



Palliser Airshed Society

Ambient Air Monitoring Network Summary

December 2004



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Alberta Environment
Enforcement and Monitoring Division
11th Floor, Oxbridge Place
9820 - 106th Street
Edmonton, Alberta, T5K 2J6

Attention: Director of Monitoring and Evaluation

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

Enclosed is the PAS Ambient Monitoring Report for the month of **December 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; 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 99% uptime for the month of December. There were no significant events leading to emergency response for the month of December.

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

- Monthly average concentrations of NO₂ was 9.7 ppb
- Monthly average concentrations for O₃ was 18.4 ppb
- Monthly average concentrations for THC was 2.15 ppm
- Monthly average concentrations for PM_{2.5} was 2.2 µg/m³

Passive Monitoring – Six Stations throughout the PAS zone:

Please Note: No data was available at the time of reporting from the Passive Monitoring Program operated by the Palliser Airshed Society. This data will be supplied in the next monthly report (January, 2005).

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

Gary Cross, C.E.T.
AQM Technical Manager

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AQM Environmental Specialist



December 2004 Monthly Overall Summary Report

Ambient Air Quality Data

Dec-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	5.8	0	0	86.1	Dec-29	1.7	SW	18.7	Dec-29	100.0%
NO ₂ (ppb)	212	106	Crescent Heights	9.7	0	0	38.8	Dec-28	4.7	SSW	19.2	Dec-29	100.0%
NO _x (ppb)			Crescent Heights	15.4	0	0	119.0	Dec-29	1.7	SW	37.7	Dec-29	100.0%
O ₃ (ppb)	82		Crescent Heights	18.4	0	0	38.1	Dec-19	15.6	N	26.5	Dec-24	100.0%
THC (ppm)			Crescent Heights	2.15	0	0	2.94	Dec-29	1.7	SW	2.43	Dec-22	100.0%
PM _{2.5} (µg/m ³)		30 ^a	Crescent Heights	2.2	0	0	14.7	Dec-09	4.5	SE	8.1	Dec-09	99.9%
RH (%)			Crescent Heights	67.2									99.9%
SR (W/m ²)			Crescent Heights	39.3									99.9%
Temp (°C)			Crescent Heights	-4.3									100.0%
WSPD v (km/hr)			Crescent Heights	4.2									100.0%
WSPD s (km/hr)			Crescent Heights	10.9									100.0%
WDIR (Deg)			Crescent Heights	WSW*									100.0%

Note: ^a 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

Crescent Heights Station

General Station Issues

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

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	$\mu\text{g}/\text{m}^3$	One hour of data was removed due to excessive drift
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	%	One hour of data was removed due to DAC channel problem
Solar Radiation	Met One	096-1	W/m^2	One hour of data was removed due to DAC channel problem
Data Acquisition System	Titan Logix	AP1000		No operational problems observed



PAS - Crescent Heights Oxides of Nitrogen Monthly Summary

HOURLY AVERAGE TABLE

Nitrogen Dioxide (NO₂)

Station: Crescent Heights

Station Owner: PAS

Monitoring Dates: December 1, 2004 to January 1, 2005

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	39	ppb	28-Dec	17:00 18:00
Maximum 24-hr Average:	19	ppb	29-Dec	

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

AIC Time:	33 hrs							Operational Time:	707 hrs	
Calibration Time:	4 hrs							AMD Operational Uptime:	100.0%	
Percentile	99	95	75	50	25	5	1	Average		
	33	24	14	7	4	2	1	9.7 ppb		

Status Flag Characters

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

Day Mountain Standard Time

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Dec-04	3	3	2	2	3	4	7	10	12	8	8	8	8	A	12	9	10	10	7	9	10	11	6	4	7.3	12.2
2-Dec-04	3	2	2	3	2	5	8	12	31	10	4	4	A	8	7	11	15	17	11	12	5	6	15	10	8.8	31.1
3-Dec-04	4	5	3	1	4	2	2	5	6	7	3	A	7	5	5	4	9	11	8	17	23	29	28	18	9.1	29.1
4-Dec-04	23	17	17	20	19	21	16	17	19	14	A	6	5	4	2	2	2	2	1	1	1	1	1	1	9.1	22.9
5-Dec-04	1	1	1	1	1	1	2	2	4	A	4	2	1	1	2	4	6	10	10	8	7	6	5	6	3.8	10.3
6-Dec-04	5	4	5	6	4	3	6	10	A	8	6	6	9	8	6	4	8	17	10	14	9	13	7	5	7.5	16.9
7-Dec-04	7	6	4	5	9	13	14	A	10	6	C	C	C	C	A	9	10	8	5	3	2	2	3	1	6.6	14.0
8-Dec-04	2	2	3	A	3	2	2	2	2	3	3	3	2	4	5	9	10	10	10	8	16	20	20	6.3	20.3	
9-Dec-04	14	4	5	A	12	10	12	11	12	8	6	6	7	9	15	19	23	26	28	37	33	13	6	10	14.2	36.6
10-Dec-04	10	12	A	6	7	10	19	31	35	26	33	29	31	29	22	13	17	7	6	5	4	3	3	2	15.6	34.8
11-Dec-04	1	A	3	2	2	3	4	3	13	14	16	6	6	4	4	3	3	3	3	5	3	4	4	8	5.1	16.3
12-Dec-04	A	9	17	13	17	12	13	7	10	8	5	7	6	6	8	18	15	7	8	10	6	12	A	9.9	18.3	
13-Dec-04	11	9	14	15	17	13	14	20	19	19	20	22	15	5	10	13	15	11	8	3	3	2	A	5	12.3	21.7
14-Dec-04	3	2	2	1	2	3	6	7	7	5	5	7	11	3	5	8	16	4	4	12	4	A	15	7	6.1	15.6
15-Dec-04	21	14	7	10	12	11	16	22	20	16	13	12	11	7	8	9	21	21	11	21	A	26	20	20	15.2	26.0
16-Dec-04	22	18	18	23	17	15	9	13	18	18	11	10	9	10	9	14	17	19	11	A	7	4	21	6	13.9	23.0
17-Dec-04	3	2	2	2	3	7	4	10	10	11	9	15	11	11	19	19	33	19	A	23	14	13	25	18	12.3	33.1
18-Dec-04	13	9	12	23	24	22	16	21	20	21	16	10	8	6	6	6	9	A	13	21	20	19	16	6	14.8	24.4
19-Dec-04	3	2	2	5	5	3	3	8	3	2	3	2	2	1	3	6	A	5	5	5	3	18	7	5	4.3	17.8
20-Dec-04	6	4	5	2	15	13	6	6	6	8	6	6	4	5	7	A	9	9	7	14	9	6	9	6	7.3	15.1
21-Dec-04	4	5	4	7	7	13	10	10	7	6	2	2	3	4	A	10	12	18	24	21	16	15	15	15	10.0	23.6
22-Dec-04	13	13	14	12	18	19	18	15	8	7	4	3	2	A	5	5	10	15	14	14	24	26	19	12	12.6	26.1
23-Dec-04	8	10	11	13	16	19	22	20	25	25	10	6	A	6	5	6	5	6	8	7	10	7	6	4	11.2	25.1
24-Dec-04	3	2	1	5	8	5	5	10	9	5	3	A	10	4	4	3	4	4	3	6	6	4	12	6	5.3	11.6
25-Dec-04	6	5	7	10	17	14	9	5	4	5	A	10	16	10	7	7	5	5	4	7	9	10	9	8	8.2	16.6
26-Dec-04	6	5	4	3	3	3	2	2	2	A	4	2	2	2	2	3	4	2	2	3	3	1	1	1	2.7	6.1
27-Dec-04	3	7	5	10	3	1	1	1	A	5	3	5	5	3	4	6	13	26	16	26	22	23	25	23	10.3	26.1
28-Dec-04	19	20	22	16	11	12	14	A	10	11	14	5	7	6	10	17	26	39	35	32	26	20	23	30	18.6	38.8
29-Dec-04	30	24	20	27	22	19	A	25	32	33	30	17	19	19	14	14	18	15	19	14	11	9	6	4	19.2	33.1
30-Dec-04	5	5	5	5	4	A	5	4	4	3	2	2	2	2	2	1	3	5	6	6	6	6	6	7	4.1	7.1
31-Dec-04	6	5	6	6	A	10	8	9	8	7	5	5	4	4	6	8	10	9	8	9	8	8	9	8	7.2	9.9
Hourly Avg	8.7	7.6	7.4	8.8	9.6	9.7	9.0	11.0	12.7	10.9	8.9	7.7	8.2	6.5	7.3	8.2	11.9	12.4	10.2	12.4	10.6	11.0	11.8	9.3		
Hourly Max	30.5	24.1	22.3	26.6	24.4	22.1	21.6	31.0	34.8	33.1	32.6	28.6	31.0	29.2	22.5	19.0	33.1	38.8	34.6	36.6	32.9	29.1	28.2	29.8		

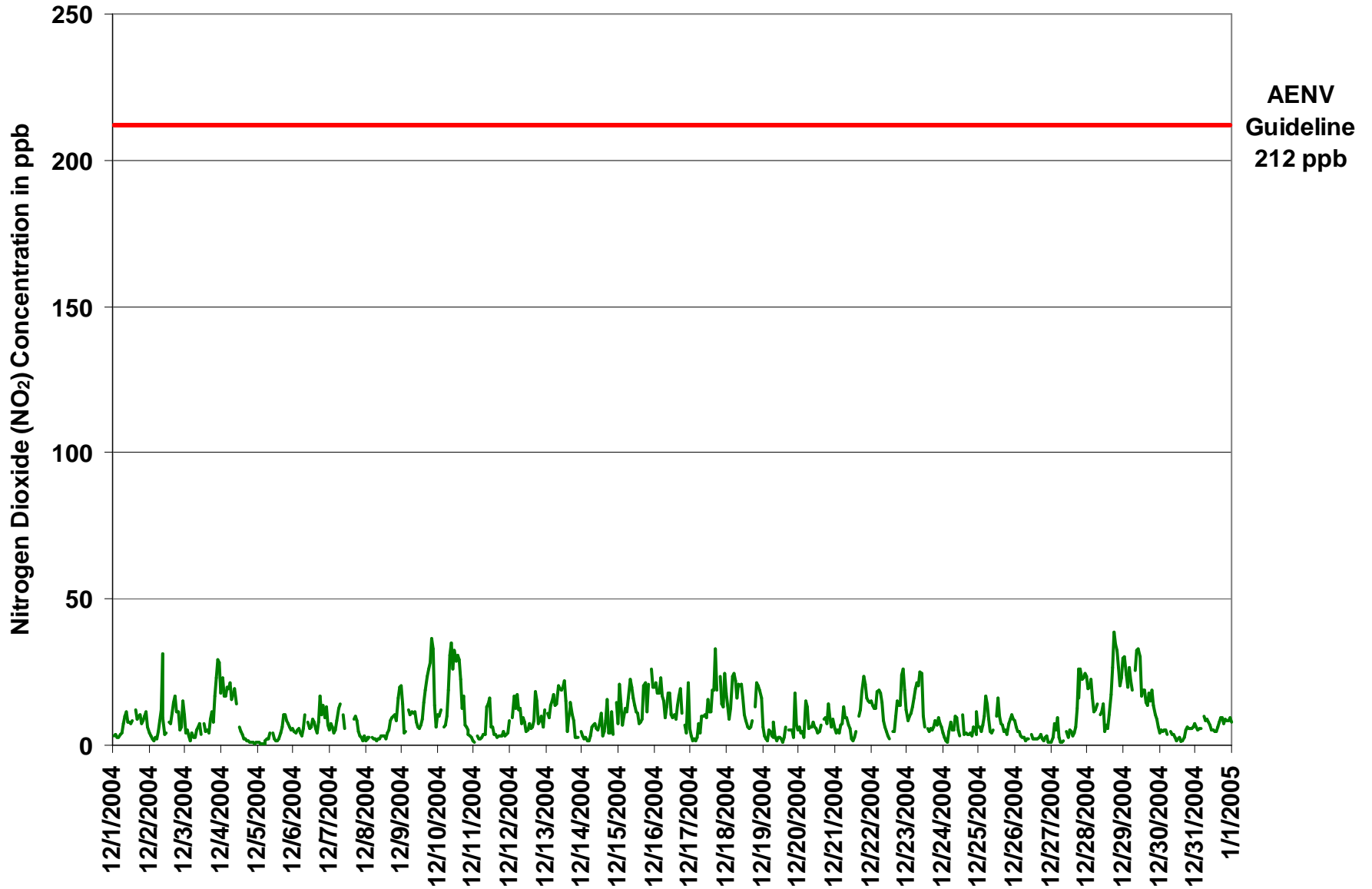


Figure 1. PAS - Crescent Heights Nitrogen Dioxide 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Nitrogen Dioxide (NO₂)

Station Owner: PAS

Monitoring Dates: December 1, 2004 to January 1, 2005

Summary

Maximum 1-hr Value:	102.0	ppb	2-Dec	8:00 9:00
Maximum 24-hr Value:	34.0	ppb	10-Dec	

AIC Time:	33 hrs	Operational Time:	707 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	62	41	24	15	7	3	2	17.7 ppb

Status Flag Characters

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum
	Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00		
1-Dec-04	4	17	10	4	36	28	24	30	32	16	14	9	11	A	25	13	15	15	12	22	23	28	12	5	17.5	36.4
2-Dec-04	4	3	3	17	9	34	68	14	102	17	11	12	A	12	10	19	23	22	19	21	15	21	25	23	22.0	102.0
3-Dec-04	13	20	17	3	27	27	6	8	9	24	6	A	39	7	12	6	33	19	11	25	29	38	33	32	19.3	39.0
4-Dec-04	52	22	28	26	26	41	18	20	24	20	A	9	6	5	3	3	3	3	1	2	2	1	2	2	13.8	51.8
5-Dec-04	2	1	1	1	1	3	3	5	8	A	7	3	2	3	3	6	13	13	15	10	12	8	8	9	6.1	15.4
6-Dec-04	6	5	7	7	6	5	8	16	A	11	8	8	12	12	22	12	12	20	14	25	19	24	10	7	12.0	24.6
7-Dec-04	10	9	6	8	13	18	19	A	25	9	C	C	C	C	A	13	18	21	6	5	4	3	5	3	10.8	25.1
8-Dec-04	3	3	4	A	4	3	4	3	3	4	5	5	5	3	20	7	10	13	13	17	11	23	23	23	9.1	23.4
9-Dec-04	21	6	6	A	17	12	20	14	14	26	19	7	8	12	21	23	33	33	34	88	39	39	9	24	22.8	87.9
10-Dec-04	23	28	A	10	25	44	52	38	46	45	40	61	49	37	43	55	83	10	26	37	19	4	3	3	34.0	83.3
11-Dec-04	2	A	9	3	20	19	18	9	25	21	25	21	15	5	6	6	5	7	6	15	4	8	7	12	11.7	25.2
12-Dec-04	A	13	27	26	28	15	31	12	15	10	7	8	18	9	38	15	27	24	11	25	20	11	16	A	18.5	38.2
13-Dec-04	22	24	50	31	20	20	43	27	20	25	22	28	25	51	17	28	19	24	19	8	26	5	A	17	24.7	51.4
14-Dec-04	34	3	25	3	3	42	15	21	10	40	29	22	25	30	15	19	21	7	8	36	5	A	31	18	20.1	42.2
15-Dec-04	34	19	14	17	23	22	34	25	22	24	19	19	17	10	12	12	29	35	21	34	A	32	30	38	23.5	38.1
16-Dec-04	31	42	21	32	20	20	25	20	25	24	26	22	14	15	12	46	23	37	21	A	34	6	35	21	24.8	46.4
17-Dec-04	12	8	7	3	4	15	9	23	14	39	21	46	29	38	24	31	63	24	A	31	22	34	33	21	24.0	62.8
18-Dec-04	18	17	30	28	26	34	23	44	48	75	20	16	11	8	7	7	10	A	27	28	26	22	30	14	24.7	74.9
19-Dec-04	7	3	2	9	22	4	11	24	38	8	22	7	5	2	31	19	A	8	9	13	7	24	18	12	13.4	38.4
20-Dec-04	15	28	14	4	28	21	15	14	18	15	11	10	10	11	11	A	10	13	11	18	14	7	13	10	13.9	27.9
21-Dec-04	6	8	6	8	9	20	20	18	9	11	4	2	4	7	A	18	15	25	26	25	39	21	19	21	14.8	39.5
22-Dec-04	18	16	16	15	24	22	20	20	12	11	8	6	5	A	9	6	17	21	25	23	30	38	25	23	17.8	38.2
23-Dec-04	50	14	20	21	21	42	26	27	33	29	41	30	A	11	9	29	36	13	50	23	15	10	13	11	25.0	49.8
24-Dec-04	8	3	2	18	39	7	21	19	39	11	5	A	18	5	9	4	5	5	5	18	20	7	22	10	13.1	39.5
25-Dec-04	8	7	12	19	26	26	32	7	8	7	A	13	19	14	12	11	7	9	7	8	13	12	11	11	13.0	31.6
26-Dec-04	9	7	7	4	4	4	3	3	5	A	7	4	4	7	3	4	6	6	3	5	7	6	2	2	5.0	9.0
27-Dec-04	6	10	7	23	6	3	3	5	A	9	4	7	10	7	7	13	17	40	25	40	26	26	28	32	15.4	40.4
28-Dec-04	22	22	26	25	15	18	40	A	22	25	28	41	24	10	38	22	38	60	47	62	32	36	38	65	32.9	65.0
29-Dec-04	40	28	30	50	31	26	A	32	48	38	38	22	23	23	19	16	21	18	23	18	13	10	8	6	25.4	50.4
30-Dec-04	13	6	6	7	5	A	8	5	9	9	3	8	5	4	4	3	5	9	20	7	9	6	8	9	7.4	20.3
31-Dec-04	8	7	7	7	A	12	10	10	10	8	10	11	6	6	9	14	13	15	14	14	11	12	12	11	10.3	15.3
Hourly Avg	16.5	13.3	14.0	14.8	18.0	20.3	21.0	17.7	24.0	21.0	16.5	16.3	15.1	13.1	15.6	16.2	21.0	19.0	17.6	23.4	18.1	17.5	17.6	16.5		
Hourly Max	51.8	41.7	49.5	50.4	38.8	43.8	68.0	44.3	102.0	74.9	41.2	60.9	49.5	51.4	43.5	54.7	83.3	60.0	49.8	87.9	39.5	38.7	38.1	65.0		

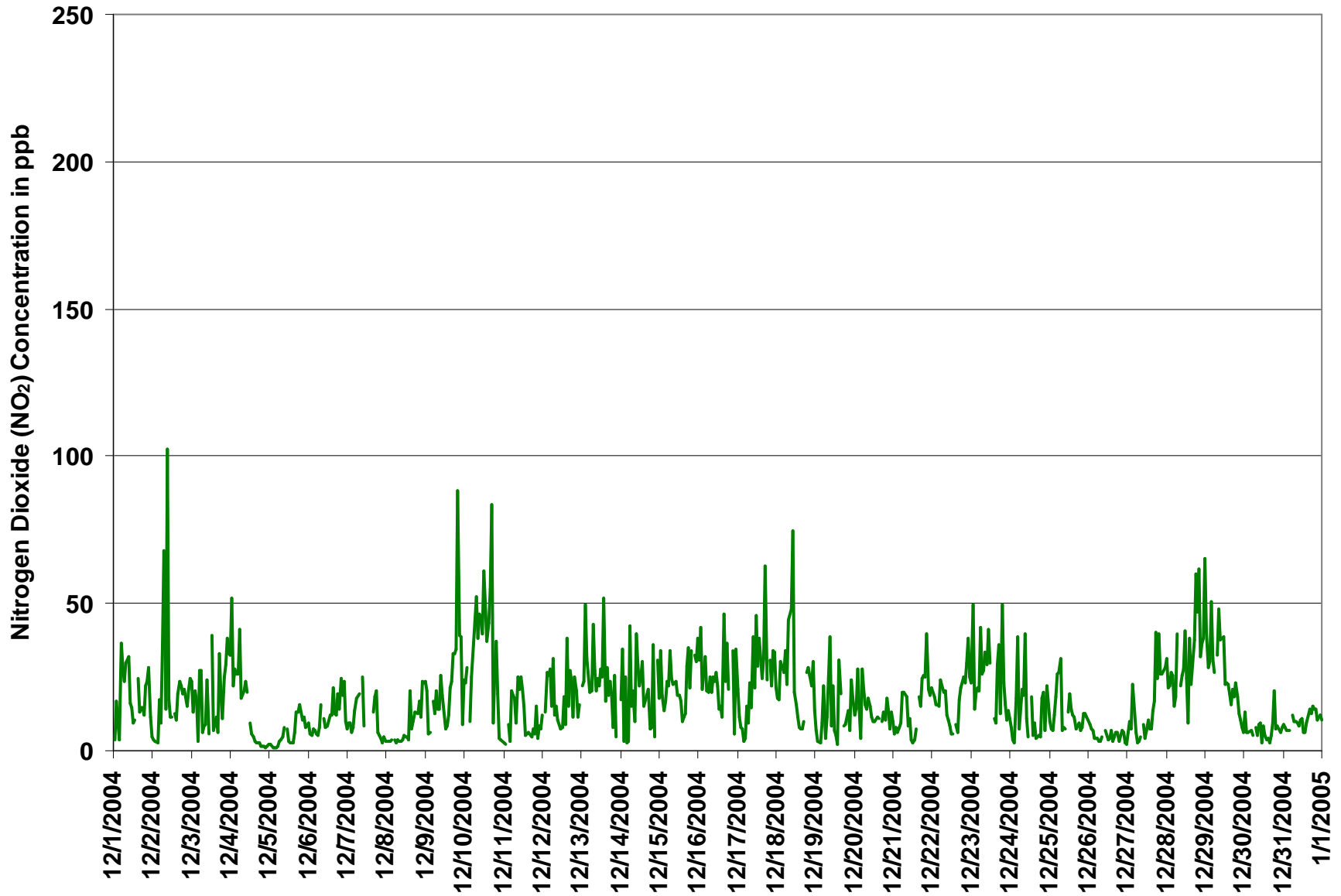
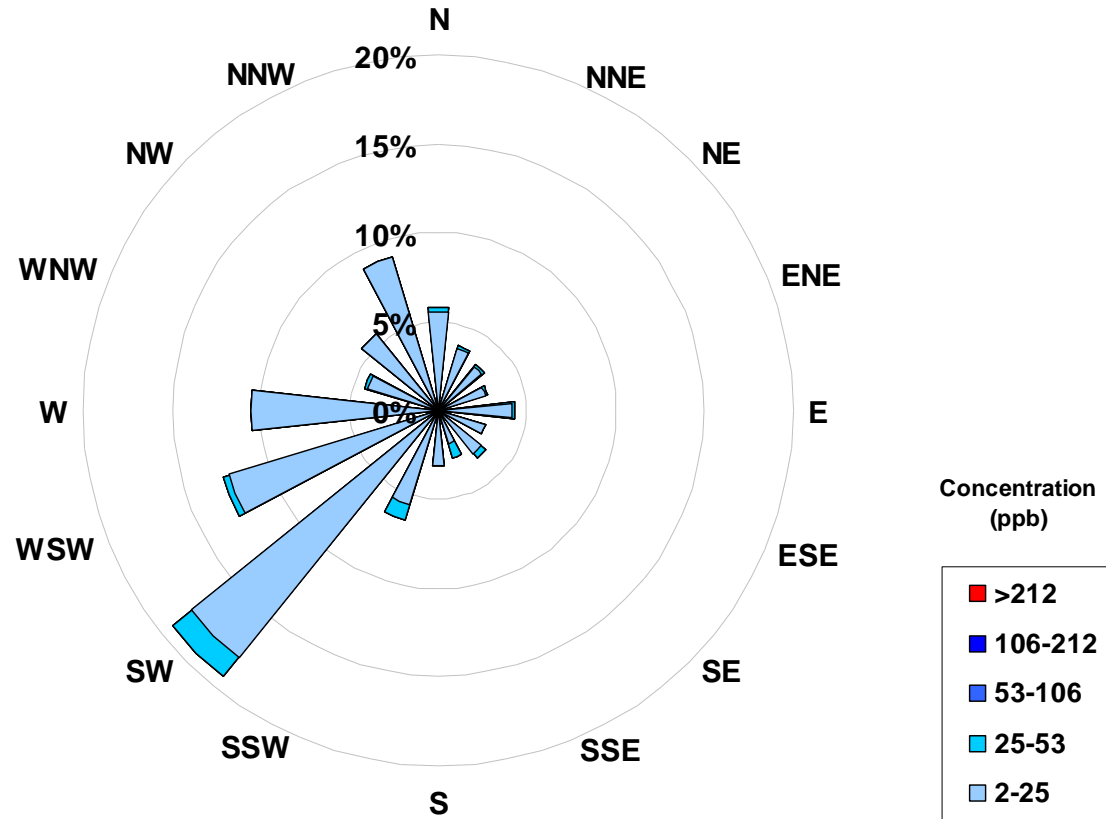


