



# Palliser Airshed Society

## Ambient Air Monitoring Network Summary

### August 2004

Prepared By:  
**FOCUS**  
AIR QUALITY MONITORING

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Edmonton, Alberta, T5K 2J6

**Attention: Director of Monitoring and Evaluation**

**RE: Palliser Airshed Society (PAS) Ambient Air Monitoring Report – August 2004**

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Enclosed is the PAS Ambient Monitoring Report for the month of **August 2004**.

Please note that this report has been prepared in partial fulfillment of the City of Medicine Hat's air monitoring requirement as well as all members of the Palliser Airshed Society.

**Continuous Monitoring – Crescent Heights**

Included in this report are the; monthly sampling table, detailed hourly average reports and multipoint calibration reports of all instruments. The measured ambient air quality was within the Provincial and Federal guidelines with no exceedences recorded. Operational time of all instruments was above 90% uptime for the month of August. There were no significant events leading to emergency response for the month of August.

The following is a summary of the monthly averages found during this month of sampling:

- Monthly average concentrations of NO<sub>2</sub> was 6.7 ppb
- Monthly average concentrations for O<sub>3</sub> was 26.0 ppb
- Monthly average concentrations for THC was 1.87 ppm
- Monthly average concentrations for PM<sub>2.5</sub> was 6.3 µg/m<sup>3</sup>

**Passive Monitoring – Six Stations throughout the PAS zone:**

There were no exceedences of the Provincial Air Quality guidelines.

- Monthly average concentrations for SO<sub>2</sub> passives averaged 0.2 ppb
- Monthly average concentrations for NO<sub>2</sub> passives ranged from 4.2 ppb to 7.3 ppb
- Monthly average concentrations for O<sub>3</sub> passives ranged from 25.5 ppb to 40.3 ppb

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

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## August 2004 Monthly Overall Summary Report

### Ambient Air Quality Data

Aug-2004		Palliser Airshed Society				Maximum Recorded Values						Operational Time (%)	
Pollutant (units)	Guidelines		Station	Monthly Average	Exceedence		1-hr			24-hr			
	1-hr	24-hr			1-hr	24-hr	Conc	Day	WSPD (km/hr)	WDIR (Sector)	Conc		Day
NO (ppb)			Crescent Heights	2.3	0	0	75.1	Aug-09	2.1	SSW	7.5	Aug-09	99.9%
NO <sub>2</sub> (ppb)	212	106	Crescent Heights	6.7	0	0	38.4	Aug-14	4.7	S	10.8	Aug-10	99.9%
NO <sub>x</sub> (ppb)			Crescent Heights	8.9	0	0	88.6	Aug-09	2.1	SSW	16.1	Aug-10	99.9%
O <sub>3</sub> (ppb)	82		Crescent Heights	26.0	0	0	66.6	Aug-06	7.7	N	40.5	Aug-05	99.9%
THC (ppm)			Crescent Heights	1.87	0	0	2.63	Aug-13	10.4	E	2.04	Aug-14	99.9%
PM <sub>2.5</sub> (µg/m <sup>3</sup> )		30 <sup>a</sup>	Crescent Heights	6.3	0	0	45.9	Aug-19	12.1	NNE	20.7	Aug-19	96.9%
RH (%)			Crescent Heights	64.8									99.9%
SR (W/m <sup>2</sup> )			Crescent Heights	211.3									99.9%
Temp (°C)			Crescent Heights	18.5									99.9%
WSPD v (km/hr)			Crescent Heights	0.8									99.9%
WSPD s (km/hr)			Crescent Heights	9.3									99.9%
WDIR (Deg)			Crescent Heights	NNE*									99.9%

Note: <sup>a</sup> the 24-hr Canada Wide Standard level is considered as an absolute value  
 \* Wind Direction is the predominate direction for the Month



# Continuous Monitoring

## Ambient Air Monitoring Network

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### Crescent Heights Station

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#### General Station Issues

No unusual activities were noted during station operation for the month of August

Parameter	Make	Model	Units	Notes
Ozone	Teledyne - API	400E	ppb	No operational problems observed
Nitrogen Dioxide	Teledyne - API	200E	ppb	No operational problems observed
Total				
Hydrocarbons	Bendix	400A	ppm	No operational problems observed
PM 2.5	R&P TEOM	1400ab	µg/m <sup>3</sup>	No operational problems observed
Wind Speed	Met One	010C	kph	No operational problems observed
Wind Direction	Met One	020C	Deg	No operational problems observed
Ambient				
Temperature	Met One	083D	DegC	No operational problems observed
Relative				
Humidity	Met One	083D	%	No operational problems observed
Solar Radiation	Met One	096-1	W/m <sup>2</sup>	No operational problems observed
Data Acquisition				
System	Titan Logix	AP1000		No operational problems observed



### PAS - Crescent Heights Oxides of Nitrogen Monthly Summary

Station: Crescent Heights

#### HOURLY AVERAGE TABLE

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

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004

##### Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	38 ppb 14-Aug 22:00 23:00
Maximum 24-hr Average:	11 ppb 10-Aug

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

AIC Time:	32 hrs	Operational Time:	707 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	99.9%					
Percentile	99	95	75	50	25	5	1	Average
	25	18	9	5	3	2	1	6.7 ppb

##### Status Flag Characters

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

##### Day Mountain Standard Time

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum	
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Aug-04	4	4	4	4	4	6	5	8	4	5	4	2	2	2	2	1	1	A	9	6	6	5	4	4.1	9.1		
2-Aug-04	3	3	3	4	4	4	4	3	2	2	3	3	3	3	2	2	1	A	9	6	5	4	3	2	3.4	9.1	
3-Aug-04	3	3	4	4	3	6	4	3	3	2	2	2	5	8	8	7	A	17	14	10	5	3	3	3	5.4	17.4	
4-Aug-04	3	2	3	4	4	3	3	6	4	4	3	4	2	2	3	A	10	6	3	3	5	5	6	5	4.0	10.2	
5-Aug-04	5	4	5	8	8	13	12	9	5	3	3	2	2	2	A	10	5	4	6	5	16	7	7	6	6.3	16.0	
6-Aug-04	7	13	6	8	7	8	8	5	7	5	4	4	5	A	12	7	4	8	6	5	7	19	28	20	8.9	28.2	
7-Aug-04	23	10	10	3	8	6	8	9	10	7	6	4	4	A	12	12	7	6	6	3	3	5	5	3	7.2	23.0	
8-Aug-04	3	3	2	3	3	4	4	4	3	2	2	A	10	5	3	2	2	2	2	3	5	10	6	6	3.9	10.2	
9-Aug-04	6	7	6	8	10	9	14	12	6	3	A	8	5	3	3	3	3	3	7	15	14	19	13	15	8.3	19.4	
10-Aug-04	6	8	12	9	11	11	11	14	7	A	11	6	5	4	4	4	4	3	4	10	19	29	31	24	10.8	31.5	
11-Aug-04	12	8	8	11	16	16	12	8	A	18	9	7	4	2	3	2	2	2	4	7	19	23	26	18	10.3	25.8	
12-Aug-04	24	15	17	14	12	17	16	A	27	13	5	3	5	4	3	3	2	2	2	3	2	3	5	3	8.7	27.0	
13-Aug-04	5	8	9	10	6	14	A	14	8	C	C	C	C	3	1	1	1	2	2	3	2	4	5	5	5.4	14.4	
14-Aug-04	12	10	12	15	18	16	A	12	11	9	10	9	4	3	3	4	4	3	3	6	7	14	38	25	10.8	38.4	
15-Aug-04	22	11	8	8	8	A	10	6	4	3	2	2	2	2	2	2	2	2	3	6	7	7	10	12	6.0	21.5	
16-Aug-04	5	5	12	11	A	20	13	11	11	10	9	7	3	2	2	1	1	2	2	6	5	8	12	11	7.4	20.3	
17-Aug-04	11	10	14	A	25	19	19	11	9	4	9	7	6	2	3	3	2	2	3	4	4	3	3	6	7.8	25.0	
18-Aug-04	3	3	A	10	8	9	8	7	5	4	2	4	9	5	5	3	5	6	6	12	22	18	16	11	7.9	21.6	
19-Aug-04	8	A	25	13	22	22	9	8	6	7	6	4	3	2	2	2	2	3	3	6	6	6	4	4	7.5	25.0	
20-Aug-04	A	13	7	7	7	6	11	11	15	9	5	3	4	3	2	3	3	4	14	20	9	13	20	A	8.6	20.1	
21-Aug-04	11	6	6	10	6	19	8	7	8	6	5	4	3	2	2	2	1	1	2	3	4	1	A	8	5.5	19.3	
22-Aug-04	3	3	2	1	2	2	2	1	1	1	1	1	1	1	1	2	2	3	4	5	3	4	A	9	5	2.6	8.7
23-Aug-04	5	4	4	3	5	3	5	4	4	4	4	4	4	3	2	2	2	2	2	4	A	9	4	4	3.8	9.1	
24-Aug-04	5	7	6	5	4	7	7	6	6	3	3	4	2	4	7	5	8	5	6	A	15	7	5	7	5.8	14.6	
25-Aug-04	4	6	5	4	7	4	6	5	3	4	6	2	2	2	5	15	15	15	A	16	10	10	6	5	6.9	16.0	
26-Aug-04	3	3	5	7	10	13	14	8	7	6	5	3	2	1	1	1	1	A	9	15	15	8	8	6	6.7	15.3	
27-Aug-04	P	3	5	9	6	10	9	13	6	1	1	1	0	0	0	1	A	9	8	11	9	10	8	5	5.7	12.6	
28-Aug-04	3	2	3	3	3	5	7	4	3	6	5	3	3	2	3	A	9	4	6	4	16	18	10	18	6.1	18.4	
29-Aug-04	12	10	10	5	4	7	9	7	8	6	3	2	1	1	A	8	4	4	5	4	6	7	12	7	6.2	12.5	
30-Aug-04	3	4	3	5	4	6	9	9	5	8	5	4	4	A	10	5	5	5	5	10	13	17	9	3	6.6	16.8	
31-Aug-04	3	2	2	5	8	12	8	8	7	9	4	3	A	11	7	7	7	12	21	25	15	10	9	7	8.8	24.7	
Hourly Avg	7.5	6.4	7.2	7.0	8.1	9.9	8.8	7.8	6.7	5.7	4.6	4.0	3.6	3.3	4.0	4.0	4.1	4.8	5.8	7.8	9.2	10.0	10.8	8.5			
Hourly Max	23.6	14.9	25.0	14.8	25.0	21.6	18.7	14.0	27.0	17.9	11.0	9.3	10.2	12.2	12.4	14.8	15.2	17.4	21.2	24.7	21.6	29.3	38.4	25.1			

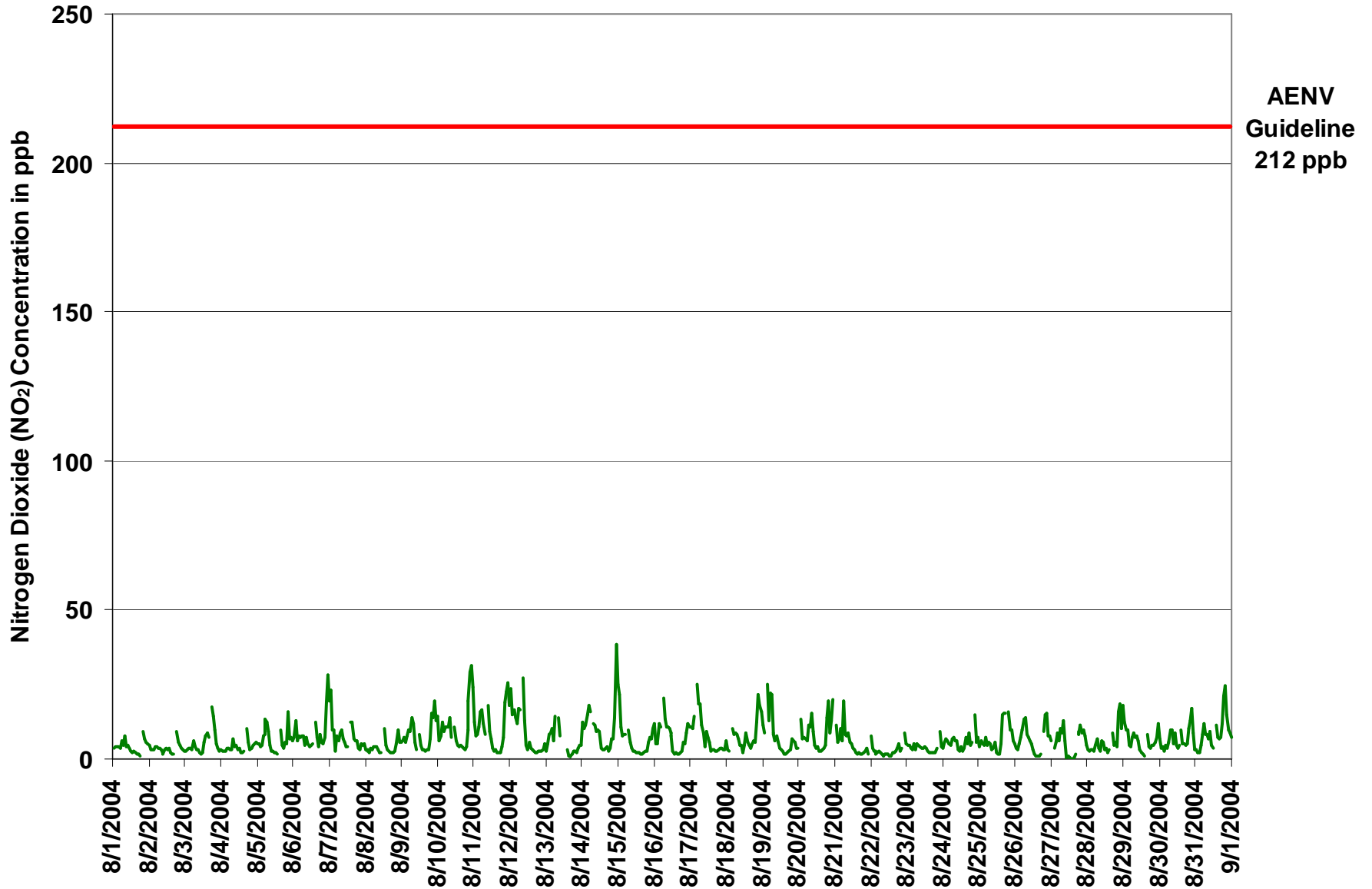


Figure 1. PAS - Crescent Heights Nitrogen Dioxide 1-hr Average Monthly Trend



Station: Crescent Heights

### HOURLY MAXIMUM TABLE

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

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004  
Summary

Maximum 1-hr Value:	58.0	ppb	19-Aug	2:00 3:00
Maximum 24-hr Value:	19.2	ppb	20-Aug	

AIC Time:	32 hrs	Operational Time:	707 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	99.9%					
Percentile	99	95	75	50	25	5	1	Average
	43	32	16	9	5	3	2	12.0 ppb

#### Status Flag Characters

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum
	Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00		
1-Aug-04	5	5	6	5	7	10	11	14	6	6	5	4	4	3	3	3	2	3	A	15	7	7	7	6	6.2	14.6
2-Aug-04	4	4	5	5	6	4	5	4	3	3	7	6	4	17	4	4	2	A	14	7	5	5	4	3	5.4	17.4
3-Aug-04	3	4	4	4	5	9	7	4	5	4	3	5	21	16	27	38	A	25	19	15	6	5	4	5	10.3	38.1
4-Aug-04	3	3	4	5	6	4	6	10	6	53	4	24	3	4	4	A	17	9	4	5	6	7	7	7	8.8	53.2
5-Aug-04	7	10	8	13	12	23	18	18	9	3	3	3	3	3	A	17	6	7	8	7	43	8	9	9	10.7	43.0
6-Aug-04	11	38	12	11	29	20	12	9	18	9	5	17	9	A	20	8	5	14	9	6	15	27	36	30	16.1	38.0
7-Aug-04	38	17	19	6	33	17	15	18	26	16	14	8	A	17	20	10	8	10	5	4	9	9	8	4	14.4	38.4
8-Aug-04	3	4	3	4	4	5	6	5	4	3	3	A	16	7	4	8	3	3	3	4	13	14	8	8	5.8	16.0
9-Aug-04	9	9	8	14	11	10	32	13	11	3	A	15	6	4	5	3	4	5	16	20	26	24	17	19	12.4	31.7
10-Aug-04	10	10	16	11	12	12	13	32	22	A	22	8	7	6	12	5	5	5	6	22	37	36	36	30	16.3	36.5
11-Aug-04	26	19	11	17	30	26	19	11	A	24	15	9	7	4	4	3	3	3	17	18	27	42	30	44	17.7	43.7
12-Aug-04	49	22	29	20	18	21	38	A	31	15	10	5	20	8	5	4	3	3	3	3	3	8	8	4	14.2	48.6
13-Aug-04	7	14	12	15	8	23	A	21	10	C	C	C	C	7	2	2	2	3	4	4	4	6	6	11	8.4	22.5
14-Aug-04	16	12	16	18	29	18	A	22	14	15	15	16	6	4	5	5	5	4	6	11	9	32	50	41	16.0	50.1
15-Aug-04	31	17	9	10	10	A	15	7	6	4	4	3	3	3	3	3	7	4	6	9	10	15	13	14	9.0	31.4
16-Aug-04	7	11	15	14	A	29	27	14	23	14	13	11	4	3	4	2	2	3	4	9	15	14	15	17	11.7	28.9
17-Aug-04	31	20	30	A	34	25	27	31	16	19	42	13	16	5	6	6	4	3	4	5	6	5	4	15	15.9	42.2
18-Aug-04	4	4	A	17	10	15	16	12	6	9	5	8	18	8	22	7	29	10	11	16	34	24	21	28	14.5	33.7
19-Aug-04	11	A	58	16	26	45	14	23	8	20	9	6	4	3	2	2	3	4	5	12	12	9	6	6	13.2	58.0
20-Aug-04	A	21	9	15	8	14	15	13	27	29	38	8	43	20	4	4	7	13	36	26	17	28	28	A	19.2	42.8
21-Aug-04	20	10	19	22	28	32	13	11	12	8	10	6	5	3	4	4	2	3	4	5	7	3	A	16	10.7	32.2
22-Aug-04	5	4	4	3	4	4	3	3	2	2	3	3	2	1	3	3	8	10	12	4	6	A	15	8	4.8	14.8
23-Aug-04	5	6	4	5	9	6	7	6	5	5	6	6	6	5	3	3	8	4	3	6	A	17	6	6	5.9	17.0
24-Aug-04	9	12	10	6	7	11	9	8	10	9	4	5	4	13	23	9	23	19	13	A	34	8	7	14	11.5	33.7
25-Aug-04	12	15	8	9	10	6	18	8	5	7	8	5	3	3	10	22	28	19	A	23	17	17	9	8	11.9	27.8
26-Aug-04	5	6	7	11	15	15	19	11	12	10	7	6	6	2	2	3	2	A	16	25	23	11	45	28	12.5	45.0
27-Aug-04	P	21	30	12	11	15	12	23	12	2	31	26	8	15	3	29	A	17	14	14	13	20	24	9	16.5	30.6
28-Aug-04	5	4	25	15	5	9	20	20	4	19	15	7	7	3	5	A	15	7	13	8	35	40	21	26	14.3	39.8
29-Aug-04	19	31	36	7	6	18	16	9	11	11	4	2	2	2	A	15	6	6	10	9	11	10	15	12	11.6	35.5
30-Aug-04	4	15	3	9	14	23	17	16	6	23	8	6	9	A	16	7	8	8	11	14	17	26	22	4	12.4	25.5
31-Aug-04	4	3	3	9	15	14	11	11	8	12	13	5	A	30	13	9	9	34	39	37	23	13	14	16	15.0	39.4
Hourly Avg	12.5	12.3	14.1	10.9	14.1	16.0	15.2	13.5	11.2	12.3	11.2	8.4	8.7	7.6	8.3	8.2	7.9	8.8	10.9	12.1	16.3	16.3	16.5	14.9		
Hourly Max	48.6	38.0	58.0	21.9	34.4	44.7	37.6	32.4	30.6	53.2	42.2	26.1	42.8	29.7	26.7	38.1	29.1	33.5	39.4	36.9	43.0	41.5	50.1	43.7		

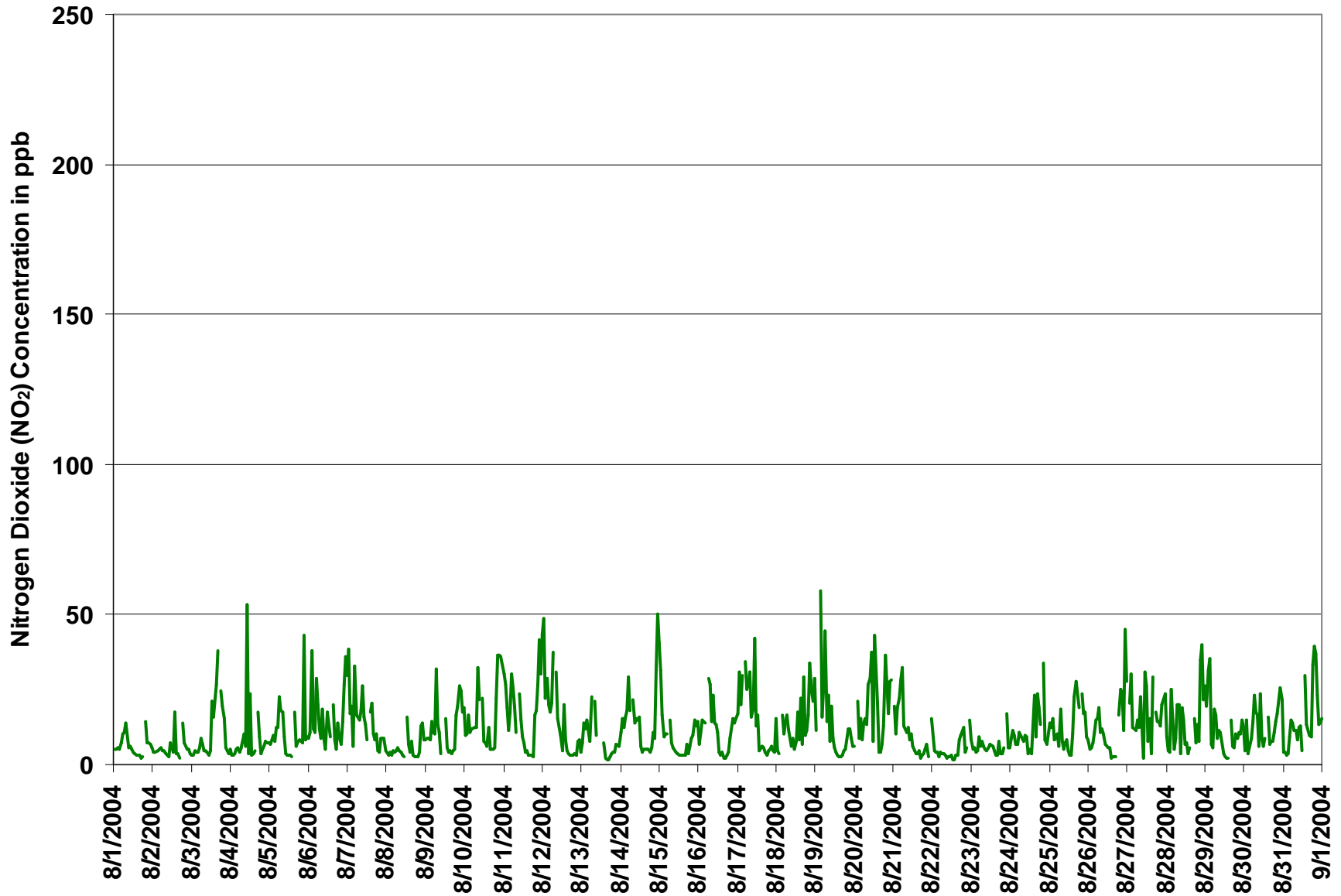
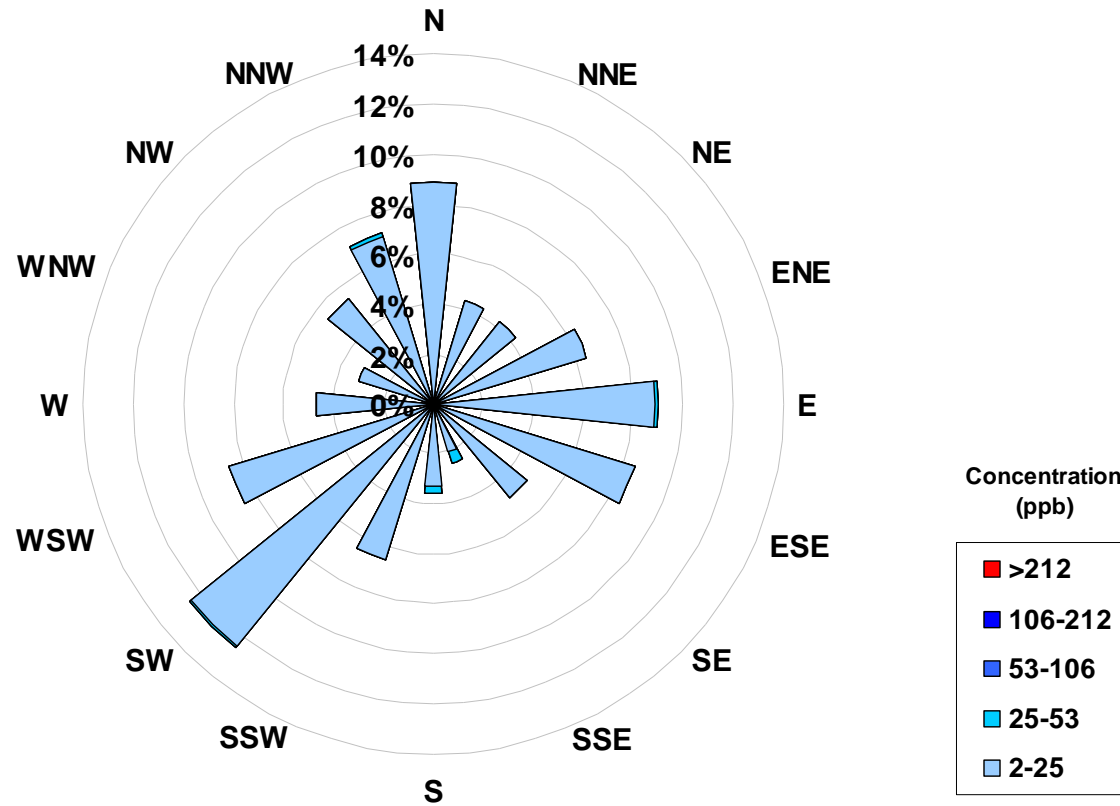


Figure 2. PAS - Crescent Heights Nitrogen Dioxide 1-hr Maximum Value Monthly Trend





**Concentration Rose for the 1-hr NO<sub>2</sub> Average Concentration Occurrences at the Crescent Heights Site for August 2004**



Frequency Distribution of NO <sub>2</sub> in ppb			
Range			Frequency (hrs)
0	<	2	62
2	to	25	637
25	to	53	8
53	to	106	0
106	to	212	0
	>	212	0
Total Non-Zero Values			707

Calms	
Range	
ppb	
2-25	0.0%
25-53	0.0%
53-106	0.0%
106-212	0.0%
>212	0.0%



Station: Crescent Heights

### HOURLY AVERAGE TABLE

Nitric Oxide (NO)

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004

#### Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	75	ppb	9-Aug	6:00 7:00
Maximum 24-hr Average:	8	ppb	9-Aug	

