



Palliser Airshed Society

Ambient Air Monitoring Network Summary

November 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 – November 2004

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

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

- Monthly average concentrations of NO₂ was 9.4 ppb
- Monthly average concentrations for O₃ was 18.1 ppb
- Monthly average concentrations for THC was 2.09 ppm
- Monthly average concentrations for PM_{2.5} was 2.5 µg/m³

Note: On November 14, 2004 between 13:42 and 14:00, the TEOM PM_{2.5} analyzer recorded elevated particulate concentrations in excess of 125 µg/m³. This event was investigated through the raw 30 second data but found to be possible (based upon the rate of increase / decrease and instrument operation). However, it should be considered when evaluating the hourly average table, as this elevated concentration resulted in a much higher maximum compared to hourly average value for that period.

Passive Monitoring – Six Stations throughout the PAS zone:

The following are the ranges recorded by the six passive stations located throughout the PAS zone:

- Monthly average concentrations for SO₂ passives ranged from 0.2 ppb to 0.3 ppb
- Monthly average concentrations for NO₂ passives ranged from 4.8 ppb to 12.3 ppb
- Monthly average concentrations for O₃ passives ranged from 16.0 ppb to 25.7 ppb

Please note: No data was available for Station 6 (Christian School Park)



Palliser Airshed Society

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

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



November 2004 Monthly Overall Summary Report

Ambient Air Quality Data

Nov-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	8.0	0	0	108.4	Nov-18	4.1	SW	21.9	Nov-11	100.0%
NO ₂ (ppb)	212	106	Crescent Heights	9.4	0	0	32.8	Nov-18	3.1	WSW	15.6	Nov-24	100.0%
NO _x (ppb)			Crescent Heights	17.2	0	0	138.1	Nov-18	4.1	SW	36.3	Nov-11	100.0%
O ₃ (ppb)	82		Crescent Heights	18.1	0	0	39.3	Nov-12	14.2	SSW	29.7	Nov-05	100.0%
THC (ppm)			Crescent Heights	2.09	0	0	3.69	Nov-24	2.9	SE	2.37	Nov-24	100.0%
PM _{2.5} (µg/m ³)		30 ^a	Crescent Heights	2.5	0	0	21.7	Nov-14	11.3	S	5.7	Nov-13	99.7%
RH (%)			Crescent Heights	60.1									100.0%
SR (W/m ²)			Crescent Heights	59.0									100.0%
Temp (°C)			Crescent Heights	2.3									100.0%
WSPD v (km/hr)			Crescent Heights	8.0									100.0%
WSPD s (km/hr)			Crescent Heights	12.4									100.0%
WDIR (Deg)			Crescent Heights	SW*									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 November

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	$\mu\text{g}/\text{m}^3$	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^2	No operational problems observed
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: November 1, 2004 to December 1, 2004

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	33	ppb	18-Nov	7:00 8:00
Maximum 24-hr Average:	16	ppb	24-Nov	