Figure 2. PAS - Crescent Heights Nitrogen Dioxide 1-hr Maximum Value Monthly Trend



Concentration Rose for the 1-hr NO₂ Average Concentration Occurrences at the Crescent Heights Site for December 2004



Frequency Distribution of NO ₂ in ppb			
Range			Frequency (hrs)
0	<	2	52
2	to	25	623
25	to	53	32
53	to	106	0
106	to	212	0
	>	212	0
Total Non-Zero Values			707

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



Station: Crescent Heights

HOURLY AVERAGE TABLE

Nitric Oxide (NO)

Station Owner: PAS

Monitoring Dates: December 1, 2004 to January 1, 2005

Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	86 ppb 29-Dec 9:00 10:00
Maximum 24-hr Average:	19 ppb 29-Dec

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

AIC Time:	33 hrs	Operational Time:	707 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	56	28	5	2	1	0	0	5.8 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-Dec-04	0	1	1	0	4	2	5	4	8	3	3	5	4	A	4	2	2	2	2	5	4	10	1	1	3.3	9.6
2-Dec-04	0	0	0	2	1	4	5	3	46	4	2	2	A	1	2	2	3	3	2	2	1	2	7	4	4.2	45.7
3-Dec-04	1	3	2	0	5	2	1	1	2	4	1	A	3	1	2	1	5	2	1	4	4	22	21	5	4.0	22.4
4-Dec-04	39	4	12	10	19	55	5	12	41	13	A	1	1	1	0	0	0	0	0	0	0	0	0	0	9.4	55.5
5-Dec-04	0	0	0	0	0	0	0	0	1	A	2	2	2	2	2	1	1	4	2	1	1	1	0	1	1.1	4.4
6-Dec-04	0	0	0	1	0	0	1	2	A	3	4	5	7	5	4	2	1	2	1	3	1	2	0	0	2.0	7.1
7-Dec-04	0	1	1	0	1	5	5	A	3	2	C	C	C	C	A	2	0	0	0	0	0	0	0	0	1.1	5.3
8-Dec-04	0	0	0	A	0	0	0	0	0	1	3	4	3	2	4	2	3	4	4	5	3	11	12	12	3.3	12.4
9-Dec-04	3	1	1	A	3	2	5	4	5	5	7	8	10	12	20	22	39	75	35	64	24	5	1	1	15.3	75.1
10-Dec-04	1	2	A	1	3	5	21	19	30	35	54	47	63	31	11	6	5	1	2	2	1	1	1	0	14.9	63.2
11-Dec-04	0	A	1	0	1	2	1	1	4	10	11	2	2	1	1	1	1	1	1	1	1	1	1	1	2.0	11.2
12-Dec-04	A	2	7	3	9	2	8	2	3	3	2	3	5	3	4	3	5	5	2	6	5	2	3	A	3.7	9.3
13-Dec-04	6	5	11	5	5	5	15	26	42	45	44	46	17	3	3	3	2	2	3	1	1	0	A	1	12.7	46.1
14-Dec-04	4	0	1	0	0	2	2	2	1	2	3	4	8	3	2	2	4	1	1	15	1	A	6	1	2.8	14.9
15-Dec-04	9	1	1	2	3	2	8	21	22	15	10	11	9	3	3	2	4	6	2	8	A	23	19	30	9.3	30.5
16-Dec-04	36	19	6	28	7	7	6	5	20	24	11	11	6	6	3	5	5	7	3	A	3	1	7	1	9.9	36.3
17-Dec-04	1	0	0	0	0	0	1	2	3	6	4	16	8	5	6	4	26	4	A	4	2	3	6	1	4.5	25.6
18-Dec-04	1	1	3	8	13	25	8	32	50	58	29	7	5	4	3	1	1	A	6	31	35	13	14	1	15.1	57.7
19-Dec-04	1	0	0	3	2	1	1	8	3	1	2	1	1	1	3	2	A	1	1	1	1	2	1	1	1.6	8.3
20-Dec-04	1	2	1	0	5	3	1	1	2	3	3	3	2	2	4	A	2	2	1	2	2	1	1	1	2.0	4.7
21-Dec-04	0	0	0	0	0	1	1	2	1	2	1	1	2	3	A	4	2	2	3	3	5	4	4	7	2.1	7.0
22-Dec-04	5	2	3	2	3	4	7	3	4	5	4	4	4	A	3	3	3	4	5	5	10	24	6	3	5.0	24.3
23-Dec-04	3	2	3	4	2	8	6	6	12	24	7	4	A	2	2	4	3	2	7	3	3	2	1	1	4.8	24.0
24-Dec-04	1	1	1	3	4	1	2	2	5	2	2	A	5	2	2	1	1	1	1	1	1	1	1	1	1.7	5.3
25-Dec-04	1	0	0	1	1	1	1	0	0	1	A	7	14	6	3	1	0	0	0	0	1	1	1	1	1.9	13.7
26-Dec-04	1	1	1	1	1	1	2	2	2	A	3	3	3	3	2	2	2	1	1	1	1	0	0	1	1.4	3.2
27-Dec-04	1	1	1	1	0	0	0	0	2	A	2	3	7	6	4	3	2	30	5	23	8	11	18	11	6.2	30.5
28-Dec-04	4	3	10	5	1	2	6	A	3	7	13	5	7	4	8	8	17	56	35	40	10	10	8	16	12.0	56.1
29-Dec-04	27	3	3	17	5	2	A	9	57	86	74	23	36	29	21	9	9	5	6	3	2	1	1	1	18.7	86.1
30-Dec-04	1	1	1	1	1	A	1	1	2	2	2	3	3	2	2	2	1	2	1	1	1	1	1	1	1.5	3.1
31-Dec-04	1	1	1	1	A	2	1	2	2	3	4	6	5	5	6	4	1	0	2	2	1	1	2	1	2.3	6.1
Hourly Avg	5.0	1.9	2.5	3.4	3.4	4.8	4.2	6.0	12.9	12.8	11.0	8.5	8.5	5.2	4.6	3.6	5.1	7.6	4.5	7.8	4.5	5.2	4.8	3.6		
Hourly Max	39.3	18.6	12.4	28.4	19.3	55.5	21.3	31.8	57.1	86.1	74.1	47.3	63.2	30.7	20.7	22.4	38.9	75.1	35.3	64.0	34.6	24.3	21.3	30.5		



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Nitric Oxide (NO)

Station Owner: PAS

Monitoring Dates: December 1, 2004 to January 1, 2005
Summary

Maximum 1-hr Value:	349.3	ppb	18-Dec	8:00 9:00
Maximum 24-hr Value:	83.1	ppb	10-Dec	

AIC Time:	33 hrs	Operational Time:	707 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	216	98	26	7	2	1	0	24.2 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	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-Dec-04	1	24	31	1	74	31	49	24	85	16	14	8	7	A	12	14	4	8	3	28	22	81	3	2	23.6	85.3	
2-Dec-04	1	1	1	47	26	89	183	9	157	63	10	10	A	3	9	3	5	4	4	4	3	16	14	12	29.3	183.4	
3-Dec-04	4	18	68	1	85	33	2	3	3	67	2	A	47	2	6	2	41	5	3	22	12	104	45	40	26.7	104.5	
4-Dec-04	326	10	59	32	82	163	10	30	79	34	A	1	1	1	1	1	1	1	1	1	1	1	1	1	36.4	326.0	
5-Dec-04	1	1	1	1	1	1	1	1	1	1	A	3	3	2	3	3	2	5	11	5	2	3	3	2	2	2.5	10.7
6-Dec-04	2	2	2	2	1	2	2	6	A	5	6	8	11	8	17	13	3	4	3	12	7	10	2	2	5.7	17.0	
7-Dec-04	2	2	2	2	4	8	9	A	22	5	C	C	C	C	A	7	2	3	0	0	0	0	0	0	3.6	22.2	
8-Dec-04	0	0	0	A	1	1	1	1	2	2	6	5	4	4	37	3	6	6	7	12	6	25	25	23	7.7	37.3	
9-Dec-04	6	2	1	A	6	3	22	8	10	28	18	11	13	17	39	48	89	118	44	185	76	106	2	11	37.7	185.4	
10-Dec-04	14	8	A	1	29	125	281	46	158	157	84	285	234	60	80	161	82	3	44	39	17	1	1	1	83.1	284.6	
11-Dec-04	1	A	29	1	30	31	14	3	21	47	40	15	6	2	2	2	2	3	2	4	2	2	2	3	11.5	46.9	
12-Dec-04	A	3	20	15	75	4	76	9	6	4	3	4	23	5	46	5	10	20	3	53	39	4	6	A	19.7	75.9	
13-Dec-04	84	51	155	59	10	14	110	64	51	83	57	61	45	75	6	25	5	8	44	2	46	2	A	29	47.1	154.9	
14-Dec-04	103	1	31	1	2	58	9	38	3	37	41	18	33	67	8	4	7	2	2	85	2	A	22	4	25.1	102.8	
15-Dec-04	63	3	6	7	36	24	76	36	42	47	21	25	15	5	5	5	11	33	6	43	A	114	78	101	34.9	114.2	
16-Dec-04	81	220	18	56	25	24	82	11	43	58	60	44	11	11	5	35	31	98	7	A	62	1	20	6	43.9	220.0	
17-Dec-04	4	3	2	1	2	1	2	9	6	90	19	52	31	31	9	10	90	9	A	13	3	26	26	2	19.1	89.9	
18-Dec-04	16	2	21	17	38	115	23	152	349	317	46	17	8	5	5	3	2	A	28	76	64	32	82	5	61.9	349.3	
19-Dec-04	1	1	1	86	72	1	11	52	129	15	52	19	6	2	66	8	A	2	3	3	2	4	12	1	23.9	129.3	
20-Dec-04	5	29	4	1	16	5	7	4	7	7	5	6	6	7	7	A	3	3	2	4	3	2	2	3	6.0	29.3	
21-Dec-04	1	1	1	1	1	4	4	5	3	4	2	1	2	6	A	14	5	5	6	5	65	26	11	42	9.2	65.1	
22-Dec-04	23	4	6	2	19	8	20	6	13	7	9	5	9	5	A	8	4	12	8	17	10	17	66	13	12	13.0	65.6
23-Dec-04	99	5	8	9	5	91	19	22	24	32	43	26	A	10	3	110	50	4	91	53	12	4	4	2	31.5	109.9	
24-Dec-04	2	2	1	17	77	2	26	6	75	8	3	A	13	3	15	2	2	1	1	2	3	1	4	2	11.6	76.6	
25-Dec-04	1	1	1	2	5	4	18	1	1	3	A	14	17	9	5	3	1	1	1	1	3	2	3	2	4.3	18.2	
26-Dec-04	1	2	2	2	2	2	3	3	3	A	4	4	4	5	4	4	3	10	2	2	2	1	1	2	2.9	9.6	
27-Dec-04	3	2	2	3	1	1	1	1	A	4	4	9	15	10	6	7	7	89	16	123	21	19	40	49	18.9	122.6	
28-Dec-04	7	7	22	21	2	4	98	A	27	46	46	81	64	14	74	13	54	157	113	218	27	86	65	88	57.9	217.6	
29-Dec-04	79	18	15	159	15	4	A	21	90	110	109	42	42	42	38	12	15	8	10	6	3	2	2	1	36.6	158.8	
30-Dec-04	4	1	3	3	1	A	3	2	8	5	3	17	6	4	5	8	3	5	10	2	9	2	2	2	4.7	17.0	
31-Dec-04	2	2	2	2	A	3	3	3	3	4	17	18	12	7	11	11	3	1	13	12	2	2	3	3	6.1	18.2	
Hourly Avg	31.2	14.2	17.1	19.1	24.6	28.5	38.8	19.9	49.0	45.1	26.0	29.0	24.6	14.8	18.3	18.0	18.4	21.0	16.4	34.1	17.8	24.8	16.4	15.0			
Hourly Max	326.0	220.0	154.9	158.8	84.8	162.7	281.2	152.1	349.3	316.6	108.5	284.6	234.3	74.7	80.2	160.5	89.9	156.8	112.6	217.6	76.4	114.2	82.1	100.8			



Station: Crescent Heights

HOURLY AVERAGE TABLE

Oxides of Nitrogen (NO_x)

Station Owner: PAS

Monitoring Dates: December 1, 2004 to January 1, 2005

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	119	ppb	29-Dec	9:00 10:00
Maximum 24-hr Average:	38	ppb	29-Dec	

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

AIC Time:	33 hrs							Operational Time:	707 hrs						
Calibration Time:	4 hrs							AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average							
	86	51	19	10	5	2	1	15.4 ppb							

Status Flag Characters

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

Day Mountain Standard Time

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum	
1-Dec-04	3	5	3	2	7	6	12	14	20	11	11	12	12	A	9	16	12	12	13	9	13	15	21	7	5	10.5	20.8
2-Dec-04	3	2	2	4	3	9	14	15	77	14	6	6	A	9	9	13	18	19	13	13	6	8	21	14	12.9	76.6	
3-Dec-04	5	8	5	2	9	4	3	6	8	11	4	A	10	6	7	5	14	14	9	20	27	51	49	23	13.0	51.3	
4-Dec-04	62	20	29	30	38	76	20	29	60	27	A	7	5	4	2	2	2	2	1	1	1	1	1	1	18.3	76.4	
5-Dec-04	1	1	1	1	1	2	2	3	5	A	6	4	3	3	4	5	8	15	13	9	8	7	6	7	4.8	14.7	
6-Dec-04	5	4	6	6	4	3	7	13	A	11	9	11	16	13	9	6	9	19	12	16	11	15	7	6	9.5	19.3	
7-Dec-04	8	7	5	6	10	18	19	A	13	8	C	C	C	C	A	11	10	8	3	1	1	0	1	0	7.1	19.1	
8-Dec-04	0	1	1	A	3	3	3	3	3	4	7	8	7	5	9	8	13	14	15	16	13	28	33	34	10.1	33.5	
9-Dec-04	17	6	6	A	15	12	16	15	16	13	13	13	17	21	35	41	62	101	63	100	56	19	7	11	29.4	100.8	
10-Dec-04	11	14	A	7	10	15	40	50	65	61	87	76	94	60	33	19	22	8	8	7	5	3	3	2	30.3	93.9	
11-Dec-04	1	A	4	2	3	4	4	4	17	23	27	8	9	5	4	3	4	4	4	6	4	4	5	9	6.9	27.4	
12-Dec-04	A	10	23	15	26	13	20	9	12	10	6	7	12	8	10	11	23	20	9	13	15	7	14	A	13.3	26.3	
13-Dec-04	16	14	24	20	22	18	29	46	61	64	63	68	32	8	13	16	17	13	11	3	4	3	A	6	24.8	67.7	
14-Dec-04	7	2	3	1	2	4	8	8	8	8	8	10	19	6	7	10	20	5	5	26	4	A	20	8	8.7	26.1	
15-Dec-04	29	15	8	11	15	13	24	43	42	31	23	22	20	10	10	10	24	27	13	29	A	49	39	50	24.3	50.0	
16-Dec-04	58	36	24	51	24	22	15	18	38	41	22	21	15	16	12	19	21	26	13	A	10	5	28	7	23.6	57.7	
17-Dec-04	3	2	2	2	3	7	4	12	13	17	13	31	19	16	25	23	58	22	A	27	16	16	30	19	16.6	58.3	
18-Dec-04	15	10	15	31	38	46	25	52	70	78	45	17	13	10	9	8	9	A	19	52	55	31	30	7	29.7	78.3	
19-Dec-04	3	2	2	8	7	3	4	16	6	2	4	3	3	2	5	8	A	6	6	6	3	19	7	6	5.7	19.3	
20-Dec-04	7	6	6	3	20	16	7	7	8	11	9	9	6	7	10	A	10	11	8	16	11	7	10	7	9.2	19.5	
21-Dec-04	4	6	4	7	7	14	10	11	8	7	3	2	4	7	A	14	15	20	27	24	21	19	19	22	12.0	26.6	
22-Dec-04	19	15	16	14	21	23	25	18	12	12	8	7	6	A	8	7	13	19	18	18	34	50	24	15	17.5	50.2	
23-Dec-04	12	12	14	17	19	27	27	26	36	49	17	10	A	8	6	10	7	8	15	9	12	9	7	5	15.7	48.5	
24-Dec-04	3	2	2	7	12	6	6	12	14	7	5	A	16	5	6	5	5	5	4	7	6	4	13	7	6.9	15.5	
25-Dec-04	6	5	7	10	18	15	10	5	5	6	A	16	30	16	10	8	5	5	4	7	10	11	10	9	9.9	29.7	
26-Dec-04	7	5	5	4	3	3	3	3	4	A	7	5	5	5	4	5	5	3	2	3	4	1	1	1	3.9	6.8	
27-Dec-04	4	8	6	10	3	1	1	2	A	7	5	12	11	7	7	9	15	56	22	49	31	34	42	35	16.4	56.5	
28-Dec-04	24	23	32	21	12	14	20	A	13	18	27	10	14	10	19	25	43	95	69	72	36	31	30	46	30.5	94.6	
29-Dec-04	57	27	23	44	26	20	A	34	89	119	104	39	54	48	35	23	27	21	25	17	13	10	7	5	37.7	119.0	
30-Dec-04	6	5	6	6	4	A	6	5	5	4	3	5	5	4	4	3	4	7	8	7	7	7	7	8	5.5	8.0	
31-Dec-04	7	6	6	6	A	11	10	10	10	10	9	11	9	9	12	12	11	10	9	10	9	9	11	9	9.4	12.3	
Hourly Avg	13.4	9.3	9.7	12.0	12.8	14.4	13.2	16.9	25.4	23.6	19.8	16.1	16.6	11.6	11.7	11.7	16.9	19.8	14.5	20.0	14.8	16.0	16.4	12.7			
Hourly Max	61.8	36.1	32.2	51.2	38.4	76.4	39.7	52.4	89.0	119.0	104.1	75.7	93.9	59.7	35.1	41.2	61.9	100.8	68.9	100.3	56.2	51.3	49.3	50.0			



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Oxides of Nitrogen (NO_x)

Station Owner: PAS

Monitoring Dates: December 1, 2004 to January 1, 2005

Summary

Maximum 1-hr Value:	390.5	ppb	18-Dec	8:00 9:00
Maximum 24-hr Value:	112.5	ppb	10-Dec	

AIC Time:	33 hrs	Operational Time:	707 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	250	134	50	22	10	3	1	40.2 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-Dec-04	5	38	38	3	83	59	72	54	108	32	27	16	17	A	37	23	17	21	15	50	45	108	15	6	38.7	107.9
2-Dec-04	4	3	3	61	34	122	250	21	217	80	21	21	A	15	16	23	28	26	23	24	18	34	39	34	48.6	250.4
3-Dec-04	16	38	76	3	111	57	7	9	11	84	7	A	86	8	18	8	69	23	14	40	39	142	77	62	43.8	142.3
4-Dec-04	368	28	78	59	105	184	27	49	100	54	A	10	7	5	3	3	3	3	1	1	2	1	2	2	47.5	367.8
5-Dec-04	2	1	1	1	1	4	4	6	8	A	9	5	4	5	5	8	17	23	20	12	13	10	9	11	7.8	22.9
6-Dec-04	6	6	8	9	6	7	9	22	A	14	13	16	21	20	38	26	14	24	15	37	25	33	10	8	16.8	38.4
7-Dec-04	10	10	7	9	14	25	28	A	46	12	C	C	C	C	A	19	19	23	4	3	2	1	3	3	13.3	46.4
8-Dec-04	2	1	2	A	5	4	5	4	6	6	12	11	10	7	59	11	17	19	19	27	17	49	49	47	16.9	59.2
9-Dec-04	28	8	8	A	20	15	35	22	23	53	36	18	21	29	59	63	115	150	73	235	113	139	10	34	56.8	234.6
10-Dec-04	36	36	A	11	50	160	313	77	191	193	122	339	283	93	116	199	163	11	71	76	36	5	4	3	112.5	339.1
11-Dec-04	2	A	38	4	43	50	32	11	45	66	65	35	21	7	6	8	6	8	7	20	5	10	8	13	22.1	65.8
12-Dec-04	A	15	45	39	102	18	106	20	21	13	10	11	40	13	82	19	36	44	14	79	58	14	20	A	37.2	106.4
13-Dec-04	105	69	187	90	28	33	142	91	70	108	77	85	69	125	22	53	23	32	62	8	71	5	A	43	69.4	186.6
14-Dec-04	124	3	55	3	3	99	23	52	11	76	70	38	56	92	23	23	27	9	10	119	6	A	52	21	43.3	123.9
15-Dec-04	95	21	17	24	57	45	106	58	64	65	40	43	31	15	15	15	38	66	27	71	A	143	108	125	56.1	143.0
16-Dec-04	111	248	38	85	44	44	106	30	67	80	86	64	25	26	15	67	53	134	28	A	89	7	53	26	66.2	248.1
17-Dec-04	13	11	9	4	4	16	11	31	20	128	34	92	54	68	33	40	126	29	A	44	24	60	58	22	40.5	128.5
18-Dec-04	27	19	50	40	63	149	45	187	391	382	65	32	19	13	11	9	11	A	53	103	89	54	106	19	84.2	390.5
19-Dec-04	8	4	3	91	87	4	22	75	165	22	69	26	11	3	96	27	A	10	10	14	7	27	30	12	35.8	164.6
20-Dec-04	19	56	18	5	43	26	21	17	24	22	16	15	16	19	18	A	12	15	13	21	17	9	14	13	19.5	56.1
21-Dec-04	6	8	6	8	10	24	24	20	12	14	5	3	6	13	A	29	19	28	30	28	105	46	29	63	23.4	104.6
22-Dec-04	41	20	19	17	41	29	39	25	24	17	17	11	14	A	13	10	29	29	43	29	46	93	38	34	29.4	92.6
23-Dec-04	150	18	26	27	24	133	44	49	56	61	85	56	A	20	12	137	86	16	121	76	27	14	17	12	55.1	149.6
24-Dec-04	9	5	3	34	115	9	44	24	114	18	7	A	31	8	22	6	6	6	5	19	22	7	25	11	23.8	115.5
25-Dec-04	8	7	13	20	30	30	49	7	8	10	A	27	36	23	17	13	8	10	7	8	13	13	13	11	16.7	49.3
26-Dec-04	10	7	7	5	5	5	5	5	6	A	10	7	8	10	6	8	9	12	4	7	8	7	3	3	6.7	12.2
27-Dec-04	9	11	8	26	7	4	4	5	A	12	8	16	25	17	13	21	20	129	40	162	47	43	68	76	33.4	161.8
28-Dec-04	28	28	48	46	18	22	133	A	49	64	74	122	80	23	99	32	88	217	153	259	57	119	102	145	87.3	259.4
29-Dec-04	117	46	45	202	45	29	A	50	122	147	142	64	64	64	57	26	35	26	32	22	15	12	9	7	60.0	202.1
30-Dec-04	17	7	9	10	6	A	10	7	17	14	5	25	10	8	8	9	7	13	29	8	15	8	9	10	11.3	29.2
31-Dec-04	9	8	8	8	A	14	12	13	13	12	25	27	16	12	20	25	15	16	28	26	11	13	14	12	15.4	27.7
Hourly Avg	46.2	26.0	29.1	32.5	40.2	47.3	57.6	35.9	69.2	64.1	41.3	44.1	38.6	27.2	32.4	31.9	37.3	38.9	32.4	54.3	34.7	40.8	33.0	29.6		
Hourly Max	367.8	248.1	186.6	202.1	115.5	183.6	312.9	186.9	390.5	381.5	141.8	339.1	282.6	124.7	115.6	199.2	162.5	216.7	153.3	259.4	112.9	143.0	107.6	145.1		