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

AIC Time:	32 hrs							Operational Time:	707 hrs	
Calibration Time:	4 hrs							AMD Operational Uptime:	99.9%	
Percentile	99	95	75	50	25	5	1	Average		
	25	10	2	1	0	0	0	2.3 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-Aug-04	0	0	0	0	0	2	1	2	1	1	1	1	0	1	1	1	0	0	A	0	0	0	1	0	0.7	1.8
2-Aug-04	0	0	0	0	0	0	1	1	1	1	1	1	1	1	0	0	0	A	0	0	0	0	0	0	0.5	1.2
3-Aug-04	0	0	0	0	0	1	1	1	1	1	0	1	2	1	1	2	A	2	1	1	0	0	0	0	0.8	2.4
4-Aug-04	0	0	0	0	0	0	1	3	1	5	1	2	0	0	1	A	0	0	0	0	0	0	0	0	0.7	4.7
5-Aug-04	0	0	0	0	0	4	5	4	1	1	1	1	1	0	A	1	0	0	1	0	1	0	0	0	1.0	5.1
6-Aug-04	0	4	0	0	1	2	4	2	3	2	1	1	1	A	1	0	0	0	0	0	0	0	4	2	1.3	4.2
7-Aug-04	11	0	3	0	2	1	1	2	1	2	2	1	A	1	1	1	1	1	1	1	2	1	1	1	1.7	11.2
8-Aug-04	0	0	0	0	0	1	1	2	3	1	1	A	1	1	1	1	0	0	0	1	2	3	1	1	0.9	2.9
9-Aug-04	1	1	1	4	6	20	75	39	7	2	A	1	1	1	1	1	1	1	1	2	2	7	1	2	7.5	75.1
10-Aug-04	0	0	2	1	3	10	27	43	10	A	1	1	1	1	1	1	1	0	1	2	2	11	5	5.5	43.4	
11-Aug-04	7	1	1	3	9	16	12	8	A	7	2	1	1	0	0	0	0	0	1	1	1	1	17	3.9	17.4	
12-Aug-04	25	2	5	3	1	16	25	A	25	5	1	0	1	1	0	0	0	0	0	0	0	0	0	0	4.9	25.3
13-Aug-04	0	0	0	1	1	18	A	3	4	C	C	C	C	0	0	0	0	0	0	0	0	0	0	0	1.5	17.9
14-Aug-04	0	0	0	1	10	6	A	4	5	3	2	3	1	1	0	1	1	0	0	0	0	1	37	11	3.8	36.8
15-Aug-04	3	5	1	0	0	A	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.6	4.5
16-Aug-04	0	0	0	0	0	A	4	3	2	3	3	3	1	0	0	0	0	0	0	0	0	0	0	0	1.1	4.4
17-Aug-04	4	1	4	A	14	9	31	7	5	2	6	3	2	0	1	0	0	0	0	0	0	0	0	1	4.0	30.5
18-Aug-04	0	0	A	1	1	1	2	3	2	2	1	2	5	2	3	2	3	2	1	1	2	1	3	1.7	4.7	
19-Aug-04	0	A	9	1	14	39	3	4	3	4	2	1	1	0	0	0	0	0	0	0	0	0	0	0	3.6	39.1
20-Aug-04	A	0	0	0	0	1	6	6	14	3	1	1	2	1	1	1	1	1	2	1	0	0	1	A	1.9	14.0
21-Aug-04	0	0	1	1	1	5	1	2	3	2	2	1	1	0	0	0	0	0	0	0	0	0	A	0	1.0	5.4
22-Aug-04	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	0	1	A	0	0	0.4	0.9
23-Aug-04	0	0	0	0	0	0	1	1	1	1	1	2	2	2	1	1	1	1	1	1	A	0	0	0	0.8	2.0
24-Aug-04	0	1	1	0	1	2	3	4	8	4	2	2	1	1	3	2	3	1	1	A	2	0	0	1	1.9	7.5
25-Aug-04	1	2	1	1	1	1	2	2	2	2	3	1	1	1	1	2	4	2	A	1	1	1	1	0	1.4	3.6
26-Aug-04	0	0	0	0	1	1	3	4	4	4	3	1	1	0	0	0	0	A	0	1	2	1	6	2	1.6	5.9
27-Aug-04	P	0	7	1	0	11	6	23	4	0	1	1	0	0	0	2	A	1	1	1	1	2	5	1	3.2	23.1
28-Aug-04	0	1	5	1	1	1	7	4	1	10	4	2	3	1	2	A	1	1	1	1	3	14	1	3	2.9	14.0
29-Aug-04	2	11	5	0	0	2	6	4	5	4	1	1	1	0	A	1	0	0	0	0	0	0	1	0	2.0	10.9
30-Aug-04	0	2	0	1	2	3	8	9	3	11	3	2	2	A	1	1	1	1	1	1	1	3	1	0	2.6	10.8
31-Aug-04	0	0	0	1	4	18	13	19	11	12	3	2	A	2	2	2	2	6	11	5	2	1	0	1	5.0	19.0
Hourly Avg	2.1	1.2	1.6	0.8	2.5	6.5	8.6	6.9	4.4	3.3	1.7	1.3	1.1	0.7	0.9	0.8	0.8	0.9	0.9	0.7	0.9	1.4	2.5	1.8		
Hourly Max	25.2	10.9	8.7	4.4	14.3	39.1	75.1	43.4	25.0	12.3	5.5	2.9	4.7	2.4	2.8	2.3	3.6	6.2	10.5	5.1	3.4	14.0	36.8	17.4		



Station: Crescent Heights

### HOURLY MAXIMUM TABLE

Nitric Oxide (NO)

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004

#### Summary

Maximum 1-hr Value:	260.1	ppb	10-Aug	7:00 8:00
Maximum 24-hr Value:	29.0	ppb	27-Aug	

AIC Time:	32 hrs	Operational Time:	707 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	99.9%					
Percentile	99	95	75	50	25	5	1	Average
	136	54	7	2	1	1	1	11.3 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	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum	
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Aug-04	1	1	1	1	3	5	4	4	2	3	3	2	2	2	1	1	1	1	A	1	1	1	1	1	1	1.8	4.9
2-Aug-04	1	1	1	1	1	1	2	1	1	2	3	2	2	16	2	1	1	A	1	1	1	1	1	1	1	1.9	15.9
3-Aug-04	1	1	1	1	1	2	2	2	2	2	2	2	7	2	22	65	A	4	3	4	1	1	1	1	1	5.5	65.0
4-Aug-04	1	1	1	1	1	1	2	5	3	81	1	31	1	1	1	A	1	1	1	1	1	1	1	1	1	5.9	81.5
5-Aug-04	1	1	1	1	1	17	12	11	4	1	1	1	1	1	A	1	1	1	1	1	1	6	1	1	1	3.0	16.8
6-Aug-04	1	75	2	2	31	25	8	5	10	4	2	8	2	A	3	1	1	1	1	1	1	1	1	33	38	11.0	74.8
7-Aug-04	91	7	29	1	35	7	2	5	24	15	19	3	A	2	4	2	2	2	2	2	5	2	2	1	11.5	90.9	
8-Aug-04	1	1	1	1	1	1	2	3	4	2	2	A	2	1	1	9	1	1	1	1	13	11	2	2	2.8	13.0	
9-Aug-04	2	3	2	34	11	34	194	62	16	2	A	1	1	1	1	1	1	1	2	4	14	25	3	3	18.2	193.5	
10-Aug-04	1	1	3	4	6	28	34	260	96	A	4	3	2	2	8	2	2	1	1	2	11	10	33	10	22.8	260.1	
11-Aug-04	185	35	2	24	71	78	36	24	A	10	6	2	2	1	1	1	1	1	6	2	2	11	4	95	26.1	185.3	
12-Aug-04	136	6	51	10	4	34	72	A	35	8	3	1	8	3	2	1	1	1	1	1	1	1	1	1	16.6	136.2	
13-Aug-04	1	1	1	2	1	49	A	6	6	C	C	C	C	1	0	0	1	1	1	0	0	0	0	1	3.9	48.8	
14-Aug-04	1	1	2	3	64	12	A	9	6	7	5	5	2	2	2	2	1	1	1	1	1	4	124	112	16.0	123.9	
15-Aug-04	14	13	2	1	1	A	2	1	2	1	2	1	2	1	1	1	4	1	1	1	0	1	1	1	2.4	14.2	
16-Aug-04	1	1	1	1	A	7	24	3	22	6	7	5	2	2	1	1	1	1	1	1	1	1	1	1	1	3.8	23.8
17-Aug-04	39	10	55	A	21	37	88	55	23	24	53	7	12	1	2	2	1	1	1	1	1	1	1	1	7	19.3	88.1
18-Aug-04	1	1	A	2	2	3	10	6	3	5	3	4	18	4	25	3	49	4	2	2	12	2	1	42	8.9	49.3	
19-Aug-04	1	A	114	2	42	222	6	33	4	22	4	2	2	1	1	1	1	2	2	1	2	1	2	1	20.3	221.9	
20-Aug-04	A	1	1	2	2	4	13	10	63	21	20	2	50	8	1	1	2	6	20	2	2	2	3	A	10.8	63.0	
21-Aug-04	1	1	12	5	20	38	2	4	6	4	6	2	2	1	1	1	1	1	1	1	1	1	1	A	1	5.0	38.3
22-Aug-04	1	1	1	2	1	1	2	1	1	1	1	2	1	1	1	1	3	2	3	1	1	A	1	1	1.5	3.3	
23-Aug-04	1	2	1	1	1	1	3	2	2	2	2	3	3	5	3	2	3	2	2	3	A	2	1	1	2.1	5.5	
24-Aug-04	1	17	4	2	2	6	7	8	29	41	3	3	2	16	26	4	8	6	5	A	6	2	1	8	9.0	40.6	
25-Aug-04	34	18	4	3	4	2	25	4	3	5	5	2	2	2	2	5	10	4	A	2	3	2	2	2	6.3	34.3	
26-Aug-04	1	1	1	2	4	2	7	6	8	9	5	3	3	1	1	2	2	A	1	6	5	2	190	63	14.3	189.8	
27-Aug-04	P	37	97	4	2	36	12	86	11	1	43	25	11	24	4	40	A	2	4	3	3	24	166	5	29.0	165.5	
28-Aug-04	1	11	142	21	2	5	132	43	2	62	18	6	6	2	4	A	2	2	3	2	40	85	5	14	26.5	142.1	
29-Aug-04	7	110	42	2	2	27	16	5	10	10	2	1	1	1	A	1	1	2	2	1	2	2	3	2	10.9	109.6	
30-Aug-04	1	21	1	2	96	95	57	15	4	45	5	3	5	A	2	2	2	2	2	4	3	21	5	1	17.1	95.9	
31-Aug-04	1	1	1	5	14	40	29	30	14	19	21	3	A	23	6	4	3	36	37	26	4	10	1	19	15.0	40.3	
Hourly Avg	18.3	12.7	19.2	4.7	14.9	27.3	27.7	23.6	13.9	14.3	8.6	4.7	5.5	4.4	4.5	5.5	3.7	3.1	3.7	2.7	4.8	7.6	19.7	14.5			
Hourly Max	185.3	109.6	142.1	33.6	95.9	221.9	193.5	260.1	96.4	81.5	53.0	30.7	49.9	23.8	26.4	65.0	49.3	36.1	37.0	26.0	39.7	85.0	189.8	112.1			



Station: Crescent Heights

### HOURLY AVERAGE TABLE

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

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004

#### Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	89	ppb	9-Aug	6:00 7:00
Maximum 24-hr Average:	16	ppb	10-Aug	

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

AIC Time:	32 hrs							Operational Time:	707 hrs						
Calibration Time:	4 hrs							AMD Operational Uptime:	99.9%						
Percentile	99	95	75	50	25	5	1	Average							
	48	25	11	6	4	2	1	8.9 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

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
	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-Aug-04	4	4	4	4	4	4	7	5	9	5	6	5	3	2	3	3	2	2	A	9	7	6	6	5	4.7	9.5	
2-Aug-04	3	3	3	4	4	4	4	4	4	3	2	4	5	4	4	2	2	2	A	9	6	5	4	3	2	3.8	9.5
3-Aug-04	3	3	4	4	4	7	5	5	4	3	2	3	7	8	9	9	A	20	16	10	5	4	3	3	6.1	19.7	
4-Aug-04	3	2	3	4	4	3	4	9	5	9	3	5	2	2	3	A	10	6	3	3	5	5	6	5	4.6	10.5	
5-Aug-04	5	4	5	8	8	17	18	13	6	3	3	3	3	3	2	A	10	5	4	6	5	17	7	7	6	7.2	17.5
6-Aug-04	8	17	7	8	8	10	11	7	10	7	5	6	6	A	13	8	4	8	6	5	7	19	32	21	10.1	32.1	
7-Aug-04	34	10	13	3	9	7	10	11	8	7	6	5	A	13	13	7	7	7	4	4	7	5	6	4	8.8	34.1	
8-Aug-04	3	3	2	4	3	5	5	6	6	3	3	A	11	5	4	3	2	2	2	3	7	13	7	6	4.7	12.8	
9-Aug-04	7	8	6	12	16	29	89	50	12	5	A	9	5	4	4	3	4	4	7	17	16	26	14	16	15.7	88.6	
10-Aug-04	7	8	14	10	14	21	38	57	17	A	12	7	5	5	6	5	5	4	4	10	21	31	42	29	16.1	57.3	
11-Aug-04	19	9	9	13	25	33	23	16	A	25	11	8	4	3	3	2	2	2	5	8	20	24	27	35	14.1	35.1	
12-Aug-04	49	16	22	17	13	33	42	A	52	18	5	3	7	4	3	3	2	2	3	3	3	3	5	3	13.5	51.7	
13-Aug-04	5	8	9	11	7	32	A	17	11	C	C	C	C	2	1	1	0	1	2	3	2	3	5	5	6.7	32.4	
14-Aug-04	12	11	12	16	28	22	A	16	16	12	12	12	4	3	3	4	4	3	4	7	7	14	75	37	14.6	75.5	
15-Aug-04	24	15	8	8	9	A	11	7	4	3	2	2	2	2	2	2	2	2	3	6	7	7	11	12	6.6	24.3	
16-Aug-04	5	5	12	11	A	25	16	12	14	13	12	10	3	2	2	2	2	2	3	6	5	9	12	11	8.5	24.8	
17-Aug-04	15	12	18	A	39	28	49	19	14	6	14	10	7	3	3	3	3	2	3	4	4	3	3	7	11.8	49.5	
18-Aug-04	3	3	A	11	9	10	10	9	7	6	3	6	13	8	7	5	9	8	7	13	24	19	17	14	9.7	24.1	
19-Aug-04	9	A	34	14	36	61	11	12	9	11	8	5	4	3	2	2	2	3	3	7	7	6	4	4	11.2	60.9	
20-Aug-04	A	13	7	7	7	7	17	17	30	13	6	4	6	3	3	4	4	5	16	21	9	13	21	A	10.6	29.6	
21-Aug-04	12	6	7	12	7	25	10	10	12	8	7	5	4	3	2	2	2	2	2	3	4	1	A	8	6.6	24.9	
22-Aug-04	3	3	2	1	2	3	2	2	1	2	2	2	1	2	3	2	3	4	6	3	4	A	9	5	3.0	9.1	
23-Aug-04	5	5	4	3	5	4	6	5	5	5	4	6	5	5	3	3	4	3	3	5	A	10	4	4	4.6	9.5	
24-Aug-04	6	8	7	5	5	9	11	11	14	7	5	6	3	5	10	7	11	5	7	A	16	7	6	8	7.7	16.2	
25-Aug-04	5	9	6	5	8	5	8	7	5	6	9	3	2	2	6	17	19	18	A	17	11	10	7	6	8.3	18.9	
26-Aug-04	4	3	6	8	11	14	17	12	12	10	8	5	2	1	1	1	1	A	10	16	17	9	13	8	8.3	17.2	
27-Aug-04	P	4	14	10	7	22	16	37	12	1	3	3	1	1	1	4	A	10	9	13	9	12	13	6	9.5	36.6	
28-Aug-04	3	3	8	5	3	6	13	7	4	17	9	5	6	3	5	A	10	5	6	5	19	32	11	21	9.0	32.3	
29-Aug-04	14	21	15	5	5	9	15	11	13	10	4	3	2	1	A	9	5	4	5	5	6	8	13	7	8.1	20.7	
30-Aug-04	4	6	3	5	6	9	18	19	9	19	7	5	7	A	11	6	7	6	6	12	14	20	9	3	9.1	20.0	
31-Aug-04	3	2	2	6	12	29	21	27	17	22	7	5	A	14	9	9	9	18	32	30	16	10	9	8	13.7	31.8	
Hourly Avg	9.5	7.6	8.8	7.8	10.6	16.5	17.4	14.8	11.2	9.0	6.3	5.3	4.6	4.0	4.8	4.7	4.9	5.6	6.6	8.5	10.0	11.4	13.3	10.3			
Hourly Max	48.7	20.7	33.8	16.9	38.9	60.9	88.6	57.3	51.7	24.7	14.4	12.2	13.4	13.7	13.5	17.3	18.9	19.7	31.8	29.8	24.1	32.3	75.5	36.7			



Station: Crescent Heights

### HOURLY MAXIMUM TABLE

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

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004

#### Summary

Maximum 1-hr Value:	290.9	ppb	10-Aug	7:00 8:00
Maximum 24-hr Value:	45.1	ppb	27-Aug	

AIC Time:	32 hrs	Operational Time:	707 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	99.9%					
Percentile	99	95	75	50	25	5	1	Average
	169	80	25	11	6	3	2	22.5 ppb

#### Status Flag Characters

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

#### Day Mountain Standard Time

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum	
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Aug-04	5	6	6	6	10	15	15	17	7	8	6	6	4	5	4	4	2	3	A	15	8	7	7	6	7.5	17.5	
2-Aug-04	4	4	5	5	6	5	6	5	4	3	9	7	5	33	4	4	2	A	15	7	5	5	4	3	6.6	33.2	
3-Aug-04	3	4	4	4	6	10	9	6	6	6	3	6	27	17	48	103	A	29	22	19	6	5	4	6	15.3	102.6	
4-Aug-04	4	3	4	5	6	5	8	15	9	135	5	48	4	4	5	A	18	9	4	6	6	7	7	7	14.0	134.6	
5-Aug-04	7	11	8	13	13	39	29	28	13	4	4	4	3	3	A	18	6	8	9	7	47	9	10	9	13.2	47.2	
6-Aug-04	11	110	14	12	60	42	20	14	28	13	7	25	11	A	22	9	5	14	9	7	14	27	66	61	26.1	109.9	
7-Aug-04	126	24	42	6	68	23	16	23	50	29	32	11	A	18	25	11	10	12	7	5	14	10	10	5	25.2	126.5	
8-Aug-04	4	4	3	5	5	5	8	7	7	4	4	A	18	7	5	16	3	3	3	4	25	25	10	9	8.0	25.0	
9-Aug-04	10	11	10	48	21	44	213	75	27	6	A	16	7	5	5	4	6	6	18	23	40	44	20	22	29.5	212.8	
10-Aug-04	10	10	19	14	17	38	45	291	108	A	25	9	9	8	20	6	7	7	6	24	47	46	68	40	38.1	290.9	
11-Aug-04	193	51	12	40	91	101	55	34	A	31	20	11	9	5	5	3	3	3	19	18	29	51	32	133	41.3	193.2	
12-Aug-04	183	27	79	29	22	55	106	A	63	23	13	5	26	11	5	4	3	3	4	4	3	8	8	4	29.9	183.5	
13-Aug-04	7	15	13	17	9	70	A	27	14	C	C	C	C	6	2	2	2	3	4	4	4	6	6	11	11.7	70.3	
14-Aug-04	16	13	17	21	92	30	A	30	20	22	18	20	7	5	5	6	6	5	7	11	9	36	167	149	30.9	167.5	
15-Aug-04	46	30	12	11	11	A	17	8	7	5	4	3	3	3	4	3	11	4	6	9	10	15	13	15	10.9	45.5	
16-Aug-04	7	11	15	14	A	32	50	17	44	19	20	15	5	4	4	2	2	3	4	9	16	14	16	18	14.9	49.6	
17-Aug-04	64	31	85	A	56	62	114	86	34	43	89	18	26	5	7	7	4	4	5	6	7	5	4	22	34.0	114.1	
18-Aug-04	5	4	A	17	12	18	26	17	9	12	7	11	37	13	46	11	74	13	13	18	46	26	22	71	23.0	74.3	
19-Aug-04	12	A	169	18	67	248	19	55	11	39	12	8	5	3	3	3	4	5	5	13	12	9	7	6	31.8	248.2	
20-Aug-04	A	22	9	16	8	18	27	22	83	50	58	10	93	28	5	5	8	19	57	27	18	31	31	A	29.3	92.6	
21-Aug-04	20	12	26	27	48	68	13	15	18	11	16	8	6	4	5	5	3	3	4	5	7	3	A	16	15.0	68.2	
22-Aug-04	5	4	4	3	5	4	4	3	2	3	4	4	4	2	2	4	3	11	12	14	5	6	A	16	8	5.5	16.3
23-Aug-04	6	7	5	5	9	6	9	8	6	6	6	9	8	10	5	4	10	5	4	7	A	18	6	6	7.2	18.2	
24-Aug-04	9	24	14	7	8	16	15	15	38	50	5	8	5	29	46	13	32	25	18	A	39	9	7	20	19.7	50.3	
25-Aug-04	42	32	11	11	14	8	43	11	8	13	13	6	4	4	11	27	37	22	A	25	18	19	10	8	17.2	43.1	
26-Aug-04	6	5	8	11	19	17	26	16	18	18	11	9	10	2	3	3	3	A	18	31	28	13	236	88	25.9	235.9	
27-Aug-04	P	58	128	16	14	51	25	107	25	3	75	52	19	40	8	61	A	20	18	16	14	43	188	13	45.1	187.6	
28-Aug-04	5	13	167	37	6	14	152	63	6	80	33	12	13	5	9	A	16	8	15	9	74	123	24	39	40.1	167.2	
29-Aug-04	26	138	77	7	6	44	32	13	21	20	5	3	3	3	A	15	7	6	10	8	11	10	17	13	21.6	137.7	
30-Aug-04	5	34	4	9	111	118	72	32	10	64	13	8	14	A	17	8	9	10	12	17	20	45	25	5	28.8	118.2	
31-Aug-04	4	3	3	14	28	55	41	40	21	31	34	7	A	51	19	13	12	68	76	63	27	23	14	33	29.5	75.8	
Hourly Avg	29.1	23.9	32.5	14.9	28.2	42.0	41.8	36.7	23.9	25.8	19.0	12.4	13.7	11.5	12.1	12.9	10.9	11.4	14.0	14.1	20.3	23.1	35.3	28.2			
Hourly Max	193.2	137.7	169.4	47.7	110.6	248.2	212.8	290.9	107.8	134.6	89.0	51.6	92.6	51.2	47.7	102.6	74.3	68.3	75.8	62.9	73.6	122.8	235.9	149.0			

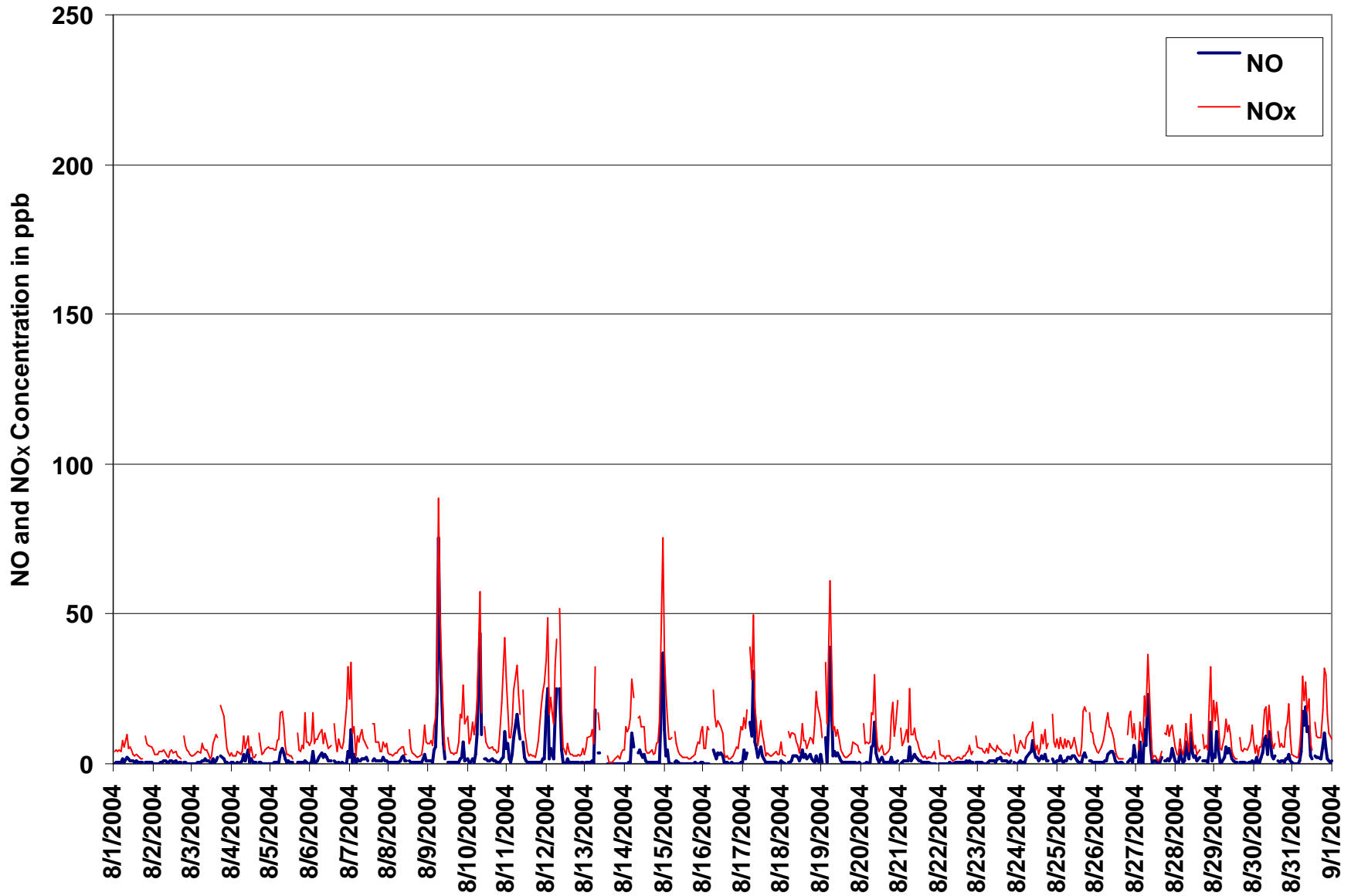


Figure 3. PAS - Crescent Heights Oxides of Nitrogen 1-hr Average Monthly Trends

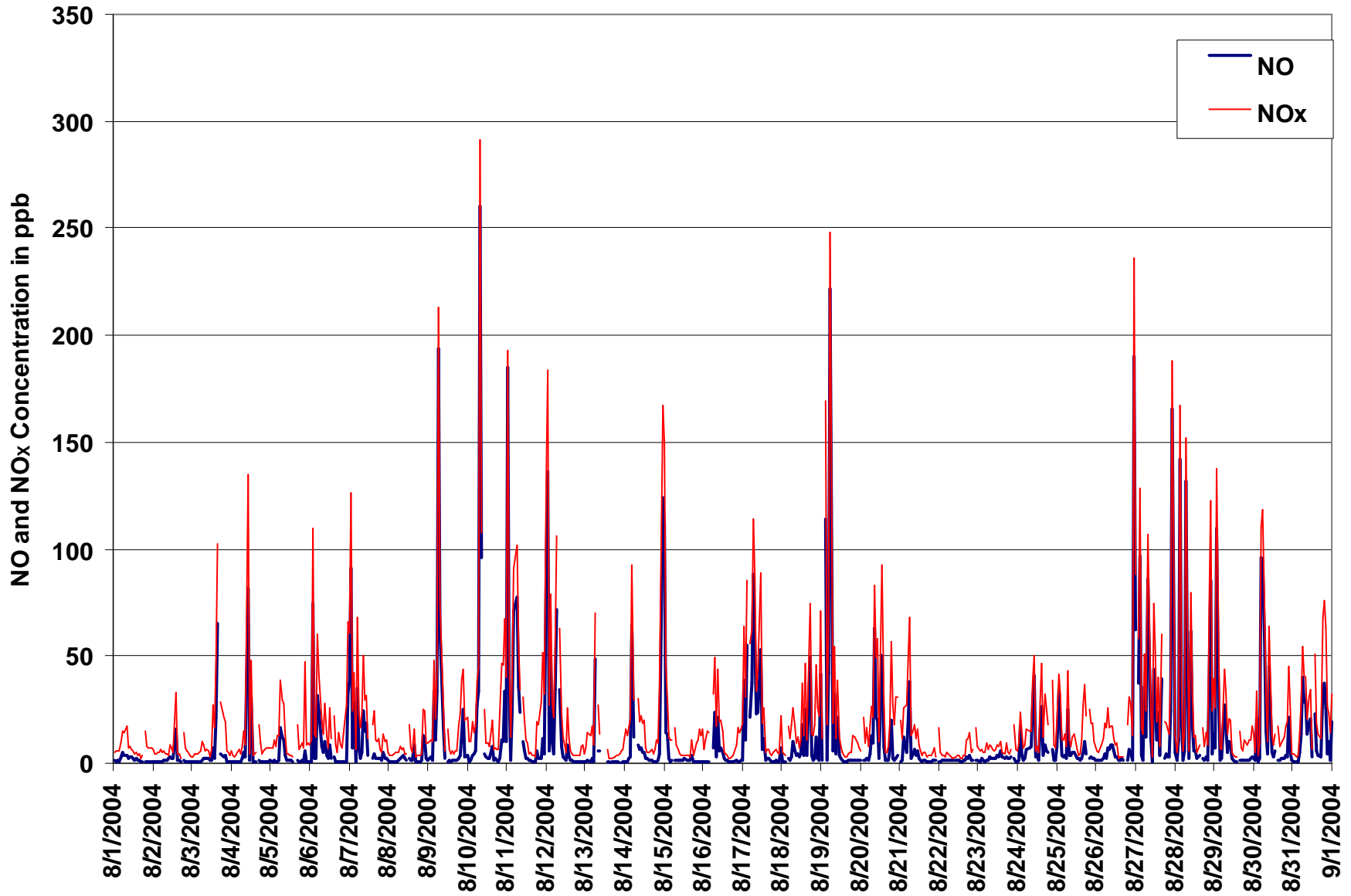


Figure 4. PAS - Crescent Heights Oxides of Nitrogen 1-hr Maximum Value Monthly Trends



