



# Palliser Airshed Society

## Ambient Air Monitoring Network Summary

### September 2004



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Alberta Environment  
Enforcement and Monitoring Division  
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Edmonton, Alberta, T5K 2J6

**Attention: Director of Monitoring and Evaluation**

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

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Enclosed is the PAS Ambient Monitoring Report for the month of **September 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 95% uptime for the month of September. There were no significant events leading to emergency response for the month of September.

The following is a summary of the monthly averages recorded during sampling:

- Monthly average concentrations of NO<sub>2</sub> was 7.3 ppb
- Monthly average concentrations for O<sub>3</sub> was 21.9 ppb
- Monthly average concentrations for THC was 1.93 ppm
- Monthly average concentrations for PM<sub>2.5</sub> was 2.6 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 ranged from 0.1 ppb to 0.3 ppb
- Monthly average concentrations for NO<sub>2</sub> passives ranged from 4.1 ppb to 6.5 ppb
- Monthly average concentrations for O<sub>3</sub> passives ranged from 18.2 ppb to 25.7 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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AQM Environmental Specialist



## September 2004 Monthly Overall Summary Report

### Ambient Air Quality Data

Sep-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	3.5	0	0	41.6	Sep-23	3.3	SE	12.8	Sep-23	100.0%
NO <sub>2</sub> (ppb)	212	106	Crescent Heights	7.3	0	0	33.5	Sep-23	4.3	SW	13.5	Sep-23	100.0%
NO <sub>x</sub> (ppb)			Crescent Heights	10.8	0	0	66.6	Sep-25	4.9	S	26.3	Sep-23	100.0%
O <sub>3</sub> (ppb)	82		Crescent Heights	21.9	0	0	46.7	Sep-18	10.0	E	34.7	Sep-18	100.0%
THC (ppm)			Crescent Heights	1.93	0	0	2.80	Sep-30	2.8	WSW	2.14	Sep-30	100.0%
PM <sub>2.5</sub> (µg/m <sup>3</sup> )		30 <sup>a</sup>	Crescent Heights	2.6	0	0	19.4	Sep-25	4.9	S	5.5	Sep-28	97.6%
RH (%)			Crescent Heights	61.9									100.0%
SR (W/m <sup>2</sup> )			Crescent Heights	160.5									100.0%
Temp (°C)			Crescent Heights	13.4									100.0%
WSPD v (km/hr)			Crescent Heights	3.8									100.0%
WSPD s (km/hr)			Crescent Heights	10.2									100.0%
WDIR (Deg)			Crescent Heights	SW*									100.0%

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 September

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: September 1, 2004 to October 1, 2004  
Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	34 ppb 23-Sep 20:00 21:00
Maximum 24-hr Average:	13 ppb 23-Sep

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

AIC Time:	33 hrs	Operational Time:	684 hrs					
Calibration Time:	3 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	27	18	10	6	4	2	0	7.3 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	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-Sep-04	0:00	1:00	9	13	17	15	18	7	11	14	18	15	12	A	20	14	17	16	21	5	6	5	13	14	9	13	13.2	20.7	
2-Sep-04	1:00	2:00	5	4	4	3	6	8	8	5	5	8	A	11	6	4	8	8	7	12	9	5	10	16	13	15	7.6	15.6	
3-Sep-04	2:00	3:00	9	6	8	8	4	6	7	8	6	A	12	9	6	5	7	5	3	7	10	28	17	11	7	8	8.6	27.7	
4-Sep-04	3:00	4:00	8	8	9	9	9	9	7	5	A	8	4	3	3	4	5	2	10	9	10	7	9	6	6	4	6.7	10.2	
5-Sep-04	4:00	5:00	6	8	7	8	9	13	10	A	16	13	7	4	3	3	2	4	2	4	7	12	10	6	11	10	7.5	15.5	
6-Sep-04	5:00	6:00	6	4	5	6	13	10	A	16	9	9	10	7	3	3	5	5	4	5	8	4	5	7	4	3	6.4	15.8	
7-Sep-04	6:00	7:00	3	3	3	4	2	A	13	10	7	5	7	5	3	3	5	5	3	3	11	27	19	13	15	16	8.0	27.0	
8-Sep-04	7:00	8:00	15	14	14	14	A	19	15	15	6	4	5	4	2	3	3	6	3	4	8	11	19	17	11	15	9.9	19.2	
9-Sep-04	8:00	9:00	10	5	3	A	14	8	7	6	5	4	C	C	C	A	A	4	5	4	4	3	3	2	2	2	5.0	13.6	
10-Sep-04	9:00	10:00	1	2	2	A	11	7	4	3	2	4	5	3	4	4	3	2	3	3	3	3	3	2	2	2	3.2	10.7	
11-Sep-04	10:00	11:00	3	3	A	11	7	6	10	11	4	4	4	4	4	3	3	3	3	3	17	5	13	12	5	7	6.1	16.9	
12-Sep-04	11:00	12:00	6	A	13	11	11	14	18	16	19	10	6	8	9	7	3	4	5	6	5	5	3	3	3	2	8.1	18.8	
13-Sep-04	12:00	13:00	A	7	4	4	5	9	12	14	7	3	3	3	2	2	2	3	3	6	8	8	13	9	9	A	6.1	13.6	
14-Sep-04	13:00	14:00	18	9	16	11	12	15	15	11	4	3	3	2	2	2	2	4	7	7	6	8	7	7	A	12	7.9	18.0	
15-Sep-04	14:00	15:00	9	7	6	4	4	9	8	6	5	4	5	5	3	3	4	4	8	7	6	11	8	A	20	10	6.6	20.0	
16-Sep-04	15:00	16:00	12	5	7	4	6	8	10	7	7	3	4	6	5	7	6	11	10	12	24	30	A	13	8	6	9.0	29.8	
17-Sep-04	16:00	17:00	5	5	5	6	6	11	19	18	11	3	3	3	2	3	3	5	9	18	25	A	25	20	5	3	9.2	24.8	
18-Sep-04	17:00	18:00	5	2	3	4	3	8	6	3	5	3	2	2	2	1	3	4	8	9	A	14	10	7	7	6	5.0	13.5	
19-Sep-04	18:00	19:00	14	5	8	4	4	5	6	6	5	6	6	5	4	5	4	5	6	A	9	6	4	2	3	5	5.5	14.0	
20-Sep-04	19:00	20:00	5	3	2	2	4	6	6	7	3	2	3	2	1	2	3	4	A	12	11	16	21	21	14	11	6.9	21.0	
21-Sep-04	20:00	21:00	10	8	9	8	14	16	18	15	5	3	2	2	3	3	3	A	10	8	9	8	7	3	3	2	7.4	18.2	
22-Sep-04	21:00	22:00	4	3	3	4	4	6	6	5	6	6	7	6	6	3	A	7	5	5	6	7	12	17	12	15	6.6	16.9	
23-Sep-04	22:00	23:00	15	12	13	12	12	12	13	13	14	14	3	3	5	A	10	5	5	11	14	32	34	27	19	12	13.5	33.5	
24-Sep-04	23:00	0:00	14	22	17	16	15	13	9	8	6	5	5	5	3	A	8	6	5	6	9	10	8	11	5	5	4	9.1	22.2
25-Sep-04			3	3	4	4	5	7	6	7	5	3	3	A	9	6	4	4	5	8	10	8	14	30	32	25	8.8	31.7	
26-Sep-04			24	22	9	6	3	4	6	7	4	4	A	8	4	3	4	3	2	4	3	4	5	5	6	9	6.4	24.2	
27-Sep-04			5	5	3	2	4	12	19	17	8	A	9	4	5	3	4	4	4	4	6	4	3	4	4	1	5.7	19.3	
28-Sep-04			1	1	2	1	2	6	5	10	A	9	5	4	5	4	4	7	10	6	8	11	7	8	6	5	5.5	11.4	
29-Sep-04			4	5	9	9	7	10	18	A	12	6	3	2	1	1	0	0	1	3	4	4	1	0	2	0	4.3	17.9	
30-Sep-04			0	3	4	5	8	10	A	10	8	7	6	6	4	5	6	3	0	0	0	1	5	2	5	9	4.6	10.0	
																											N	0.0	
Hourly Avg			7.9	6.8	7.1	6.9	7.6	9.3	10.4	9.6	7.5	6.0	5.2	4.5	4.3	4.1	4.6	4.8	5.8	6.6	8.8	10.1	10.6	9.8	8.5	7.9			
Hourly Max			24.2	22.2	17.4	15.5	18.1	19.2	19.3	17.8	18.8	15.0	12.4	10.7	20.3	14.4	16.7	15.6	20.7	17.7	24.5	32.1	33.5	29.8	31.7	25.4			

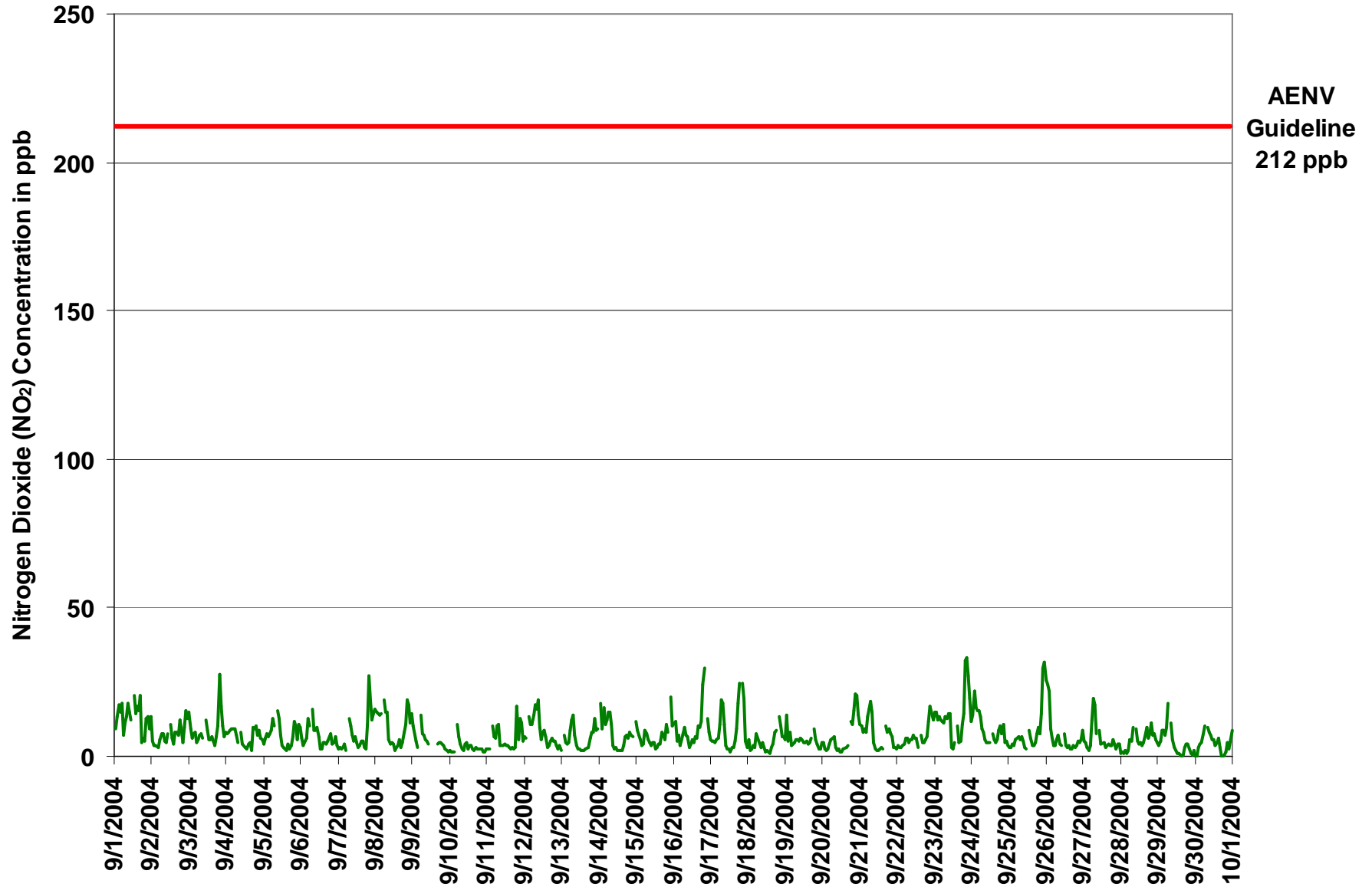


Figure 1. PAS - Crescent Heights Nitrogen Dioxide 1-hr Average Monthly Trend



Station: Crescent Heights

### HOURLY MAXIMUM TABLE

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

Station Owner: PAS

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

Maximum 1-hr Value:	80.3	ppb	23-Sep	12:00 13:00
Maximum 24-hr Value:	24.6	ppb	2-Sep	

AIC Time:	33 hrs	Operational Time:	684 hrs					
Calibration Time:	3 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	58	36	21	12	6	3	2	15.2 ppb

#### Status Flag Characters

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

#### Day Mountain Standard Time

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Sep-04	40	21	42	29	26	29	19	19	22	20	22	A	34	17	21	20	31	11	18	12	19	20	16	35	23.6	41.7
2-Sep-04	24	24	35	24	43	51	30	8	35	17	A	18	12	5	24	14	18	21	24	11	18	24	51	36	24.6	51.4
3-Sep-04	23	11	13	10	9	20	21	27	22	A	26	16	10	8	11	11	9	13	15	39	28	16	15	15	16.8	39.0
4-Sep-04	13	16	23	25	20	15	10	14	A	16	6	4	3	61	29	3	29	22	19	22	23	9	8	6	17.1	61.0
5-Sep-04	9	26	8	10	11	31	21	A	21	15	14	5	5	5	3	7	6	10	19	19	17	11	19	15	13.3	30.9
6-Sep-04	13	5	7	9	20	13	A	30	13	12	59	9	11	4	7	6	6	7	11	5	9	8	6	4	11.8	58.6
7-Sep-04	4	4	5	9	8	A	22	14	10	9	9	6	5	7	7	5	5	29	39	28	15	22	19	12.5	38.6	
8-Sep-04	69	18	21	20	A	26	24	17	12	6	7	6	3	7	7	19	4	8	17	24	35	23	31	20	18.5	69.1
9-Sep-04	15	11	15	A	18	11	9	7	8	6	C	C	C	A	A	6	8	7	6	5	4	3	3	3	8.0	17.7
10-Sep-04	2	2	2	A	22	9	5	4	3	5	6	4	5	8	4	3	4	3	4	3	3	2	2	3	4.8	22.1
11-Sep-04	3	3	A	18	8	8	14	19	6	5	14	5	25	12	3	5	5	4	48	31	45	24	16	17	14.7	47.8
12-Sep-04	8	A	19	33	29	32	61	18	25	13	8	10	11	10	6	6	7	9	8	8	4	4	5	5	14.7	61.1
13-Sep-04	A	14	6	5	6	11	24	18	10	5	3	3	3	4	4	4	14	22	12	11	32	11	16	A	10.9	31.5
14-Sep-04	29	19	31	17	19	18	25	46	17	17	50	3	12	3	4	6	25	57	24	31	25	10	A	36	22.8	56.6
15-Sep-04	22	20	18	5	5	23	19	9	9	14	7	17	7	6	8	23	16	12	8	26	12	A	33	27	14.9	33.0
16-Sep-04	29	7	28	6	7	36	11	11	16	4	6	32	7	28	27	16	18	21	42	36	A	21	26	7	19.1	41.8
17-Sep-04	7	19	6	7	10	29	36	24	31	5	18	14	2	35	17	20	54	25	34	A	34	30	11	24	21.4	53.9
18-Sep-04	43	3	29	32	8	14	9	7	7	5	3	4	3	3	5	8	18	19	A	25	38	9	9	8	13.5	42.6
19-Sep-04	46	9	27	5	7	7	27	27	7	10	7	7	5	7	7	7	7	A	16	11	7	3	5	9	11.6	45.6
20-Sep-04	9	4	3	3	6	7	13	12	5	4	5	5	2	5	4	6	A	16	13	20	31	25	21	14	10.1	30.9
21-Sep-04	13	9	17	14	15	20	25	29	33	20	3	3	28	45	5	A	36	12	13	23	32	21	20	4	19.1	44.9
22-Sep-04	57	28	13	20	6	21	12	7	8	8	18	10	12	4	A	13	6	6	7	13	27	27	16	16	15.5	57.4
23-Sep-04	16	14	16	14	20	13	21	17	17	24	9	5	80	A	16	9	8	16	31	42	42	34	39	16	22.5	80.3
24-Sep-04	33	59	28	30	17	18	17	28	10	6	6	7	A	15	19	27	9	42	14	10	34	7	16	11	20.1	58.8
25-Sep-04	4	6	13	5	6	24	9	25	7	22	10	A	14	25	7	7	8	17	14	11	20	54	77	39	18.5	77.4
26-Sep-04	26	27	16	8	4	4	8	11	5	5	A	14	6	4	27	4	3	5	5	5	6	7	11	14	9.8	27.3
27-Sep-04	6	6	4	3	6	17	23	25	15	A	23	6	41	24	12	19	4	5	9	5	3	29	33	2	14.0	41.3
28-Sep-04	14	6	27	2	4	28	8	12	A	19	37	26	18	21	8	9	12	9	10	28	9	13	8	7	14.5	36.5
29-Sep-04	5	16	11	12	11	14	32	A	19	7	4	3	3	2	2	1	2	6	8	7	3	2	7	0	7.6	31.9
30-Sep-04	0	15	10	6	15	13	A	12	15	12	8	9	9	8	12	12	1	1	4	4	8	6	14	13	8.9	15.2
																									N	0.0
Hourly Avg	20.1	14.5	17.0	13.6	13.2	19.5	19.8	17.7	14.5	11.0	14.2	9.3	13.5	13.7	10.9	10.3	12.8	14.2	16.5	18.1	20.6	16.1	19.1	14.6		
Hourly Max	69.1	58.8	41.7	33.1	42.7	51.4	61.1	45.8	35.3	23.7	58.6	31.6	80.3	61.0	29.3	27.2	53.9	56.6	47.8	41.9	45.3	54.3	77.4	38.9		

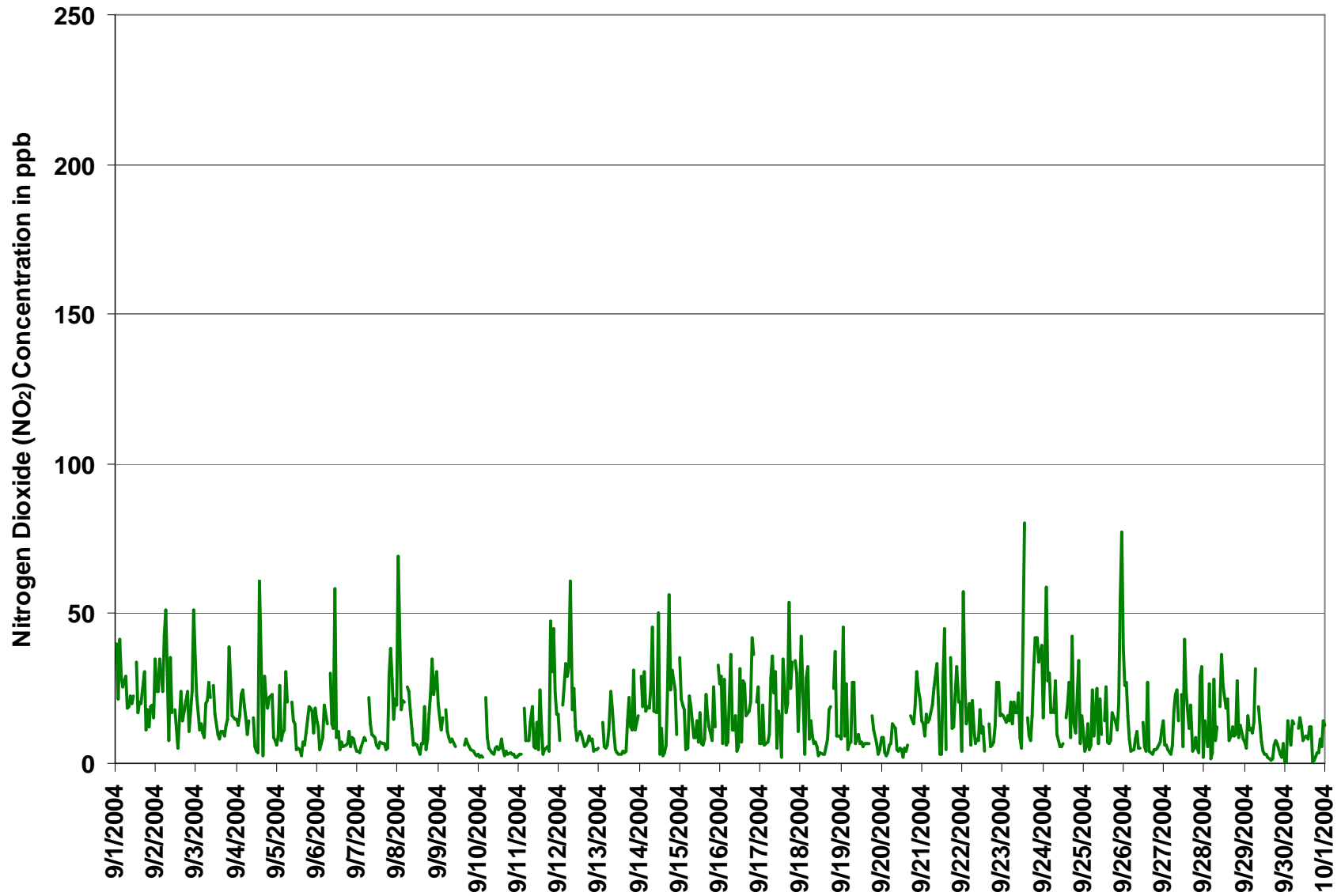
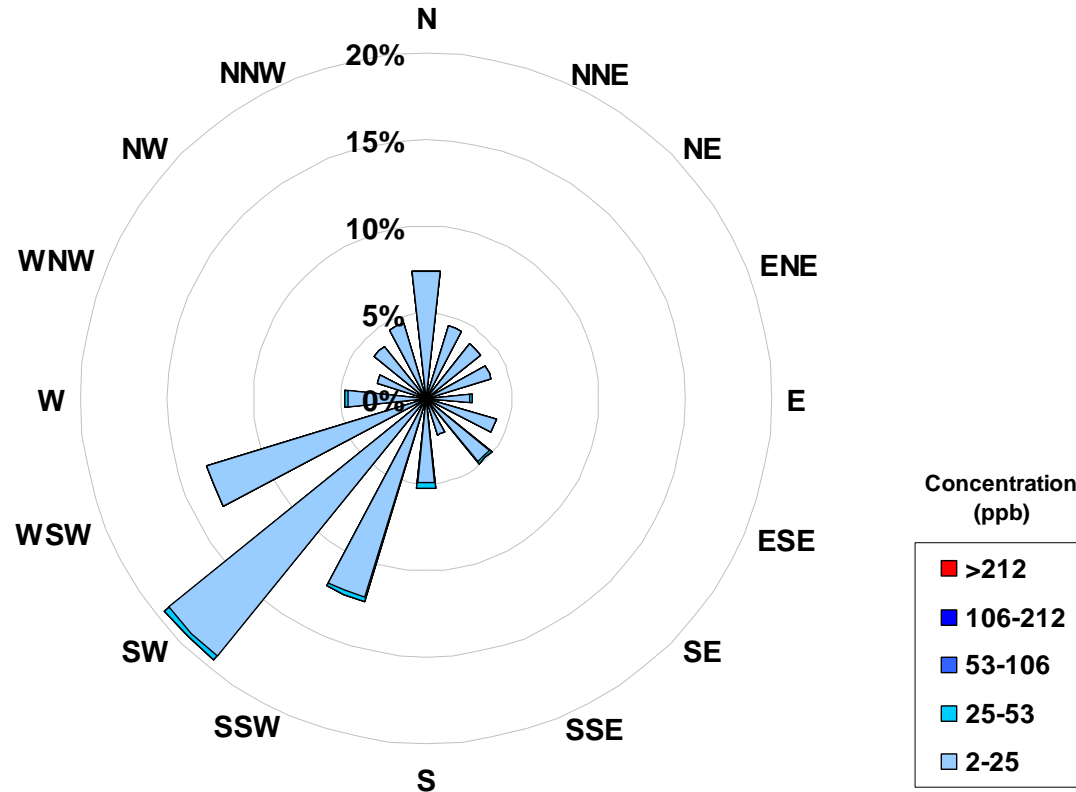


Figure 2. PAS - Crescent Heights Nitrogen Dioxide 1-hr Maximum Value Monthly Trend





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



Frequency Distribution of NO <sub>2</sub> in ppb			
Range		Frequency (hrs)	
0	< 2	36	
2	to 25	632	
25	to 53	9	
53	to 106	0	
106	to 212	0	
	> 212	0	
Total Non-Zero Values		684	

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: September 1, 2004 to October 1, 2004

#### Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	42	ppb	23-Sep	7:00 8:00
Maximum 24-hr Average:	13	ppb	23-Sep	

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

AIC Time:	33 hrs			Operational Time:	684 hrs		
Calibration Time:	3 hrs			AMD Operational Uptime:	100.0%		
Percentile	99	95	75	50	25	5	1
	35	15	3	1	1	0	0
							Average
							3.5 ppb