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

AIC Time:	30 hrs							Operational Time:	686 hrs	
Calibration Time:	4 hrs							AMD Operational Uptime:	100.0%	
Percentile	99	95	75	50	25	5	1	Average		
	28	21	14	8	4	2	1	9.4 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-Nov-04	23	15	9	4	4	4	5	7	6	6	5	3	2	3	4	8	7	6	4	4	A	6	3	2	6.1	23.1
2-Nov-04	3	2	1	3	4	4	11	14	5	4	2	2	4	3	8	8	11	10	16	A	11	8	6	6	6.3	16.4
3-Nov-04	5	4	5	2	1	4	7	12	8	11	6	5	5	5	6	11	16	20	A	25	19	19	11	6	9.3	24.8
4-Nov-04	3	2	2	4	3	4	8	6	7	4	5	4	10	6	C	C	C	C	14	8	8	5	4	6	5.6	13.7
5-Nov-04	3	11	4	9	5	7	5	12	3	2	1	1	2	1	1	1	A	11	7	6	10	11	13	7	5.8	12.7
6-Nov-04	5	4	7	4	1	4	3	9	20	10	2	3	3	2	2	A	4	3	4	5	8	6	2	2	4.9	20.3
7-Nov-04	2	2	2	1	1	0	1	2	1	1	2	2	1	0	A	4	2	5	3	2	2	3	3	10	2.2	10.3
8-Nov-04	9	10	16	14	16	16	14	11	12	14	13	14	4	A	5	7	6	8	8	8	10	9	4	6	10.2	16.2
9-Nov-04	4	3	5	5	8	13	16	9	8	11	11	11	A	11	12	8	14	11	10	9	18	13	7	7	9.7	17.9
10-Nov-04	5	4	2	3	3	4	4	4	5	3	1	A	4	5	4	4	4	3	10	10	18	24	28	19	7.5	28.0
11-Nov-04	19	10	14	19	24	26	29	20	19	4	A	5	5	6	4	9	10	18	13	19	18	15	15	15	14.5	29.3
12-Nov-04	12	13	12	13	12	16	14	17	19	A	17	14	13	6	5	8	7	10	16	13	6	6	5	5	11.2	18.7
13-Nov-04	3	9	7	3	10	14	21	18	A	19	6	3	4	4	8	9	19	23	22	20	19	19	17	18	12.9	23.4
14-Nov-04	18	13	13	13	15	15	14	A	13	12	15	18	18	14	3	4	3	3	2	3	2	2	1	0	9.3	17.8
15-Nov-04	1	0	0	0	1	2	A	8	6	7	5	5	5	4	5	5	7	6	5	5	8	4	1	1	4.0	8.2
16-Nov-04	4	3	6	12	12	A	14	10	16	11	8	9	5	3	3	8	25	24	28	20	8	5	6	4	10.6	27.5
17-Nov-04	5	4	3	5	A	5	7	7	19	11	5	3	3	3	4	6	16	29	33	30	27	25	20	15	12.5	32.7
18-Nov-04	21	22	19	A	26	30	27	33	31	24	6	6	6	6	9	11	9	10	11	6	2	9	5	8	14.6	32.8
19-Nov-04	3	4	A	9	10	11	10	15	11	7	4	4	4	4	4	6	11	14	20	20	21	14	14	14	10.1	20.7
20-Nov-04	7	A	8	9	7	6	10	10	11	10	6	5	5	3	7	5	9	11	14	17	5	3	2	2	7.5	16.9
21-Nov-04	A	5	4	4	3	4	3	4	4	2	3	3	4	3	4	4	4	4	4	4	4	4	5	A	3.7	5.1
22-Nov-04	5	4	7	4	4	9	7	6	3	2	2	2	3	3	4	6	16	16	14	16	20	15	A	13	7.8	20.1
23-Nov-04	14	13	14	13	15	20	18	21	19	11	11	3	2	4	5	9	14	16	18	20	20	A	24	18	13.9	23.9
24-Nov-04	19	18	21	22	24	22	19	20	21	18	18	22	20	8	7	10	11	13	9	8	A	13	9	6	15.6	23.9
25-Nov-04	6	7	13	11	14	14	16	16	12	10	10	9	5	5	19	12	14	20	15	A	13	14	15	12	12.2	19.7
26-Nov-04	10	8	15	21	14	8	13	14	17	21	18	11	6	5	6	8	13	16	A	13	10	9	9	4	11.8	21.3
27-Nov-04	3	5	5	6	4	5	6	6	8	12	13	7	10	7	6	6	13	A	14	13	10	8	11	12	8.3	14.4
28-Nov-04	15	16	19	16	12	12	10	11	9	15	16	11	12	13	17	21	A	15	8	9	7	4	5	2	12.0	20.9
29-Nov-04	3	3	2	3	2	5	8	13	8	11	15	14	19	16	17	A	17	9	6	5	5	4	3	5	8.3	19.0
30-Nov-04	7	4	3	7	7	10	24	26	19	13	7	6	8	7	A	12	20	22	23	16	13	9	7	5	11.9	25.8
Hourly Avg	8.2	7.6	8.3	8.2	9.0	10.1	11.9	12.4	11.7	9.9	8.1	7.0	6.6	5.5	6.6	7.7	11.2	12.6	12.5	11.7	11.4	9.9	8.7	8.0		
Hourly Max	23.1	22.0	21.5	21.9	25.5	30.3	29.3	32.8	31.5	23.7	18.4	22.5	20.1	16.5	19.3	20.9	24.8	29.1	32.7	29.7	27.1	25.3	28.0	19.0		