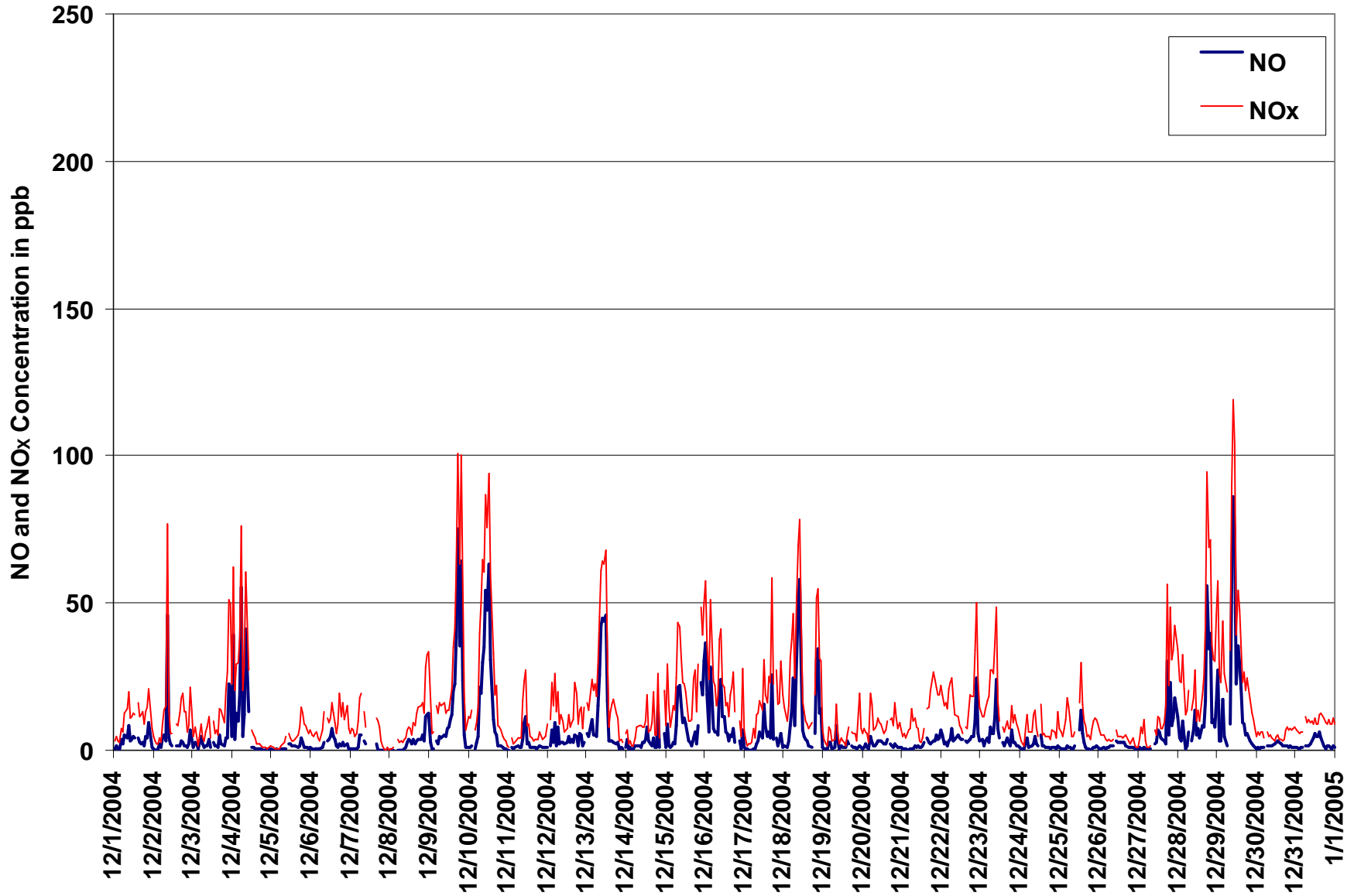


Figure 3. PAS - Crescent Heights Oxides of Nitrogen 1-hr Average Monthly Trends

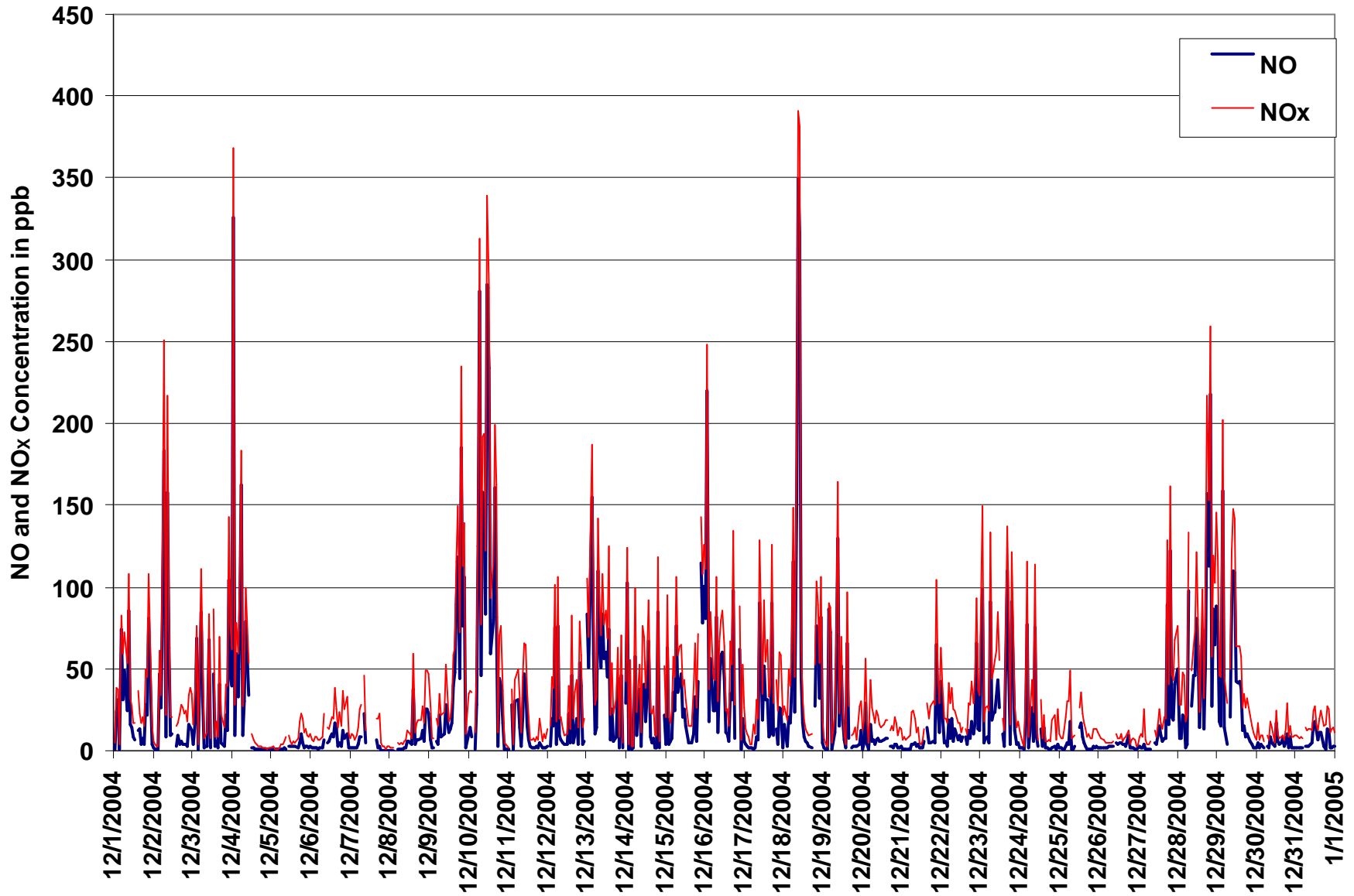


Figure 4. PAS - Crescent Heights Oxides of Nitrogen 1-hr Maximum Value Monthly Trends



PAS - Crescent Heights Ozone Monthly Summary

Station: Crescent Heights

HOURLY AVERAGE TABLE

Ozone (O₃)

Station Owner: PAS

Monitoring Dates: December 1, 2004 to January 1, 2005

Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	38 ppb 19-Dec 19:00 20:00
Maximum 24-hr Average:	27 ppb 24-Dec

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

AIC Time:	33 hrs	Operational Time:	709 hrs					
Calibration Time:	2 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	33	30	25	20	12	3	1	18.4 ppb

Status Flag Characters

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

Day Mountain Standard Time

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Dec-04	2	21	23	23	22	19	15	11	10	15	15	16	17	19	A	21	19	18	20	17	16	14	17	18	16.9	23.1
2-Dec-04	20	21	22	21	21	19	17	13	15	20	25	26	28	A	32	27	23	19	22	22	28	26	14	17	21.6	31.6
3-Dec-04	22	23	25	27	27	29	30	27	25	27	32	31	A	32	30	32	26	22	24	15	8	3	2	9	23.0	32.1
4-Dec-04	4	9	6	2	2	1	3	3	3	11	28	A	27	26	20	14	11	12	13	14	16	17	16	15	11.9	28.0
5-Dec-04	16	17	18	18	19	18	18	18	16	17	A	17	18	17	17	15	11	7	8	13	15	18	21	21	16.2	20.9
6-Dec-04	23	23	22	22	24	26	23	18	19	A	23	23	22	24	26	26	22	13	18	12	15	13	19	20	20.7	26.4
7-Dec-04	18	18	20	19	17	11	11	13	A	19	22	23	22	22	21	20	C	C	A	21	22	22	20	21	19.1	22.7
8-Dec-04	21	21	21	A	21	22	22	22	22	21	19	19	17	17	15	14	11	10	9	11	13	6	3	2	15.6	22.0
9-Dec-04	8	16	15	A	9	10	9	10	9	13	13	13	12	12	9	5	1	1	1	1	4	22	28	24	10.7	28.2
10-Dec-04	24	22	A	28	26	22	16	5	3	10	6	9	7	9	13	18	14	21	21	22	22	23	26	16.9	28.4	
11-Dec-04	27	A	25	26	26	23	24	23	11	8	9	27	26	27	27	33	32	31	29	27	31	28	26	20	24.7	33.5
12-Dec-04	A	20	10	12	8	12	11	16	18	22	28	30	28	30	30	23	12	11	15	14	12	15	8	A	17.4	29.8
13-Dec-04	14	15	10	7	4	7	6	2	2	4	6	7	22	35	29	26	23	28	29	33	32	31	A	30	17.5	35.0
14-Dec-04	29	29	29	29	28	26	22	23	22	23	23	22	26	31	29	25	16	28	27	20	27	A	19	22	25.0	30.6
15-Dec-04	10	13	18	15	12	11	6	2	2	5	10	15	19	28	28	28	16	12	20	10	A	2	4	4	12.5	28.5
16-Dec-04	1	2	3	2	4	6	14	7	5	6	11	14	20	21	22	16	11	9	16	A	26	28	15	30	12.6	29.9
17-Dec-04	33	35	34	32	29	25	30	24	22	20	23	21	24	24	19	18	4	15	A	15	23	22	10	12	22.3	34.6
18-Dec-04	18	22	18	6	2	1	4	1	1	3	5	12	14	17	16	15	12	A	11	1	1	2	7	16	8.9	21.7
19-Dec-04	19	20	20	17	18	21	22	19	25	26	25	27	27	31	32	30	A	38	37	38	36	19	29	27	26.3	38.1
20-Dec-04	24	25	28	30	18	20	26	26	26	23	23	24	26	25	24	A	24	21	22	16	20	23	20	24	23.3	30.4
21-Dec-04	24	23	25	22	21	13	19	20	21	23	25	27	26	25	A	23	18	10	4	7	11	10	9	7	17.9	26.8
22-Dec-04	9	9	9	10	5	4	3	9	18	21	24	26	29	A	28	26	21	15	16	15	7	4	7	13	14.2	29.1
23-Dec-04	16	14	13	11	10	9	7	10	10	11	24	27	A	30	29	27	27	24	22	21	21	23	25	28	19.1	29.9
24-Dec-04	29	30	31	28	24	26	26	22	23	27	30	A	26	30	30	30	29	29	29	24	25	25	16	19	26.5	31.1
25-Dec-04	20	22	22	20	13	17	19	21	20	20	A	19	12	16	20	22	27	26	25	22	19	17	18	17	19.8	27.3
26-Dec-04	18	17	17	17	18	19	23	24	25	A	26	27	27	28	28	28	26	28	28	27	27	29	28	28	24.5	28.8
27-Dec-04	25	21	22	19	25	26	26	25	A	24	25	23	23	25	23	21	14	5	9	3	4	3	2	2	17.2	26.1
28-Dec-04	5	4	3	11	19	19	18	A	24	22	22	29	27	30	27	19	9	3	3	3	6	13	9	4	14.4	30.4
29-Dec-04	5	8	11	8	11	13	A	6	2	4	7	13	11	12	13	12	7	11	7	12	15	16	18	19	10.4	18.9
30-Dec-04	18	18	19	18	20	A	22	21	21	21	22	22	22	23	25	26	27	25	24	24	24	24	23	22	22.2	27.3
31-Dec-04	23	24	23	23	A	21	21	20	21	22	24	25	25	25	24	22	20	20	23	21	21	21	20	21	22.2	25.5
Hourly Avg	17.5	18.8	18.7	18.1	16.7	16.6	17.0	15.3	15.3	16.8	19.9	21.1	21.8	23.8	23.7	22.1	17.7	17.6	18.3	16.7	18.3	17.4	15.9	18.0		
Hourly Max	32.9	34.6	33.6	32.2	29.3	29.1	30.1	26.7	25.8	27.3	32.1	30.9	29.1	35.0	32.3	33.5	32.4	37.7	37.2	38.1	36.4	31.4	29.4	30.0		

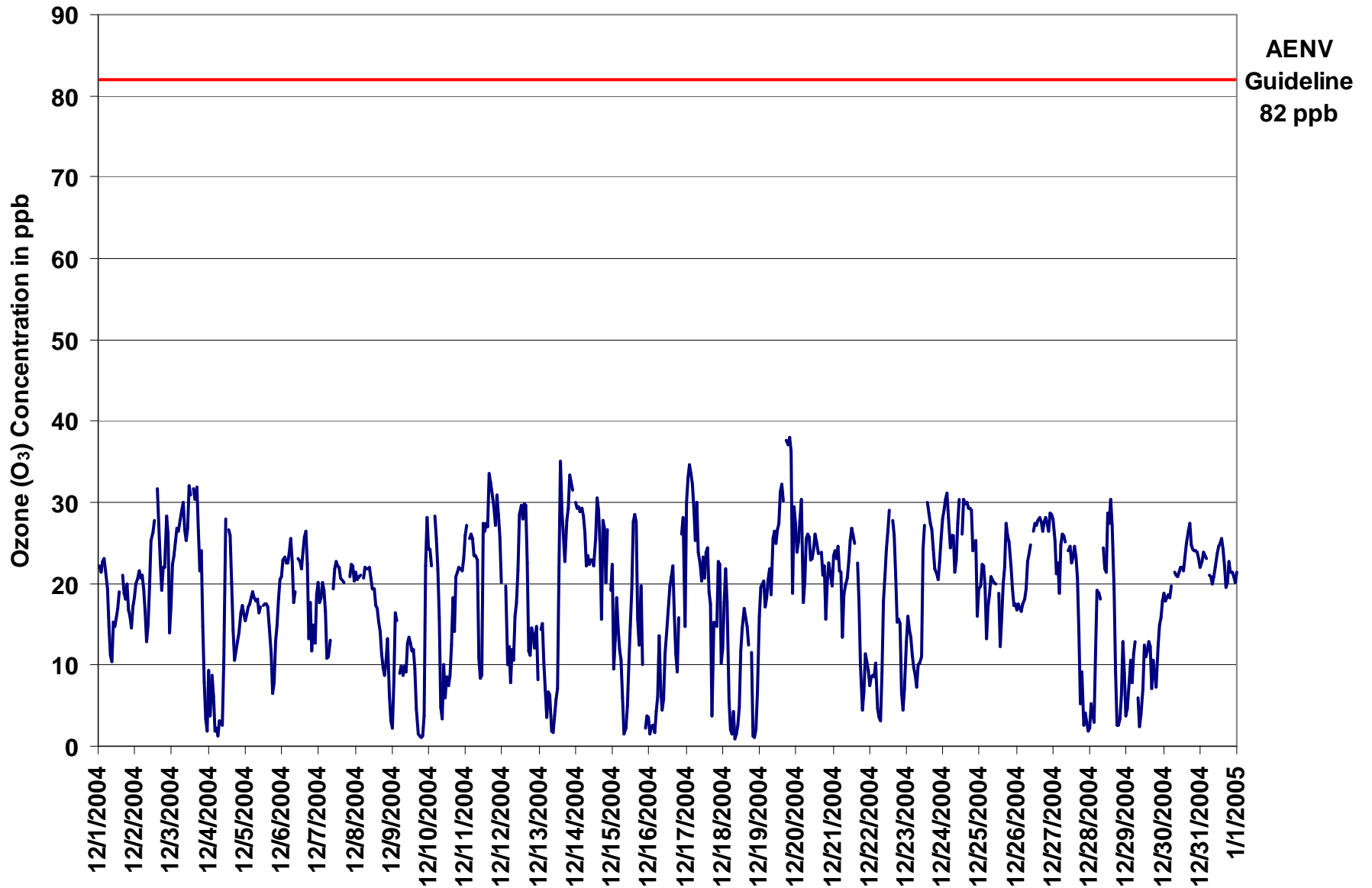


Figure 5. PAS - Crescent Heights Ozone 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Ozone (O₃)

Station Owner: PAS

Monitoring Dates: December 1, 2004 to January 1, 2005

Summary

Maximum 1-hr Value:	41.8	ppb	19-Dec	19:00 20:00
Maximum 24-hr Value:	29.9	ppb	24-Dec	

AIC Time:	33 hrs	Operational Time:	709 hrs					
Calibration Time:	2 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	37	33	28	23	17	6	3	22.2 ppb

Status Flag Characters

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum	
	Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00			23:00 0:00
1-Dec-04	23	23	24	24	24	23	18	14	16	18	18	20	20	24	A	24	22	23	25	21	21	22	20	20	21.2	25.1	
2-Dec-04	22	22	24	22	22	22	19	15	23	26	28	28	29	A	38	36	31	29	26	28	33	33	27	24	26.4	37.5	
3-Dec-04	26	28	27	28	32	31	32	29	29	31	35	34	A	28	27	34	35	33	29	27	24	16	10	5	20	27.3	35.0
4-Dec-04	12	20	18	4	5	4	8	8	7	21	31	A	A	28	27	27	17	13	13	14	16	18	19	17	17	15.8	31.4
5-Dec-04	18	18	19	19	20	20	19	19	19	19	A	19	19	19	18	17	16	10	12	16	17	21	23	23	18.1	22.9	
6-Dec-04	26	25	24	24	26	28	25	22	23	A	26	27	26	26	28	29	29	18	22	17	21	20	21	21	24.1	29.3	
7-Dec-04	20	21	22	22	21	17	17	17	A	22	23	24	23	24	24	22	C	C	A	23	24	24	22	23	21.8	24.0	
8-Dec-04	22	22	22	A	22	23	23	23	23	22	21	20	20	18	17	17	13	14	11	13	16	15	6	7	17.8	23.5	
9-Dec-04	15	18	18	A	13	12	11	12	13	15	15	14	13	15	14	7	3	3	2	2	11	29	30	29	13.6	30.1	
10-Dec-04	28	28	A	30	29	27	24	10	6	19	12	12	11	13	20	24	24	24	24	25	23	23	25	27	21.2	30.2	
11-Dec-04	28	A	27	27	27	25	25	25	18	13	20	35	31	30	29	38	34	34	30	30	33	31	28	23	27.9	37.8	
12-Dec-04	A	23	22	17	14	15	17	20	22	26	30	32	33	33	35	28	19	16	16	16	16	19	11	A	21.8	34.5	
13-Dec-04	18	19	15	12	8	11	10	4	3	6	8	12	37	37	35	36	28	33	34	35	35	33	A	32	21.7	37.4	
14-Dec-04	31	31	31	31	29	28	27	25	26	25	25	26	33	34	34	31	29	30	30	28	29	A	28	27	28.9	33.6	
15-Dec-04	19	20	21	18	15	14	11	4	5	9	16	19	27	31	33	32	26	23	26	18	A	5	9	9	17.8	32.7	
16-Dec-04	5	6	5	7	9	13	20	13	12	9	16	17	33	39	25	20	17	17	23	A	29	30	32	34	18.7	39.1	
17-Dec-04	36	36	35	35	30	32	32	30	28	24	27	26	27	29	23	26	11	28	A	20	29	29	22	16	27.4	36.1	
18-Dec-04	24	25	22	17	5	5	9	2	6	5	8	14	17	19	18	17	14	A	18	2	2	5	14	19	12.4	24.6	
19-Dec-04	21	21	22	21	22	22	24	24	30	28	27	28	28	35	34	36	A	41	40	42	40	26	32	32	29.4	41.8	
20-Dec-04	28	29	32	32	30	28	28	31	31	29	27	28	28	28	27	A	26	24	24	19	24	24	24	26	27.3	32.1	
21-Dec-04	26	26	27	24	24	21	23	22	23	25	27	28	27	26	A	26	25	18	8	9	16	15	14	11	21.3	27.9	
22-Dec-04	12	11	11	12	10	6	6	16	21	24	26	29	31	A	29	28	26	22	20	22	14	9	12	18	18.0	30.6	
23-Dec-04	18	18	19	16	15	15	14	17	19	16	30	31	A	31	31	29	28	27	26	24	25	25	30	32	23.3	31.6	
24-Dec-04	31	32	32	32	31	29	28	29	30	31	32	A	30	32	32	32	31	31	31	29	29	28	23	22	29.9	32.4	
25-Dec-04	22	25	25	27	18	22	23	23	22	22	A	25	17	19	24	26	32	30	28	25	26	19	21	20	23.4	31.6	
26-Dec-04	20	19	18	19	20	23	24	26	27	A	28	28	29	30	30	30	30	30	30	30	31	31	31	30	26.5	31.0	
27-Dec-04	28	24	24	24	27	27	28	27	A	27	26	25	25	26	26	25	18	14	18	5	6	8	3	4	20.4	28.1	
28-Dec-04	12	8	7	17	22	26	26	A	28	28	29	31	31	33	33	29	22	6	7	7	10	22	16	13	20.2	33.3	
29-Dec-04	11	16	16	18	19	26	A	10	4	6	14	15	13	16	17	15	13	13	10	15	18	18	19	20	14.9	25.7	
30-Dec-04	20	20	20	21	21	A	23	22	23	23	23	23	25	25	28	29	29	27	26	25	25	25	25	25	25	24.0	29.0
31-Dec-04	24	25	25	24	A	23	22	21	23	24	25	26	26	27	26	27	24	25	25	24	23	23	23	24	24.3	27.0	
Hourly Avg	21.5	21.8	21.8	21.6	20.3	20.6	20.5	18.7	19.2	20.4	23.2	23.9	25.4	26.9	27.1	26.3	22.9	22.4	21.8	20.4	21.9	21.4	20.5	21.5			
Hourly Max	36.1	35.6	35.3	35.0	31.6	31.9	32.2	31.3	31.0	31.1	34.7	34.8	36.5	39.1	37.5	37.8	33.9	40.9	40.3	41.8	39.7	32.9	32.3	34.0			

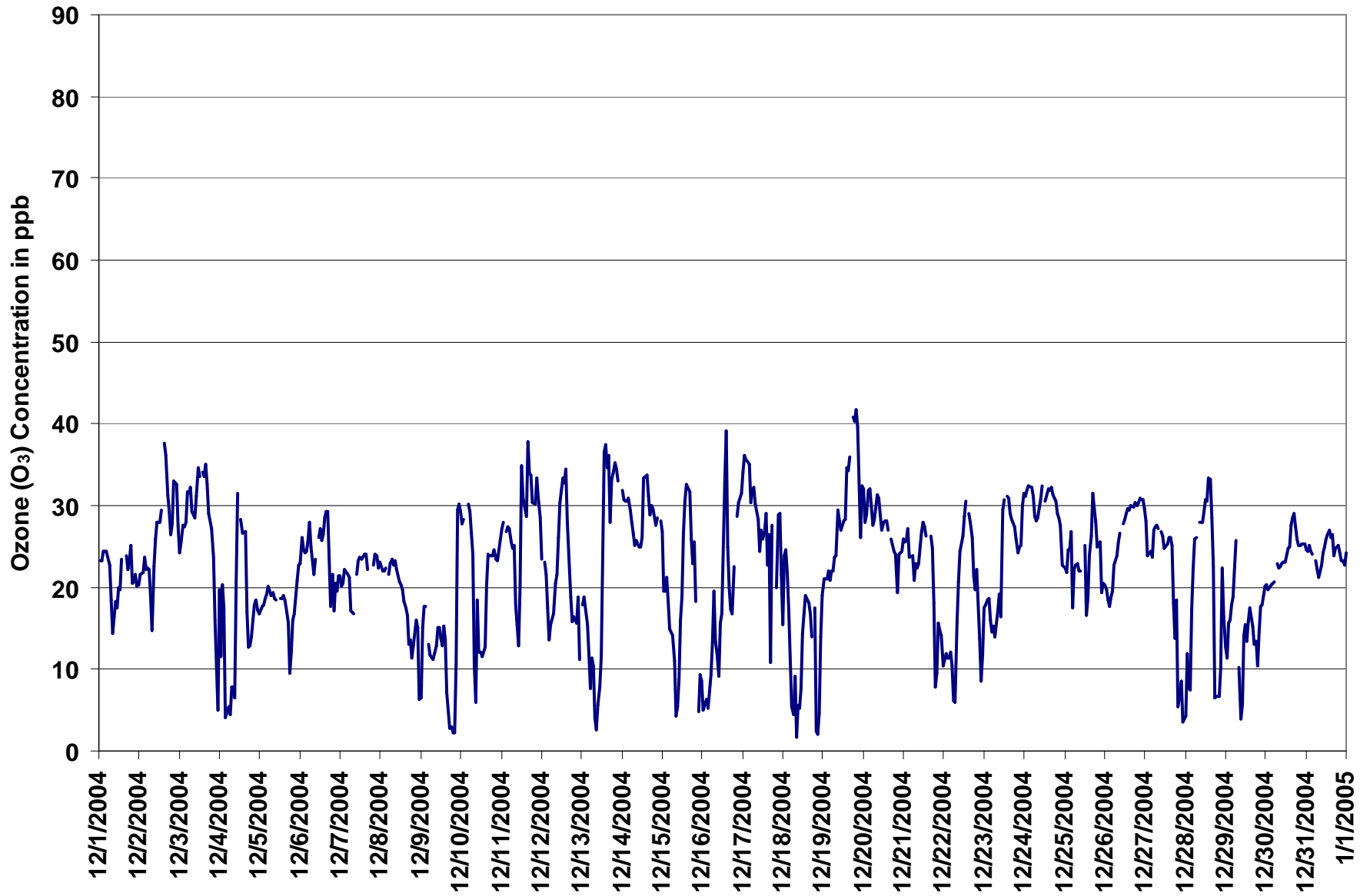


Figure 6. PAS - Crescent Heights Ozone 1-hr Maximum Value Monthly Trend



Station: Crescent Heights

EIGHT HOUR RUNNING AVERAGE TABLE

Ozone (O₃)