#### Status Flag Characters

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum
	Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00		
1-Sep-04	7	5	21	14	14	5	2	7	17	9	7	A	6	9	5	4	6	1	1	0	1	1	0	6	6.3	21.1
2-Sep-04	2	5	3	1	6	4	4	2	4	4	A	2	1	1	3	2	3	4	2	0	0	1	5	9	2.9	8.7
3-Sep-04	3	1	1	0	0	3	7	9	5	A	4	4	2	1	2	2	1	2	1	4	1	1	1	0	2.4	9.2
4-Sep-04	0	1	1	13	3	3	4	4	A	2	1	1	1	3	5	0	4	3	1	2	1	0	0	0	2.2	12.8
5-Sep-04	1	3	0	0	1	15	8	A	8	11	5	1	1	1	0	2	1	1	1	1	1	0	0	0	2.6	14.6
6-Sep-04	0	0	0	0	3	1	A	15	6	6	7	4	1	1	2	1	1	0	0	0	0	0	0	0	2.1	14.6
7-Sep-04	0	0	0	0	0	A	2	2	1	1	3	2	1	1	2	1	1	1	4	13	5	1	9	15	2.8	15.0
8-Sep-04	16	10	8	15	A	12	18	35	6	2	2	2	1	1	1	2	1	1	1	1	6	2	2	1	6.1	35.0
9-Sep-04	1	0	0	A	3	0	1	2	4	3	C	C	C	A	A	1	2	2	1	1	1	0	0	0	1.3	4.0
10-Sep-04	0	0	0	A	1	1	1	1	2	4	4	2	3	3	2	1	2	1	1	1	1	0	0	0	1.3	4.3
11-Sep-04	0	0	A	1	1	1	4	5	1	1	4	1	2	2	1	1	1	1	5	1	5	1	0	0	1.7	5.2
12-Sep-04	0	A	0	3	6	4	10	10	23	2	2	2	3	1	1	1	1	1	1	1	0	0	0	0	3.0	22.8
13-Sep-04	A	0	0	0	0	1	10	19	6	2	1	1	1	1	1	1	1	2	1	1	5	1	1	A	2.5	19.0
14-Sep-04	5	1	7	2	3	2	8	6	2	3	3	1	2	1	1	2	3	5	2	3	2	1	A	5	3.1	7.7
15-Sep-04	3	3	1	0	1	6	6	6	4	3	3	3	2	2	2	1	2	1	1	1	1	A	1	2	2.3	6.3
16-Sep-04	10	1	5	1	1	3	5	7	10	3	3	4	2	4	2	1	2	2	15	14	A	0	3	0	4.2	15.1
17-Sep-04	0	1	0	0	1	5	28	31	12	2	1	1	1	2	1	2	4	3	3	A	2	2	0	1	4.4	30.5
18-Sep-04	5	0	1	2	0	0	0	1	1	1	1	1	0	0	1	1	2	1	A	1	3	0	0	0	1.0	5.2
19-Sep-04	6	1	8	0	0	0	2	4	3	3	2	2	1	2	1	2	3	A	0	0	0	0	0	0	1.7	8.3
20-Sep-04	0	1	0	0	1	2	4	7	3	2	3	1	1	2	2	2	A	2	1	2	27	37	17	1	5.1	37.1
21-Sep-04	1	1	5	3	10	18	34	38	5	3	2	1	3	2	1	A	2	1	1	1	2	2	2	0	6.1	38.3
22-Sep-04	4	3	2	2	1	3	2	4	8	8	11	6	5	2	A	0	0	0	0	0	1	8	1	3	3.3	10.8
23-Sep-04	5	4	5	8	13	13	31	42	41	27	2	2	5	A	2	1	1	2	1	12	30	39	10	1	12.8	41.6
24-Sep-04	22	28	9	10	15	17	9	15	6	4	3	3	A	1	3	2	1	3	1	1	2	0	1	0	6.7	28.3
25-Sep-04	0	0	1	0	0	5	1	4	3	2	2	A	1	2	1	1	1	1	0	0	0	19	35	39	5.2	38.9
26-Sep-04	33	3	0	1	0	0	1	1	1	1	A	1	1	0	1	0	0	0	0	0	0	0	0	1	2.1	33.1
27-Sep-04	0	0	0	0	0	2	17	27	6	A	3	1	3	1	1	2	1	1	1	0	0	2	3	0	3.1	27.3
28-Sep-04	1	0	1	0	0	5	1	3	A	3	3	2	2	2	1	2	2	1	1	5	1	1	0	0	1.6	5.4
29-Sep-04	0	1	0	1	1	1	11	A	4	2	1	1	1	1	0	0	0	1	1	1	1	0	0	0	1.2	11.4
30-Sep-04	0	1	1	1	4	12	A	10	8	10	6	5	2	3	4	3	1	1	1	1	1	1	1	1	3.3	11.8
																									N	0.0
Hourly Avg	4.4	2.5	2.9	2.9	3.0	4.9	8.2	11.2	7.1	4.4	3.3	2.0	1.8	1.8	1.7	1.4	1.7	1.5	1.7	2.4	3.4	4.2	3.2	3.0		
Hourly Max	33.1	28.3	21.1	15.2	15.0	18.2	34.1	41.6	41.1	27.3	10.8	6.3	5.8	8.9	4.7	3.5	5.6	5.1	15.1	14.0	30.4	38.6	35.1	38.9		



Station: Crescent Heights

### HOURLY MAXIMUM TABLE

Nitric Oxide (NO)

Station Owner: PAS

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

Maximum 1-hr Value:	208.1	ppb	2-Sep	22:00 23:00
Maximum 24-hr Value:	49.3	ppb	2-Sep	

AIC Time:	33 hrs	Operational Time:	684 hrs					
Calibration Time:	3 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	157	91	25	4	2	1	1	21.1 ppb

#### Status Flag Characters

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

#### Day Mountain Standard Time

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum	
1-Sep-04	72	22	144	66	36	56	19	13	36	19	22	A	10	11	6	6	18	2	12	1	1	2	2	75	28.2	144.2	
2-Sep-04	49	156	75	50	154	120	67	3	70	18	A	5	4	1	31	5	8	9	6	2	1	2	208	93	49.3	208.1	
3-Sep-04	44	21	3	1	1	70	45	60	38	A	18	11	6	3	3	5	11	10	2	25	3	1	2	2	16.7	69.9	
4-Sep-04	1	4	24	97	29	36	5	25	A	3	2	2	1	68	86	1	23	11	2	20	7	1	2	2	19.6	96.6	
5-Sep-04	3	62	1	1	5	129	46	A	12	18	18	2	2	2	1	4	3	4	3	3	2	1	1	1	14.1	129.3	
6-Sep-04	1	1	1	1	13	3	A	91	16	11	28	6	8	2	3	2	2	1	1	1	1	1	1	1	8.4	90.9	
7-Sep-04	1	1	1	1	0	A	25	3	2	3	7	4	2	2	2	2	2	8	45	37	16	3	61	54	12.2	61.2	
8-Sep-04	128	24	53	56	A	23	55	51	26	4	4	3	1	2	3	13	2	2	13	4	39	5	23	2	23.2	128.0	
9-Sep-04	1	8	4	A	12	2	5	3	10	7	C	C	C	A	A	2	5	4	2	3	3	1	1	1	4.2	12.4	
10-Sep-04	1	0	1	A	5	1	2	2	4	5	6	4	5	14	4	2	4	3	1	1	1	1	1	1	2.9	13.5	
11-Sep-04	1	1	A	1	1	1	19	26	2	3	87	2	45	38	1	2	1	2	55	8	54	6	2	1	15.6	86.9	
12-Sep-04	1	A	1	75	84	61	168	13	65	4	3	3	5	3	1	2	2	2	2	2	1	1	1	1	21.7	168.4	
13-Sep-04	A	1	0	1	1	3	59	33	8	3	2	2	2	2	1	2	7	30	3	2	75	1	2	A	10.9	74.9	
14-Sep-04	23	17	50	8	11	6	47	21	26	93	106	2	11	2	2	2	77	149	32	52	26	3	A	52	35.6	148.5	
15-Sep-04	21	30	15	1	1	78	69	15	9	12	5	26	4	3	4	10	7	2	2	2	1	A	4	50	16.2	78.0	
16-Sep-04	82	1	109	1	4	37	10	16	42	4	5	65	4	37	35	3	7	9	171	62	A	1	108	1	35.4	171.2	
17-Sep-04	1	19	1	1	3	52	168	74	100	3	16	15	1	29	13	28	117	6	9	A	5	8	1	33	30.5	167.9	
18-Sep-04	115	1	64	53	1	1	1	2	2	2	1	1	1	1	1	2	5	3	A	1	80	1	1	1	14.8	115.2	
19-Sep-04	64	4	63	1	1	1	41	57	4	7	4	4	2	3	3	4	6	A	1	1	0	0	0	1	11.7	64.2	
20-Sep-04	1	2	2	1	2	3	25	11	5	3	7	5	2	6	2	3	A	3	2	8	73	69	70	6	13.4	72.7	
21-Sep-04	4	4	43	14	17	38	80	114	47	50	2	2	94	45	3	A	28	4	1	44	49	72	69	2	35.9	113.8	
22-Sep-04	111	90	53	64	2	69	15	5	13	13	28	13	13	3	A	1	1	1	1	1	17	89	4	9	26.7	111.2	
23-Sep-04	8	13	14	21	47	24	91	87	63	57	9	3	151	A	4	2	2	3	20	56	52	126	143	5	43.5	151.3	
24-Sep-04	198	189	70	81	21	87	49	105	17	5	4	5	A	4	61	25	4	67	2	3	45	1	7	1	45.6	197.5	
25-Sep-04	1	2	34	1	1	110	2	43	4	26	21	A	5	16	3	2	2	7	1	1	1	75	158	157	29.1	157.7	
26-Sep-04	59	10	1	2	1	1	2	2	2	3	A	2	2	2	21	1	1	1	1	1	1	1	1	1	5.1	58.5	
27-Sep-04	1	1	1	1	1	4	39	67	15	A	51	2	57	31	9	44	1	1	2	1	1	53	57	1	19.1	66.6	
28-Sep-04	44	3	25	1	2	110	2	5	A	31	71	23	20	22	3	3	3	1	2	29	2	2	1	1	17.6	110.2	
29-Sep-04	1	13	1	3	3	3	77	A	6	4	2	2	2	2	1	1	1	3	2	2	2	1	1	1	5.7	77.1	
30-Sep-04	1	22	3	3	78	71	A	16	75	25	15	7	5	8	10	10	2	2	2	2	2	4	12	3	16.4	77.6	
																									N	0.0	
Hourly Avg	35.7	24.8	29.5	21.6	18.5	41.4	44.0	34.3	25.7	15.6	20.1	8.2	16.5	12.9	11.3	6.5	12.0	12.0	13.7	12.8	19.3	18.3	32.4	19.1			
Hourly Max	197.5	188.6	144.2	96.6	154.3	129.3	168.4	113.8	100.3	93.4	105.9	65.1	151.3	68.2	86.1	44.3	117.4	148.5	171.2	61.7	80.2	125.8	208.1	156.7			



Station: Crescent Heights

### HOURLY AVERAGE TABLE

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

Station Owner: PAS

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

#### Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	67	ppb	25-Sep	22:00 23:00
Maximum 24-hr Average:	26	ppb	23-Sep	

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

AIC Time:	33 hrs		Operational Time:	684 hrs				
Calibration Time:	3 hrs		AMD Operational Uptime:	100.0%				
Percentile	99	95	75	50	25	5	1	Average
	55	31	12	7	5	2	1	10.8 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	
1-Sep-04	16	18	39	29	32	12	14	21	36	25	19	A	26	23	22	19	26	5	7	6	13	14	10	19	19.6	38.7	
2-Sep-04	7	9	7	4	12	12	11	6	9	12	A	13	7	5	11	10	10	16	10	5	10	16	18	23	10.5	23.4	
3-Sep-04	13	7	8	9	5	9	14	17	12	A	16	13	8	7	8	7	4	8	11	32	18	11	7	8	10.9	31.7	
4-Sep-04	8	9	10	22	12	12	11	8	A	10	5	4	3	7	9	3	13	13	11	9	10	7	6	4	8.9	22.2	
5-Sep-04	7	10	7	8	10	28	18	A	23	24	13	5	4	4	2	6	3	5	8	13	11	6	11	10	10.2	27.7	
6-Sep-04	6	4	5	7	16	11	A	31	15	15	17	10	4	3	6	6	5	5	8	4	5	7	4	3	8.5	30.5	
7-Sep-04	3	3	3	4	2	A	14	12	9	7	10	7	4	4	6	6	4	4	15	40	24	14	24	31	10.8	39.7	
8-Sep-04	30	24	22	30	A	31	33	50	11	6	6	6	3	4	5	8	4	5	9	12	24	19	13	15	16.1	50.0	
9-Sep-04	11	5	3	A	17	8	8	8	9	7	C	C	C	A	A	5	7	6	5	5	3	2	2	2	6.2	16.5	
10-Sep-04	1	2	2	A	12	7	5	4	4	8	9	5	7	7	4	3	5	4	4	3	3	2	2	3	4.4	11.9	
11-Sep-04	3	3	A	11	7	7	14	16	5	5	8	5	6	5	3	4	3	4	22	6	18	12	6	7	7.8	22.0	
12-Sep-04	6	A	13	14	17	18	27	25	42	12	8	10	11	8	4	5	6	7	6	6	4	3	4	2	11.1	41.6	
13-Sep-04	A	7	5	4	5	9	22	33	14	5	4	4	3	3	3	3	4	8	9	9	17	10	10	A	8.6	32.6	
14-Sep-04	23	11	24	12	15	18	22	17	6	6	6	3	4	3	3	5	10	12	8	11	9	8	A	17	11.0	23.6	
15-Sep-04	11	10	7	4	5	15	14	12	9	7	7	7	4	4	5	6	5	10	8	6	12	8	A	21	12	8.9	21.1
16-Sep-04	22	6	12	4	7	10	14	14	16	6	7	10	7	11	8	12	12	14	39	44	A	13	11	6	13.2	43.6	
17-Sep-04	5	7	5	6	7	16	47	48	22	5	4	3	2	5	5	7	14	21	28	A	27	22	6	4	13.6	48.2	
18-Sep-04	11	2	4	5	3	8	6	4	6	4	2	2	2	1	4	5	10	10	A	14	13	7	7	6	6.0	14.2	
19-Sep-04	20	6	16	4	4	5	8	10	8	9	8	7	6	7	6	6	9	A	10	6	4	2	3	5	7.2	19.7	
20-Sep-04	5	3	3	3	5	7	10	13	6	4	5	3	2	4	4	5	A	13	12	18	48	58	31	12	11.9	57.5	
21-Sep-04	11	9	14	12	23	34	52	53	10	6	4	4	6	5	4	A	12	9	10	9	9	5	6	3	13.4	53.1	
22-Sep-04	8	6	5	6	5	9	9	8	14	14	18	12	11	5	A	8	5	5	6	7	13	25	13	18	9.9	25.3	
23-Sep-04	20	16	18	20	25	25	44	55	55	42	5	4	9	A	12	6	6	12	16	44	64	66	29	13	26.3	65.7	
24-Sep-04	35	50	25	26	30	31	18	23	12	8	8	7	A	9	9	6	7	12	11	9	13	5	6	4	15.8	50.4	
25-Sep-04	3	4	5	4	6	12	6	10	8	6	5	A	10	9	5	4	5	8	10	8	14	49	67	64	14.0	66.6	
26-Sep-04	57	25	9	7	3	4	6	9	5	5	A	8	4	3	5	3	3	4	3	4	5	5	6	9	8.3	57.1	
27-Sep-04	5	5	3	2	4	14	37	45	13	A	12	5	7	4	5	6	4	4	6	4	3	6	7	1	8.8	44.6	
28-Sep-04	3	2	3	1	3	10	6	13	A	12	8	6	7	5	6	9	12	7	8	17	8	8	6	5	7.1	16.9	
29-Sep-04	4	6	9	10	8	10	29	A	15	8	4	2	2	1	1	1	1	4	4	5	1	1	2	0	5.5	29.4	
30-Sep-04	0	4	5	6	12	22	A	19	16	17	11	10	6	8	10	5	1	1	1	2	5	3	6	9	7.7	21.6	
																										N	0.0
Hourly Avg	12.2	9.3	10.0	9.7	10.6	14.2	18.6	20.7	14.6	10.4	8.5	6.5	6.1	5.8	6.2	6.1	7.5	8.0	10.4	12.4	13.9	14.0	11.7	10.9			
Hourly Max	57.1	50.4	38.7	29.8	32.3	34.1	52.1	54.5	55.3	41.5	19.0	12.9	26.1	23.4	21.5	19.2	26.4	20.5	39.2	43.8	63.7	65.7	66.6	64.1			



Station: Crescent Heights

## HOURLY MAXIMUM TABLE

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

Station Owner: PAS

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

## Summary

Maximum 1-hr Value:	259.0	ppb	2-Sep	22:00 23:00
Maximum 24-hr Value:	72.9	ppb	2-Sep	

AIC Time:	33 hrs	Operational Time:	684 hrs					
Calibration Time:	3 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	199	115	48	16	8	4	2	35.1 ppb

## Status Flag Characters

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

## Day Mountain Standard Time

Hour Start	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-Sep-04	112	41	175	86	62	85	31	32	59	39	44	A	43	28	26	26	48	12	27	12	20	21	16	104	50.0	175.2	
2-Sep-04	69	172	110	73	198	172	92	11	106	34	A	22	16	6	55	18	26	29	30	12	19	26	259	124	72.9	259.0	
3-Sep-04	66	29	14	11	9	90	66	81	60	A	45	27	15	10	14	15	19	17	17	64	30	17	17	17	32.5	89.7	
4-Sep-04	13	17	44	120	48	52	13	36	A	17	7	5	4	125	108	3	52	33	20	39	31	9	9	8	35.4	125.2	
5-Sep-04	12	86	8	11	17	157	64	A	28	32	32	7	7	7	3	12	9	14	23	21	19	11	20	16	26.7	157.3	
6-Sep-04	13	5	7	9	33	17	A	121	28	23	86	15	18	5	10	7	7	7	11	6	9	8	6	4	19.8	120.9	
7-Sep-04	4	4	6	9	8	A	47	16	12	12	15	10	7	9	9	8	7	13	62	70	44	18	82	73	23.5	81.7	
8-Sep-04	197	41	75	73	A	47	79	67	37	10	11	9	4	9	9	32	5	10	29	27	73	28	53	22	41.2	197.4	
9-Sep-04	17	20	19	A	30	13	12	10	18	12	C	C	C	A	A	7	13	11	8	8	7	3	3	4	11.8	29.5	
10-Sep-04	3	2	2	A	26	10	7	5	6	10	11	9	10	22	8	5	7	6	5	4	4	2	2	3	7.3	25.8	
11-Sep-04	3	4	A	19	9	9	31	42	7	8	97	7	69	50	5	6	7	5	99	38	92	29	18	17	29.0	98.8	
12-Sep-04	8	A	20	108	110	91	229	29	85	16	11	12	15	12	7	8	8	11	9	10	5	4	5	5	35.5	229.4	
13-Sep-04	A	14	6	5	6	14	83	50	18	8	5	5	4	6	4	5	21	52	15	13	106	12	17	A	21.3	106.1	
14-Sep-04	51	36	79	24	30	24	71	68	43	110	156	5	23	4	5	8	102	196	55	78	51	12	A	86	57.2	196.1	
15-Sep-04	39	46	33	5	6	98	81	22	17	26	12	43	10	9	12	33	22	14	8	27	13	A	35	76	29.8	97.5	
16-Sep-04	110	7	129	7	11	72	21	27	58	8	11	93	11	54	62	18	22	30	213	92	A	21	133	7	52.8	212.8	
17-Sep-04	7	33	6	8	12	80	202	95	123	8	33	29	3	63	29	48	171	31	42	A	39	36	12	53	50.6	202.3	
18-Sep-04	158	3	91	85	9	15	10	8	9	7	3	5	4	4	6	10	20	21	A	26	117	10	9	9	27.7	157.8	
19-Sep-04	111	11	84	5	7	8	68	74	11	16	9	11	7	9	9	9	12	A	16	12	7	3	5	9	22.3	110.6	
20-Sep-04	9	4	4	4	7	10	36	23	9	7	12	9	3	10	6	9	A	17	14	27	103	93	89	20	22.9	102.7	
21-Sep-04	17	12	57	27	31	58	102	134	64	62	5	5	116	90	7	A	64	15	13	63	75	91	84	6	52.1	134.3	
22-Sep-04	168	107	65	81	8	88	26	10	21	20	43	22	24	7	A	13	7	6	8	13	43	110	20	25	40.6	168.1	
23-Sep-04	24	27	28	34	64	37	106	103	80	80	17	7	230	A	18	12	10	18	51	97	84	150	182	17	64.2	230.4	
24-Sep-04	225	229	97	104	38	101	65	124	27	10	9	11	A	17	78	52	12	103	16	11	79	8	22	12	63.1	229.4	
25-Sep-04	4	7	48	5	7	134	11	68	11	48	28	A	19	42	9	9	10	22	15	11	21	114	199	177	44.2	198.8	
26-Sep-04	83	35	16	10	4	5	9	12	6	7	A	15	7	4	45	5	3	5	5	6	6	7	12	14	13.8	83.1	
27-Sep-04	7	7	5	3	7	21	59	90	29	A	72	7	97	54	21	62	5	6	11	5	4	76	88	2	32.0	97.1	
28-Sep-04	55	8	51	2	5	138	10	17	A	45	105	48	39	44	10	12	15	10	10	56	11	13	9	8	31.3	138.4	
29-Sep-04	6	29	11	14	12	16	94	A	24	10	5	4	4	3	1	2	2	7	9	9	4	2	7	0	12.0	94.0	
30-Sep-04	1	36	12	9	80	78	A	27	90	30	22	15	13	16	22	22	2	3	4	4	10	9	24	14	23.6	89.8	
																										N	0.0
Hourly Avg	54.9	36.9	44.9	34.0	30.8	59.9	61.5	50.0	38.7	25.5	33.5	16.8	29.4	25.7	21.3	16.4	24.3	25.0	29.1	29.7	38.7	32.6	49.5	32.1			
Hourly Max	225.3	229.4	175.2	120.3	198.0	171.5	229.4	134.3	122.9	110.4	155.7	92.6	230.4	125.2	107.9	62.2	171.2	196.1	212.8	97.0	117.0	150.2	259.0	176.8			

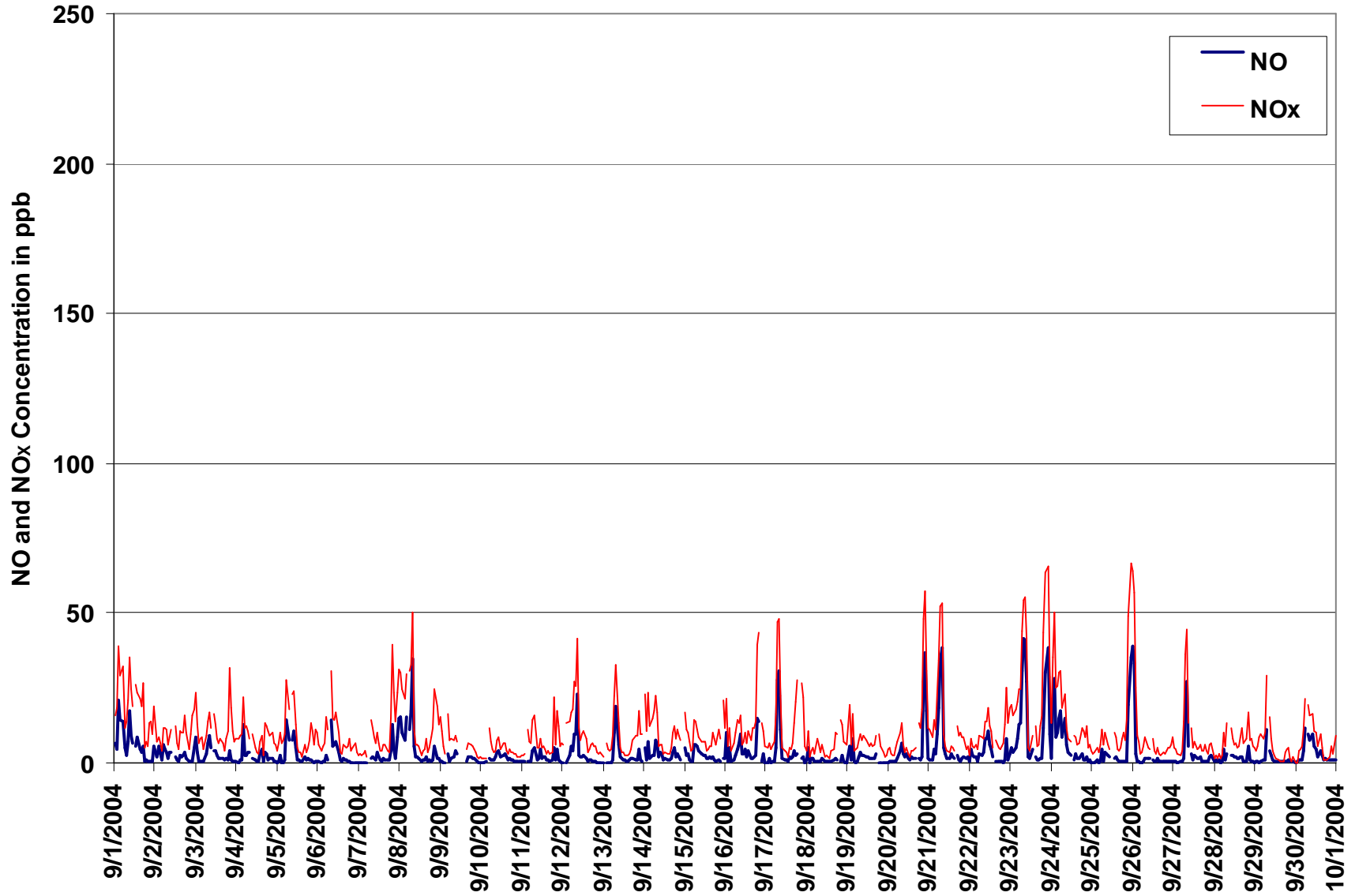


Figure 3. PAS - Crescent Heights Oxides of Nitrogen 1-hr Average Monthly Trends

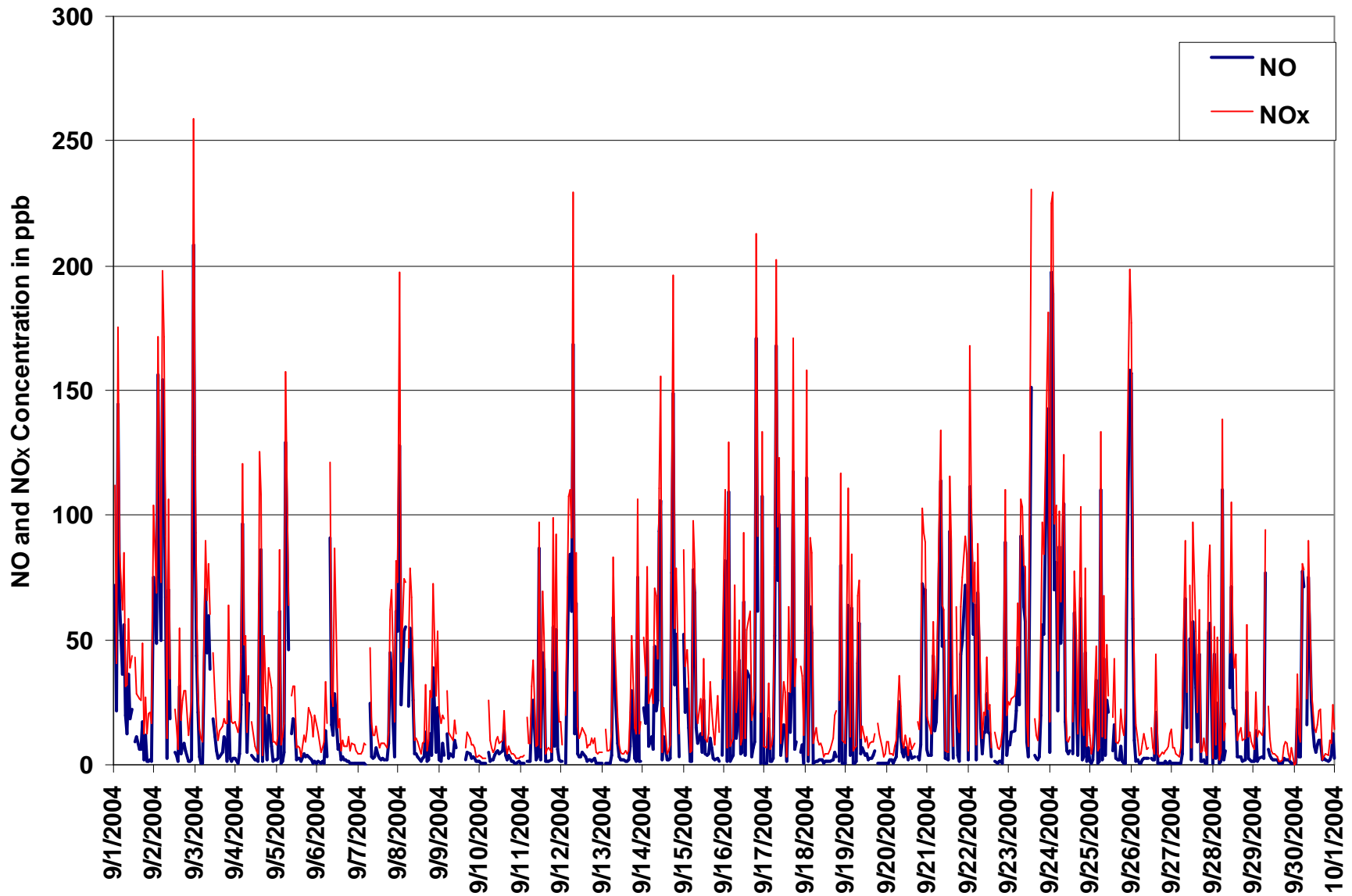


Figure 4. PAS - Crescent Heights Oxides of Nitrogen 1-hr Maximum Value Monthly Trends



