	1	1	1	1	1	1	1	1	A	1	1	11	4	2.3	14.9
31-Dec-07	1	2	1	1	1	3	3	4	2	2	5	4	1	1	1	1	1	1	1	1	A	1	1	1	1	1.7	4.7
Hourly Avg	1.9	1.3	1.3	1.4	1.6	1.5	1.1	1.2	2.3	1.2	1.7	1.3	0.7	0.7	0.6	0.8	0.8	0.9	0.9	0.9	1.4	1.1	1.1	0.9			
Hourly Max	28.3	8.2	9.0	19.3	23.1	23.3	9.1	7.7	21.1	11.6	24.1	14.0	2.1	1.4	1.4	4.1	2.1	2.2	2.5	3.0	14.8	5.8	10.7	4.0			

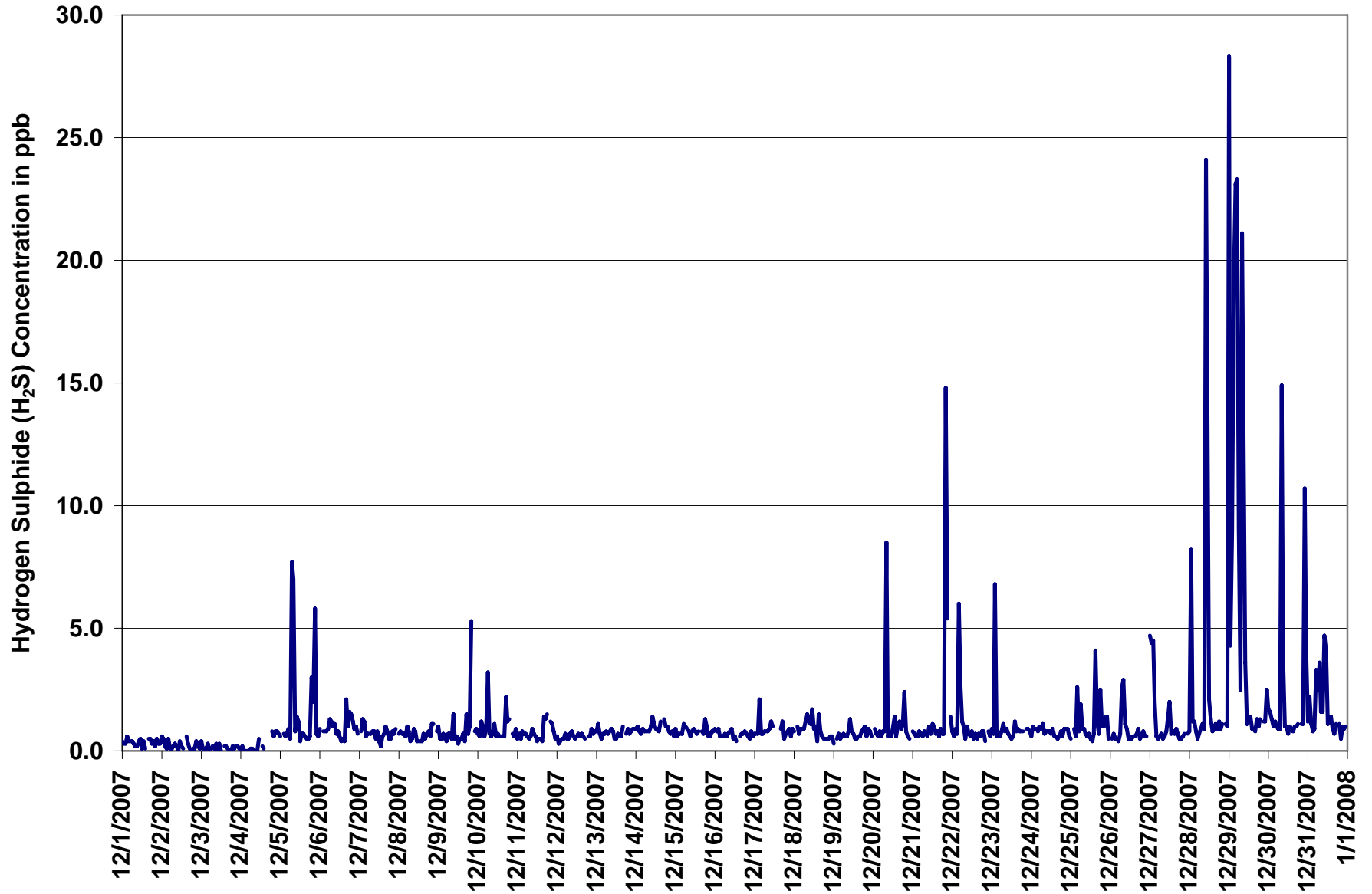
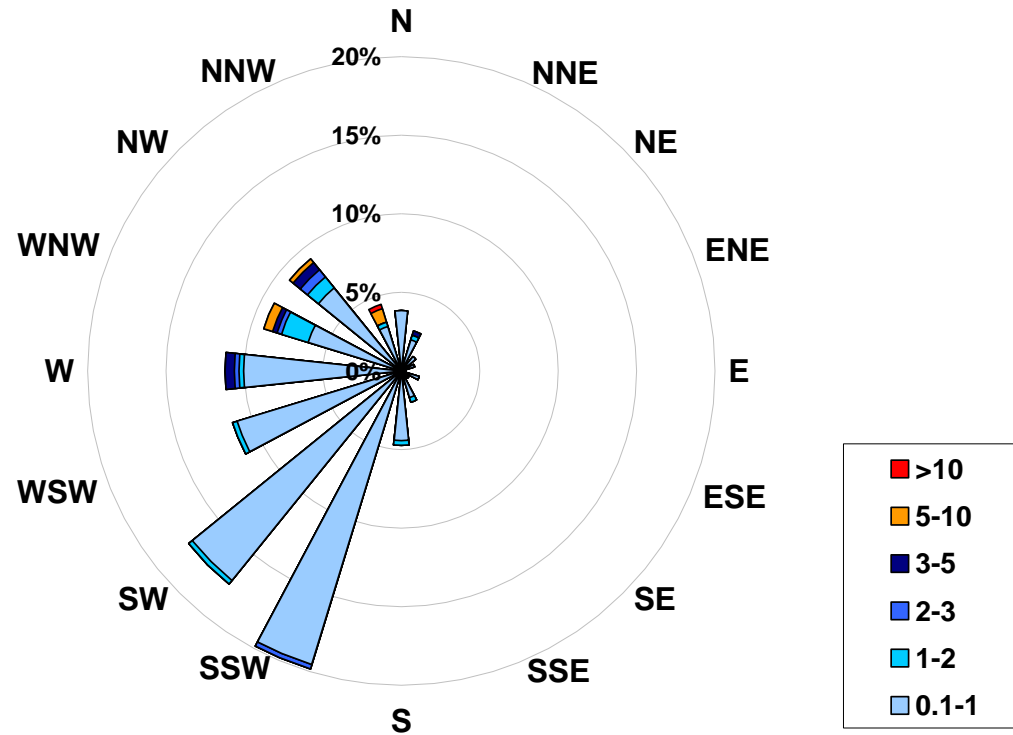


Figure 21. PAS – Brooks Hydrogen Sulphide Instantaneous (30 Second) Maximum Value Monthly Trend



**1-hr Average Concentration Rose for Hydrogen Sulphide (in ppb) Located at the Portable-Brooks Site for December 2007**



**Calms: 0%**

Frequency Distribution of H <sub>2</sub> S in ppb			Frequency (hrs)
Range			
0.1	<	1	669
1	to	2	16
2	to	3	5
3	to	5	6
5	to	10	6
	>	10	1
Total Non-Zero Values			704



## PAS - Brooks Scalar Wind Speed Monthly Summary

Station: **Portable-Brooks**  
 Station Owner: **PAS**

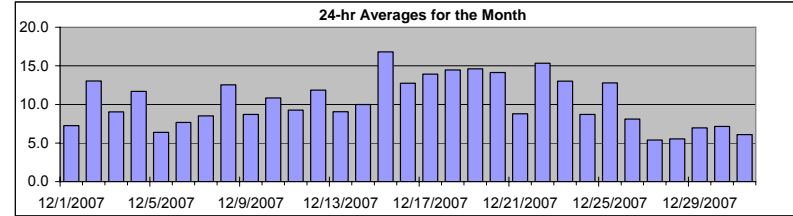
### HOURLY AVERAGE TABLE

### Wind Speed (WSs)

Monitoring Dates: December 1, 2007 to January 1, 2008

**Summary**

Maximum 1-hr Average:	34.8	km/hr	20-Dec	20:00 21:00
Maximum 24-hr Value:	16.8	km/hr	15-Dec	



Calm Time:	0 hrs	0% calms	Operational Time:	744 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%				
Percentile	99	95	75	50	25	5	1	AverageS
	27.7	19.7	13.0	9.4	6.6	3.9	2.8	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 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-Dec-07	4	3	3	2	5	6	8	10	6	6	7	7	6	5	3	3	6	8	9	9	15	15	16	14	7.3	15.9
2-Dec-07	12	13	12	13	14	15	15	15	10	13	11	9	12	15	15	16	16	15	14	16	12	11	11	11	13.1	15.6
3-Dec-07	12	13	12	14	14	13	9	9	11	9	7	6	5	4	4	5	6	11	9	5	9	10	9	10	9.0	13.5
4-Dec-07	13	13	12	11	12	9	13	18	18	19	18	16	14	12	12	12	9	9	9	9	6	5	6	7	11.7	18.5
5-Dec-07	10	9	6	6	7	7	5	4	4	5	6	8	9	9	12	11	7	4	4	4	5	4	4	4	6.4	12.4
6-Dec-07	7	7	7	8	8	9	7	8	9	6	6	8	13	15	11	5	5	6	6	7	7	7	7	7	7.7	15.3
7-Dec-07	6	8	9	8	7	7	7	7	7	10	11	10	9	8	9	13	9	9	8	7	10	10	8	8	8.5	13.4
8-Dec-07	13	14	11	9	13	13	11	13	12	13	13	12	15	17	17	12	13	15	13	12	10	10	12	9	12.5	17.2
9-Dec-07	11	12	11	11	10	13	11	8	8	9	7	5	9	6	11	12	11	8	6	4	5	8	8	7	8.7	12.6
10-Dec-07	8	8	8	12	9	6	8	12	10	15	15	17	18	17	15	8	5	5	6	11	11	11	13	12	10.8	18.4
11-Dec-07	12	12	10	7	7	8	9	12	9	7	11	14	13	10	6	4	4	3	4	6	9	12	18	17	9.3	17.5
12-Dec-07	16	17	12	19	17	15	14	8	9	8	7	10	12	13	13	13	9	10	13	13	11	7	8	12	11.9	18.5
13-Dec-07	9	10	11	11	8	8	6	8	9	6	7	8	10	9	9	9	13	11	10	13	11	11	9	6	9.1	12.7
14-Dec-07	6	7	9	10	7	10	10	11	11	9	8	5	3	5	6	11	11	13	14	14	14	15	14	18	10.0	17.8
15-Dec-07	20	16	16	16	14	14	10	12	11	14	19	21	21	16	19	15	18	23	21	21	19	18	17	14	16.8	22.6
16-Dec-07	14	8	14	12	14	14	12	14	13	10	11	9	11	11	10	10	13	14	13	14	16	16	18	15	12.7	18.1
17-Dec-07	14	16	16	11	12	15	17	17	17	17	19	19	15	10	13	10	5	9	12	15	15	14	14	14	13.9	19.4
18-Dec-07	12	10	9	10	7	8	8	6	5	4	4	4	9	13	12	19	22	29	29	29	28	25	26	23	14.5	29.3
19-Dec-07	19	25	20	18	10	12	12	10	12	13	11	16	23	22	18	16	8	7	7	8	18	22	12	13	14.6	25.0
20-Dec-07	8	15	13	14	12	14	11	13	14	16	15	13	5	6	6	9	8	8	7	9	35	32	29	28	14.1	34.8
21-Dec-07	22	15	17	14	7	4	7	6	6	4	7	10	10	11	9	8	8	7	6	6	7	7	6	9	8.8	21.6
22-Dec-07	13	11	13	9	7	6	10	11	10	11	16	17	17	18	22	22	28	27	27	27	22	23	15	6	15.3	27.5
23-Dec-07	10	13	8	8	7	6	8	10	15	16	11	10	12	15	16	12	15	18	21	16	13	13	18	21	13.0	21.4
24-Dec-07	13	10	11	9	11	4	7	7	9	9	9	7	6	9	9	8	6	8	10	8	11	11	9	10	8.7	13.0
25-Dec-07	9	12	12	10	8	8	6	5	5	7	9	10	13	11	12	14	17	17	19	20	22	20	19	21	12.8	21.5
26-Dec-07	21	18	17	15	8	5	7	5	4	6	3	8	9	7	7	5	6	8	10	9	8	5	5	3	8.1	20.7
27-Dec-07	4	4	6	5	3	5	4	2	2	2	2	3	4	3	6	5	6	9	9	8	8	11	14	8	5.4	14.0
28-Dec-07	9	5	7	7	6	4	4	4	2	2	3	4	5	8	7	8	6	7	5	4	10	8	5	5	5.5	9.5
29-Dec-07	5	5	6	4	3	3	6	5	4	4	5	5	6	5	6	7	12	11	15	11	13	8	7	10	7.0	14.6
30-Dec-07	9	10	10	4	6	8	5	5	6	7	7	13	13	9	10	8	5	5	5	6	7	5	5	6	7.2	13.1
31-Dec-07	7	8	8	9	6	5	4	4	3	3	4	5	7	7	5	5	7	9	8	9	9	6	7	3	6.1	9.4
1-hr Average	11.2	11.1	10.8	10.1	8.9	8.8	8.6	9.0	8.7	9.0	9.2	9.9	10.7	10.5	10.7	10.1	10.0	11.0	11.2	11.0	12.7	11.9	11.5	11.4		
Hourly Max	21.6	25.0	19.7	18.5	17.0	15.3	16.9	18.0	17.9	18.5	18.6	21.1	22.5	22.3	22.3	22.4	27.5	29.0	28.6	29.3	34.8	32.3	29.2	27.8		



## PAS - Brooks Vector Wind Speed Monthly Summary

Station: Portable-Brooks  
 Station Owner: PAS

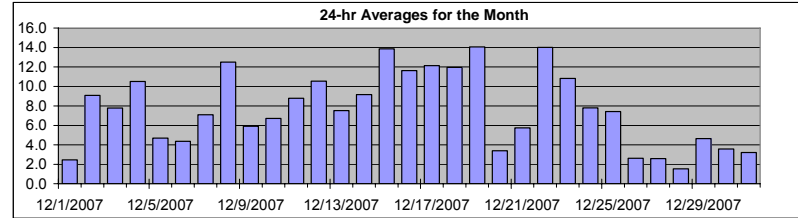
### HOURLY AVERAGE TABLE

### Wind Speed (WSv)

Monitoring Dates: December 1, 2007 to January 1, 2008

**Summary**

Maximum 1-hr Average:	34.7	km/hr	20-Dec	20:00 21:00
Maximum 24-hr Value:	14.1	km/hr	19-Dec	