Station Owner: PAS

Monitoring Dates: December 1, 2004 to January 1, 2005

Summary

Number of 8-hr Exceedances:	0						
Maximum 8-hr Average:	34.7	ppb	19-Dec	20:00	21:00		

Guideline Limit: Canada Wide Standard 8-hr 65 ppb

Percentile	99	95	75	50	25	5	1
	30.9	28.8	23.7	19.4	13.3	6.7	3.7

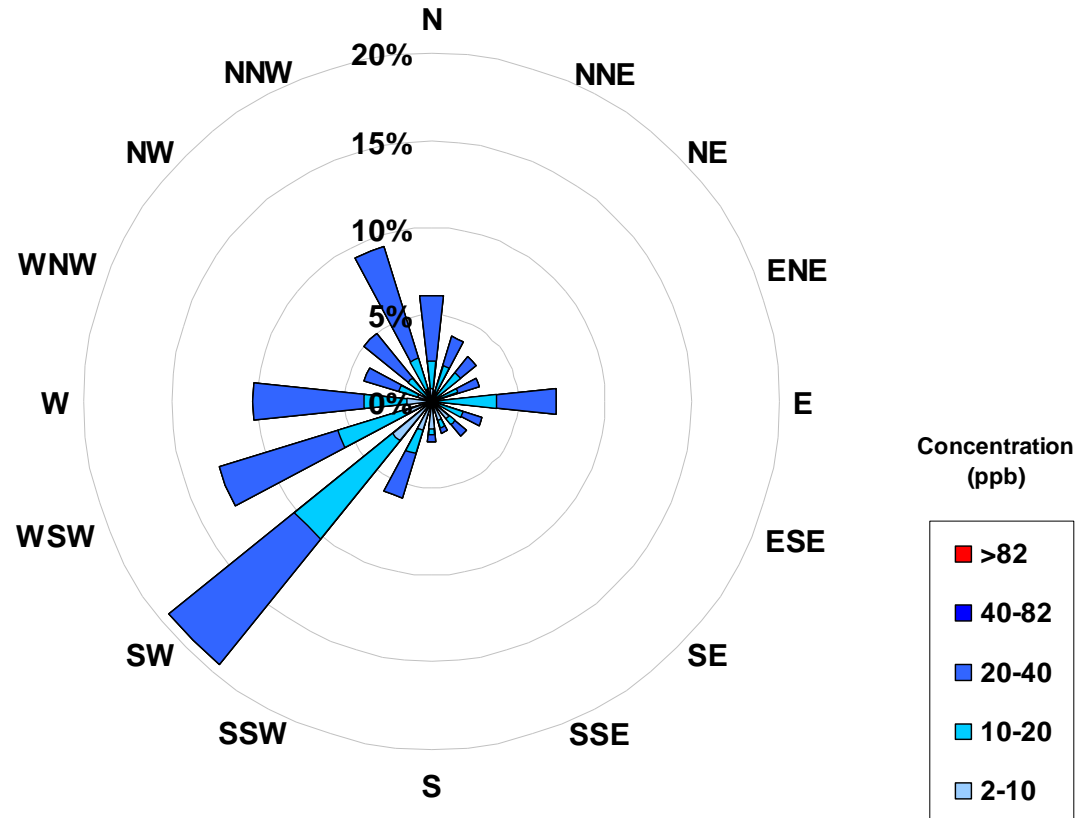
Status Flag Characters

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

Day	Mountain Standard Time																								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-Dec-04	22	21	23	24	23	23	21	20	18	17	16	15	15	15	15	16	17	18	19	19	19	18	18	17	18.7	23.8
2-Dec-04	18	18	18	19	19	20	20	19	18	18	19	20	20	20	23	25	26	26	25	25	25	25	23	21	21.2	25.8
3-Dec-04	21	22	22	23	23	23	25	26	27	27	28	28	29	29	30	30	29	28	26	24	20	16	14	25.0	30.0	
4-Dec-04	11	9	7	5	5	4	5	4	4	4	7	7	11	14	17	18	19	20	17	17	16	15	14	14	11.0	19.6
5-Dec-04	15	16	16	17	17	17	17	18	18	18	18	18	18	17	17	17	16	15	14	13	13	13	13	14	16.0	17.9
6-Dec-04	16	18	19	21	22	23	23	23	22	22	22	22	22	22	22	23	24	22	22	20	19	18	17	16	20.8	23.7
7-Dec-04	16	16	17	18	18	18	17	16	16	16	16	16	17	19	20	21	21	N	N	N	N	N	N	N	N	21.3
8-Dec-04	N	21	21	21	21	21	21	21	21	21	21	21	21	20	19	18	17	15	14	13	12	11	10	8	17.9	21.4
9-Dec-04	8	9	9	9	9	9	10	11	11	11	10	11	11	11	11	11	10	8	7	5	4	6	8	10	9.1	11.4
10-Dec-04	13	16	18	22	25	25	23	20	17	16	14	12	10	8	8	9	11	12	14	16	17	19	20	21	16.2	25.0
11-Dec-04	23	23	24	24	25	25	25	25	23	21	19	19	19	19	20	21	24	27	29	29	30	30	30	28	24.3	30.0
12-Dec-04	28	26	23	21	18	15	13	13	13	14	16	18	21	23	25	26	25	24	22	20	18	16	14	12	19.3	27.5
13-Dec-04	13	13	13	12	10	9	9	8	7	5	5	5	7	10	13	16	19	22	25	28	29	29	30	15.2	29.6	
14-Dec-04	30	31	31	30	30	29	28	27	26	25	25	24	23	24	25	25	24	25	25	25	25	24	23	23	26.2	30.7
15-Dec-04	22	20	18	18	16	15	13	11	10	9	8	8	9	11	14	17	19	20	21	20	20	17	13	10	14.8	21.8
16-Dec-04	8	6	4	3	3	3	4	5	5	6	7	8	10	12	13	14	15	16	16	16	17	18	17	19	10.3	19.3
17-Dec-04	22	26	29	29	29	29	31	30	29	27	26	24	24	24	22	21	19	18	18	17	17	16	15	14	23.2	31.0
18-Dec-04	16	17	17	16	14	11	10	9	7	4	3	4	5	7	9	10	12	13	14	12	11	8	7	7	10.2	17.4
19-Dec-04	8	10	11	13	15	17	19	20	20	21	22	23	24	25	27	28	28	30	32	33	35	33	33	32	23.3	34.7
20-Dec-04	31	30	28	27	25	25	25	25	25	25	24	23	24	25	25	24	24	24	24	22	22	21	21	21	24.6	31.1
21-Dec-04	21	21	22	22	23	21	21	21	20	20	20	21	22	23	24	24	24	22	19	16	14	12	12	10	19.8	24.1
22-Dec-04	8	8	9	9	9	8	7	7	8	10	12	14	17	19	22	25	25	24	23	21	18	16	14	12	14.4	25.1
23-Dec-04	12	11	11	11	11	12	12	11	11	10	12	14	14	17	20	23	25	27	27	26	25	24	24	24	17.2	26.9
24-Dec-04	24	25	26	27	27	28	28	27	26	26	26	25	26	26	27	28	29	29	29	28	28	28	26	25	26.9	29.3
25-Dec-04	23	23	22	21	20	19	19	19	19	19	19	18	18	18	18	18	19	20	21	21	22	22	22	21	20.2	23.5
26-Dec-04	20	19	18	17	17	18	18	19	20	20	22	23	25	26	26	27	27	27	28	28	27	28	28	28	23.2	27.7
27-Dec-04	28	27	26	25	25	24	24	24	24	24	24	25	25	24	24	23	22	20	18	15	13	10	8	5	21.1	27.5
28-Dec-04	4	4	3	4	6	8	10	11	14	17	19	22	23	25	26	25	23	21	18	15	13	10	8	6	14.1	25.9
29-Dec-04	6	6	7	8	8	8	8	9	8	8	7	8	8	8	8	9	10	11	11	11	11	12	12	13	9.0	13.1
30-Dec-04	14	15	17	18	18	19	19	19	20	20	21	21	21	22	22	23	24	24	24	25	25	25	25	24	21.0	25.0
31-Dec-04	24	23	23	23	23	23	22	22	22	22	22	22	22	22	23	23	23	23	23	23	23	22	21	21	22.5	23.6
Hourly Avg	17.5	17.8	17.9	18.0	17.8	17.7	17.7	17.4	17.1	16.8	17.0	17.4	18.0	18.9	19.8	20.7	21.0	21.0	20.9	20.2	19.7	18.9	18.0	17.4		
Hourly Max	31.1	30.7	30.7	30.1	29.5	29.1	31.0	30.2	28.9	27.1	27.9	28.5	28.7	29.1	29.1	29.9	30.0	30.0	31.8	33.4	34.7	32.9	32.5	32.1		



Concentration Rose for the 1-hr O₃ Average Concentration Occurrences at the Crescent Heights Site for December 2004



Frequency Distribution of O ₃ in ppb			
Range			Frequency (hrs)
0	<	2	19
2	to	10	109
10	to	20	226
20	to	40	355
40	to	82	0
	>	82	0
Total Non-Zero Values			709

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: December 1, 2004 to January 1, 2005

Summary				
Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	2.9	ppm	29-Dec	9:00 10:00
Maximum 24-hr Average:	2.4	ppm	22-Dec	

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

AIC Time:	33 hrs						Operational Time:	709 hrs
Calibration Time:	2 hrs						AMD Operational Uptime:	100.0%
Percentile	99	95	75	50	25	5	1	Average
	2.7	2.5	2.3	2.1	2.0	1.9	1.8	2.15 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-Dec-04	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.1	2.1	2.01	2.06
2-Dec-04	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	A	2.0	2.0	2.0	2.1	2.0	2.1	2.0	2.1	2.1	2.1	2.01	2.14
3-Dec-04	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.3	2.3	2.3	2.01	2.32
4-Dec-04	2.4	2.4	2.4	2.4	2.4	2.3	2.2	2.3	2.5	2.5	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.22	2.52
5-Dec-04	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.1	2.2	A	2.2	2.2	2.0	2.0	2.1	2.1	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.06	2.19
6-Dec-04	2.1	2.0	2.0	2.3	2.1	2.1	2.1	2.2	2.2	A	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.4	2.3	2.3	2.2	2.2	2.18	2.40
7-Dec-04	2.3	2.4	2.3	2.3	2.4	2.4	2.4	2.4	A	2.4	2.2	2.1	2.1	2.2	C	C	A	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.30	2.44
8-Dec-04	2.3	2.3	2.3	A	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.16	2.34
9-Dec-04	2.2	2.1	2.2	A	2.3	2.3	2.3	2.4	2.4	2.5	2.4	2.4	2.4	2.4	2.4	2.6	2.7	2.7	2.6	2.5	2.3	2.1	2.1	2.1	2.1	2.36	2.74
10-Dec-04	2.0	2.1	A	2.0	2.1	2.1	2.1	2.2	2.3	2.3	2.5	2.3	2.5	2.5	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.11	2.50
11-Dec-04	1.9	A	1.9	1.8	1.8	1.8	1.8	1.7	1.8	1.9	2.0	1.9	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	1.92	2.13
12-Dec-04	A	2.1	2.2	2.2	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.0	2.1	A	2.1	2.13	2.26
13-Dec-04	2.1	2.1	2.2	2.3	2.3	2.3	2.3	2.3	2.4	2.3	2.4	2.4	2.2	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	A	2.0	2.0	2.17	2.44
14-Dec-04	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	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	1.92	2.04
15-Dec-04	2.1	2.1	2.1	2.3	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	A	2.3	2.3	2.3	2.15	2.30
16-Dec-04	2.3	2.2	2.2	2.4	2.2	2.2	2.0	2.0	2.2	2.4	2.4	2.2	2.4	2.2	2.1	2.1	2.0	2.1	2.0	A	2.0	1.9	1.9	1.9	1.9	2.14	2.43
17-Dec-04	1.8	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.2	2.1	2.3	2.1	A	2.2	2.2	2.2	2.2	2.3	2.3	2.06	2.28
18-Dec-04	2.2	2.2	2.3	2.3	2.4	2.4	2.3	2.4	2.4	2.4	2.6	2.5	2.4	2.4	2.4	2.3	2.3	A	2.3	2.5	2.4	2.3	2.2	2.1	2.1	2.35	2.60
19-Dec-04	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.97	2.05
20-Dec-04	2.0	1.9	2.2	1.9	2.0	1.9	1.9	2.0	1.9	2.0	2.0	2.0	2.1	2.1	2.1	A	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.04	2.20
21-Dec-04	2.1	2.2	2.1	2.3	2.3	2.4	2.3	2.3	2.2	2.1	2.2	2.2	2.2	2.1	A	2.2	2.2	2.3	2.3	2.3	2.2	2.3	2.2	2.2	2.2	2.22	2.35
22-Dec-04	2.7	2.6	2.5	2.4	2.4	2.6	2.7	2.5	2.1	2.1	2.2	2.2	2.1	A	2.2	2.3	2.3	2.4	2.5	2.5	2.5	2.6	2.7	2.7	2.7	2.43	2.74
23-Dec-04	2.6	2.5	2.5	2.5	2.5	2.4	2.3	2.6	2.7	2.7	2.2	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.0	2.0	1.9	1.9	2.26	2.68
24-Dec-04	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.5	2.1	2.1	1.99	2.47
25-Dec-04	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	A	2.1	2.2	2.1	2.1	2.2	2.1	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.11	2.23
26-Dec-04	2.2	2.1	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.3	2.3	2.18	2.27
27-Dec-04	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	A	2.2	2.2	2.1	2.1	2.2	2.2	2.2	2.3	2.4	2.2	2.3	2.4	2.6	2.4	2.4	2.4	2.25	2.60
28-Dec-04	2.4	2.4	2.4	2.3	2.2	2.2	2.2	A	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.6	2.5	2.6	2.4	2.2	2.3	2.4	2.27	2.57
29-Dec-04	2.3	2.3	2.2	2.2	2.2	2.2	A	2.7	2.7	2.9	2.9	2.6	2.7	2.6	2.5	2.4	2.5	2.4	2.4	2.3	2.2	2.1	2.1	2.1	2.1	2.41	2.94
30-Dec-04	2.1	2.1	2.1	2.1	2.2	A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.14	2.20
31-Dec-04	2.1	2.1	2.1	2.1	A	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.4	2.5	2.4	2.3	2.3	2.3	2.2	2.3	2.23	2.47
Hourly Avg	2.15	2.15	2.14	2.14	2.15	2.14	2.13	2.17	2.18	2.20	2.19	2.14	2.15	2.13	2.11	2.12	2.15	2.17	2.15	2.17	2.15	2.16	2.17	2.15	2.15		
Hourly Max	2.65	2.60	2.51	2.50	2.45	2.55	2.74	2.68	2.71	2.94	2.88	2.60	2.69	2.58	2.50	2.60	2.66	2.74	2.59	2.57	2.51	2.60	2.72	2.70	2.70		

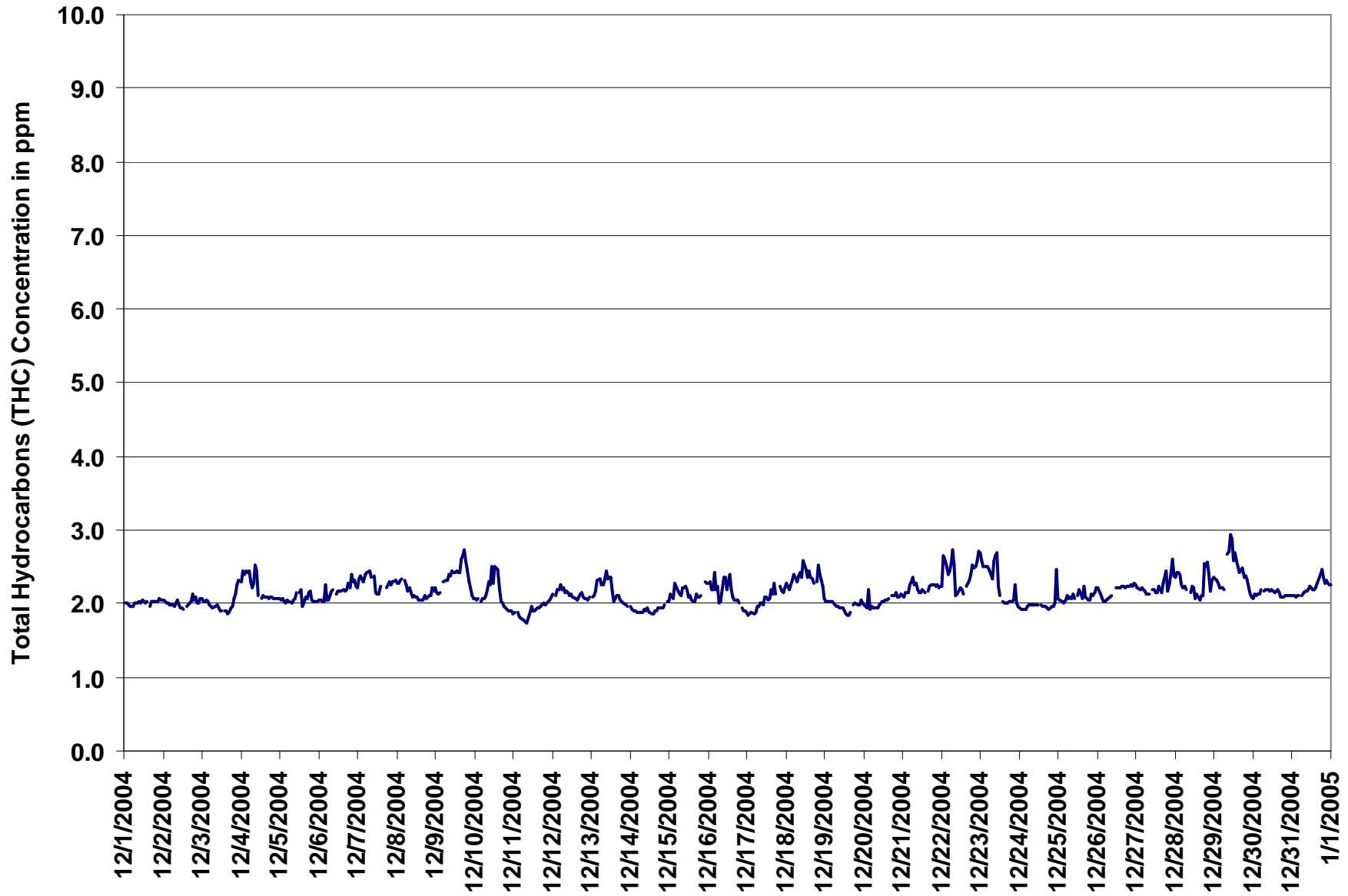


Figure 7. PAS - Crescent Heights Total Hydrocarbons 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Total HydroCarbons (THC)

Station Owner: PAS

Monitoring Dates: December 1, 2004 to January 1, 2005
Summary

Maximum 1-hr Value:	9.1	ppm	16-Dec	13:00 14:00
Maximum 24-hr Value:	2.7	ppm	16-Dec	

AIC Time:	33 hrs	Operational Time:	709 hrs					
Calibration Time:	2 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	3.5	2.8	2.4	2.2	2.1	1.9	1.9	2.3 ppm

Status Flag Characters

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum	
	Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00			23:00 0:00
1-Dec-04	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.1	2.0	2.1	A	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.07	2.23
2-Dec-04	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.9	2.1	2.0	2.0	2.0	A	2.1	2.1	2.1	2.3	2.1	2.3	2.1	2.1	2.2	2.1	2.12	2.91	
3-Dec-04	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	A	2.1	1.9	1.9	1.9	2.0	2.0	2.5	2.2	2.5	2.7	2.4	2.09	2.65	
4-Dec-04	2.5	2.6	2.6	2.5	2.6	2.5	2.4	2.4	2.7	2.8	2.2	A	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.32	2.81	
5-Dec-04	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.5	2.5	2.4	A	2.3	2.4	2.1	2.2	2.3	2.3	2.5	2.4	2.1	2.1	2.1	2.1	2.1	2.22	2.51	
6-Dec-04	2.1	2.1	2.1	5.6	2.1	2.1	2.2	2.2	2.3	A	2.2	2.2	2.2	2.2	2.6	2.4	2.3	2.4	2.3	2.5	2.4	2.5	2.3	2.3	2.41	5.59	
7-Dec-04	2.4	2.5	2.4	2.5	2.9	2.5	2.8	2.7	A	3.6	2.4	2.2	2.3	2.5	C	C	A	2.4	2.3	2.4	2.3	2.4	2.4	2.3	2.51	3.64	
8-Dec-04	2.3	2.4	2.4	A	2.5	2.4	2.2	2.3	2.2	2.2	2.2	2.2	2.1	2.4	2.1	2.2	2.2	2.2	2.2	2.2	2.4	2.3	2.2	2.3	2.27	2.46	
9-Dec-04	2.2	2.2	2.2	A	2.4	2.3	2.4	2.5	2.4	2.6	2.4	2.5	2.5	2.5	2.5	2.9	2.9	2.9	2.7	2.6	2.4	2.3	2.1	2.1	2.46	2.94	
10-Dec-04	2.1	2.1	A	2.1	2.1	2.1	2.2	2.6	2.4	2.5	2.6	2.5	2.9	2.7	2.4	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.22	2.89	
11-Dec-04	1.9	A	1.9	1.9	1.8	1.8	1.8	1.8	1.9	2.1	2.2	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.2	1.98	2.18	
12-Dec-04	A	2.1	2.3	2.3	2.4	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.2	2.1	2.1	2.1	2.2	2.3	2.2	2.1	2.1	2.1	2.1	A	2.20	2.36	
13-Dec-04	2.1	2.1	2.2	2.6	2.5	2.4	2.4	2.5	2.6	2.5	2.5	2.4	2.4	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.0	2.0	A	2.0	2.26	2.61	
14-Dec-04	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	3.0	2.1	2.8	2.1	2.1	1.9	2.0	2.0	2.0	2.0	2.0	2.0	A	2.1	2.2	2.08	3.02
15-Dec-04	2.2	2.1	2.1	5.8	2.2	2.2	2.2	2.3	2.3	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.3	2.2	2.1	2.2	A	2.5	2.5	2.5	2.40	5.77	
16-Dec-04	2.5	2.2	2.3	2.6	2.5	2.5	2.0	2.1	2.3	2.5	2.7	2.3	5.3	9.1	2.8	2.4	2.1	2.1	2.1	A	2.0	1.9	1.9	1.9	2.70	9.11	
17-Dec-04	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.1	2.1	2.5	2.3	2.2	2.2	2.3	2.3	2.5	2.3	A	2.4	2.2	2.3	2.3	2.4	2.16	2.48	
18-Dec-04	2.4	2.3	2.4	2.4	2.6	2.5	2.4	2.5	2.5	2.5	2.9	2.8	2.5	2.6	2.6	2.6	2.4	A	2.5	2.6	2.6	2.3	2.6	2.2	2.51	2.87	
19-Dec-04	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	2.0	2.1	2.0	2.1	2.1	2.0	2.0	2.01	2.10	
20-Dec-04	2.0	2.0	3.6	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.5	A	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.17	3.59	
21-Dec-04	2.1	2.3	2.2	2.4	2.4	2.4	2.3	2.4	2.3	2.3	2.2	2.3	2.3	2.3	A	2.2	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.30	2.43	
22-Dec-04	2.8	2.7	2.6	2.4	2.5	2.7	2.8	2.9	2.1	2.2	2.3	2.2	2.2	A	2.3	2.4	2.4	2.5	2.6	2.6	2.6	2.8	2.8	2.9	2.55	2.92	
23-Dec-04	2.7	2.6	2.6	2.6	2.5	2.5	2.5	3.0	3.0	3.5	2.6	2.3	A	2.1	2.0	2.1	2.0	2.1	2.1	2.1	3.4	2.0	2.0	2.1	2.45	3.49	
24-Dec-04	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.5	4.1	2.1	2.12	4.08	
25-Dec-04	2.1	2.1	2.0	2.1	2.1	2.1	2.4	2.2	2.2	2.2	A	2.2	2.3	2.2	2.1	2.5	2.3	2.1	2.1	2.2	2.2	2.2	2.3	2.3	2.20	2.50	
26-Dec-04	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	A	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.23	2.33	
27-Dec-04	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	A	2.5	2.2	2.2	2.2	2.5	2.5	2.2	2.6	2.7	2.2	2.3	3.0	3.0	2.4	2.5	2.38	2.99	
28-Dec-04	2.6	2.8	3.1	2.4	2.3	2.3	2.2	A	2.3	2.4	2.5	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.9	2.8	2.9	2.6	2.5	2.5	2.46	3.07	
29-Dec-04	2.4	2.4	2.3	2.4	2.3	2.3	A	2.9	3.0	3.4	3.1	2.9	2.9	2.8	2.8	2.5	2.6	2.5	2.5	2.5	2.3	2.2	2.2	2.1	2.56	3.36	
30-Dec-04	2.2	2.2	2.2	2.2	2.3	A	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.19	2.28	
31-Dec-04	2.1	2.2	2.1	2.1	A	2.2	2.3	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.3	2.4	2.5	2.6	2.6	2.5	2.5	2.4	2.3	2.4	2.31	2.61	
Hourly Avg	2.21	2.22	2.27	2.45	2.24	2.22	2.22	2.31	2.31	2.38	2.34	2.25	2.37	2.46	2.27	2.22	2.25	2.28	2.24	2.28	2.28	2.27	2.32	2.23			
Hourly Max	2.84	2.84	3.59	5.77	2.86	2.72	2.84	2.99	2.97	3.64	3.07	2.86	5.32	9.11	2.78	2.93	2.92	2.94	2.84	2.86	3.43	2.99	4.08	2.90			