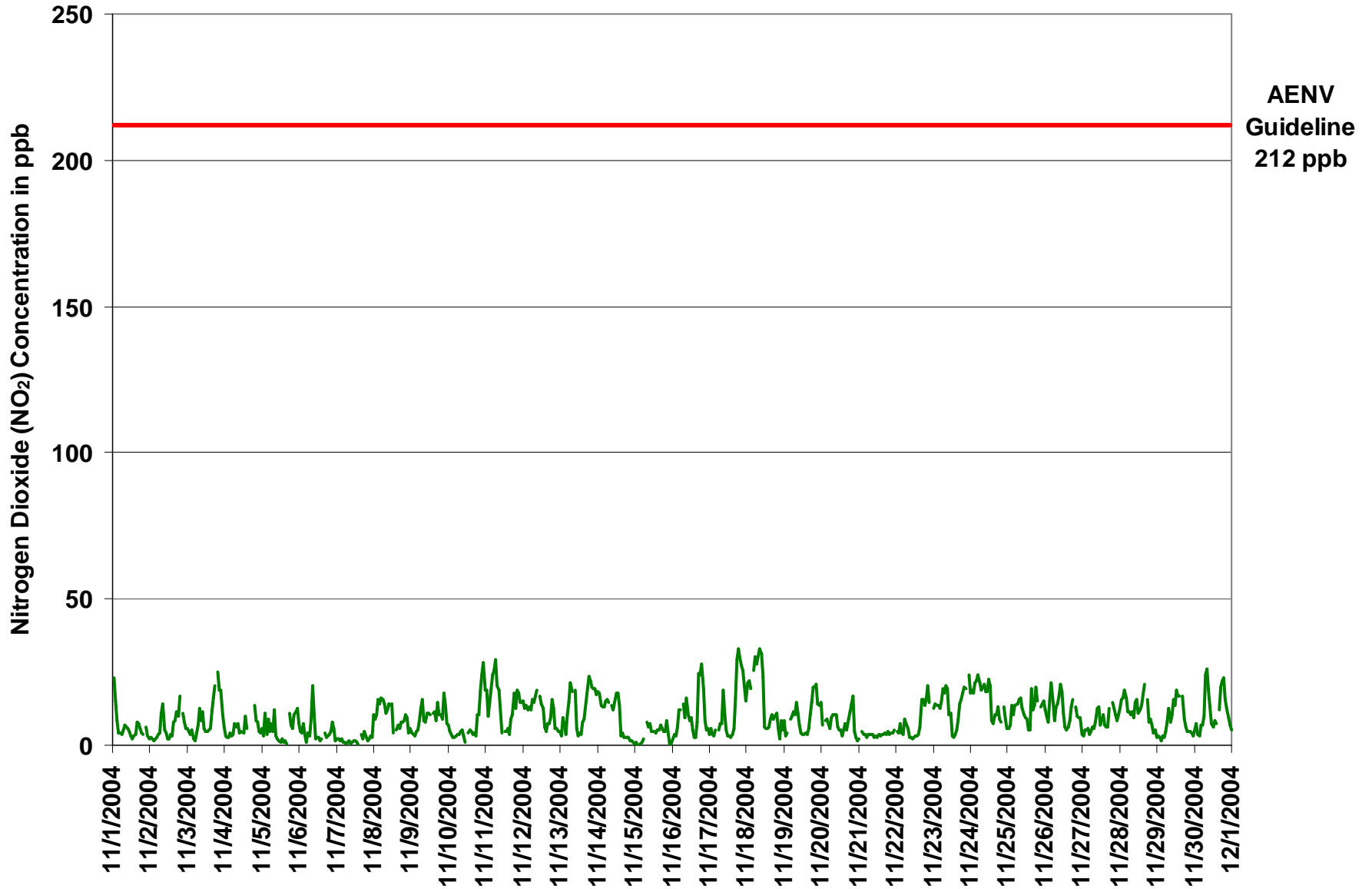


Figure 1. PAS - Crescent Heights Nitrogen Dioxide 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Nitrogen Dioxide (NO₂)

Station Owner: PAS

Monitoring Dates: November 1, 2004 to December 1, 2004

Summary

Maximum 1-hr Value:	84.3	ppb	4-Nov	10:00 11:00
Maximum 24-hr Value:	26.2	ppb	11-Nov	

AIC Time:	30 hrs	Operational Time:	686 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	52	40	25	17	9	3	1	18.3 ppb

Status Flag Characters

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum		
	Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00			23:00	0:00
1-Nov-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-Nov-04		51	21	11	6	11	7	25	42	8	10	29	5	3	5	37	53	49	39	23	10	A	19	5	26	21.5	52.6	
2-Nov-04		30	26	2	18	17	25	50	23	13	11	3	3	60	15	35	37	21	17	23	A	25	13	25	20	22.3	60.4	
3-Nov-04		15	6	8	3	3	8	19	21	14	18	10	14	10	10	16	26	27	30	A	40	29	42	15	10	17.1	41.6	
4-Nov-04		6	4	5	24	8	6	16	8	34	7	84	13	19	37	C	C	C	C	24	10	30	9	10	35	19.5	84.3	
5-Nov-04		19	44	9	32	8	36	9	28	8	5	5	3	18	2	3	1	A	31	25	9	14	15	33	16	16.2	43.8	
6-Nov-04		13	33	35	29	8	15	6	14	27	22	3	4	5	3	4	A	7	4	5	7	10	9	2	3	11.8	35.5	
7-Nov-04		3	3	3	2	1	1	3	3	1	2	3	3	3	1	A	6	6	6	6	3	3	5	5	17	4.0	16.9	
8-Nov-04		13	15	18	16	18	19	17	16	20	17	16	24	21	A	8	46	7	38	11	21	18	25	5	16	18.4	46.0	
9-Nov-04		28	4	25	31	16	18	25	14	9	18	13	13	A	17	17	11	22	14	17	14	24	20	9	8	16.9	31.4	
10-Nov-04		6	6	4	6	5	5	5	8	7	6	2	A	6	7	8	8	6	5	18	17	26	33	33	27	11.0	33.3	
11-Nov-04		23	19	18	25	28	38	37	32	24	16	A	22	15	24	5	27	17	27	33	50	28	21	42	32	26.2	50.0	
12-Nov-04		24	32	14	17	24	39	32	19	20	A	22	22	15	17	35	38	11	13	21	16	8	18	18	9	21.0	38.8	
13-Nov-04		9	36	26	5	33	39	32	25	A	28	17	5	22	6	31	14	25	31	36	25	21	23	19	22	23.0	38.6	