Calm Time:	0 hrs	0% calms	Operational Time:	744 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%				
Percentile	99	95	75	50	25	5	1	AverageV
	27.6	19.6	12.9	9.2	6.3	3.1	1.5	16.2 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		
1-Dec-07	4	1	2	1	5	6	8	10	6	6	7	7	5	4	2	3	6	7	9	8	14	15	16	14	2.4	15.9
2-Dec-07	11	13	12	13	14	15	15	14	9	13	10	9	12	14	15	15	16	15	14	15	12	10	11	11	9.1	15.5
3-Dec-07	12	13	12	14	13	12	9	9	11	9	7	6	5	3	1	4	3	11	9	4	9	10	9	10	7.8	13.5
4-Dec-07	13	13	11	11	12	9	13	18	18	18	18	16	14	12	12	12	9	9	9	9	5	5	5	7	10.5	18.3
5-Dec-07	10	9	6	6	7	7	5	4	4	5	6	8	8	9	12	10	7	4	3	4	5	4	4	3	4.7	12.3
6-Dec-07	7	7	7	8	8	8	7	8	9	5	6	8	13	15	11	5	5	6	7	7	7	7	7	7	4.4	15.3
7-Dec-07	6	7	8	8	7	7	7	7	7	10	11	10	9	8	9	13	9	9	8	7	10	10	3	7	7.1	13.3
8-Dec-07	13	14	11	9	13	13	11	13	12	13	13	12	15	17	17	12	13	15	13	12	10	10	12	9	12.5	17.1
9-Dec-07	11	12	11	11	10	13	11	8	8	9	6	4	7	4	11	9	10	8	5	3	3	7	8	6	5.9	12.5
10-Dec-07	8	8	8	12	9	6	8	12	10	15	15	17	18	17	15	8	4	5	6	11	11	11	13	12	6.7	18.3
11-Dec-07	12	12	10	7	7	8	9	12	9	7	11	14	13	10	6	4	3	2	3	6	8	12	18	17	8.8	17.5
12-Dec-07	16	16	12	18	17	15	14	8	9	8	6	10	12	13	13	13	9	9	13	13	11	7	8	12	10.5	18.4
13-Dec-07	9	10	11	11	8	8	6	7	9	6	7	8	9	9	9	9	12	11	10	12	11	11	9	5	7.5	12.4
14-Dec-07	6	7	9	10	7	10	10	11	11	9	8	4	2	5	5	11	11	13	14	14	14	15	14	18	9.2	17.8
15-Dec-07	20	16	16	16	13	14	10	12	11	14	19	21	21	16	19	15	18	23	21	21	19	18	17	14	13.9	22.6
16-Dec-07	14	4	14	12	14	14	12	14	13	7	11	9	10	11	9	10	13	14	13	14	16	16	18	15	11.6	18.0
17-Dec-07	14	16	15	11	12	15	17	17	17	17	18	19	15	10	13	10	5	8	11	15	15	14	14	14	12.1	19.2
18-Dec-07	12	9	8	10	4	7	7	5	5	4	2	3	9	13	12	19	22	29	29	29	28	25	26	23	12.0	29.2
19-Dec-07	19	25	20	18	10	12	12	10	12	13	11	16	22	22	18	15	8	7	7	7	18	22	12	12	14.1	24.9
20-Dec-07	8	15	13	14	11	14	8	12	14	16	14	13	4	6	6	9	8	8	7	5	35	32	29	28	3.4	34.7
21-Dec-07	22	15	17	14	7	3	6	6	5	4	7	10	10	11	9	8	8	7	6	6	6	5	5	9	5.7	21.5
22-Dec-07	13	11	13	9	6	6	10	11	10	11	16	17	17	18	22	22	27	27	27	22	23	11	6	8	14.0	27.4
23-Dec-07	9	12	8	7	7	6	8	10	15	16	11	10	11	15	16	12	15	18	21	16	13	13	18	21	10.8	21.3
24-Dec-07	13	10	11	9	9	2	3	6	9	8	8	6	5	9	9	8	5	8	9	8	11	11	9	10	7.8	12.9
25-Dec-07	9	12	12	10	8	8	6	5	5	7	9	10	13	11	12	14	17	17	19	20	21	20	19	21	7.4	21.4
26-Dec-07	21	18	17	14	7	4	5	5	2	5	2	7	8	7	7	5	5	7	10	8	8	5	5	3	2.6	20.6
27-Dec-07	4	4	5	5	3	5	4	1	2	2	1	3	3	3	6	5	6	8	8	8	8	10	14	7	2.6	13.9
28-Dec-07	9	4	6	7	6	3	4	3	2	1	3	2	5	7	7	8	6	6	5	2	9	7	4	4	1.5	9.1
29-Dec-07	5	5	5	4	2	3	6	5	3	4	5	4	6	5	6	7	12	11	14	10	13	7	6	8	4.7	14.4
30-Dec-07	8	9	9	4	5	8	3	4	5	7	7	12	13	9	10	7	3	5	4	6	7	4	5	6	3.6	13.0
31-Dec-07	6	8	8	9	5	4	4	4	3	3	4	5	7	6	5	4	7	9	8	9	9	1	6	2	3.2	9.3
1-hr Vector	5.5	5.6	5.2	4.5	4.0	4.4	4.4	3.9	4.1	3.9	4.0	4.1	4.0	3.8	3.2	3.5	4.6	5.6	6.3	6.2	5.2	5.4	5.7	5.4		
Hourly Max	21.5	24.9	19.7	18.4	16.9	15.2	16.9	17.9	17.8	18.3	18.6	21.0	22.4	22.3	22.2	22.4	27.4	29.0	28.5	29.2	34.7	32.3	29.2	27.7		



### PAS - Brooks Wind Direction Monthly Summary

Station: Portable-Brooks  
Station Owner: PAS

### HOURLY AVERAGE TABLE

Wind Direction (WD)

Monitoring Dates: December 1, 2007 to January 1, 2008

#### Summary


Calm Time:	0 hrs	0% calms	Operational Time:	744 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%				
Percentile	99	95	75	50	25	5	1	Average
	356.0	346.6	282.2	220.3	193.1	12.0	1.8	234 deg

#### Status Flag Characters

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

#### Day Mountain Standard Time

Hour Start	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	WD Sector
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-Dec-07	350	314	286	325	348	354	8	21	358	1	346	350	348	14	30	74	109	141	154	125	138	133	139	147	80	E
2-Dec-07	148	143	130	136	133	138	133	130	117	122	103	78	34	54	53	51	63	68	69	56	32	13	1	349	86	E
3-Dec-07	347	0	352	350	354	0	353	351	8	9	348	327	329	334	312	194	62	57	78	20	6	8	4	5	3	N
4-Dec-07	10	4	358	359	358	356	1	11	17	25	26	29	26	27	40	41	65	55	60	108	109	26	39	56	26	NNE
5-Dec-07	72	63	59	29	7	5	319	294	295	302	308	326	327	339	354	353	349	333	324	305	323	291	278	243	344	NNW
6-Dec-07	214	217	224	221	221	212	226	219	217	267	297	338	5	8	2	328	281	267	259	250	258	255	245	238	263	W
7-Dec-07	243	273	310	305	293	290	283	275	251	221	217	211	209	199	199	210	227	225	214	229	218	222	210	200	233	SW
8-Dec-07	208	203	208	197	208	209	212	211	211	208	208	206	204	204	207	209	201	201	210	204	215	212	207	216	207	SSW
9-Dec-07	216	207	211	205	212	209	210	208	196	194	188	225	185	345	41	100	218	254	263	311	262	224	236	282	215	SW
10-Dec-07	289	306	311	328	335	307	312	319	326	352	351	345	348	349	352	345	300	268	245	214	211	214	205	206	313	NW
11-Dec-07	206	206	205	201	197	209	208	203	203	205	206	210	199	196	208	201	114	23	243	216	210	207	205	204	204	SSW
12-Dec-07	209	229	244	251	259	259	282	287	301	284	287	283	281	293	298	301	314	308	295	293	305	294	284	300	278	W
13-Dec-07	307	298	301	296	289	290	284	247	224	235	243	249	239	239	226	223	212	211	213	207	215	216	224	264	244	WSW
14-Dec-07	270	249	228	228	243	221	221	223	220	224	236	277	247	293	253	208	213	206	204	205	203	200	199	178	217	SW
15-Dec-07	181	192	186	191	192	193	195	185	194	182	182	182	195	222	248	247	252	252	261	260	262	264	265	265	220	SW
16-Dec-07	258	264	256	256	239	260	265	260	262	236	232	237	235	228	207	210	203	206	211	207	206	205	199	205	230	SW
17-Dec-07	200	205	201	168	198	193	201	200	197	192	190	207	223	237	248	249	207	218	239	250	260	273	271	272	219	SW
18-Dec-07	270	259	224	232	334	228	233	294	259	288	316	202	195	198	191	170	171	175	177	181	183	201	209	216	201	SSW
19-Dec-07	219	215	220	221	227	215	212	222	220	235	232	245	249	249	248	262	267	264	229	211	222	216	225	227	231	SW
20-Dec-07	202	208	210	213	209	214	181	128	185	207	209	209	147	207	235	212	218	225	233	273	10	13	7	9	231	SW
21-Dec-07	5	354	360	357	0	235	278	313	289	293	251	246	252	252	254	242	249	269	287	297	301	294	252	223	296	WNNW
22-Dec-07	211	218	211	216	162	156	191	193	181	181	180	164	169	166	161	163	158	167	167	182	193	217	268	258	181	S
23-Dec-07	246	299	324	311	276	280	245	224	211	211	216	243	212	203	190	190	189	192	200	216	223	234	246	251	225	SW
24-Dec-07	271	270	251	276	316	344	325	309	301	322	316	280	290	275	252	262	292	252	232	272	305	298	307	307	287	WNNW
25-Dec-07	313	315	320	327	317	318	307	296	257	222	201	194	211	205	191	176	158	163	166	171	162	165	172	180	194	SSW
26-Dec-07	180	189	189	193	231	174	262	304	296	244	251	327	327	347	6	338	338	335	344	357	349	328	355	332	273	W
27-Dec-07	308	318	329	37	327	8	8	343	63	178	149	154	173	294	309	310	262	213	214	220	222	210	205	218	243	WSW
28-Dec-07	206	196	206	198	210	241	117	183	270	293	14	320	60	51	46	20	39	26	12	2	22	18	1	23	26	NNE
29-Dec-07	314	347	310	288	338	338	295	303	345	261	233	235	211	241	197	185	210	209	205	218	212	223	205	157	229	SW
30-Dec-07	199	220	223	240	223	219	267	315	334	16	349	3	10	3	4	355	337	333	5	356	2	329	281	250	323	NW
31-Dec-07	289	323	347	7	350	319	294	272	259	291	326	306	310	299	303	279	222	209	217	218	217	346	98	137	287	WNNW
Hourly Avg	235	241	244	249	256	239	246	245	239	232	232	245	244	256	249	221	205	208	210	218	228	235	231	233		





### PAS – Brooks Standard Deviation of Wind Direction Monthly Summary

Station: Portable-Brooks  
Station Owner: PAS

### HOURLY AVERAGE TABLE

### Wind Direction (WD)

Monitoring Dates: December 1, 2007 to January 1, 2008

#### Summary


Determined by the Yamartino 15-min interval calculation

Calm Time:	0 hrs	0% calms	Operational Time:	744 hrs			
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%			
Percentile	99	95	75	50	25	5	1
	71.9	47.7	16.3	8.9	5.4	3.2	2.4

#### Status Flag Characters

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

#### Day Mountain Standard Time

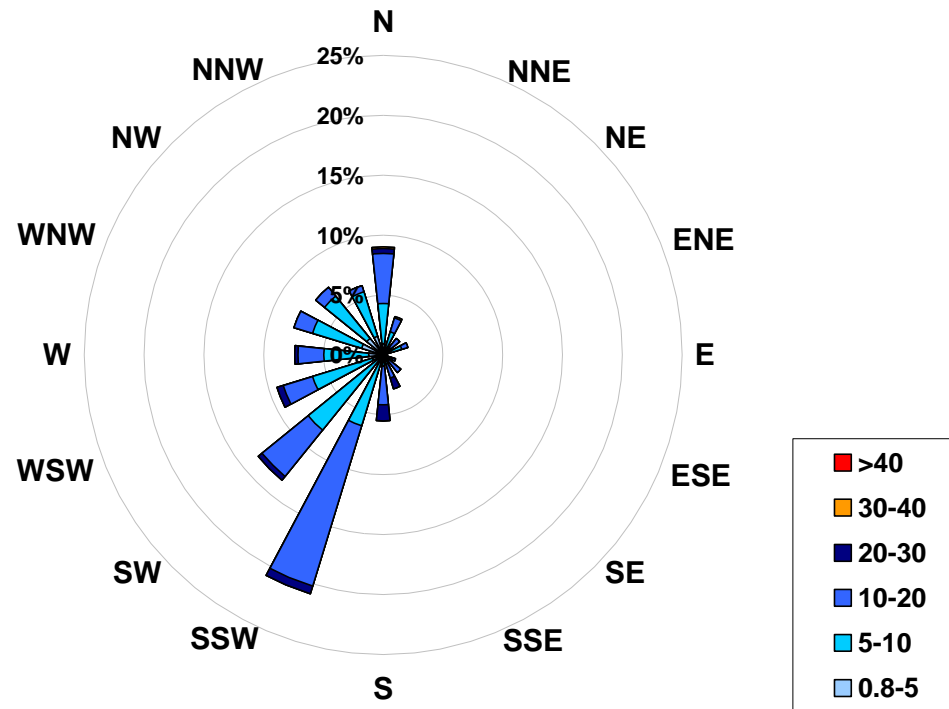
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00
1-Dec-07	17	71	46	80	9	17	7	6	7	9	9	12	14	32	49	17	16	13	6	14	4	3	3	3
2-Dec-07	5	7	4	6	3	4	4	6	10	10	10	18	7	10	5	6	7	6	6	7	9	12	8	10
3-Dec-07	10	6	7	5	9	8	9	8	6	9	15	23	31	62	82	23	78	8	12	52	8	6	7	6
4-Dec-07	7	5	8	7	9	9	8	4	5	7	6	6	8	12	5	9	9	5	12	11	25	24	19	19
5-Dec-07	6	6	10	11	6	5	24	21	16	12	12	13	10	12	7	8	9	10	12	12	11	13	20	18
6-Dec-07	6	6	6	4	8	5	14	8	5	40	19	15	8	5	5	31	8	16	11	8	13	6	16	11
7-Dec-07	8	27	5	4	4	7	7	6	11	16	11	7	3	14	12	7	4	3	8	5	4	4	84	34
8-Dec-07	2	1	4	8	4	23	5	3	5	2	4	7	4	3	4	6	4	4	6	2	15	6	4	17
9-Dec-07	8	5	5	4	4	5	5	8	17	18	31	44	46	59	12	50	24	11	21	49	49	6	13	19
10-Dec-07	14	10	6	6	10	9	4	5	4	9	9	6	6	6	6	16	24	21	15	9	3	4	3	2
11-Dec-07	2	3	7	8	10	8	10	3	14	8	10	4	4	6	10	23	73	48	40	12	14	10	4	3
12-Dec-07	6	22	12	5	5	10	8	10	10	16	15	14	7	7	5	7	14	6	9	7	10	12	7	6
13-Dec-07	13	6	4	4	8	10	13	25	12	26	16	7	15	11	9	7	7	8	6	24	9	5	8	14
14-Dec-07	17	10	11	8	13	6	6	5	4	8	22	24	64	18	16	5	3	3	3	3	2	3	4	4
15-Dec-07	6	6	3	4	6	6	8	7	7	5	3	5	4	16	3	5	7	3	4	3	3	4	3	3
16-Dec-07	4	89	8	11	14	8	4	4	4	57	10	6	11	18	15	9	7	7	8	5	4	8	4	5
17-Dec-07	5	4	9	9	6	12	3	3	5	6	6	9	6	8	4	9	23	11	17	3	5	4	3	3
18-Dec-07	5	13	12	4	68	33	29	19	20	26	63	40	9	4	6	5	5	4	3	3	4	5	4	3
19-Dec-07	4	4	3	3	6	10	4	9	6	12	9	10	3	3	3	13	5	5	17	18	6	4	4	14
20-Dec-07	8	6	6	4	9	8	48	28	14	6	4	13	61	19	12	3	8	4	8	48	4	3	3	4
21-Dec-07	6	10	10	10	11	62	30	12	9	34	18	10	6	7	14	13	8	9	13	12	24	33	24	13
22-Dec-07	6	3	5	9	29	15	18	10	9	13	8	8	8	5	5	5	4	2	4	6	4	52	17	19
23-Dec-07	15	12	20	28	14	16	8	10	4	3	11	17	10	6	5	5	6	6	6	5	11	5	5	5
24-Dec-07	8	8	8	9	36	84	58	25	5	10	24	23	16	7	9	10	37	14	19	22	5	5	6	4
25-Dec-07	8	9	4	7	5	4	7	9	32	12	10	6	9	9	6	5	3	3	3	3	4	5	5	2
26-Dec-07	3	3	5	10	27	68	37	20	59	29	47	17	8	14	14	17	14	11	14	6	7	21	17	27
27-Dec-07	12	19	14	35	22	11	14	41	56	30	32	23	38	35	9	11	15	15	5	3	4	9	5	47
28-Dec-07	13	31	19	9	26	55	20	42	23	32	33	50	24	14	10	11	18	21	17	53	18	22	49	49
29-Dec-07	17	25	26	36	44	33	9	15	26	41	20	28	13	27	15	19	7	5	7	27	5	35	38	42
30-Dec-07	21	10	12	17	23	22	58	20	17	8	10	8	7	8	11	12	63	23	17	12	12	28	23	15
31-Dec-07	13	10	12	8	33	19	34	15	38	43	24	13	11	9	12	15	21	11	9	7	4	80	17	63