### PAS - Crescent Heights Ozone Monthly Summary

#### HOURLY AVERAGE TABLE

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

Station: Crescent Heights

Station Owner: PAS

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

##### Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	47	ppb	18-Sep	13:00 14:00
Maximum 24-hr Average:	35	ppb	18-Sep	

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

AIC Time:	32 hrs				Operational Time:	686 hrs			
Calibration Time:	2 hrs				AMD Operational Uptime:	100.0%			
Percentile	99	95	75	50	25	5	1	Average	
	45	40	31	22	13	4	1	21.9 ppb	

##### Status Flag Characters

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

##### Day Mountain Standard Time

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum	
1-Sep-04	2	7	5	5	2	23	23	10	8	20	18	A	13	20	21	23	19	38	37	38	28	24	23	21	18.6	38.3	
2-Sep-04	25	28	27	23	20	18	21	31	36	40	A	45	46	46	41	42	41	35	34	34	27	20	17	13	30.7	45.9	
3-Sep-04	14	14	14	15	23	21	14	16	25	A	24	26	31	34	34	39	43	41	33	12	18	19	21	18	23.7	43.1	
4-Sep-04	17	15	13	11	10	9	7	13	A	21	24	29	32	32	32	35	31	30	27	26	23	24	21	21	21.8	35.3	
5-Sep-04	17	14	13	12	10	6	6	A	7	5	19	32	35	35	37	32	32	30	25	19	19	23	17	18	20.1	36.7	
6-Sep-04	20	19	16	14	6	8	A	9	16	20	22	27	34	35	35	35	35	33	29	29	25	21	25	27	23.5	35.4	
7-Sep-04	27	27	26	23	27	A	19	17	17	19	18	20	25	26	28	28	31	31	22	5	9	7	4	2	19.8	31.3	
8-Sep-04	5	3	3	2	A	2	3	4	17	22	27	32	37	38	40	39	42	39	33	26	13	10	16	10	20.2	42.1	
9-Sep-04	13	20	25	A	7	9	8	6	6	6	7	10	12	15	16	C	C	A	13	14	15	14	12	11.6	24.7		
10-Sep-04	12	10	9	A	5	4	6	8	8	7	7	9	9	10	12	14	12	12	11	11	10	11	10	9	9.3	13.9	
11-Sep-04	9	8	A	6	7	8	6	14	23	22	23	24	25	27	28	30	35	31	27	34	29	29	32	29	21.9	34.7	
12-Sep-04	27	A	23	20	17	13	9	8	7	19	23	20	20	23	27	26	26	25	24	22	23	25	26	28	20.9	28.0	
13-Sep-04	A	30	26	24	23	17	8	7	15	26	31	32	36	39	39	39	37	30	25	22	15	16	A	A	25.0	39.1	
14-Sep-04	11	15	9	12	9	7	9	17	28	31	35	36	36	39	39	36	33	33	30	27	25	22	A	22	24.2	39.1	
15-Sep-04	20	19	17	17	15	8	8	12	16	19	33	35	35	34	36	38	37	33	33	27	27	A	14	18	23.9	38.0	
16-Sep-04	15	17	13	13	10	10	8	11	11	15	21	27	34	33	35	30	30	27	11	3	A	19	20	22	18.8	35.2	
17-Sep-04	23	22	19	17	16	10	4	8	19	34	35	41	44	42	43	40	34	22	14	A	14	15	33	41	25.6	43.7	
18-Sep-04	39	41	36	33	32	26	26	28	28	38	45	45	46	47	44	41	36	32	A	31	28	28	25	23	34.7	46.7	
19-Sep-04	15	19	13	18	21	19	20	18	18	17	16	18	16	14	13	10	7	A	21	26	28	31	30	25	18.9	30.5	
20-Sep-04	18	14	12	11	9	8	7	7	11	16	18	20	23	23	25	23	A	19	15	8	2	1	4	5	13.0	24.8	
21-Sep-04	7	11	7	8	1	1	2	6	16	20	22	26	30	33	35	A	34	31	26	25	28	29	24	21	19.2	35.1	
22-Sep-04	18	17	17	16	14	12	11	11	10	12	13	15	17	23	A	32	31	29	25	23	13	5	6	2	16.1	31.5	
23-Sep-04	2	3	2	1	1	1	2	2	4	10	21	27	32	A	38	42	41	34	29	8	2	2	5	9	13.8	41.6	
24-Sep-04	6	3	6	3	1	2	4	6	11	17	22	25	A	36	35	35	35	29	24	19	24	22	22	17.8	35.5		
25-Sep-04	22	21	18	16	13	12	16	15	18	24	26	A	37	38	41	44	44	41	35	37	28	11	2	2	24.2	44.0	
26-Sep-04	2	10	20	21	28	29	26	25	30	33	A	38	43	44	44	45	46	42	39	32	30	28	27	22	30.5	45.7	
27-Sep-04	26	25	27	24	20	10	3	5	21	A	33	37	37	38	38	38	39	36	33	34	35	31	30	34	28.4	38.6	
28-Sep-04	34	34	33	31	29	25	25	19	A	31	33	33	33	35	37	37	35	38	31	24	28	27	32	31	31.1	38.4	
29-Sep-04	29	27	23	18	19	16	9	A	20	24	30	33	36	38	39	40	39	34	31	27	30	29	26	25	27.9	39.8	
30-Sep-04	24	20	17	12	10	2	A	4	7	10	18	22	30	27	22	23	27	29	32	30	24	25	20	15	19.5	31.6	
																									N	0.0	
Hourly Avg	17.1	17.6	16.8	15.2	13.9	11.6	11.0	12.0	16.2	20.6	23.6	27.9	30.4	31.7	32.8	32.9	33.2	31.5	26.8	23.3	21.1	19.6	19.2	18.9			
Hourly Max	38.9	41.3	36.2	33.0	32.4	28.9	26.1	30.5	36.1	39.7	44.7	44.9	46.0	46.7	44.2	44.9	45.7	42.0	38.9	38.3	34.9	31.3	32.5	40.8			



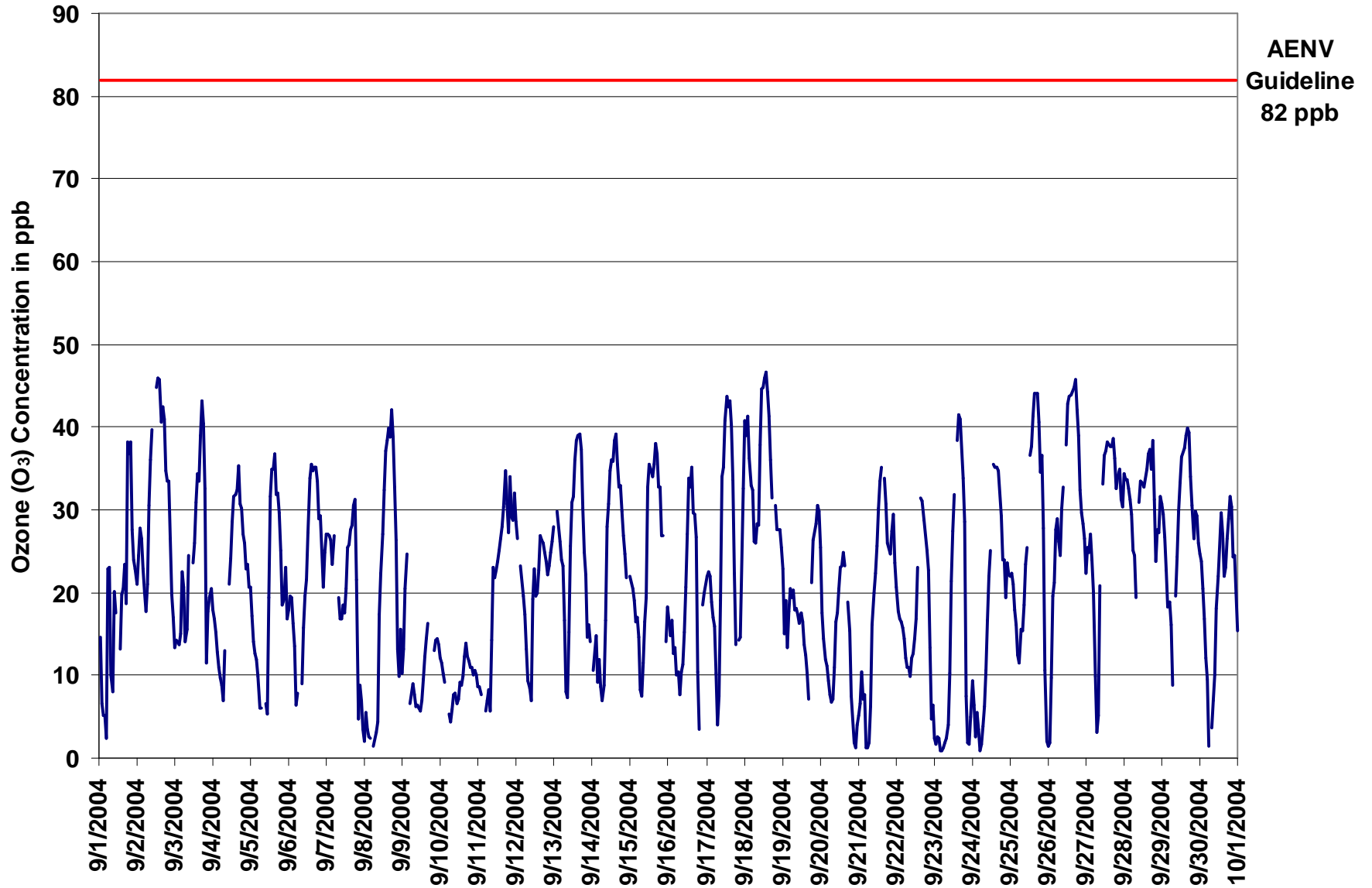


Figure 5. PAS - Crescent Heights Ozone 1-hr Average Monthly Trend



Station: Crescent Heights

### HOURLY MAXIMUM TABLE

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

Station Owner: PAS

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

#### Summary

Maximum 1-hr Value:	49.8	ppb	2-Sep	12:00 13:00
Maximum 24-hr Value:	38.9	ppb	18-Sep	

AIC Time:	32 hrs	Operational Time:	686 hrs					
Calibration Time:	2 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	48	44	35	26	17	8	3	25.9 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	Daily	
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	Average	Maximum	
1-Sep-04	19	17	16	11	8	41	41	14	12	26	25	A	19	29	28	32	33	42	41	41	38	34	34	29	27.3	41.7	
2-Sep-04	28	32	30	26	25	22	26	35	44	47	A	49	50	48	48	48	47	45	40	37	30	26	24	19	35.7	49.8	
3-Sep-04	19	17	20	17	24	24	19	22	33	A	29	33	36	38	39	44	46	47	43	32	23	26	25	20	29.4	46.7	
4-Sep-04	20	19	16	18	14	13	10	16	A	24	27	31	33	35	36	37	40	38	34	31	29	27	23	23	25.9	39.5	
5-Sep-04	19	19	14	15	14	11	9	A	10	9	27	35	37	38	40	35	35	33	31	27	24	27	22	23	24.1	39.5	
6-Sep-04	24	22	20	17	12	11	A	13	19	21	28	32	36	37	38	38	38	37	32	32	30	22	27	29	26.7	37.9	
7-Sep-04	30	30	30	25	29	A	24	20	19	22	22	23	34	31	33	33	33	34	32	21	14	13	7	8	24.5	33.9	
8-Sep-04	10	9	8	10	A	3	6	6	23	28	29	38	40	42	43	43	45	43	39	37	21	16	19	16	24.8	44.7	
9-Sep-04	17	25	27	A	12	13	10	8	9	8	7	10	13	14	16	19	C	C	A	15	17	17	16	15	14.5	26.7	
10-Sep-04	14	12	11	A	8	6	8	9	9	8	9	11	10	12	14	15	14	14	12	12	11	12	11	10	10.9	15.0	
11-Sep-04	10	9	A	7	8	10	9	22	24	24	27	26	27	28	29	38	40	35	41	40	37	35	36	34	25.9	40.8	
12-Sep-04	29	A	27	25	24	17	15	15	20	23	25	21	22	27	29	28	28	29	29	25	26	27	28	31	24.7	31.0	
13-Sep-04	A	32	29	26	25	22	15	14	22	29	33	35	39	41	41	42	40	36	30	26	20	20	18	A	28.8	41.8	
14-Sep-04	19	22	19	19	15	13	14	23	32	33	38	37	42	43	41	39	39	37	35	31	29	25	A	26	29.1	42.7	
15-Sep-04	25	24	18	18	17	14	9	16	20	32	38	38	38	37	40	41	43	39	36	33	32	A	19	21	28.1	43.1	
16-Sep-04	20	19	16	15	13	13	10	13	15	18	25	36	38	39	40	35	37	32	29	10	A	22	23	25	23.6	40.2	
17-Sep-04	26	25	21	19	20	16	10	13	29	37	38	43	47	46	46	44	40	30	30	A	23	24	39	44	30.9	46.5	
18-Sep-04	44	44	40	36	35	34	33	33	34	44	47	47	48	48	49	46	46	40	A	36	32	30	29	25	38.9	48.8	
19-Sep-04	22	23	19	22	24	22	24	21	20	21	18	19	19	19	14	12	10	A	29	30	32	33	34	28	22.3	33.6	
20-Sep-04	21	18	14	13	14	11	8	11	13	19	19	23	25	27	28	26	A	23	19	13	7	2	8	9	16.2	27.8	
21-Sep-04	13	14	16	13	3	3	4	13	20	23	26	29	33	36	38	A	37	36	29	28	33	32	27	23	23.0	37.6	
22-Sep-04	20	19	19	19	16	15	14	13	12	15	15	18	20	27	A	33	33	31	27	27	22	11	10	7	19.1	33.4	
23-Sep-04	5	8	4	2	2	3	3	3	6	16	24	31	36	A	42	44	44	42	36	31	4	2	13	13	18.0	44.0	
24-Sep-04	10	5	11	8	2	5	6	8	14	20	26	31	A	37	38	38	37	35	26	27	24	25	26	24	21.0	37.6	
25-Sep-04	24	23	21	18	14	14	18	18	22	26	29	A	41	41	43	47	47	46	39	41	35	33	4	2	28.1	47.1	
26-Sep-04	4	18	22	27	29	30	29	29	33	35	A	40	45	45	46	47	48	46	44	34	32	31	32	29	33.6	47.6	
27-Sep-04	29	26	28	27	23	18	7	10	30	A	37	38	40	40	40	40	40	39	35	36	36	34	34	35	31.3	40.1	
28-Sep-04	35	35	34	32	31	29	27	23	A	34	36	36	36	38	40	42	40	42	34	29	31	32	34	34	34.0	42.2	
29-Sep-04	31	28	27	22	23	20	17	A	23	28	33	36	38	40	41	42	41	38	34	29	31	32	28	27	30.7	41.6	
30-Sep-04	26	26	20	16	14	4	A	7	10	14	22	27	33	31	27	27	29	31	35	33	29	28	23	20	23.1	34.5	
																										N	0.0
Hourly Avg	21.1	21.3	20.6	18.6	17.1	15.7	15.1	16.0	20.7	24.4	27.1	31.2	33.6	34.9	36.0	36.3	37.4	36.3	32.8	29.1	25.9	24.0	23.2	22.3			
Hourly Max	43.5	43.5	39.7	35.6	34.7	41.0	41.0	34.6	43.6	46.7	46.8	48.5	49.8	47.9	48.8	48.0	47.6	46.7	43.5	41.0	38.2	35.4	38.9	43.6			

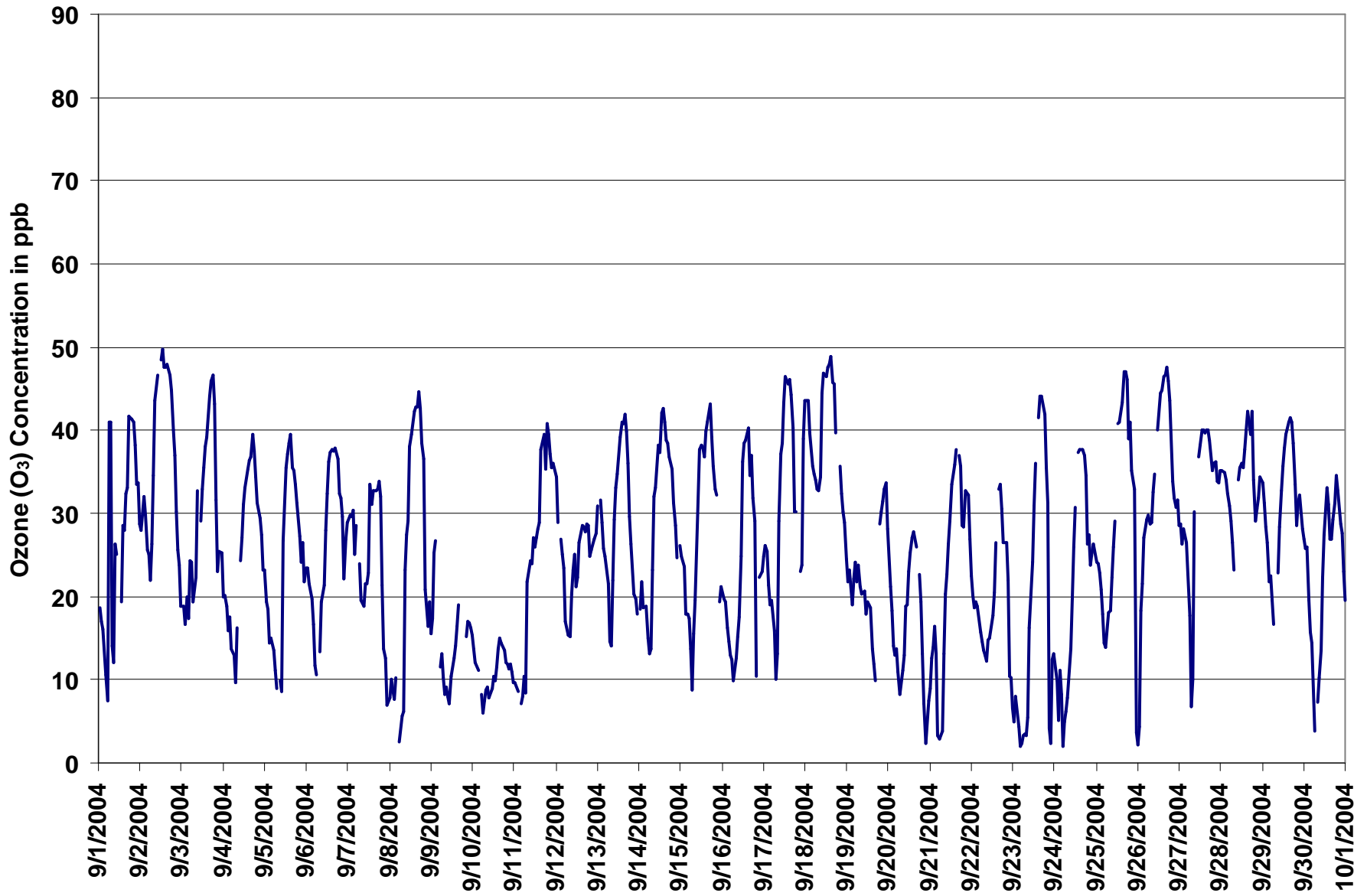


Figure 6. PAS - Crescent Heights Ozone 1-hr Maximum Value Monthly Trend



Station: Crescent Heights

### EIGHT HOUR RUNNING AVERAGE TABLE

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

Station Owner: PAS

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

#### Summary

Number of 8-hr Exceedances:	0						
Maximum 8-hr Average:	43.0	ppb	26-Sep	17:00	18:00		

Guideline Limit: Canada Wide Standard 8-hr 65 ppb

Percentile	99	95	75	50	25	5	1
	41.8	36.6	28.8	21.9	14.6	6.9	3.0

#### Status Flag Characters

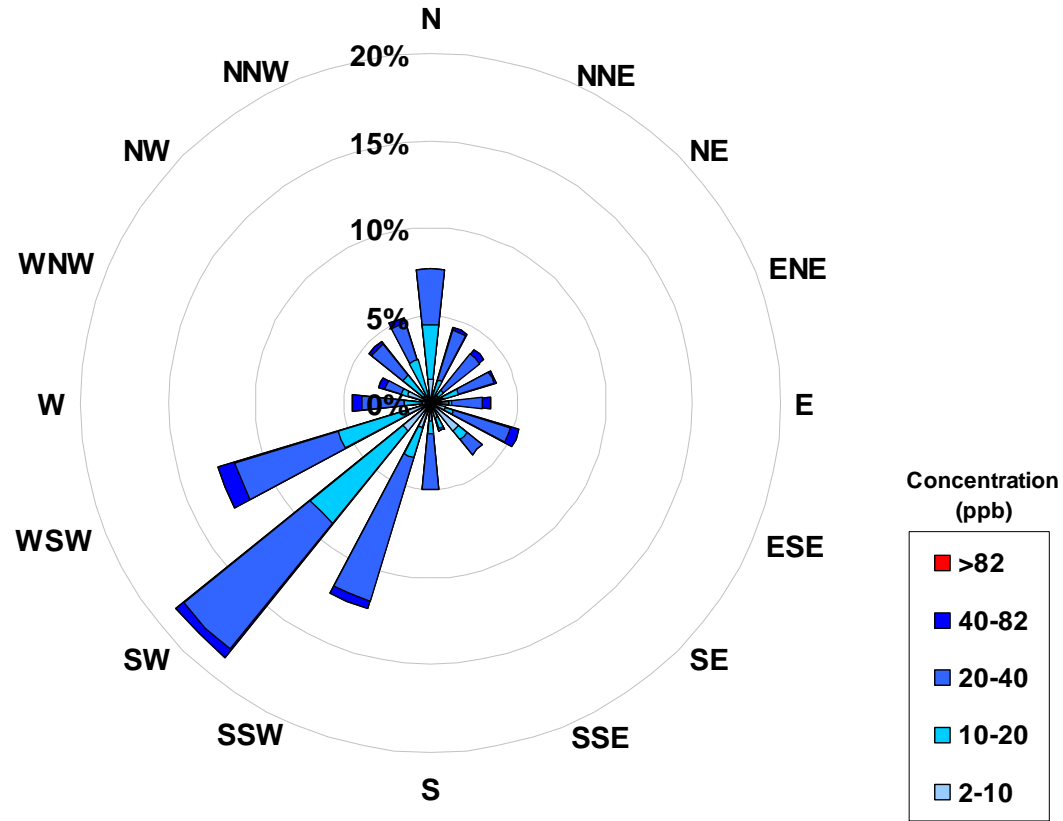
C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	X	Filter Exchange
N	No Data	M	Equipment Maintenance
D	Excessive Instrument Drift	P	Power Failure

#### Day Mountain Standard Time

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum	
1-Sep-04	15	20	17	14	12	12	12	11	10	12	14	15	16	16	16	18	19	22	24	26	28	28	29	28	18.1	28.7	
2-Sep-04	29	28	27	25	24	23	23	24	25	27	27	30	34	38	40	42	43	42	41	40	37	34	31	27	31.7	42.9	
3-Sep-04	24	22	19	17	16	16	16	16	18	18	19	21	22	24	27	30	33	34	35	33	32	30	28	25	24.0	35.0	
4-Sep-04	22	19	16	16	15	14	12	12	11	12	14	16	19	22	26	29	29	31	31	31	30	28	27	25	21.2	30.9	
5-Sep-04	24	22	20	18	16	14	12	11	10	8	9	12	16	20	24	25	28	31	32	30	29	27	25	23	20.2	32.1	
6-Sep-04	21	20	19	18	17	15	14	13	13	13	13	15	19	23	25	28	30	32	33	33	32	30	29	28	22.3	33.3	
7-Sep-04	27	26	26	25	25	26	25	24	22	21	20	19	19	20	21	23	24	26	26	24	22	20	17	14	22.7	27.0	
8-Sep-04	11	7	5	4	4	3	3	3	5	8	11	15	18	23	27	32	35	37	38	37	34	30	27	24	18.3	37.5	
9-Sep-04	20	18	17	15	14	14	13	13	12	9	7	7	7	8	8	10	10	N	N	N	N	N	N	N	N	20.0	
10-Sep-04	N	13	12	12	11	10	8	8	7	7	6	7	7	8	9	9	10	11	11	11	12	12	11	11	9.7	12.8	
11-Sep-04	10	10	9	9	8	8	7	8	10	12	14	16	18	20	23	25	27	28	28	30	30	30	31	31	18.4	30.9	
12-Sep-04	30	29	29	27	25	23	20	17	14	15	15	15	15	16	18	21	23	24	24	24	24	25	25	25	21.7	29.6	
13-Sep-04	25	25	26	26	26	25	22	19	19	18	19	20	21	24	28	32	35	35	35	33	31	28	25	23	25.8	35.3	
14-Sep-04	19	17	14	13	12	11	10	11	13	15	18	21	25	29	32	35	35	36	35	34	33	30	29	27	23.1	35.7	
15-Sep-04	25	23	22	20	19	17	16	14	14	14	16	18	21	24	28	31	33	35	35	34	33	33	30	27	24.2	35.1	
16-Sep-04	24	21	19	17	14	14	13	12	12	11	12	14	17	20	23	26	28	29	28	25	24	22	20	19	19.3	29.4	
17-Sep-04	18	17	18	20	20	19	17	15	14	16	18	21	24	28	33	37	39	38	35	34	30	26	24	25	24.4	39.1	
18-Sep-04	25	28	31	31	34	35	34	33	31	31	32	34	35	38	40	42	43	42	42	39	37	34	31	29	34.7	42.7	
19-Sep-04	26	24	23	21	20	19	19	18	18	18	18	18	18	17	16	15	14	13	14	15	17	19	22	24	18.7	25.8	
20-Sep-04	26	24	23	21	19	16	13	11	10	10	11	12	14	16	18	20	21	22	21	19	16	13	10	8	16.4	25.6	
21-Sep-04	8	7	6	6	5	5	5	5	7	8	10	12	15	19	24	26	29	30	31	31	30	30	28	27	16.7	30.7	
22-Sep-04	25	23	22	21	19	17	16	14	13	13	12	12	12	14	14	17	20	23	24	26	25	22	20	17	18.5	25.6	
23-Sep-04	13	10	7	4	3	2	2	2	2	3	5	9	13	14	19	25	30	34	35	32	28	24	20	16	14.7	34.7	
24-Sep-04	12	8	5	4	4	4	4	4	4	6	8	11	12	17	22	26	29	31	31	31	30	28	27	25	16.0	31.3	
25-Sep-04	23	22	22	21	20	18	17	17	16	16	17	17	21	25	28	32	36	39	40	39	38	35	30	25	25.6	39.8	
26-Sep-04	19	16	14	12	12	14	17	20	23	26	27	30	32	34	37	39	42	43	42	42	40	38	36	33	28.7	43.0	
27-Sep-04	31	29	27	26	25	23	20	17	17	16	17	18	21	25	30	34	37	37	37	37	36	35	34	34	27.6	37.0	
28-Sep-04	33	33	33	33	32	31	31	29	28	28	28	28	28	30	32	34	34	35	35	34	33	32	32	31	31.5	35.3	
29-Sep-04	30	29	27	27	26	24	21	20	19	18	19	22	24	27	31	32	35	36	36	35	35	34	32	30	27.9	36.2	
30-Sep-04	28	26	25	23	20	17	16	13	10	9	9	10	13	17	17	20	22	25	26	27	27	26	25	25	19.9	28.1	
																									N	0.0	
Hourly Avg	22.1	20.5	19.3	18.2	17.2	16.3	15.3	14.4	14.3	14.6	15.5	17.2	19.3	21.9	24.6	27.2	29.2	31.0	31.2	30.6	29.3	27.8	26.1	24.3			
Hourly Max	33.4	33.1	33.1	32.7	33.7	35.2	34.3	32.8	31.5	31.0	32.1	33.6	35.3	37.8	40.5	42.2	42.9	43.0	42.5	41.8	40.2	38.2	36.1	34.0			