14-Nov-04		26	15	15	14	17	26	33	A	17	21	17	36	28	22	17	37	4	4	3	31	13	2	2	1	17.4	37.2	
15-Nov-04		14	1	1	1	2	14	A	31	8	39	6	9	23	6	30	22	17	7	29	14	14	18	1	4	13.5	38.8	
16-Nov-04		9	6	13	15	17	A	23	13	33	19	16	18	7	14	4	21	36	32	39	27	10	8	18	5	17.5	39.2	
17-Nov-04		39	5	7	36	A	7	20	20	27	20	14	7	7	5	8	13	44	42	41	40	42	38	31	24	23.3	44.4	
18-Nov-04		27	33	26	A	31	52	41	62	39	34	15	6	15	27	11	13	12	14	19	20	3	19	17	17	24.0	61.5	
19-Nov-04		10	12	A	13	12	16	14	19	17	12	7	6	14	9	14	9	18	19	27	50	25	26	16	22	16.8	50.1	
20-Nov-04		15	A	10	28	17	8	20	19	16	17	17	12	11	6	14	9	22	16	18	20	13	17	3	12	14.7	27.8	
21-Nov-04		A	9	12	30	15	21	6	31	23	3	5	20	17	5	5	6	5	5	36	4	6	16	22	A	13.7	36.4	
22-Nov-04		8	16	20	11	7	15	15	13	9	5	4	3	4	6	8	10	25	22	20	24	22	22	A	28	13.7	27.8	
23-Nov-04		24	18	18	15	19	22	28	23	28	18	13	10	3	18	7	13	23	18	29	29	22	A	28	23	19.5	29.3	
24-Nov-04		25	20	25	42	32	29	20	27	25	22	24	24	24	27	9	13	14	30	11	12	A	19	13	10	21.6	42.3	
25-Nov-04		7	10	19	15	15	16	19	23	25	14	11	11	6	11	50	20	20	23	19	A	22	18	18	17	17.8	50.5	
26-Nov-04		21	13	31	24	24	12	18	22	20	24	26	19	8	12	9	13	20	24	A	25	12	28	35	5	19.3	35.2	
27-Nov-04		5	18	7	17	6	9	8	16	20	58	49	11	17	11	8	8	18	A	18	15	14	10	16	19	16.4	58.3	
28-Nov-04		19	20	23	18	16	14	14	15	28	33	49	27	28	30	43	47	A	44	13	12	12	6	24	4	23.3	48.5	
29-Nov-04		24	20	3	4	3	13	25	31	23	30	37	38	41	39	46	A	36	15	52	7	18	30	4	17	24.2	52.1	
30-Nov-04		21	9	5	23	13	18	71	64	30	20	12	8	10	11	A	23	28	31	27	26	27	18	10	35	23.4	71.1	
																											N	0.0
Hourly Avg		18.5	16.3	14.1	17.9	14.7	18.8	22.4	23.5	19.8	18.9	18.2	13.7	15.9	13.8	17.8	20.1	20.1	21.4	23.1	20.7	18.3	18.8	16.6	16.7			
Hourly Max		51.2	43.8	35.5	42.3	33.2	52.3	71.1	64.0	39.3	58.3	84.3	38.0	60.4	38.7	50.5	52.6	48.6	43.6	52.1	50.1	42.3	41.6	41.6	34.6			