Daily Maximum
79.7
17.9
82.3
25.4
23.9
40.1
83.7
22.5
59.3
23.8
72.6
21.5
26.1
64.1
16.1
88.6
22.9
68.3
18.2
60.9
62.2
51.6
28.4
83.9
31.8
67.9
56.4
54.6
44.3
62.7
79.6

Hourly Max	21	89	46	80	68	84	58	42	59	57	63	50	64	62	82	50	78	48	40	53	49	80	84	63
------------	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----



1-hr Average Wind Rose (in km/hr) Located at the Portable-Brooks Site for December 2007



Calms: 0%

Frequency Distribution of Wind in km/hr			
Range			Frequency (hrs)
0.8	<	5	83
5	to	10	326
10	to	20	297
20	to	30	34
30	to	40	2
	>	40	0
Total Non-Zero Values			744



# **Palliser Airshed Society**

## **Passive Monitoring – December 2007**

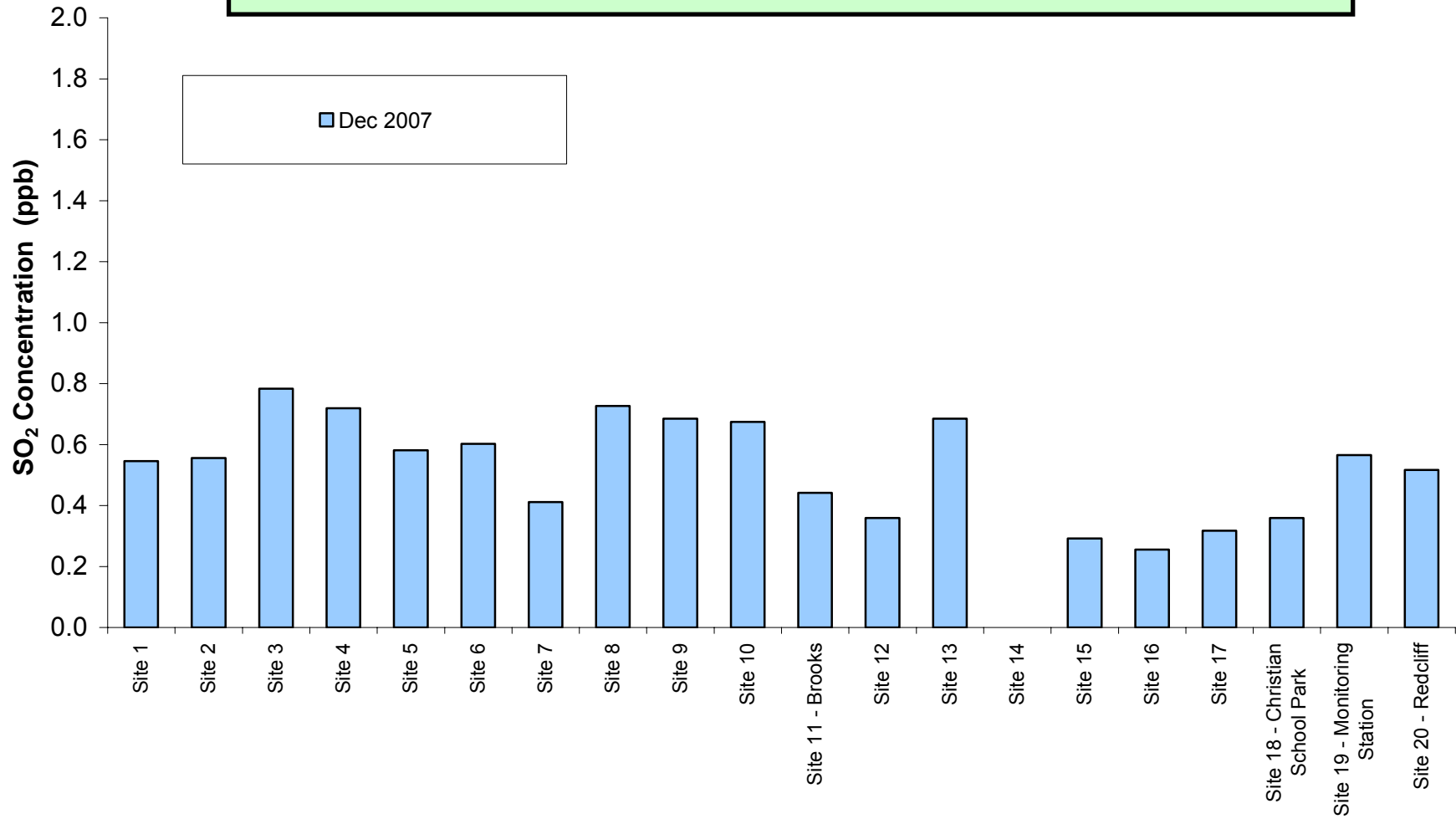


## Palliser Airshed Society - Palliser Passive Stations for December 2007 Palliser Passive Monitoring Expansion

Station Number	Station	SO2 ppb	O3 ppb	NO2 ppb	Location		Elevation meter
	Name				Easting	Northing	
<b>Duplicates</b>							
4a	Site 4	0.8	69.2	1.7			
4b	Site 4	0.7	69.1	1.9			
14a	Site 14	missing	missing	missing			
14b	Site 14	missing	missing	missing			
1	Site 1	0.5	79.9	2.8	562434	5583139	719
2	Site 2	0.6	67.1	2.5	565416	5616277	
3	Site 3	0.8	68.0	2.2	533794	5675379	779
4	Site 4	0.7	69.1	1.8	554771	5717338	718
5	Site 5	0.6	57.4	2.6	494218	5715862	735
6	Site 6	0.6	54.7	4.2	433039	5673766	818
7	Site 7	0.4	63.5	3.4	400808	5620907	780
8	Site 8	0.7	66.8	4.1	498530	5621839	747
9	Site 9	0.7	73.7	3.9	487701	5591707	763
10	Site 10	0.7	59.8	4.7	478223	5613583	774
11	Site 11 - Brooks	0.4	51.4	8.9	439773	5604548	736
12	Site 12	0.4	69.3	2.7	450287	5587201	726
13	Site 13	0.7	70.7	1.5	464279	5548934	
14	Site 14	missing	missing	missing	493206	5521201	870
15	Site 15	0.3	87.7	0.4	465824	5485742	874
16	Site 16	0.3	88.3	0.2	503827	5446942	903
17	Site 17	0.3	72.9	0.1	557668	5452307	942
18	Site 18 - Christian School Park	0.4	59.3	6.8	526575	5538135	709
19	Site 19 - Monitoring Station	0.6	62.9	8.0	522813	5544137	714
20	Site 20 - Redcliff	0.5	73.0	3.6	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**

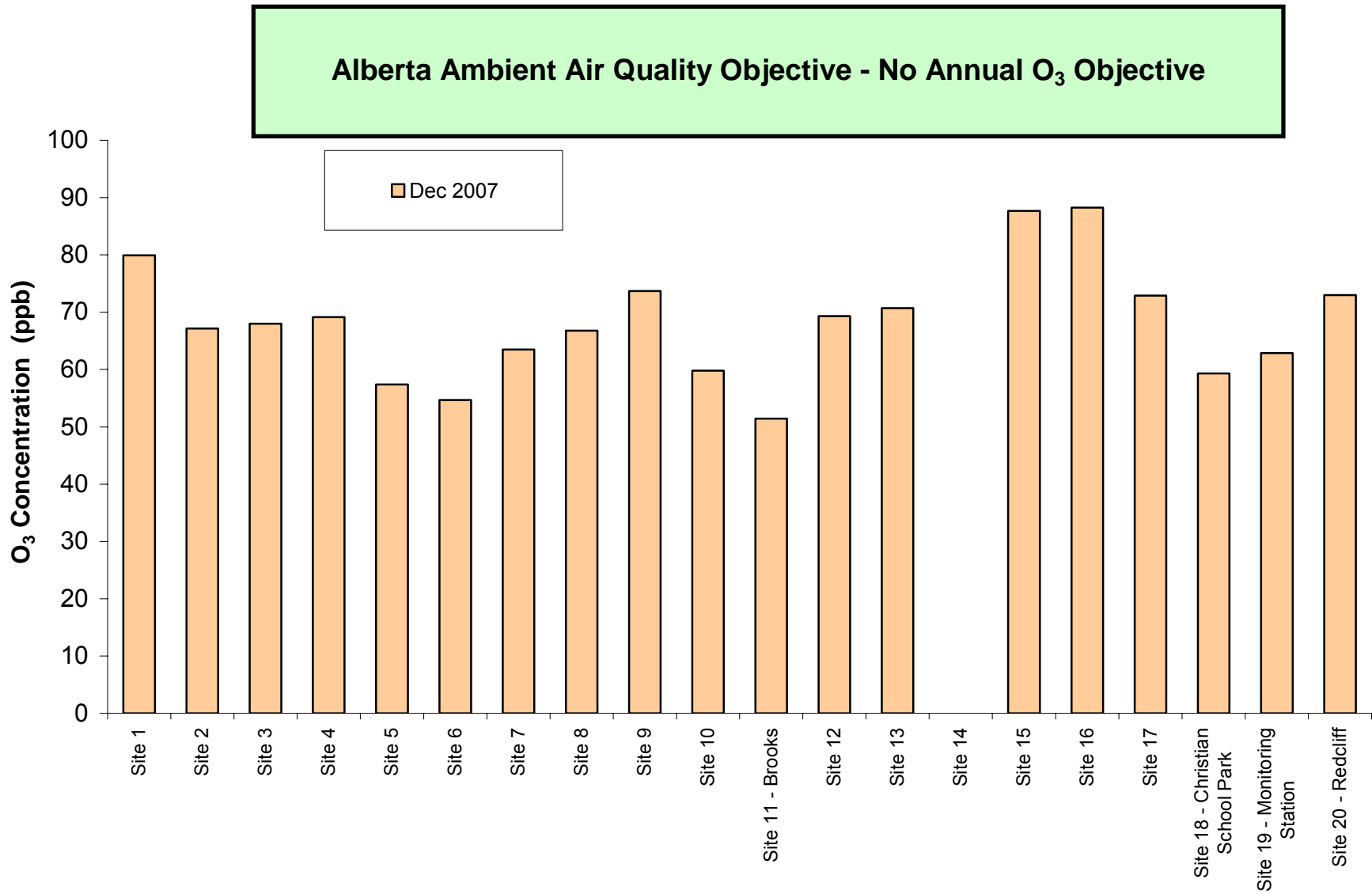
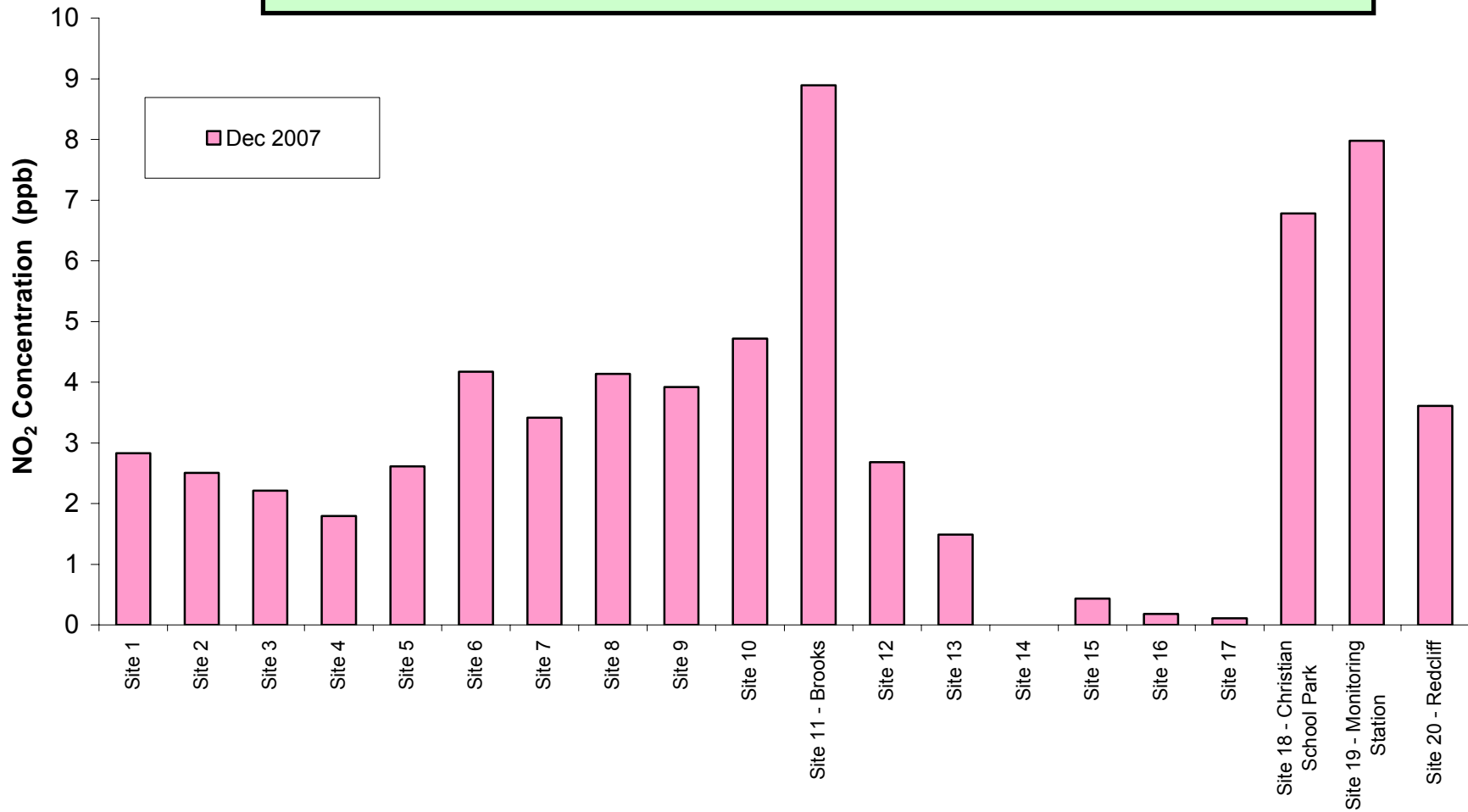