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



Frequency Distribution of O <sub>3</sub> in ppb			
Range	Frequency (hrs)		
0 < 2	19		
2 to 10	111		
10 to 20	173		
20 to 40	349		
40 to 82	34		
> 82	0		
Total Non-Zero Values		686	

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: September 1, 2004 to October 1, 2004

**Summary**

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	2.8 ppm 30-Sep 4:00 5:00
Maximum 24-hr Average:	2.1 ppm 30-Sep

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

AIC Time:	32 hrs	Operational Time:	685 hrs
Calibration Time:	3 hrs	AMD Operational Uptime:	100.0%
Percentile	99	95	75
	50	25	5
	1	Average	
	2.3	2.2	2.0
	1.9	1.8	1.8
	1.7	1.93 ppb	

**Status Flag Characters**

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum		
	Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00			23:00	24:00
1-Sep-04	1:00	1.8	2.0	2.0	2.1	2.2	1.9	1.8	1.9	2.1	1.9	1.8	A	1.9	1.9	1.9	1.9	1.9	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.88	2.20
2-Sep-04	1:00	1.8	1.7	1.7	1.7	1.7	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	1.8	1.8	1.8	1.8	1.9	1.9	2.0	1.80	2.00
3-Sep-04	1:00	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.2	2.1	1.9	1.8	1.9	1.9	1.87	2.20
4-Sep-04	1:00	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.8	1.7	1.81	2.00	
5-Sep-04	1:00	1.8	1.8	1.9	1.9	1.9	2.0	2.0	A	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.0	1.92	2.10	
6-Sep-04	1:00	2.0	2.0	2.0	2.1	2.1	2.1	A	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.0	1.8	1.8	1.8	1.8	1.91	2.10	
7-Sep-04	1:00	1.8	1.9	1.8	1.8	1.8	A	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	2.0	1.9	1.9	2.0	1.87	2.00	
8-Sep-04	1:00	2.2	2.2	2.1	2.1	A	2.1	2.0	2.2	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.0	1.9	1.9	1.8	2.0	1.95	2.20	
9-Sep-04	1:00	2.0	1.9	1.8	A	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	C	C	C	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.95	2.00	
10-Sep-04	1:00	1.9	2.0	2.0	A	1.9	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.98	2.00	
11-Sep-04	1:00	2.0	2.1	A	2.1	2.1	2.1	2.2	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.87	2.20	
12-Sep-04	1:00	1.9	A	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.0	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.00	2.20	
13-Sep-04	1:00	A	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.4	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.0	2.0	A	1.97	2.40		
14-Sep-04	1:00	2.0	1.9	2.0	2.0	2.1	2.1	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.9	1.9	A	1.8	1.89	2.10	
15-Sep-04	1:00	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	2.0	1.91	2.00	
16-Sep-04	1:00	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.9	1.9	2.0	A	1.9	1.9	1.9	1.92	2.00	
17-Sep-04	1:00	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.0	A	2.0	1.9	1.8	1.8	1.88	2.10	
18-Sep-04	1:00	1.8	1.7	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.9	1.9	1.9	1.9	1.80	1.90	
19-Sep-04	1:00	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.94	2.10	
20-Sep-04	1:00	2.0	1.9	1.9	2.0	2.1	2.2	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.2	2.3	2.2	2.1	2.01	2.30
21-Sep-04	1:00	2.1	2.1	2.2	2.1	2.3	2.2	2.1	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.97	2.30	
22-Sep-04	1:00	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	1.88	2.10	
23-Sep-04	1:00	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	1.9	1.9	1.9	A	1.9	1.8	1.9	1.9	1.9	2.2	2.2	2.4	2.2	2.2	2.05	2.40	
24-Sep-04	1:00	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	A	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.97	2.20	
25-Sep-04	1:00	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.8	1.8	1.8	1.8	1.8	1.9	2.0	2.0	2.0	2.2	2.3	2.2	1.92	2.30	
26-Sep-04	1:00	2.4	2.3	2.3	2.2	2.2	2.1	2.2	2.1	2.1	2.1	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.05	2.40		
27-Sep-04	1:00	2.2	2.1	2.1	2.0	2.1	2.1	2.2	2.3	2.0	A	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.96	2.30	
28-Sep-04	1:00	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.9	A	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.0	2.0	1.87	2.00	
29-Sep-04	1:00	2.0	2.0	2.1	2.2	2.1	2.1	2.3	A	2.1	2.1	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	2.0	2.0	1.9	1.9	1.9	2.0	1.98	2.30	
30-Sep-04	1:00	1.9	1.9	2.0	2.5	2.8	2.4	A	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.3	2.14	2.80	
Hourly Avg		1.95	1.95	1.96	1.99	2.02	2.01	1.99	2.01	1.98	1.95	1.90	1.90	1.88	1.87	1.86	1.85	1.85	1.86	1.89	1.93	1.94	1.94	1.93	1.95	N	0.00	
Hourly Max		2.40	2.30	2.30	2.50	2.80	2.40	2.30	2.30	2.40	2.20	2.10	2.20	2.20	2.10	2.00	2.00	2.00	2.00	2.00	2.20	2.20	2.40	2.30	2.30			

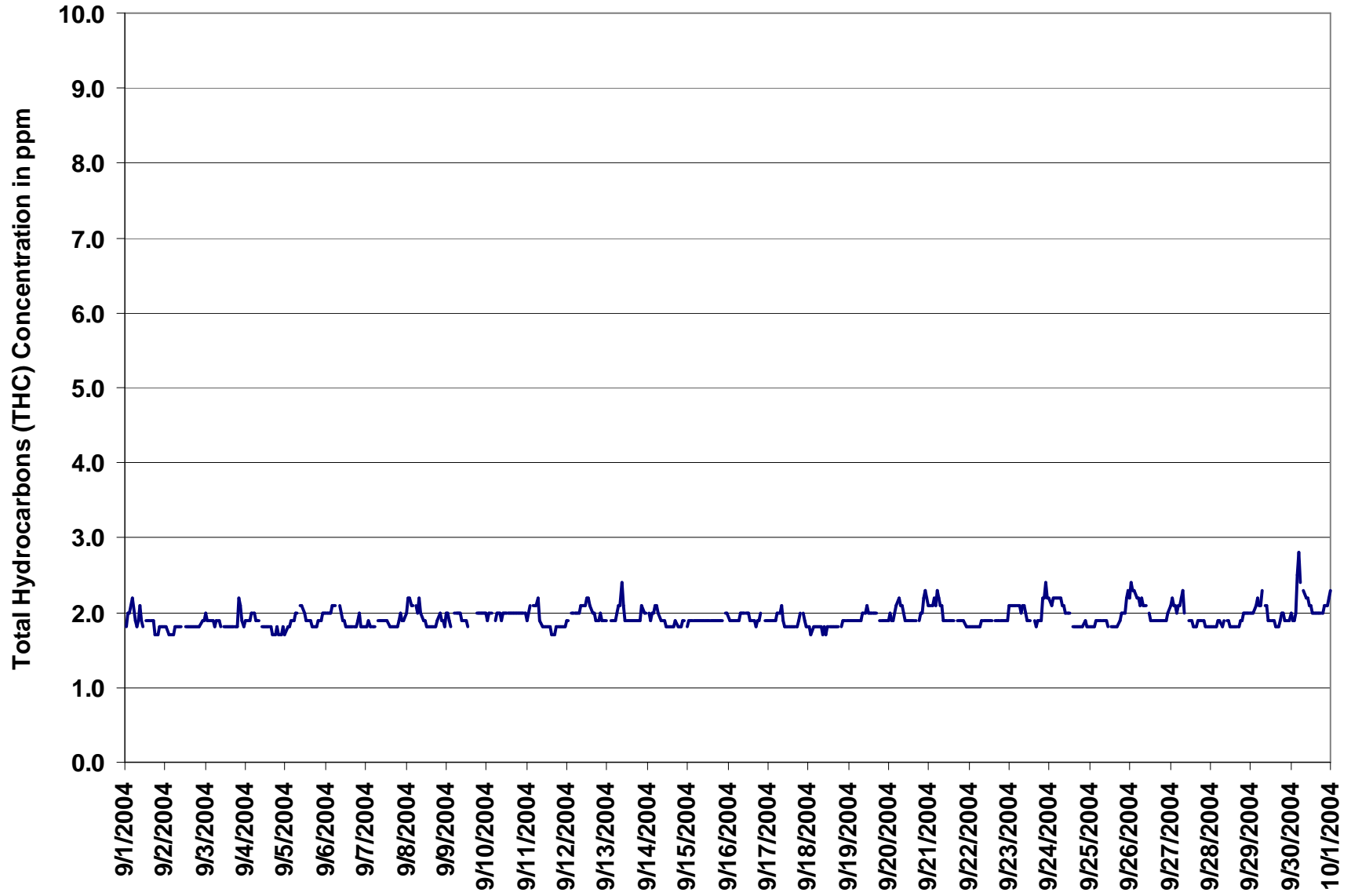


Figure 7. PAS - Crescent Heights Total Hydrocarbons 1-hr Average Monthly Trend



Station: Crescent Heights

### HOURLY MAXIMUM TABLE

Total HydroCarbons (THC)

Station Owner: PAS

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

Maximum 1-hr Value:	4.8	ppm	13-Sep	8:00 9:00
Maximum 24-hr Value:	2.3	ppm	30-Sep	

AIC Time:	32 hrs	Operational Time:	685 hrs					
Calibration Time:	3 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	2.6	2.4	2.1	2.0	1.9	1.8	1.8	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

Day	Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum	
1-Sep-04	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-Sep-04		1.9	2.1	2.2	2.2	2.4	2.2	2.0	2.0	2.3	2.0	1.9	A	1.9	1.9	1.9	2.2	2.1	1.9	1.8	1.8	1.8	1.9	1.8	1.9	2.00	2.40	
2-Sep-04		1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.0	2.1	1.85	2.10	
3-Sep-04		2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.8	1.9	2.4	2.4	2.1	1.9	1.9	1.93	2.40	
4-Sep-04		1.9	1.9	2.0	2.1	2.0	2.0	2.0	1.9	A	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.9	1.9	1.7	1.8	2.1	1.8	1.87	2.10		
5-Sep-04		1.8	1.9	1.9	2.0	2.0	2.1	2.1	A	2.1	2.2	2.1	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	2.0	2.1	2.1	2.0	1.97	2.20	
6-Sep-04		2.1	2.0	2.1	2.1	2.2	2.2	A	2.2	2.2	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.8	1.9	2.2	1.9	1.9	1.8	1.8	1.98	2.20	
7-Sep-04		1.9	1.9	1.9	1.9	1.9	A	2.1	1.9	1.9	2.0	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.9	2.1	2.1	2.0	2.0	2.1	1.94	2.10	
8-Sep-04		2.6	2.3	2.2	2.2	A	2.2	2.2	2.5	2.6	2.0	1.9	1.9	1.8	1.8	1.9	1.8	1.8	1.8	2.0	2.4	2.0	2.0	1.9	2.0	2.08	2.60	
9-Sep-04		2.0	1.9	1.9	A	2.2	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	C	C	C	A	2.0	2.1	2.1	2.1	2.0	2.0	2.0	1.99	2.20	
10-Sep-04		2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.0	2.0	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.02	2.20	
11-Sep-04		2.1	2.2	A	2.1	2.4	2.2	2.6	2.2	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.9	1.8	1.9	1.96	2.60	
12-Sep-04		1.9	A	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.1	2.0	2.0	2.0	2.1	2.4	2.5	2.0	2.0	1.9	2.2	2.11	2.50	
13-Sep-04		A	2.0	2.1	2.0	2.0	2.1	2.2	2.3	4.8	2.2	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.4	2.0	2.0	A	2.15	4.80	
14-Sep-04		2.0	2.0	2.0	2.2	2.2	2.3	2.3	2.0	2.4	2.0	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.00	2.40	
15-Sep-04		1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	A	2.1	2.0	1.93	2.10	
16-Sep-04		2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	2.0	2.2	A	1.9	1.9	1.9	1.97	2.20	
17-Sep-04		1.9	1.9	1.9	2.0	1.9	2.1	2.1	2.3	2.0	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	2.1	A	2.2	2.0	1.9	1.8	1.96	2.30
18-Sep-04		1.8	1.8	1.8	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	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.83	1.90	
19-Sep-04		1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.1	2.3	2.1	2.1	2.1	2.0	2.1	2.1	A	2.0	1.9	1.9	1.9	1.9	1.9	1.99	2.30	
20-Sep-04		2.1	2.0	2.0	2.0	2.3	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	2.0	2.0	2.0	A	2.0	2.0	2.2	2.7	2.4	2.4	2.2	2.12	2.70	
21-Sep-04		2.1	2.1	2.4	2.4	2.4	2.4	2.3	2.4	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.8	2.05	2.40	
22-Sep-04		1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.9	1.9	2.0	2.0	2.0	2.0	2.0	A	1.9	1.9	1.9	1.9	2.0	2.1	2.0	2.0	2.1	1.93	2.10	
23-Sep-04		2.3	2.3	2.2	2.2	2.3	2.1	2.2	2.2	2.2	2.1	1.9	1.9	1.9	A	1.9	1.9	1.9	2.0	2.1	2.3	2.4	2.5	2.3	2.2	2.14	2.50	
24-Sep-04		2.1	2.3	2.4	2.4	2.4	2.3	2.3	2.2	2.1	2.1	2.1	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.0	1.8	1.9	2.08	2.40	
25-Sep-04		1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.8	1.9	1.8	1.9	2.0	2.1	2.1	2.3	2.4	2.4	2.3	1.98	2.40	
26-Sep-04		2.5	2.4	2.4	2.2	2.2	2.2	2.3	2.3	2.2	2.1	A	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.11	2.50	
27-Sep-04		2.5	2.2	2.1	2.1	2.2	2.3	2.3	2.4	2.2	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	2.03	2.50	
28-Sep-04		1.9	1.8	1.8	1.9	1.9	1.9	1.9	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.2	2.1	2.1	1.94	2.20	
29-Sep-04		2.0	2.0	2.2	2.4	2.3	2.2	2.5	A	2.3	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.1	2.1	1.9	2.0	2.0	2.07	2.50	
30-Sep-04		1.9	1.9	2.2	3.1	3.1	3.0	A	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.0	2.0	2.1	2.2	2.2	2.1	2.3	2.4	2.27	3.10	
																										N	0.00	
Hourly Avg		2.02	2.00	2.04	2.09	2.11	2.11	2.11	2.10	2.18	2.00	1.97	1.94	1.92	1.91	1.90	1.91	1.90	1.90	1.90	1.98	2.05	2.05	2.02	2.01	2.00		
Hourly Max		2.60	2.40	2.40	3.10	3.10	3.00	2.60	2.50	4.80	2.20	2.30	2.20	2.30	2.20	2.10	2.20	2.10	2.10	2.40	2.50	2.70	2.50	2.40	2.40			



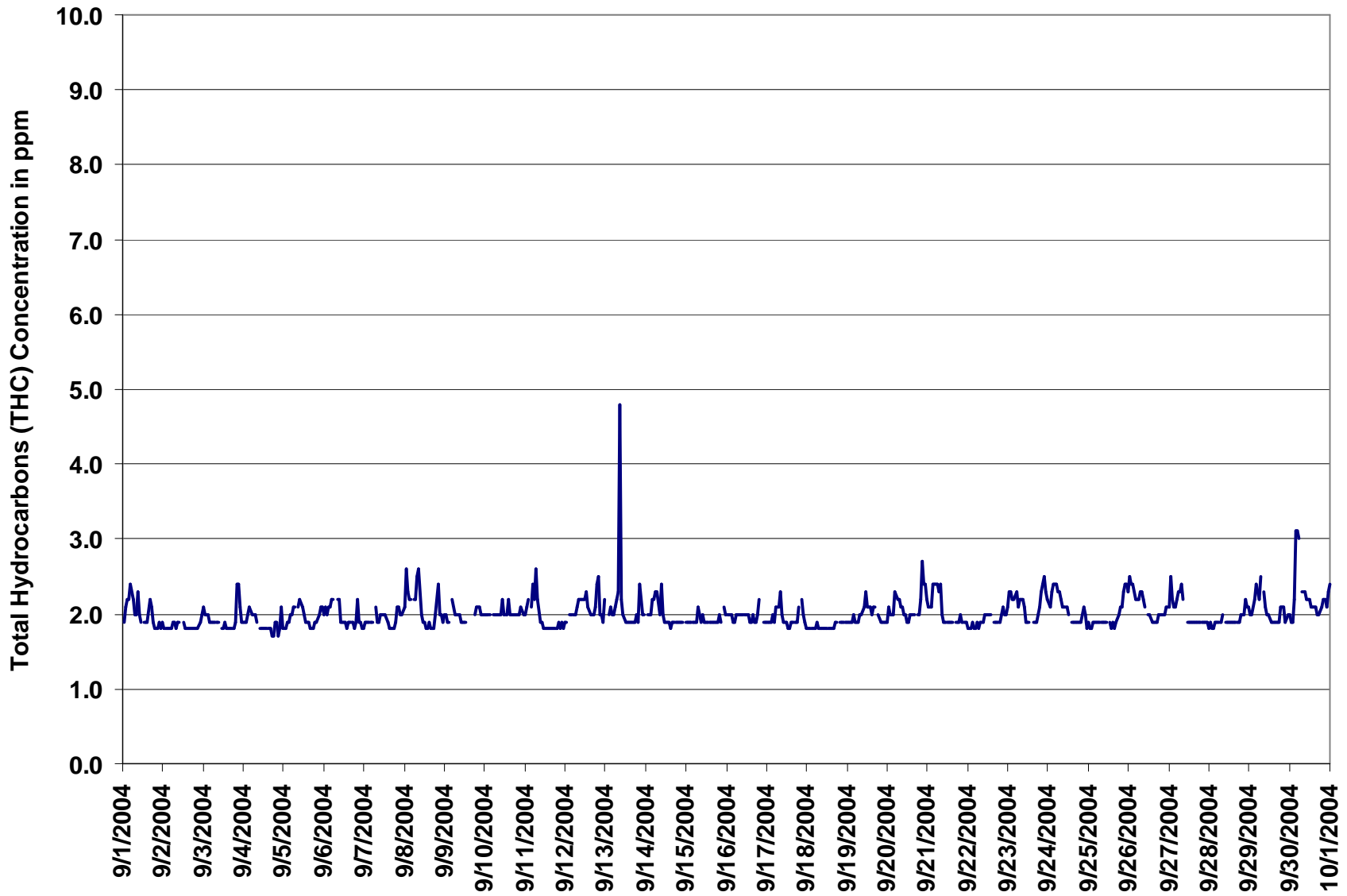


Figure 8. PAS - Crescent Heights Total Hydrocarbons 1-hr Maximum Value Monthly Trend



## 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: September 1, 2004 to October 1, 2004  
**Summary**

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	19.4 $\mu\text{g}/\text{m}^3$ 25-Sep 22:00 23:00
Maximum 24-hr Average:	5.5 $\mu\text{g}/\text{m}^3$ 28-Sep

Guideline Limit Canada Wide Standard 1-hr -  $\mu\text{g}/\text{m}^3$  24-hr 30  $\mu\text{g}/\text{m}^3$   
 (considered as an absolute value)

AIC Time:	0 hrs	Operational Time:	700 hrs
Calibration Time:	3 hrs	AMD Operational Uptime:	97.6%
Percentile	99	95	75
	50	25	5
	1	Average	Geomean
	13.2	7.0	3.8
	2.1	0.5	0.0
	0.0	0.0	0.0
	2.6 $\mu\text{g}/\text{m}^3$		2.3 $\mu\text{g}/\text{m}^3$

**Status Flag Characters**

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

Day	Mountain Standard Time																								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-Sep-04	3	5	5	1	6	0	3	7	7	9	0	6	13	6	4	5	0	D	5	0	2	2	3	2	4.0	13.2
2-Sep-04	0	D	1	0	D	4	D	D	0	0	2	2	4	0	0	0	0	2	1	2	8	4	3	1	1.7	8.1
3-Sep-04	0	1	1	1	0	2	6	4	0	0	0	0	0	0	2	1	2	1	3	9	6	4	3	3	2.0	9.3
4-Sep-04	4	4	4	3	3	2	2	1	1	1	0	D	0	0	1	0	3	2	3	5	4	4	4	5	2.3	4.8
5-Sep-04	3	4	4	3	2	3	5	4	7	8	0	D	0	0	0	1	0	3	3	5	5	6	6	8	3.4	7.9
6-Sep-04	9	6	6	5	8	4	10	7	6	6	5	4	2	2	4	3	1	3	5	4	4	4	3	2	4.7	10.1
7-Sep-04	3	1	2	2	0	2	3	4	6	7	4	4	1	2	4	3	2	3	1	4	5	1	0	2	2.7	6.5
8-Sep-04	3	0	1	1	0	1	6	6	4	4	2	0	0	D	0	1	1	4	2	6	6	5	4	5	2.6	6.3
9-Sep-04	5	0	1	7	9	7	7	3	3	4	C	C	C	3	3	2	D	0	2	2	1	1	0	2	3.1	9.4
10-Sep-04	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	0	0	0.2	1.2
11-Sep-04	0	0	0	0	0	0	1	2	2	5	2	2	1	4	3	D	2	1	D	2	1	3	3	4	1.8	4.5
12-Sep-04	3	3	2	4	2	4	3	6	6	0	3	1	3	4	2	5	3	6	2	0	0	D	0	2	2.8	6.3
13-Sep-04	3	0	0	0	0	1	0	3	1	1	0	0	0	0	0	1	2	4	2	3	1	1	1	0	0.9	3.9
14-Sep-04	2	0	2	1	1	1	3	4	0	1	0	0	0	0	0	1	3	2	3	2	1	2	2	0	1.3	3.7
15-Sep-04	3	2	2	0	0	0	0	3	4	4	0	0	D	0	1	0	1	4	3	2	2	5	3	4	1.8	5.3
16-Sep-04	3	0	0	0	0	2	2	3	4	5	4	0	2	0	2	3	10	1	5	3	0	0	0	0	1.9	9.5
17-Sep-04	1	0	0	0	0	1	3	5	4	0	1	0	0	1	1	1	3	5	6	4	2	3	3	6	2.1	6.2
18-Sep-04	5	5	2	2	1	0	0	0	1	0	0	0	0	1	6	2	0	0	1	2	3	1	2	1	1.4	5.5
19-Sep-04	2	0	0	0	D	0	0	1	2	3	2	5	6	1	4	4	3	3	2	1	0	0	0	1	1.7	5.7
20-Sep-04	0	2	1	0	2	2	2	2	2	1	0	0	0	1	0	2	1	2	3	3	7	5	3	3	1.6	6.5
21-Sep-04	3	2	2	0	3	2	4	7	0	0	2	0	0	0	1	1	0	3	2	2	0	3	4	3	1.8	6.9
22-Sep-04	3	2	2	3	2	3	3	4	5	4	3	3	2	2	1	1	2	1	2	2	3	3	2	2	2.5	4.9
23-Sep-04	3	3	1	1	2	2	4	7	9	8	2	0	1	D	1	0	2	3	5	13	12	14	8	5	4.6	13.5
24-Sep-04	6	6	5	6	4	5	5	6	7	5	3	5	1	1	0	1	1	3	4	3	3	2	2	1	3.5	7.0
25-Sep-04	2	1	2	3	3	4	4	5	6	4	4	1	0	0	0	2	3	9	10	5	9	16	19	15	5.2	19.4
26-Sep-04	15	8	6	5	4	5	4	4	3	3	2	2	1	1	1	2	2	4	0	1	3	3	4	3	3.5	15.2
27-Sep-04	4	4	3	3	2	3	6	5	0	1	0	1	1	2	3	2	1	1	1	0	2	2	2	4	2.2	5.5
28-Sep-04	4	4	2	2	4	3	4	6	9	4	4	6	8	5	3	6	7	14	8	8	6	6	3	4	5.5	14.3
29-Sep-04	3	3	3	2	1	1	4	6	4	5	4	2	1	1	1	2	3	5	4	6	10	5	1	1	3.2	9.5
30-Sep-04	D	0	0	4	3	4	3	4	3	5	2	4	D	0	1	7	2	1	0	0	0	0	0	0	2.0	6.5
Hourly Avg	3.2	2.2	2.0	2.0	2.2	2.2	3.4	4.0	3.5	3.1	1.7	1.8	1.7	1.3	1.6	2.0	2.1	3.1	2.9	3.3	3.5	3.6	2.8	3.0	N	0.0
Hourly Max	15.2	8.0	6.4	7.1	9.4	7.1	10.1	7.0	9.2	8.5	5.0	6.1	13.2	6.1	5.5	6.5	9.5	14.3	9.8	13.2	12.3	16.3	19.4	14.5		