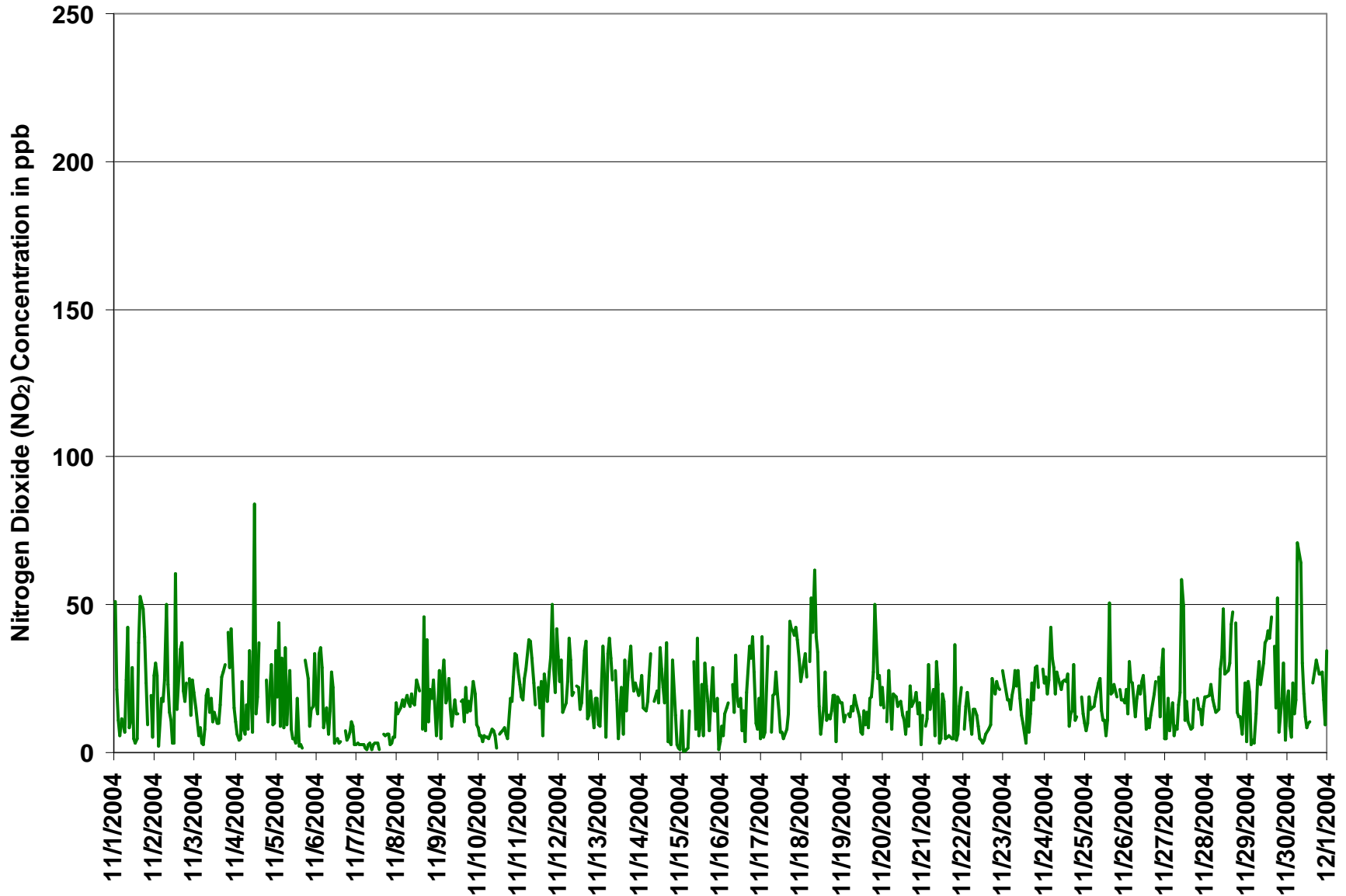
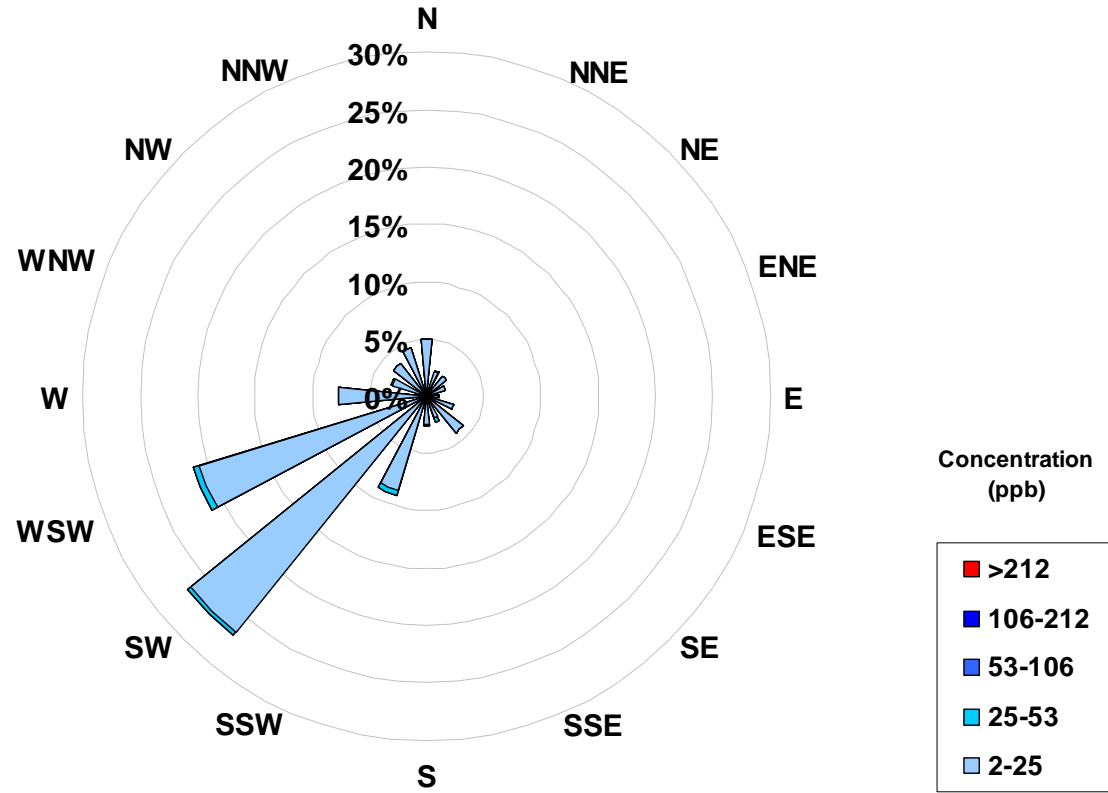