Figure 23. PAS – Ozone Passive Summary Chart



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



**Figure 24. PAS – Nitrogen Dioxide Passive Summary Chart**

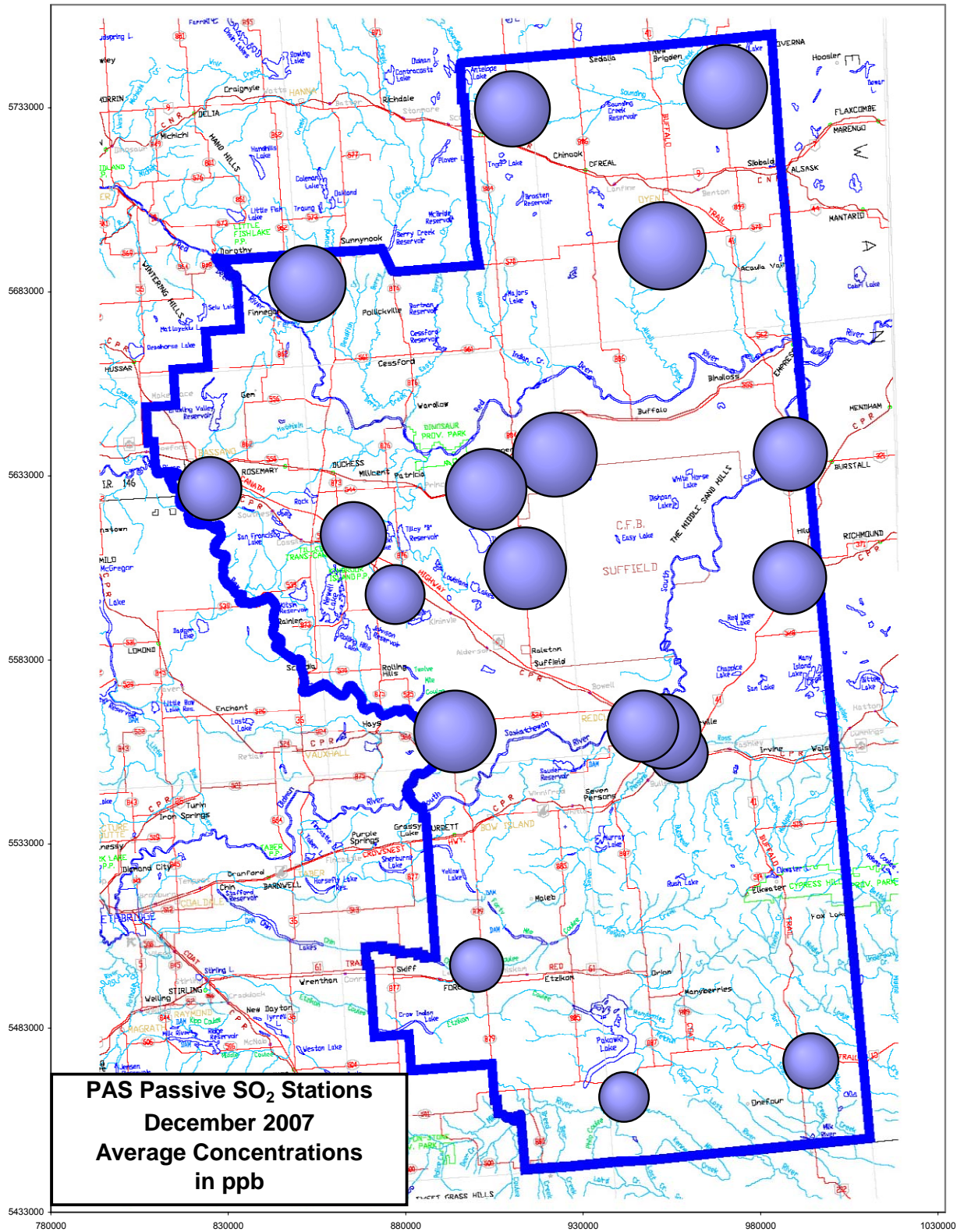


Figure 25. PAS – Sulphur Dioxide Passive Summary Bubble Chart



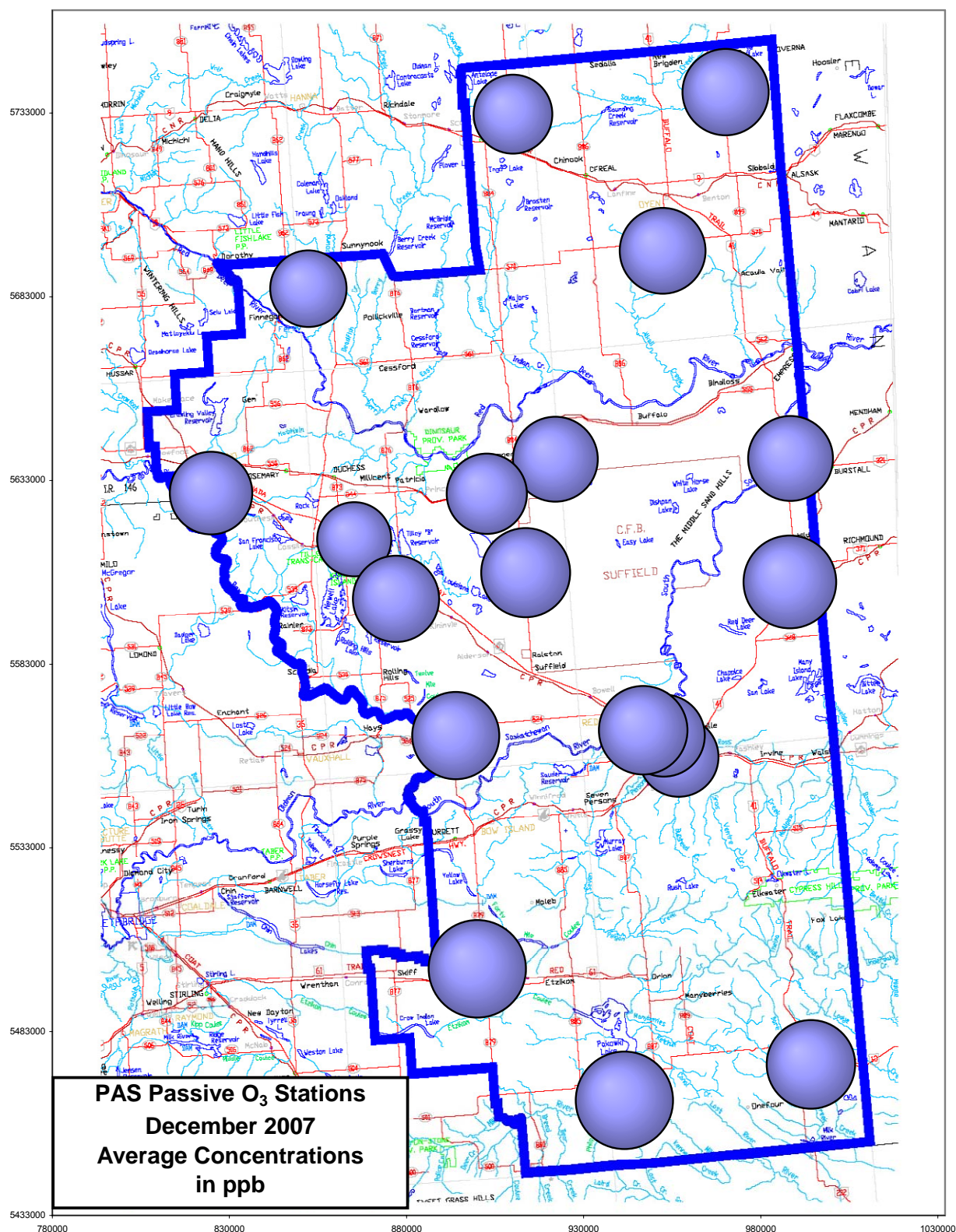


Figure 26. PAS – Ozone Passive Summary Bubble Chart

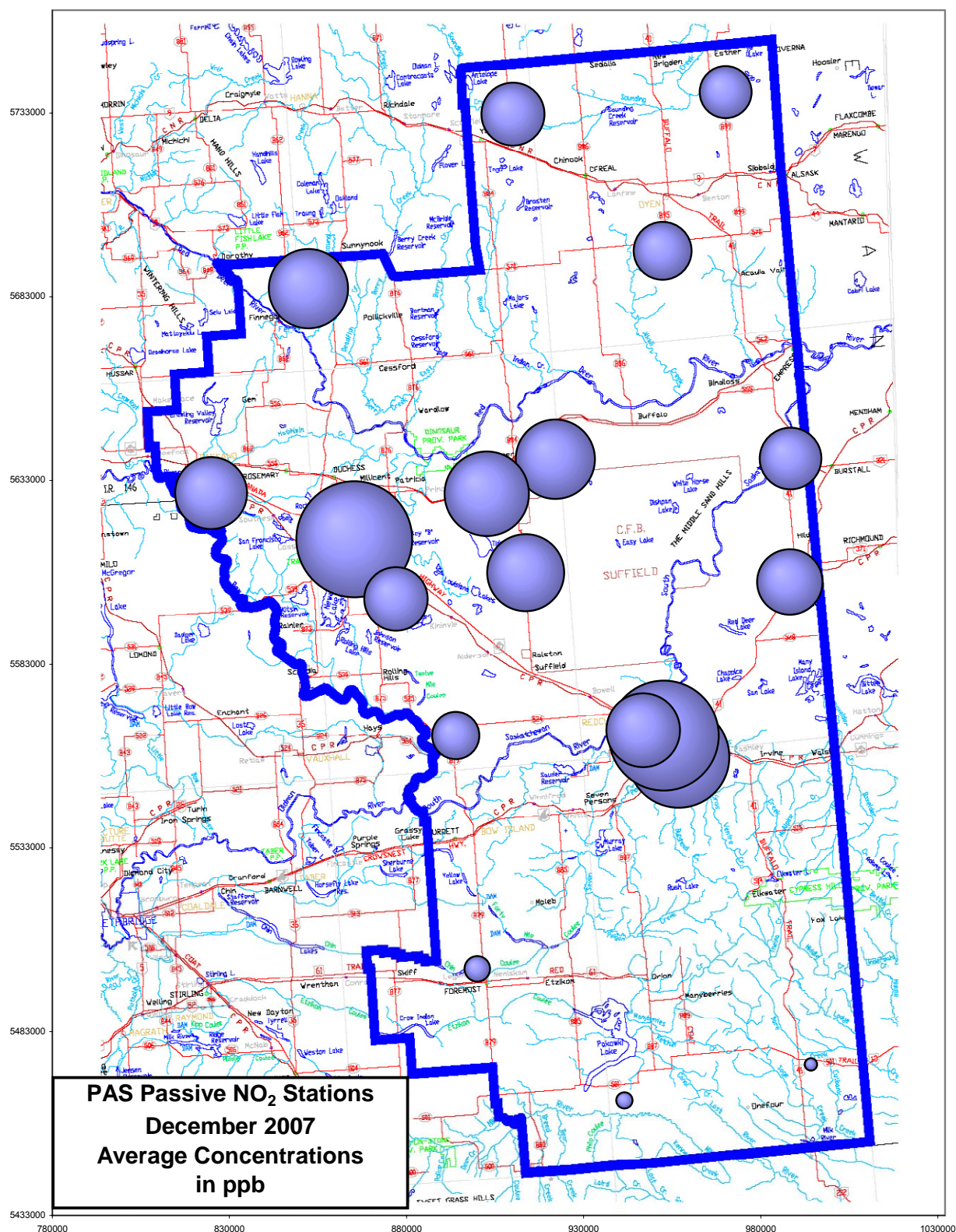


Figure 27. PAS – Nitrogen Dioxide Passive Summary Bubble Chart

# **Palliser Airshed Society**

## **December 2007 - Calibration Reports**

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

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



# Calibration Report

Parameter 03  
 Air Monitoring Network Palliser Airshed



## Station Information

Calibration Date	December 14, 2007	Previous Calibration	November 20, 2007
Station Number	101	Station Location	Crescent Heights
Reason:	<b>Routine</b>	Calibration	Removal
			Other:
Start Time (MST)	12:50	End Time (MST)	15:50
Barometric Pressure	27.8 inches Hg	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	2844
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45270
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	0.990293	Calculated slope	0.998458
Calculated intercept	0.988183	Calculated intercept	-0.024060
Analyzer make	TEI 49i	Analyzer serial #	713021144

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
O3 Background	0.6	ppb	0.6	ppb
O3 Coeff	1.099		1.099	
CellA	86926.0	Hz	86926.0	Hz
CellB	116655.0	Hz	116655.0	Hz
Pressure	699.1	mmHg	699.1	mmHg
Cell A Flow	724.0	ccm	724.0	ccm
Cell B Flow	714	ccm	714	ccm
Bench	32.2	Deg C	32.2	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	0.3	N/A
4997	300.0	267.4	268.6	0.9955
4997	200.0	178.9	178.0	1.0053
4997	100.0	82.2	82.6	0.9955
4997	0.0	0.0	0.3	0.0000
4997	300.0	267.4	330.7	0.8086
Average Correction Factor				0.9988

Calculated value of As Found Response: 328.2 ppm      Percent Change of As Found: 22.7%

	before calibration		after calibration	
Auto zero	-3.4	ppb	1.5	ppb
Auto span	370.3	ppb	277.8	ppb

Notes: Adjusted Span ...  
 \_\_\_\_\_  
 \_\_\_\_\_

Calibration Performed By: Lenin Flores

## Calibration Summary

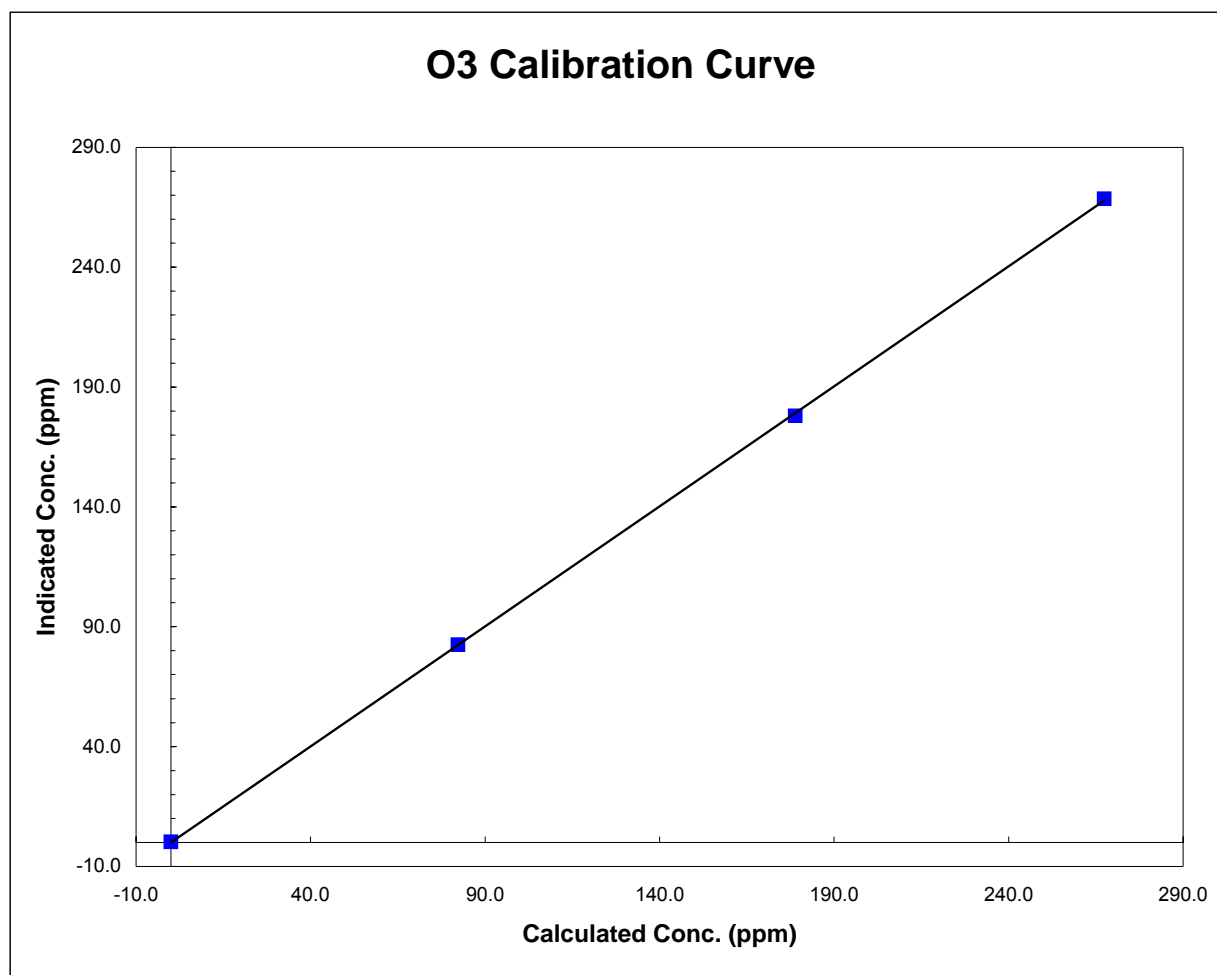
Parameter                     O3                    Air Monitoring Network   Palliser Airshed  