### PAS - Crescent Heights Ozone Monthly Summary

Station: Crescent Heights

#### HOURLY AVERAGE TABLE

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

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004

##### Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	67 ppb 6-Aug 16:00 17:00
Maximum 24-hr Average:	41 ppb 5-Aug

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

AIC Time:	32 hrs	Operational Time:	707 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	99.9%					
Percentile	99	95	75	50	25	5	1	Average
	59	54	35	24	14	5	2	26.0 ppb

##### Status Flag Characters

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

##### Day Mountain Standard Time

Hour Start	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-Aug-04	2	21	20	21	22	18	19	16	23	28	31	34	32	29	31	36	35	33	A	30	25	23	24	24	25.2	36.1	
2-Aug-04	26	24	23	18	15	13	13	17	24	32	37	39	45	49	55	54	51	A	44	40	39	33	29	29	32.6	54.6	
3-Aug-04	27	24	20	19	18	13	19	20	26	34	43	48	48	41	40	44	A	30	29	31	34	43	49	40	32.2	49.0	
4-Aug-04	35	32	27	22	21	20	21	23	36	44	48	50	55	56	56	A	53	50	47	42	36	33	31	34	37.8	55.8	
5-Aug-04	29	39	39	20	17	10	16	27	38	46	53	55	57	59	A	58	58	56	47	47	41	45	38	36	40.5	59.3	
6-Aug-04	34	23	25	20	19	17	21	26	34	38	43	47	46	A	54	62	67	60	56	53	48	28	9	11	36.4	66.6	
7-Aug-04	5	23	23	34	28	24	21	26	27	28	27	33	A	35	30	28	25	23	12	10	7	11	11	12	21.9	34.5	
8-Aug-04	10	10	13	11	11	10	11	10	9	12	14	A	22	23	23	23	23	23	21	18	13	7	9	7	14.6	23.4	
9-Aug-04	6	6	6	5	1	1	2	5	13	19	A	27	30	31	31	31	30	30	25	16	18	6	10	7	15.4	31.5	
10-Aug-04	12	10	4	7	2	2	3	6	14	A	34	37	38	41	41	41	43	46	46	37	25	11	3	4	22.0	46.0	
11-Aug-04	13	14	10	7	4	3	6	12	A	24	49	54	56	57	59	56	54	53	49	42	32	24	12	14	30.5	59.1	
12-Aug-04	7	8	4	8	8	2	4	A	11	27	49	53	54	56	55	57	57	56	48	43	40	31	26	25	31.6	56.9	
13-Aug-04	17	10	8	6	8	2	A	15	18	28	33	26	47	52	C	C	C	C	50	44	39	32	30	26	26.0	52.2	
14-Aug-04	13	13	11	5	2	3	A	18	17	25	30	33	42	46	52	56	58	56	50	44	38	28	3	8	28.4	58.2	
15-Aug-04	10	21	26	23	21	A	18	21	26	34	37	40	41	42	44	44	47	45	40	34	31	28	18	14	30.6	46.8	
16-Aug-04	22	22	14	12	A	4	15	16	15	17	22	32	43	43	47	50	50	48	45	38	36	27	17	14	28.3	49.7	
17-Aug-04	14	12	8	A	1	2	3	13	23	34	33	41	46	53	57	59	62	60	58	55	45	47	43	39	35.1	62.4	
18-Aug-04	37	27	A	20	17	16	18	21	24	31	35	34	33	37	36	37	34	35	34	27	14	14	13	17	26.7	37.4	
19-Aug-04	19	A	9	12	2	4	16	18	22	26	41	51	56	60	55	51	50	46	43	34	30	28	28	26	31.6	59.7	
20-Aug-04	A	19	19	18	15	13	6	9	12	27	37	44	48	50	50	49	49	45	34	27	34	22	13	A	29.1	50.2	
21-Aug-04	26	28	28	21	25	12	18	19	22	27	30	33	37	41	38	37	39	38	35	32	30	29	A	27	29.2	40.6	
22-Aug-04	28	28	27	26	24	21	21	22	23	24	24	26	27	29	33	34	34	32	26	26	26	A	25	22	26.5	34.4	
23-Aug-04	16	14	14	14	13	14	12	12	12	12	12	10	10	12	12	13	13	13	13	14	12	A	12	12	11	12.5	16.1
24-Aug-04	8	6	6	6	7	6	5	5	8	13	18	23	32	32	31	32	29	31	27	A	19	20	18	13	17.1	32.4	
25-Aug-04	16	13	12	10	6	9	10	12	16	19	20	28	32	34	27	18	18	16	A	20	20	21	24	24	18.4	33.9	
26-Aug-04	25	25	20	16	13	11	8	9	9	13	18	31	34	36	35	37	36	A	35	23	13	16	16	16	21.6	37.1	
27-Aug-04	P	14	13	9	9	5	8	10	26	36	36	35	35	34	34	33	A	33	26	19	19	13	14	17	21.8	36.4	
28-Aug-04	17	16	16	17	17	14	13	17	18	17	21	25	28	31	33	A	36	38	34	35	22	16	18	10	22.2	37.6	
29-Aug-04	13	17	13	12	12	8	7	10	14	24	29	31	35	40	A	40	40	37	33	29	23	16	10	14	21.9	40.3	
30-Aug-04	16	14	15	12	13	13	9	11	14	14	25	29	30	A	35	38	35	33	27	21	17	11	16	18	20.2	37.8	
31-Aug-04	16	15	13	8	5	1	2	5	8	12	28	31	A	33	32	32	32	27	15	8	13	14	16	17	16.6	32.6	
Hourly Avg	17.8	18.2	16.2	14.7	12.5	9.7	11.9	15.0	19.4	25.5	31.9	36.0	39.3	40.8	40.2	41.1	41.4	39.0	36.3	31.2	27.6	22.9	19.5	19.2			
Hourly Max	37.4	39.5	39.4	34.4	28.1	24.2	21.1	27.0	37.9	46.0	52.6	54.6	57.1	59.7	59.1	61.6	66.6	59.8	58.1	55.3	47.8	46.7	49.0	40.2			



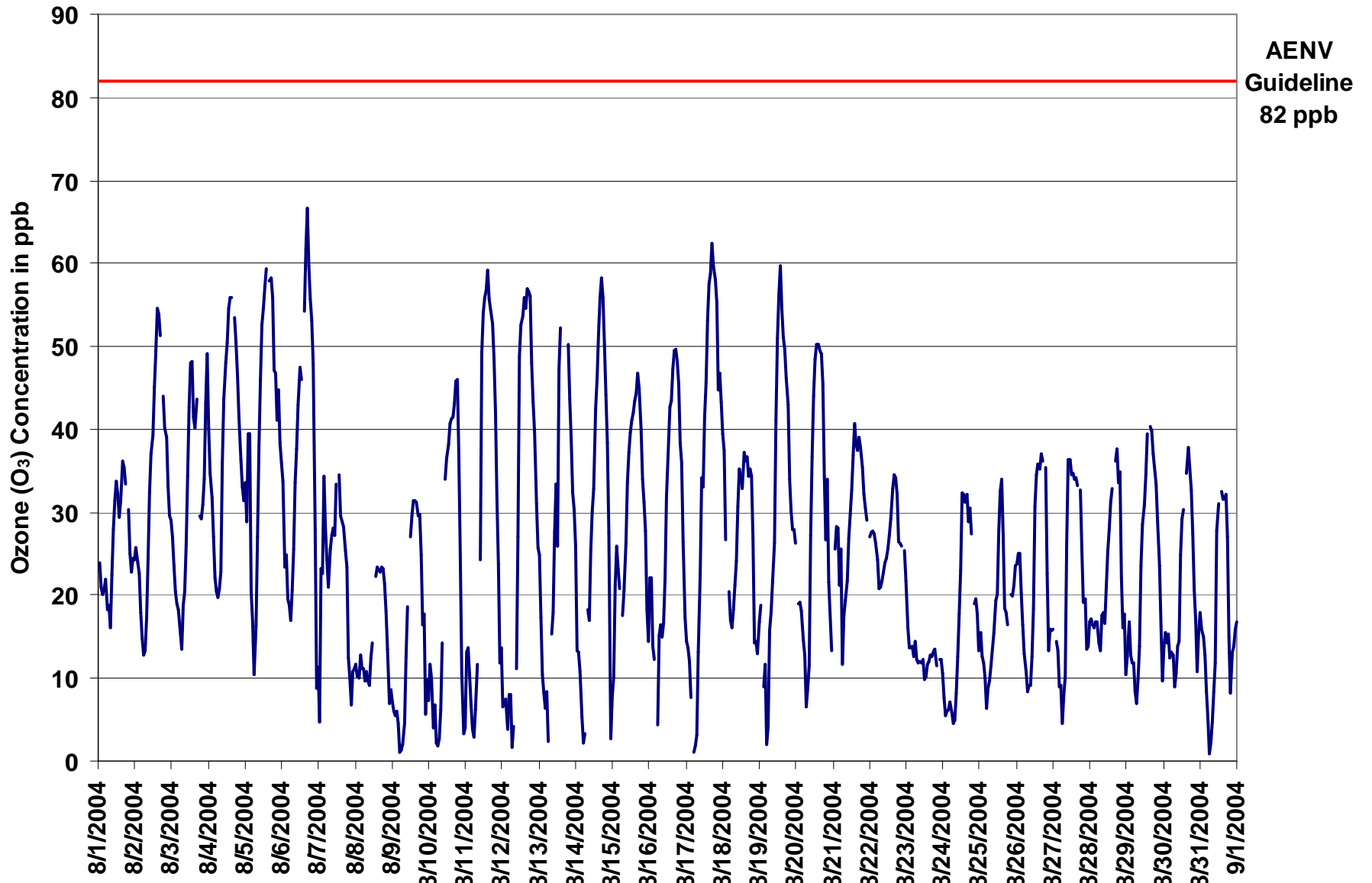


Figure 5. PAS - Crescent Heights Ozone 1-hr Average Monthly Trend



Station: Crescent Heights

### HOURLY MAXIMUM TABLE

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

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004  
Summary

Maximum 1-hr Value:	69.6	ppb	6-Aug	16:00 17:00
Maximum 24-hr Value:	46.7	ppb	5-Aug	

AIC Time:	32 hrs	Operational Time:	707 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	99.9%					
Percentile	99	95	75	50	25	5	1	Average
	64	58	40	29	18	9	4	30.1 ppb

#### Status Flag Characters

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00		
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-Aug-04	27	24	23	25	26	20	22	22	31	31	37	40	35	32	34	39	37	35	A	32	29	25	27	26	29.5	40.4
2-Aug-04	27	26	24	21	16	14	15	22	28	35	40	45	48	54	57	56	53	A	50	42	42	39	31	31	35.4	57.5
3-Aug-04	29	27	22	20	20	19	23	24	30	40	49	50	52	47	45	54	A	35	35	35	38	51	53	45	36.6	54.4
4-Aug-04	38	35	29	26	24	21	23	32	44	49	50	57	56	58	59	A	60	53	49	44	40	39	34	38	41.5	60.4
5-Aug-04	36	44	46	35	20	16	22	38	44	51	56	56	61	61	A	59	60	58	50	63	65	50	43	39	46.7	64.8
6-Aug-04	39	31	28	25	23	20	24	30	41	42	47	51	50	A	58	66	70	69	61	56	54	40	19	16	41.7	69.6
7-Aug-04	14	28	34	38	34	30	26	34	32	32	31	38	A	39	35	33	28	27	14	13	12	13	15	16	26.8	38.5
8-Aug-04	11	14	17	14	15	10	13	11	12	15	17	A	29	27	25	25	26	25	26	21	20	10	11	8	17.4	28.6
9-Aug-04	9	8	9	8	3	3	5	7	17	24	A	30	33	34	33	34	32	32	33	25	28	13	14	11	19.4	34.3
10-Aug-04	14	13	9	10	4	3	4	10	25	A	36	38	42	46	44	44	47	48	48	45	42	20	7	8	26.4	48.2
11-Aug-04	18	19	13	10	7	6	9	15	A	37	56	59	58	60	62	59	56	56	53	49	40	41	17	24	35.9	62.1
12-Aug-04	15	10	9	13	13	5	11	A	21	40	52	56	57	60	57	59	59	59	55	46	42	35	29	28	36.0	59.7
13-Aug-04	23	15	12	11	10	7	A	19	23	32	39	44	50	55	C	C	C	C	53	49	41	37	31	30	30.5	54.7
14-Aug-04	19	14	14	9	6	6	A	22	19	33	34	42	46	50	55	59	61	59	54	48	44	38	11	16	33.0	61.0
15-Aug-04	25	27	28	26	22	A	20	23	31	36	41	43	43	45	45	47	48	48	44	37	35	33	23	22	34.4	48.1
16-Aug-04	25	24	18	19	A	14	22	22	20	22	29	44	45	45	51	51	51	51	47	43	41	31	23	17	32.8	51.5
17-Aug-04	18	15	12	A	3	3	8	19	32	38	39	48	51	55	62	64	66	67	61	60	49	51	47	43	39.6	67.4
18-Aug-04	41	31	A	24	22	21	23	24	27	34	38	36	37	40	40	41	40	41	39	31	24	20	16	22	31.0	41.2
19-Aug-04	25	A	14	14	5	11	19	20	24	36	48	56	61	64	60	54	53	48	47	39	35	30	31	30	35.7	64.2
20-Aug-04	A	20	22	23	17	16	11	15	19	36	41	49	52	52	53	51	52	50	46	38	41	31	18	A	34.3	52.6
21-Aug-04	33	32	38	30	29	20	20	24	26	30	33	35	41	43	42	39	42	39	37	36	33	32	A	28	33.2	42.6
22-Aug-04	29	29	28	27	27	23	22	23	24	25	25	27	29	31	35	36	37	36	33	29	29	A	27	26	28.5	37.2
23-Aug-04	19	15	15	15	15	16	16	13	13	14	13	13	14	13	15	15	15	16	16	14	A	15	13	13	14.6	18.6
24-Aug-04	11	8	8	8	8	12	7	7	11	16	21	28	35	36	36	35	37	33	32	A	25	22	21	17	20.7	36.8
25-Aug-04	19	17	14	13	10	11	13	14	18	25	24	31	37	37	32	32	25	22	A	23	24	24	27	28	22.7	37.4
26-Aug-04	27	28	23	19	18	12	11	11	14	15	26	34	37	38	36	38	38	A	38	34	19	18	18	18	24.8	38.3
27-Aug-04	P	18	19	14	12	11	13	16	36	38	39	37	37	36	36	36	A	35	33	24	24	18	18	19	25.9	39.3
28-Aug-04	19	18	19	20	18	17	17	21	21	23	24	28	31	34	38	A	40	40	37	39	33	27	25	23	26.6	40.4
29-Aug-04	21	25	19	13	15	12	10	12	17	31	31	33	39	42	A	42	42	40	36	31	30	22	12	17	25.7	42.1
30-Aug-04	18	16	17	17	16	16	13	16	17	25	29	33	34	A	37	39	38	38	31	24	21	18	20	20	24.0	39.4
31-Aug-04	18	16	14	12	10	2	4	9	10	19	31	34	A	36	34	34	38	37	31	16	21	17	20	20	21.1	37.5
Hourly Avg	23.0	21.5	19.9	18.8	15.6	13.3	15.3	19.1	24.2	30.8	36.0	40.4	42.8	43.7	43.4	44.3	44.8	42.7	41.0	36.2	34.0	28.7	23.4	23.3		
Hourly Max	41.2	43.5	45.7	38.3	33.7	30.4	25.9	37.6	43.8	50.8	56.4	58.8	61.4	64.2	62.1	65.6	69.6	68.8	60.9	62.8	64.8	50.9	52.6	44.7		

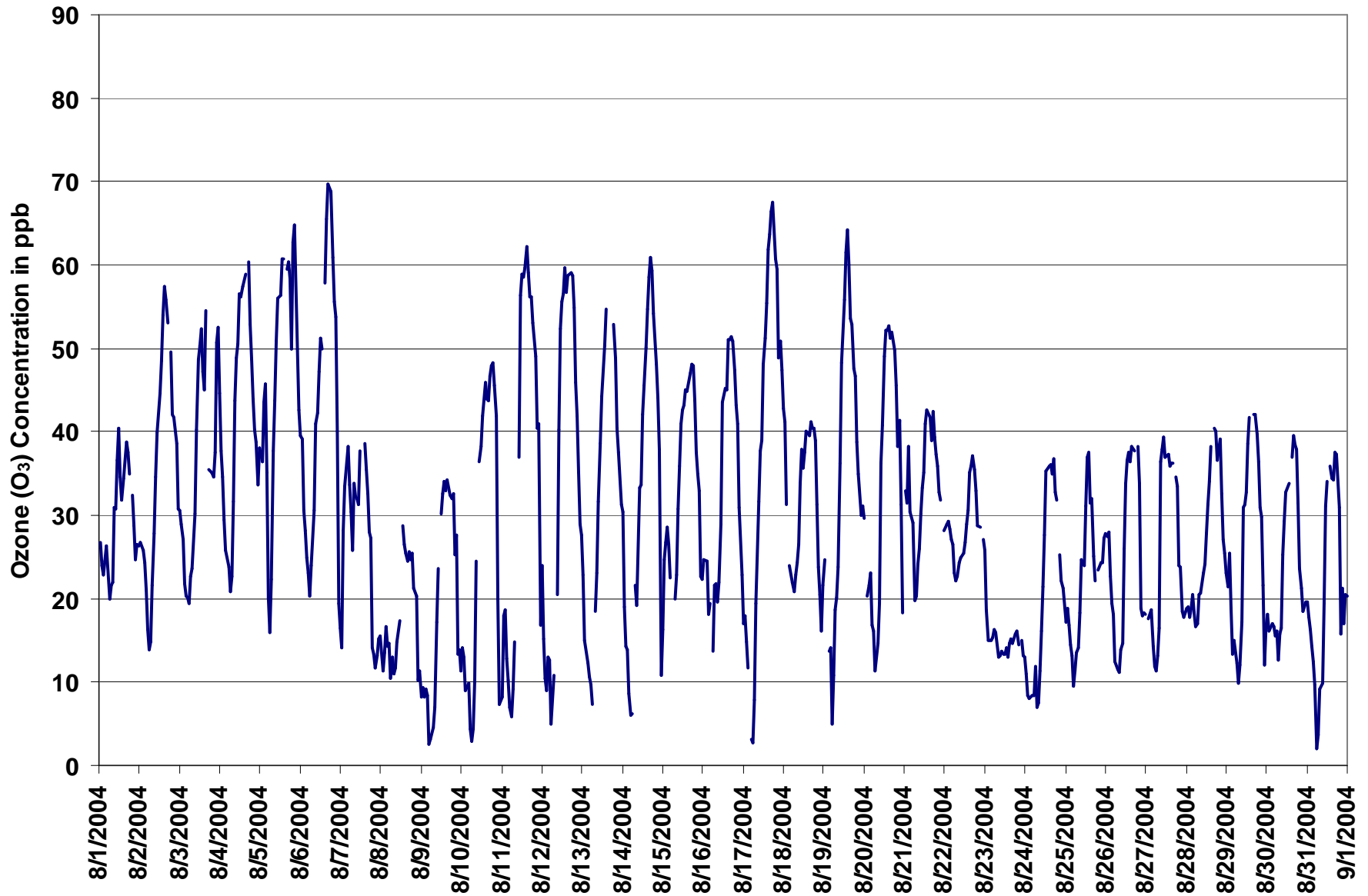


Figure 6. PAS - Crescent Heights Ozone 1-hr Maximum Value Monthly Trend



Station: Crescent Heights

### EIGHT HOUR RUNNING AVERAGE TABLE

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

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004

#### Summary

Number of 8-hr Exceedances:	0						
Maximum 8-hr Average:	57.0	ppb	6-Aug	20:00	21:00		

Guideline Limit: Canada Wide Standard 8-hr 65 ppb

Percentile	99	95	75	50	25	5	1
	55.3	50.2	33.5	24.6	16.2	8.8	5.8

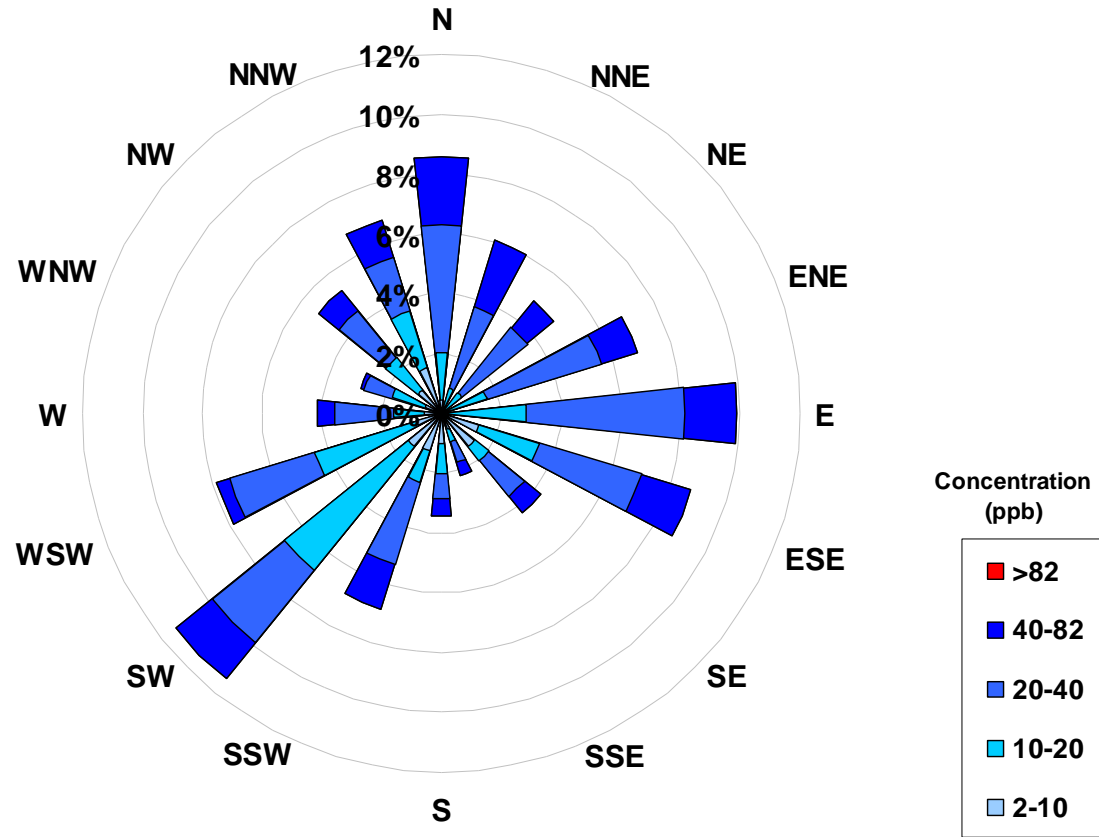
#### Status Flag Characters

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum	
	Hour Start	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-Aug-04	24	31	27	26	24	23	22	20	20	21	22	24	25	27	28	31	32	33	33	33	32	31	30	28	26.9	33.1	
2-Aug-04	27	25	25	23	22	21	19	19	18	19	21	24	28	32	37	42	45	47	48	48	47	45	42	38	31.9	48.4	
3-Aug-04	35	33	30	28	25	23	21	20	20	21	24	28	32	35	38	41	43	42	40	38	36	36	37	37	31.7	42.7	
4-Aug-04	36	37	36	35	34	31	27	25	25	27	29	33	37	42	46	49	52	53	52	51	49	45	42	41	38.9	52.7	
5-Aug-04	38	36	35	33	30	28	26	25	26	27	28	33	38	44	48	52	55	56	56	55	52	50	49	46	40.2	56.5	
6-Aug-04	43	39	36	33	30	26	24	23	23	25	27	30	34	36	41	46	51	54	56	57	57	53	48	41	38.9	57.0	
7-Aug-04	34	29	25	23	20	20	21	23	26	26	27	27	27	28	29	30	29	29	27	23	21	18	16	14	24.7	33.6	
8-Aug-04	12	10	10	11	11	11	11	11	11	11	11	11	11	13	15	16	18	20	22	23	22	21	19	17	15	14.7	22.8
9-Aug-04	13	11	9	7	6	5	4	4	5	6	6	10	14	18	22	26	28	30	29	28	27	23	21	18	15.4	30.0	
10-Aug-04	15	13	10	9	7	7	6	6	6	5	10	14	19	25	30	35	39	40	42	42	40	36	31	27	21.4	41.7	
11-Aug-04	23	19	15	11	8	7	8	9	8	9	15	22	29	37	44	51	51	55	55	53	50	46	40	35	29.1	54.8	
12-Aug-04	29	23	18	13	10	8	7	6	6	9	16	22	28	36	43	45	51	54	54	53	51	48	45	41	29.9	54.4	
13-Aug-04	36	30	25	20	17	13	11	10	10	12	16	19	24	31	31	N	N	N	N	N	N	N	N	N	N	N	35.8
14-Aug-04	34	31	26	21	17	13	11	9	10	12	15	18	24	30	33	38	43	47	49	51	50	48	42	36	29.4	50.5	
15-Aug-04	30	25	22	20	17	16	18	20	22	24	26	28	31	32	35	38	41	42	43	42	41	39	36	32	30.1	42.8	
16-Aug-04	29	26	23	20	19	15	15	15	14	13	15	17	21	25	29	34	38	42	45	46	45	43	39	34	27.6	45.6	
17-Aug-04	30	25	21	18	13	10	8	8	9	12	16	19	24	31	38	43	48	51	55	56	56	55	54	51	31.3	56.3	
18-Aug-04	48	44	42	37	33	29	25	22	21	21	23	25	27	29	31	33	35	35	35	34	32	29	26	24	30.8	48.1	
19-Aug-04	22	20	16	14	12	11	11	11	12	14	18	22	29	36	41	45	49	51	51	49	46	42	39	36	29.0	51.4	
20-Aug-04	34	30	26	24	22	20	17	14	14	15	17	20	25	29	35	40	44	47	46	44	42	39	34	32	29.6	46.7	
21-Aug-04	29	26	25	25	23	22	23	22	22	21	22	23	25	28	31	33	35	37	37	37	36	35	34	33	28.5	37.2	
22-Aug-04	31	30	29	28	27	26	25	25	24	24	23	23	23	24	26	28	29	30	30	30	30	30	29	27	27.2	31.4	
23-Aug-04	25	22	20	19	17	16	15	14	13	13	13	12	12	12	12	12	12	12	12	12	12	13	13	12	14.3	24.8	
24-Aug-04	12	10	9	9	8	8	7	6	6	7	8	11	14	17	20	24	26	29	30	31	29	27	25	22	16.4	30.7	
25-Aug-04	20	18	16	15	13	12	11	11	11	12	13	15	18	21	23	24	25	24	25	24	22	20	20	20	18.1	24.9	
26-Aug-04	21	23	22	22	21	20	18	16	14	12	12	14	17	20	23	27	30	33	35	34	31	28	25	22	22.5	35.0	
27-Aug-04	N	19	16	14	13	12	11	10	12	15	17	21	24	28	31	34	35	34	33	30	28	25	22	20	21.9	34.8	
28-Aug-04	20	18	17	16	16	16	16	16	16	16	17	18	19	21	24	25	27	30	32	33	33	30	28	26	22.1	33.5	
29-Aug-04	23	20	18	15	14	13	11	11	12	12	14	17	20	23	26	30	34	36	37	36	35	31	29	25	22.6	36.5	
30-Aug-04	22	19	17	15	14	13	13	13	13	13	14	16	18	19	23	26	29	32	32	31	29	27	25	22	20.7	32.5	
31-Aug-04	20	17	16	14	13	11	10	8	7	7	9	12	12	17	21	25	28	31	29	25	24	22	20	18	17.3	30.6	
Hourly Avg	27.1	24.6	22.0	19.9	18.0	16.2	15.2	14.5	14.6	15.5	17.5	20.2	23.5	27.4	30.9	34.1	36.9	38.6	39.0	38.3	36.8	34.5	31.8	29.1			
Hourly Max	48.1	44.0	41.9	37.0	33.6	30.6	27.1	24.9	25.9	26.7	29.2	32.8	37.7	43.8	47.8	52.2	55.1	56.5	55.9	56.7	57.0	55.4	53.6	51.2			



**Concentration Rose for the 1-hr O<sub>3</sub> Average Concentration Occurrences at the Crescent Heights Site for August 2004**



Frequency Distribution of O <sub>3</sub> in ppb			
Range		Frequency (hrs)	
0	< 2	8	
2	to 10	84	
10	to 20	193	
20	to 40	292	
40	to 82	130	
	> 82	0	
Total Non-Zero Values			707

Calms	
Range	
ppb	
2-10	0.0%
10-20	0.0%
20-40	0.0%
40-82	0.0%
>82	0.0%



### PAS - Crescent Heights Total Hydrocarbon Monthly Summary

Station: Crescent Heights

#### HOURLY AVERAGE TABLE

Total HydroCarbons (THC)