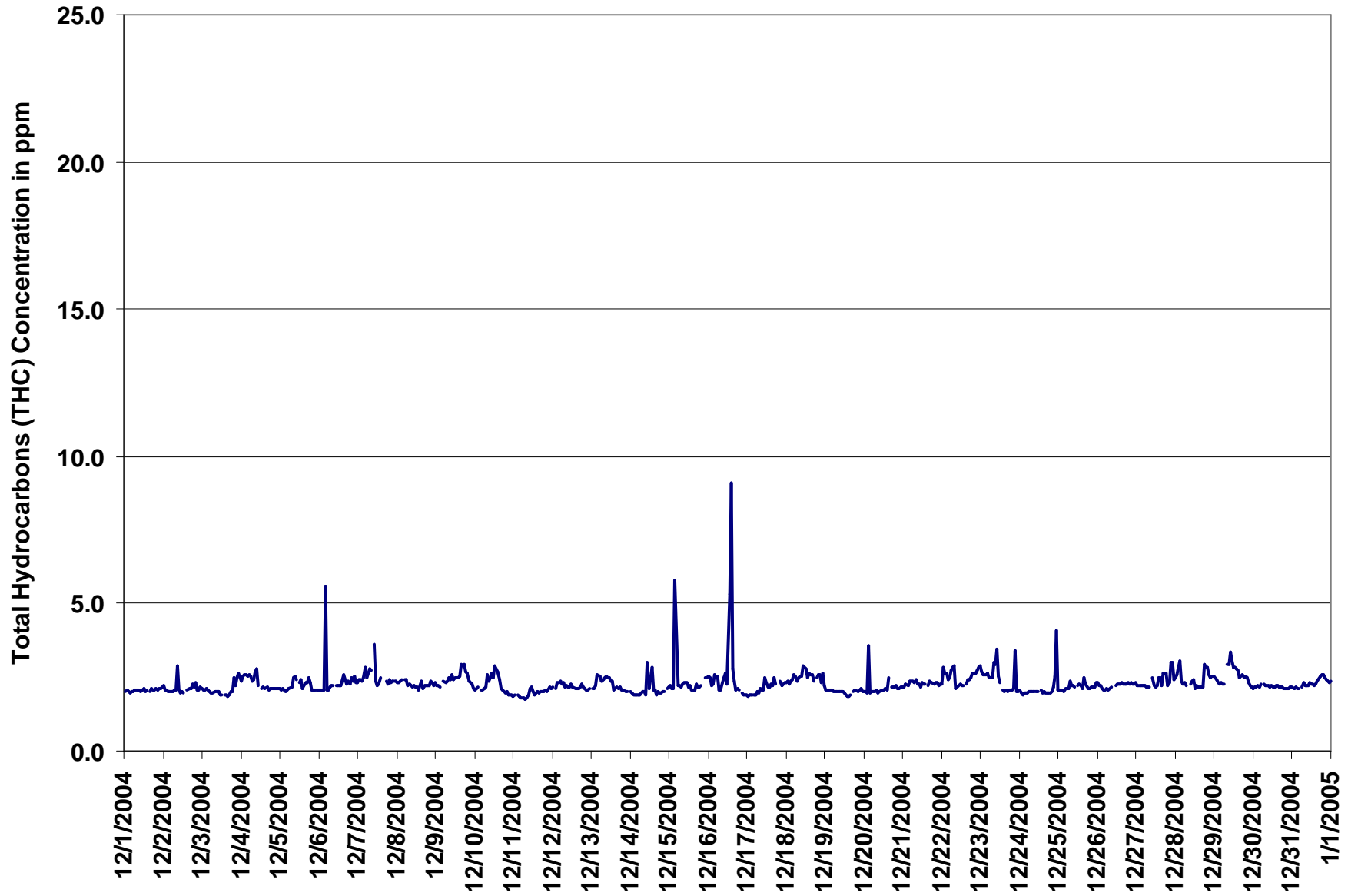


Figure 8. PAS - Crescent Heights Total Hydrocarbons 1-hr Maximum Value Monthly Trend



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

Station: Crescent Heights

HOURLY AVERAGE TABLE

Particulate Matter (PM_{2.5})

Station Owner: PAS

Monitoring Dates: December 1, 2004 to January 1, 2005

Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	14.7 $\mu\text{g}/\text{m}^3$ 9-Dec 17:00 18:00
Maximum 24-hr Average:	8.1 $\mu\text{g}/\text{m}^3$ 9-Dec

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:	740 hrs
Calibration Time:	3 hrs	AMD Operational Uptime:	99.9%
Percentile	99	95	75
	10.1	6.3	3.2
	50	25	5
	1.8	0.5	0.0
	1	0.0	0.0
Average	2.2 $\mu\text{g}/\text{m}^3$		
Geomean	1.9 $\mu\text{g}/\text{m}^3$		

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

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-Dec-04	0:00	1:00	0	1	0	1	1	2	4	3	2	2	1	2	1	0	1	2	1	1	2	1	2	1	0	1.4	3.9	
2-Dec-04	0	0	0	0	0	0	1	6	1	5	0	0	2	5	4	3	3	2	1	2	1	0	0	0	1.5	6.4		
3-Dec-04	0	0	0	0	0	0	0	0	0	1	1	2	1	3	4	2	1	2	3	3	4	5	5	5	4	1.9	5.4	
4-Dec-04	4	3	3	2	2	2	1	2	4	3	0	0	0	0	2	1	2	4	4	3	1	1	4	4	2.1	4.5		
5-Dec-04	3	2	3	2	3	2	2	3	3	4	6	3	2	4	4	3	4	4	8	5	6	5	2	0	3.5	7.6		
6-Dec-04	1	1	1	1	0	0	1	4	3	2	4	2	3	2	1	1	2	1	1	2	2	1	0	0	1.5	3.7		
7-Dec-04	1	0	1	0	0	1	2	2	2	2	1	0	2	2	C	C	C	0	0	0	0	1	0	1	0.9	2.3		
8-Dec-04	0	0	0	1	2	1	1	2	2	2	1	1	2	1	1	2	3	4	4	3	4	6	10	9	2.6	9.6		
9-Dec-04	8	10	9	7	8	8	9	10	8	7	11	10	12	11	11	11	11	15	8	6	4	1	0	0	8.1	14.7		
10-Dec-04	0	0	0	0	0	0	1	3	2	5	4	4	3	2	0	0	0	0	0	0	0	0	0	0	1.1	4.9		
11-Dec-04	0	0	0	0	0	0	0	1	0	4	4	3	1	3	3	0	3	3	2	4	3	3	2	3	1.8	4.3		
12-Dec-04	3	2	2	1	2	1	5	2	3	1	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1.1	5.0		
13-Dec-04	0	0	0	0	0	0	1	2	2	4	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0.7	4.7		
14-Dec-04	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	1	3	1	2	1	1	1	2	2	0.7	2.6		
15-Dec-04	2	2	2	1	2	2	4	4	5	3	1	1	2	1	1	1	3	2	0	3	2	2	2	1	2.0	5.0		
16-Dec-04	0	1	1	2	0	0	1	1	4	6	3	1	0	0	1	0	0	0	0	0	0	0	0	0	0.9	5.8		
17-Dec-04	0	0	1	1	1	1	1	2	1	2	2	2	0	3	4	2	5	6	2	2	1	1	3	3	1.9	6.3		
18-Dec-04	1	1	1	2	3	4	2	4	2	5	5	2	2	0	0	1	1	1	1	2	4	2	2	0	2.0	5.0		
19-Dec-04	0	0	0	0	0	0	0	3	0	0	0	D	0	10	5	10	8	8	0	2	2	0	0	0	2.0	10.0		
20-Dec-04	0	0	1	0	0	0	0	5	3	3	2	3	1	2	3	3	2	2	1	3	3	2	2	1	1.7	4.6		
21-Dec-04	2	2	1	1	1	3	3	3	3	3	3	1	3	4	3	3	3	3	4	4	4	3	3	4	2.7	4.3		
22-Dec-04	3	3	3	3	4	4	4	4	8	6	2	2	2	2	3	3	2	4	3	3	3	3	3	2	3.2	7.6		
23-Dec-04	0	0	0	1	1	2	0	2	1	6	2	0	0	0	1	0	2	2	2	1	1	1	0	0	1.1	6.1		
24-Dec-04	1	1	2	1	1	1	2	2	1	1	0	0	0	0	1	1	1	1	1	2	2	1	2	3	1.2	2.6		
25-Dec-04	0	0	2	1	2	2	1	0	1	1	2	2	2	2	1	2	1	1	1	2	2	2	1	1	1.3	2.2		
26-Dec-04	0	0	4	5	5	5	5	4	5	5	3	2	2	3	2	2	2	3	2	2	1	1	2	1	2.7	5.2		
27-Dec-04	1	2	3	3	2	1	2	1	2	3	2	3	3	4	3	2	5	9	4	6	6	5	7	5	3.4	8.7		
28-Dec-04	4	3	2	2	2	3	0	1	3	2	1	1	2	1	2	1	1	5	3	4	1	2	1	3	2.1	5.0		
29-Dec-04	4	0	1	1	1	0	3	0	4	7	6	0	2	1	0	0	2	2	1	1	3	3	3	5	2.1	6.6		
30-Dec-04	4	4	5	6	5	5	7	7	6	7	7	6	8	6	4	4	4	5	4	4	4	4	5	6	5.1	7.9		
31-Dec-04	4	4	4	4	4	5	4	4	4	4	5	5	4	4	5	4	4	4	5	5	4	3	4	1	4.1	5.3		
Hourly Avg	1.4	1.4	1.7	1.6	1.6	1.8	2.4	2.6	2.9	3.3	2.8	2.0	2.1	2.6	2.2	2.2	2.7	3.1	2.3	2.5	2.2	2.1	2.1	1.9				
Hourly Max	8.2	10.1	9.1	7.2	7.5	7.8	9.5	9.7	8.0	7.1	10.9	10.2	12.2	11.0	10.6	11.1	11.1	14.7	8.1	6.0	6.3	5.7	9.6	8.9				

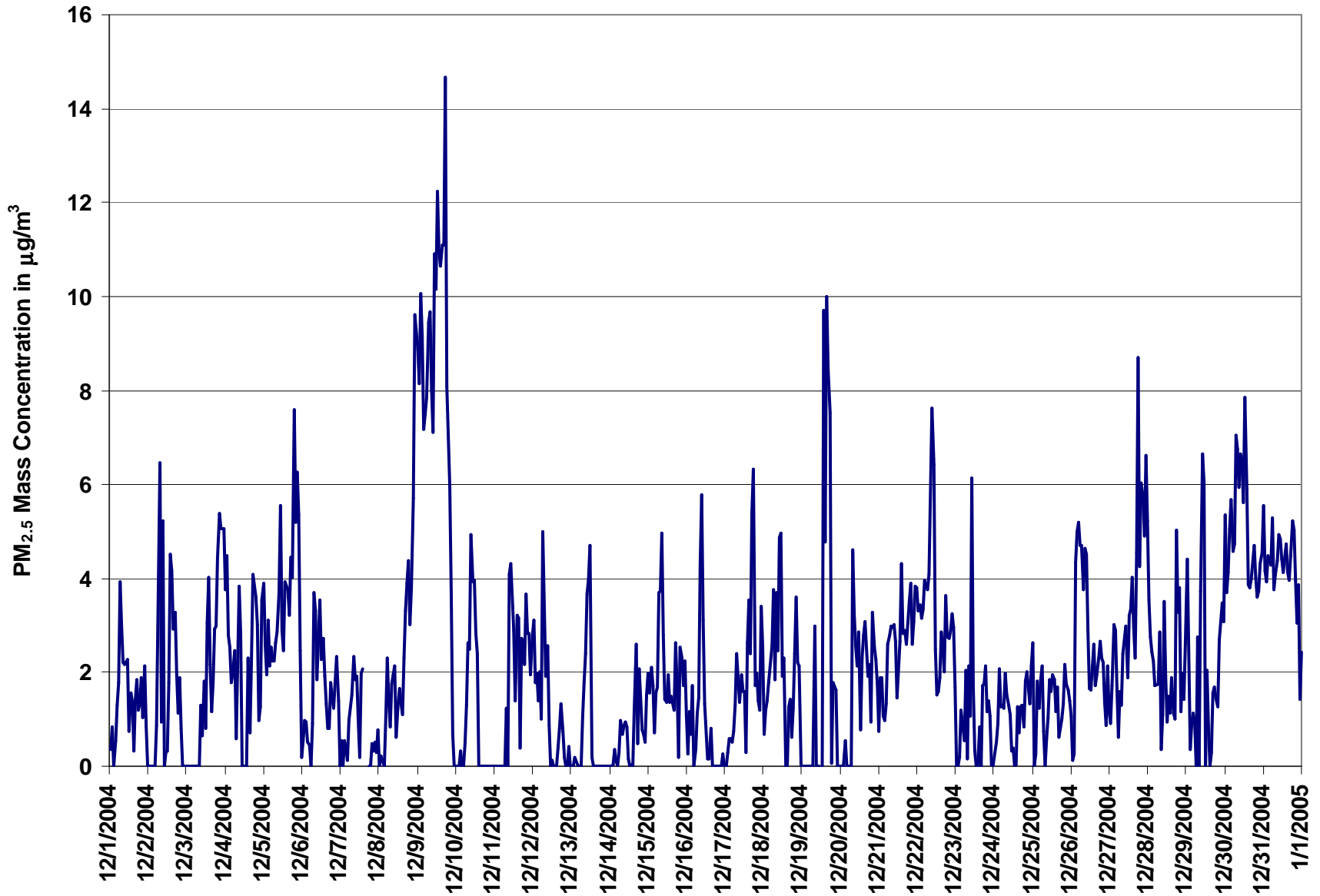


Figure 9. PAS - Crescent Heights Particulate Matter (less than 2.5 microns) 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Particulate Matter (PM_{2.5})

Station Owner: PAS

Monitoring Dates: December 1, 2004 to January 1, 2005

Summary

Maximum 1-hr Value:	68.3	µg/m ³	19-Dec	13:00 14:00
Maximum 24-hr Value:	12.6	µg/m ³	9-Dec	

AIC Time:	0 hrs	Operational Time:	740 hrs						
Calibration Time:	3 hrs	AMD Operational Uptime:	99.9%						
Percentile	99	95	75	50	25	5	1	Average	Geomean
	18.2	12.8	7.9	5.9	4.6	2.6	1.4	6.7 µg/m ³	6.5 µg/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

Day	Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum
1-Dec-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-Dec-04		6	7	4	7	6	8	14	10	10	8	7	7	9	11	6	6	6	8	11	9	7	10	9	8	8.0	14.3
2-Dec-04		5	5	6	5	5	6	40	7	17	6	5	8	8	22	17	7	8	6	5	7	6	4	3	3	8.7	40.4
3-Dec-04		3	5	6	5	6	4	8	5	7	7	8	9	11	9	10	12	18	7	7	12	10	9	9	8	8.1	18.2
4-Dec-04		13	8	9	5	6	8	6	7	8	6	3	5	3	6	8	5	8	9	6	6	4	5	18	12	7.3	17.6
5-Dec-04		9	8	11	9	8	9	8	8	8	10	11	11	7	11	7	10	10	14	16	15	11	11	7	7	9.9	15.6
6-Dec-04		7	5	8	6	6	4	4	10	11	12	7	9	12	9	7	6	4	5	5	7	7	8	7	5	7.2	11.8
7-Dec-04		5	5	8	7	7	8	10	10	10	11	11	4	5	4	C	C	C	1	5	4	4	3	4	3	6.2	11.1
8-Dec-04		2	3	4	6	7	5	3	4	5	5	4	5	4	5	5	6	5	7	8	6	7	9	14	13	5.9	13.8
9-Dec-04		11	14	14	10	12	10	13	15	12	12	16	15	18	16	15	15	15	19	15	13	10	4	6	4	12.6	19.2
10-Dec-04		2	3	6	2	3	5	6	6	7	10	8	10	9	7	4	5	2	2	1	1	1	2	1	3	4.5	10.0
11-Dec-04		3	3	2	2	2	3	3	9	7	9	13	13	6	7	8	5	6	6	6	6	8	6	5	6	6.0	13.3
12-Dec-04		7	5	5	4	6	6	15	5	7	6	4	3	3	3	3	4	3	6	5	4	3	2	2	3	4.7	14.8
13-Dec-04		3	3	2	3	3	4	8	5	7	6	8	8	6	0	3	3	3	3	2	2	0	2	3	4	3.9	8.4
14-Dec-04		2	4	3	4	3	4	5	4	4	5	5	3	3	3	4	5	6	4	5	5	4	4	5	5	4.1	6.1
15-Dec-04		5	6	6	5	5	7	8	12	10	6	5	5	5	5	6	7	6	5	4	6	5	5	8	4	6.2	11.5
16-Dec-04		4	5	5	5	4	7	6	6	10	11	8	6	4	4	5	4	3	3	3	3	2	3	3	2	4.8	10.8
17-Dec-04		5	4	4	4	4	5	5	5	5	5	5	5	4	9	9	10	10	21	6	5	3	5	7	6	6.3	21.3
18-Dec-04		5	5	6	6	7	7	5	7	14	11	10	5	5	4	8	8	6	5	4	6	9	7	6	2	6.6	14.0
19-Dec-04		3	2	4	10	2	0	2	18	4	4	4	D	5	68	18	20	13	22	5	5	5	4	2	2	9.6	68.3
20-Dec-04		4	4	8	2	2	3	4	12	7	5	7	6	4	5	5	6	5	5	3	6	6	6	6	4	5.3	12.0
21-Dec-04		6	5	5	5	5	6	7	5	6	7	6	5	7	9	6	8	6	7	8	7	6	6	7	6	6.2	8.9
22-Dec-04		6	6	6	6	7	8	8	7	11	10	6	5	5	5	6	5	5	7	7	6	6	7	8	7	6.7	11.4
23-Dec-04		4	3	5	7	6	7	7	8	5	12	6	4	5	3	5	4	5	6	8	4	5	4	5	4	5.5	11.9
24-Dec-04		7	6	5	5	5	4	5	5	4	5	3	4	3	4	5	3	4	4	6	6	5	5	6	6	4.8	6.6
25-Dec-04		3	4	6	5	4	7	3	3	4	5	5	5	7	5	4	5	5	5	5	6	6	6	5	5	4.9	7.2
26-Dec-04		4	5	10	8	9	8	9	8	8	9	7	4	5	7	6	5	6	7	7	6	5	5	5	5	6.6	10.0
27-Dec-04		5	6	7	6	7	3	5	5	7	8	6	6	7	8	7	9	9	14	14	11	10	8	10	10	7.8	14.4
28-Dec-04		8	7	10	8	6	6	13	5	5	8	6	5	4	4	6	5	6	11	10	9	3	5	6	8	6.8	12.9
29-Dec-04		10	3	4	5	4	2	7	4	10	10	12	6	7	6	4	4	6	6	5	5	5	7	7	10	6.2	12.3
30-Dec-04		8	7	9	10	8	8	10	10	8	11	10	10	12	11	8	7	7	8	8	7	7	7	8	8	8.6	11.7
31-Dec-04		7	7	8	7	8	8	6	8	7	9	8	11	8	9	11	8	8	10	8	8	8	8	5	6	7.9	10.6
Hourly Avg		5.5	5.2	6.2	5.8	5.6	5.8	8.2	7.5	8.0	8.0	7.3	6.8	6.5	9.0	7.1	6.9	6.8	7.9	6.7	6.5	5.8	5.7	6.3	5.8		
Hourly Max		13.0	13.6	13.8	10.4	11.5	10.1	40.4	18.0	17.5	11.9	16.0	14.6	18.1	68.3	18.0	20.0	18.2	21.9	15.6	15.2	11.2	11.1	17.6	12.6		