### Station Information

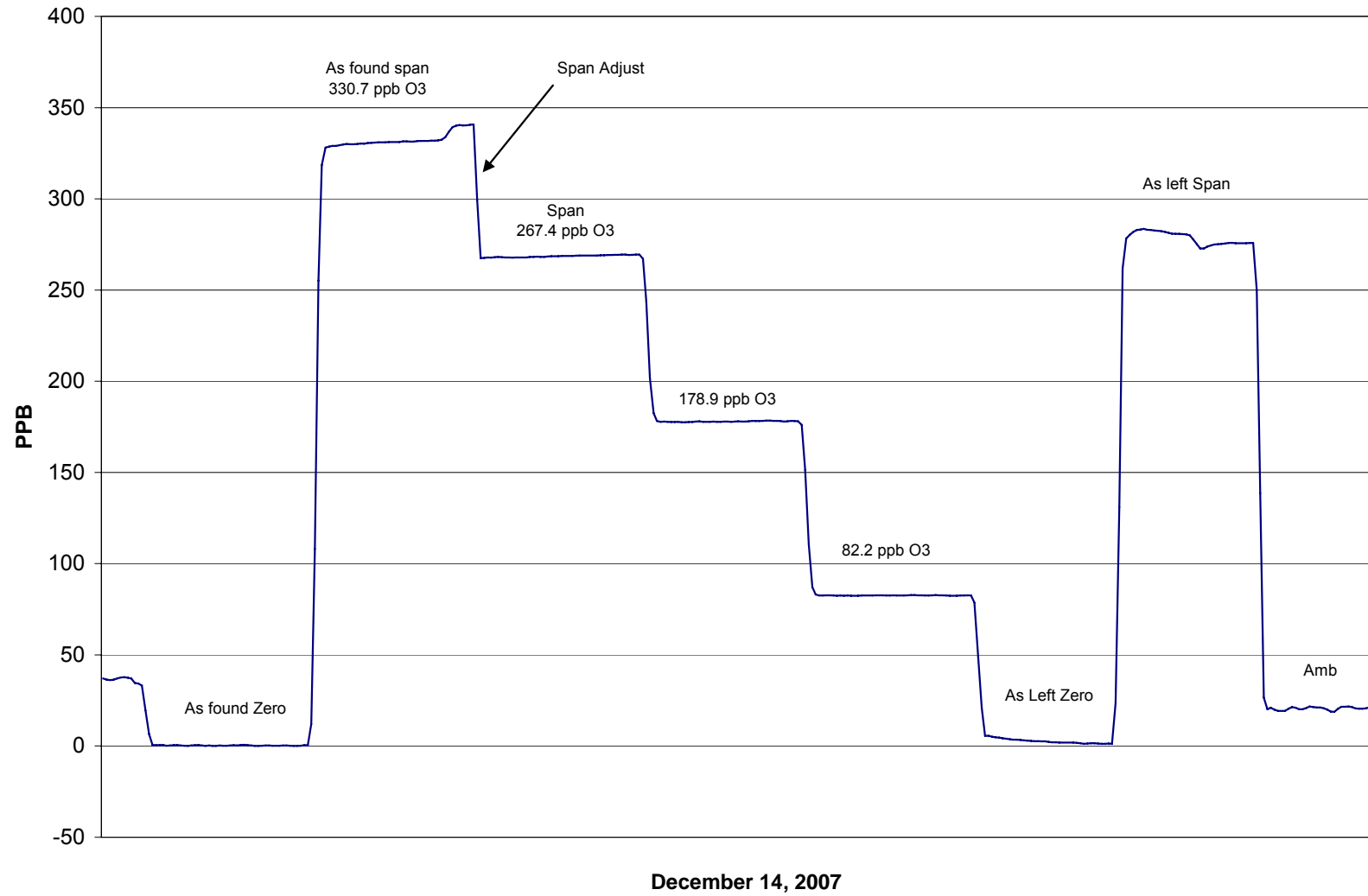
Calibration Date	December 14, 2007	Previous Calibration	November 20, 2007
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	12:50	End Time (MST)	15:50
Analyzer make/model	TEI 49i	Analyzer serial #	713021144

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
267.4	268.6	0.9955		
178.9	178.0	1.0053	Correlation Coefficient	0.999944
82.2	82.6	0.9955		
0.0	0.3	N/A	Slope	0.998458
			Intercept	-0.024060



### O3 Calibration



# Calibration Report

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



## Station Information

Calibration Date	<u>December 14, 2007</u>	Previous Calibration	<u>November 20, 2007</u>	
Station Number	<u>101</u>	Station Location	<u>Crescent Heights</u>	
Reason:	Routine	Installation	Removal	<b>Other:</b> Maintenance / calibration
Start Time (MST)	<u>8:45</u>	End Time (MST)	<u>14:00</u>	
Barometric Pressure	<u>27.8</u> inches Hg	Station Temperature	<u>21.5</u> Deg C	
Calibrator	<u>Envionics 6103</u>	Serial Number	<u>2844</u>	
NO Cal Gas Conc	<u>48.9</u> ppm	Cal Gas Expiry Date	<u>5-Dec-07</u>	
NOx Cal Gas Conc	<u>48.9</u> ppm	Cal Gas Serial #	<u>LL-50114</u>	

## DACS Information

DACS make	<u>FOCUS AP1000</u>	DACS serial No.	<u>45270</u>
-----------	---------------------	-----------------	--------------

Parameter		NO2	NOx	NO
Before	Data Slope	1.014879	1.002864	1.001207
	Data Offset	0.514905	-0.233088	-1.034415
After	Data Slope	0.997249	0.993289	0.993871
	Data Offset	1.273594	4.728337	3.981210
Channel #		8	6	7
Voltage Range		0 - 1 VDC	0 - 1 VDC	0 - 1 VDC

## Analyzer Information

Analyzer make/model	<u>API Model 200E</u>	Analyzer serial #	<u>219</u>
---------------------	-----------------------	-------------------	------------

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO offset	-0.1	mV	-2.9	mV
NOx offset	0.8	mV	21.0	mV
NO slope	2.841		1.121	
NOx slope	2.852		1.122	
R Cell Temp	50.0	Deg C	50.4	Deg C
PMT Temp	7.0	Deg C	7.1	Deg C
Azero	44.1	mV	50.7	mV
Perm Temp	40.2	Deg C	40.2	Deg C
R Cell Press	3.9	in Hg	4.3	in Hg
Sample Press	27.4	in Hg	26.3	in Hg
O3 Flow	75.0	ccm	75.0	ccm
Sample Flow	457.0	ccm	454.0	ccm

Notes: Performed Maintenance. Captured as Founds on Thursday13th and performed a full calibration on Friday the 14th. Replaced the Moly converter, cleaned the reaction chamber's mirror assy, cleaned and overhauled the orifices in reaction chamber, installed new O-rings and sintered filters...

# Calibration Report

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



## Station Information

Calibration Date: December 14, 2007 Station Location: Crescent Heights

## Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO <sub>2</sub> conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO <sub>2</sub> conc (ppb)	NOx Correction factor	NO Correction factor
zero	4997	0.00	0.0	0.0	0.0	-1.3	-1.8	-1.2	N/A	N/A
1	4997	39.94	387.7	387.7	0.0	388.4	388.1	-0.6	0.9982	0.9990
2	4997	19.96	194.5	194.5	0.0	185.5	187.8	-3.7	1.0485	1.0359
3	4997	9.98	97.4	97.4	0.0	92.6	93.8	-2.6	1.0524	1.0394
AFZ	4997	0.00	0.0	0.0	0.0	-2.1	-2.3	-2.1	0.0000	0.0000
AFS	4997	39.96	387.9	387.9	0.0	371.7	380.9	-10.8	1.0436	1.0185
								Average Correction Factor	1.0330	1.0248

As Found Concentrations NO<sub>x</sub>= 373.6 NO= 382.1 As Found Percent Change NO<sub>x</sub>= -3.7% NO= -1.5%

## GPT Calibration Data

Dilution Flow 4997 ccm Source Gas Flow 39.96 ccm

O <sub>3</sub> Setpoint (ppb)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO <sub>2</sub> conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO <sub>2</sub> conc (ppb)	NOx Correction factor	NO Correction factor	NO <sub>2</sub> Correction factor	Converter Efficiency	
0	384.6	384.0	0.7	382.5	382.3	-1.2	N/A	N/A	N/A	N/A	
300	388.0	120.6	267.4	385.8	117.3	266.9	1.0055	1.0278	1.0018	99.8%	
200	387.3	208.4	178.9	385.2	205.7	178.0	1.0056	1.0132	1.0046	99.5%	
100	388.6	306.4	82.2	386.5	304.3	80.9	1.0055	1.0070	1.0150	98.5%	
							Average Correction Factor	1.0055	1.0160	1.0071	99.3%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NOx	NO <sub>2</sub>	NO		NOx	NO <sub>2</sub>	NO	
Auto zero	0.2	-2.4	-0.6	ppb	1.9	-1.6	2.1	ppb
Auto span	432.3	418.3	8.2	ppb	267.8	261.5	6.0	ppb

Calibration Performed By: Lenin Flores



## Calibration Summary

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

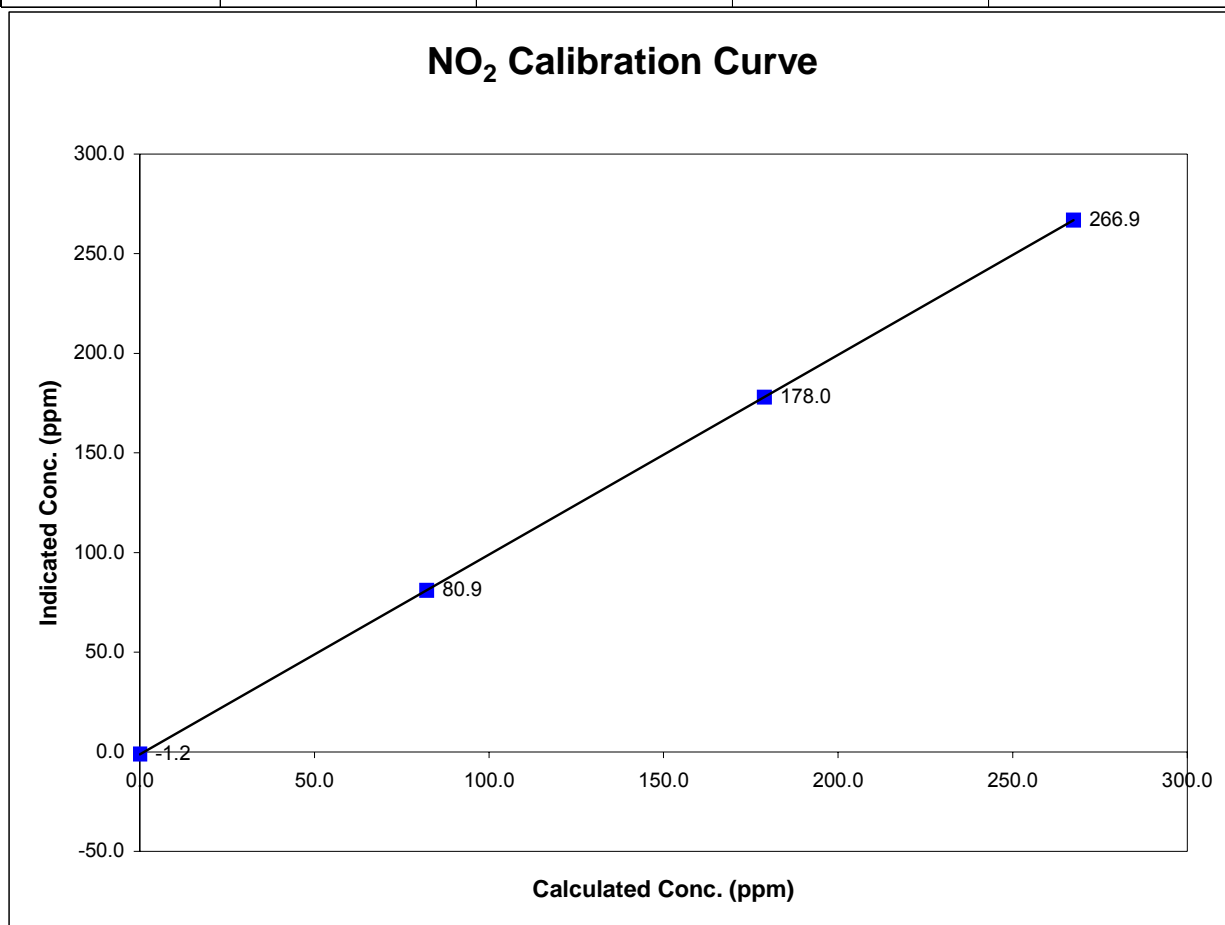


### Station Information

Calibration Date	December 14, 2007	Previous Calibration	November 20, 2007
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	8:45	End Time (MST)	14:00
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	-1.2	0.0000		
267.4	266.9	1.0018	Correlation Coefficient	0.999999
178.9	178.0	1.0046		
82.2	80.9	1.0150	Slope	0.997249
			Intercept	1.273594



## Calibration Summary

Parameter NO<sub>x</sub>  
 Air Monitoring Network Palliser Airshed



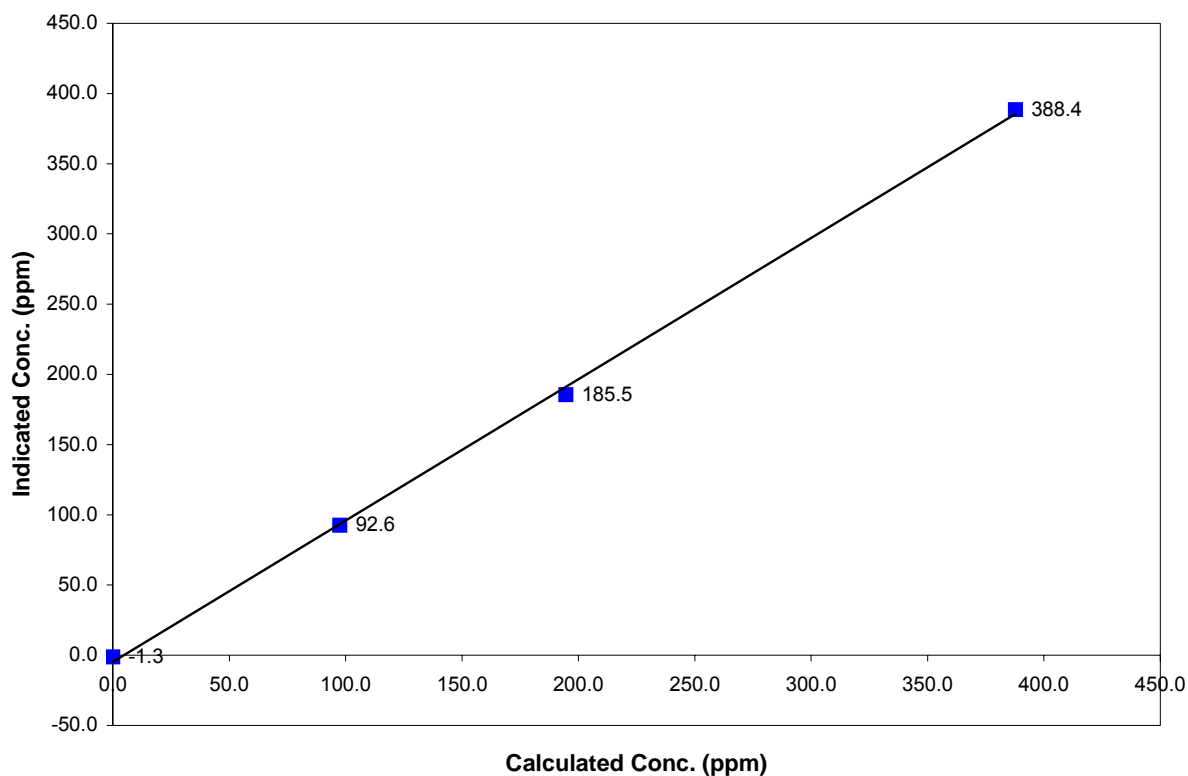
### Station Information

Calibration Date	December 14, 2007	Previous Calibration	November 20, 2007
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	8:45	End Time (MST)	14:00
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	0.0000	Correlation Coefficient	0.999382
387.7	388.4	0.9982		
194.5	185.5	1.0485		
97.4	92.6	1.0524		
			Slope	0.993289
			Intercept	4.728337