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004

#### Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	2.6 ppm 13-Aug 11:00 12:00
Maximum 24-hr Average:	2.0 ppm 14-Aug

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

AIC Time:	32 hrs	Operational Time:	707 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	99.9%					
Percentile	99	95	75	50	25	5	1	Average
	2.4	2.1	1.9	1.8	1.8	1.7	1.7	1.9 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	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-Aug-04	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.8	1.7	A	1.8	1.8	1.8	1.8	1.8	1.79	1.94
2-Aug-04	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	A	1.7	1.7	1.7	1.7	1.7	1.7	1.76	1.87
3-Aug-04	1.7	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.8	1.7	1.8	1.8	1.7	1.7	1.7	1.76	1.87
4-Aug-04	1.8	1.8	1.8	1.8	2.0	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.74	1.97
5-Aug-04	1.9	1.7	1.8	1.8	1.9	1.9	1.9	1.9	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.7	1.7	1.7	1.6	1.6	1.7	1.7	1.7	1.8	1.75	1.95
6-Aug-04	1.9	1.9	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.8	1.8	A	1.7	1.8	1.8	1.7	1.7	1.8	1.9	2.1	2.0	1.82	2.06
7-Aug-04	2.1	2.0	1.8	1.7	1.7	1.8	1.8	1.8	1.7	1.7	1.7	1.7	A	1.7	1.7	1.7	1.7	1.7	1.8	1.8	2.2	2.1	2.1	1.9	1.83	2.22	
8-Aug-04	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.8	1.8	A	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.9	1.9	1.9	1.80	1.94	
9-Aug-04	1.9	2.0	2.1	2.1	2.2	2.3	2.3	2.2	1.9	1.9	A	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.9	1.9	2.0	1.92	2.34	
10-Aug-04	2.0	2.0	2.0	2.0	2.2	2.5	2.6	2.3	2.0	A	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.9	2.1	2.2	2.1	1.97	2.56	
11-Aug-04	2.0	2.1	2.3	2.2	2.3	2.2	2.0	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.8	1.8	1.9	2.1	1.9	1.93	2.29	
12-Aug-04	1.9	2.0	2.0	2.1	2.0	2.1	2.0	A	2.0	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.7	1.7	1.8	1.83	2.11	
13-Aug-04	1.9	1.9	1.9	1.9	1.9	2.0	A	2.0	2.0	1.8	1.9	2.6	C	C	C	C	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.0	1.94	2.63	
14-Aug-04	2.4	2.1	2.1	2.4	2.3	2.2	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	2.1	2.1	2.4	2.3	2.04	2.40	
15-Aug-04	2.4	2.2	2.1	2.1	2.1	A	2.2	2.1	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0	1.9	1.9	1.97	2.42	
16-Aug-04	2.0	2.0	2.1	2.2	A	2.3	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.1	1.9	1.9	1.9	1.92	2.29	
17-Aug-04	1.9	1.9	2.0	A	2.1	2.1	2.2	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.88	2.17	
18-Aug-04	1.9	1.9	A	2.0	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.1	2.0	1.97	2.14	
19-Aug-04	2.0	A	2.1	2.3	2.4	2.2	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.9	1.9	1.9	2.0	2.0	2.0	1.98	2.42	
20-Aug-04	A	2.0	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.9	1.8	1.8	1.9	2.0	2.2	1.9	2.0	A	1.98	2.22	
21-Aug-04	1.8	1.8	1.8	2.1	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	A	1.8	1.85	2.07	
22-Aug-04	1.8	1.8	1.8	1.9	1.8	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.83	1.92	
23-Aug-04	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.9	1.81	1.88	
24-Aug-04	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.84	1.95	
25-Aug-04	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.7	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	2.0	1.81	1.97	
26-Aug-04	1.9	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	A	1.9	2.1	2.0	1.9	1.9	1.9	1.93	2.12	
27-Aug-04	P	2.0	2.0	2.0	2.1	2.1	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.88	2.13	
28-Aug-04	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.9	1.80	1.90	
29-Aug-04	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	A	1.8	1.7	1.7	1.8	2.2	1.7	1.7	1.8	1.8	1.88	2.16	
30-Aug-04	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.7	1.7	1.7	1.8	1.8	A	1.9	1.8	1.8	1.8	1.9	2.0	2.1	2.1	2.1	1.9	1.83	2.12	
31-Aug-04	1.9	2.0	2.0	2.0	2.3	2.2	2.3	2.2	2.1	2.0	1.8	1.8	A	1.7	1.7	1.8	1.8	1.8	1.7	2.0	1.8	1.8	1.8	1.8	1.92	2.29	
Hourly Avg	1.92	1.90	1.92	1.95	1.99	2.01	1.98	1.93	1.90	1.85	1.82	1.83	1.79	1.78	1.78	1.77	1.77	1.77	1.79	1.86	1.88	1.87	1.91	1.89			
Hourly Max	2.42	2.16	2.29	2.37	2.42	2.48	2.56	2.27	2.13	2.03	1.98	2.63	1.95	1.92	1.90	1.89	1.88	1.85	1.90	2.16	2.22	2.14	2.38	2.34			

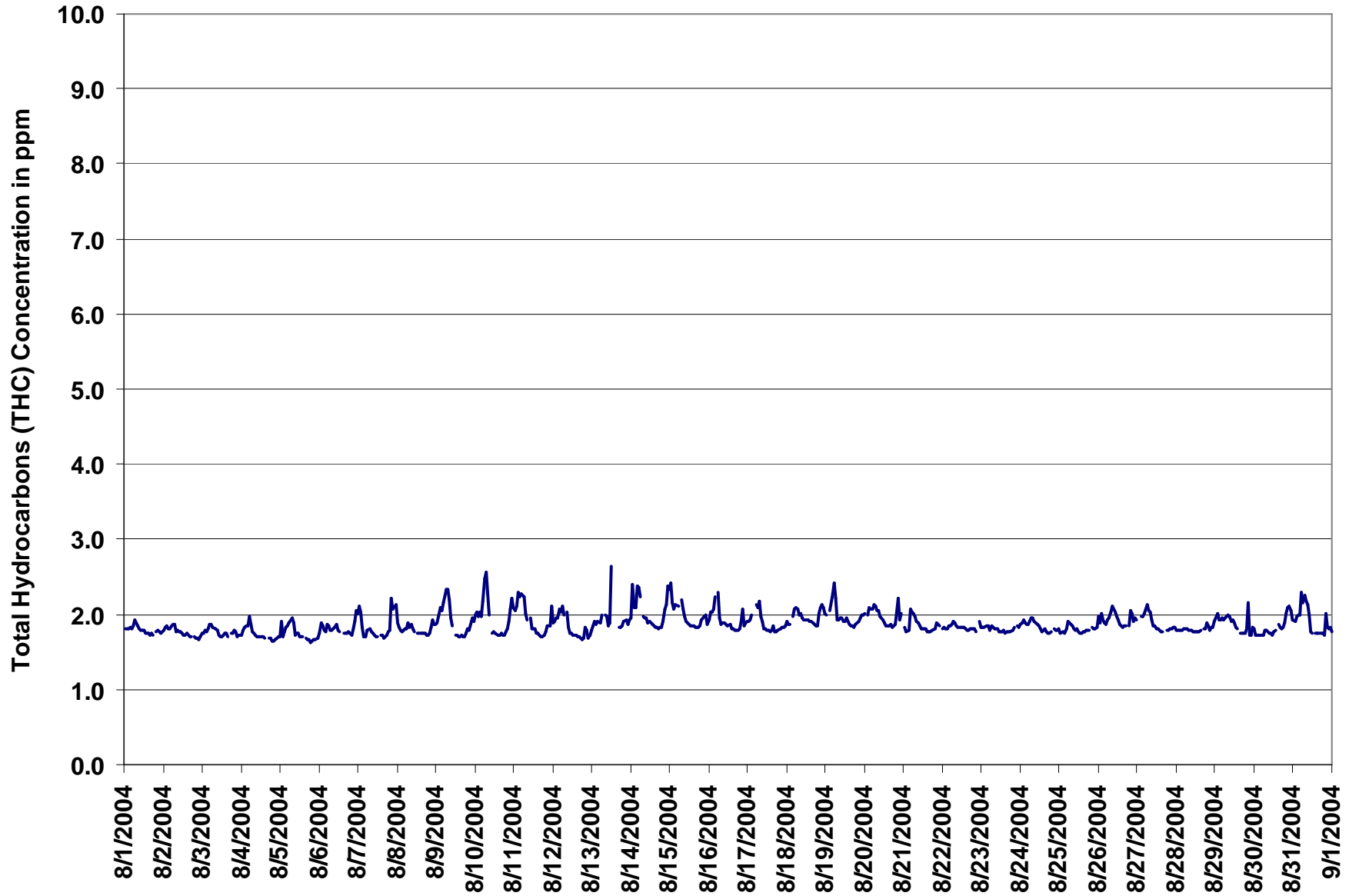


Figure 7. PAS - Crescent Heights Total Hydrocarbons 1-hr Average Monthly Trend



Station: Crescent Heights

**HOURLY MAXIMUM TABLE**

**Total HydroCarbons (THC)**

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004  
 Summary

Maximum 1-hr Value:	5.5	ppm	7-Aug	20:00 21:00
Maximum 24-hr Value:	2.2	ppm	14-Aug	

AIC Time:	32 hrs	Operational Time:	707 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	99.9%					
Percentile	99	95	75	50	25	5	1	Average
	2.8	2.4	2.0	1.9	1.8	1.7	1.7	2.0 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			
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-Aug-04	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.8	1.8	1.8	1.8	1.8	1.84	2.04
2-Aug-04	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.7	1.8	1.7	1.7	A	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.81	1.94
3-Aug-04	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.7	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	2.0	1.8	1.8	1.8	1.8	1.8	1.82	2.04
4-Aug-04	1.9	1.9	1.9	1.9	2.1	2.1	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	A	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.79	2.09
5-Aug-04	2.1	1.9	2.0	1.9	1.9	2.0	2.2	2.2	1.8	1.8	1.9	1.8	1.7	1.7	A	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.84	2.16
6-Aug-04	2.0	2.0	1.8	1.9	1.9	1.9	1.9	1.8	1.9	1.9	2.1	1.8	1.8	A	1.8	2.1	2.1	1.8	1.8	1.8	1.9	2.0	2.2	2.1	1.93	2.17	
7-Aug-04	2.2	2.1	2.0	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.7	1.7	A	1.8	1.8	1.7	1.7	1.9	1.8	1.9	5.5	2.8	2.9	2.3	2.11	5.53	
8-Aug-04	1.9	1.8	1.8	1.8	1.8	1.9	2.2	1.9	2.1	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.8	2.0	2.1	2.1	1.9	1.88	2.20	
9-Aug-04	1.9	2.1	2.2	2.2	2.3	2.5	2.5	2.4	2.1	1.9	A	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.9	1.9	2.0	2.0	2.0	2.1	2.01	2.47	
10-Aug-04	2.3	2.1	2.1	2.1	2.4	2.6	2.7	2.5	2.2	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	2.3	1.9	2.1	2.2	2.6	2.3	2.11	2.68	
11-Aug-04	2.2	2.5	2.5	2.3	2.3	2.3	2.3	2.0	A	2.0	1.9	1.9	2.6	1.8	1.8	1.8	1.7	1.7	1.8	2.0	2.2	2.1	2.4	2.1	2.09	2.59	
12-Aug-04	2.0	2.0	2.0	2.4	2.1	2.2	2.2	A	2.1	1.9	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.8	1.9	1.9	1.7	1.8	1.8	1.8	1.90	2.37	
13-Aug-04	2.0	2.1	1.9	2.0	2.0	2.2	A	2.1	2.1	2.0	2.0	3.5	C	C	C	C	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.0	2.07	3.54	
14-Aug-04	4.2	2.2	2.4	2.5	2.4	2.4	A	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.8	1.9	1.8	1.9	1.9	1.9	2.2	2.3	2.4	2.7	2.22	4.16	
15-Aug-04	2.5	2.2	2.2	2.2	2.2	A	2.4	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.1	2.1	2.1	1.9	2.0	2.06	2.53	
16-Aug-04	2.1	2.1	2.2	2.4	A	2.4	2.1	2.0	1.9	2.0	1.9	1.9	2.0	1.9	1.8	1.8	1.8	1.8	1.9	2.1	2.3	2.0	1.9	2.0	2.02	2.42	
17-Aug-04	2.0	2.0	2.3	A	2.2	2.2	2.3	2.1	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.0	1.96	2.31	
18-Aug-04	1.9	1.9	A	2.1	2.1	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.2	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.8	2.2	2.3	2.2	2.09	2.77	
19-Aug-04	2.1	A	2.3	2.4	2.8	2.7	2.0	2.0	2.1	2.3	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.1	2.1	2.1	2.12	2.81
20-Aug-04	A	2.1	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.2	2.1	2.7	2.0	2.1	A	2.08	2.73	
21-Aug-04	1.9	1.8	1.9	2.2	2.1	2.1	2.0	2.0	2.0	1.9	2.1	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	A	1.8	1.92	2.19	
22-Aug-04	1.9	1.8	1.8	1.9	1.9	1.9	2.0	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	2.1	2.0	1.88	2.09	
23-Aug-04	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.9	1.9	1.85	1.94	
24-Aug-04	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	2.8	1.8	1.8	1.8	A	1.9	1.8	1.8	1.8	1.92	2.81	
25-Aug-04	1.8	1.8	1.8	1.9	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	A	1.9	1.9	1.9	2.3	1.88	2.29	
26-Aug-04	2.0	2.1	2.0	1.9	1.9	2.0	2.0	2.2	2.7	2.2	2.0	2.0	1.9	1.9	1.8	1.9	1.9	A	1.9	2.3	2.1	2.0	2.0	2.0	2.02	2.68	
27-Aug-04	P	2.0	2.0	2.1	2.1	2.2	2.2	2.1	2.0	1.9	1.9	1.8	2.0	1.8	1.8	1.8	A	1.8	1.9	1.9	1.8	1.9	1.9	1.8	1.95	2.24	
28-Aug-04	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.8	2.1	2.1	1.9	1.9	1.9	2.0	1.85	2.08	
29-Aug-04	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	A	1.8	1.8	1.8	1.8	2.4	3.0	1.8	1.8	1.9	1.9	1.99	2.99	
30-Aug-04	1.8	1.8	1.8	1.8	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.9	A	1.9	1.9	1.8	1.9	2.2	2.4	2.3	2.4	2.4	2.0	1.93	2.43	
31-Aug-04	1.9	2.0	2.0	2.1	2.8	2.2	2.4	2.3	2.2	2.1	2.0	1.8	A	1.8	1.8	1.8	1.9	1.8	1.9	2.5	1.9	1.8	2.0	1.8	2.04	2.83	
Hourly Avg	2.06	1.99	2.02	2.03	2.08	2.11	2.09	2.01	1.98	1.91	1.90	1.90	1.87	1.83	1.84	1.82	1.82	1.82	1.90	2.04	2.11	1.99	2.05	1.99			
Hourly Max	4.16	2.48	2.50	2.47	2.83	2.66	2.68	2.47	2.68	2.34	2.24	3.54	2.59	2.17	2.81	2.12	2.10	2.01	2.36	2.99	5.53	2.78	2.87	2.42			



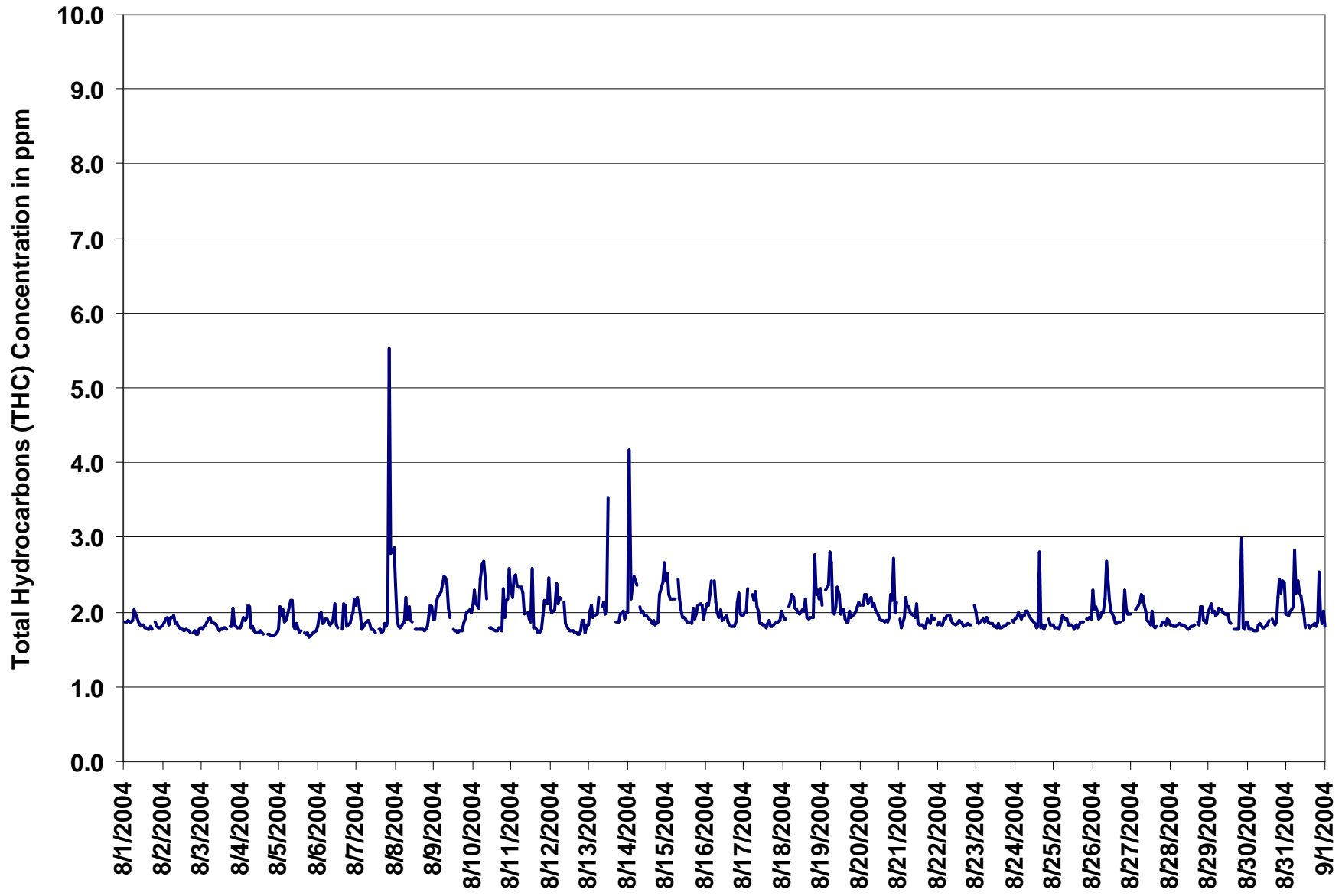


Figure 8. PAS - Crescent Heights Total Hydrocarbons 1-hr Maximum Value Monthly Trend



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

Station: Crescent Heights

### HOURLY AVERAGE TABLE

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

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004

**Summary**

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	45.9	µg/m <sup>3</sup>	19-Aug	18:00 19:00
Maximum 24-hr Average:	20.7	µg/m <sup>3</sup>	19-Aug	

Guideline Limit	Canada Wide Standard	1-hr	-	µg/m <sup>3</sup>	24-hr	30	µg/m <sup>3</sup>
(considered as an absolute value)							

AIC Time:	0 hrs		Operational Time:	713 hrs					
Calibration Time:	8 hrs		AMD Operational Uptime:	96.9%					
Percentile	99	95	75	50	25	5	1	Average	Geomean
	29.0	20.6	9.2	3.6	0.9	0.0	0.0	6.3 µg/m <sup>3</sup>	3.9 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**

Day	Hour Start	Hour End	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum
1-Aug-04	7	4	0	1	5	2	8	4	3	4	2	0	5	5	0	1	2	0	3	3	1	1	0	2.6	7.9			
2-Aug-04	0	0	0	1	1	1	1	0	1	2	5	7	6	5	6	5	6	7	13	0	6	5	1	2	3.5	12.9		
3-Aug-04	1	2	2	2	3	4	6	7	7	6	3	7	13	3	6	7	15	5	6	10	3	D	0	4	5.3	14.6		
4-Aug-04	3	3	3	4	2	5	6	3	0	0	2	D	2	0	0	1	8	8	14	5	3	5	0	0	3.4	13.9		
5-Aug-04	6	0	1	8	4	4	6	0	2	0	0	1	0	D	1	0	2	6	12	0	19	4	4	0	3.4	19.2		
6-Aug-04	D	5	0	1	D	0	1	4	5	5	0	0	D	D	1	5	3	6	3	6	4	8	12	8	3.8	11.5		
7-Aug-04	6	3	12	1	4	3	4	1	0	0	D	D	0	6	2	2	1	6	3	1	2	6	6	4	3.3	12.3		
8-Aug-04	6	4	4	5	6	5	2	3	3	4	5	3	5	4	3	2	1	2	2	1	1	2	2	1	3.2	6.1		
9-Aug-04	0	2	1	0	2	6	13	6	1	0	0	0	0	0	0	0	0	0	4	1	5	8	3	2	2.3	13.0		
10-Aug-04	1	2	3	1	0	3	4	9	7	0	0	2	0	1	3	2	3	3	1	6	9	12	13	8	3.9	13.0		
11-Aug-04	3	4	3	4	4	5	7	9	10	5	D	8	8	12	13	12	11	10	11	14	14	19	25	13	9.8	24.9		
12-Aug-04	16	12	12	10	12	13	15	17	21	13	3	13	10	10	10	11	11	9	16	8	13	10	8	8	11.8	21.2		
13-Aug-04	8	8	8	7	8	10	13	8	13	7	C	C	C	C	C	C	C	C	6	5	4	4	3	4	N	13.1		
14-Aug-04	5	5	5	7	8	7	10	7	9	7	8	8	7	8	5	5	3	5	4	9	15	12	19	15	8.0	18.6		
15-Aug-04	15	9	11	12	13	16	19	23	23	25	25	21	21	22	22	22	22	21	20	20	20	20	21	21	19.3	25.2		
16-Aug-04	16	18	19	20	20	20	20	19	18	21	18	14	15	14	14	10	12	13	14	17	15	15	16	16	16.5	21.0		
17-Aug-04	16	16	17	19	18	16	20	17	18	17	18	14	15	14	13	13	10	18	21	28	24	17	18	29	17.8	29.0		
18-Aug-04	34	14	8	7	6	1	3	5	5	0	1	2	2	4	4	4	6	4	8	15	11	10	11	9	7.2	33.7		
19-Aug-04	7	7	11	10	10	12	13	18	19	18	10	17	16	10	14	28	40	41	46	36	30	29	29	26	20.7	45.9		
20-Aug-04	26	30	20	20	18	14	17	22	26	26	27	19	13	6	9	6	7	8	9	14	13	15	15	13	16.3	29.5		
21-Aug-04	19	12	8	10	7	9	8	7	7	4	7	2	0	3	0	1	4	6	4	3	3	0	0	0	5.1	19.3		
22-Aug-04	0	0	2	0	0	1	0	1	0	0	0	2	2	2	2	1	4	3	1	0	14	1	1	0	1.5	13.8		
23-Aug-04	0	0	0	0	0	1	0	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0.2	2.1		
24-Aug-04	0	0	0	1	1	1	3	1	3	4	3	3	D	1	D	3	D	0	0	3	2	0	0	0	1.4	3.8		
25-Aug-04	0	0	0	4	2	3	4	2	2	1	1	1	0	2	4	0	1	0	0	1	0	1	0	1	1.4	4.3		
26-Aug-04	0	0	1	2	1	3	2	5	4	5	0	D	D	2	2	2	3	3	4	6	15	5	1	1	3.1	15.2		
27-Aug-04	P	P	2	2	1	3	3	8	3	0	0	1	0	0	D	0	1	0	9	2	0	0	0	0	1.8	9.0		
28-Aug-04	0	0	0	0	0	0	1	3	2	3	0	0	0	0	0	2	0	0	2	13	0	4	1	3	1.4	12.7		
29-Aug-04	1	0	1	0	0	1	3	4	2	D	0	0	0	0	0	1	0	0	0	0	3	3	2	2	0	1.1	3.8	
30-Aug-04	0	0	0	0	0	1	3	5	5	3	2	0	2	4	1	2	2	2	2	4	7	5	3	5	2.4	7.4		
31-Aug-04	2	1	1	0	1	2	7	1	6	11	D	0	D	D	0	3	D	5	0	9	3	5	2	3	3.1	11.1		
Hourly Avg	6.8	5.3	5.0	5.1	5.2	5.4	7.1	7.1	7.4	6.5	5.3	5.4	5.5	5.3	4.8	5.1	6.3	6.5	7.7	7.8	8.5	7.5	7.0	6.4				
Hourly Max	33.7	29.5	19.6	20.1	19.9	20.4	20.3	23.1	26.4	26.4	26.7	21.1	21.1	21.5	21.9	28.0	40.3	41.3	45.9	36.3	30.0	28.9	28.7	29.0				

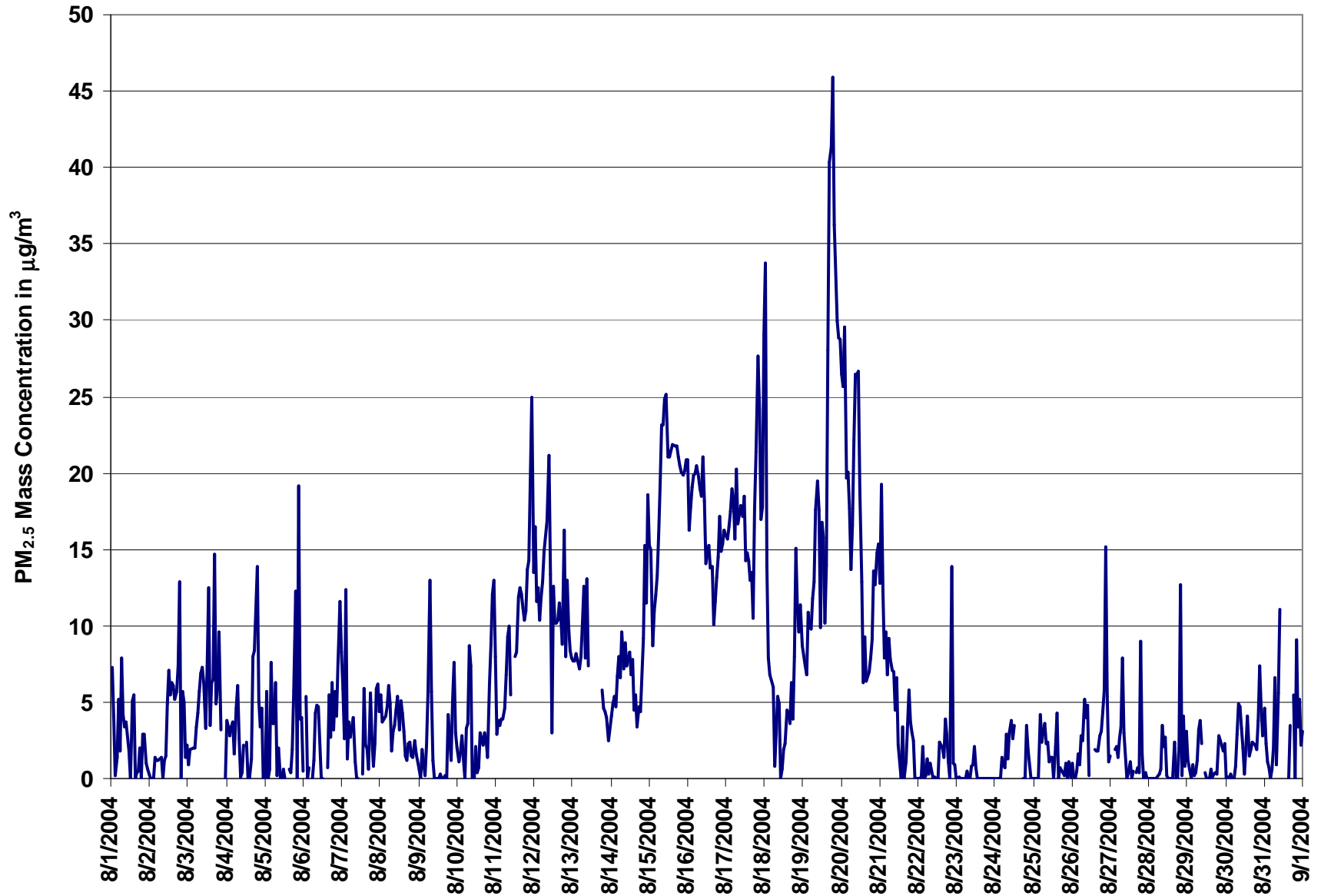


Figure 9. PAS - Crescent Heights Particulate Matter (less than 2.5 microns) 1-hr Average Monthly Trend



Station: Crescent Heights

### HOURLY MAXIMUM TABLE

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

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004  
Summary

Maximum 1-hr Value:	63.4	µg/m <sup>3</sup>	5-Aug	20:00 21:00
Maximum 24-hr Value:	26.3	µg/m <sup>3</sup>	19-Aug	