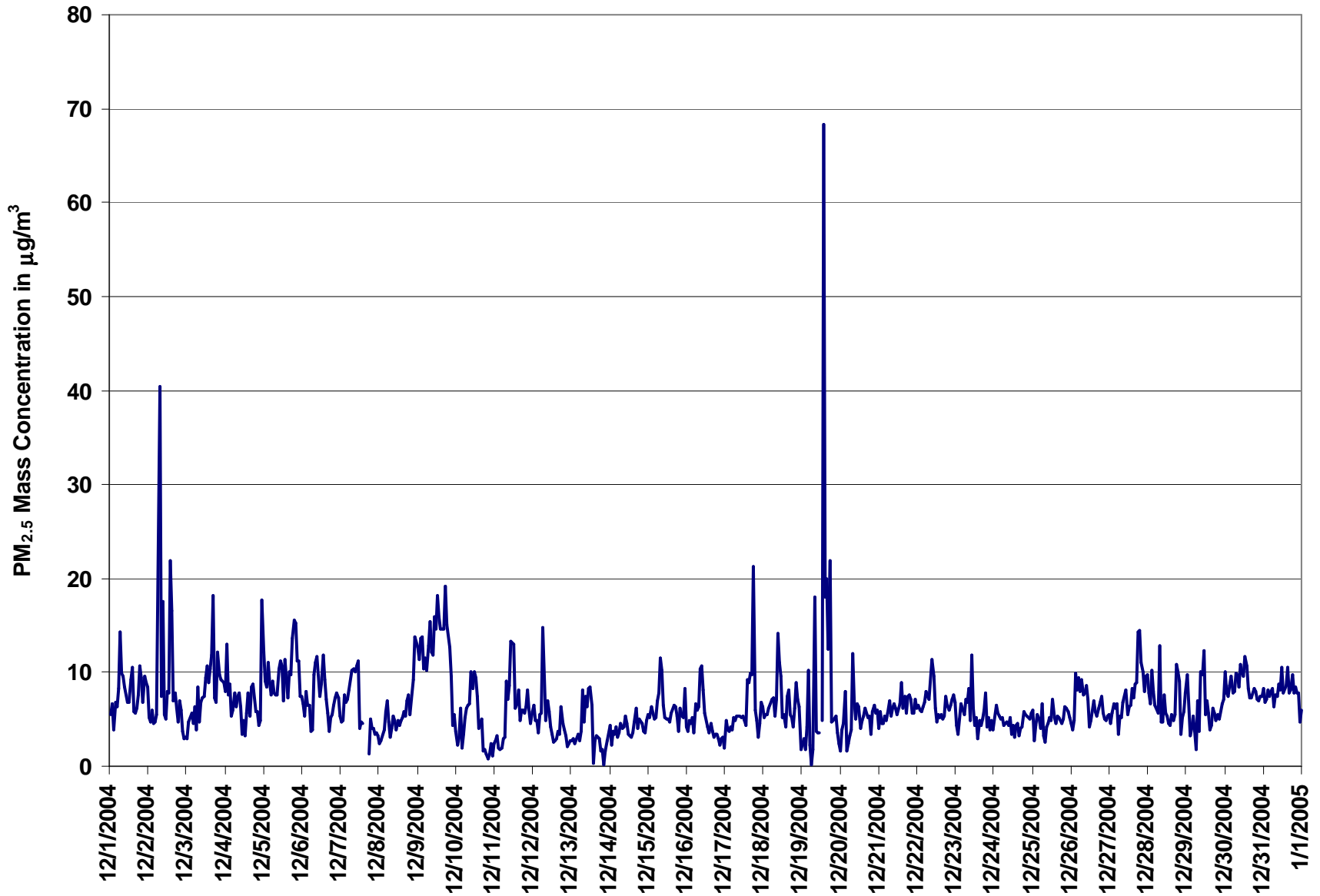
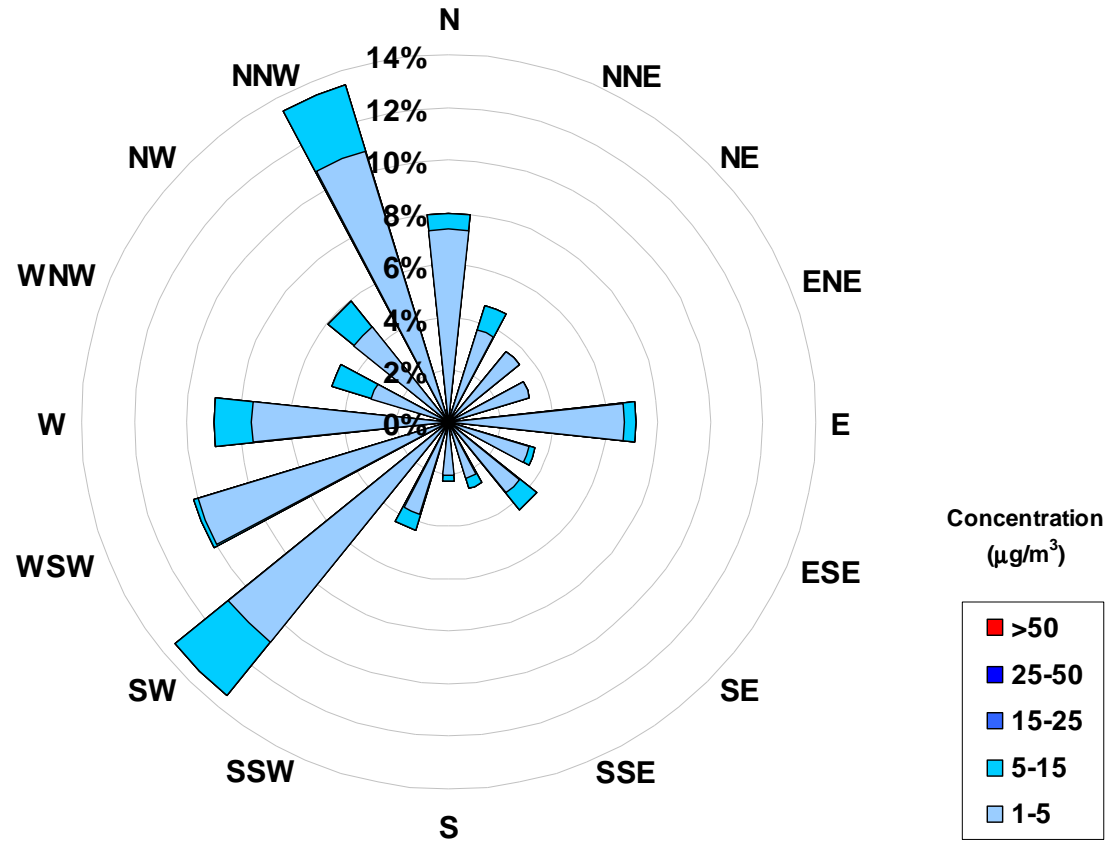


Figure 10. PAS - Crescent Heights Particulate Matter (less than 2.5 microns) 1-hr Maximum Value Monthly



Concentration Rose for the 1-hr PM_{2.5} Average Concentration Occurrences at the Crescent Heights Site for December 2004



Frequency Distribution of PM _{2.5} in $\mu\text{g}/\text{m}^3$			
Range	Frequency (hrs)		
0 < 1	248		
1 to 5	423		
5 to 15	69		
15 to 25	0		
25 to 50	0		
> 50	0		
Total Non-Zero Values			
740			

Calms	
Range	$\mu\text{g}/\text{m}^3$
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: December 1, 2004 to January 1, 2005

Summary

Number of 1-hr Exceedances:	0		
Number of 24-hr Exceedances:	0		
Maximum 1-hr Average:	92.0	%	19-Dec 21:00 22:00
Maximum 24-hr Average:	80.0	%	8-Dec

AIC Time:	0 hrs		Operational Time:	743 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	99.9%				
Percentile	99	95	75	50	25	5	1	Average
	86.9	83.3	74.8	69.0	61.8	44.5	33.7	67.2 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

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

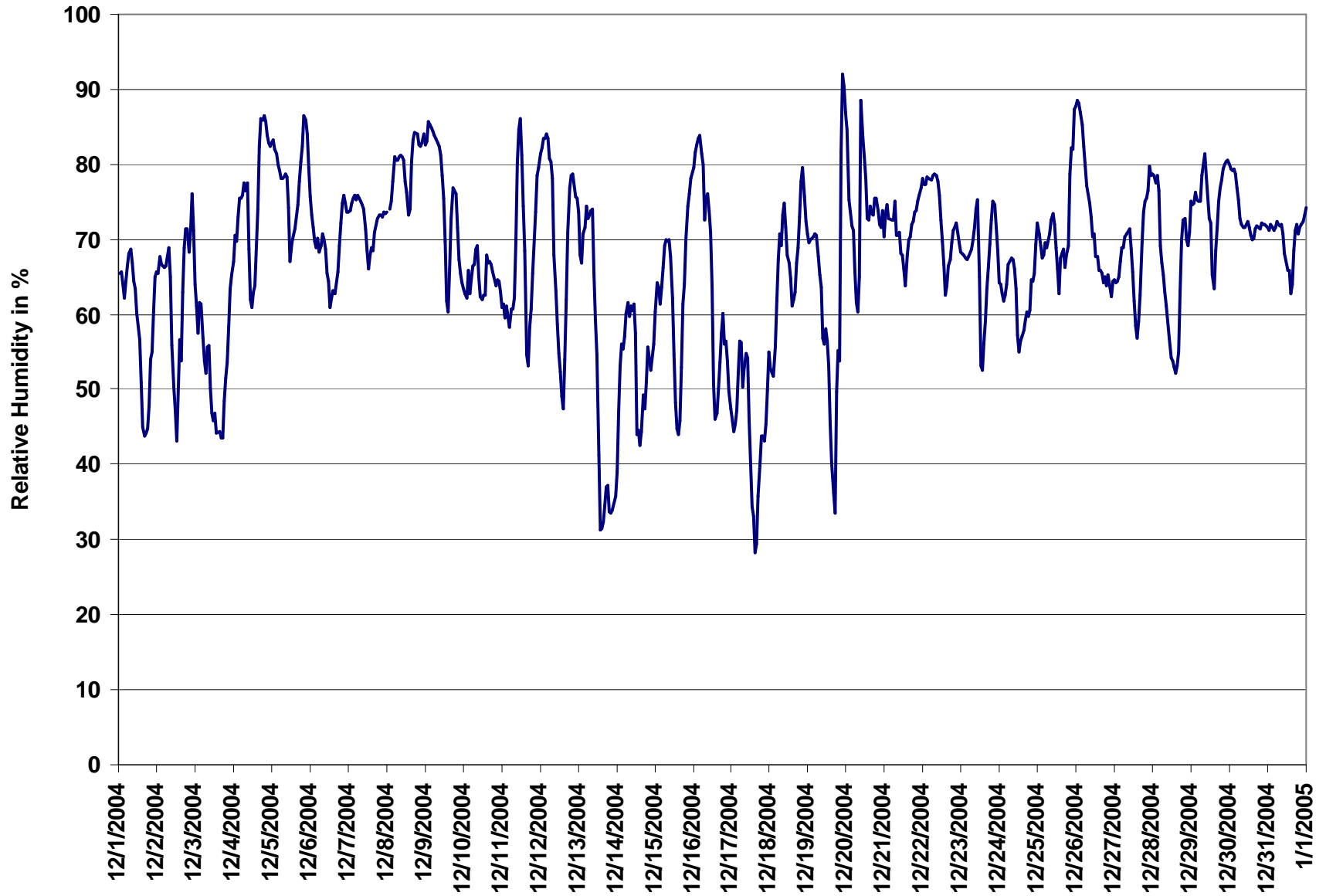


Figure 11. PAS - Crescent Heights Relative Humidity 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY AVERAGE TABLE

Ambient Temperature (AT - °C)

Station Owner: PAS

Monitoring Dates: December 1, 2004 to January 1, 2005

Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	15.6 °C 19-Dec 14:00 15:00
Maximum 24-hr Average:	7.0 °C 14-Dec

AIC Time:	0 hrs	Operational Time:	744 hrs					
Calibration Time:	0 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	11.5	9.0	2.9	-2.9	-12.6	-17.9	-24.4	-4.3 ppb

Status Flag Characters

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

Day Mountain Standard Time

Day	Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum	
1-Dec-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	0.2	4.5	
2-Dec-04		-2	-3	-3	-3	-3	-3	-3	-3	-3	-1	-1	1	2	3	4	4	4	4	3	3	2	1	0	-1	3.2	8.0	
3-Dec-04		5	5	4	4	5	6	6	6	6	8	9	9	9	9	9	9	9	7	7	6	4	3	2	2	6.2	9.4	
4-Dec-04		1	1	0	0	0	0	0	0	0	2	4	4	4	4	3	1	-1	-3	-3	-4	-5	-6	-6	-6	-0.5	4.3	
5-Dec-04		-6	-6	-6	-6	-6	-6	-6	-6	-5	-4	-1	-1	-1	-1	-2	-3	-3	-4	-4	-6	-7	-9	-10	-11	-5.1	-1.0	
6-Dec-04		-12	-12	-13	-13	-14	-15	-15	-16	-15	-15	-14	-14	-13	-13	-13	-14	-14	-15	-15	-17	-17	-17	-16	-16	-14.6	-11.8	
7-Dec-04		-17	-17	-18	-18	-18	-19	-19	-18	-18	-17	-16	-14	-13	-13	-13	-13	-15	-16	-16	-15	-15	-15	-14	-14	-15.9	-13.1	
8-Dec-04		-14	-14	-14	-14	-13	-13	-13	-13	-12	-12	-11	-9	-8	-6	-5	-5	-6	-6	-6	-8	-9	-9	-9	-9	-9.9	-5.0	
9-Dec-04		-9	-9	-9	-9	-9	-10	-10	-11	-11	-11	-10	-9	-6	-3	-2	-4	-6	-6	-5	-3	-1	1	1	1	-6.2	0.8	
10-Dec-04		0	0	-1	0	-1	-1	0	0	3	4	5	5	7	7	8	8	8	8	9	9	10	10	10	11	4.5	10.5	
11-Dec-04		10	10	10	10	10	10	10	7	6	6	3	3	3	4	4	3	2	1	1	1	-1	-2	-3	-3	4.7	10.5	
12-Dec-04		-4	-4	-4	-5	-5	-5	-4	-3	-2	-2	-1	0	1	2	2	2	0	-2	-3	-3	-4	-5	-6	-6	-2.6	2.1	
13-Dec-04		-6	-7	-8	-8	-8	-9	-9	-9	-9	-7	-4	-1	4	6	7	5	2	2	2	3	3	3	3	4	-1.6	6.6	
14-Dec-04		4	4	5	5	5	5	5	6	6	6	7	9	12	12	12	11	9	9	8	6	6	6	6	5	7.0	12.0	
15-Dec-04		4	4	4	4	3	3	2	2	2	2	3	5	8	9	9	8	6	4	3	1	0	-1	-2	-2	3.3	9.0	
16-Dec-04		-3	-4	-4	-4	-4	-4	-1	-2	-2	-1	0	3	6	8	9	8	7	5	5	6	6	6	8	9	2.4	8.8	
17-Dec-04		10	9	9	7	5	5	6	6	5	5	7	8	10	10	11	11	8	7	5	4	4	3	2	1	6.6	11.1	
18-Dec-04		2	2	1	-1	-2	-3	-3	-4	-4	-4	-2	0	1	2	2	1	0	0	-1	-3	-3	-1	0	2	-0.7	2.0	
19-Dec-04		2	3	3	4	4	5	6	7	10	10	10	11	12	15	16	15	14	9	5	5	2	0	1	1	7.0	15.6	
20-Dec-04		1	2	2	1	1	1	1	1	-2	-5	-6	-8	-8	-9	-10	-10	-11	-12	-12	-11	-11	-11	-13	-14	-6.0	1.6	
21-Dec-04		-15	-15	-15	-16	-16	-16	-15	-15	-15	-15	-14	-14	-13	-13	-13	-13	-14	-13	-13	-13	-12	-12	-12	-12	-14.0	-11.6	
22-Dec-04		-13	-13	-13	-13	-12	-12	-13	-13	-13	-14	-15	-15	-15	-16	-16	-17	-18	-19	-21	-22	-22	-23	-23	-25	-26	-17.1	-12.2
23-Dec-04		-26	-26	-26	-27	-26	-26	-23	-22	-19	-16	-13	-9	-7	-7	-6	-6	-6	-5	-5	-5	-4	-3	-3	-1	-13.2	-1.3	
24-Dec-04		-1	0	0	0	0	0	0	0	1	3	4	5	5	6	5	5	4	4	4	3	3	3	2	1	2.5	5.5	
25-Dec-04		1	0	0	0	-1	-1	-2	-3	-3	-3	-2	-1	1	0	0	0	0	0	0	-1	-1	-1	-1	-2	-0.8	1.0	
26-Dec-04		-2	-3	-4	-6	-8	-11	-14	-15	-16	-16	-17	-17	-17	-17	-17	-17	-18	-18	-18	-18	-18	-18	-17	-17	-14.2	-2.5	
27-Dec-04		-17	-17	-17	-17	-17	-16	-16	-16	-16	-14	-15	-13	-11	-10	-10	-11	-13	-14	-16	-16	-15	-16	-14	-13	-14.6	-9.9	
28-Dec-04		-12	-12	-13	-10	-7	-6	-6	-4	-4	-3	-1	0	2	3	4	4	1	-1	-2	-3	-3	-3	-4	-6	-3.6	4.1	
29-Dec-04		-5	-6	-7	-6	-7	-7	-9	-11	-12	-10	-8	-8	-6	-5	-7	-8	-10	-10	-10	-10	-10	-10	-10	-10	-8.5	-5.5	
30-Dec-04		-10	-10	-11	-11	-12	-12	-13	-13	-13	-13	-13	-13	-12	-12	-13	-14	-14	-15	-16	-16	-17	-17	-17	-17	-13.5	-10.3	
31-Dec-04		-18	-18	-18	-18	-19	-19	-19	-19	-19	-18	-17	-17	-17	-16	-17	-18	-19	-19	-18	-18	-18	-18	-18	-18	-18.0	-15.7	
Hourly Avg		-5.0	-5.1	-5.4	-5.5	-5.7	-5.9	-5.8	-5.8	-5.8	-5.0	-4.1	-3.1	-1.8	-1.1	-1.1	-1.6	-2.7	-3.5	-4.1	-4.5	-4.8	-5.0	-5.2	-5.3			
Hourly Max		10.1	10.3	10.0	10.2	10.5	9.9	10.1	9.7	9.9	9.6	9.7	10.8	12.1	14.8	15.6	15.1	14.1	9.0	8.8	9.5	9.6	9.8	9.8	10.5			

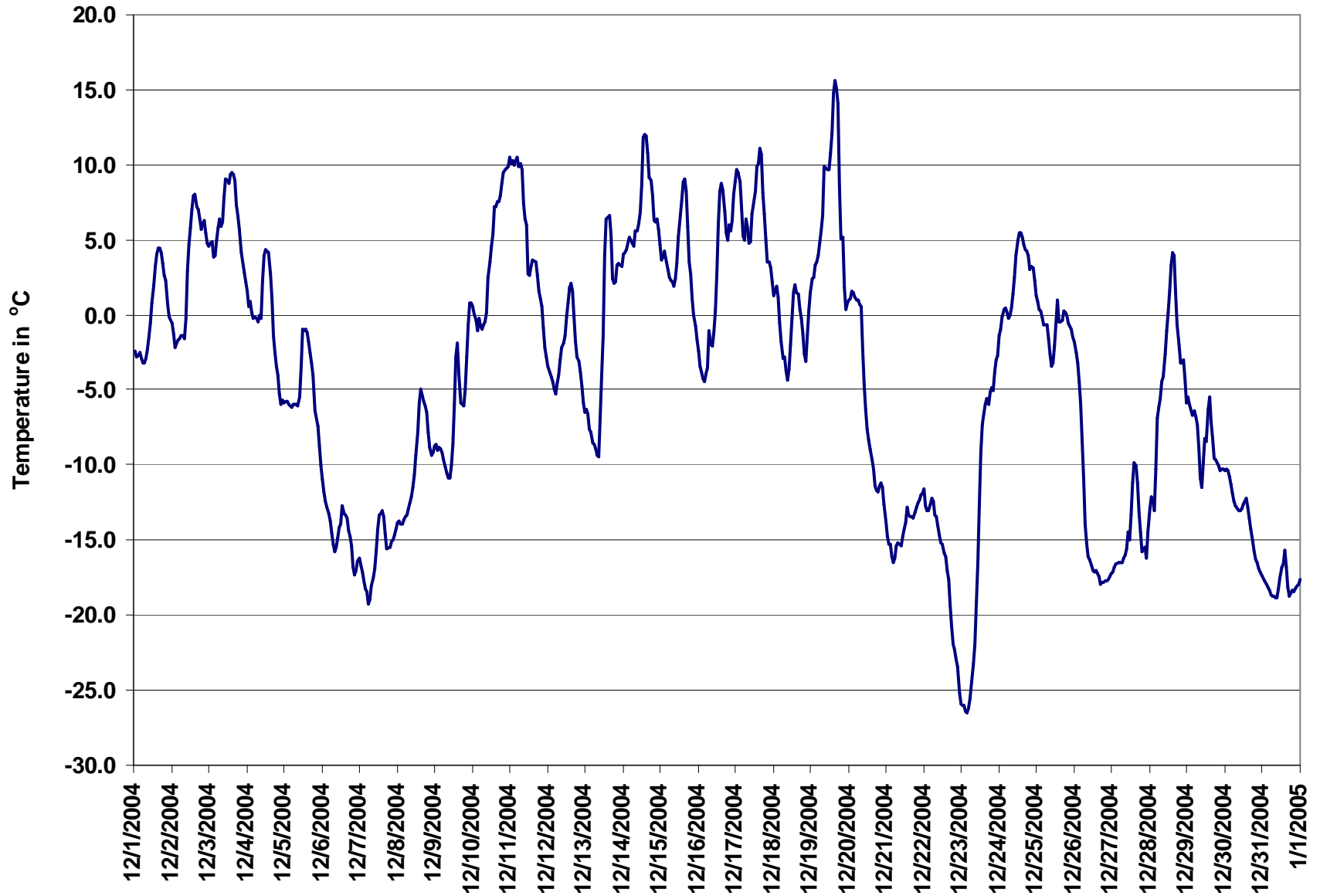


Figure 12. PAS - Crescent Heights Temperature 1-hr Average Monthly Trend

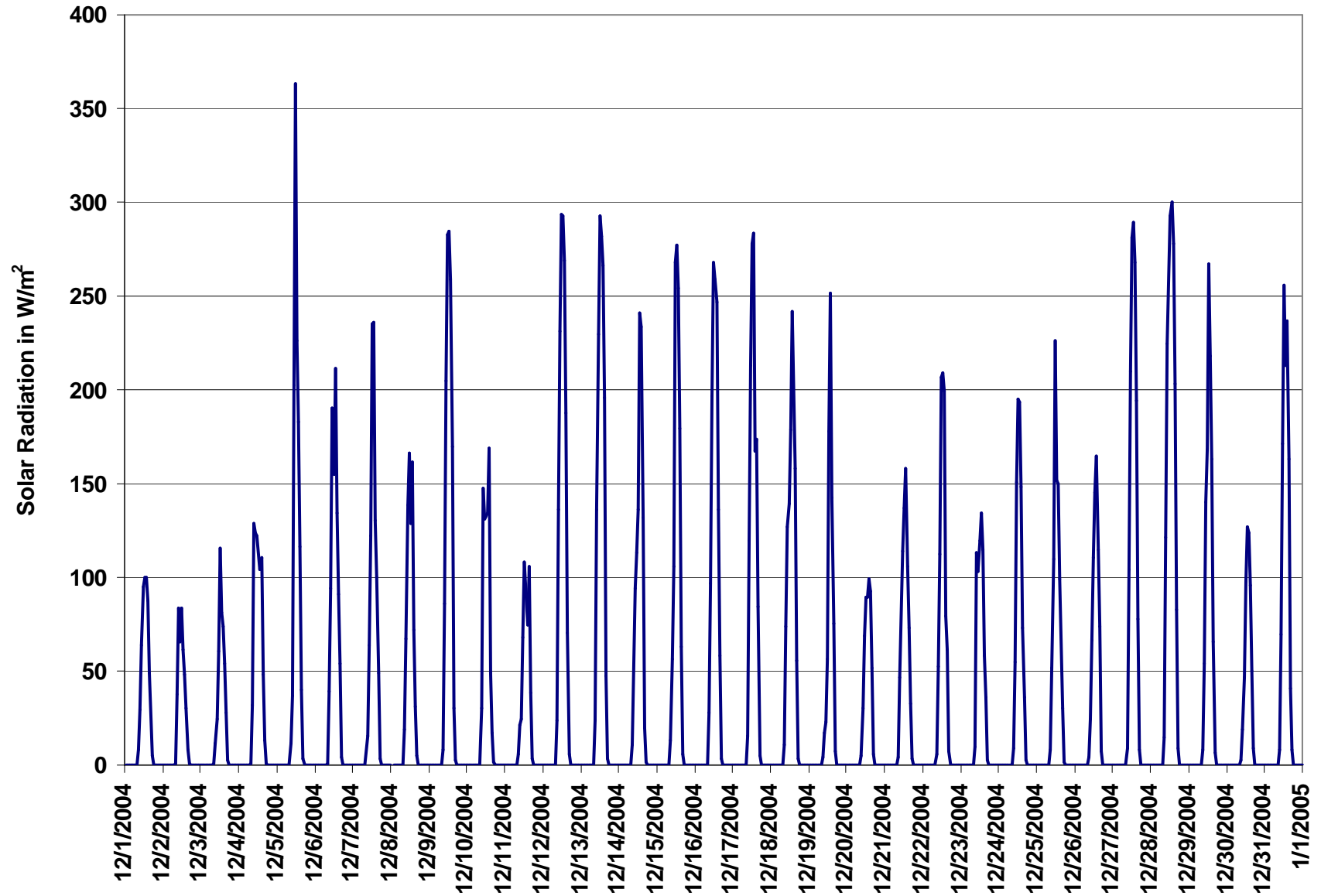


Figure 13. PAS - Crescent Heights Solar Radiation 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY AVERAGE TABLE

Wind Speed (WSv - km/hr)

Station Owner: PAS

Monitoring Dates: December 1, 2004 to January 1, 2005
Summary

Maximum 1-hr Average:	39.1	km/hr	19-Dec	13:00 14:00
Maximum 24-hr Average:	16.6	km/hr	19-Dec	

Calm Time:	0 hrs	0% calms	Operational Time:	744 hrs					
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	AverageS	AverageV
	30.5	24.7	15.1	9.3	5.5	3.1	1.7	10.9 km/hr	4.2 km/hr