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



## Calibration Summary

Parameter NO  
 Air Monitoring Network Palliser Airshed

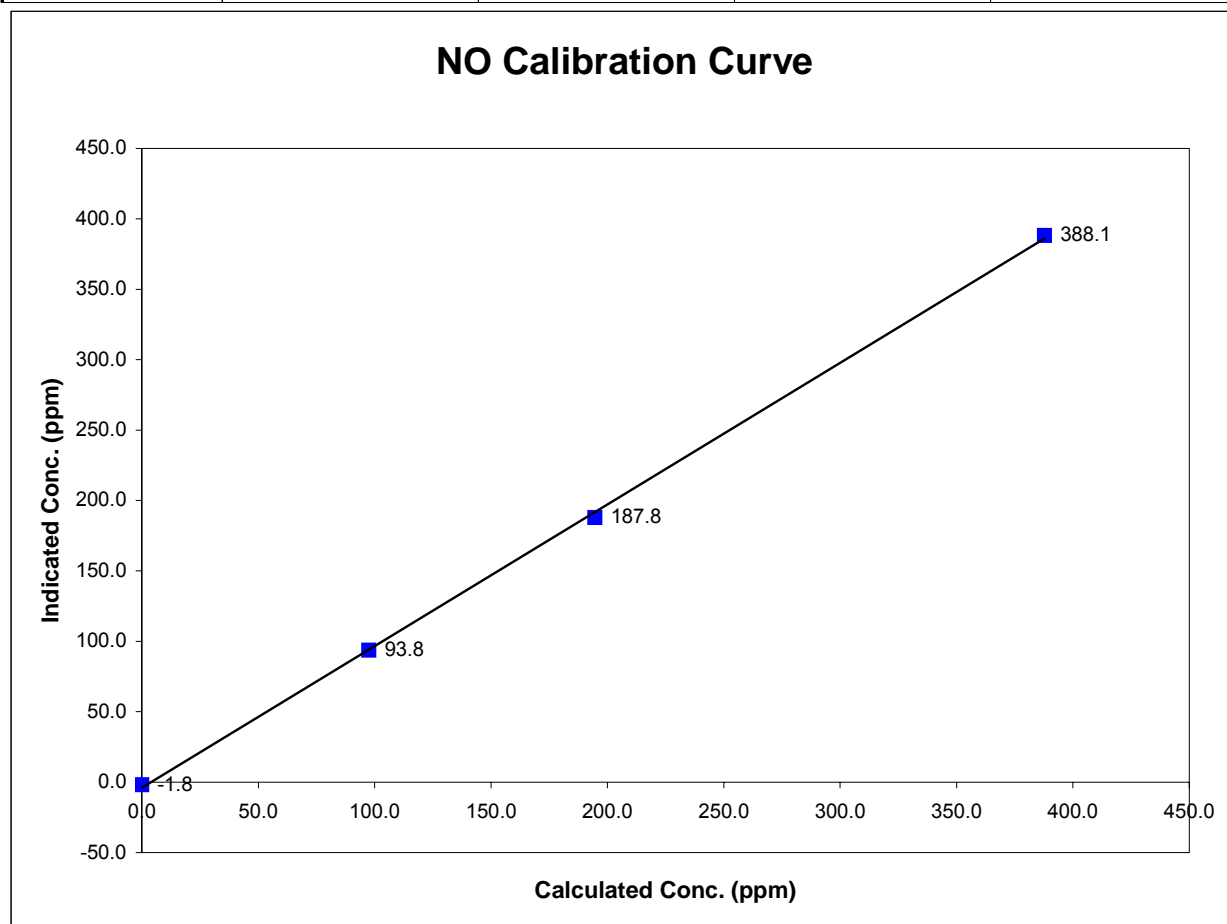


### Station Information

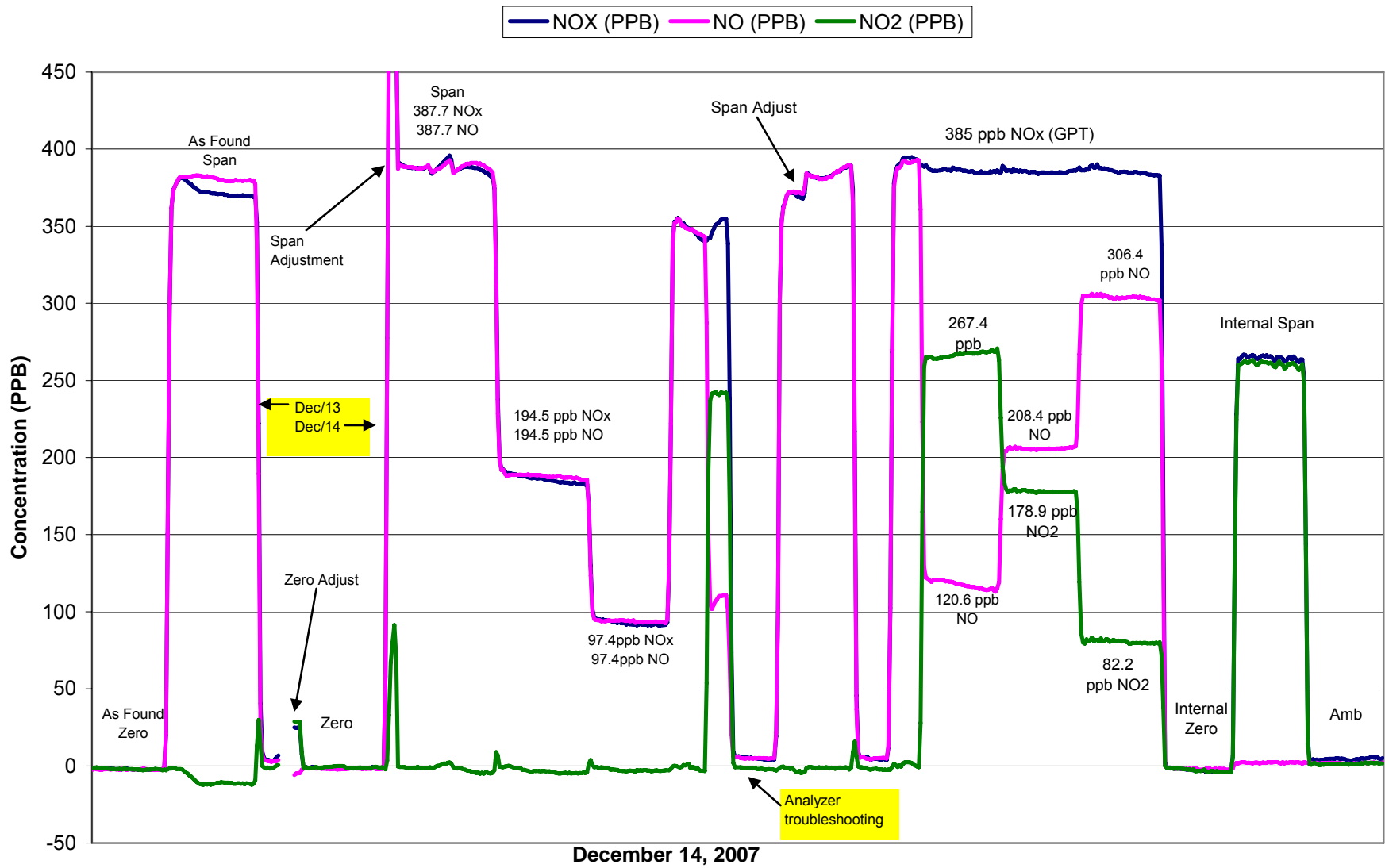
Calibration Date	December 14, 2007	Previous Calibration	November 20, 2007
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	8:45	End Time (MST)	14:00
Analyzer make	API Model 200E	Analyzer serial #	219

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-1.8	N/A	Correlation Coefficient	0.999705
387.7	388.1	0.9990		
194.5	187.8	1.0359		
97.4	93.8	1.0394		
			Slope	0.993871
			Intercept	3.981210



### NOX Calibration



# Calibration Report

Parameter THC  
 Air Monitoring Network Palliser Airshed



## Station Information

Calibration Date	December 13, 2007	Previous Calibration	November 20, 2007
Station Number	101	Station Location	Crescent Heights
Reason:	<b>Routine</b>	Install	Removal
			Other:
Start Time (MST)	12:00	End Time (MST)	16:30
Barometric Pressure	27.6 inches Hg	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	2844
Cal Gas Concentration	708 ppm CH <sub>4</sub> / 299 ppm C <sub>3</sub> H <sub>8</sub>	Cal Gas Expiry Date	1/25/2009
Cal Gas CH <sub>4</sub> equiv	1530.25 ppm	Cal Gas Cylinder #	LL-41839
DACS make	Focus AP1000	DACS serial No.	45270
DACS voltage range	0 - 10 volt	DACS channel #	9
	Before		After
Calculated slope	0.994542	Calculated slope	0.999841
Calculated intercept	-0.678299	Calculated intercept	-0.005392
Analyzer make	TEI 51C-LT	Analyzer serial #	0407505596

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
THC sample pressure	5.71	PSI	5.74	PSI
THC span counts	12340	raw	12558	raw
THC zero counts	1471	raw	1591	raw
V Bias	-326	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)
4996	0.00	0.00	0.00	N/A
4996	79.86	24.07	24.09	0.9993
4996	39.94	12.14	12.12	1.0015
4996	19.97	6.09	6.12	0.9957
4996	0.00	0.00	0.33	As Found Zero
4996	79.86	24.07	24.48	As Found Span
Average Correction Factor				0.9988

Calculated value of As Found Response: 23.337 ppm      Percent Change of As Found: 3.1%

	before calibration		after calibration	
Auto zero	-0.06	ppm	0.00	ppm
Auto span	18.57	ppm	21.07	ppm

Notes: Adjusted Zero and Span. Increased Zero Air puppy pressure to 40PSI  
After increasing the Zero Air pressure, the response was less noisy...

Calibration Performed By: Lenin Flores

## Calibration Summary

Parameter THC  
 Air Monitoring Network Palliser Airshed

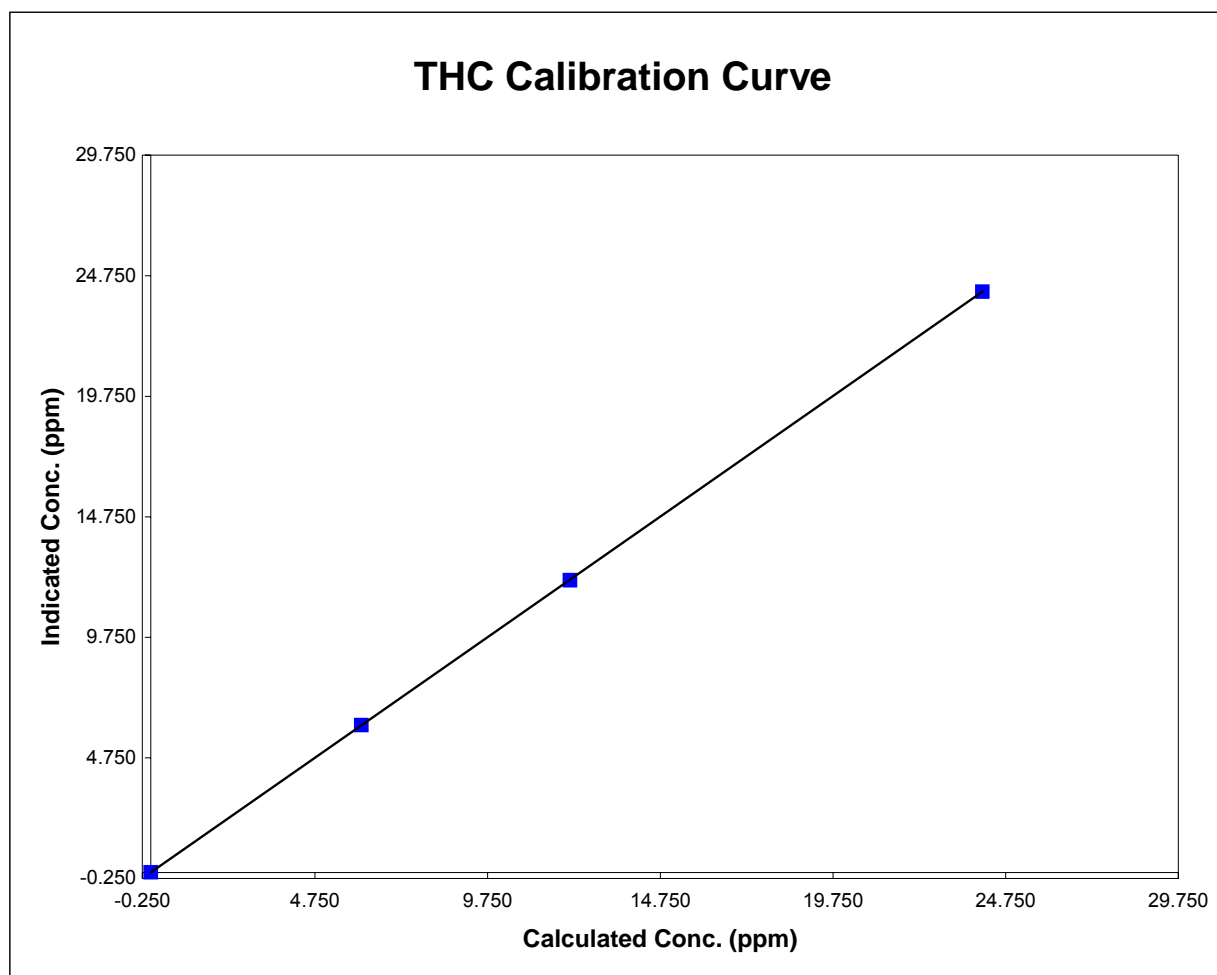


### Station Information

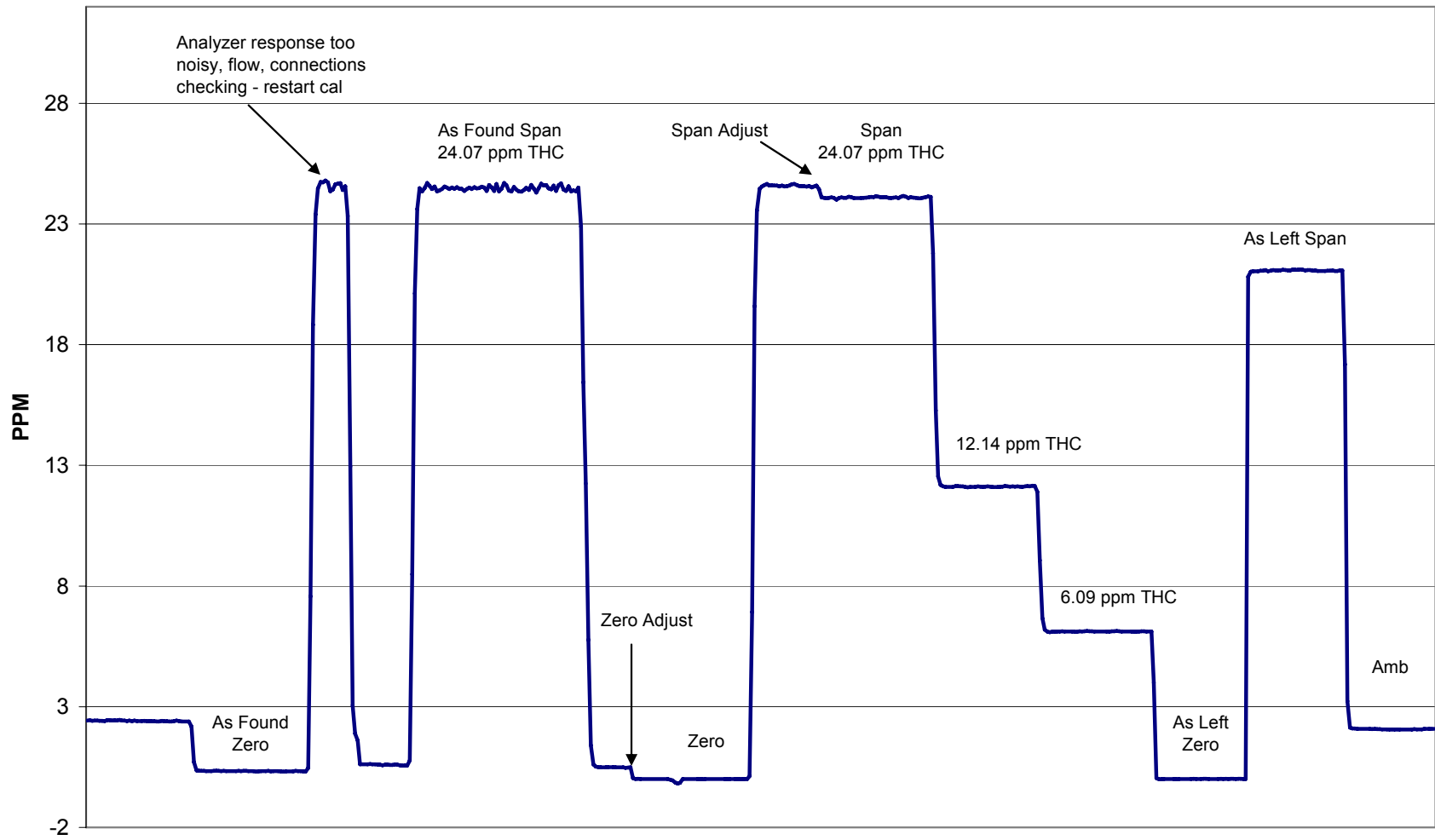
Calibration Date	December 13, 2007	Previous Calibration	November 20, 2007
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	12:00	End Time (MST)	16:30
Analyzer make/model	TEI 51C-LT	Analyzer serial #	0407505596