AIC Time:	0 hrs	Operational Time:	735 hrs						
Calibration Time:	8 hrs	AMD Operational Uptime:	99.9%						
Percentile	99	95	75	50	25	5	1	Average	Geomean
	43.5	28.9	17.1	10.0	5.4	2.1	0.6	12.3 µg/m <sup>3</sup>	10.8 µg/m <sup>3</sup>

#### Status Flag Characters

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

#### Day Mountain Standard Time

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
1-Aug-04	12	11	6	9	17	10	13	13	20	9	10	20	18	15	7	8	9	11	6	6	8	4	4	2	10.3	19.8
2-Aug-04	2	1	2	4	4	3	6	6	6	11	16	16	15	15	17	14	15	24	32	11	10	18	5	5	10.7	32.1
3-Aug-04	4	4	4	4	6	7	12	11	14	16	17	25	52	51	19	45	32	19	15	27	17	5	5	9	17.5	52.2
4-Aug-04	6	5	8	7	5	7	9	11	12	13	16	13	14	9	11	13	56	24	31	13	19	12	1	14	13.8	56.4
5-Aug-04	17	1	12	12	6	7	28	9	12	12	8	10	12	10	18	12	12	25	35	21	63	10	9	8	15.4	63.4
6-Aug-04	15	17	6	8	3	2	8	10	15	13	3	6	4	6	20	19	10	19	17	16	13	24	23	17	12.2	23.7
7-Aug-04	16	13	28	5	9	9	10	10	6	10	12	5	15	14	9	8	7	12	11	3	8	12	9	8	10.4	27.6
8-Aug-04	7	5	7	7	9	7	4	6	6	10	10	18	9	9	8	9	6	10	8	4	5	7	6	3	7.5	17.8
9-Aug-04	1	4	4	4	7	16	23	10	5	3	10	6	1	5	5	14	5	5	23	14	20	14	8	4	8.8	22.9
10-Aug-04	3	5	7	3	3	11	7	12	12	7	12	6	8	8	10	9	9	10	7	9	23	18	23	11	9.7	23.1
11-Aug-04	7	6	6	6	8	7	11	13	25	12	7	13	15	18	20	21	18	16	17	27	28	30	34	19	16.0	34.4
12-Aug-04	21	15	16	13	14	15	17	24	28	21	20	23	17	22	22	21	20	20	24	13	17	16	14	13	18.6	27.8
13-Aug-04	11	11	10	11	11	18	17	16	23	19	C	C	C	C	C	C	C	C	26	10	6	6	5	6	N	26.1
14-Aug-04	7	7	8	9	11	9	14	9	11	10	11	14	10	11	11	8	8	7	7	20	26	19	22	22	12.1	26.1
15-Aug-04	20	11	14	14	16	28	22	26	26	27	29	26	25	25	25	24	24	23	23	24	22	23	24	25	22.7	28.8
16-Aug-04	19	21	22	24	24	24	27	23	22	25	25	27	25	21	19	15	15	17	16	23	19	17	18	17	21.1	27.1
17-Aug-04	18	19	20	29	20	20	27	19	24	23	25	24	20	23	18	21	16	31	30	31	26	24	21	33	23.5	33.3
18-Aug-04	36	30	9	10	8	4	6	8	9	5	7	4	5	10	7	6	9	8	13	39	19	12	14	11	12.1	38.9
19-Aug-04	11	17	15	16	15	14	15	21	22	23	16	24	28	23	21	41	44	45	49	43	32	32	32	33	26.3	49.2
20-Aug-04	28	36	29	23	23	16	19	27	31	30	33	32	22	11	18	12	14	15	21	25	20	20	22	22	22.9	35.6
21-Aug-04	38	30	21	21	16	13	13	13	15	14	13	15	8	11	10	9	10	13	12	5	4	0	3	1	12.9	37.7
22-Aug-04	2	3	6	3	5	7	3	4	3	3	3	4	8	9	5	4	10	12	11	2	35	11	6	4	6.8	34.6
23-Aug-04	1	2	1	2	2	4	5	2	4	4	4	3	1	2	2	4	2	0	2	2	3	2	0	1	2.3	4.7
24-Aug-04	2	3	2	4	2	5	5	5	7	14	9	10	5	7	26	12	3	3	2	9	9	3	2	2	6.2	26.2
25-Aug-04	0	1	2	12	8	5	5	5	5	6	8	7	7	10	15	5	4	3	3	7	3	5	3	3	5.5	14.5
26-Aug-04	1	1	3	4	3	5	5	8	9	12	9	3	6	11	5	5	7	7	6	12	24	12	5	5	6.9	24.3
27-Aug-04	P	3	4	4	3	6	8	13	10	5	7	6	4	5	3	22	6	5	36	7	5	7	4	0	7.5	35.8
28-Aug-04	0	0	1	3	1	4	4	6	6	9	5	9	7	9	7	13	8	4	4	28	8	10	6	9	6.7	28.4
29-Aug-04	4	16	9	2	3	8	9	7	7	6	9	4	3	7	12	5	5	7	7	6	6	3	4	1	6.3	15.5
30-Aug-04	2	2	3	3	2	3	5	10	8	11	9	7	9	13	12	7	10	10	8	6	14	13	8	9	7.7	13.8
31-Aug-04	4	3	3	2	3	4	16	12	9	19	4	7	6	5	7	10	4	16	6	18	13	10	7	11	8.4	19.4
Hourly Avg	10.6	9.8	9.2	8.9	8.6	9.6	12.0	11.9	13.2	13.0	12.2	12.9	12.6	13.2	13.0	13.9	13.3	14.0	16.4	15.6	17.0	12.9	11.2	10.6		
Hourly Max	37.7	35.6	28.8	29.3	24.2	27.6	27.6	27.5	30.6	30.5	33.1	32.3	52.2	51.5	26.2	45.5	56.4	44.8	49.2	42.8	63.4	32.3	34.4	33.3		

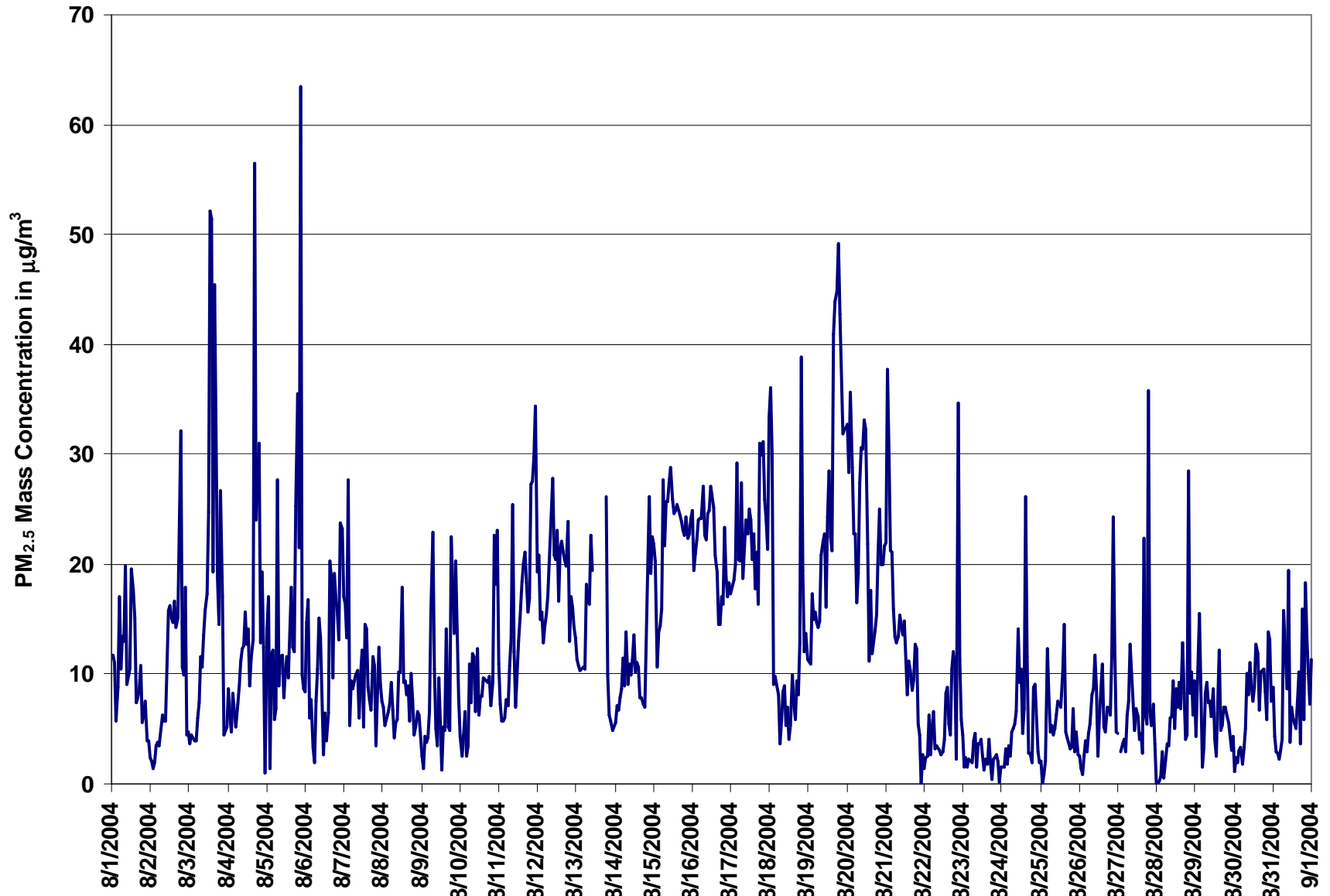
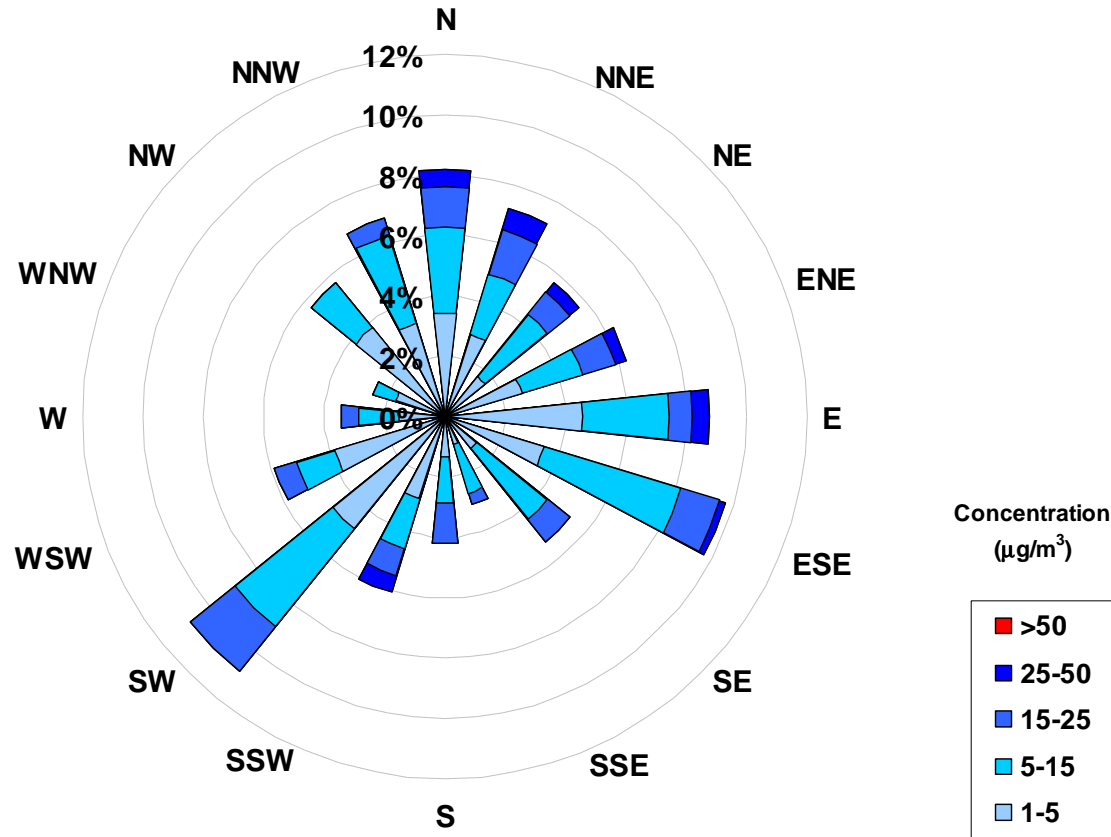


Figure 10. PAS - Crescent Heights Particulate Matter (less than 2.5 microns) 1-hr Maximum Value Monthly Trend



**Concentration Rose for the 1-hr PM<sub>2.5</sub> Average Concentration Occurrences at the Crescent Heights Site for August 2004**



Frequency Distribution of PM <sub>2.5</sub> in µg/m <sup>3</sup>			
Range	Frequency (hrs)		
0 < 1	188		
1 to 5	232		
5 to 15	199		
15 to 25	76		
25 to 50	18		
> 50	0		
Total Non-Zero Values			
			713

Calms	
Range	µg/m <sup>3</sup>
1-5	0.0%
5-15	0.0%
15-25	0.0%
25-50	0.0%
>50	0.0%

**PAS - Crescent Heights Meteorological Parameters Monthly Summary**

Station: Crescent Heights

**HOURLY AVERAGE TABLE****Relative Humidity (RH - %)**

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004

**Summary**

Number of 1-hr Exceedances:	0		
Number of 24-hr Exceedances:	0		
Maximum 1-hr Average:	94.5 %	26-Aug	3:00 4:00
Maximum 24-hr Average:	90.5 %	23-Aug	

AIC Time:	0 hrs		Operational Time:	743 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	99.9%				
Percentile	99	95	75	50	25	5	1	Average
	93.6	92.0	83.0	68.0	47.7	32.6	23.5	64.8 ppb

**Status Flag Characters**

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

**Day Mountain Standard Time**

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
1-Aug-04	70	81	82	82	87	88	92	93	88	85	78	69	78	88	83	77	73	71	71	76	80	83	84	85	81	93
2-Aug-04	84	85	85	86	87	87	83	76	66	55	51	51	49	48	47	50	48	50	54	58	62	70	75	75	66	87
3-Aug-04	76	79	81	83	85	86	78	73	61	55	46	41	48	63	72	71	81	79	77	78	78	81	80	85	72	86
4-Aug-04	87	87	89	91	90	89	80	73	66	58	54	47	42	36	34	31	36	43	53	63	68	74	75	74	64	91
5-Aug-04	76	66	65	80	86	87	75	63	56	47	40	37	34	30	30	29	29	33	46	49	68	81	86	86	58	87
6-Aug-04	79	79	81	82	78	76	69	66	59	53	45	37	34	28	27	31	33	36	39	46	52	58	68	73	55	82
7-Aug-04	79	76	84	90	91	94	94	91	87	83	77	69	67	79	86	89	89	92	90	87	88	85	84	84	85	94
8-Aug-04	85	85	85	84	85	85	82	82	80	80	78	73	71	68	64	63	62	60	64	67	70	78	82	84	76	85
9-Aug-04	85	86	89	89	91	90	78	74	71	68	61	55	51	48	47	49	50	50	55	59	60	74	79	81	68	91
10-Aug-04	85	86	89	89	92	91	83	74	70	56	48	46	42	38	37	36	36	37	36	44	51	61	71	75	61	92
11-Aug-04	76	81	84	86	85	84	79	73	65	54	37	35	34	34	33	34	34	35	36	43	48	56	69	75	57	86
12-Aug-04	76	82	85	84	85	87	78	67	61	52	38	37	35	33	32	32	32	33	40	45	50	58	65	68	56	87
13-Aug-04	78	85	87	87	87	87	77	68	60	50	43	35	30	26	21	22	22	25	30	39	49	55	55	63	53	87
14-Aug-04	73	75	79	83	84	79	66	57	52	45	39	35	30	29	24	22	19	22	24	29	39	48	56	61	49	84
15-Aug-04	66	67	73	80	85	88	86	81	74	67	59	50	45	42	41	41	42	43	44	50	52	55	63	67	61	88
16-Aug-04	66	67	69	74	77	77	78	85	85	85	77	67	58	52	49	47	46	48	52	58	60	69	75	79	67	85
17-Aug-04	79	82	83	84	86	87	83	73	63	52	47	41	39	39	40	42	38	33	39	46	50	51	50	51	57	87
18-Aug-04	56	65	71	76	80	75	70	67	62	48	42	41	38	38	37	35	35	34	37	46	52	58	64	67	54	80
19-Aug-04	66	62	67	77	80	76	72	68	62	54	41	36	37	35	33	31	33	35	40	47	51	55	56	59	53	80
20-Aug-04	64	68	69	69	74	77	78	73	62	55	53	46	41	38	34	31	29	30	33	40	45	52	55	55	53	78
21-Aug-04	58	61	64	75	76	78	79	74	66	60	55	49	44	44	37	37	39	44	53	59	62	66	72	73	59	79
22-Aug-04	73	75	84	84	85	90	89	87	83	79	73	67	60	54	50	48	48	49	52	55	71	89	90	87	72	90
23-Aug-04	87	87	86	85	85	87	89	91	91	91	93	94	93	93	92	92	92	91	92	92	93	92	92	92	90	94
24-Aug-04	91	92	92	92	91	90	90	88	80	74	67	61	52	52	52	51	44	45	47	55	62	68	73	77	70	92
25-Aug-04	77	79	81	86	90	92	92	89	83	73	71	67	63	65	89	93	93	91	93	93	93	92	92	93	85	93
26-Aug-04	94	93	94	94	94	92	91	91	89	85	76	58	45	43	43	42	44	42	45	55	72	84	85	84	72	94
27-Aug-04	P	88	87	87	90	91	83	73	60	47	44	45	42	43	39	40	39	44	65	67	70	76	75	75	64	91
28-Aug-04	77	80	80	78	78	79	77	70	70	62	55	48	42	37	38	41	40	39	48	75	86	84	85	88	65	88
29-Aug-04	90	87	91	93	92	92	90	86	80	62	57	54	49	43	41	41	41	41	48	57	66	74	75	73	68	93
30-Aug-04	73	74	73	76	76	74	73	68	68	61	53	47	43	46	43	44	44	47	53	60	66	71	74	82	62	82
31-Aug-04	88	90	91	92	93	94	92	78	70	62	42	35	30	26	23	25	23	25	30	39	44	50	51	55	56	94
Hourly Avg	77	79	81	84	85	85	81	77	71	63	56	51	47	46	46	46	46	47	51	57	63	69	73	75		
Hourly Max	94	93	94	94	94	94	94	93	91	91	93	94	93	93	92	93	93	92	93	93	93	92	92	93		

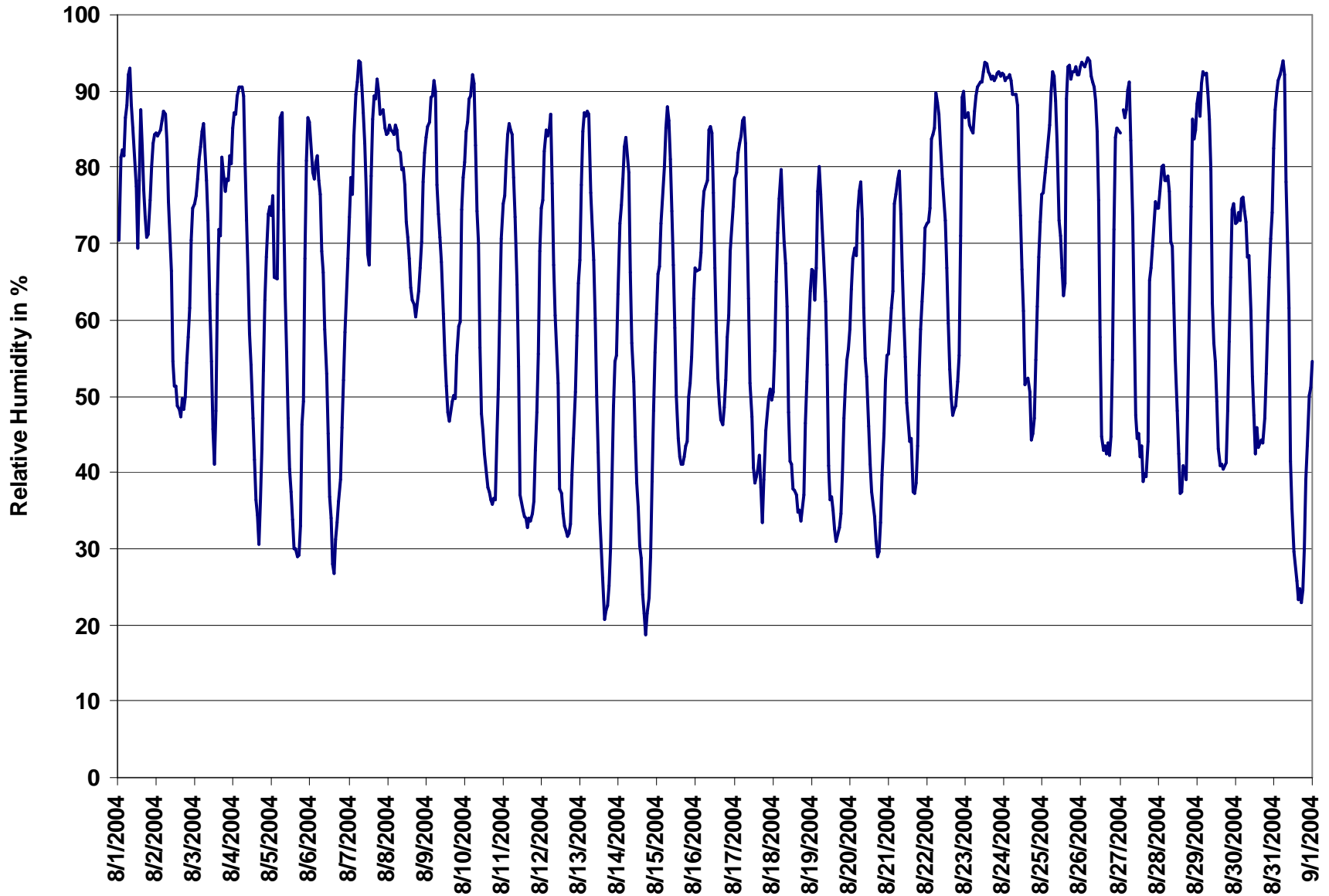


Figure 11. PAS - Crescent Heights Relative Humidity 1-hr Average Monthly Trend





Station: Crescent Heights

### HOURLY AVERAGE TABLE

Ambient Temperature (AT - °C)

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004

#### Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	33.1 °C 5-Aug 16:00 17:00
Maximum 24-hr Average:	24.4 °C 5-Aug

AIC Time:	0 hrs	Operational Time:	743 hrs					
Calibration Time:	0 hrs	AMD Operational Uptime:	99.9%					
Percentile	99	95	75	50	25	5	1	Average
	31.8	28.9	22.9	17.4	14.1	10.5	9.0	18.5 ppb

#### Status Flag Characters

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

#### Day Mountain Standard Time

Hour Start	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-Aug-04	17	16	15	15	15	14	14	15	16	16	18	19	17	16	16	16	18	18	18	18	17	16	15	15	15	16.2	18.8	
2-Aug-04	15	15	15	15	15	15	16	17	19	23	25	26	27	28	28	27	28	28	27	26	24	22	20	19	19	21.5	28.1	
3-Aug-04	19	18	17	16	16	16	18	19	23	26	29	30	29	24	21	20	19	20	21	20	20	18	17	17	17	20.5	30.4	
4-Aug-04	17	17	17	16	16	16	18	20	22	23	24	26	28	29	30	31	30	28	27	24	23	21	20	19	19	22.6	31.4	
5-Aug-04	19	21	21	18	16	16	19	22	24	27	28	30	31	32	32	33	33	32	29	27	21	18	17	17	17	24.4	33.1	
6-Aug-04	18	18	17	16	15	14	16	17	20	22	24	26	26	28	29	28	26	26	25	23	21	20	18	17	17	21.1	28.6	
7-Aug-04	16	16	16	15	14	14	15	15	16	16	17	17	18	16	14	14	14	15	15	15	14	14	14	14	14	15.1	18.0	
8-Aug-04	14	14	14	14	14	13	14	14	14	14	15	16	16	17	18	18	17	18	17	16	15	13	12	11	11	14.8	17.8	
9-Aug-04	10	10	9	9	8	9	12	14	14	14	15	16	17	18	18	17	17	16	16	15	14	13	12	11	11	13.5	18.2	
10-Aug-04	10	10	10	9	8	8	10	13	16	18	20	21	21	22	23	23	23	23	22	20	18	16	15	13	13	16.3	23.3	
11-Aug-04	12	11	10	10	10	9	11	13	17	21	23	24	25	26	27	26	26	26	26	23	21	20	18	15	15	18.8	26.5	
12-Aug-04	15	13	12	12	12	11	14	17	21	24	27	27	28	29	29	30	29	29	27	25	23	21	19	18	18	21.4	29.7	
13-Aug-04	16	14	14	13	13	13	16	18	21	24	27	29	30	30	31	31	30	29	28	25	23	21	20	18	18	22.2	30.9	
14-Aug-04	16	16	15	13	13	13	17	19	22	24	26	28	30	31	32	33	32	31	29	27	24	22	20	19	19	23.0	32.8	
15-Aug-04	17	17	17	16	16	15	16	18	19	21	23	24	26	26	27	27	26	26	25	23	22	20	19	18	18	21.1	27.0	
16-Aug-04	18	17	17	17	16	16	16	16	16	17	19	22	23	25	25	25	25	24	23	22	21	19	18	17	17	19.7	25.2	
17-Aug-04	16	15	15	15	14	14	15	17	20	24	25	27	28	28	29	28	28	27	26	24	22	20	17	16	16	21.2	28.5	
18-Aug-04	15	14	13	11	10	9	10	11	14	15	17	18	20	21	22	23	23	23	22	19	18	16	14	13	13	16.3	23.4	
19-Aug-04	13	14	13	11	11	11	12	15	18	22	25	26	26	26	27	27	26	25	24	22	20	19	19	18	18	19.6	26.8	
20-Aug-04	17	16	16	16	15	14	14	16	19	21	23	25	27	28	28	30	30	29	27	25	23	21	20	20	20	21.6	29.8	
21-Aug-04	20	21	20	17	17	16	16	18	19	21	22	23	24	24	26	25	25	24	21	20	18	16	14	13	13	20.0	25.6	
22-Aug-04	12	12	11	11	11	10	10	11	12	13	14	15	18	21	22	23	23	23	23	21	20	17	15	14	14	14	15.5	23.0
23-Aug-04	13	13	13	14	14	13	13	12	12	12	12	12	12	12	12	12	11	11	11	11	11	10	10	10	10	12.0	14.0	
24-Aug-04	11	10	10	10	11	11	11	12	13	15	17	19	21	21	21	21	22	21	21	19	18	16	15	14	14	15.9	22.1	
25-Aug-04	14	13	13	13	12	12	12	13	14	16	17	18	19	18	14	12	12	12	12	12	12	12	12	12	12	13.6	18.8	
26-Aug-04	12	12	12	12	12	12	12	12	13	14	15	17	19	19	19	19	19	19	18	16	14	13	11	11	11	14.7	19.4	
27-Aug-04	P	9	9	9	8	8	10	13	17	19	21	21	23	23	24	24	24	22	18	18	16	15	14	13	13	16.4	23.7	
28-Aug-04	12	11	11	11	11	11	11	14	15	18	20	21	23	24	23	23	23	22	20	15	13	13	13	12	12	16.3	23.9	
29-Aug-04	12	11	10	10	10	10	10	12	14	16	18	19	20	22	24	24	24	24	21	19	17	16	16	16	16	16.4	24.1	
30-Aug-04	15	15	15	14	14	14	15	17	18	20	23	24	25	25	25	25	25	24	22	20	19	17	16	15	15	19.3	25.4	
31-Aug-04	14	13	13	12	12	11	12	15	18	22	26	28	29	30	30	31	30	29	26	24	22	21	20	19	19	21.1	30.8	
Hourly Avg	14.8	14.3	13.8	13.2	12.8	12.6	13.7	15.3	17.3	19.3	21.1	22.4	23.4	23.8	24.0	24.0	23.9	23.4	22.1	20.4	18.7	17.2	16.1	15.3	15.3			
Hourly Max	20.5	21.1	20.8	17.6	16.6	16.3	19.5	22.4	24.3	26.7	28.8	30.4	31.0	32.2	32.5	32.8	33.1	32.2	29.0	26.9	24.0	21.8	20.2	19.7	19.7			