Figure 2. PAS - Crescent Heights Nitrogen Dioxide 1-hr Maximum Value Monthly Trend



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



Frequency Distribution of NO ₂ in ppb			
Range		Frequency (hrs)	
0	< 2	44	
2	to 25	627	
25	to 53	15	
53	to 106	0	
106	to 212	0	
	> 212	0	
Total Non-Zero Values		686	

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: November 1, 2004 to December 1, 2004

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	108	ppb	18-Nov	5:00 6:00
Maximum 24-hr Average:	22	ppb	11-Nov	

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

AIC Time:	30 hrs	Operational Time:	686 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	57	35	8	3	1	0	0	8.0 ppb

Status Flag Characters

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

Day Mountain Standard Time

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum	
1-Nov-04	20	1	1	0	1	0	2	4	3	4	4	2	2	1	2	3	4	5	2	1	A	3	0	1	2.9	19.8	
2-Nov-04	2	2	0	1	2	1	9	5	2	3	2	2	6	3	6	6	4	2	8	A	4	2	3	1	3.2	9.3	
3-Nov-04	1	0	0	0	1	1	1	2	2	4	2	3	3	3	3	5	5	5	A	13	8	16	2	1	3.5	16.3	
4-Nov-04	1	1	1	3	1	1	3	2	9	3	5	3	7	4	C	C	C	C	2	1	5	1	1	7	3.1	9.4	
5-Nov-04	1	10	1	4	1	3	1	3	1	2	2	2	2	1	1	1	A	5	2	1	2	2	5	1	2.3	9.7	
6-Nov-04	1	3	5	2	0	1	1	1	7	3	1	1	1	1	1	A	1	0	1	0	1	1	0	0	1.4	6.8	
7-Nov-04	0	0	0	0	0	0	0	0	0	1	1	1	1	0	A	0	0	0	0	0	0	0	0	2	0.4	2.0	
8-Nov-04	2	2	8	13	23	19	39	24	38	47	34	23	3	A	1	6	1	5	1	3	2	4	1	1	13.1	47.4	
9-Nov-04	6	0	2	2	1	1	6	9	11	23	24	15	A	7	6	2	4	3	1	2	7	3	2	1	6.1	24.2	
10-Nov-04	0	0	0	0	0	0	0	1	1	1	1	A	0	1	1	1	1	0	2	1	7	30	35	10	4.1	34.8	
11-Nov-04	3	2	3	7	15	44	77	39	38	5	A	3	6	7	2	8	4	14	14	68	48	25	32	40	21.9	76.9	
12-Nov-04	22	33	16	22	13	42	21	24	32	A	30	22	13	4	4	4	1	1	4	2	1	1	3	1	13.8	42.2	
13-Nov-04	1	8	5	0	8	8	11	4	A	18	3	2	3	2	5	3	7	26	29	43	58	65	53	57	18.3	64.6	
14-Nov-04	53	27	15	16	30	45	51	A	23	22	21	24	21	9	1	2	1	1	1	1	1	0	0	0	16.0	53.4	
15-Nov-04	2	0	0	0	0	2	A	2	1	4	1	2	4	1	3	2	2	1	5	1	1	1	0	0	1.6	4.8	
16-Nov-04	0	0	1	2	1	A	1	1	9	6	5	8	4	2	1	3	11	11	23	6	1	0	2	0	4.2	22.5	
17-Nov-04	2	0	0	3	A	1	3	2	9	5	3	1	1	1	1	1	5	11	18	28	31	32	25	6	8.2	32.5	
18-Nov-04	10	10	4	A	6	108	15	30	44	23	1	1	2	2	2	3	1	2	3	1	1	3	1	1	12.0	108.4	
19-Nov-04	1	1	A	1	1	1	2	4	5	3	2	2	2	3	3	3	2	3	7	16	24	10	5	8	4.7	23.6	
20-Nov-04	5	A	1	6	2	1	5	6	5	10	5	4	4	2	4	2	3	2	2	4	1	3	0	1	3.4	10.2	
21-Nov-04	A	0	1	2	1	3	1	2	3	1	1	2	3	1	1	1	1	0	3	0	1	1	2	A	1.5	3.5	
22-Nov-04	0	1	2	1	1	1	1	2	1	1	1	1	2	2	2	1	2	4	5	4	9	21	8	A	2	3.2	21.4
23-Nov-04	5	2	1	2	4	15	20	36	56	18	16	4	4	5	5	5	9	8	21	58	38	A	35	4	16.1	58.3	
24-Nov-04	10	5	12	15	31	21	11	29	54	53	40	58	52	11	3	4	4	10	3	3	A	4	1	1	18.9	58.1	
25-Nov-04	1	1	13	4	7	18	35	42	32	27	24	13	2	1	12	4	4	12	10	A	4	7	5	2	12.2	42.0	
26-Nov-04	5	1	12	24	7	3	6	7	10	35	26	12	5	4	3	3	4	7	A	6	2	5	10	1	8.6	34.6	
27-Nov-04	0	2	1	1	0	1	1	1	5	19	17	7	12	6	3	2	4	A	3	2	1	1	2	2	4.1	18.6	
28-Nov-04	4	4	16	6	3	3	4	7	10	27	35	22	23	29	36	40	A	17	2	2	3	1	6	1	13.0	39.6	
29-Nov-04	3	3	0	0	1	2	5	17	10	19	33	25	33	27	27	A	23	3	2	1	2	3	1	1	10.5	33.2	
30-Nov-04	1	0	1	2	1	1	18	30	34	10	5	4	6	3	A	2	4	6	6	5	4	2	1	2	6.4	34.1	
Hourly Avg	5.6	4.1	4.3	4.9	5.5	12.0	12.1	11.6	15.8	13.7	12.0	9.3	7.8	5.0	5.2	4.4	4.2	5.8	6.4	9.9	9.9	8.1	8.0	5.3	N	0.0	
Hourly Max	53.4	33.0	16.3	24.0	30.9	108.4	76.9	42.0	55.7	53.0	40.5	58.1	51.8	29.4	36.3	39.6	23.5	25.9	29.4	67.9	58.5	64.6	53.5	56.5			



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Nitric Oxide (NO)

Station Owner: PAS

Monitoring Dates: November 1, 2004 to December 1, 2004

Summary

Maximum 1-hr Value:	242.7	ppb	11-Nov	19:00 20:00
Maximum 24-hr Value:	65.7	ppb	11-Nov	

AIC Time:	30 hrs	Operational Time:	686 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	157	109	51	14	3	1	1	31.3 ppb