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.003	N/A		
24.075	24.092	0.9993	Correlation Coefficient	0.999996
12.135	12.117	1.0015		
6.092	6.118	0.9957	Slope	0.999841
			Intercept	-0.005392



### THC Calibration



December 13, 2007

# Calibration Report



Parameter CO  
 Air Monitoring Network Palliser

### Station Information

Calibration Date	December 13, 2007	Previous Calibration	November 20, 2007
Station Number	101	Station Location	Crescent Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			Other: <input type="text"/>
Start Time (MST)	16:40	End Time (MST)	19:30
Barometric Pressure	27.40 in Hg	Station Temperature	22.0 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	1.026021	Calculated slope	0.978722
Calculated intercept	-0.274124	Calculated intercept	-0.502874
Analyzer make	TEI Model 48C	Analyzer serial #	436609887

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO coefficient	1.080		1.080	
CO bkg setting	1.204		1.202	
Lamp ratio	1.142139		1.141572	
Lamp intensity	199157	Hz	199242	Hz
Sample Flow	1.011	LPM	1.011	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	0.39	N/A
3996	49.95	37.01	38.27	0.9670
3996	29.95	22.31	23.35	0.9554
3996	10.00	7.48	8.29	0.9023
3996	0.00	0.00	0.39	0.0000
3996	49.97	37.03	38.27	0.9675
Average Correction Factor				0.9415

Calculated value of As Found Response: 38.595 ppm      Percent Change of As Found: -4.2%

	before calibration		after calibration	
Auto zero	-0.07	ppm	-0.11	ppm
Auto span	19.20	ppm	19.35	ppm

Notes: No adjustments made

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Calibration Performed By: Lenin Flores



# Calibration Summary

Parameter CO  
 Air Monitoring Network Palliser

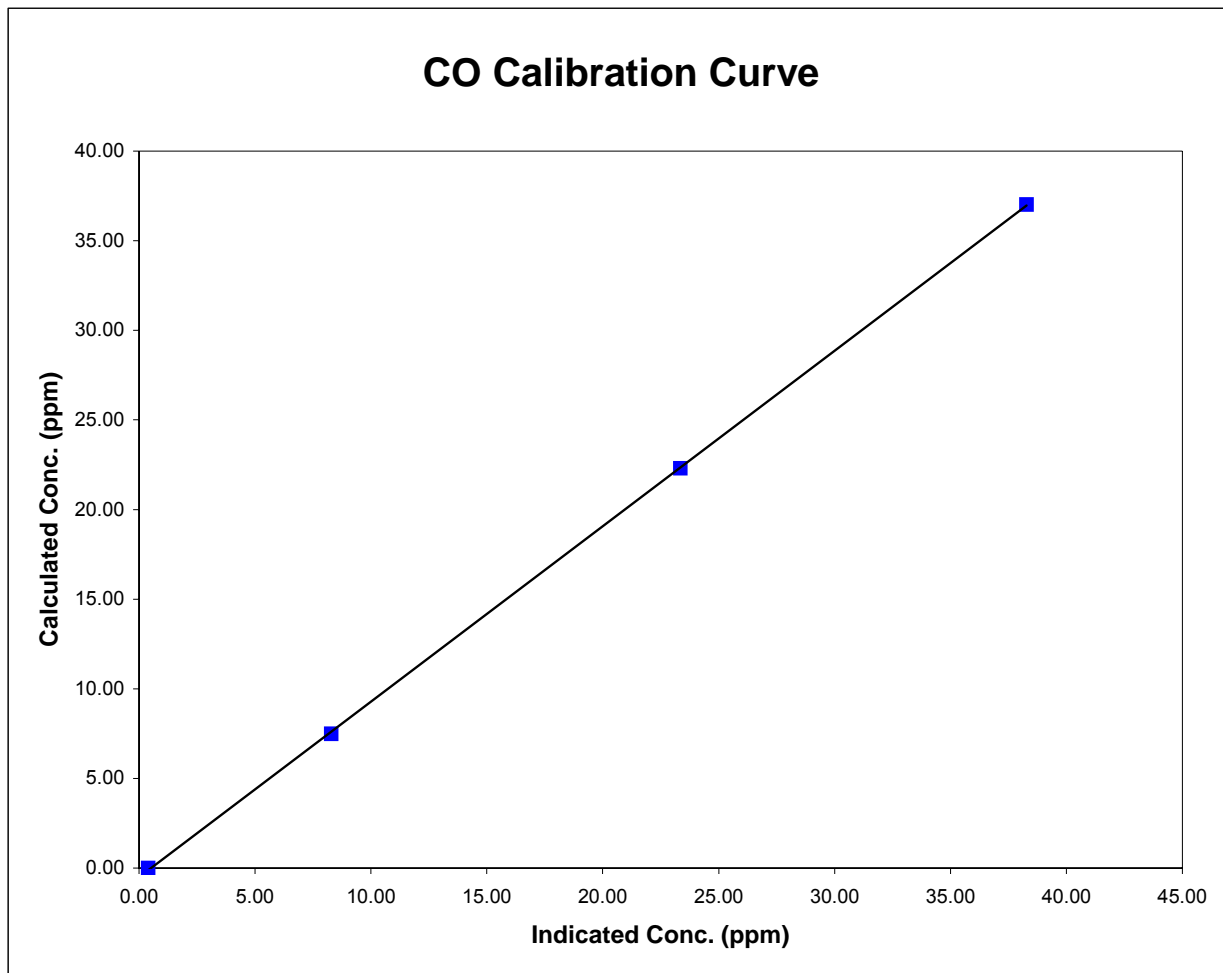


### Station Information

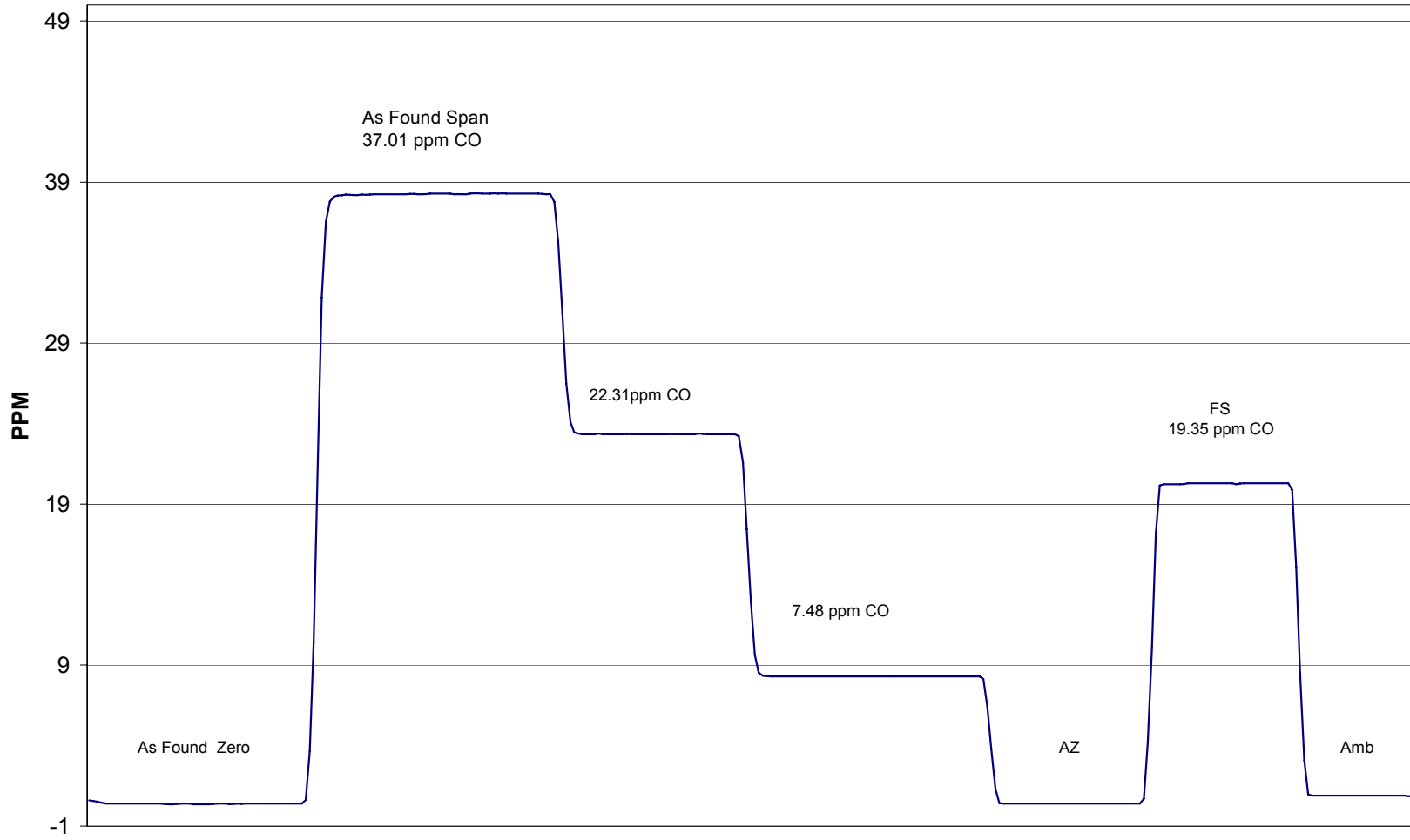
Calibration Date	December 13, 2007	Previous Calibration	November 20, 2007
Station Number	101	Station Location	Crescent Heights
Start Time (MST)	16:40	End Time (MST)	19:30
Analyzer make/model	TEI Model 48C	Analyzer serial #	436609887

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.00	0.39	N/A		
37.01	38.27	0.9670	Correlation Coefficient	0.999955
22.31	23.35	0.9554		
7.48	8.29	0.9023	Slope	0.978722
			Intercept	-0.502874



### CO Calibration



December 13, 2007

# Calibration Report

Parameter PM2.5  
 Air Monitoring Network Palliser Airshed



## Station Information

Calibration Date	December 14, 2007	Previous Calibration	November 20, 2007
Station Number	101	Station Location	Crescent Heights
Reason:	<b>Routine</b>	Install	Removal
			Other:
Start Time (MST)	11:50	End Time (MST)	14:00
Barometric Pressure	0.925 ATM	Station Temperature	20.0 Deg C
Flow Calibrator	BIOS Drycal Definer 220	Serial Number	111860
DACS make	AP 1000	DACS serial No.	45269
DACS voltage range	0 - 1 V	DACS channel #	15
	Before		After
DACS Scale High	450	DACS slope	450
DACS Scale Low	-50	DACS intercept	-50

## Analyzer Information

Analyzer make	R&P	Control Unit serial #	140AB237960110
Analyzer model	TEOM 1400AB	Sensor Unit serial #	140AB237960110

	before		after	
Main Flow Set Point	3.000	SLPM	3.000	SLPM
Aux Flow Set Point	13.67	SLPM	13.67	SLPM
Filter Load	37%	%	35%	%
Ko Factor	NA		NA	
Temperature	3.5	Deg C	3.7	Deg C
Pressure	0.925	ATM	0.925	ATM

## Calibration Data

Parameter	Set Point	TEOM Reading (as found)	Tolerance	TEOM Reading (after adjustments)
zero flow - main	0.0	0.00	0.00	0.00
zero flow - auxillary	0.0	-0.02	0.01	-0.02
flow recovery - main	45 - 60 Seconds	40.0	45 - 60 Seconds	40.0
flow recovery - aux	46 - 60 Seconds	49.0	46 - 60 Seconds	49.0
Temperature	measured	2.3	+/- 1.0 Deg C	2.3
Pressure	measured	0.917	+/- 1.5% ΔATM	0.917
Total Flow	16.67 SLPM	17.05		17.05
Auxiliary flow	13.67 SLPM	14.00	+/- 1.0 SLPM	14.00
Main flow	3.0 SLPM	2.990	+/- 0.2 SLPM	2.990
Leak Check - main	0.0	0.01	<0.15 SLPM	0.01
Leak Check - aux	0.0	-0.01	<0.15 SLPM	-0.01
Ko Factor (w/o filter)	measured	NA	filter weight (g)	NA
Ko Factor (w/ filter)	measured	NA	% Ko difference	NA

Notes: No adjustments made...

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Calibration Performed By: Lenin Flores

# Calibration Report



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

### Station Information

Calibration Date	December 17, 2007	Previous Calibration	November 19, 2007
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)	14:05	End Time (MST)	16:20
Barometric Pressure	27.5 inches Hg	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	2844
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA

DACS make	Focus AP1000	DACS serial No.	45265
DACS voltage range	0 - 1 volt	DACS channel #	7
	Before		After
Calculated slope	0.980019	Calculated slope	0.940746
Calculated intercept	2.803746	Calculated intercept	-0.992664

Analyzer make                      API Model 400E                      Analyzer serial #                      331

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Offset	-11	ppb	-11	ppb
Slope	1.038		1.038	
Lamp measure	4479.1	mV	4479.1	mV
Lamp Reference	4478.9	mV	4478.9	mV
Pressure	26.1	inches Hg	26.1	inches Hg
Sample Flow	670	ccm	670	ccm
Sample temp	34.8	Deg C	34.8	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	0.5	N/A
4996	300.0	267.4	285.1	0.9379
4996	200.0	178.9	191.1	0.9361
4996	100.0	82.2	89.3	0.9202
4996	0.0	0.0	0.5	As Found Zero
4996	300.0	267.4	285.1	As Found Span
Average Correction Factor				0.9314

Calculated value of As Found Response: 281.7 ppm      Percent Change of As Found: 5.4%

	before calibration		after calibration	
Auto zero	-0.2	ppb	0.3	ppb
Auto span	393.0	ppb	425.7	ppb

Notes:                      No adjustents were made...  
                     Final Zero and Span were triggered manually...  
                    

Calibration Performed By:                      Lenin Flores, Travis Mehrer

## Calibration Summary

Parameter                                                                 
 Air Monitoring Network                                                               