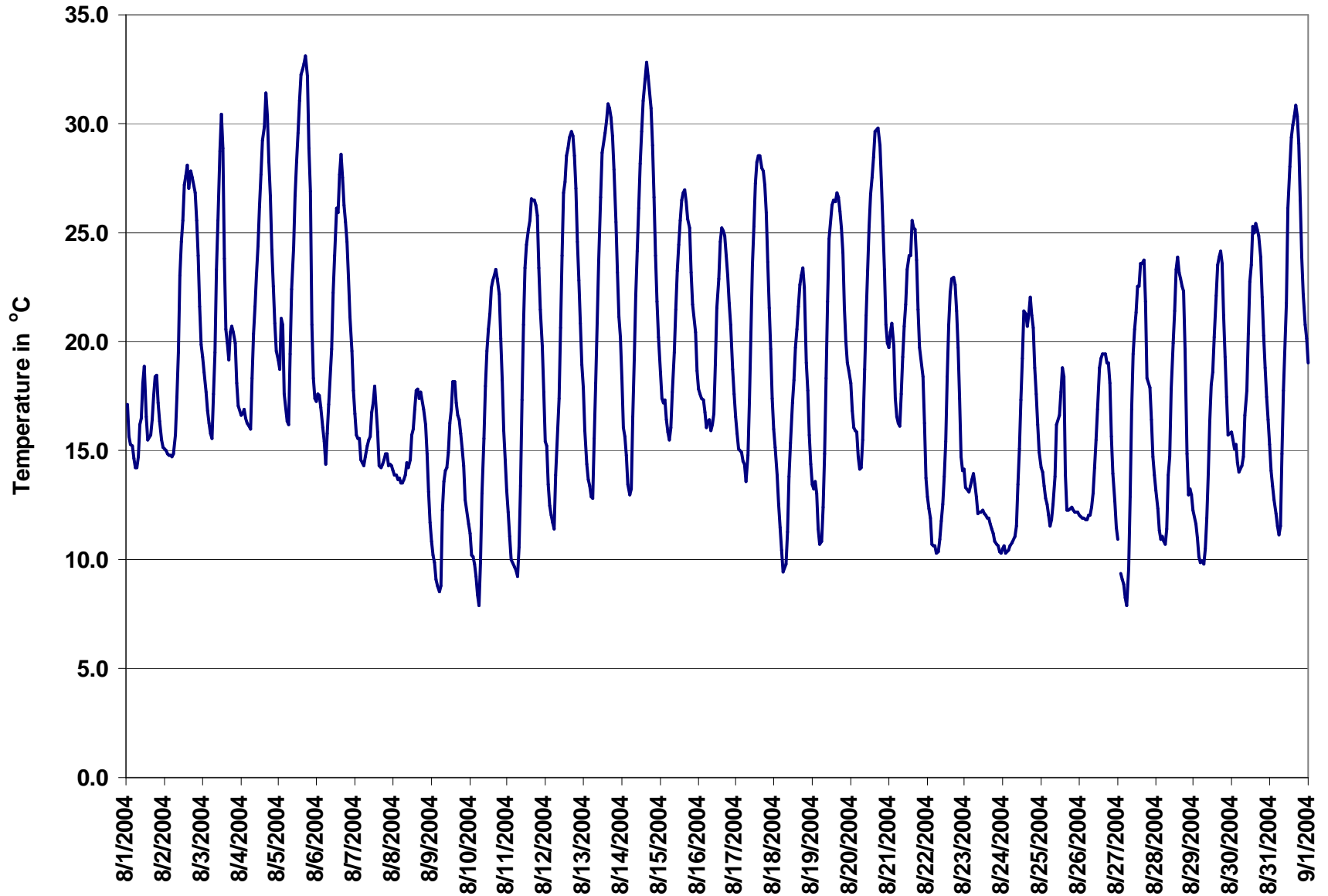


Figure 12. PAS - Crescent Heights Temperature 1-hr Average Monthly Trend



Station: Crescent Heights

### HOURLY AVERAGE TABLE

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

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004

#### Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	891.8 W/m <sup>2</sup> 10-Aug 13:00 14:00
Maximum 24-hr Average:	308.4 W/m <sup>2</sup> 10-Aug

AIC Time:	0 hrs	Operational Time:	743 hrs					
Calibration Time:	0 hrs	AMD Operational Uptime:	99.9%					
Percentile	99	95	75	50	25	5	1	Average
	828.2	755.2	413.4	48.8	0.2	0.1	0.1	211.3 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	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
1-Aug-04	0	0	0	0	0	5	11	89	243	190	467	409	186	206	130	276	314	245	165	38	1	0	0	0	124	467
2-Aug-04	0	0	0	0	0	8	77	193	421	633	747	823	875	750	754	437	500	289	167	47	1	0	0	0	280	875
3-Aug-04	0	0	0	0	1	37	149	316	494	647	733	694	535	43	6	20	129	177	83	23	0	0	0	0	170	733
4-Aug-04	0	0	0	0	1	32	172	334	490	638	747	822	853	833	632	695	533	329	191	40	1	0	0	0	306	853
5-Aug-04	0	0	0	0	1	26	203	331	388	638	725	820	817	830	589	652	512	320	59	2	1	0	0	0	288	830
6-Aug-04	0	0	0	0	0	29	187	349	504	658	754	797	467	746	750	379	177	102	68	51	1	0	0	0	251	797
7-Aug-04	0	0	0	0	0	7	41	66	80	130	217	247	265	145	84	83	78	73	36	18	0	0	0	0	65	265
8-Aug-04	0	0	0	0	0	6	66	98	180	130	181	217	196	412	470	490	137	204	58	17	1	0	0	0	119	490
9-Aug-04	0	0	0	0	0	49	189	310	336	312	341	474	405	464	249	174	93	66	31	15	0	0	0	0	146	474
10-Aug-04	0	0	0	0	0	31	166	327	493	637	771	843	755	892	823	634	499	331	169	27	0	0	0	0	308	892
11-Aug-04	0	0	0	0	0	25	153	310	473	616	725	802	829	798	721	608	466	305	145	26	0	0	0	0	292	829
12-Aug-04	0	0	0	0	0	22	143	303	468	615	727	802	827	774	632	603	458	296	140	20	0	0	0	0	285	827
13-Aug-04	0	0	0	0	0	25	150	312	478	625	741	813	840	814	756	627	460	263	131	22	0	0	0	0	294	840
14-Aug-04	0	0	0	0	0	34	183	302	359	441	504	603	541	774	655	590	458	287	88	11	0	0	0	0	243	774
15-Aug-04	0	0	0	0	0	20	112	258	426	573	683	750	759	734	660	548	344	189	113	10	0	0	0	0	258	759
16-Aug-04	0	0	0	0	0	3	13	52	47	174	330	545	677	762	649	463	386	144	42	8	0	0	0	0	179	762
17-Aug-04	0	0	0	0	0	8	90	250	422	569	651	758	785	665	586	452	369	232	101	11	0	0	0	0	248	785
18-Aug-04	0	0	0	0	0	22	85	221	427	438	598	641	776	700	658	578	438	277	122	11	0	0	0	0	250	776
19-Aug-04	0	0	0	0	0	13	115	245	390	544	676	737	757	755	678	542	319	183	78	7	0	0	0	0	252	757
20-Aug-04	0	0	0	0	0	6	57	171	308	458	627	705	776	685	563	555	402	211	60	6	0	0	0	0	233	776
21-Aug-04	0	0	0	0	0	6	58	191	273	418	307	642	586	450	658	440	444	253	60	6	0	0	0	0	200	658
22-Aug-04	0	0	0	0	0	6	26	93	124	139	221	397	773	636	426	453	283	115	43	3	0	0	0	0	156	773
23-Aug-04	0	0	0	0	0	2	23	41	67	43	35	49	60	82	93	81	47	26	12	2	0	0	0	0	28	93
24-Aug-04	0	0	0	0	0	5	27	67	304	453	656	706	804	406	212	390	205	150	76	4	0	0	0	0	186	804
25-Aug-04	0	0	0	0	0	3	38	85	245	372	230	399	576	234	8	6	13	14	8	1	0	0	0	0	93	576
26-Aug-04	0	0	0	0	0	2	27	77	132	196	264	494	768	725	616	580	331	242	79	3	0	0	0	0	189	768
27-Aug-04	P	0	0	0	0	9	115	263	428	574	685	760	803	479	644	486	398	127	56	4	0	0	0	0	253	803
28-Aug-04	0	0	0	0	0	7	42	262	184	409	420	567	701	627	519	367	352	241	23	0	0	0	0	0	197	701
29-Aug-04	0	0	0	0	0	12	90	131	264	462	539	488	704	734	657	517	405	186	33	2	0	0	0	0	218	734
30-Aug-04	0	0	0	0	0	3	97	244	223	395	510	473	769	727	652	537	389	156	42	2	0	0	0	0	217	769
31-Aug-04	0	0	0	0	0	4	74	263	415	554	674	755	662	600	465	462	282	136	22	3	0	0	0	0	224	755
Hourly Avg	0	0	0	0	0	15	96	211	325	441	532	614	649	596	516	443	330	199	81	14	0	0	0	0		
Hourly Max	0	0	0	0	1	49	203	349	504	658	771	843	875	892	823	695	533	331	191	51	1	0	0	0		

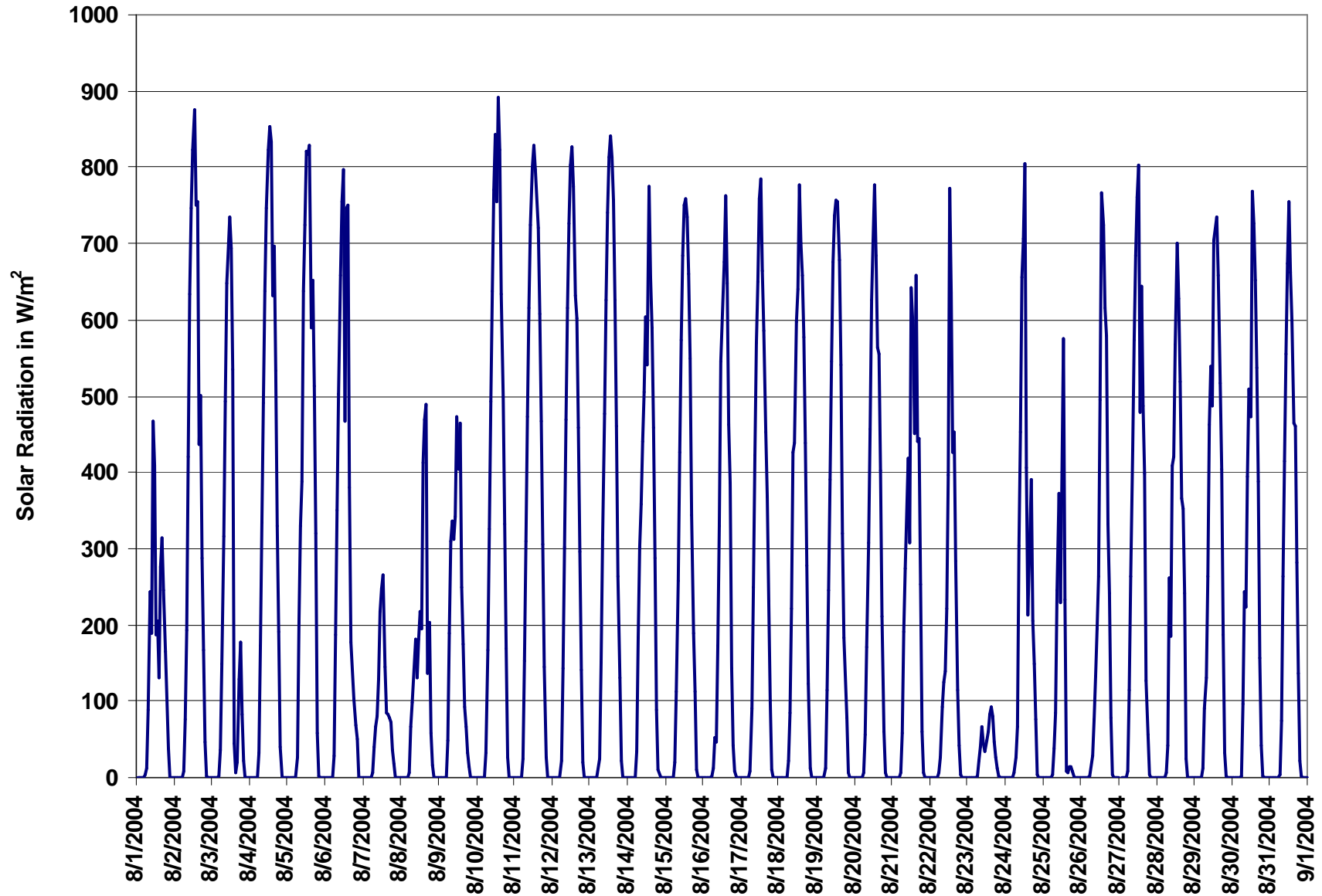


Figure 13. PAS - Crescent Heights Solar Radiation 1-hr Average Monthly Trend



Station: Crescent Heights

### HOURLY AVERAGE TABLE

Wind Speed (WSv - km/hr)

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004  
Summary

Maximum 1-hr Average:	26.8	km/hr	3-Aug	21:00 22:00
Maximum 24-hr Average:	15.1	km/hr	22-Aug	

Calm Time:	0 hrs	0% calms	Operational Time:	743 hrs					
Calibration Time:	0 hrs		AMD Operational Uptime:	99.9%					
Percentile	99	95	75	50	25	5	1	AverageS	AverageV
	22.0	18.0	12.1	8.6	5.7	3.5	2.5	9.3 km/hr	0.8 km/hr

#### Status Flag Characters

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

Day	Mountain Standard Time																							24-hr Vector Average	Daily Max	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00		
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-Aug-04	10	12	16	11	11	13	6	7	10	11	13	20	26	19	19	16	14	13	13	10	9	12	12	11	11.2	25.8
2-Aug-04	10	10	12	8	9	10	8	6	6	4	5	6	6	6	8	9	11	13	16	14	16	16	12	12	7.6	16.5
3-Aug-04	11	11	10	10	9	7	7	10	5	10	9	8	14	9	16	15	7	5	4	8	14	27	20	9	7.7	26.8
4-Aug-04	11	8	5	4	7	9	7	7	12	13	15	11	9	10	9	8	13	17	17	21	17	14	8	4	7.5	20.5
5-Aug-04	6	9	5	11	5	5	6	7	8	11	13	10	7	10	10	10	8	12	18	22	11	15	4	7	2.9	22.1
6-Aug-04	5	6	7	8	9	14	14	15	14	10	12	9	9	9	7	8	8	6	7	13	5	5	4	4	4.1	15.3
7-Aug-04	5	9	19	11	8	6	5	5	6	13	13	11	11	12	9	7	6	10	19	16	17	16	15	13	7.8	19.1
8-Aug-04	11	10	10	10	11	12	13	14	13	14	14	14	15	17	16	18	15	16	14	10	8	6	8	8	11.7	18.4
9-Aug-04	6	7	4	3	3	3	2	4	5	6	7	6	7	5	5	8	9	7	4	3	3	6	6	5	3.6	8.6
10-Aug-04	5	3	5	4	6	3	4	4	7	9	9	12	10	12	14	10	9	9	9	5	5	2	5	7	4.9	13.8
11-Aug-04	9	7	4	5	6	6	8	7	4	5	6	7	8	9	6	8	6	6	4	3	5	4	6	4	1.7	9.3
12-Aug-04	5	4	6	4	3	4	3	2	3	4	5	8	7	7	7	7	8	12	13	14	14	10	13	5.9	14.0	
13-Aug-04	6	6	5	5	3	2	3	6	7	10	10	10	11	11	9	11	13	13	10	13	12	11	15	9	8.0	14.8
14-Aug-04	4	5	3	2	2	3	3	3	2	3	3	4	4	5	4	4	5	10	9	9	8	5	5	5	2.1	10.5
15-Aug-04	8	11	11	6	9	6	8	10	13	13	11	12	11	11	11	10	11	10	11	10	9	5	5	5	8.3	13.3
16-Aug-04	7	3	3	4	3	5	8	7	6	6	3	4	7	8	7	7	10	9	7	7	6	5	5	6	2.3	9.7
17-Aug-04	5	5	2	4	3	4	6	6	9	12	10	8	9	11	14	17	18	17	14	16	14	13	9	8	4.5	17.7
18-Aug-04	15	16	11	5	6	7	8	7	5	5	6	7	8	11	12	8	9	7	5	2	4	5	6	6	1.1	16.2
19-Aug-04	8	8	5	3	4	9	12	11	8	8	10	10	14	16	14	15	15	12	12	12	10	9	9	10	2.5	15.8
20-Aug-04	5	6	9	6	7	6	5	6	4	6	7	10	12	15	13	13	10	6	3	5	7	6	6	11	3.4	14.5
21-Aug-04	14	16	18	10	5	5	6	8	8	9	9	9	13	12	14	14	15	20	16	17	15	23	25	20	4.9	24.5
22-Aug-04	23	20	19	17	22	19	22	22	23	22	18	21	20	16	5	6	7	5	8	15	12	13	14	15	15.1	22.7
23-Aug-04	10	10	8	9	9	7	11	13	13	11	12	12	14	15	16	16	14	16	15	12	9	9	8	7	9.2	16.5
24-Aug-04	8	6	6	5	4	4	6	4	5	7	7	6	11	10	10	11	14	10	8	5	14	12	7	5	6.5	14.5
25-Aug-04	13	10	12	8	7	8	4	5	6	4	4	6	9	10	8	6	7	5	6	7	7	7	6	6	3.5	13.0
26-Aug-04	8	9	4	5	6	7	6	7	7	7	7	9	11	13	15	16	15	11	7	4	8	10	10	12	5.2	16.3
27-Aug-04	P	5	5	6	5	5	4	6	10	13	19	21	16	16	19	19	19	18	11	9	7	10	14	14	11.1	21.2
28-Aug-04	15	15	15	15	13	11	11	14	13	9	8	10	11	13	17	15	15	14	11	19	7	8	4	3	8.9	19.4
29-Aug-04	6	7	5	6	8	5	5	5	3	5	6	8	9	8	8	8	6	4	8	10	11	7	5	5	2.5	10.5
30-Aug-04	13	10	10	11	11	13	9	9	8	8	10	11	13	15	13	13	10	9	8	7	5	5	9	12	4.9	14.8
31-Aug-04	11	11	11	6	4	3	4	4	4	6	14	20	21	18	16	13	9	7	7	4	6	8	8	9	5.9	21.0
1-hr Vector	1.1	0.6	0.1	0.4	0.1	0.8	1.1	1.4	1.0	1.3	2.2	1.8	1.6	1.6	1.5	2.7	3.6	4.7	4.6	4.3	2.7	3.1	2.5	1.6		
Hourly Max	22.7	19.9	19.1	17.0	21.7	19.1	21.6	22.4	22.7	21.7	18.9	21.2	25.8	19.0	19.4	18.8	19.4	19.7	18.7	22.1	17.0	26.8	24.5	19.8		



Station: Crescent Heights

### HOURLY AVERAGE TABLE

Wind Direction (WD - Degrees)

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004

#### Summary


Calm Time:	0 hrs	0% calms	Operational Time:	743 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	99.9%				
Percentile	99	95	75	50	25	5	1	Average
	357.3	344.8	251.8	186.5	86.3	13.1	2.8	35 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
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-Aug-04	81	65	46	59	70	45	114	121	21	28	26	9	13	38	49	66	95	109	112	86	73	63	64	78	57
2-Aug-04	92	88	84	61	79	93	75	86	41	40	270	240	128	182	50	29	23	48	63	97	113	109	93	93	81
3-Aug-04	74	70	64	82	100	117	93	87	51	38	99	162	217	113	206	126	175	107	133	78	73	73	80	94	97
4-Aug-04	97	90	104	117	78	91	112	159	210	209	226	218	206	200	173	172	121	114	107	117	126	128	135	103	142
5-Aug-04	3	174	217	340	343	286	90	148	136	194	202	213	211	96	108	110	105	106	143	156	335	1	305	16	137
6-Aug-04	74	172	191	233	227	232	233	241	254	280	305	276	229	217	75	40	9	330	322	6	13	229	162	285	260
7-Aug-04	326	309	248	297	253	228	212	219	200	218	230	256	263	310	298	261	263	309	343	330	331	335	337	330	291
8-Aug-04	315	303	316	314	312	318	325	324	326	324	322	328	338	351	352	3	9	3	3	3	9	333	340	343	338
9-Aug-04	342	353	317	255	279	215	209	157	66	12	10	358	0	348	10	0	6	23	37	228	261	344	316	346	351
10-Aug-04	346	285	252	266	232	208	208	203	216	240	257	229	243	233	230	258	271	321	331	330	318	89	152	195	250
11-Aug-04	220	211	203	232	220	205	216	226	234	198	289	317	7	18	356	43	32	6	345	340	286	243	187	147	265
12-Aug-04	182	133	135	179	172	127	118	199	156	125	92	92	170	185	117	147	100	62	86	84	93	107	87	93	112
13-Aug-04	107	115	113	134	107	130	54	97	57	60	73	83	65	51	56	47	55	52	52	70	92	87	88	104	75
14-Aug-04	113	35	85	104	8	108	156	121	155	25	11	91	121	121	129	227	10	25	19	5	350	59	169	220	58
15-Aug-04	359	360	4	359	10	17	14	38	59	73	59	57	54	47	34	33	28	19	17	21	42	96	119	118	37
16-Aug-04	80	279	0	210	187	265	239	246	230	234	185	122	84	106	96	62	59	55	73	62	98	119	126	130	105
17-Aug-04	122	118	127	132	68	147	173	198	223	219	225	232	256	317	329	348	350	351	354	351	348	353	346	350	330
18-Aug-04	16	46	40	11	339	341	358	10	360	334	92	148	216	222	237	253	252	238	233	199	120	139	216	210	311
19-Aug-04	223	235	344	65	168	214	230	222	220	229	234	259	357	10	23	16	21	7	27	48	48	88	88	88	7
20-Aug-04	116	63	54	103	76	103	135	118	193	206	191	209	220	225	213	207	247	275	334	51	101	124	185	233	184
21-Aug-04	255	255	260	310	13	270	268	283	280	250	256	305	328	326	321	333	356	19	34	38	54	82	94	104	344
22-Aug-04	99	113	108	82	72	75	88	89	102	113	113	109	95	102	150	35	115	108	125	123	138	117	88	73	100
23-Aug-04	63	58	62	91	96	93	43	43	39	21	17	10	355	357	357	355	351	349	347	344	330	327	307	311	12
24-Aug-04	304	288	275	261	245	242	242	226	198	181	190	166	215	210	240	205	243	262	264	246	215	223	245	287	234
25-Aug-04	228	240	240	256	295	334	298	328	14	83	206	358	27	16	129	238	251	255	268	319	299	313	349	359	294
26-Aug-04	349	349	285	242	278	293	317	316	340	323	337	2	25	23	12	23	35	13	11	333	235	227	238	229	340
27-Aug-04	P	188	192	191	199	140	120	145	189	181	197	204	196	194	206	208	209	202	216	245	206	236	223	235	203
28-Aug-04	240	237	237	238	232	239	238	236	230	233	237	267	271	314	329	327	325	324	345	302	222	256	264	187	268
29-Aug-04	246	241	222	231	238	233	200	228	223	56	81	61	62	81	120	134	128	171	83	87	120	119	187	276	142
30-Aug-04	236	244	245	235	236	221	224	224	224	251	254	288	280	308	303	318	343	2	12	10	19	63	80	85	277
31-Aug-04	94	94	97	110	108	149	125	126	140	182	215	215	212	213	217	209	265	261	263	204	229	232	240	241	203
Hourly Avg	69	86	194	260	124	194	183	179	196	211	229	249	291	351	341	7	8	14	28	42	61	80	99	95	



Station: Crescent Heights

### STANDARD DEVIATION TABLE

Wind Direction (WD - Degrees)

Station Owner: PAS

Monitoring Dates: August 1, 2004 to September 1, 2004

#### Summary


Determined by the Yamartino 15-min interval calculation

Calm Time:	0 hrs	0% calms	Operational Time:	743 hrs			
Calibration Time:	0 hrs		AMD Operational Uptime:	99.9%			
Percentile	99	95	75	50	25	5	1
	60.2	49.0	25.0	13.4	8.8	5.2	4.1

#### Status Flag Characters

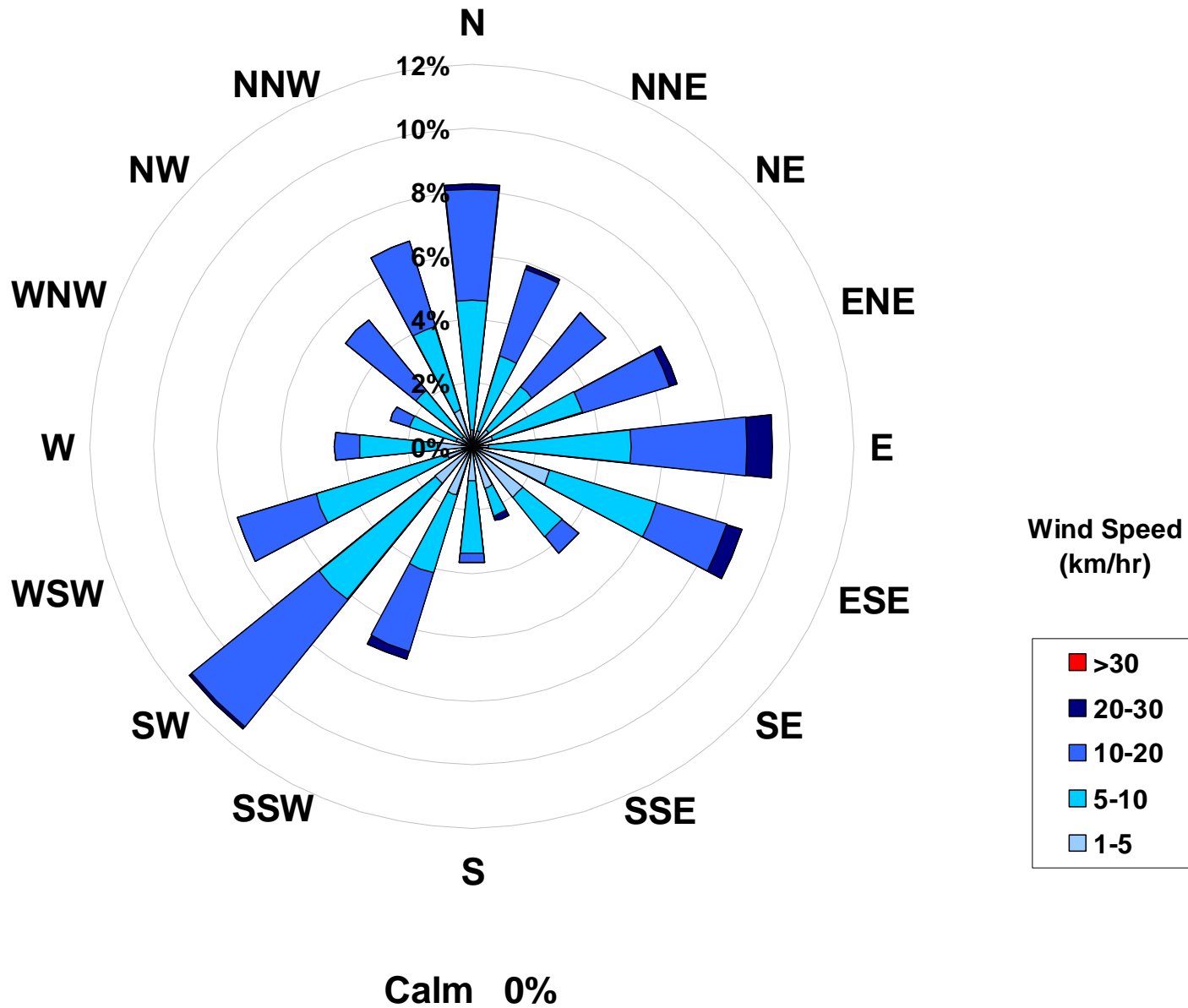
C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	X	Filter Exchange
N	No Data	M	Equipment Maintenance
D	Excessive Instrument Drift	P	Power Failure