Status Flag Characters

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

Day	Mountain Standard Time																								24-hr Vector Average	Daily Max
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00		
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
1-Dec-04	16	17	18	17	17	17	13	12	12	15	15	18	16	14	13	12	10	9	9	10	9	10	18	18	13.5	18.5
2-Dec-04	19	20	15	22	26	22	20	15	16	19	22	20	19	14	20	15	17	11	13	14	15	13	14	15	15.5	25.9
3-Dec-04	18	19	22	21	22	24	24	25	22	20	23	28	25	22	18	13	13	11	9	4	2	6	7	16.4	27.6	
4-Dec-04	6	6	5	5	6	4	4	3	4	5	13	18	16	19	20	18	21	20	19	20	26	27	23	18	11.5	27.5
5-Dec-04	16	17	18	15	14	8	8	8	8	6	7	7	8	8	7	7	6	9	12	15	14	16	15	12	4.8	17.5
6-Dec-04	14	13	10	10	10	10	8	8	8	7	6	6	5	7	5	6	5	6	8	6	6	6	9	10	4.7	13.5
7-Dec-04	11	11	9	8	9	9	8	6	8	9	5	5	4	7	7	8	7	9	9	10	11	11	12	12	7.4	12.2
8-Dec-04	12	13	13	12	10	11	11	12	12	12	11	10	9	7	8	8	8	7	5	6	6	3	3	3	6.6	13.0
9-Dec-04	4	7	7	6	6	7	7	7	5	8	8	7	4	5	3	2	3	4	4	5	6	11	12	10	4.3	12.2
10-Dec-04	9	7	10	13	9	8	7	4	5	7	2	2	2	3	6	12	13	18	19	24	29	30	29	35	12.0	34.5
11-Dec-04	33	33	30	27	25	25	29	23	8	9	10	31	24	15	16	25	19	15	19	24	21	12	8	5	12.3	32.7
12-Dec-04	4	5	4	4	6	4	10	8	11	12	13	8	9	10	11	9	8	7	10	12	11	10	4	6	7.1	13.1
13-Dec-04	8	6	3	5	5	6	5	3	5	4	3	4	9	15	10	11	11	11	10	23	25	20	18	19	9.2	25.1
14-Dec-04	23	28	27	30	27	22	14	18	16	16	18	15	22	23	14	10	8	17	16	11	16	15	13	6	16.3	30.3
15-Dec-04	3	4	6	4	6	5	2	5	4	5	7	10	10	12	10	8	7	6	7	3	5	4	5	6	5.0	12.0
16-Dec-04	5	2	3	4	3	8	11	5	3	5	8	8	9	9	13	10	12	12	22	26	22	19	16	14	9.8	26.2
17-Dec-04	21	19	17	10	7	9	14	13	9	7	10	10	7	6	5	5	10	10	4	9	8	5	5	5	8.4	20.8
18-Dec-04	5	7	4	3	3	3	7	3	4	3	1	5	7	15	14	11	13	11	3	3	3	3	9	14	2.7	14.5
19-Dec-04	17	15	18	26	22	11	15	17	19	27	27	30	31	39	36	25	31	27	6	16	10	5	8	16	16.6	39.1
20-Dec-04	15	14	18	17	14	12	12	21	30	26	21	25	20	20	18	14	9	5	5	4	9	9	8	8	12.6	29.7
21-Dec-04	5	4	6	5	4	1	1	5	5	6	8	6	4	7	8	6	4	1	2	5	6	5	6	4	1.6	8.1
22-Dec-04	7	5	4	4	2	5	10	9	13	12	14	16	16	14	13	13	9	5	5	2	5	6	9	6.1	16.2	
23-Dec-04	9	7	5	4	3	4	2	3	2	5	13	12	25	21	16	19	18	21	22	16	12	13	12	13	10.7	24.7
24-Dec-04	16	16	17	15	10	13	15	12	14	14	17	13	10	16	18	18	17	16	12	8	8	6	7	11	12.8	18.4
25-Dec-04	10	11	6	3	4	3	8	9	10	11	7	5	3	5	5	5	6	9	11	10	8	10	5	9	1.7	11.4
26-Dec-04	13	17	20	20	20	21	23	23	20	18	17	16	14	13	10	9	8	5	5	4	4	4	3	3	12.3	22.9
27-Dec-04	4	2	2	3	6	6	4	5	4	7	10	7	5	5	6	6	3	5	6	5	4	3	4	4	4.5	10.1
28-Dec-04	5	5	6	6	4	6	8	11	12	6	9	11	11	11	10	6	4	5	6	7	6	8	5	4	6.6	12.3
29-Dec-04	4	4	5	5	4	4	4	7	3	2	3	7	4	5	11	6	6	6	5	6	7	6	10	11	3.3	11.3
30-Dec-04	10	9	11	11	12	13	14	13	14	15	16	15	15	17	21	22	20	19	19	18	17	15	12	11	14.9	21.9
31-Dec-04	14	13	12	11	11	7	6	7	6	6	6	6	4	3	5	4	3	3	3	5	7	4	7	9	6.1	13.6
1-hr Vector	6.1	5.7	5.0	5.5	4.9	4.9	5.5	4.9	4.0	4.1	3.9	4.3	4.6	4.3	4.5	4.0	3.9	3.4	3.5	3.6	3.5	3.7	4.4	5.1		
Hourly Max	32.5	32.7	30.1	30.3	27.3	25.3	28.7	25.1	29.7	27.1	27.2	31.4	30.7	39.1	36.4	25.0	31.4	27.4	22.4	26.2	29.0	29.8	29.4	34.5		



Station: Crescent Heights

STANDARD DEVIATION TABLE

Wind Direction (WD - Degrees)

Station Owner: PAS

Monitoring Dates: December 1, 2004 to January 1, 2005
Summary

Determined by the Yamartino 15-min interval calculation

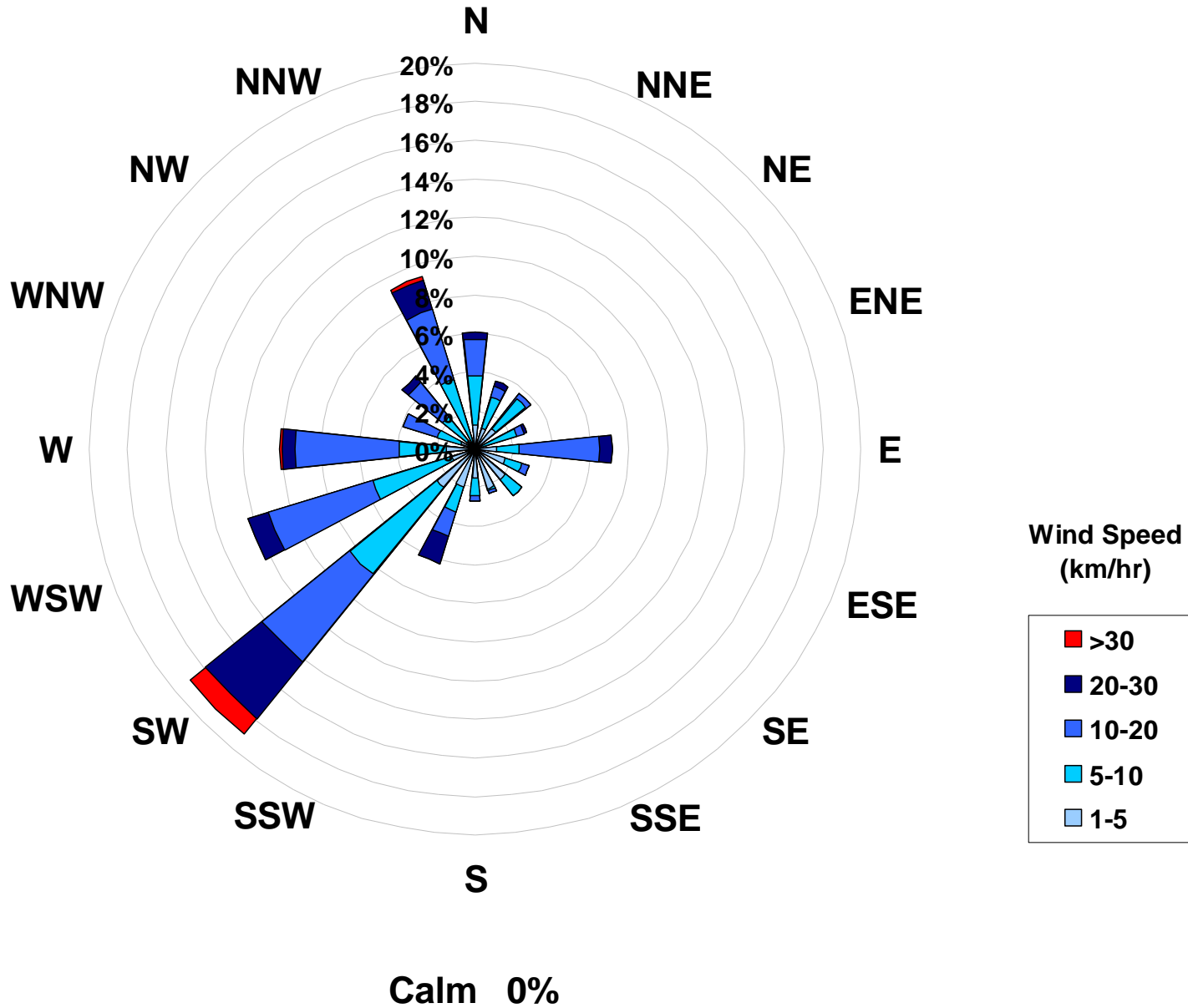
Calm Time:	0 hrs	0% calms	Operational Time:	744 hrs			
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%			
Percentile	99	95	75	50	25	5	1
	48.8	27.5	12.8	8.7	6.1	4.4	3.4

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

Day	Mountain Standard Time																							Daily Maximum	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	
1-Dec-04	8	6	6	7	7	5	6	4	6	6	6	6	8	8	7	6	6	5	6	8	6	10	6	5	9.5
2-Dec-04	6	5	9	4	3	4	3	4	5	8	5	5	6	10	11	8	5	6	7	6	5	6	5	5	11.4
3-Dec-04	6	7	5	5	7	5	6	4	4	6	7	4	5	5	10	8	12	11	7	30	65	71	22	20	71.2
4-Dec-04	26	17	15	14	8	17	13	34	20	18	7	6	8	9	8	7	6	8	8	7	6	5	6	9	34.2
5-Dec-04	7	6	6	7	8	13	10	10	8	12	13	16	15	17	12	8	12	9	9	7	10	8	9	11	17.1
6-Dec-04	9	7	10	10	10	10	11	10	12	18	24	25	34	23	25	14	7	4	10	10	26	22	8	8	34.5
7-Dec-04	7	7	12	10	15	4	7	13	9	10	16	12	24	16	13	10	7	7	9	8	8	8	9	9	23.7
8-Dec-04	7	7	7	8	8	8	7	8	9	7	6	8	10	13	10	9	6	6	7	6	5	14	17	24	24.2
9-Dec-04	19	8	11	14	12	13	15	16	15	13	15	13	17	24	51	62	18	11	14	11	10	7	6	7	61.9
10-Dec-04	9	17	14	5	8	9	9	12	12	9	20	23	19	20	11	12	7	4	5	5	3	3	4	3	22.6
11-Dec-04	3	3	3	4	5	4	4	11	19	8	20	6	6	8	9	5	5	6	6	5	4	7	9	13	19.9
12-Dec-04	23	11	23	19	15	11	11	6	9	9	9	13	12	11	10	9	9	7	5	6	9	5	10	10	23.1
13-Dec-04	6	7	18	9	15	7	11	12	6	12	10	17	14	10	12	13	10	9	12	6	6	8	8	7	17.7
14-Dec-04	6	4	5	4	5	6	15	6	10	7	6	8	7	5	6	9	8	5	6	6	4	5	6	26	25.6
15-Dec-04	44	36	13	23	13	10	54	25	13	9	9	10	10	12	14	11	10	10	8	29	12	29	17	13	53.9
16-Dec-04	11	25	16	22	59	12	7	42	45	11	9	13	10	12	6	8	6	5	4	5	6	6	7	5	58.7
17-Dec-04	7	5	6	7	10	32	6	8	7	12	16	10	13	14	12	8	10	18	7	14	9	9	14	22	32.4
18-Dec-04	9	5	10	10	19	18	9	32	20	16	57	11	22	7	7	8	8	8	17	38	26	26	9	6	56.9
19-Dec-04	9	9	7	6	10	11	10	8	9	7	6	5	4	4	5	6	5	10	20	6	36	12	8	5	35.9
20-Dec-04	7	6	5	4	5	7	6	7	6	6	6	4	5	7	5	6	9	14	12	16	10	8	10	11	16.2
21-Dec-04	19	17	13	11	8	30	25	21	12	11	11	13	18	12	8	8	15	35	28	10	8	11	8	10	34.9
22-Dec-04	8	13	9	14	30	26	6	7	4	4	6	6	5	5	4	3	5	10	14	23	22	9	12	10	30.3
23-Dec-04	11	13	11	14	23	17	17	17	36	42	8	21	6	7	11	6	6	5	4	4	6	5	10	9	42.5
24-Dec-04	6	7	5	5	9	5	5	6	6	6	5	9	9	6	4	5	4	6	5	27	9	22	14	6	26.7
25-Dec-04	8	4	9	63	27	14	9	6	6	5	8	22	26	7	10	14	19	14	5	6	11	7	10	12	62.7
26-Dec-04	10	5	4	5	4	5	3	4	5	5	5	6	7	6	9	10	11	12	15	18	14	13	23	16	23.5
27-Dec-04	14	37	46	18	11	9	10	12	11	11	7	9	13	11	11	8	27	9	5	9	13	37	20	13	46.4
28-Dec-04	39	38	18	6	32	15	15	11	6	21	8	8	5	6	8	13	11	9	7	6	9	8	12	13	39.2
29-Dec-04	22	14	9	8	17	14	38	26	46	35	43	15	25	25	7	7	11	11	10	11	11	32	8	7	45.7
30-Dec-04	7	8	7	7	6	6	5	6	8	5	4	6	5	6	4	5	4	5	4	5	5	5	8	6	8.5
31-Dec-04	6	7	7	6	5	9	10	11	12	11	12	13	16	16	11	12	14	11	14	8	7	16	7	6	16.2
Hourly Max	44	38	46	63	59	32	54	42	46	42	57	25	34	25	51	62	27	35	28	38	65	71	23	26	



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





Passive Monitoring

Ambient Air Compliance Network

Please Note: At the time of Reporting, data from the Passive Monitoring Program was not available. This information will be included in the next monthly report (January, 2005). No information has been included in this section for this month's report.

December 2004 - Calibration Reports

PAS - Crescent Heights Station

O₃, NO_x, NO, NO₂, THC, PM_{2.5}

Calibration Report

Parameter 03
 Air Monitoring Network Palliser Airshed

**Station Information**

Calibration Date	December 7, 2003	Previous Calibration	November 5, 2003
Station Number	1	Station Location	Crescent Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	15:55	End Time (MST)	18:45
Barometric Pressure	0.907 ATM	Station Temperature	21.0 Deg C
Calibrator	Enviroics 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	0.050000	DACS slope	0.050000
DACS intercept	0.000000	DACS intercept	0.000000
Calculated slope	0.996840	Calculated slope	1.001757
Calculated intercept	2.035564	Calculated intercept	2.775979
Analyzer make	API Model 400E	Analyzer serial #	331

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	-1.4	ppb	-1.4	ppb
coefficient	1.109		1.147	
Lamp measure	3148	mV	3085	mV
Lamp Reference	3147	mV	3087	mV
Pressure	25.3	inches Hg	25.6	inches Hg
Sample Flow	710	ccm	715	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	-2.5	N/A
4995	0.00	319.0	315.9	1.0097
4995	0.00	182.7	179.2	1.0193
4995	0.00	91.3	88.2	1.0356
4995	0.00	0.0	-2.5	0.0000
4995	0.00	319.0	302.7	1.0539
Average Correction Factor				1.0215

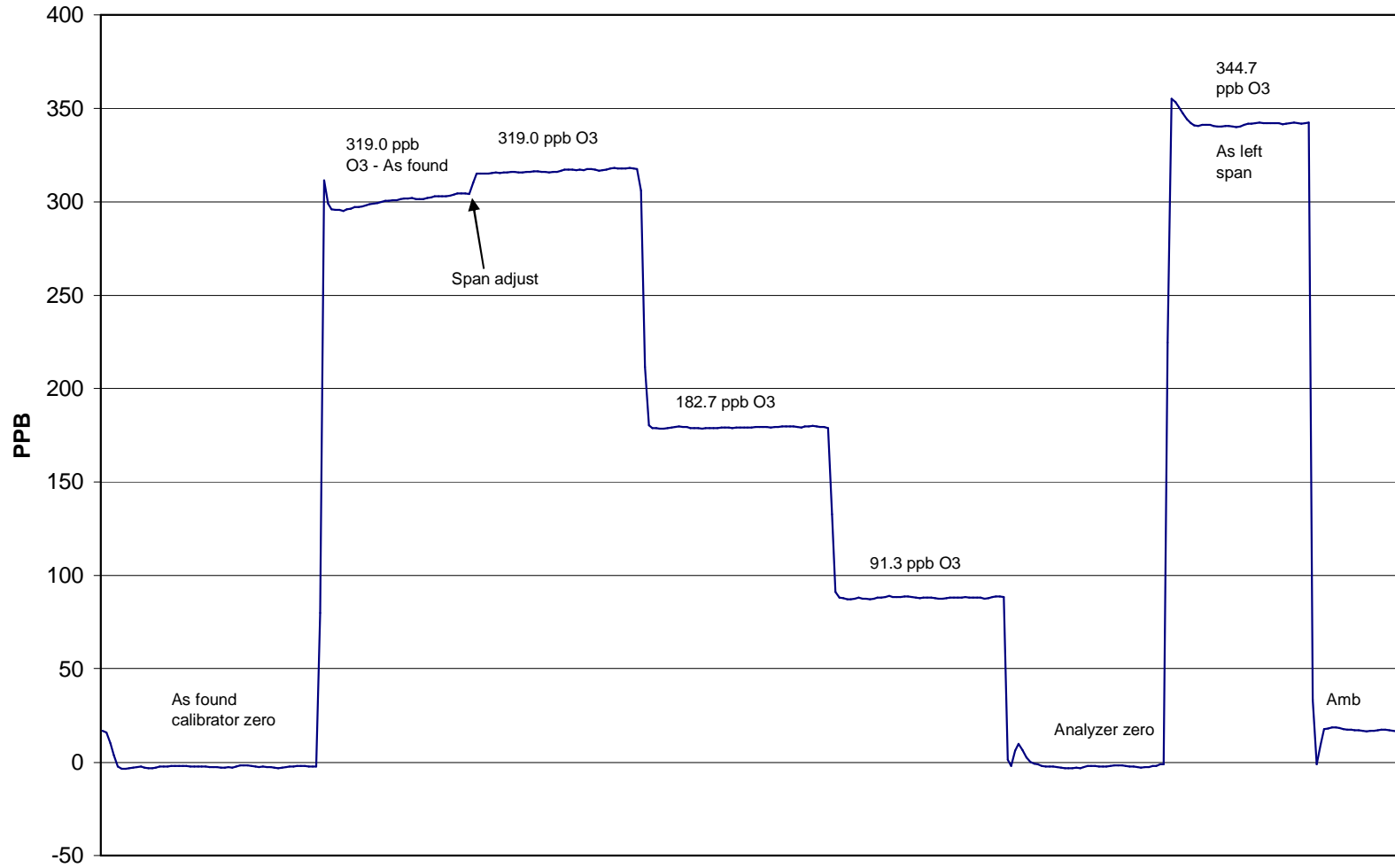
Calculated value of As Found Response: 306.3 ppm Percent Change of As Found: -4.0%

	before calibration		after calibration	
Auto zero	0.5	ppb	0.3	ppb
Auto span	347.5	ppb	344.7	ppb

Notes: Analyzer was span adjusted; no other maintenance required.
O3 calibration points generated via GPT portion of the NOX calibration.

Calibration Performed By: Kelly Baragar

O3 Calibration



December 07, 2004

Calibration Report

Parameter **NOx-NO-NO₂**
 Air Monitoring Network **Palliser Airshed**



Station Information

Calibration Date December 7, 2004 Previous Calibration November 4, 2004
 Station Number 1 Station Location Crescent Heights

Reason: Routine Installation Removal Other: _____

Start Time (MST) 10:30 End Time (MST) 14:58
 Barometric Pressure 0.907 ATM Station Temperature 20.5 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 ₂	NO _x	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	1.008182	1.006935	1.009801
	Data Offset	-1.919751	-2.958650	-1.221765
After	Data Slope	1.009649	1.005522	1.006146
	Data Offset	-1.721916	-0.865434	-0.307147
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	0.1	mV
NO _x background	-0.7	mV	2.3	mV
NO coefficient	1.473		1.548	
NO _x coefficient	1.461		1.551	
Chamber Temp	50.1	Deg C	49.9	Deg C
Cooler Temp	7.1	Deg C	7.1	Deg C
Azero	29.9		30.;5	
Perm Temp	40.1	Deg C	40.0	Deg C
Pressure	3.6	inches Hg	3.5	inches Hg
Sample Flow	434.0	ccm	435.0	ccm

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

Calibration Report

Parameter **NO_x-NO-NO₂**
Air Monitoring Network **Palliser Airshed**



Station Information

Calibration Date: December 7, 2004 Station Location: Crescent Heights

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NO _x conc (ppb)	Calculated NO conc (ppb)	Calculated NO ₂ conc (ppb)	Indicated NO _x conc (ppb)	Indicated NO conc (ppb)	Indicated NO ₂ conc (ppb)	NO _x Correction factor	NO Correction factor
zero	4993	0.00	0.0	0.0	0.0	1.1	0.4	1.0	N/A	N/A
1	4993	39.97	396.3	395.5	0.8	395.0	393.4	2.4	1.0033	1.0053
2	4993	19.97	198.8	198.4	0.4	198.7	197.5	1.7	1.0005	1.0043
3	4993	9.97	99.4	99.2	0.2	99.4	98.8	0.9	1.0005	1.0047
AFZ	4993	0.00	0.0	0.0	0.0	4.2	1.9	2.6	0.0000	0.0000
AFS	4993	39.97	396.3	395.5	0.8	369.1	367.4	2.4	1.0736	1.0765
Average Correction Factor									1.0014	1.0048

As Found Concentrations NO_x= 361.9 NO= 364.2 As Found Percent Change NO_x= -8.7% NO= -7.9%

GPT Calibration Data

Dilution Flow 4993 ccm Source Gas Flow 39.97 ccm

O3 Setpoint (ppb)	Calculated NO _x conc (ppb)	Calculated NO conc (ppb)	Calculated NO ₂ conc (ppb)	Indicated NO _x conc (ppb)	Indicated NO conc (ppb)	Indicated NO ₂ conc (ppb)	NO _x Correction factor	NO Correction factor	NO ₂ Correction factor	Converter Efficiency
0	397.9	397.2	0.7	395.1	395.0	1.0	N/A	N/A	N/A	N/A
350	397.9	78.9	319.0	395.7	78.8	317.1	1.0056	1.0022	1.0060	99.4%
200	397.9	215.2	182.7	397.0	214.2	183.3	1.0024	1.0047	0.9969	100.3%
100	397.9	306.6	91.3	397.1	305.0	92.8	1.0020	1.0051	0.9838	101.6%
Average Correction Factor							1.0033	1.0040	0.9955	100.5%

AIC Data

Parameter	Previous calibration				Current calibration			
	NO _x	NO ₂	NO	ppb	NO _x	NO ₂	NO	ppb
Auto zero	0.3	-0.3	0.8	ppb	2.8	0.3	1.5	ppb
Auto span	434.8	428.1	7.5	ppb	453.0	444.4	9.5	ppb

Calibration Performed By: Kelly Baragar

Calibration Summary

Parameter NO₂
 Air Monitoring Network Palliser Airshed

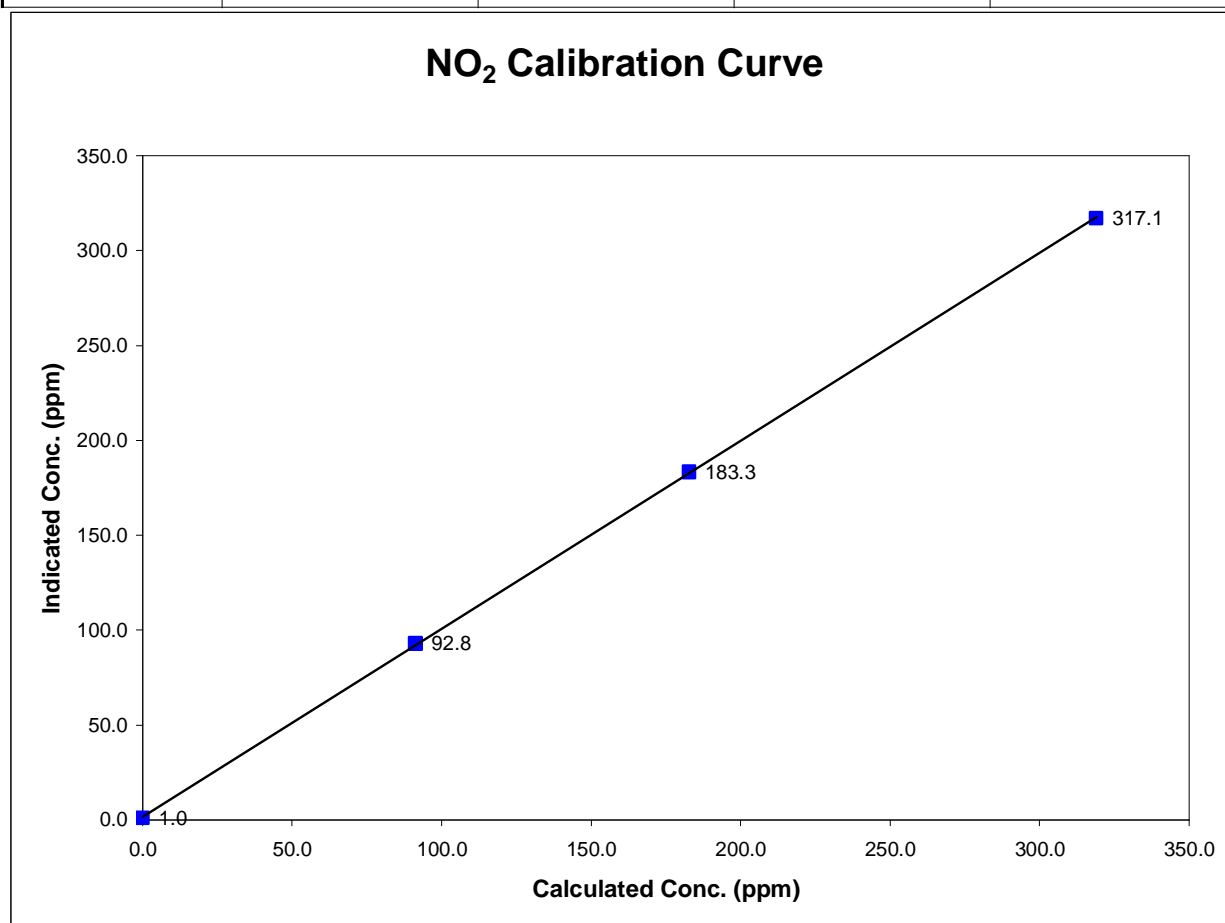


Station Information

Calibration Date	December 7, 2004	Previous Calibration	November 4, 2004
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	10:30	End Time (MST)	14:58
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	1.0	0.0000		
91.3	92.8	0.9838	Correlation Coefficient	0.999969
182.7	183.3	0.9969		
319.0	317.1	1.0060	Slope	1.009649
			Intercept	-1.721916