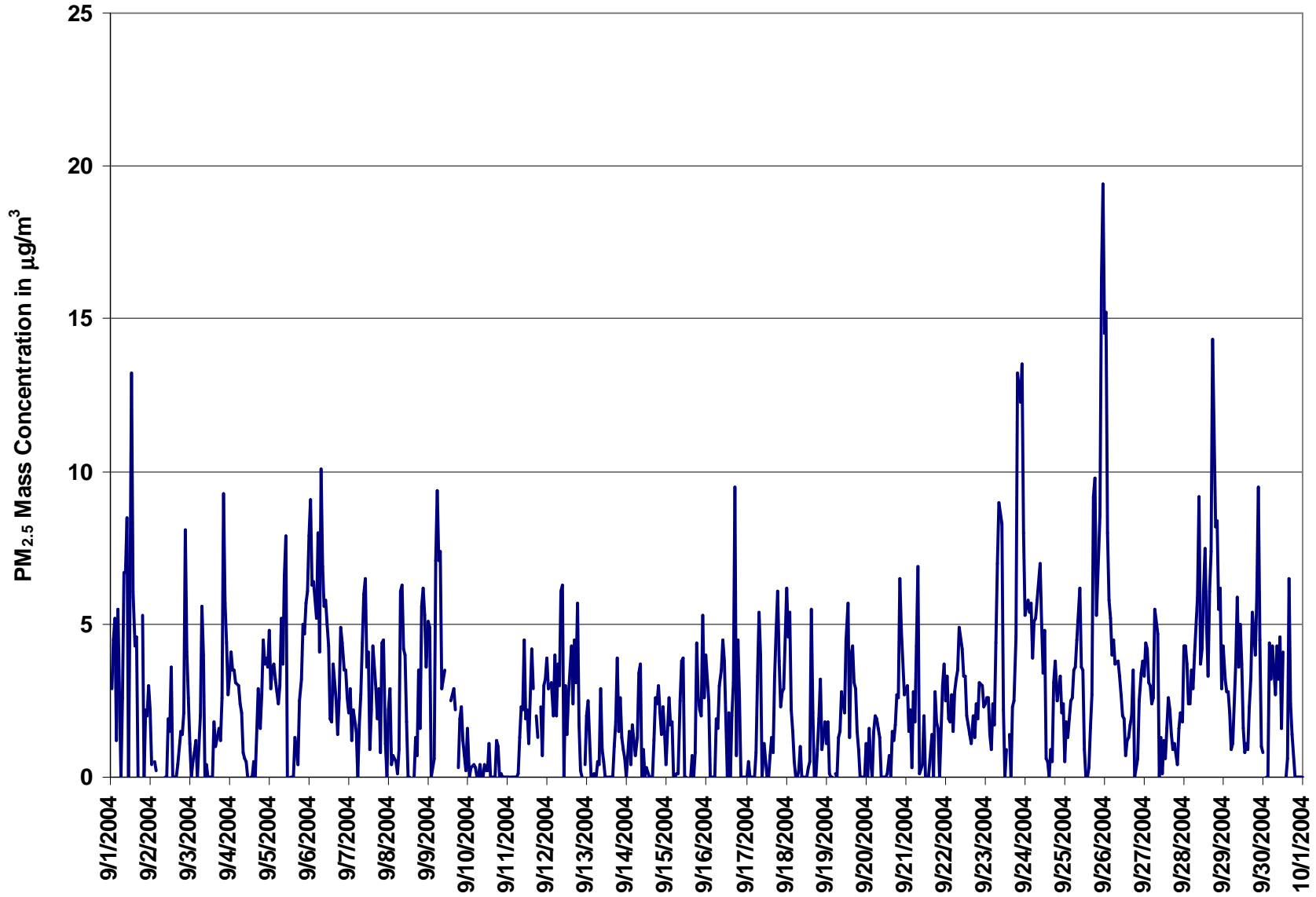


Figure 9. PAS - Crescent Heights Particulate Matter (less than 2.5 microns) 1-hr Average Monthly Trend



Station: Crescent Heights

**HOURLY MAXIMUM TABLE**

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

Station Owner: PAS

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

Maximum 1-hr Value:	33.7	µg/m <sup>3</sup>	1-Sep	16:00 17:00
Maximum 24-hr Value:	15.2	µg/m <sup>3</sup>	1-Sep	

AIC Time:	0 hrs							Operational Time:	717 hrs	
Calibration Time:	3 hrs							AMD Operational Uptime:	100.0%	
Percentile	99	95	75	50	25	5	1	Average	Geomean	
	26.6	15.0	8.5	6.2	4.3	1.8	0.4	7.0 µg/m <sup>3</sup>	6.7 µg/m <sup>3</sup>	

**Status Flag Characters**

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

**Day Mountain Standard Time**

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-Sep-04	5	10	14	6	12	27	10	13	17	17	10	23	34	29	17	32	34	7	18	4	7	5	5	7	15.2	33.7	
2-Sep-04	6	0	5	5	4	12	0	2	7	5	7	5	14	3	5	3	6	5	5	14	7	4	3	5.4	13.9		
3-Sep-04	2	2	4	4	2	4	12	11	2	13	5	3	7	1	5	8	7	7	5	15	13	14	6	6	6.6	14.8	
4-Sep-04	7	6	7	7	7	5	5	4	6	4	4	1	3	1	5	1	13	5	7	13	6	9	7	9	5.9	12.9	
5-Sep-04	5	6	5	5	6	8	10	5	14	16	9	4	5	4	5	8	7	6	6	6	7	7	8	9	7.2	16.0	
6-Sep-04	11	8	7	7	12	9	16	9	10	9	8	8	5	6	13	11	11	13	7	7	5	5	5	5	8.6	15.8	
7-Sep-04	6	4	6	4	2	14	8	7	9	11	13	10	5	14	11	10	9	9	5	8	9	3	4	5	7.7	14.1	
8-Sep-04	5	2	4	4	2	4	11	15	10	10	5	5	5	1	4	5	6	9	6	15	12	10	7	8	6.8	15.4	
9-Sep-04	8	8	5	18	24	10	11	7	6	5	C	C	C	6	6	14	15	3	4	6	4	3	3	7	8.2	24.4	
10-Sep-04	3	4	3	2	2	3	2	1	3	3	3	3	3	3	3	4	3	7	0	2	3	0	0	1	2.5	7.1	
11-Sep-04	1	2	3	1	1	2	4	6	8	10	8	8	6	9	6	6	7	9	7	6	4	6	7	9	5.6	10.0	
12-Sep-04	6	15	4	7	5	6	5	13	12	5	7	7	5	10	8	8	8	24	8	8	3	0	5	5	7.7	23.9	
13-Sep-04	8	2	3	3	3	3	2	7	6	5	3	4	4	7	7	11	8	7	6	5	5	3	3	2	4.8	10.8	
14-Sep-04	7	2	6	4	3	5	9	6	2	5	6	5	5	4	4	7	9	8	11	6	4	4	4	2	5.3	10.5	
15-Sep-04	7	6	3	1	1	2	2	5	6	8	6	1	0	2	4	3	5	10	5	5	6	11	9	6	4.9	11.2	
16-Sep-04	6	1	2	2	2	8	3	6	6	8	8	8	8	8	6	8	29	10	8	9	6	1	4	5	6.7	28.5	
17-Sep-04	6	3	3	2	1	3	8	9	9	7	8	3	3	5	7	6	8	9	14	10	10	8	7	14	6.8	14.3	
18-Sep-04	8	9	7	6	4	2	2	4	6	8	7	5	7	15	14	10	6	4	8	8	9	5	5	4	6.7	14.6	
19-Sep-04	4	3	3	6	3	4	6	5	6	7	6	10	11	4	9	7	7	7	5	5	7	3	3	5	5.6	11.3	
20-Sep-04	3	5	4	3	4	4	3	4	5	4	3	3	8	4	4	9	5	6	6	5	15	7	7	5	5.2	14.6	
21-Sep-04	6	4	5	3	4	5	18	20	4	2	6	5	4	3	6	14	3	5	4	5	3	6	6	5	6.1	19.7	
22-Sep-04	6	4	5	6	4	4	7	6	7	10	7	10	11	10	5	6	7	5	5	6	6	5	5	7	6.3	10.7	
23-Sep-04	5	6	5	5	4	4	11	12	15	12	9	8	7	5	8	7	10	7	16	18	20	22	13	8	9.9	22.1	
24-Sep-04	9	10	9	13	7	8	9	10	9	9	8	11	8	8	6	5	7	7	7	5	7	4	5	3	7.6	12.8	
25-Sep-04	4	5	4	5	4	10	8	7	9	7	8	13	7	6	9	9	9	15	17	9	12	29	25	18	10.3	29.1	
26-Sep-04	19	12	8	9	6	7	5	7	7	6	15	6	6	7	6	6	6	8	4	3	6	5	7	7	7.3	18.7	
27-Sep-04	7	7	5	5	5	5	8	9	6	14	9	5	5	5	6	6	4	3	4	2	4	7	5	7	6.0	13.9	
28-Sep-04	6	6	5	5	5	6	6	9	12	11	8	10	13	10	9	12	12	18	15	12	8	10	7	13	9.5	18.1	
29-Sep-04	5	8	5	5	4	4	9	9	8	8	6	6	5	5	5	8	7	9	8	10	30	12	5	3	7.7	30.3	
30-Sep-04	0	3	3	18	9	12	6	7	8	9	7	9	8	5	10	15	6	5	2	2	1	1	2	4	6.3	17.8	
																									N	0.0	
Hourly Avg	6.1	5.4	5.0	5.6	5.0	6.6	7.1	7.7	7.8	8.2	7.2	6.8	7.3	6.6	7.1	8.5	9.1	8.2	7.4	7.3	8.3	7.0	6.1	6.4			
Hourly Max	18.7	15.3	14.2	17.8	24.4	26.8	18.2	19.7	16.9	17.4	15.2	23.3	33.6	28.7	17.2	31.6	33.7	23.9	18.1	17.6	30.3	29.1	25.3	18.1			

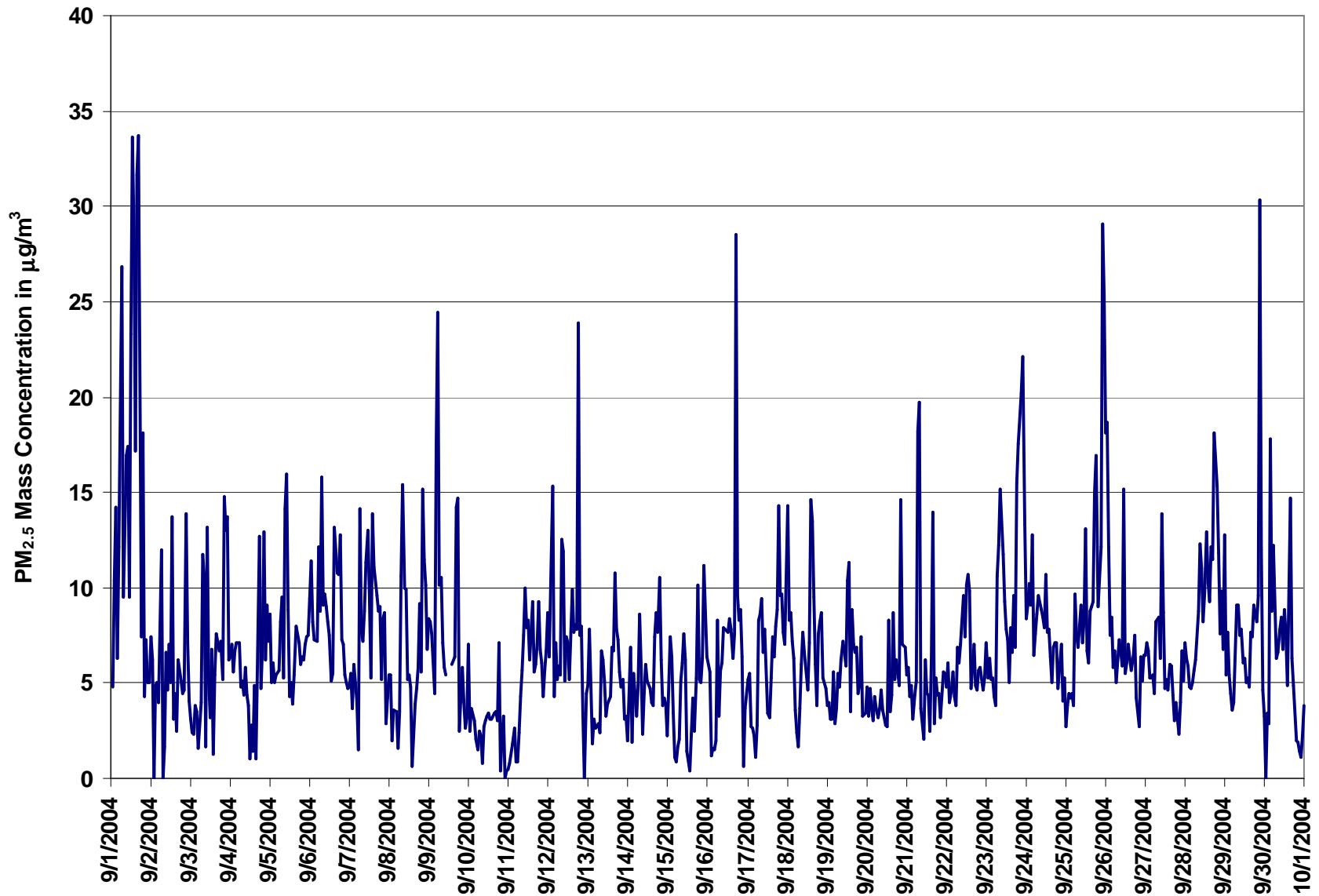
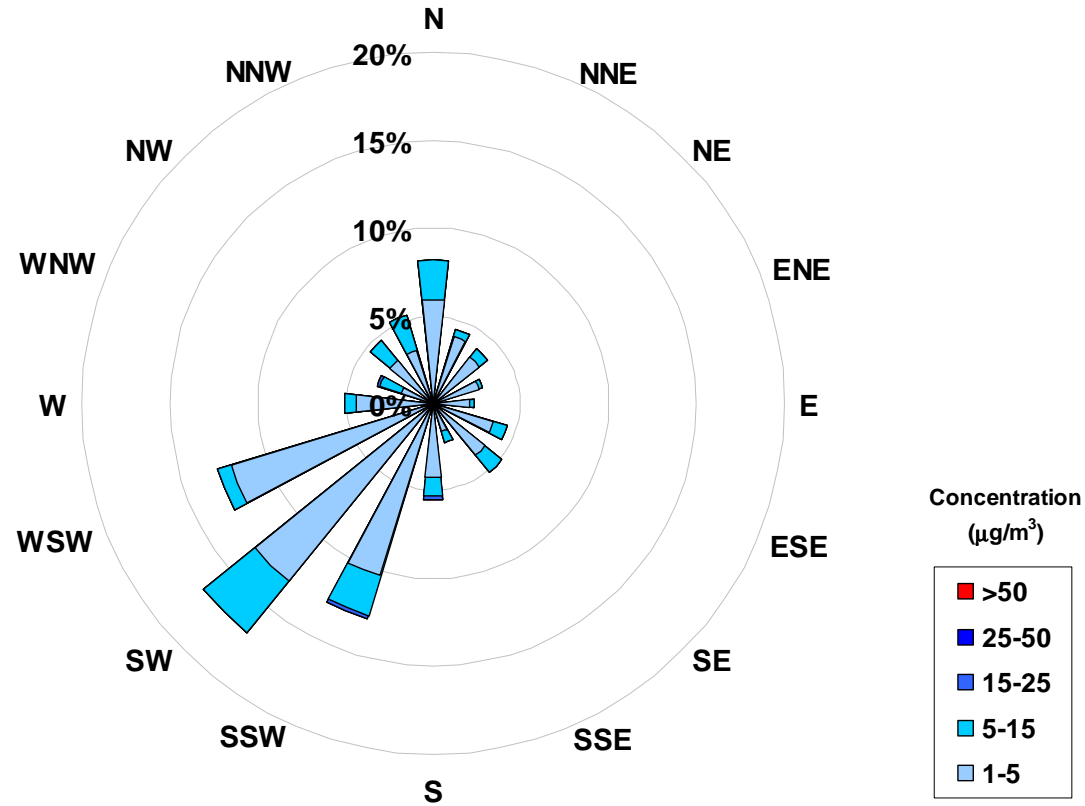


Figure 10. PAS - Crescent Heights Particulate Matter (less than 2.5 microns) 1-hr Maximum Value Monthly Trend



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



Frequency Distribution of PM <sub>2.5</sub> in µg/m <sup>3</sup>			
Range			Frequency (hrs)
0	<	1	220
1	to	5	382
5	to	15	95
15	to	25	3
25	to	50	0
	>	50	0
Total Non-Zero Values			700

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: September 1, 2004 to October 1, 2004

#### Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	94.0 % 30-Sep 7:00 8:00
Maximum 24-hr Average:	81.4 % 10-Sep

AIC Time:	0 hrs	Operational Time:	720 hrs					
Calibration Time:	0 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	92.7	88.3	75.8	62.6	48.2	33.0	27.7	61.9 ppb

#### Status Flag Characters

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

#### Day Mountain Standard Time

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

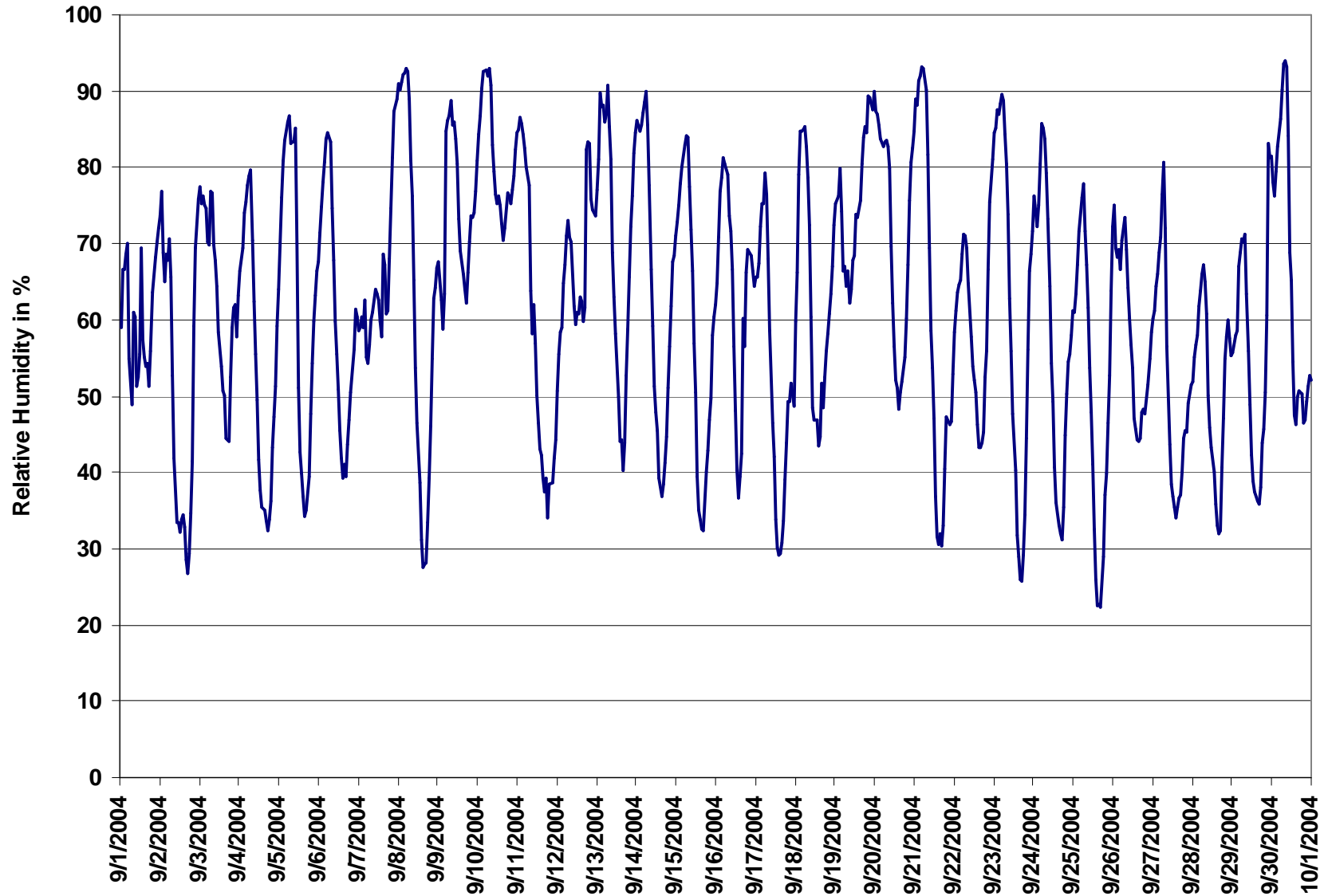


Figure 11. PAS - Crescent Heights Relative Humidity 1-hr Average Monthly Trend





Station: Crescent Heights

### HOURLY AVERAGE TABLE

Ambient Temperature (AT - °C)

Station Owner: PAS

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

#### Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	27.8 °C 25-Sep 14:00 15:00
Maximum 24-hr Average:	19.5 °C 1-Sep

AIC Time:	0 hrs	Operational Time:	720 hrs					
Calibration Time:	0 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	24.8	22.4	17.3	13.0	9.3	5.6	2.6	13.4 ppb

#### Status Flag Characters

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

#### Day Mountain Standard Time

Hour Start	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-Sep-04	18	16	16	15	15	19	21	19	20	24	24	22	20	24	24	24	24	21	20	18	17	17	16	16	19.5	24.2
2-Sep-04	16	16	17	16	15	14	13	14	16	18	18	19	20	20	20	20	20	19	17	15	13	11	10	9	16.0	20.0
3-Sep-04	8	7	8	8	9	9	9	11	12	12	13	15	16	16	16	18	18	18	16	15	15	15	15	14	13.0	18.3
4-Sep-04	13	13	12	12	12	11	11	13	15	17	19	20	22	22	23	23	23	23	21	19	19	17	15	14	16.9	23.0
5-Sep-04	12	10	9	9	8	8	9	10	11	12	15	18	19	19	19	20	19	18	16	14	12	11	10	10	13.2	19.6
6-Sep-04	9	8	8	7	6	5	6	8	11	13	15	16	18	19	20	19	19	17	17	16	14	13	13	14	12.9	19.9
7-Sep-04	14	13	13	13	13	13	13	13	14	14	15	15	16	16	15	16	17	17	15	13	12	10	9	8	13.5	17.2
8-Sep-04	8	7	7	7	6	5	7	10	12	16	19	21	23	24	25	25	25	23	21	19	16	14	14	13	15.3	24.8
9-Sep-04	14	14	14	13	10	9	9	8	8	8	8	9	10	11	12	12	13	11	10	9	9	9	8	8	10.3	14.3
10-Sep-04	7	7	7	7	7	7	7	7	9	9	10	10	10	10	10	10	10	10	10	9	9	8	7	6	8.3	10.2
11-Sep-04	6	6	6	7	7	8	9	13	15	15	18	19	21	23	23	23	22	23	22	20	19	18	18	16	15.7	23.1
12-Sep-04	15	14	14	12	12	11	11	12	13	13	15	15	15	15	16	17	17	13	12	11	11	10	10	11	13.1	17.1
13-Sep-04	10	9	9	9	9	9	8	9	10	13	14	15	17	18	17	18	18	16	14	13	11	10	8	8	12.1	18.3
14-Sep-04	7	8	7	7	7	7	8	11	14	15	17	18	19	20	21	20	19	18	17	15	13	12	12	11	13.4	20.7
15-Sep-04	11	10	10	9	7	6	6	8	10	13	16	17	18	19	20	20	19	17	17	15	14	13	12	12	13.2	19.9
16-Sep-04	11	9	7	6	6	6	7	9	10	12	15	18	20	20	19	18	16	17	14	13	12	11	11	11	12.3	20.1
17-Sep-04	11	10	9	8	8	7	7	9	13	16	18	20	21	22	22	21	21	20	18	17	16	15	16	16	14.9	21.7
18-Sep-04	15	14	13	13	12	12	12	13	15	18	21	21	21	22	22	20	19	17	15	14	14	13	12	11	15.8	22.1
19-Sep-04	10	10	9	9	9	9	9	9	10	10	10	10	10	11	10	10	10	10	9	8	8	7	7	7	9.1	10.6
20-Sep-04	7	7	7	6	6	6	6	6	6	7	9	10	11	12	12	11	11	11	9	8	7	6	6	6	7.9	11.9
21-Sep-04	5	5	4	3	3	2	2	5	7	9	12	13	15	16	17	18	18	17	15	13	13	13	13	12	10.3	17.9
22-Sep-04	11	11	11	11	10	10	9	10	12	15	17	17	17	19	20	20	19	18	16	14	12	10	8	7	13.5	19.7
23-Sep-04	7	6	6	5	5	4	5	7	10	14	17	18	20	21	22	22	22	20	18	15	13	11	10	9	12.8	22.3
24-Sep-04	8	9	8	7	6	6	6	7	10	13	16	19	21	23	23	24	24	22	19	17	16	15	15	14	14.4	23.7
25-Sep-04	14	13	12	11	10	9	11	12	15	18	20	23	25	27	28	28	27	24	21	18	16	14	13	11	17.4	27.8
26-Sep-04	10	10	10	10	10	9	9	10	12	13	15	16	18	18	19	19	19	18	16	15	13	13	12	12	13.5	18.8
27-Sep-04	12	12	12	12	12	10	9	11	14	17	19	20	21	22	22	22	22	20	18	17	17	16	15	16	16.2	22.2
28-Sep-04	16	15	15	14	13	13	12	13	16	19	20	22	23	24	25	25	25	22	19	17	16	15	14	14	17.8	25.2
29-Sep-04	13	12	11	9	7	7	6	6	9	11	14	16	17	19	19	19	19	17	16	15	13	10	10	9	12.6	19.3
30-Sep-04	8	7	6	5	4	3	3	4	4	7	10	12	13	13	12	11	9	7	5	3	1	0	-2	-2	5.8	13.1
																									N	0.0
Hourly Avg	10.8	10.3	9.9	9.2	8.7	8.4	8.6	9.8	11.7	13.7	15.5	16.8	17.9	18.8	19.0	19.1	18.7	17.5	15.7	14.2	12.9	11.8	11.2	10.6		
Hourly Max	17.6	16.4	17.0	16.2	15.2	19.0	21.1	18.7	19.7	23.8	23.5	22.5	24.8	26.9	27.8	27.5	27.0	24.4	22.0	19.9	19.4	18.3	17.7	16.3		