#### Day Mountain Standard Time

Hour Start	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	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-Aug-04	19	12	7	12	32	12	44	27	23	8	14	9	6	9	7	8	10	10	8	6	7	7	8	9	44.5
2-Aug-04	10	10	23	15	8	8	13	23	26	61	52	45	49	59	45	23	15	9	7	10	5	8	10	9	60.8
3-Aug-04	6	6	8	7	6	11	11	10	42	15	17	40	23	38	28	43	35	13	30	14	9	6	6	32	43.0
4-Aug-04	9	15	16	17	12	8	10	23	15	15	12	22	25	34	26	30	14	7	7	5	7	8	11	27	34.0
5-Aug-04	28	24	59	14	24	22	34	23	26	21	16	28	52	39	33	28	32	19	8	11	49	33	58	9	58.8
6-Aug-04	23	19	12	11	12	4	13	8	11	18	15	34	22	28	50	28	32	32	19	5	35	21	48	44	50.3
7-Aug-04	41	15	7	13	16	47	43	49	15	8	10	10	15	11	10	10	10	15	6	7	7	7	7	8	48.7
8-Aug-04	9	12	10	9	10	7	7	9	9	9	9	11	10	10	10	9	10	7	6	6	8	5	3	2	12.2
9-Aug-04	4	3	45	24	37	36	56	41	40	27	22	62	25	43	52	12	17	9	32	45	14	5	11	21	61.5
10-Aug-04	14	65	9	21	18	41	8	23	17	25	25	21	30	26	25	32	23	24	10	9	29	27	11	7	64.7
11-Aug-04	4	5	46	12	8	7	6	11	34	47	62	36	51	23	63	37	46	36	37	10	13	13	23	36	63.0
12-Aug-04	18	12	11	14	37	10	12	36	57	26	42	47	54	53	38	57	37	22	12	4	6	10	12	8	56.8
13-Aug-04	9	8	14	11	23	47	15	12	16	14	20	23	26	32	25	21	14	7	4	5	6	6	6	9	46.9
14-Aug-04	23	11	10	24	35	22	14	21	40	42	52	59	52	49	50	53	42	11	5	5	5	22	13	37	59.1
15-Aug-04	12	2	4	12	5	19	5	8	11	12	21	18	24	19	23	26	19	11	8	6	6	18	10	49	49.2
16-Aug-04	20	49	28	41	36	14	12	10	13	20	68	43	33	28	48	34	18	15	9	7	9	10	16	6	67.8
17-Aug-04	16	26	34	47	40	39	21	13	13	9	19	35	37	22	18	12	9	8	4	5	4	5	5	9	46.6
18-Aug-04	6	4	5	13	7	20	5	11	37	38	55	53	39	35	19	37	19	36	38	30	26	14	13	10	54.9
19-Aug-04	6	9	27	22	16	8	4	5	11	17	17	33	22	13	17	11	8	7	9	5	5	8	16	12	33.3
20-Aug-04	16	15	17	26	10	14	28	13	31	27	27	30	21	15	23	20	24	20	21	16	15	13	50	6	50.3
21-Aug-04	9	11	10	11	46	16	10	12	19	19	19	21	19	17	17	14	12	9	6	5	7	8	8	7	45.8
22-Aug-04	7	7	8	8	7	8	7	6	6	6	7	8	11	13	62	34	52	51	28	9	13	11	15	7	62.2
23-Aug-04	14	8	14	10	11	14	10	6	7	8	6	7	5	6	5	6	6	4	5	7	9	10	11	16	16.4
24-Aug-04	13	12	12	12	17	19	10	16	29	27	37	46	24	21	53	16	10	8	8	27	25	10	20	21	52.5
25-Aug-04	9	9	8	10	13	9	26	21	33	61	53	27	20	26	46	35	8	8	10	16	11	20	14	13	61.1
26-Aug-04	7	10	28	10	9	10	8	10	14	13	14	12	20	15	16	11	12	11	9	18	13	6	6	3	28.3
27-Aug-04	P	10	9	12	12	12	7	14	12	11	9	14	16	12	12	12	12	8	17	27	34	11	10	6	34.1
28-Aug-04	5	5	5	6	6	7	7	6	7	16	14	19	26	17	11	12	12	10	6	10	35	11	32	38	38.1
29-Aug-04	12	9	14	10	5	16	11	8	25	43	40	19	20	28	30	32	25	41	6	8	7	12	19	52	51.6
30-Aug-04	10	10	16	8	7	7	8	9	9	19	18	15	17	14	18	16	16	11	6	4	6	32	11	8	31.8
31-Aug-04	6	8	6	18	17	21	19	28	33	27	12	9	11	9	10	10	15	11	14	22	23	12	16	10	33.2
Hourly Max	41	65	59	47	46	47	56	49	57	61	68	62	54	59	63	57	52	51	38	45	49	33	58	52	



### Wind Rose for the 1-hr Average Meterological Data at the Crescent Heights Site for August 2004







# Passive Monitoring

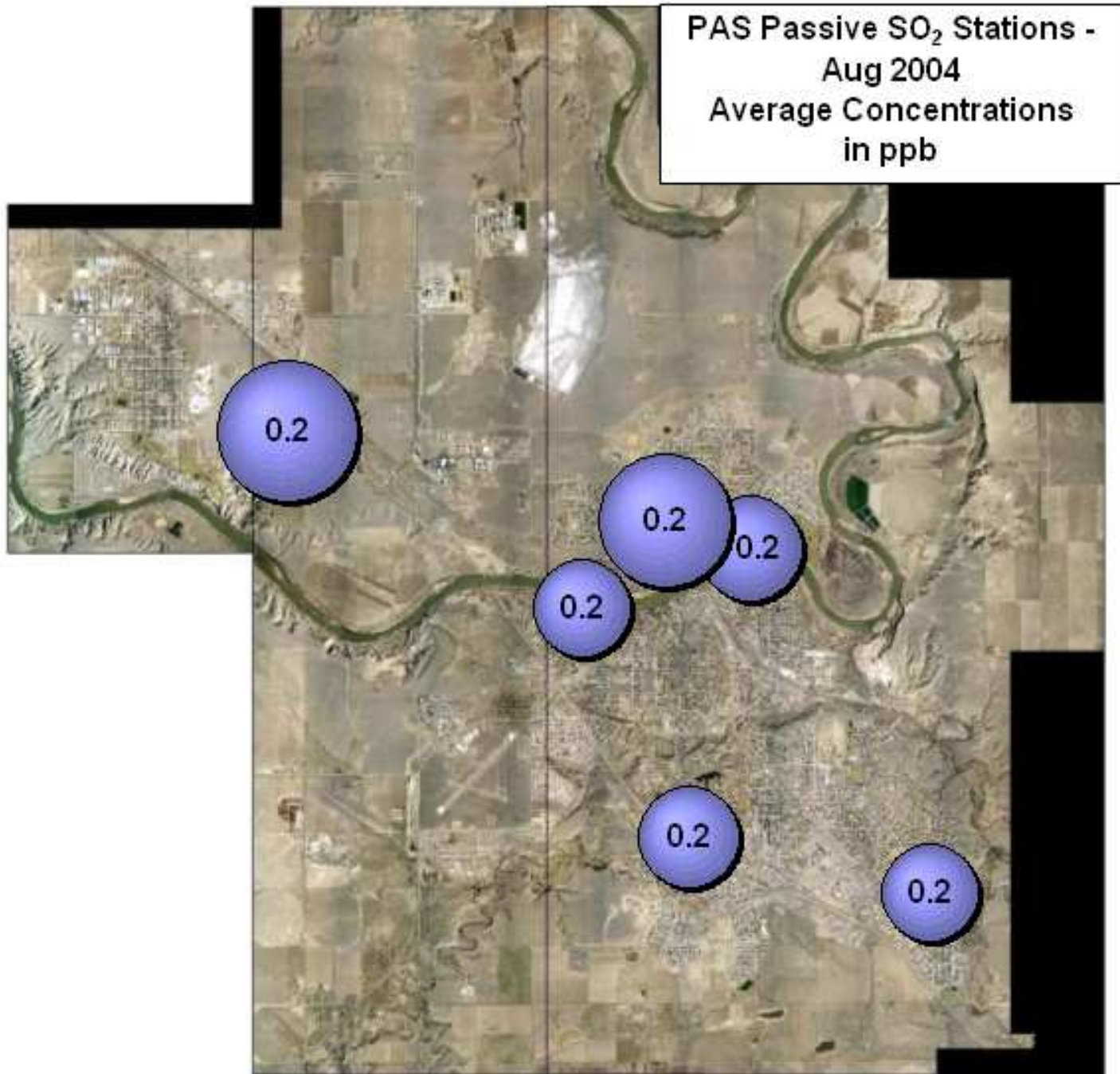
## Ambient Air Compliance Network

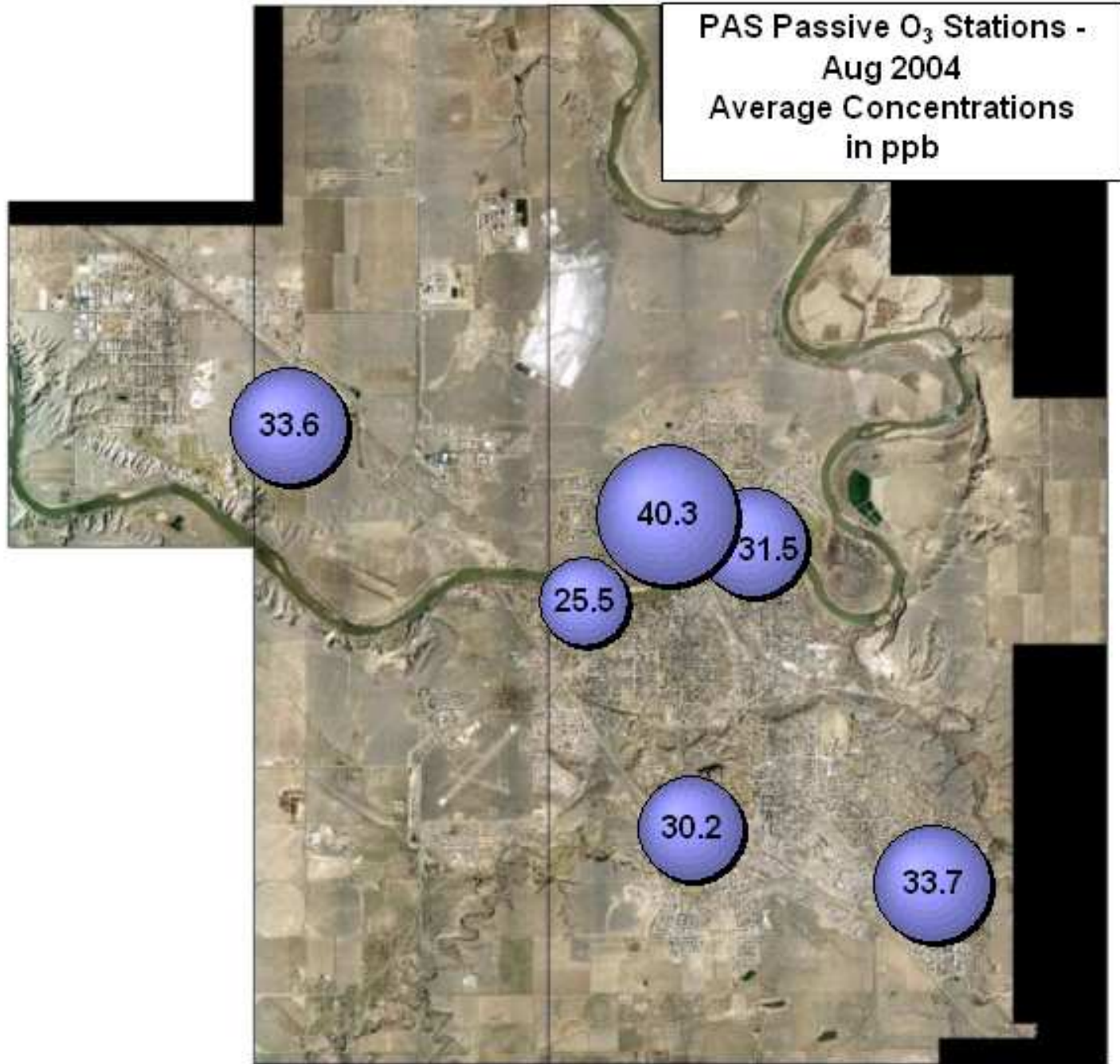
### Pallisar Airshed Society - PAS Passive Stations for August 2004

Station Number	Station	SO <sub>2</sub> ppb	O <sub>3</sub> ppb	NO <sub>2</sub> ppb	Location		
	Name				Easting	Northing	Elevation
<b>Duplicates</b>							
5a	Southridge	0.2	32.2	5.0			
5b	Southridge	0.2	28.1	6.2			
1	Hospital	0.2	25.5	7.2	521648	5542721	698
2	Ball Park	0.2	31.5	7.3	524019	5543686	660
3	Monitoring Station	0.2	40.3	5.5	522812	5544133	714
4	Redcliff	0.2	33.6	4.2	517448	5545608	725
5	Southridge	0.2	30.2	5.6	523172	5539016	721
6	Christian School Park	0.2	33.7	5.2	526577	5538133	709
<b>Stats:</b>							
	<b>Mean</b>	0.2	32.5	5.8			
	<b>Standard Deviation</b>	0.0	4.9	1.2			
	<b>Minimum</b>	0.2			6	Christian School Park	
	<b>Maximum</b>	0.2			4	Redcliff	
	<b>Minimum</b>		25.5		1	Hospital	
	<b>Maximum</b>		40.3		3	Monitoring Station	
	<b>Minimum</b>			4.2	4	Redcliff	
	<b>Maximum</b>			7.3	2	Ball Park	

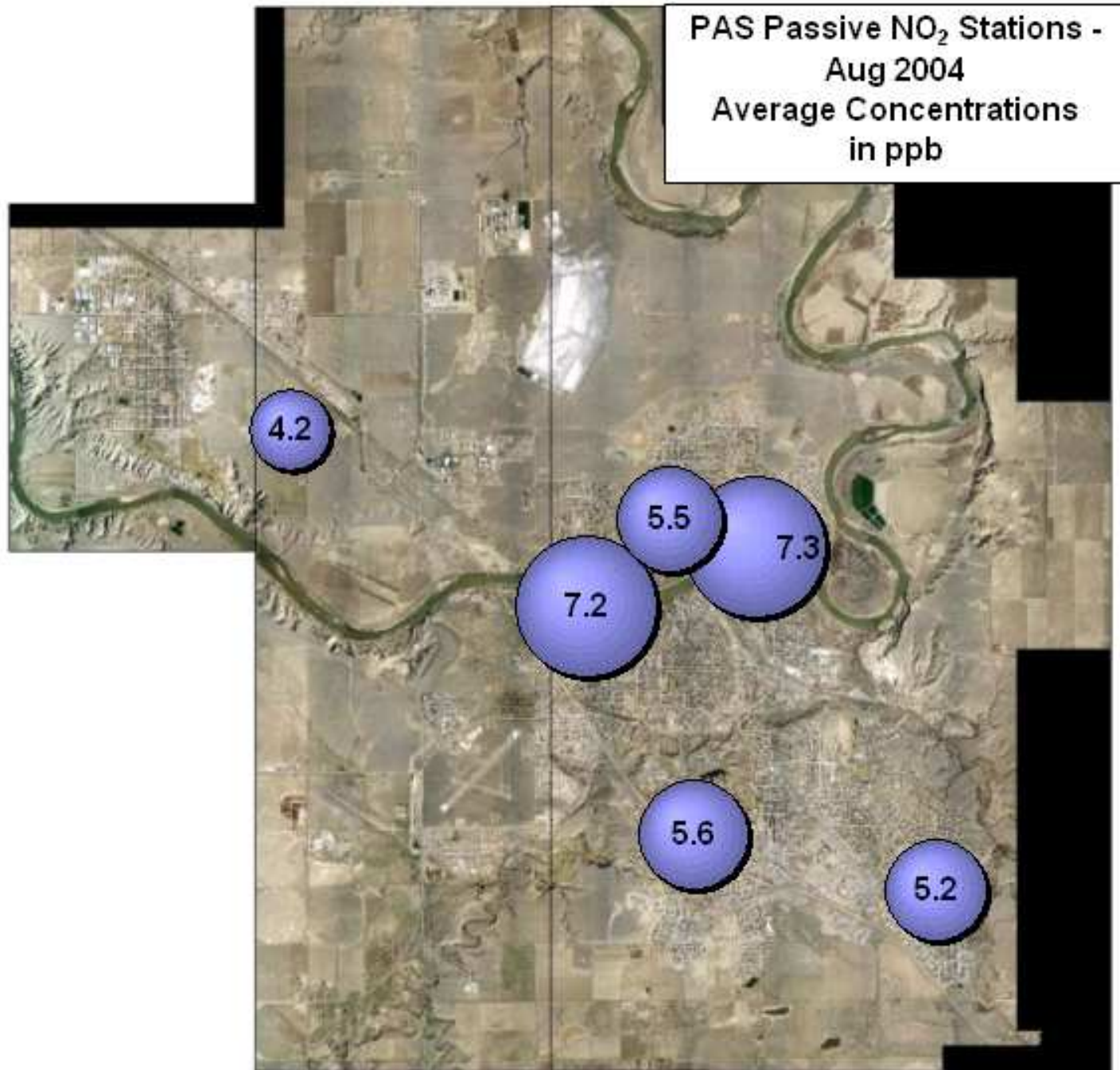
#### Comparison between Continuous and Passive monitoring (passive #3)

	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>
PAS Station	-	26.0	6.7
PAS Passive	0.2	40.3	5.5









## August 2004 - Calibration Reports

PAS - Crescent Heights Station

O<sub>3</sub>, NO<sub>x</sub>, NO, NO<sub>2</sub>, THC, PM<sub>2.5</sub>

# Calibration Report

Parameter 03  
 Air Monitoring Network Palliser Airshed



## Station Information

Calibration Date	August 13, 2003	Previous Calibration	July 2, 2003
Station Number	1	Station Location	Crescent Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	14:40	End Time (MST)	17:15
Barometric Pressure	0.929 mb	Station Temperature	21.0 Deg C
Calibrator	Envionics 6100	Serial Number	3016
Cal Gas Concentrator	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	NA
DACS voltage range	0 - 1 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
DACS slope	0.050	DACS slope	0.050
DACS intercept	0.000	DACS intercept	0.000
Calculated slope	0.994041	Calculated slope	0.996577
Calculated intercept	2.117075	Calculated intercept	1.826693
Analyzer make	API Model 400E	Analyzer serial #	331

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	-1.3	ppb	-1.3	ppb
coefficient	1.028		1.028	
Lamp measure	3613.9	mV	3331.2	mV
Lamp Reference	3617.3	mV	3342.6	mV
Pressure	26.4	inches Hg	25.7	inches Hg
Sample Flow	709	ccm	716	ccm
Lamp temp	52	Deg C	52	Deg C

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	-0.4	N/A
4995	0.00	316.8	317.1	0.9991
4995	0.00	182.4	180.0	1.0132
4995	0.00	92.0	89.2	1.0310
4995	0.00	0.0	-0.4	0.0000
4995	0.00	316.8	317.1	0.9991
Average Correction Factor				1.0145

Calculated value of As Found Response: 317.7 ppm Percent Change of As Found: 0.3%

	before calibration		after calibration	
Auto zero	1.9	ppb	1.2	ppb
Auto span	362.3	ppb	352.6	ppb

Notes: Analyzer did not require adjustment. All test functions normal.  
O3 calibration points generated via GPT portion of the NOX calibration performed August 13th.

Calibration Performed By: Kelly Baragar

**Calibration Summary**

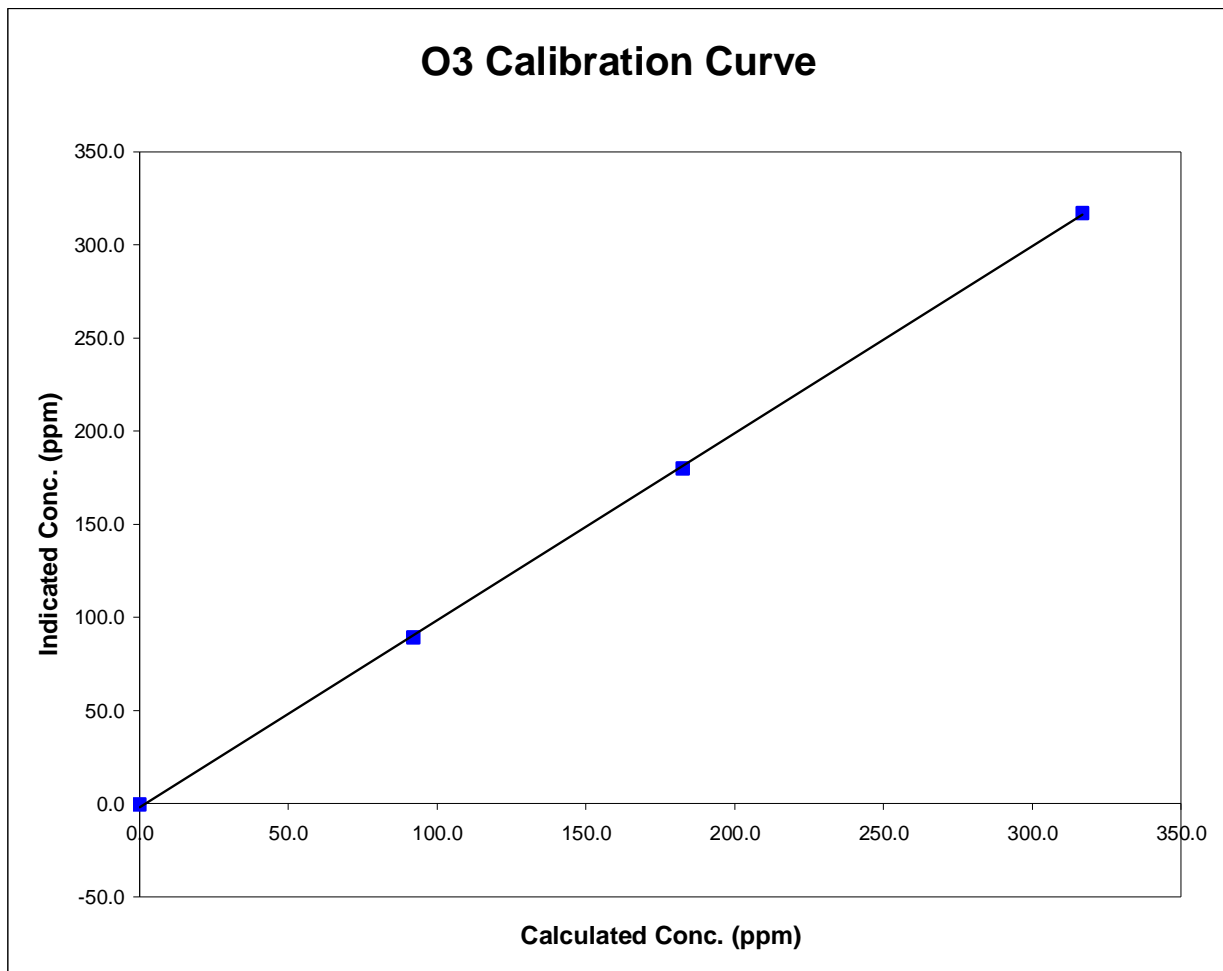
Parameter                      03  
 Air Monitoring Network                      Palliser Airshed

**Station Information**

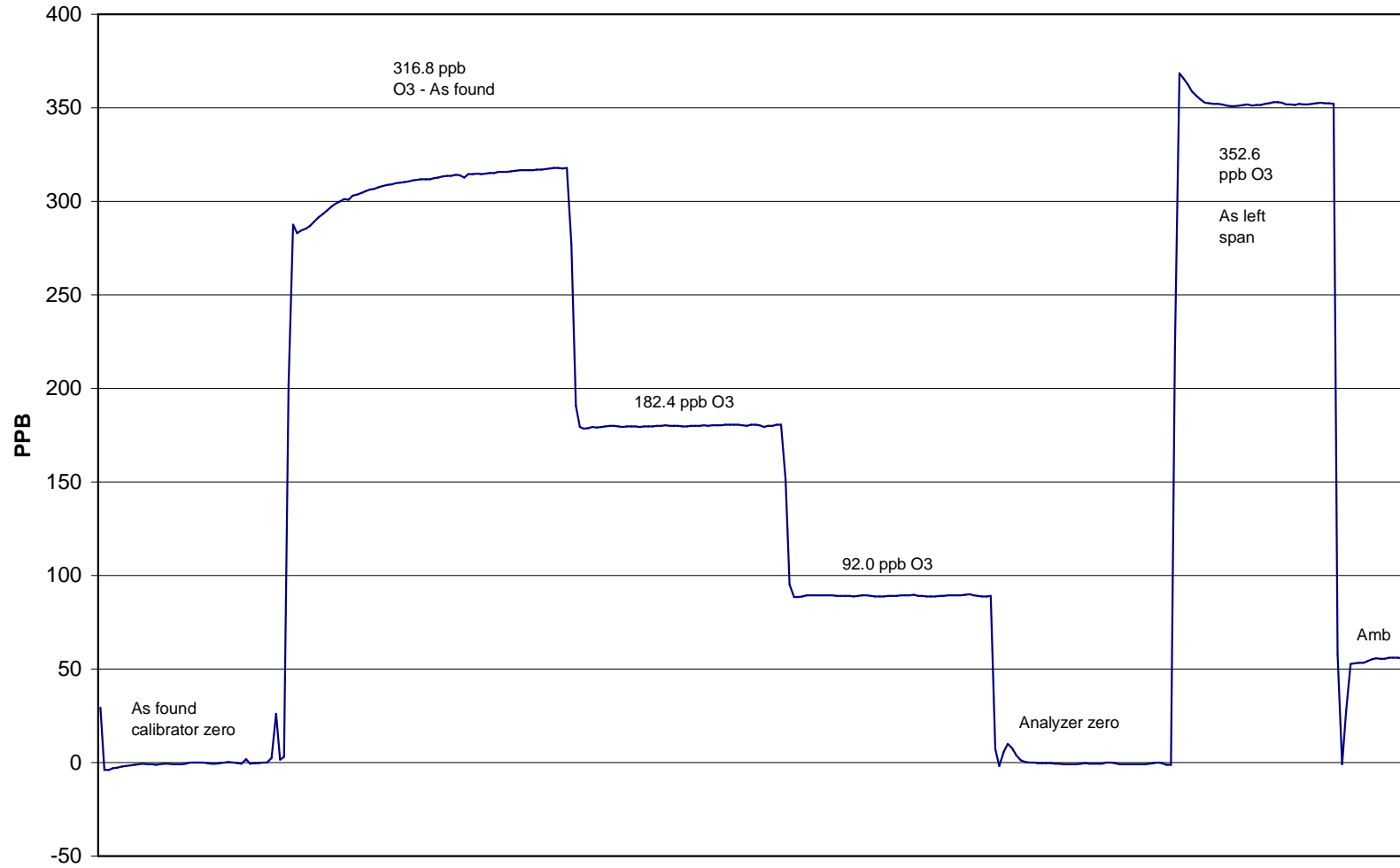
Calibration Date	August 13, 2003	Previous Calibration	July 2, 2003
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	14:40	End Time (MST)	17:15
Analyzer make/model	API Model 400E	Analyzer serial #	331

**Calibration Data**

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
316.8	317.1	0.9991		
182.4	180.0	1.0132	Correlation Coefficient	0.999891
92.0	89.2	1.0310		
0.0	-0.4	N/A	Slope	0.996577



### O3 Calibration



August 13, 2004



# Calibration Report

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



## Station Information

Calibration Date August 13, 2004 Previous Calibration July 2, 2004  
 Station Number 1 Station Location Crescent Heights

Reason:  Routine  Installation  Removal  Other: \_\_\_\_\_

Start Time (MST) 9:15 End Time (MST) 13:00  
 Barometric Pressure 0.929 mmHg Station Temperature 21.0 Deg C  
 Calibrator Envionics 6100 Serial Number 3016  
 NO Cal Gas Conc 49.8 ppm Cal Gas Expiry Date 12-Dec-05  
 NOx Cal Gas Conc 49.9 ppm Cal Gas Serial # ALM011558

## DACS Information

DACS make FOCUS AP1000 DACS serial No. 45270

Parameter		NO <sub>2</sub>	NO <sub>x</sub>	NO
Before	DACS slope	0.050000	0.050000	0.050000
	DACS offset	0.000000	0.000000	0.000000
After	DACS slope	0.050000	0.050000	0.050000
	DACS offset	0.000000	0.000000	0.000000
Before	Data Slope	1.016537	1.008891	1.009296
	Data Offset	-2.140260	-2.888216	-1.255868
After	Data Slope	1.015888	1.017978	1.016040
	Data Offset	-2.513128	-3.970736	-2.531675
Channel #		8	6	7
Voltage Range		0 - 1 VDC	0 - 1 VDC	0 - 1 VDC

## Analyzer Information

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

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO background	-2.1	mV	-2.1	mV
NO <sub>x</sub> background	-0.7	mV	-0.7	mV
NO coefficient	1.322		1.322	
NO <sub>x</sub> coefficient	1.324		1.324	
Chamber Temp	49.9	Deg C	49.9	Deg C
Cooler Temp	6.9	Deg C	6.9	Deg C
Azero	27.0		30.2	
Perm Temp	40.3	Deg C	40.3	Deg C
Pressure	3.7	inches Hg	3.7	inches Hg
Sample Flow	458.0	ccm	458.0	ccm

Notes: No adjustments or maintenance required.