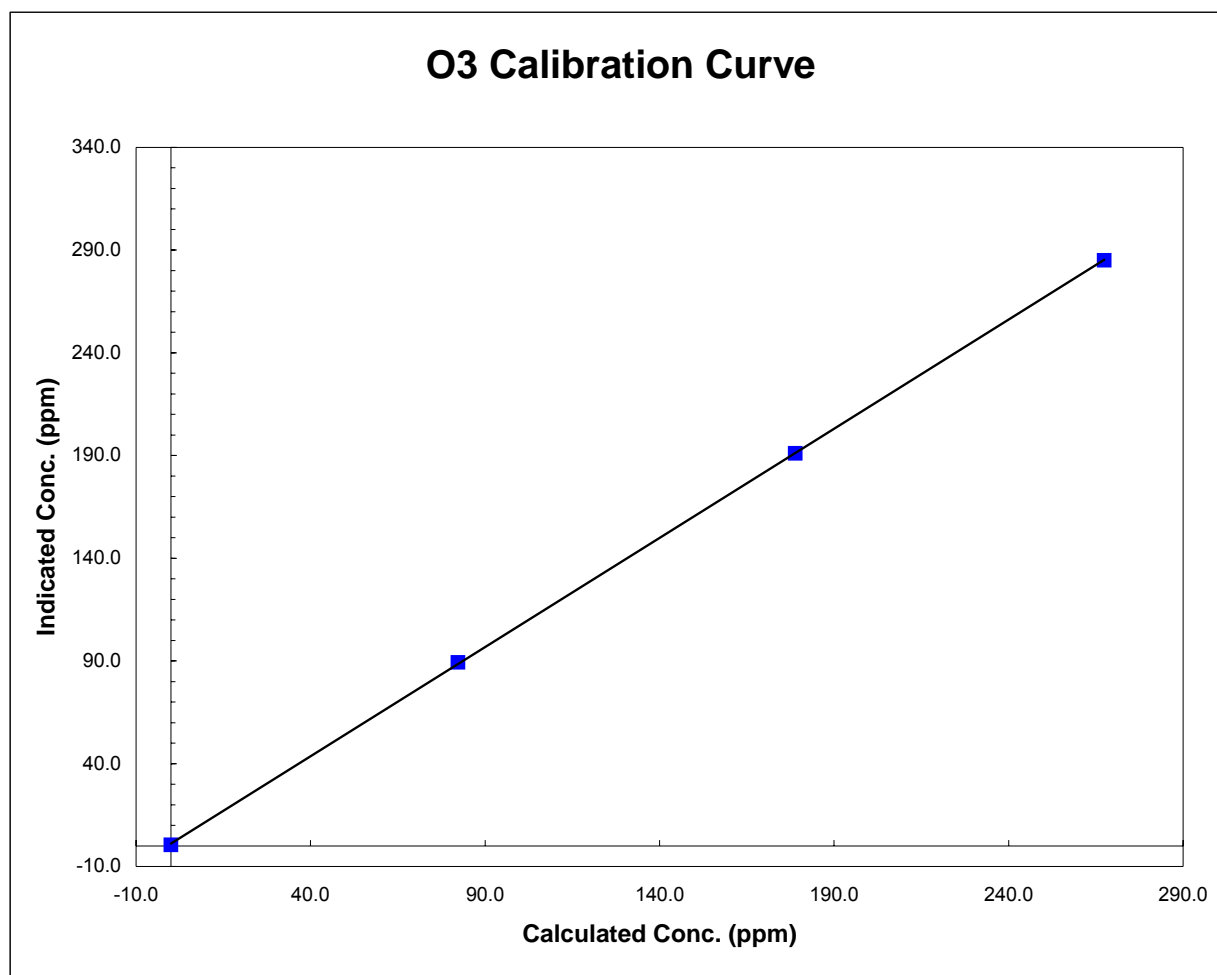


### Station Information

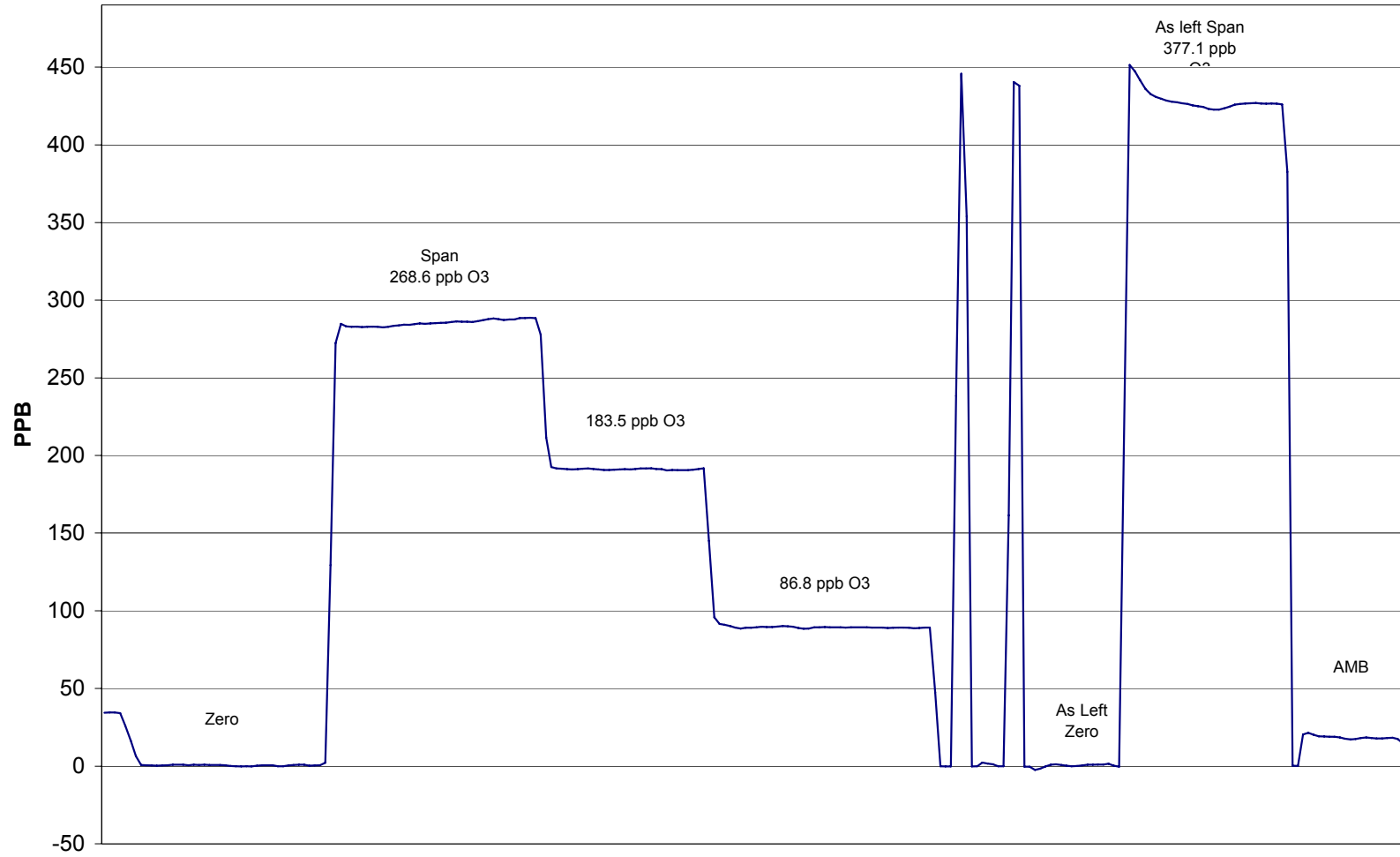
Calibration Date	December 17, 2007	Previous Calibration	November 19, 2007
Station Number	110	Station Location	Rover - Brooks
Start Time (MST)	14:05	End Time (MST)	16:20
Analyzer make/model	API Model 400E	Analyzer serial #	331

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
267.4	285.1	0.9379		
178.9	191.1	0.9361	Correlation Coefficient	0.999974
82.2	89.3	0.9202		
0.0	0.5	N/A	Slope	0.940746
			Intercept	-0.992664



### O3 Calibration



December 17, 2007

# Calibration Report



Parameter SO2  
 Air Monitoring Network PAS

## Station Information

Calibration Date	December 17, 2007	Previous Calibration	November 21, 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)	11:00	End Time (MST)	13:45
Barometric Pressure	27.80 inches Hg	Station Temperature	20.0 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	0.977269	Calculated slope	1.024419
Calculated intercept	3.612048	Calculated intercept	2.784667
Analyzer make	TEI Model 43A	Analyzer serial #	NA

	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	22	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	1.3	N/A
4996	39.95	399.0	389.4	1.0248
4996	19.97	200.2	188.5	1.0621
4996	9.96	100.0	92.6	1.0806
4996	0.00	0.0	-2.6	As found zero
4996	39.94	398.9	389.4	As found span
Average Correction Factor				1.0558

Calculated value of As Found Response: 386.624 ppm      Percent Change of As Found: 3.1%

	before calibration		after calibration	
Auto zero	-7.0	ppm	-4.5	ppm
Auto span	203.9	ppm	202.1	ppm

Notes: No adjustments were made...  
AIC triggered manually

Calibration Performed By: Lenin Flores, Travis Meherer

# Calibration Summary

Parameter SO2  
 Air Monitoring Network PAS

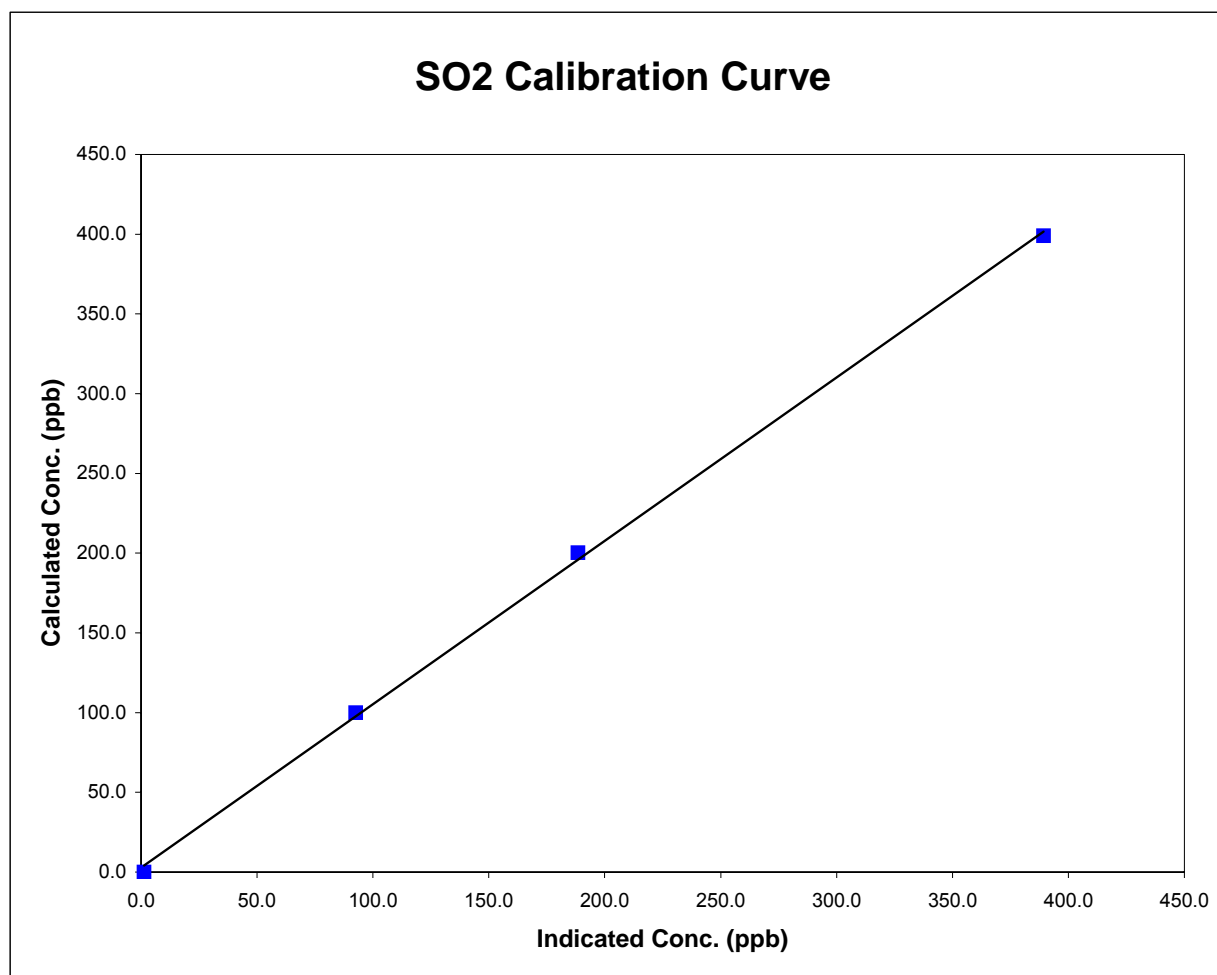


### Station Information

Calibration Date	December 17, 2007	Previous Calibration	November 21, 2007
Station Number	110	Station Location	Rover - Brooks
Start Time (MST)	11:00	End Time (MST)	13:45
Analyzer make/model	TEI Model 43A	Analyzer serial #	NA

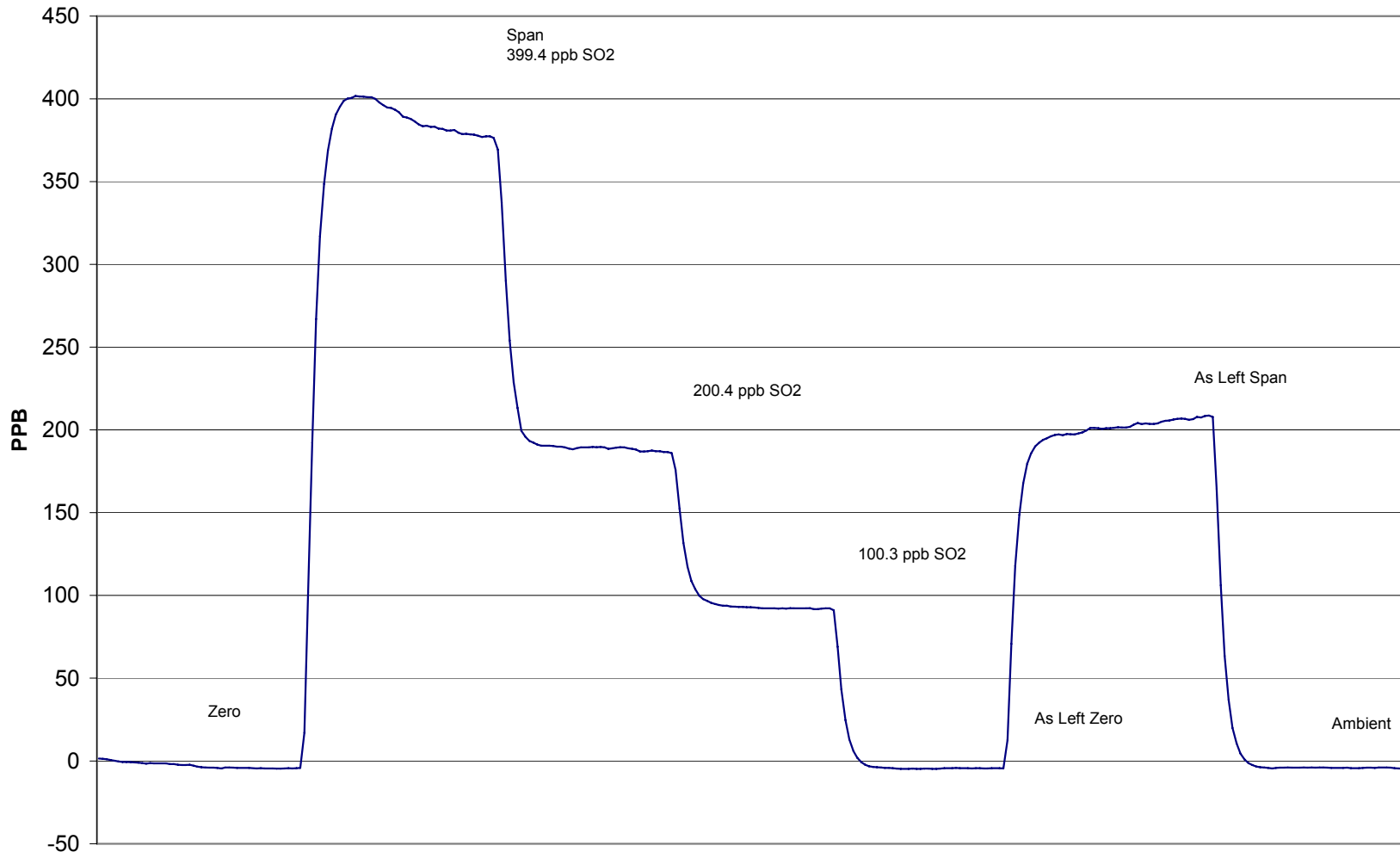
### Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.3	N/A		
399.0	389.4	1.0248	Correlation Coefficient	0.999447
200.2	188.5	1.0621		
100.0	92.6	1.0806	Slope	1.024419
			Intercept	2.784667





### SO2 Calibration



December 17, 2007

# Calibration Report

Parameter H2S  
 Air Monitoring Network PAS



## Station Information

Calibration Date	December 17, 2007	Previous Calibration	November 21, 2007
Station Number	110	Station Location	Brooks Rover
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
Other:			
Start Time (MST)	12:23	End Time (MST)	15:13
Barometric Pressure	27.8 inches Hg	Station Temperature	20.0 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
	Before		After
DACS Scale High	100	DACS slope	100
DACS Scale Low	0	DACS intercept	0
Calculated slope	0.961186	Calculated slope	0.978898
Calculated intercept	-0.442996	Calculated intercept	-0.792040
Analyzer make	TEI Model 43A	Analyzer serial #	43A-25575-221

	before		after	
Concentration range	0 - 100	ppb	0 - 100	ppb
H2S zero pot	910		910	
H2S span pot	540		540	
Analyzer flow	0.900	LPM	0.900	LPM
UV Lamp voltage	928	V	933	V
Vacuum	17.5	in Hg	22.0	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	0.5	N/A
4996	79.87	79.0	81.3	0.9719
4996	39.94	39.8	41.9	0.9498
4996	9.95	10.0	11.1	0.9018
4996	0.00	0.0	0.5	As found zero
4996	79.86	79.0	81.3	As found span
Average Correction Factor				0.9412

Calculated value of As Found Response: 77.16 ppm      Percent Change of As Found: 2.3%

	before calibration		after calibration	
Auto zero	1.3	ppm	0.7	ppm
Auto span	36.1	ppm	42.8	ppm

Notes: No adjustments were made...  
AIC triggered manually...

Calibration Performed By: Lenin Flores, Travis Mehrer



### H2S Calibration