Calibration Summary

Parameter NO_x
 Air Monitoring Network Palliser Airshed

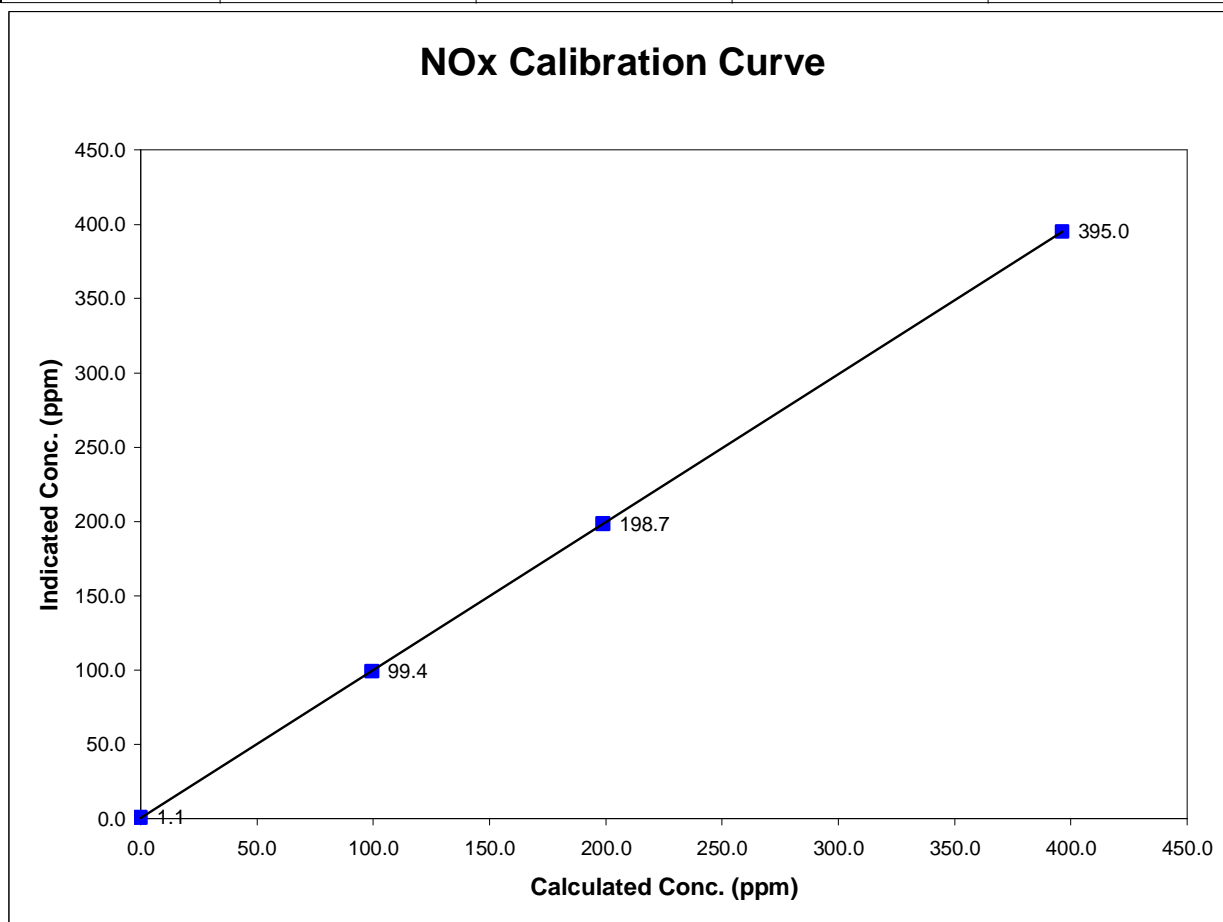


Station Information

Calibration Date	December 7, 2004	Previous Calibration	November 4, 2004
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	10:30	End Time (MST)	14:58
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	1.1	0.0000	Correlation Coefficient	0.999998
396.3	395.0	1.0033		
198.8	198.7	1.0005	Slope	1.005522
99.4	99.4	1.0005		
			Intercept	-0.865434



Calibration Summary

Parameter NO
 Air Monitoring Network Palliser Airshed

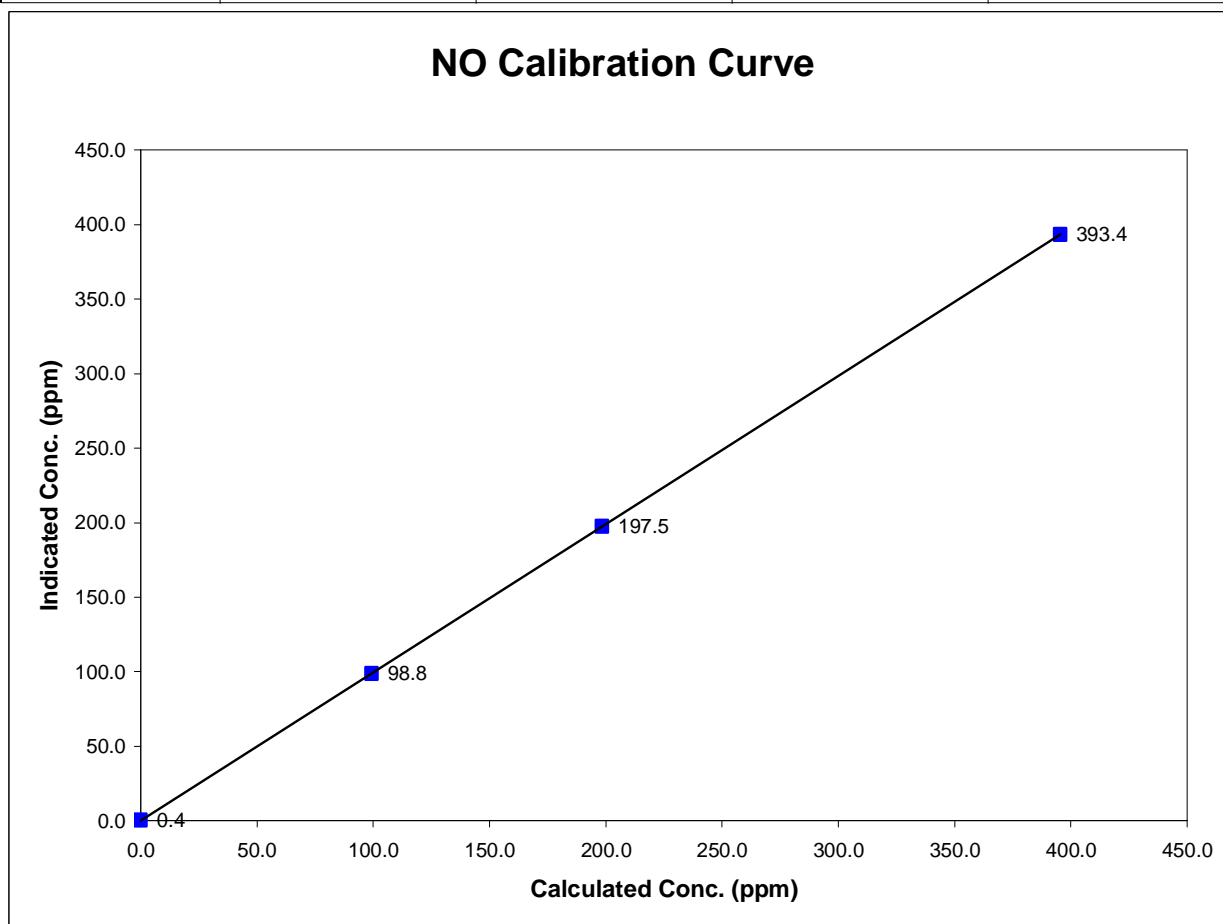


Station Information

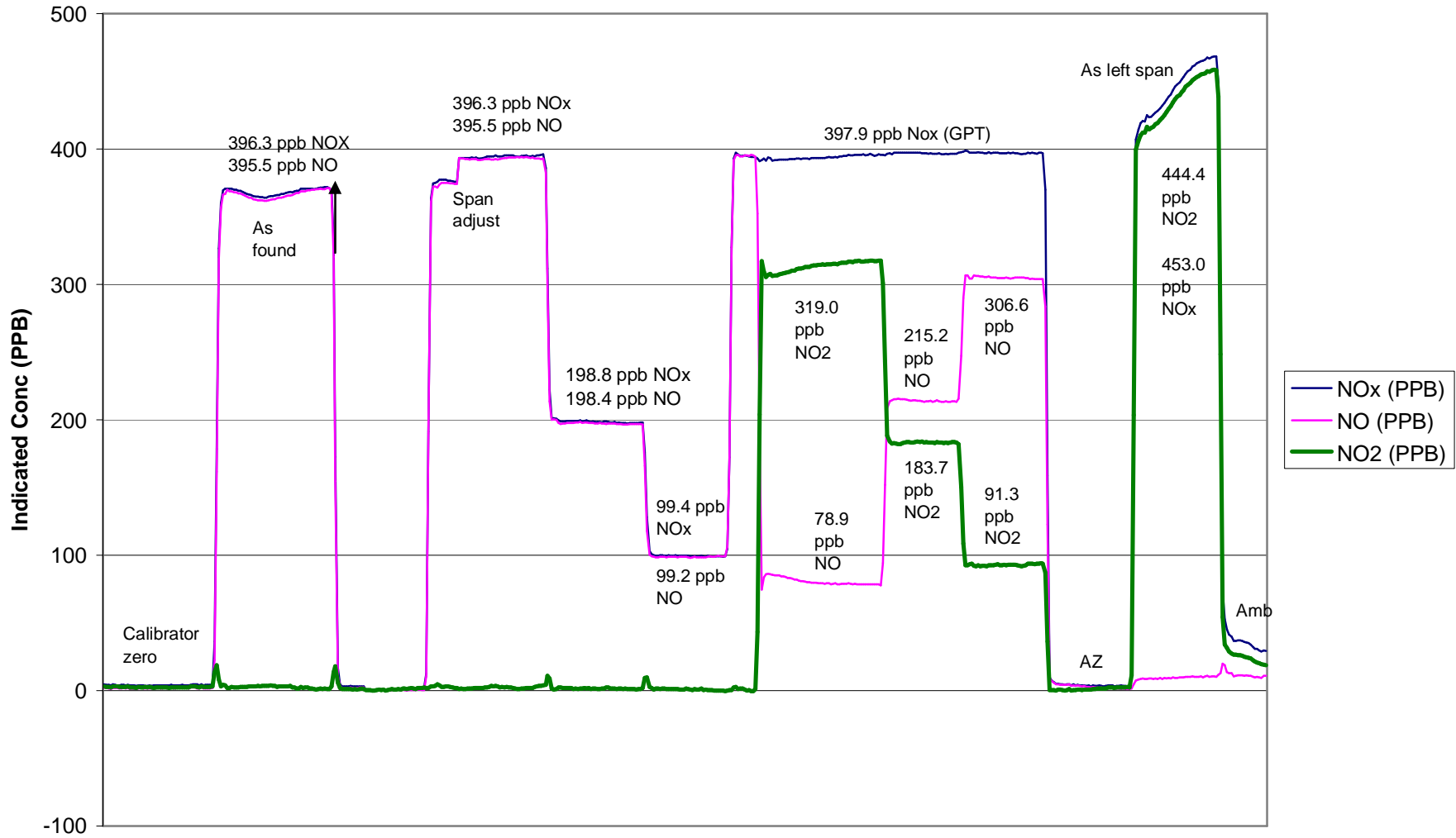
Calibration Date	December 7, 2004	Previous Calibration	November 4, 2004
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	10:30	End Time (MST)	14:58
Analyzer make	API Model 200E	Analyzer serial #	219

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.4	N/A		
395.5	393.4	1.0053	Correlation Coefficient	1.000000
198.4	197.5	1.0043		
99.2	98.8	1.0047	Slope	1.006146
			Intercept	-0.307147



NOx Calibration



December 07, 2004

Calibration Report

Parameter THC
 Air Monitoring Network Palliser Airshed



Station Information

Calibration Date	December 7, 2004	Previous Calibration	November 4, 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)	14:10	End Time (MST)	16:50
Barometric Pressure	0.907 ATM	Station Temperature	20.5 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas Concentration	700 ppm CH ₄ / 301 ppm C ₃ H ₈	Cal Gas Expiry Date	8/28/2005
Cal Gas CH ₄ 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	1.016915	Calculated slope	1.016260
Calculated intercept	0.053311	Calculated intercept	0.143493
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	5.74	PSI
THC span counts	10958	raw	10818	raw
THC zero counts	1711	raw	1711	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	-0.12	N/A
2994	39.98	20.13	19.69	1.0223
2994	19.98	10.13	9.77	1.0366
2994	9.97	5.07	4.86	1.0429
zero	0.00	0.00	-0.12	As Found Zero
2994	39.98	20.13	19.52	As Found Span
Average Correction Factor				1.0340

Calculated value of As Found Response: 20.029 ppm Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	0.04	ppm	0.06	ppm
Auto span	22.65	ppm	22.78	ppm

Notes: Analyzer was span adjusted.
All analyzer diagnostic functions are within normal factory specifications.

Calibration Performed By: Kelly Baragar

Calibration Summary

Parameter THC
 Air Monitoring Network Palliser Airshed

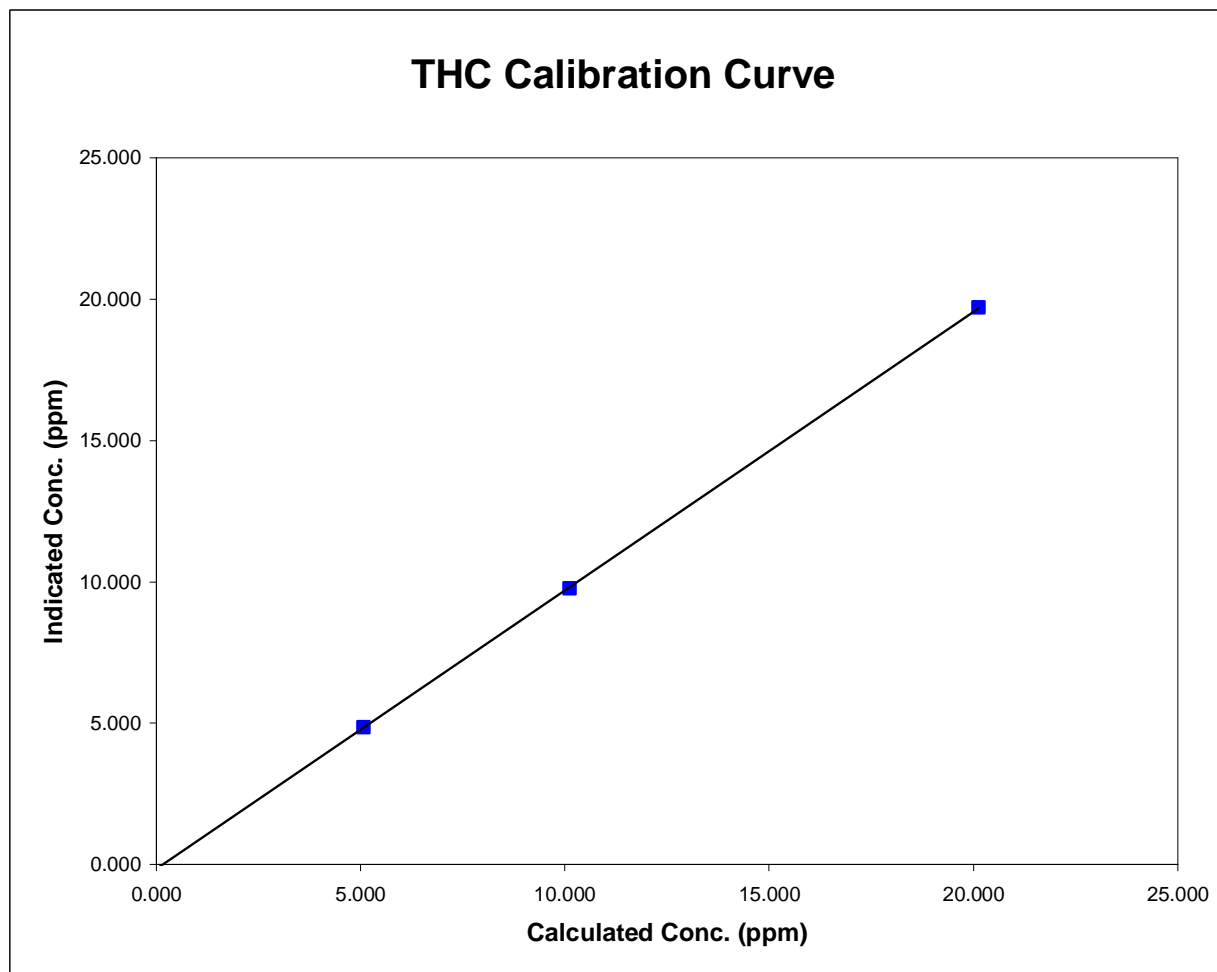


Station Information

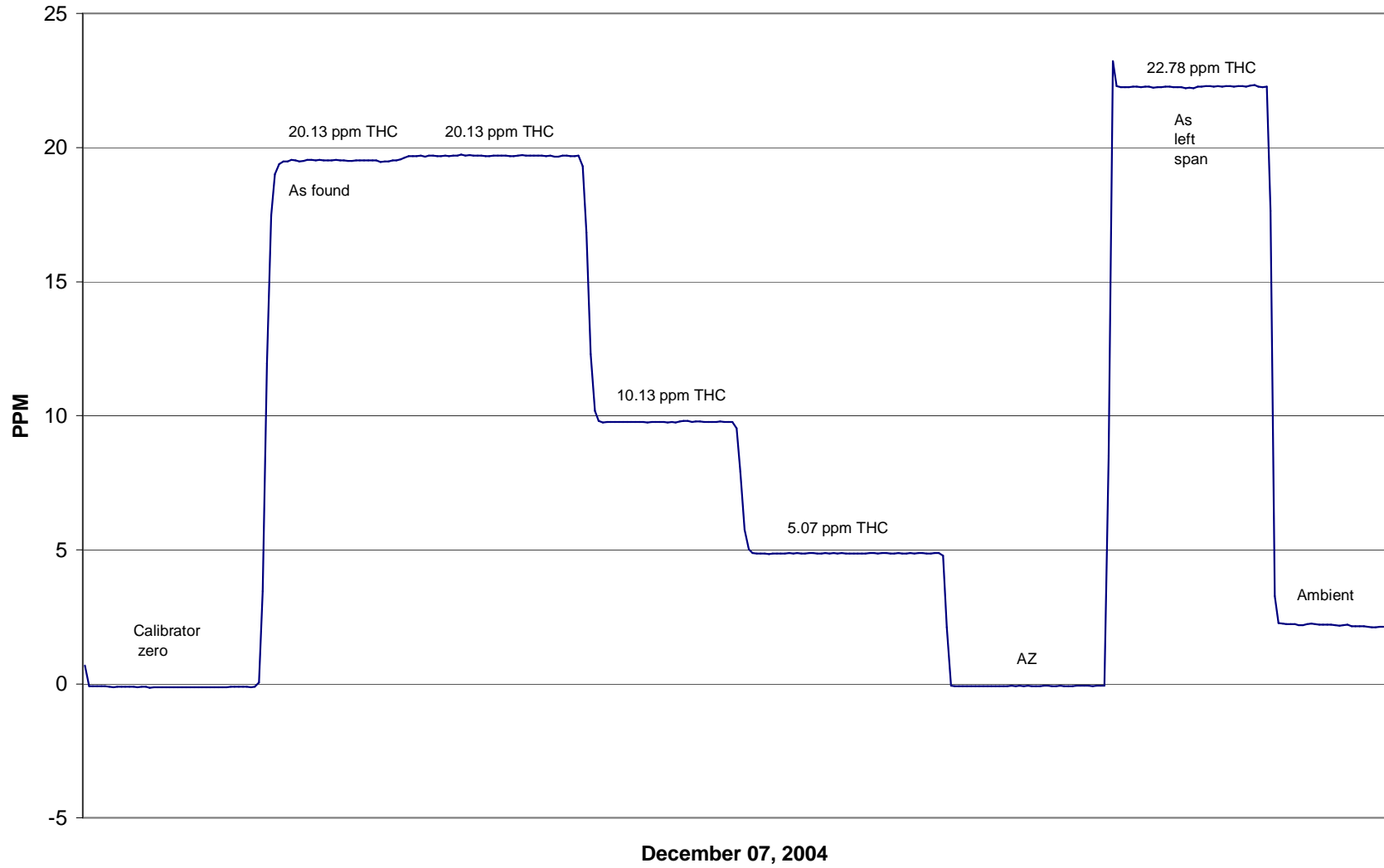
Calibration Date	December 7, 2004	Previous Calibration	November 4, 2004
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	14:10	End Time (MST)	16:50
Analyzer make/model	TEI model 51C-LT	Analyzer serial #	407505596

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.124	N/A		
20.132	19.692	1.0223	Correlation Coefficient	0.999981
10.128	9.770	1.0366		
5.071	4.862	1.0429	Slope	1.016260
			Intercept	0.143493



THC Calibration



Calibration Report



Parameter PM2.5
 Air Monitoring Network Palliser Airshed

Station Information

Calibration Date	December 7, 2004	Previous Calibration	November 5, 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)	14:00	End Time (MST)	15:30
Barometric Pressure	0.907 ATM	Station Temperature	20.5 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	59	%	23	%
Ko Factor	12758		12758	
Temperature	-13.6	Deg C	-13.6	Deg C
Pressure	0.914	ATM	0.914	ATM

Calibration Data

Parameter	Set Point	Indicated Reading (measured externally)	Tolerance	TEOM Reading
zero flow - main	0.0	0.00		0.07
zero flow - auxillary	0.0	0.00		0.08
flow recovery - main	45 - 60 Seconds	NA	45 - 60 Seconds	40 sec
flow recovery - aux	46 - 60 Seconds	NA	46 - 60 Seconds	30 sec
Temperature	measured	-12.8	+/- 1.0 Deg C	-13.6
Pressure	measured	0.907	+/- 1.5% ΔATM	0.914
Total Flow	16.67 SLPM	17.90		17.15
Main Flow	13.67 SLPM	14.80	+/- 1.0 SLPM	14.00
Auxillary Flow	3.0 SLPM	3.289	+/- 0.2 SLPM	3.150
Leak Check - main	0.0	0.00	<0.15 SLPM	0.05
Leak Check - aux	0.0	0.00	<0.15 SLPM	0.11
Ko Factor (w/o filter)	measured	328.753	filter weight (g)	0.11352
Ko Factor (w/ filter)	measured	234.444	% Ko difference	0.5%

Notes: Performed leak test, flow audit, KO confirmation, and flow calibration.
Total flow measured at 17.9 L/min. Adjusted flows slightly down. All other analyzer specs OK.
Replaced sample filter. Left flows adjusted slightly high due to cold weather influence.

Calibration Performed By: Kelly Baragar