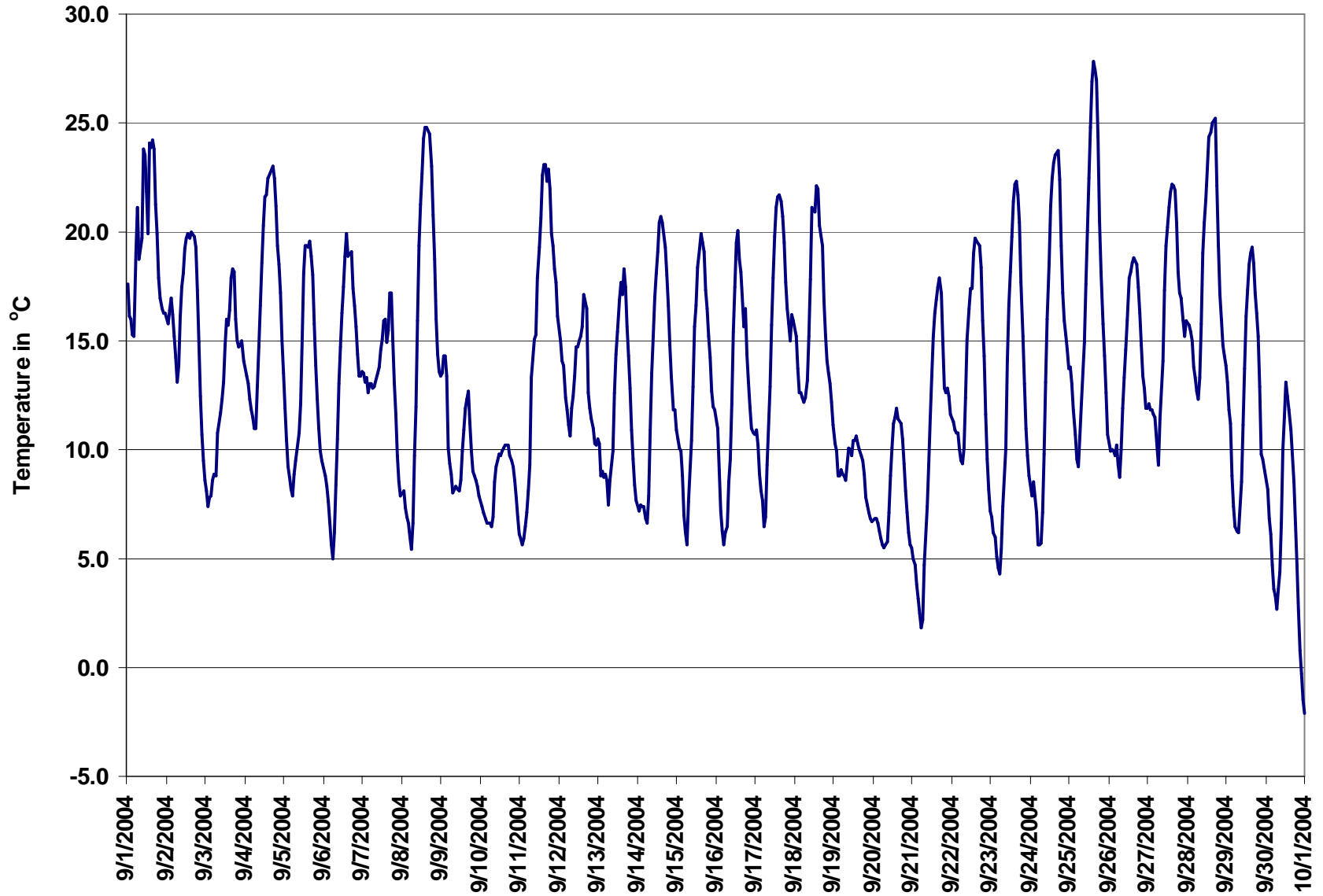


Figure 12. PAS - Crescent Heights Temperature 1-hr Average Monthly Trend



Station: Crescent Heights

### HOURLY AVERAGE TABLE

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

Station Owner: PAS

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

#### Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	756.5 W/m <sup>2</sup> 2-Sep 11:00 12:00
Maximum 24-hr Average:	237.7 W/m <sup>2</sup> 2-Sep

AIC Time:	0 hrs	Operational Time:	720 hrs					
Calibration Time:	0 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	711.5	627.6	282.6	18.3	0.3	0.2	0.1	160.5 ppb

#### Status Flag Characters

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

#### Day Mountain Standard Time

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum	
1-Sep-04	0	0	0	0	0	1	25	114	200	398	227	173	127	623	192	190	77	61	31	1	0	0	0	0	102	623	
2-Sep-04	0	0	0	0	0	2	68	246	420	566	675	757	690	628	446	526	384	234	61	1	0	0	0	0	238	757	
3-Sep-04	0	0	0	0	0	5	125	214	342	362	312	422	515	209	244	472	356	209	18	1	0	0	0	0	159	515	
4-Sep-04	0	0	0	0	0	2	76	239	383	540	638	692	692	433	513	387	290	193	53	1	0	0	0	0	214	692	
5-Sep-04	0	0	0	0	0	3	76	72	119	124	520	653	710	472	419	508	365	197	30	1	0	0	0	0	178	710	
6-Sep-04	0	0	0	0	0	2	74	227	391	536	648	717	740	751	712	424	272	84	22	0	0	0	0	0	233	751	
7-Sep-04	0	0	0	0	0	1	13	81	75	98	248	253	301	146	211	217	332	196	33	0	0	0	0	0	92	332	
8-Sep-04	0	0	0	0	0	3	71	224	345	533	610	679	720	693	615	470	312	119	19	0	0	0	0	0	226	720	
9-Sep-04	0	0	0	0	0	1	10	41	122	100	128	195	271	295	375	292	253	77	24	0	0	0	0	0	91	375	
10-Sep-04	0	0	0	0	0	1	40	91	199	140	178	156	103	136	122	118	94	58	11	0	0	0	0	0	60	199	
11-Sep-04	0	0	0	0	0	1	29	130	150	162	292	171	280	365	232	113	118	174	28	0	0	0	0	0	94	365	
12-Sep-04	0	0	0	0	0	1	22	106	129	123	271	116	159	123	170	258	132	50	31	0	0	0	0	0	71	271	
13-Sep-04	0	0	0	0	0	1	19	173	269	499	595	604	708	601	383	491	317	93	14	0	0	0	0	0	199	708	
14-Sep-04	0	0	0	0	0	1	61	233	343	497	627	726	629	655	577	388	167	115	14	0	0	0	0	0	210	726	
15-Sep-04	0	0	0	0	0	1	29	199	356	500	616	633	715	651	578	342	222	89	16	0	0	0	0	0	206	715	
16-Sep-04	0	0	0	0	0	1	48	207	341	491	611	657	705	493	184	93	120	100	6	0	0	0	0	0	169	705	
17-Sep-04	0	0	0	0	0	1	45	195	343	488	608	681	682	556	437	257	136	49	5	0	0	0	0	0	187	682	
18-Sep-04	0	0	0	0	0	0	10	84	232	266	686	513	448	593	354	228	166	17	2	0	0	0	0	0	150	686	
19-Sep-04	0	0	0	0	0	0	18	110	256	187	143	146	88	87	65	51	32	11	1	0	0	0	0	0	50	256	
20-Sep-04	0	0	0	0	0	0	7	49	133	301	465	554	539	502	393	252	174	52	8	0	0	0	0	0	143	554	
21-Sep-04	0	0	0	0	0	0	41	194	337	481	590	663	669	632	548	415	268	104	4	0	0	0	0	0	206	669	
22-Sep-04	0	0	0	0	0	0	30	170	334	460	520	466	388	617	524	397	191	102	4	0	0	0	0	0	175	617	
23-Sep-04	0	0	0	0	0	0	41	126	246	454	566	636	635	607	521	397	223	82	4	0	0	0	0	0	189	636	
24-Sep-04	0	0	0	0	0	0	25	158	310	449	557	628	633	599	510	392	248	81	3	0	0	0	0	0	191	633	
25-Sep-04	0	0	0	0	0	0	29	154	312	453	558	625	628	595	500	384	239	75	3	0	0	0	0	0	190	628	
26-Sep-04	0	0	0	0	0	0	21	146	295	433	539	609	573	352	330	299	170	30	2	0	0	0	0	0	158	609	
27-Sep-04	0	0	0	0	0	0	19	147	281	406	527	612	620	587	486	375	231	65	2	0	0	0	0	0	182	620	
28-Sep-04	0	0	0	0	0	0	19	146	297	436	546	614	612	581	450	365	213	52	2	0	0	0	0	0	181	614	
29-Sep-04	0	0	0	0	0	0	14	113	287	423	530	597	587	568	432	357	168	24	1	0	0	0	0	0	171	597	
30-Sep-04	0	0	0	0	0	0	14	58	102	311	455	491	435	236	116	122	63	13	1	0	0	0	0	0	101	491	
																										N	0
Hourly Avg	0	0	0	0	0	1	37	148	265	374	483	515	520	479	388	319	211	93	15	0	0	0	0	0			
Hourly Max	0	0	0	0	0	5	125	246	420	566	686	757	740	751	712	526	384	234	61	1	0	0	0	0			

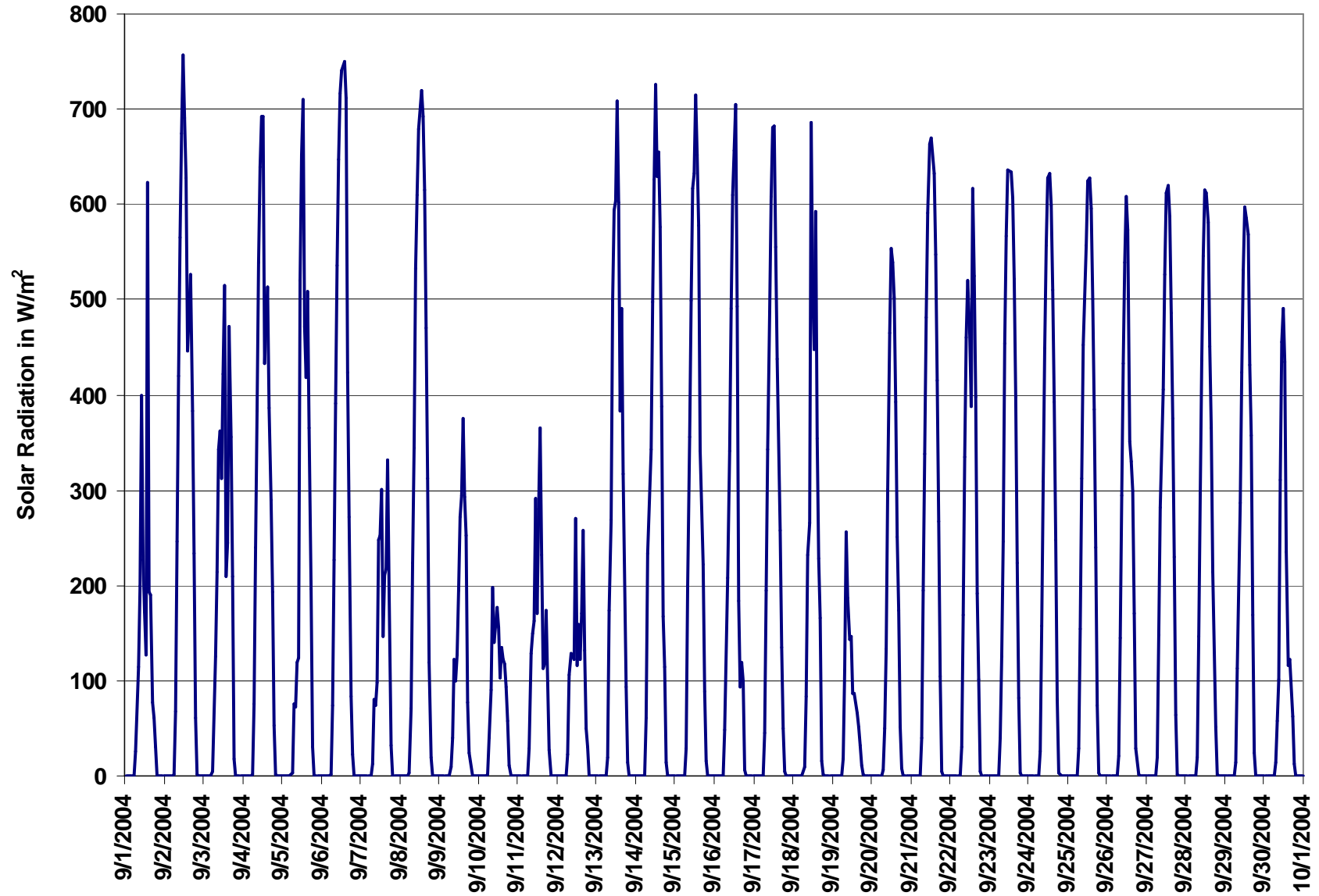


Figure 13. PAS - Crescent Heights Solar Radiation 1-hr Average Monthly Trend



Station: Crescent Heights

### HOURLY AVERAGE TABLE

Wind Speed (WSv - km/hr)

Station Owner: PAS

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

#### Summary

Maximum 1-hr Average:	31.0	km/hr	30-Sep	15:00 16:00
Maximum 24-hr Average:	14.2	km/hr	2-Sep	

Calm Time:	0 hrs	0% calms	Operational Time:	720 hrs					
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	AverageS	AverageV
	26.1	19.7	12.9	9.5	6.5	3.7	2.9	10.2 km/hr	3.8 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		
1-Sep-04	7	5	4	5	5	13	11	5	6	7	11	8	8	5	6	5	8	24	16	11	5	8	7	9	3.7	24.1
2-Sep-04	11	18	20	17	15	12	13	14	17	25	24	22	18	15	16	18	20	17	15	11	7	6	6	7	14.2	24.9
3-Sep-04	9	6	4	5	14	14	14	13	15	16	17	15	14	11	10	12	10	10	6	5	6	7	7	8	9.6	16.5
4-Sep-04	5	4	5	6	8	10	10	11	16	18	18	20	19	20	20	17	14	13	8	13	10	8	14	13	11.6	20.0
5-Sep-04	9	9	5	4	5	5	5	7	4	4	6	5	10	14	17	22	20	20	14	9	7	6	6	7	5.9	21.5
6-Sep-04	7	4	6	5	5	4	3	5	7	6	7	6	8	7	6	8	6	5	7	8	9	8	10	12	0.8	12.0
7-Sep-04	8	7	9	8	8	7	6	6	7	10	11	14	14	8	12	7	10	7	3	2	5	7	3	3	3.3	13.7
8-Sep-04	5	3	4	3	5	6	4	3	7	6	6	8	10	11	12	11	7	8	8	7	5	6	6	7	1.9	11.7
9-Sep-04	7	10	12	13	13	9	12	10	11	12	12	11	10	11	12	11	12	14	12	12	10	8	9	7	8.3	13.8
10-Sep-04	8	9	8	6	6	7	9	11	8	4	5	5	8	10	10	10	11	14	13	13	13	15	15	16	7.3	16.4
11-Sep-04	15	12	9	8	10	5	4	9	19	16	19	22	27	30	30	27	26	24	23	19	18	15	10	6	11.3	30.3
12-Sep-04	7	8	9	10	8	5	4	4	6	9	7	3	5	4	6	3	5	13	10	13	13	13	12	10	3.1	13.0
13-Sep-04	13	15	12	8	9	7	8	6	7	5	7	6	7	6	6	8	11	10	7	12	10	6	5	5	2.6	14.5
14-Sep-04	4	3	4	4	3	4	7	9	17	19	16	18	16	17	19	10	12	15	16	12	12	7	7	9	10.4	19.1
15-Sep-04	9	11	12	14	13	12	13	13	10	10	10	11	9	10	10	12	12	11	8	7	5	4	8	9	10.0	14.1
16-Sep-04	10	10	10	11	10	11	10	10	10	12	9	9	7	9	9	6	10	6	5	3	6	8	13	9	8.0	13.4
17-Sep-04	10	10	8	9	10	6	5	5	10	15	12	17	17	16	13	12	9	5	4	6	5	5	9	13	9.0	17.4
18-Sep-04	13	13	9	10	8	8	10	13	12	8	10	12	12	10	11	11	13	10	7	8	11	7	6	7	4.1	13.3
19-Sep-04	11	11	10	13	11	12	9	11	7	7	8	9	9	14	13	10	9	7	8	6	7	8	3	3	2.4	13.8
20-Sep-04	8	11	9	11	12	10	10	10	11	11	9	9	10	9	7	8	6	6	5	3	3	4	3	4	6.4	11.7
21-Sep-04	5	5	4	3	4	5	4	12	19	18	21	20	21	20	20	20	19	13	11	14	16	19	19	20	13.0	20.6
22-Sep-04	21	17	18	17	13	12	13	15	10	8	8	8	8	9	12	15	13	12	10	10	7	6	6	4	2.8	21.2
23-Sep-04	4	6	5	5	5	5	4	3	4	7	15	17	17	12	8	7	7	5	6	3	4	7	7	7	4.3	17.4
24-Sep-04	5	5	5	5	4	7	10	9	11	14	12	11	14	17	19	21	19	12	15	15	15	11	10	11.3	21.3	
25-Sep-04	17	18	18	18	15	11	14	13	12	15	13	14	14	14	14	10	8	9	10	7	4	4	5	3	9.6	18.3
26-Sep-04	3	4	10	13	21	8	4	5	7	8	10	12	8	7	7	7	6	7	14	13	8	8	4	4	7.1	20.6
27-Sep-04	7	7	9	12	10	4	3	3	5	4	11	15	16	15	16	16	16	14	12	14	14	14	17	25	8.9	25.2
28-Sep-04	25	21	20	18	16	17	13	12	10	21	24	20	17	11	7	5	4	8	10	13	12	6	7	6	7.4	24.9
29-Sep-04	10	8	8	8	11	8	6	8	9	9	11	12	14	15	14	14	12	9	10	12	18	12	9	7	7.8	17.6
30-Sep-04	10	3	4	8	3	10	9	7	10	9	9	11	17	19	20	31	30	27	19	13	6	6	6	6	8.5	31.0
																									N	0.0
1-hr Vector	4.1	3.8	3.9	3.8	3.0	3.7	3.8	4.4	5.2	6.0	6.2	6.0	5.8	5.3	6.0	4.0	4.4	3.3	2.5	1.2	1.3	2.0	2.7	4.0		
Hourly Max	24.9	20.8	20.3	17.9	20.6	17.4	14.1	15.1	19.0	24.9	23.8	21.9	27.3	30.3	29.8	31.0	29.5	27.4	22.8	18.9	17.8	19.0	18.5	25.2		



Station: Crescent Heights

### HOURLY AVERAGE TABLE

Wind Direction (WD - Degrees)

Station Owner: PAS

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


Calm Time:	0 hrs	0% calms	Operational Time:	720 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%				
Percentile	99	95	75	50	25	5	1	Average
	357.4	345.7	246.7	217.0	127.0	18.4	3.2	234 deg

#### Status Flag Characters

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

#### Day Mountain Standard Time

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average
1-Sep-04	230	146	160	135	190	189	320	63	166	226	266	340	300	131	186	32	188	232	284	357	172	203	309	231	236
2-Sep-04	196	215	212	219	230	228	233	231	233	247	249	249	271	264	251	245	248	253	257	260	296	261	228	213	241
3-Sep-04	220	235	173	175	214	224	228	257	247	245	243	255	252	266	278	255	256	244	239	221	239	264	281	292	245
4-Sep-04	291	250	231	264	245	235	220	230	211	223	223	217	216	213	209	212	247	257	281	263	273	248	231	236	232
5-Sep-04	239	235	238	246	219	242	226	230	204	131	127	78	314	317	318	331	324	333	337	329	330	314	305	324	307
6-Sep-04	347	0	311	324	310	302	203	211	216	224	222	271	311	347	331	50	91	76	63	83	114	118	119	119	55
7-Sep-04	120	110	131	120	102	65	47	59	40	18	3	18	43	126	195	188	207	228	226	83	120	124	146	164	96
8-Sep-04	179	171	145	158	128	134	133	113	65	76	154	206	221	234	259	277	327	18	52	95	113	105	135	212	163
9-Sep-04	211	228	234	257	300	288	296	299	285	278	285	287	290	308	306	329	349	4	359	352	353	346	344	347	306
10-Sep-04	340	343	340	340	22	55	78	99	120	148	41	60	6	7	22	30	56	72	68	74	82	90	99	97	59
11-Sep-04	96	92	68	54	74	64	354	250	201	193	200	202	208	211	207	224	235	231	253	239	248	253	261	218	216
12-Sep-04	238	239	243	236	231	214	224	248	336	344	4	6	311	326	3	94	132	338	8	16	19	26	54	57	345
13-Sep-04	76	73	54	37	38	25	357	359	355	11	102	93	117	138	121	180	215	201	192	206	209	203	125	136	104
14-Sep-04	148	108	202	237	264	235	225	201	203	210	211	208	208	215	223	196	212	215	220	224	225	229	241	238	215
15-Sep-04	247	245	240	230	227	234	233	230	222	209	241	245	246	250	243	246	246	247	261	254	268	222	233	229	238
16-Sep-04	241	243	238	225	228	233	242	242	236	218	218	221	227	238	237	267	264	137	148	138	202	240	231	229	230
17-Sep-04	236	226	225	207	222	193	211	174	210	222	209	211	220	223	227	216	225	201	147	158	159	170	183	195	210
18-Sep-04	190	201	192	208	194	123	112	110	127	116	116	116	108	80	267	294	284	275	246	250	229	241	239	250	187
19-Sep-04	243	238	239	228	241	233	243	237	272	341	353	11	2	3	21	13	13	54	86	104	70	70	32	301	316
20-Sep-04	348	355	352	352	351	350	349	357	2	2	341	321	317	312	298	317	308	307	315	317	106	127	212	207	338
21-Sep-04	236	247	236	159	115	138	161	214	226	222	224	220	225	219	220	214	211	200	189	196	199	199	210	212	212
22-Sep-04	216	225	232	235	238	237	245	238	239	216	268	254	357	26	24	55	50	53	67	73	119	134	122	145	228
23-Sep-04	158	121	169	148	128	129	126	124	134	175	226	219	215	241	242	301	308	327	313	260	216	207	196	200	211
24-Sep-04	200	224	229	185	190	219	239	228	221	214	213	202	215	208	213	211	208	198	193	198	205	218	240	229	212
25-Sep-04	233	240	237	238	234	221	232	233	232	225	217	217	222	223	242	271	291	330	337	346	335	204	189	174	239
26-Sep-04	300	304	354	9	16	33	2	342	15	7	18	29	62	97	52	85	41	26	23	32	65	44	24	38	27
27-Sep-04	39	45	93	106	114	137	48	132	97	125	174	173	176	175	182	177	178	181	190	187	190	210	214	194	172
28-Sep-04	191	191	199	199	198	197	198	225	228	213	217	228	227	248	280	349	134	4	360	360	9	18	38	10	218
29-Sep-04	20	47	57	349	357	21	8	345	2	42	81	107	97	110	105	101	91	39	15	357	5	29	68	85	50
30-Sep-04	106	67	360	341	256	227	240	239	230	259	304	307	324	339	335	349	357	359	4	8	360	355	318	291	335
Hourly Avg	211	218	223	230	232	217	241	233	225	227	229	227	239	238	245	259	257	278	306	295	226	207	215	208	N



Station: Crescent Heights

### STANDARD DEVIATION TABLE

Wind Direction (WD - Degrees)

Station Owner: PAS

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


Determined by the Yamartino 15-min interval calculation

Calm Time:	0 hrs	0% calms	Operational Time:	720 hrs			
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%			
Percentile	99	95	75	50	25	5	1
	55.2	40.9	18.9	11.7	8.0	5.1	4.0

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

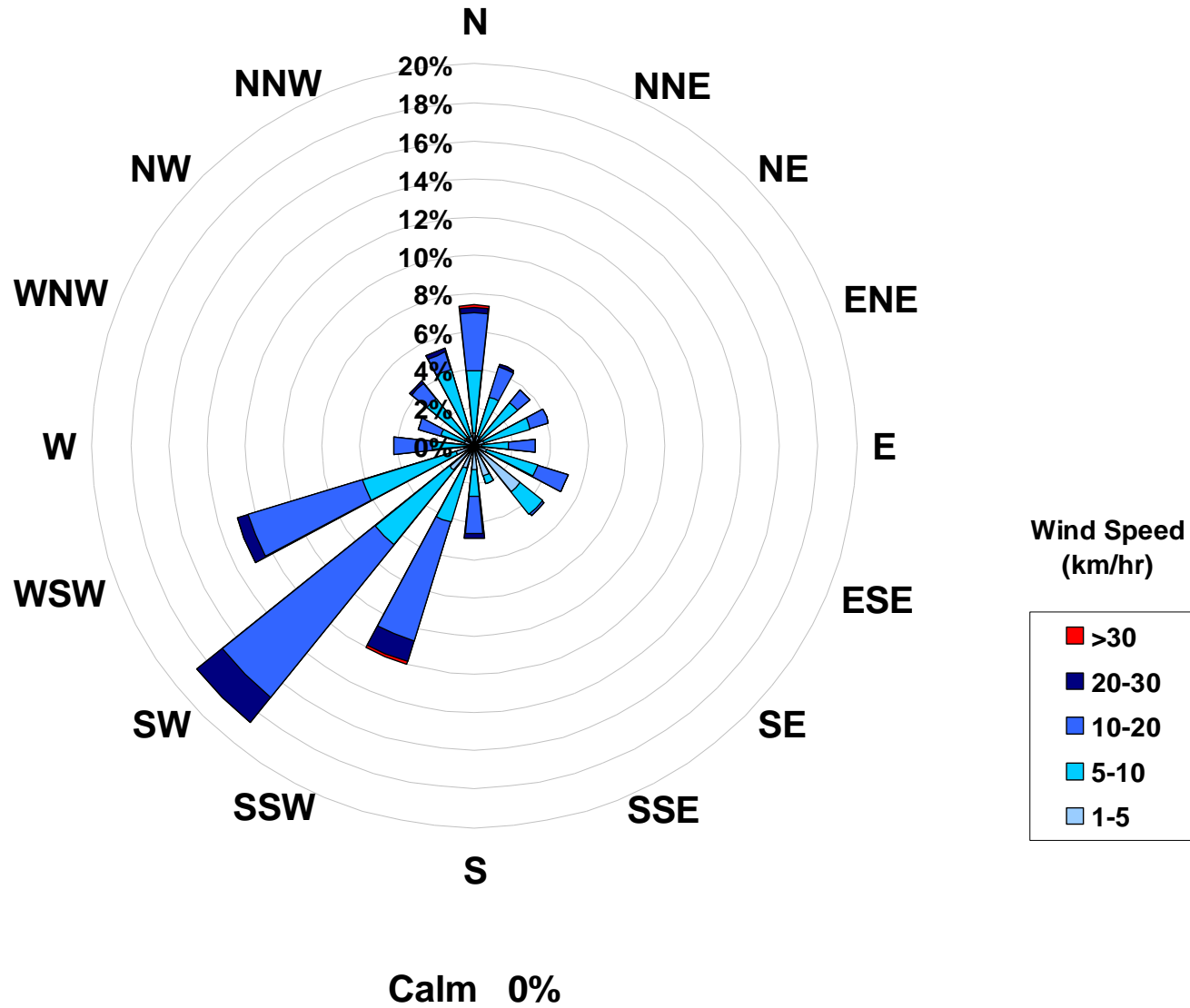
#### Day Mountain Standard Time

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	0:00	Daily Maximum
1-Sep-04	15	27	57	22	23	32	33	54	29	16	15	58	62	65	14	34	14	17	18	13	20	15	19	11	65.0	
2-Sep-04	9	6	5	7	7	8	8	6	10	9	8	10	13	13	11	12	10	8	8	7	17	19	9	31	31.2	
3-Sep-04	11	8	22	37	6	12	10	8	10	9	11	11	16	14	16	15	15	13	8	7	10	11	13	13	36.7	
4-Sep-04	15	19	18	10	7	7	5	12	8	11	9	10	12	12	9	9	11	9	14	11	10	16	4	8	18.5	
5-Sep-04	10	6	18	24	23	29	21	8	36	35	25	40	35	17	11	9	9	8	6	6	10	9	13	19	39.7	
6-Sep-04	16	23	7	10	27	29	14	14	20	41	42	39	41	52	59	41	42	44	6	6	7	8	6	6	59.1	
7-Sep-04	11	8	12	8	9	14	8	8	7	19	11	8	9	25	10	17	18	18	28	39	12	6	26	16	38.6	
8-Sep-04	13	15	16	14	15	10	16	20	20	20	35	29	16	26	22	18	16	11	6	14	22	33	19	11	34.6	
9-Sep-04	14	9	9	10	12	25	12	15	16	12	13	12	19	17	20	19	18	7	6	6	9	8	8	11	24.5	
10-Sep-04	9	5	8	13	14	7	9	9	18	44	48	25	19	13	11	16	13	10	9	7	8	5	7	6	47.5	
11-Sep-04	6	6	6	9	9	17	26	20	7	8	9	7	6	6	6	6	6	5	6	8	6	8	9	21	25.6	
12-Sep-04	12	9	9	7	7	42	35	53	29	9	21	41	23	28	16	33	28	18	6	6	5	6	14	25	53.1	
13-Sep-04	15	9	9	9	7	9	5	12	15	36	27	44	52	52	37	27	17	10	9	5	6	11	10	15	51.9	
14-Sep-04	20	28	23	19	25	24	10	9	9	10	14	11	14	15	11	15	10	8	7	8	6	12	23	7	27.6	
15-Sep-04	9	9	6	5	5	6	7	8	12	18	20	22	29	33	35	14	12	8	8	11	13	16	11	6	34.8	
16-Sep-04	6	9	7	8	7	9	8	11	12	12	22	23	46	30	13	14	35	15	20	41	14	21	6	9	46.0	
17-Sep-04	14	19	8	9	8	16	20	25	20	9	13	11	14	18	13	14	8	12	16	11	20	19	9	8	24.6	
18-Sep-04	9	11	12	9	18	13	8	9	7	15	14	11	14	33	23	14	9	10	19	13	7	23	17	16	32.7	
19-Sep-04	17	6	7	7	12	11	8	8	19	16	13	18	30	7	8	6	8	7	10	13	13	14	63	28	62.6	
20-Sep-04	22	6	6	6	5	6	5	7	9	13	20	20	22	29	31	20	24	18	9	28	41	12	50	22	49.6	
21-Sep-04	10	11	40	27	11	12	20	5	6	11	12	10	11	10	10	12	11	8	6	4	5	5	5	5	40.3	
22-Sep-04	4	6	6	9	11	9	10	6	14	19	28	29	22	31	21	11	11	5	4	14	12	7	16	29	30.7	
23-Sep-04	17	16	23	10	12	8	15	15	23	19	10	10	12	16	30	44	20	9	12	44	14	7	19	47	47.1	
24-Sep-04	20	35	14	23	49	20	6	8	8	12	13	16	16	15	12	9	7	8	5	4	4	5	16	16	48.7	
25-Sep-04	9	4	5	4	5	5	7	6	8	7	10	13	13	13	13	13	12	6	4	18	26	45	8	15	45.3	
26-Sep-04	33	43	7	8	6	17	35	11	17	23	18	16	30	28	31	25	22	11	6	6	8	10	47	24	47.3	
27-Sep-04	15	9	8	5	10	56	20	33	22	36	38	10	12	13	11	10	10	9	9	9	8	6	7	6	55.5	
28-Sep-04	6	7	8	5	6	5	10	14	9	8	8	9	11	21	43	60	48	10	2	3	3	26	18	25	59.9	
29-Sep-04	6	13	13	5	4	38	15	8	11	17	18	18	15	8	14	13	11	7	6	5	6	9	8	8	37.9	
30-Sep-04	5	39	19	27	52	5	9	12	12	17	21	19	12	9	6	5	5	4	6	5	8	7	7	22	51.6	
																										0.0