Status Flag Characters

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

Day Mountain Standard Time

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum	
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Nov-04	186	3	2	1	5	2	61	94	26	23	42	4	2	4	78	54	117	42	21	11	A	108	1	61	41.2	185.8	
2-Nov-04	69	74	1	35	27	32	233	14	7	25	3	3	140	21	61	98	10	5	18	A	31	29	55	49	45.2	232.5	
3-Nov-04	19	2	1	1	1	1	2	3	12	7	4	14	8	7	8	16	20	17	A	72	19	200	3	1	19.1	199.7	
4-Nov-04	2	2	3	36	4	2	23	3	134	5	126	8	13	59	C	C	C	C	12	3	71	3	4	74	29.3	134.0	
5-Nov-04	12	81	2	56	2	56	2	11	3	3	3	12	14	2	2	A	64	19	2	3	3	59	2	18.0	81.1		
6-Nov-04	2	59	86	24	1	2	2	3	14	11	3	2	2	2	A	1	1	1	1	1	2	1	1	1	9.7	86.0	
7-Nov-04	1	1	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	7	1.1	7.2	
8-Nov-04	4	4	23	20	30	41	57	59	104	67	47	58	32	A	2	118	3	100	2	33	38	84	2	2	40.5	118.3	
9-Nov-04	132	1	45	71	4	3	27	15	16	67	32	21	A	15	12	4	18	5	4	5	37	7	4	3	23.9	132.2	
10-Nov-04	1	1	1	1	1	1	1	4	3	2	1	A	1	2	3	3	1	1	6	5	31	85	70	41	11.6	84.8	
11-Nov-04	5	5	5	13	33	132	113	100	84	24	A	27	60	48	4	91	15	43	70	243	131	66	89	111	65.7	242.7	
12-Nov-04	137	130	23	43	69	172	31	53	41	A	53	52	17	20	97	109	2	3	9	5	1	18	82	3	50.9	171.6	
13-Nov-04	36	112	55	1	90	68	50	13	A	33	17	3	22	4	62	4	14	60	77	95	66	83	77	86	49.0	112.1	
14-Nov-04	99	56	23	24	44	108	200	A	32	46	28	81	51	17	12	38	2	2	1	33	17	1	1	1	39.9	200.1	
15-Nov-04	48	1	1	1	1	66	A	35	3	85	2	10	84	2	39	43	18	2	145	2	3	7	1	1	26.1	145.0	
16-Nov-04	1	1	3	6	2	A	3	3	31	15	36	33	5	11	2	31	39	32	93	15	2	1	76	1	19.1	92.5	
17-Nov-04	16	1	1	69	A	1	23	17	17	11	8	4	5	2	3	14	56	28	75	93	87	93	80	32	32.0	93.5	
18-Nov-04	61	53	19	A	17	234	49	126	133	55	11	2	22	23	3	4	2	3	14	6	2	17	8	4	37.7	234.4	
19-Nov-04	2	2	A	2	1	3	2	8	9	14	5	5	9	11	25	5	6	7	19	110	51	101	11	29	18.9	109.5	
20-Nov-04	105	A	3	76	37	2	67	68	34	35	31	18	13	4	28	4	28	5	4	12	5	101	1	14	30.3	104.6	
21-Nov-04	A	3	17	98	20	69	3	69	95	2	1	37	33	2	2	3	1	1	114	1	2	13	72	A	29.9	114.1	
22-Nov-04	2	16	9	3	2	3	4	7	11	9	3	3	3	3	3	3	9	8	7	62	32	30	A	42	11.9	61.9	
23-Nov-04	20	7	6	6	8	31	64	54	107	42	19	27	6	56	7	9	59	19	77	139	62	A	72	16	39.6	138.8	
24-Nov-04	26	11	26	61	72	45	17	65	94	84	64	62	67	105	5	7	7	86	13	48	A	25	4	2	43.2	104.6	
25-Nov-04	2	4	79	27	11	30	53	137	114	54	32	25	3	3	58	12	9	40	36	A	22	11	8	6	33.7	137.3	
26-Nov-04	39	6	50	41	37	6	18	25	19	59	51	33	7	10	5	4	12	25	A	56	5	93	154	2	32.8	154.0	
27-Nov-04	1	20	2	17	1	3	2	20	28	100	110	16	30	8	6	4	27	A	6	5	2	2	4	6	18.2	110.0	
28-Nov-04	7	12	64	10	5	5	12	17	101	72	100	51	54	54	138	119	A	99	5	3	8	2	68	1	43.8	137.8	
29-Nov-04	97	64	1	1	1	38	31	43	50	57	152	64	60	65	70	A	49	62	69	2	30	92	1	2	47.9	152.5	
30-Nov-04	26	1	2	16	3	3	81	128	151	30	10	6	7	5	A	6	8	24	9	16	46	14	1	60	28.4	151.2	
																										N	0.0
Hourly Avg	39.9	25.3	18.9	26.2	18.2	40.1	42.5	41.2	50.8	35.8	34.3	23.6	26.6	19.5	27.2	29.9	19.7	28.0	33.0	38.5	28.8	44.5	34.7	22.8			
Hourly Max	185.8	129.8	86.0	97.5	89.5	234.4	232.5	137.3	151.2	99.9	152.5	81.5	139.9	104.6	137.8	118.8	116.9	100.1	145.0	242.7	131.3	199.7	154.0	110.8			



Station: Crescent Heights

HOURLY AVERAGE TABLE

Oxides of Nitrogen (NO_x)

Station Owner: PAS

Monitoring Dates: November 1, 2004 to December 1, 2004

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	138	ppb	18-Nov	5:00 6:00
Maximum 24-hr Average:	36	ppb	11-Nov	