# Calibration Report

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



## Station Information

Calibration Date: August 13, 2004 Station Location: Crescent Heights

## Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NO <sub>x</sub> conc (ppb)	Calculated NO conc (ppb)	Calculated NO <sub>2</sub> conc (ppb)	Indicated NO <sub>x</sub> conc (ppb)	Indicated NO conc (ppb)	Indicated NO <sub>2</sub> conc (ppb)	NO <sub>x</sub> Correction factor	NO Correction factor
zero	4993	0.00	0.0	0.0	0.0	3.7	3.5	1.8	N/A	N/A
1	4993	39.97	396.3	395.5	0.8	393.0	392.1	3.3	1.0084	1.0087
2	4993	19.97	198.8	198.4	0.4	199.6	197.7	3.8	0.9959	1.0034
3	4993	9.97	99.4	99.2	0.2	101.6	98.8	4.6	0.9788	1.0044
AFZ	4993	0.00	0.0	0.0	0.0	3.7	3.5	1.8	0.0000	0.0000
AFS	4993	39.97	396.3	395.5	0.8	393.0	392.1	3.3	1.0084	1.0087
								Average Correction Factor	0.9944	1.0055

As Found Concentrations NO<sub>x</sub>= 386.4 NO= 387.3 As Found Percent Change NO<sub>x</sub>= -2.5% NO= -2.1%

## GPT Calibration Data

Dilution Flow 4993 ccm Source Gas Flow 39.97 ccm

O <sub>3</sub> Setpoint (ppb)	Calculated NO <sub>x</sub> conc (ppb)	Calculated NO conc (ppb)	Calculated NO <sub>2</sub> conc (ppb)	Indicated NO <sub>x</sub> conc (ppb)	Indicated NO conc (ppb)	Indicated NO <sub>2</sub> conc (ppb)	NO <sub>x</sub> Correction factor	NO Correction factor	NO <sub>2</sub> Correction factor	Converter Efficiency	
0	398.1	394.0	4.1	393.4	390.3	1.8	N/A	N/A	N/A	N/A	
300	398.1	81.3	316.8	394.6	82.5	313.7	1.0089	0.9854	1.0096	99.0%	
200	398.1	215.7	182.4	395.3	214.8	182.7	1.0070	1.0043	0.9985	100.2%	
100	398.1	306.1	92.0	395.0	303.8	93.6	1.0079	1.0077	0.9830	101.7%	
							Average Correction Factor	1.0079	0.9991	0.9970	100.3%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NO <sub>x</sub>	NO <sub>2</sub>	NO		NO <sub>x</sub>	NO <sub>2</sub>	NO	
Auto zero	-0.2	-0.4	0.0	ppb	-0.2	-0.2	-0.7	ppb
Auto span	362.8	360.7	5.0	ppb	361.1	355.2	4.5	ppb

Calibration Performed By: Kelly Baragar

## Calibration Summary

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

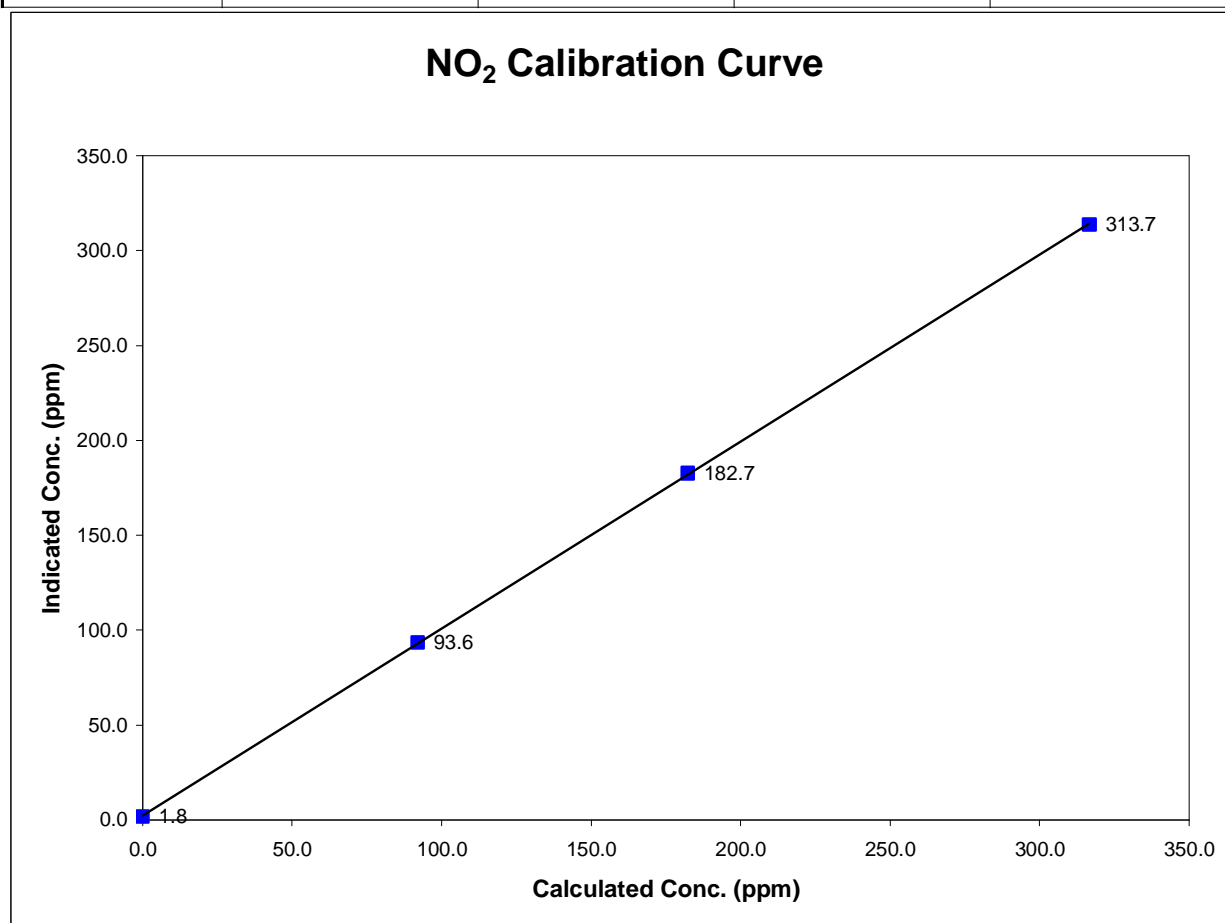


### Station Information

Calibration Date	August 13, 2004	Previous Calibration	July 2, 2004
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	9:15	End Time (MST)	13:00
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	0.0000	Correlation Coefficient	0.999972
92.0	93.6	0.9830		
182.4	182.7	0.9985		
316.8	313.7	1.0096		
			Slope	1.015888
			Intercept	-2.513128



## Calibration Summary

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



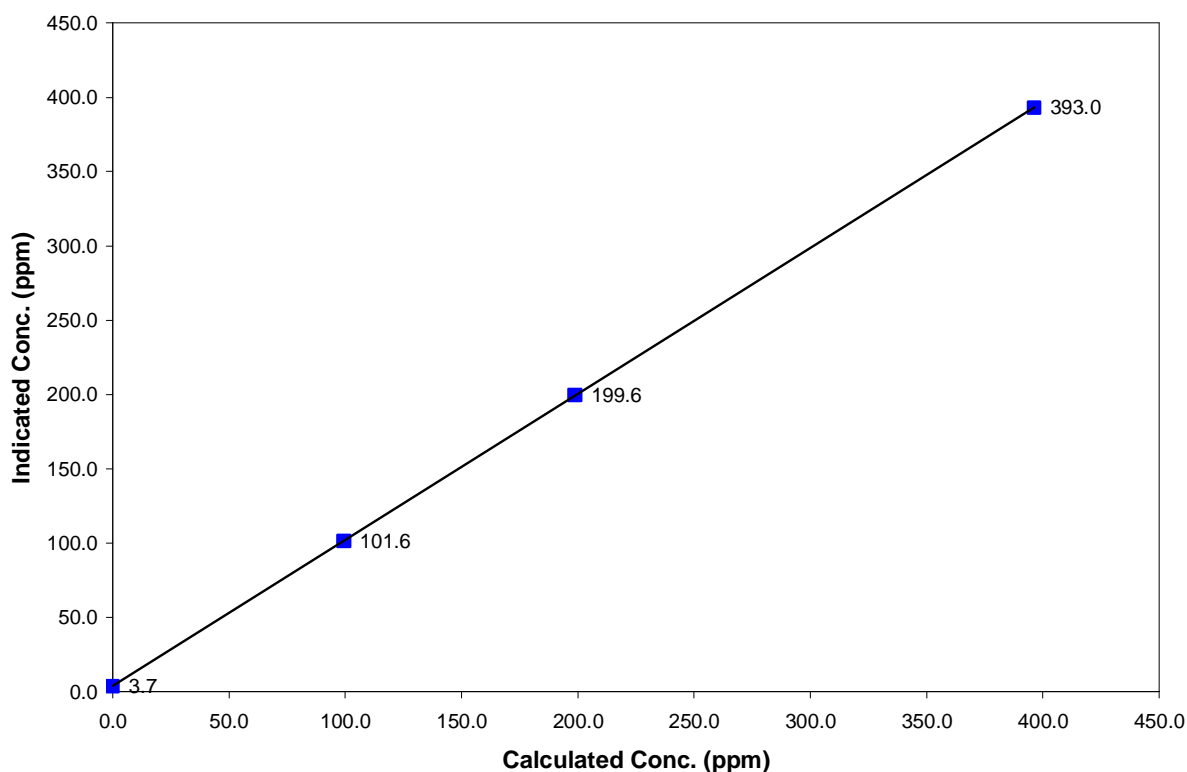
### Station Information

Calibration Date	August 13, 2004	Previous Calibration	July 2, 2004
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	9:15	End Time (MST)	13:00
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	3.7	0.0000	Correlation Coefficient	0.999997
396.3	393.0	1.0084		
198.8	199.6	0.9959		
99.4	101.6	0.9788		
			Slope	1.017978
			Intercept	-3.970736

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



## Calibration Summary

Parameter NO  
 Air Monitoring Network Palliser Airshed

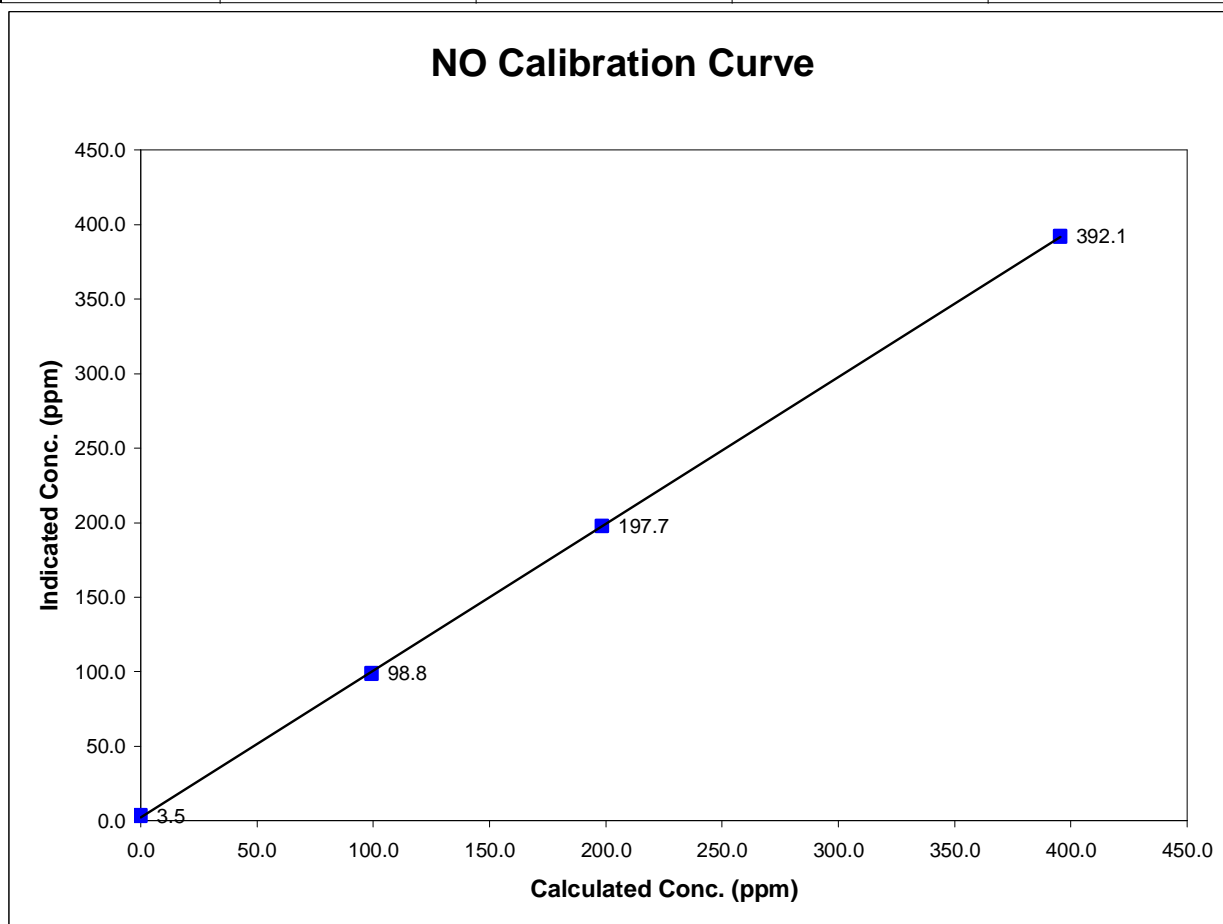


### Station Information

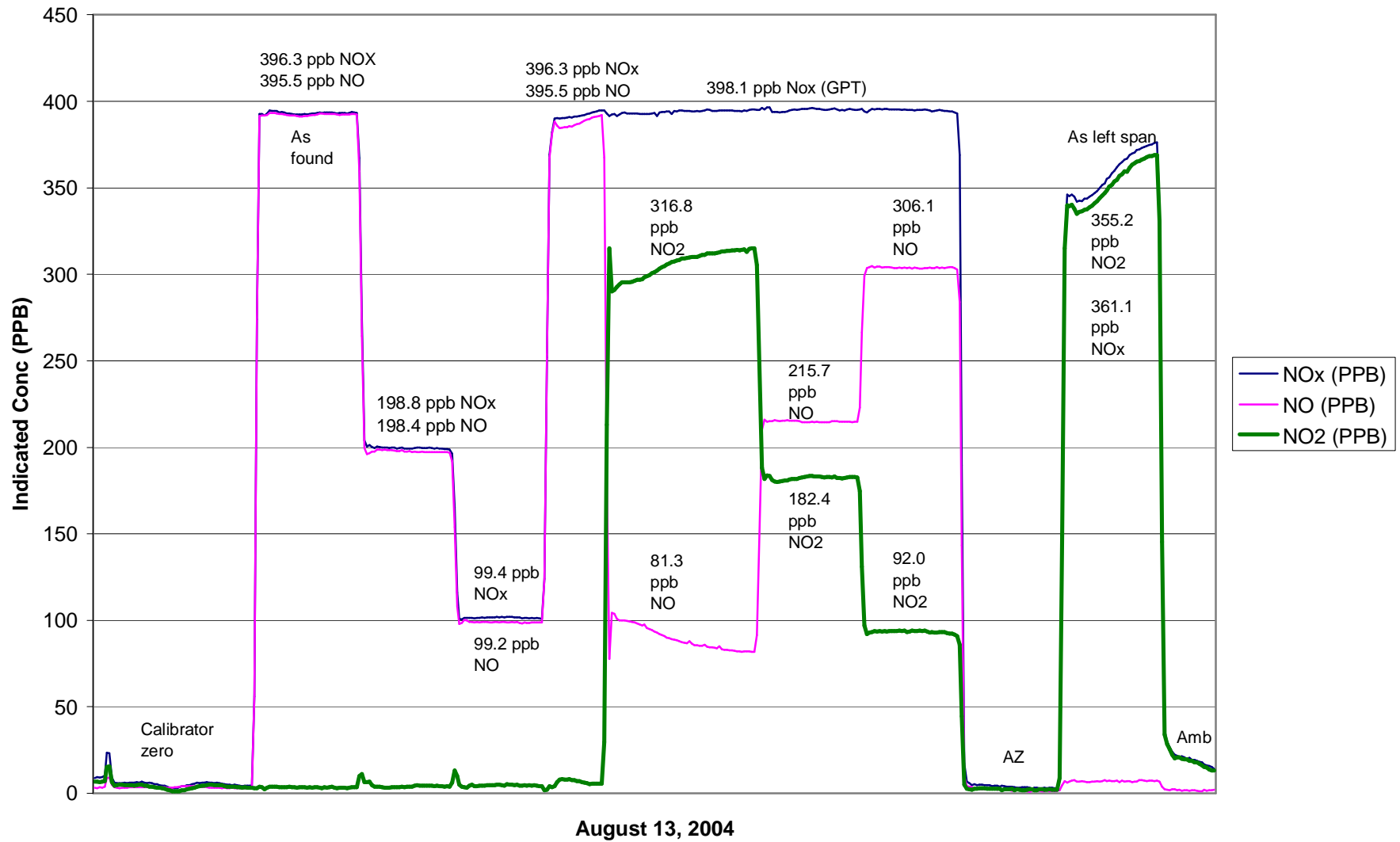
Calibration Date	August 13, 2004	Previous Calibration	July 2, 2004
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	9:15	End Time (MST)	13:00
Analyzer make	API Model 200E	Analyzer serial #	219

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	3.5	N/A		
395.5	392.1	1.0087	Correlation Coefficient	0.999963
198.4	197.7	1.0034		
99.2	98.8	1.0044	Slope	1.016040
			Intercept	-2.531675



## NOx Calibration



# Calibration Report

Parameter THC  
 Air Monitoring Network Palliser Airshed



## Station Information

Calibration Date	August 13, 2004	Previous Calibration	July 2, 2004
Station Number	1	Station Location	Crescent Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	12:10	End Time (MST)	15:30
Barometric Pressure	0.929 mb	Station Temperature	20.5 Deg C
Calibrator	Envionics 6100	Serial Number	3016
Cal Gas Concentration	700 ppm CH <sub>4</sub> / 301 ppm C <sub>3</sub> H <sub>8</sub>	Cal Gas Expiry Date	8/28/2005
Cal Gas CH <sub>4</sub> equiv	1527.75 ppm	Cal Gas Cylinder #	ALM030358
DACS make	Focus AP1000	DACS serial No.	45270
DACS voltage range	0 - 10 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
DACS slope	0.005000	DACS slope	0.005000
DACS intercept	0.000000	DACS intercept	0.000000
Calculated slope	0.997840	Calculated slope	1.001858
Calculated intercept	0.046664	Calculated intercept	0.061399
Analyzer make	TEI model 51C-LT	Analyzer serial #	407505596

	before		after	
Concentration range	NA	ppm	0 - 50	ppm
THC sample pressure	5.89	PSI	5.73	PSI
THC span counts	NA	raw	11353	raw
THC zero counts	NA	raw	1941	raw

## 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)
2994	0.00	0.00	0.00	N/A
2994	39.98	20.13	20.08	1.0024
2994	19.98	10.13	9.96	1.0168
2994	9.97	5.07	4.97	1.0196
zero	0.00	0.00	-0.14	As Found Zero
2994	39.98	20.13	20.50	As Found Span
Average Correction Factor				1.0129

Calculated value of As Found Response: 20.639 ppm      Percent Change of As Found: -2.5

	before calibration		after calibration	
Auto zero	-0.02	ppm	0.04	ppm
Auto span	22.51	ppm	22.30	ppm

Notes: Analyzer was zero and span adjusted. All test parameters holding steady.

Calibration Performed By: Kelly Baragar

## Calibration Summary

Parameter THC  
 Air Monitoring Network Palliser Airshed

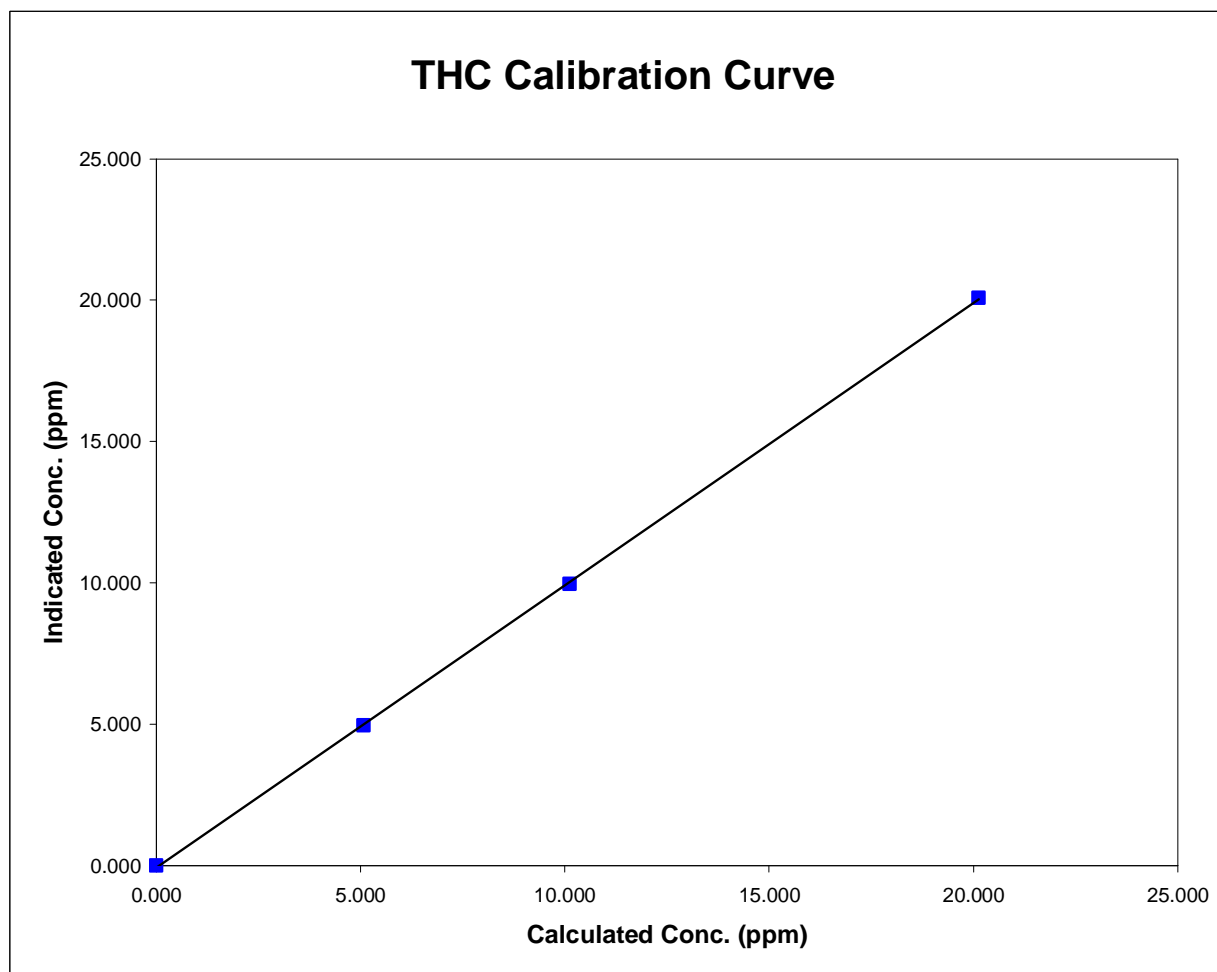


### Station Information

Calibration Date	August 13, 2004	Previous Calibration	July 2, 2004
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	12:10	End Time (MST)	15:30
Analyzer make/model	TEI model 51C-LT	Analyzer serial #	407505596

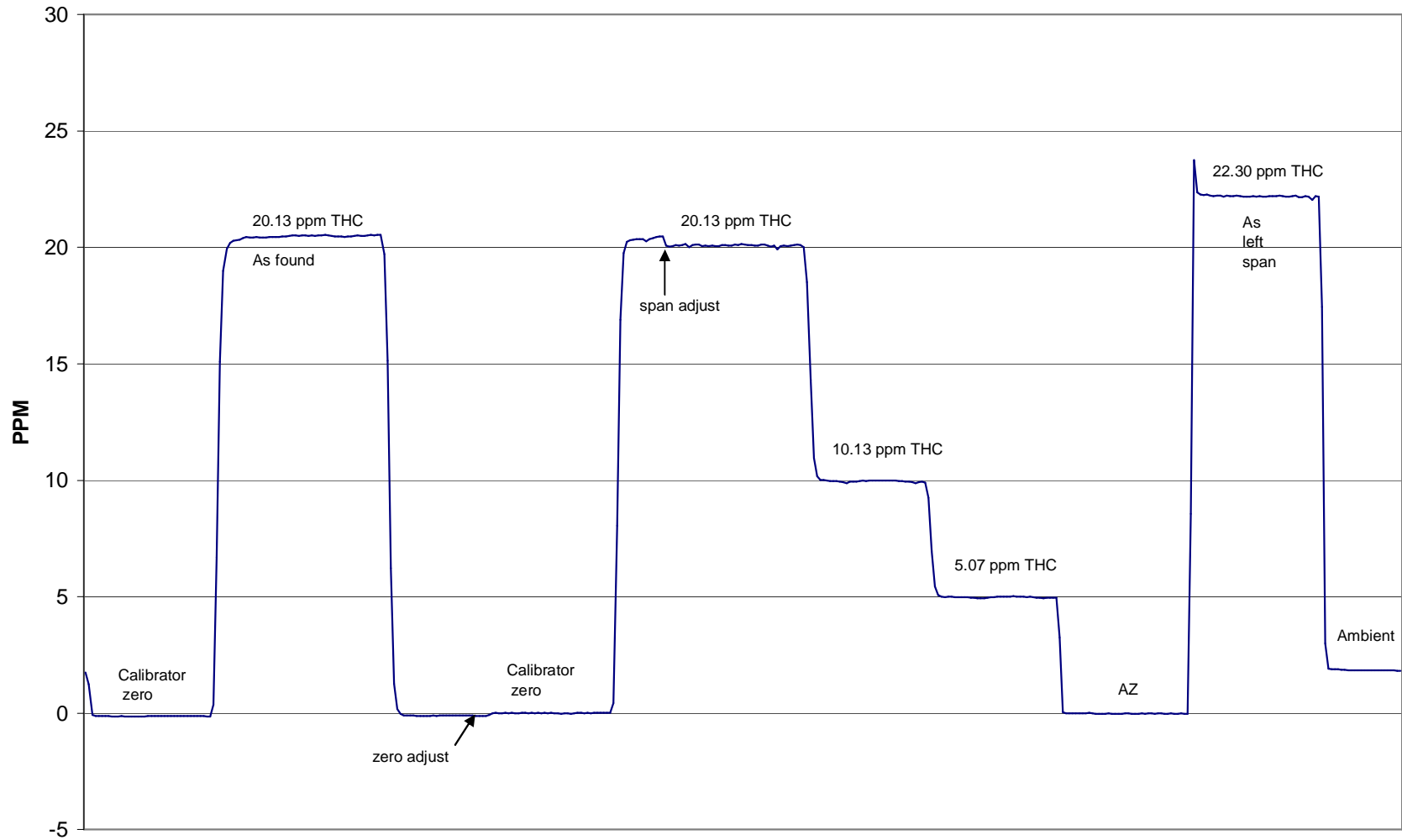
### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.003	N/A		
20.132	20.083	1.0024	Correlation Coefficient	0.999933
10.128	9.961	1.0168		
5.071	4.973	1.0196	Slope	1.001858
			Intercept	0.061399





### THC Calibration



August 13, 2004

# Calibration Report



Parameter PM2.5  
 Air Monitoring Network Palliser Airshed

## Station Information

Calibration Date	August 13, 2004	Previous Calibration	July 2, 2004
Station Number	1	Station Location	Crescent Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	10:05	End Time (MST)	15:00
Barometric Pressure	0.929 inches Hg	Station Temperature	21.0 Deg C
Flow Calibrator	BIOS Drycal DCL-MH	Serial Number	101780
DACS make	AP 1000	DACS serial No.	45269
DACS voltage range	0 - 1 V	DACS channel #	15
	<u>Before</u>		<u>After</u>
DACS slope	0.050000	DACS slope	0.050000
DACS intercept	-50.000000	DACS intercept	-50.000000

## Analyzer Information

Analyzer make	R&P	Control Unit serial #	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	16.67	SLPM	16.67	SLPM
Filter Load	49	%	18	%
Ko Factor	12758		12758	
Temperature	28.0	Deg C	28.0	Deg C
Pressure	0.929	ATM	0.929	ATM

## Calibration Data

Parameter	Set Point	Indicated Reading	Tolerance	New Reading
zero flow - main	0.0	0.07		0.07
zero flow - auxillary	0.0	0.09		0.09
flow recovery - main	45 - 60 Seconds	25 sec	45 - 60 Seconds	25 sec
flow recovery - aux	46 - 60 Seconds	45 sec	46 - 60 Seconds	45 sec
Temperature	measured	28.0	+/- 1.0 Deg C	28.0
Pressure	measured	0.929	+/- 1.5% ΔATM	0.929
Total Flow	16.67 SLPM	16.78		16.78
Main Flow	13.67 SLPM	13.70	+/- 1.0 SLPM	13.70
Auxillary Flow	3.0 SLPM	3.050	+/- 0.2 SLPM	3.050
Leak Check - main	0.0	0.03	<0.15 SLPM	0.03
Leak Check - aux	0.0	0.09	<0.15 SLPM	0.09
Ko Factor (w/o filter)	measured	328.733	filter weight (g)	0.11352
Ko Factor (w/ filter)	measured	234.170	% Ko difference	0.9%

Notes: Performed pump restart, leak checks, and flow audits. Unit appears OK on all counts  
Verification filter indicates indicated values are within 1% of measured value.  
Replaced sample filter; intial replacement slow to stabilize so secondary filter installed.

Calibration Performed By: Kelly Baragar