Hourly Max	33	43	57	37	52	56	35	54	36	44	48	58	62	65	59	60	48	44	28	44	41	45	63	47
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### Wind Rose for the 1-hr Average Meterological Data at the Crescent Heights Site for September 2004







# Passive Monitoring

## Ambient Air Compliance Network

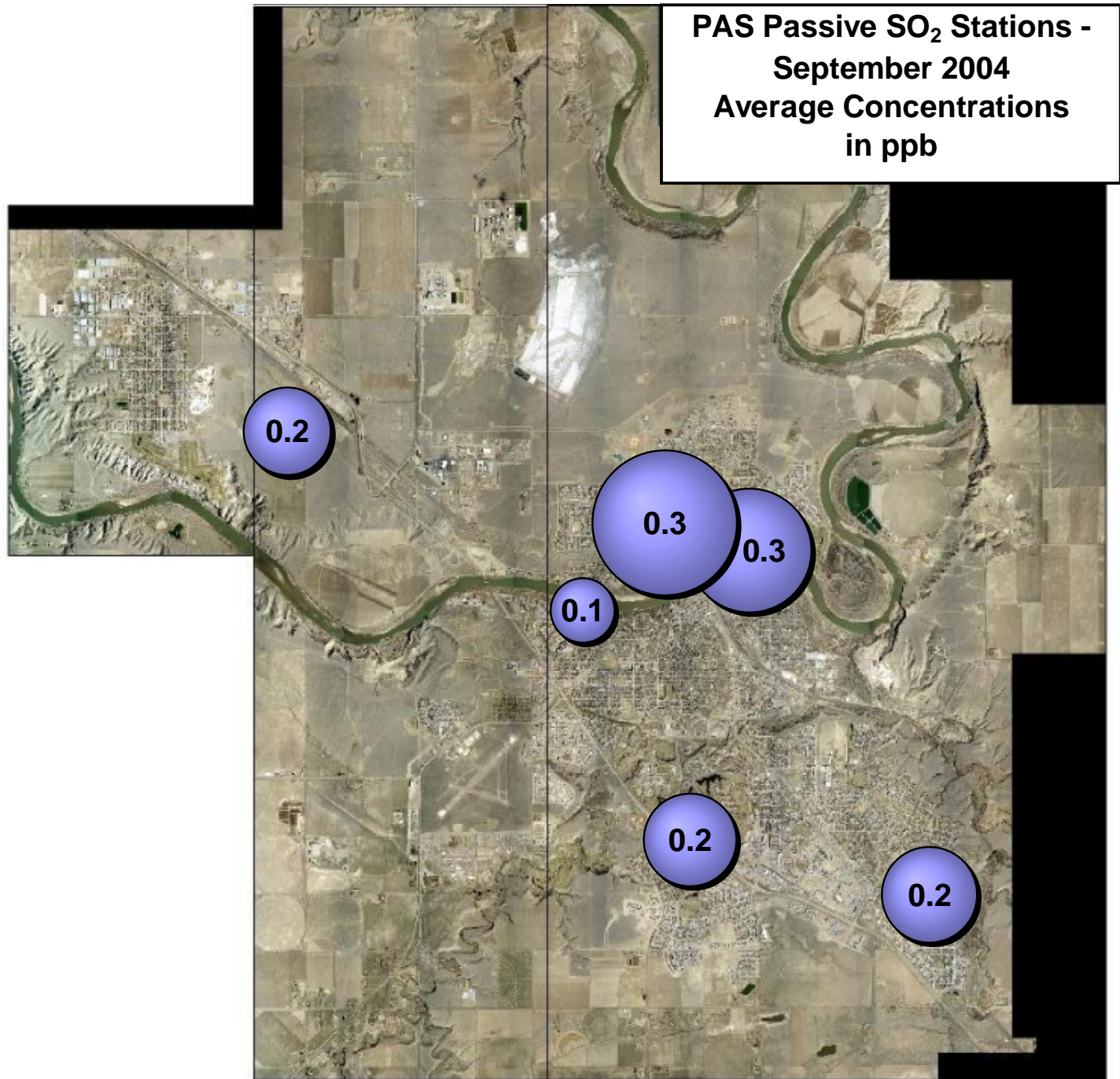
### Pallisar Airshed Society - PAS Passive Stations for September 2004

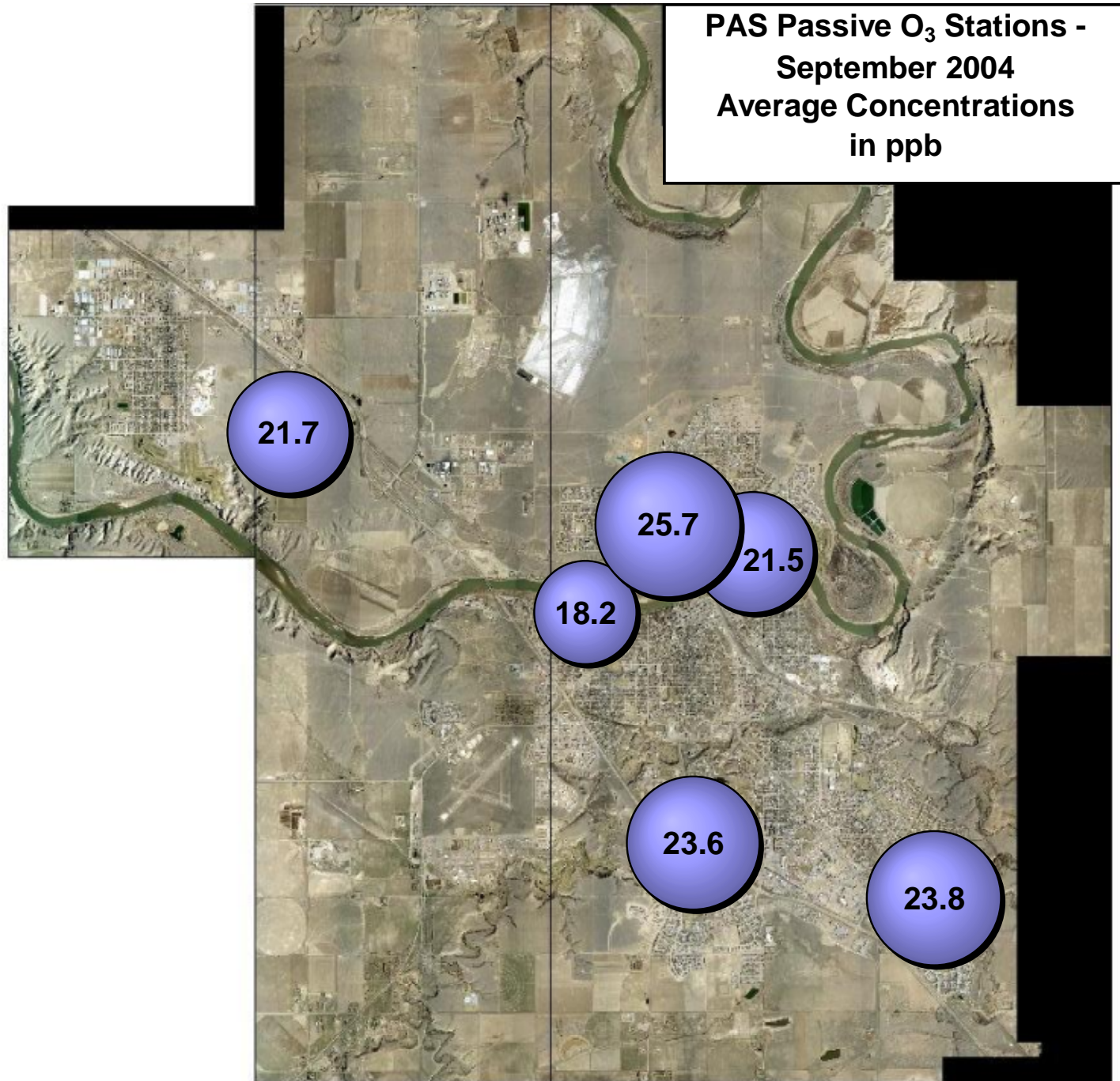
Station Number	Station	SO <sub>2</sub> ppb	O <sub>3</sub> ppb	NO <sub>2</sub> ppb	Location		
	Name				Easting	Northing	Elevation
<b>Duplicates</b>							
4a	Redcliff	0.2	21.5	3.7			
4b	Redcliff	0.2	21.9	5.3			
1	Hospital	0.1	18.2	6.5	521648	5542721	698
2	Ball Park	0.3	21.5	6.2	524019	5543686	660
3	Monitoring Station	0.3	25.7	5.9	522812	5544133	714
4	Redcliff	0.2	21.7	4.5	517448	5545608	725
5	Southridge	0.2	23.6	4.1	523172	5539016	721
6	Christian School Park	0.2	23.8	5.5	526577	5538133	709

<b>Stats:</b>							
	<b>Mean</b>	0.2	22.4	5.4			
	<b>Standard Deviation</b>	0.1	2.6	1.0			
	<b>Minimum</b>	0.1			1		<b>Hospital</b>
	<b>Maximum</b>	0.3			3		<b>Monitoring Station</b>
	<b>Minimum</b>		18.2		1		<b>Hospital</b>
	<b>Maximum</b>		25.7		3		<b>Monitoring Station</b>
	<b>Minimum</b>			4.1	5		<b>Southridge</b>
	<b>Maximum</b>			6.5	1		<b>Hospital</b>

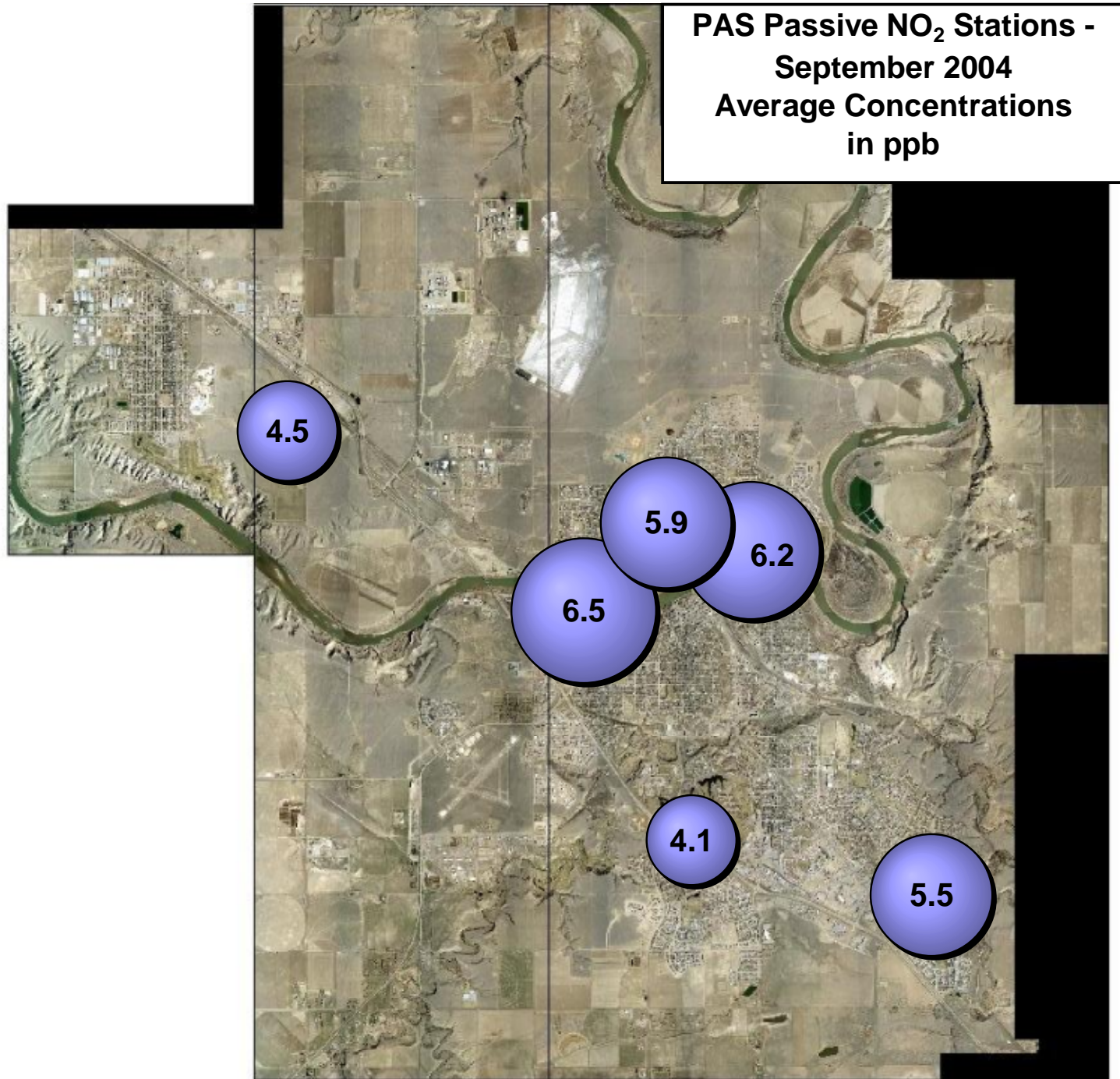
#### Comparison between Continuous and Passive monitoring (passive #3)

	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>
PAS Station	-	21.8	7.3
PAS Passive	0.3	25.7	5.9









## September 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	September 9, 2003	Previous Calibration	August 13, 2003
Station Number	1	Station Location	Crescent Heights
Reason:	<input checked="checked" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:

Start Time (MST)	16:00	End Time (MST)	18:45
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	0.996577	Calculated slope	0.993769
Calculated intercept	1.826693	Calculated intercept	1.068433

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	3331.2	mV	3295	mV
Lamp Reference	3342.6	mV	3296	mV
Pressure	25.7	inches Hg	25.6	inches Hg
Sample Flow	716	ccm	718	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	-0.6	N/A
4995	0.00	313.3	314.5	0.9960
4995	0.00	179.2	178.8	1.0023
4995	0.00	89.2	88.4	1.0096
4995	0.00	0.0	-0.6	0.0000
4995	0.00	313.3	314.5	0.9960
Average Correction Factor				1.0026

Calculated value of As Found Response: 315.9 ppm      Percent Change of As Found: 0.8%

	before calibration		after calibration	
Auto zero	1.2	ppb	0.2	ppb
Auto span	352.6	ppb	344.5	ppb

Notes: Analyzer did not require adjustment. All test functions normal.  
O3 calibration points generated via GPT portion of the NOX calibration performed September 9th.

Calibration Performed By: Kelly Baragar

## Calibration Summary

Parameter                O3      
Air Monitoring Network                                          Palliser Airshed    

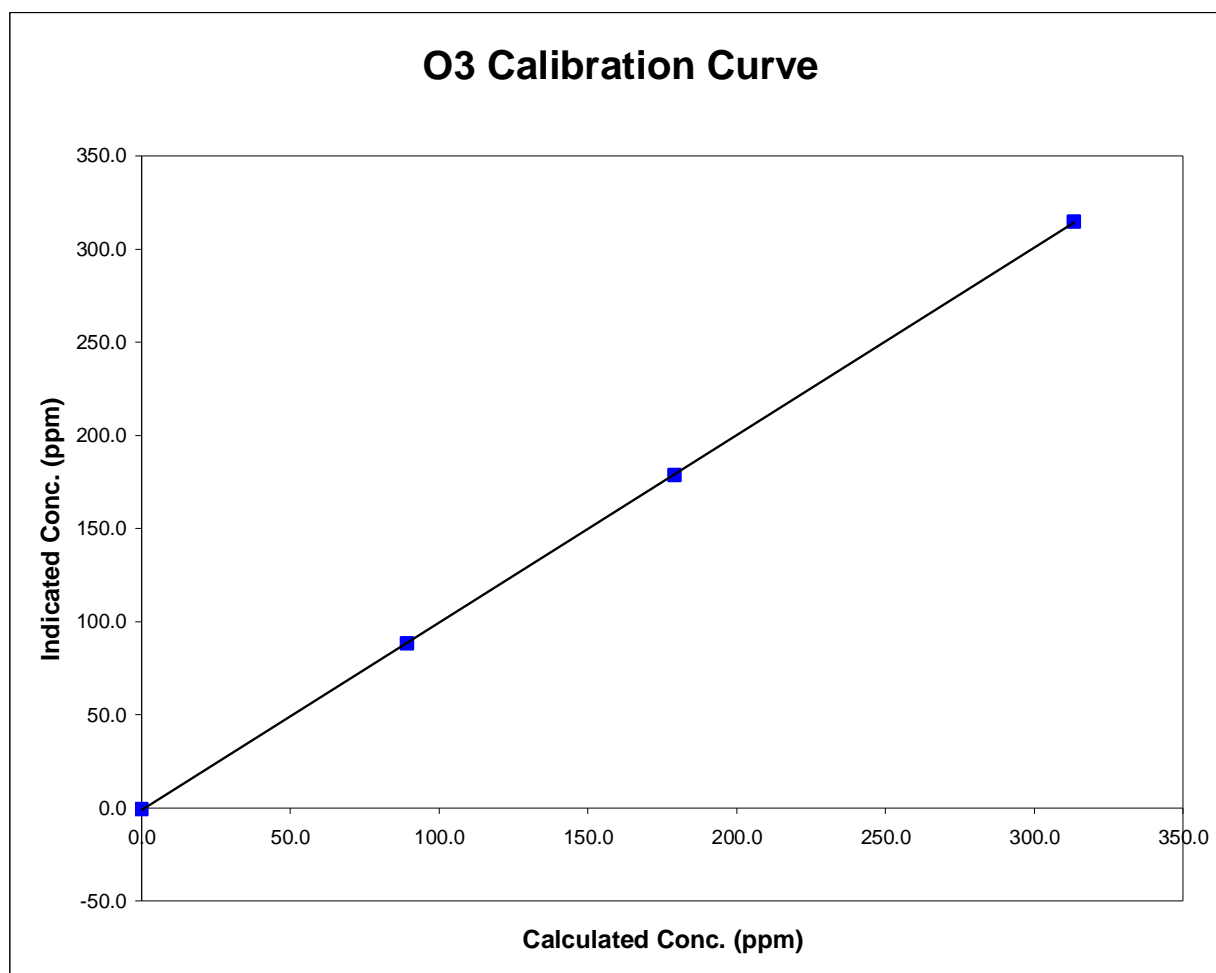


### Station Information

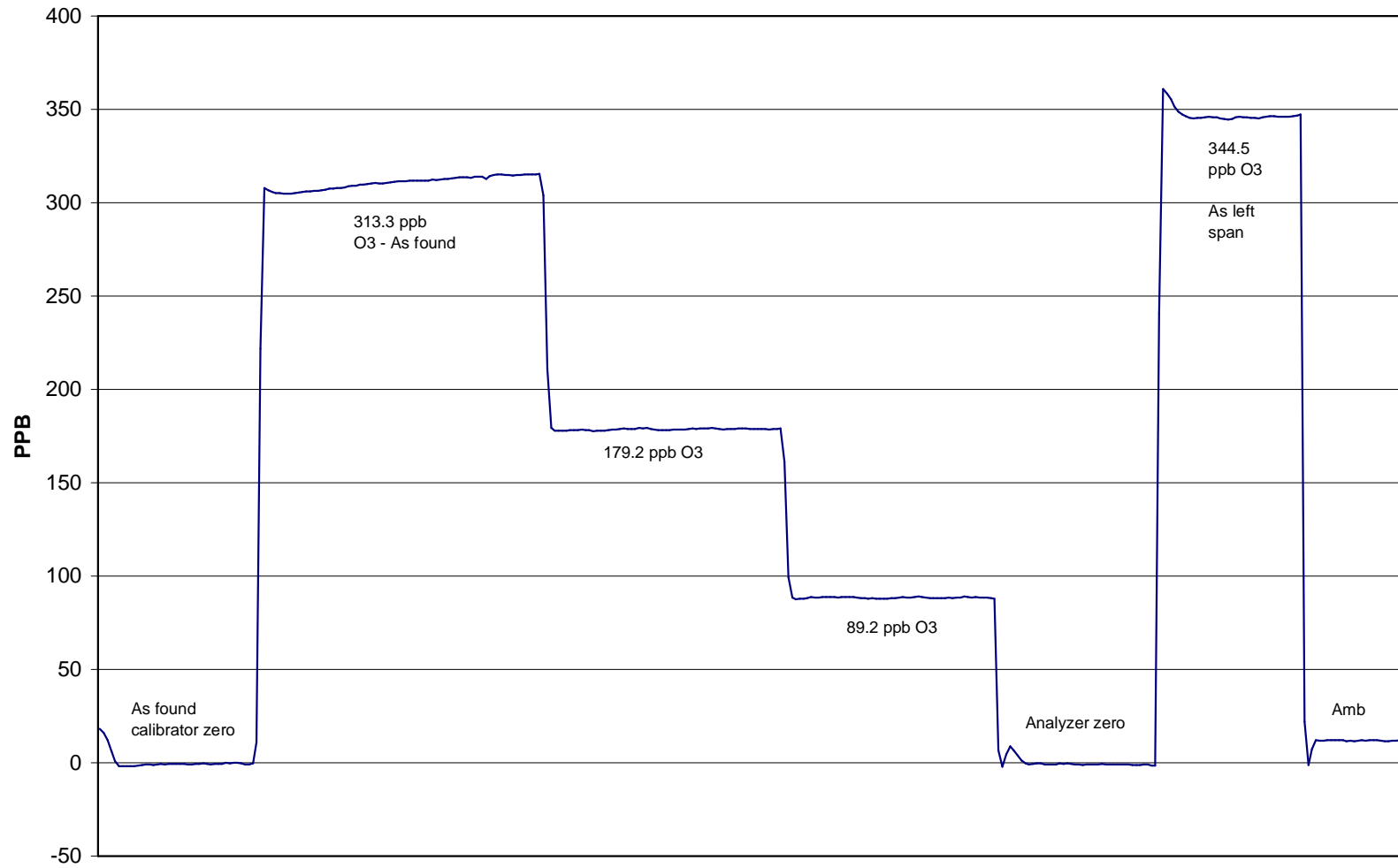
Calibration Date	September 9, 2003	Previous Calibration	August 13, 2003
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	16:00	End Time (MST)	18:45
Analyzer make/model	API Model 400E	Analyzer serial #	331

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
313.3	314.5	0.9960		
179.2	178.8	1.0023	Correlation Coefficient	0.999988
89.2	88.4	1.0096		
0.0	-0.6	N/A	Slope	0.993769
			Intercept	1.068433



### O3 Calibration



September 9, 2004



# Calibration Report

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



## Station Information

Calibration Date September 9, 2004 Previous Calibration August 13, 2004  
 Station Number 1 Station Location Crescent Heights

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

Start Time (MST) 10:20 End Time (MST) \_\_\_\_\_  
 Barometric Pressure 0.924 ATM Station Temperature 21.5 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	1.015888	1.017978	1.016040
	Data Offset	-2.513128	-3.970736	-2.531675
After	Data Slope	1.007182	1.004673	1.008166
	Data Offset	-2.920462	-2.538178	-0.949848
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		1.373	
NO <sub>x</sub> coefficient	1.324		1.375	
Chamber Temp	49.9	Deg C	49.9	Deg C
Cooler Temp	6.9	Deg C	7.0	Deg C
Azero	30.2		28.6	
Perm Temp	40.3	Deg C	40.3	Deg C
Pressure	3.7	inches Hg	3.6	inches Hg
Sample Flow	458.0	ccm	450.0	ccm

Notes: Analyzer was span adjusted. All test functions are within normal factory specs.

# Calibration Report

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



## Station Information

Calibration Date: September 9, 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	2.8	1.4	1.7	N/A	N/A
1	4993	39.97	396.3	395.5	0.8	396.9	393.3	4.4	0.9985	1.0055
2	4993	19.97	198.8	198.4	0.4	200.9	197.9	3.4	0.9896	1.0024
3	4993	9.97	99.4	99.2	0.2	100.8	98.7	2.4	0.9864	1.0060
AFZ	4993	0.00	0.0	0.0	0.0	3.1	1.4	2.0	0.0000	0.0000
AFS	4993	39.97	396.3	395.5	0.8	378.7	378.6	1.1	1.0464	1.0446
Average Correction Factor									0.9915	1.0046

As Found Concentrations NO<sub>x</sub>= 371.6 NO= 374.6 As Found Percent Change NO<sub>x</sub>= -6.2% NO= -5.3%

## 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	396.9	395.3	1.5	398.0	393.1	1.7	N/A	N/A	N/A	N/A
350	396.9	83.5	313.3	397.0	83.8	313.2	0.9997	0.9968	1.0003	100.0%
200	396.9	217.7	179.2	397.6	216.9	181.5	0.9981	1.0038	0.9872	101.3%
100	396.9	307.7	89.2	398.0	306.1	92.7	0.9971	1.0051	0.9619	104.0%
Average Correction Factor							0.9983	1.0019	0.9832	101.7%

## AIC Data

Parameter	Previous calibration				Current calibration			
	NO <sub>x</sub>	NO <sub>2</sub>	NO	ppb	NO <sub>x</sub>	NO <sub>2</sub>	NO	ppb
Auto zero	-0.2	-0.2	-0.7	ppb	0.4	-1.5	0.7	ppb
Auto span	361.1	355.2	4.5	ppb	375.0	368.9	6.2	ppb

Calibration Performed By: Kelly Baragar

## Calibration Summary

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

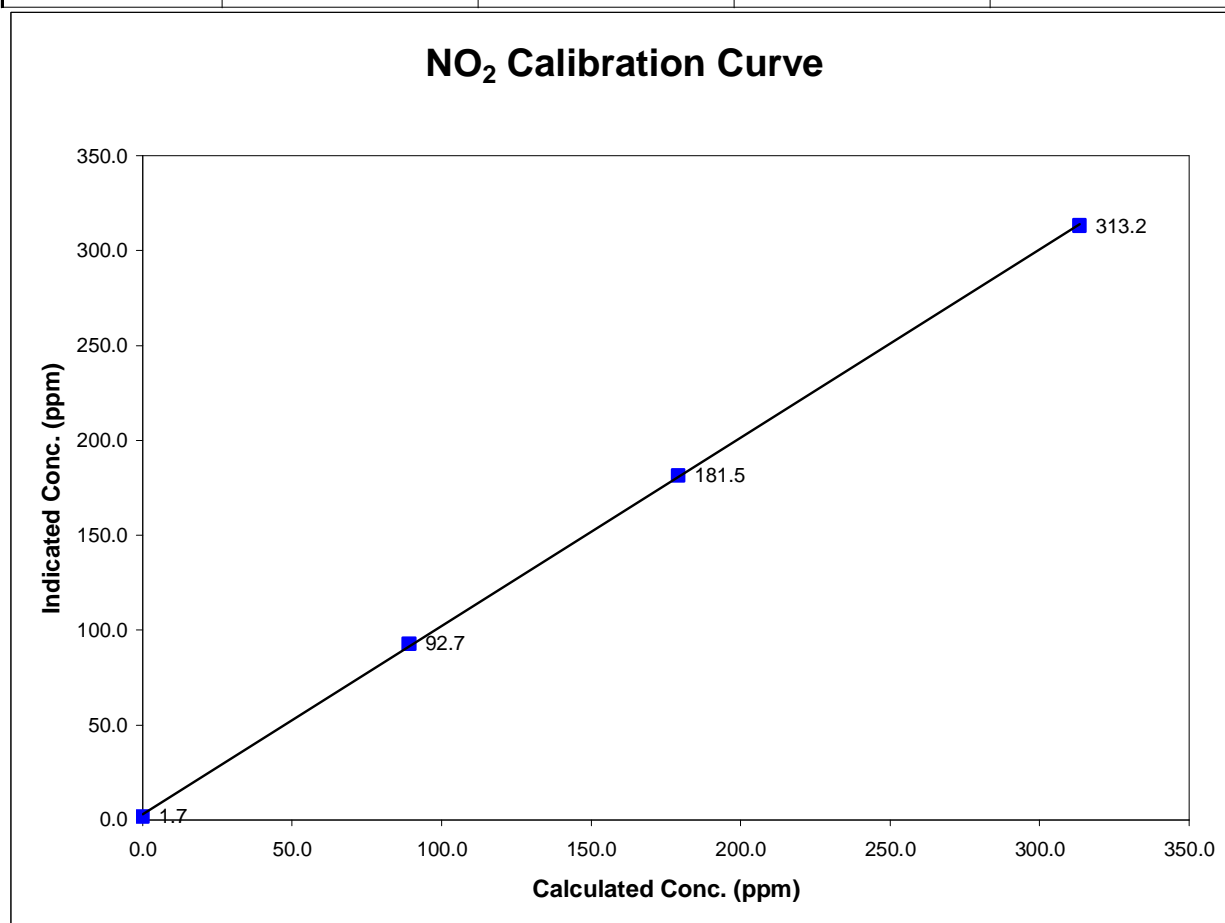


### Station Information

Calibration Date	September 9, 2004	Previous Calibration	August 13, 2004
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	10:20	End Time (MST)	0:00
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	1.7	0.0000		
89.2	92.7	0.9619	Correlation Coefficient	0.999923
179.2	181.5	0.9872		
313.3	313.2	1.0003	Slope	1.007182
			Intercept	-2.920462



## Calibration Summary

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

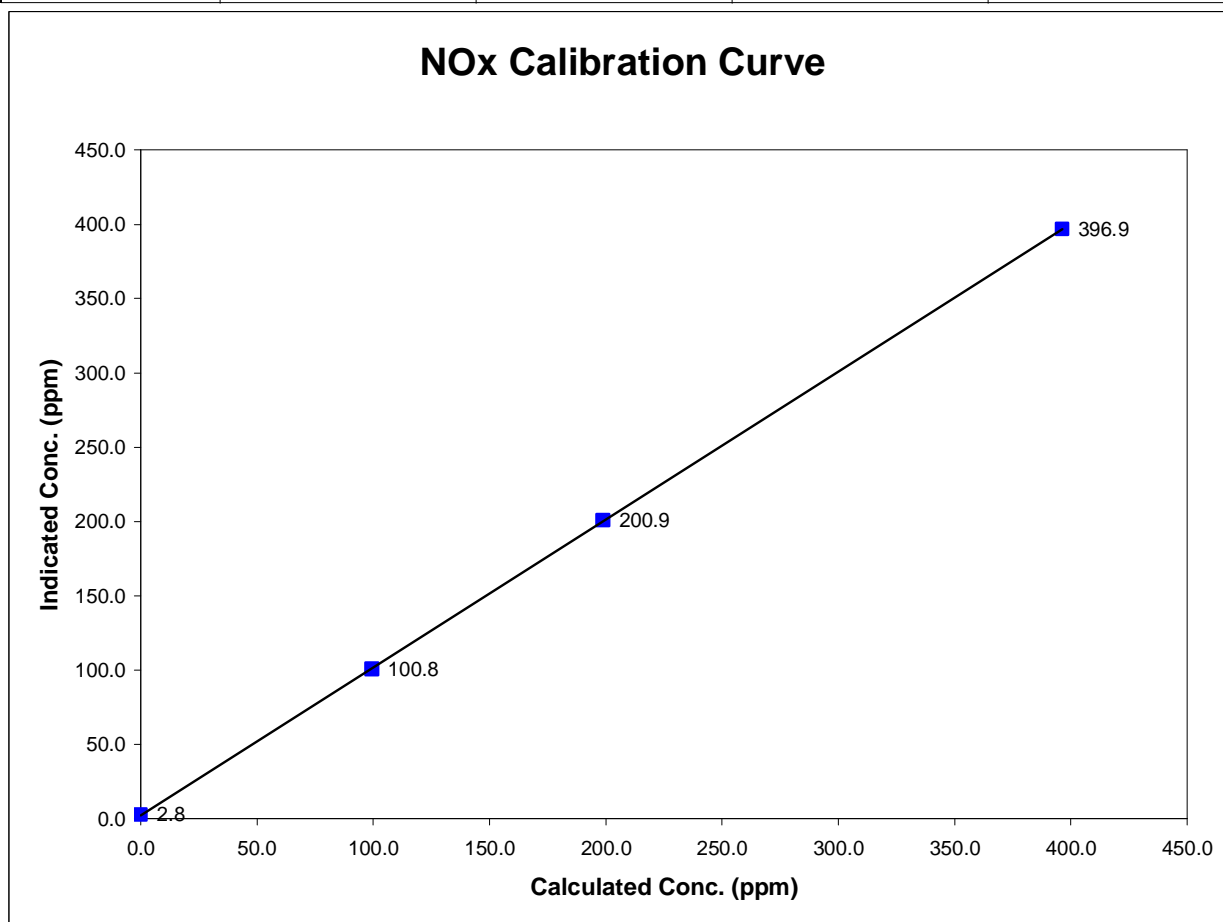


### Station Information

Calibration Date	September 9, 2004	Previous Calibration	August 13, 2004
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	10:20	End Time (MST)	0:00
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	2.8	0.0000	Correlation Coefficient	0.999990
396.3	396.9	0.9985		
198.8	200.9	0.9896		
99.4	100.8	0.9864		
			Slope	1.004673
			Intercept	-2.538178



## Calibration Summary

Parameter NO  
 Air Monitoring Network Palliser Airshed

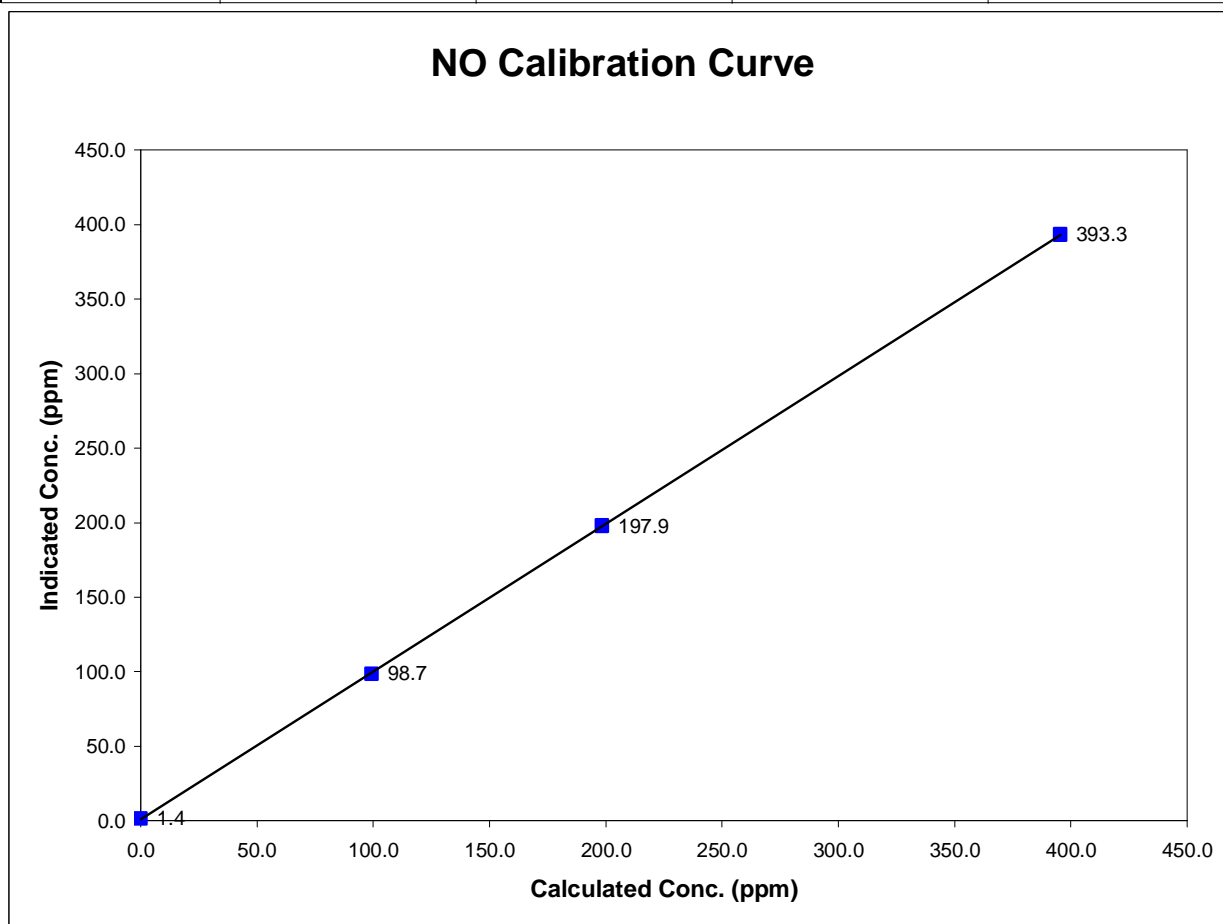


### Station Information

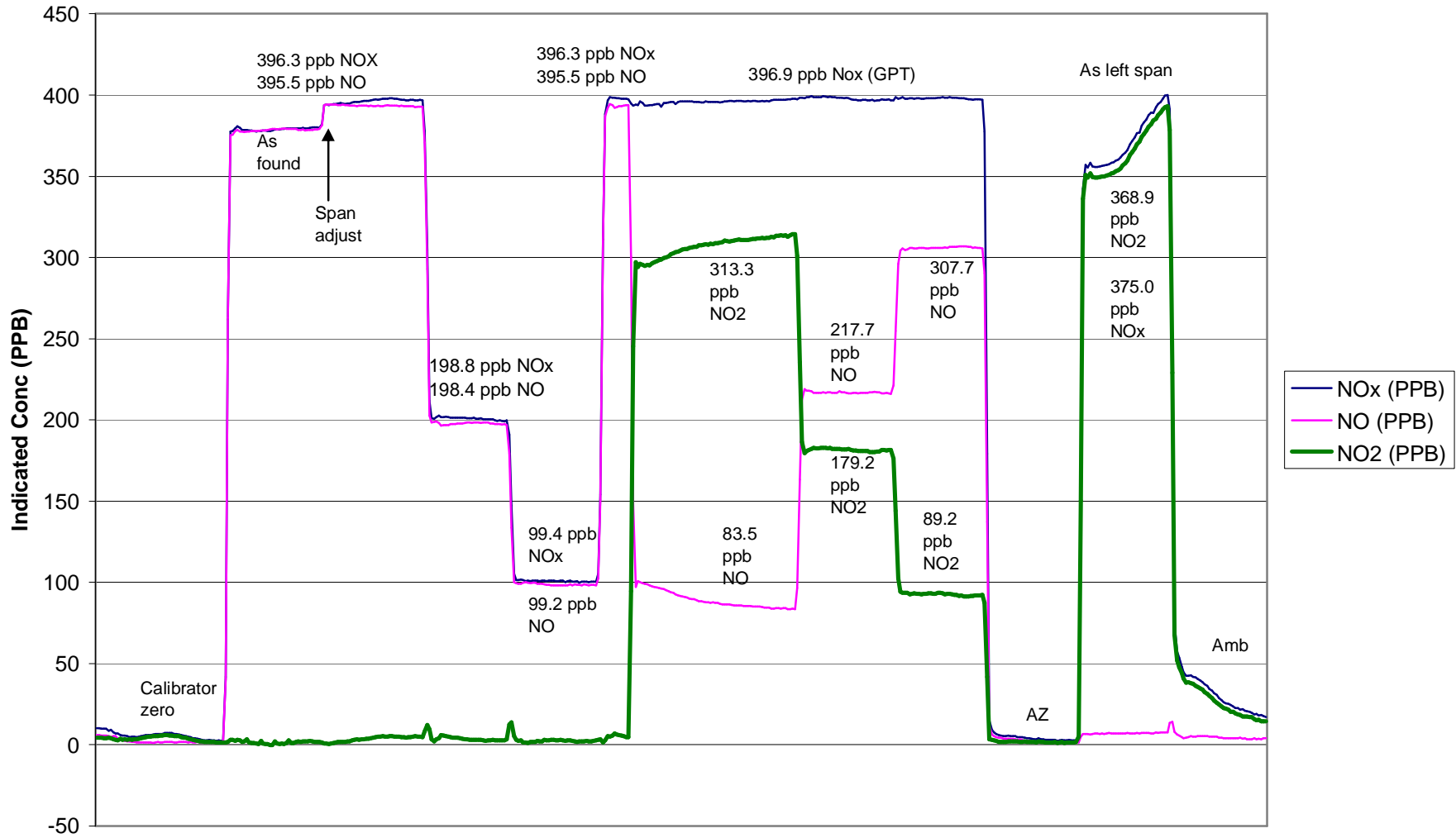
Calibration Date	September 9, 2004	Previous Calibration	August 13, 2004
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	10:20	End Time (MST)	0:00
Analyzer make	API Model 200E	Analyzer serial #	219

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.4	N/A		
395.5	393.3	1.0055	Correlation Coefficient	0.999991
198.4	197.9	1.0024		
99.2	98.7	1.0060		
			Slope	1.008166
			Intercept	-0.949848



### NOx Calibration



September 09, 2004

# Calibration Report

Parameter THC  
 Air Monitoring Network Palliser Airshed



## Station Information

Calibration Date	September 9, 2004	Previous Calibration	August 13, 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)	13:30	End Time (MST)	16:45
Barometric Pressure	0.924 mb	Station Temperature	21.5 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	1.001858	Calculated slope	1.016436
Calculated intercept	0.061399	Calculated intercept	0.055606
Analyzer make	TEI model 51C-LT	Analyzer serial #	407505596

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
THC sample pressure	5.73	PSI	5.75	PSI
THC span counts	11353	raw	NA	raw
THC zero counts	1941	raw	NA	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	19.80	1.0169
2994	19.98	10.13	9.83	1.0306
2994	9.97	5.07	4.91	1.0321
zero	0.00	0.00	-0.18	As Found Zero
2994	39.98	20.13	19.54	As Found Span
Average Correction Factor				1.0265

Calculated value of As Found Response: 19.818 ppm      Percent Change of As Found: 1.6

	before calibration		after calibration	
Auto zero	0.04	ppm	0.05	ppm
Auto span	22.30	ppm	22.21	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

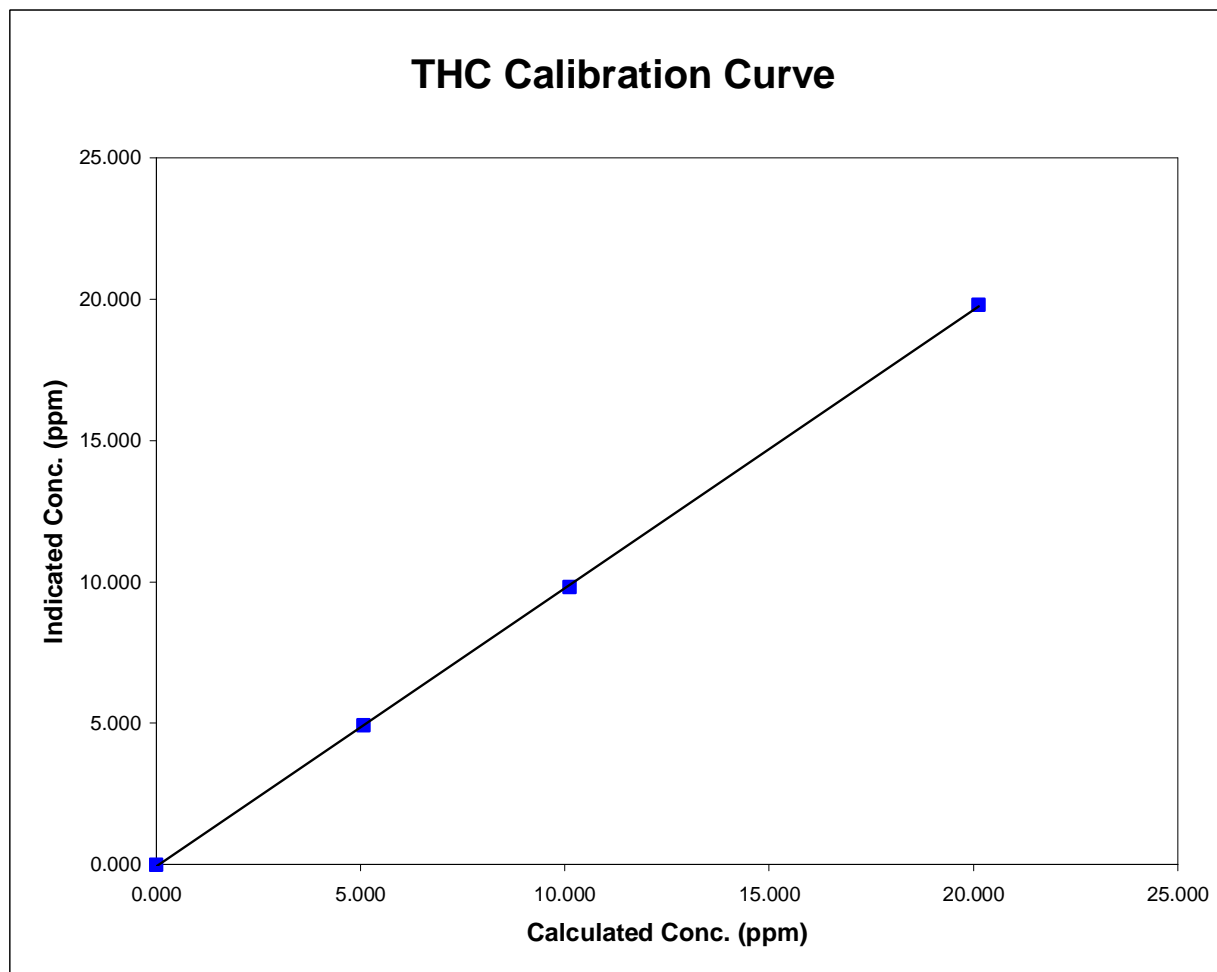


### Station Information

Calibration Date	September 9, 2004	Previous Calibration	August 13, 2004
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	13:30	End Time (MST)	16:45
Analyzer make/model	TEI model 51C-LT	Analyzer serial #	407505596

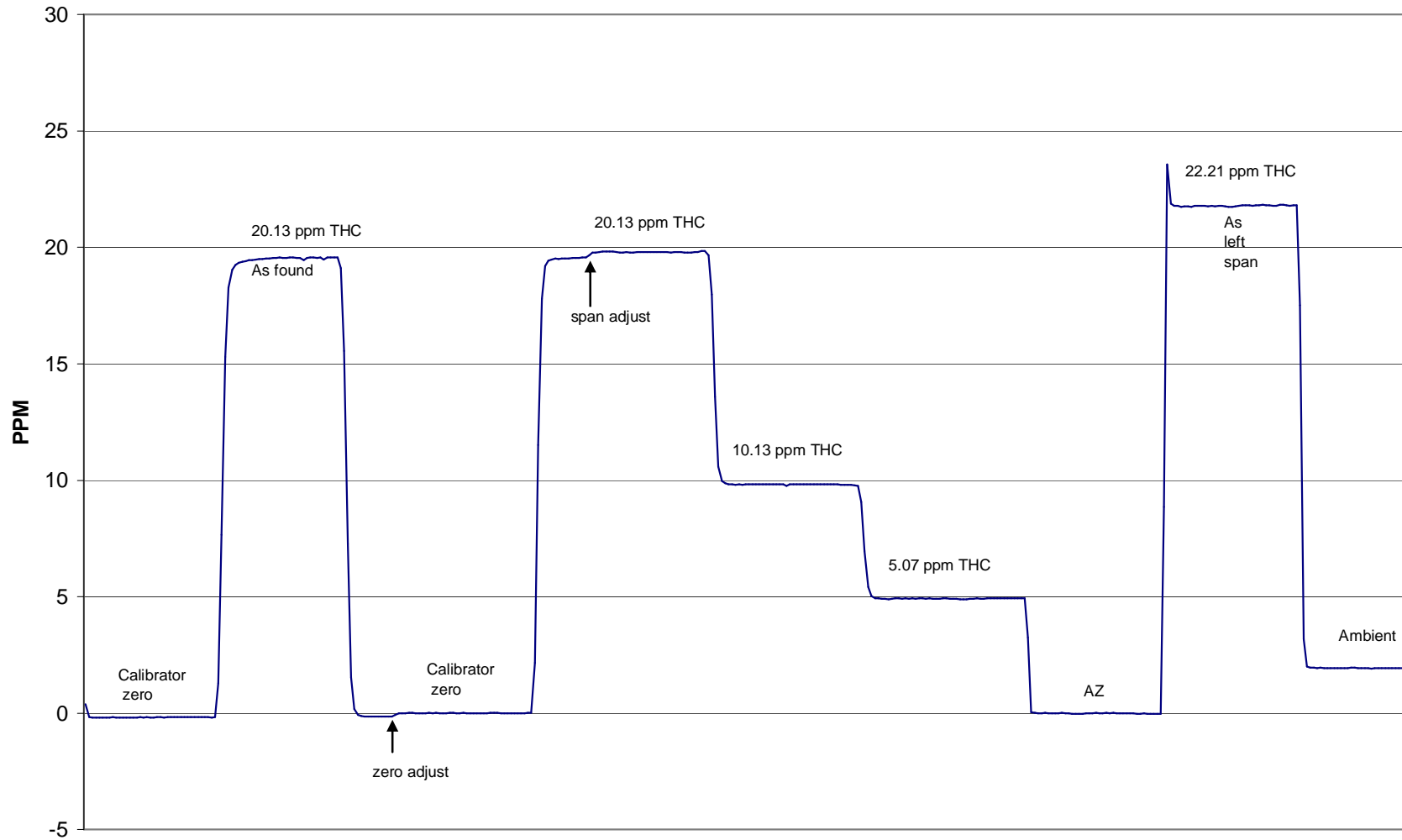
### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.003	N/A		
20.132	19.798	1.0169	Correlation Coefficient	0.999941
10.128	9.827	1.0306		
5.071	4.913	1.0321	Slope	1.016436
			Intercept	0.055606





### THC Calibration



September 09, 2004

# Calibration Report



Parameter PM2.5  
 Air Monitoring Network Palliser Airshed

## Station Information

Calibration Date	September 9, 2004	Previous Calibration	August 13, 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)	10:30	End Time (MST)	16:40
Barometric Pressure	0.924 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	37	%	37	%
Ko Factor	12758		12758	
Temperature	7.2	Deg C	7.2	Deg C
Pressure	0.924	ATM	0.924	ATM

## Calibration Data

Parameter	Set Point	Indicated Reading	Tolerance	New Reading
zero flow - main	0.0	NA		NA
zero flow - auxillary	0.0	NA		NA
flow recovery - main	45 - 60 Seconds	NA	45 - 60 Seconds	NA
flow recovery - aux	46 - 60 Seconds	NA	46 - 60 Seconds	NA
Temperature	measured	7.2	+/- 1.0 Deg C	7.2
Pressure	measured	0.924	+/- 1.5% ΔATM	0.924
Total Flow	16.67 SLPM	16.90		16.90
Main Flow	13.67 SLPM	NA	+/- 1.0 SLPM	NA
Auxillary Flow	3.0 SLPM	NA	+/- 0.2 SLPM	NA
Leak Check - main	0.0	NA	<0.15 SLPM	NA
Leak Check - aux	0.0	NA	<0.15 SLPM	NA
Ko Factor (w/o filter)	measured	NA	filter weight (g)	0.11352
Ko Factor (w/ filter)	measured	NA	% Ko difference	N/A

Notes: Performed flow audit; all parameters are normal. TEOM down between 10:30-10:48 MST and also 16:25-16:40 MST. All data between is normal. Bypass filter changed out.  
Confirmed pressure sensor to be within 1% of actual reading.

Calibration Performed By: Kelly Baragar