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

AIC Time:	30 hrs							Operational Time:	686 hrs	
Calibration Time:	4 hrs							AMD Operational Uptime:	100.0%	
Percentile	99	95	75	50	25	5	1	Average		
	75	56	22	11	5	2	1	17.2 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
1-Nov-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	9.0	42.8
2-Nov-04		43	16	9	4	5	4	7	11	9	10	9	5	3	5	7	12	12	8	5	4	A	10	4	3	9.6	24.3
3-Nov-04		5	4	2	4	5	5	20	19	7	8	4	3	10	6	14	14	15	12	24	A	14	10	8	7	12.8	38.0
4-Nov-04		6	4	5	2	2	5	7	14	11	15	8	7	8	8	8	16	21	26	A	38	27	35	12	7	8.7	17.1
5-Nov-04		4	3	3	7	4	5	11	9	17	7	9	7	17	10	C	C	C	C	16	9	12	6	5	13	7.9	20.4
6-Nov-04		4	20	4	12	5	11	6	15	4	4	3	2	4	2	2	1	A	15	8	6	12	13	17	8	6.1	26.9
7-Nov-04		5	7	13	6	1	5	4	10	27	13	3	4	4	2	3	A	5	3	4	5	8	6	2	2	6.1	26.9
8-Nov-04		2	2	2	1	1	0	1	2	1	1	2	2	1	0	A	4	2	5	3	2	2	3	3	12	2.4	12.3
9-Nov-04		11	12	24	27	39	35	54	35	50	61	48	37	7	A	7	12	7	13	9	11	12	14	5	6	23.2	61.2
10-Nov-04		10	3	7	7	9	14	22	17	19	34	35	25	A	19	17	11	19	13	12	11	25	16	9	8	15.8	35.1
11-Nov-04		5	4	2	3	4	4	4	6	6	4	2	A	5	6	5	4	5	3	12	11	25	54	63	29	11.5	62.6
12-Nov-04		22	12	17	26	39	69	106	59	57	10	A	8	10	12	6	17	14	32	26	86	66	39	46	55	36.3	105.9
13-Nov-04		34	46	28	35	25	58	35	41	51	A	47	36	26	10	8	11	8	11	20	14	6	7	8	5	24.8	57.5
14-Nov-04		4	17	11	4	18	23	32	23	A	37	9	5	7	6	13	12	26	49	51	62	77	83	71	75	31.1	83.5
15-Nov-04		71	40	28	29	45	61	66	A	37	34	36	42	39	23	4	6	3	3	3	4	2	2	1	1	25.2	70.9
16-Nov-04		2	0	0	1	1	3	A	9	7	11	6	7	8	5	8	7	8	7	9	5	10	5	1	1	5.4	11.5
17-Nov-04		4	3	7	13	13	A	15	10	25	17	14	17	9	4	3	11	36	34	50	25	9	6	8	4	14.6	49.9
18-Nov-04		7	4	3	8	A	5	10	9	28	16	8	5	5	3	5	7	21	40	50	58	57	58	45	21	20.5	57.6
19-Nov-04		31	32	23	A	32	138	42	63	75	47	7	6	8	8	11	13	10	11	14	7	2	12	6	10	26.4	138.1
20-Nov-04		4	5	A	9	10	13	12	18	15	9	7	6	6	7	6	8	13	18	27	36	44	24	18	22	14.7	44.1
21-Nov-04		12	A	9	15	9	7	14	16	16	21	12	9	9	5	11	7	11	13	16	21	6	5	2	3	10.8	20.7
22-Nov-04		A	5	4	6	3	7	4	6	6	3	4	4	7	4	5	5	5	4	8	4	5	5	7	A	5.1	7.9
23-Nov-04		5	5	10	4	4	9	8	7	4	4	3	4	4	5	5	8	20	20	18	24	41	23	A	15	10.9	41.4
24-Nov-04		19	16	15	15	19	34	37	56	75	28	27	7	6	9	10	14	23	24	39	78	57	A	58	22	29.9	78.0
25-Nov-04		28	23	34	37	54	42	29	49	75	71	59	80	72	19	10	14	14	22	12	10	A	17	10	7	34.3	80.2
26-Nov-04		6	8	26	14	20	32	50	58	44	37	33	22	6	6	31	16	17	32	25	A	17	20	20	15	24.3	57.8
27-Nov-04		14	9	27	45	21	11	19	21	27	55	44	22	11	9	9	11	17	22	A	19	12	14	20	4	20.2	55.2
28-Nov-04		4	7	6	6	4	6	7	7	13	31	29	14	22	13	10	8	16	A	18	15	12	9	12	15	12.3	30.8
29-Nov-04		19	20	35	22	14	15	17	18	19	41	50	33	35	43	53	60	A	32	10	10	9	5	11	3	25.0	60.3
30-Nov-04		6	5	2	3	3	7	12	30	18	29	49	38	52	43	44	A	40	12	8	6	6	7	4	6	18.7	51.7
		9	4	4	8	7	11	42	55	53	23	12	10	14	10	A	14	23	27	28	20	16	11	7	7	18.1	55.2
																										N	0.0
Hourly Avg		13.7	11.6	12.4	12.9	14.4	22.0	23.9	23.9	27.4	23.5	20.0	16.2	14.3	10.4	11.7	12.0	15.3	18.3	18.8	21.5	21.2	17.9	16.6	13.2		
Hourly Max		70.9	46.3	34.9	45.1	54.5	138.1	105.9	62.9	75.2	71.1	58.8	80.2	71.6	43.5	53.3	60.3	39.9	49.2	51.2	86.2	77.4	83.5	70.6	74.7		



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Oxides of Nitrogen (NO_x)

Station Owner: PAS

Monitoring Dates: November 1, 2004 to December 1, 2004

Summary

Maximum 1-hr Value:	281.4	ppb	2-Nov	6:00 7:00
Maximum 24-hr Value:	88.9	ppb	11-Nov	

AIC Time:	30 hrs	Operational Time:	686 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	209	144	74	31	12	4	2	47.7 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

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-Nov-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	60.5	224.4	
2-Nov-04		224	23	13	6	16	8	85	124	31	29	70	8	5	9	115	107	159	80	44	21	A	121	6	87	65.9	281.4	
3-Nov-04		100	98	2	47	42	56	281	36	20	34	6	6	200	34	89	132	31	22	42	A	57	38	75	69	34.9	233.6	
4-Nov-04		35	6	9	4	4	8	22	24	25	25	14	26	18	16	24	41	39	41	A	110	47	234	18	12	47.7	209.7	
5-Nov-04		8	6	7	52	11	9	36	11	167	12	210	21	32	96	C	C	C	C	36	13	95	12	13	108	33.1	119.0	
6-Nov-04		32	119	11	86	10	84	11	38	10	7	8	11	32	4	4	2	A	95	44	10	17	18	91	17	20.3	111.6	
7-Nov-04		15	91	112	53	9	17	7	16	40	29	5	6	6	4	4	A	8	4	6	8	12	9	3	3	20.3	111.6	
8-Nov-04		4	3	3	2	1	1	3	3	1	3	4	4	4	1	A	7	7	7	7	7	3	3	5	5	23	4.6	23.0
9-Nov-04		17	19	40	36	47	60	72	75	120	83	60	82	52	A	10	164	9	127	12	55	46	103	7	17	57.0	164.1	
10-Nov-04		155	5	70	103	19	22	50	27	25	82	45	33	A	31	28	13	38	18	19	19	47	26	13	10	39.1	154.6	
11-Nov-04		6	6	4	6	5	5	5	11	10	8	3	A	7	8	11	11	7	6	24	22	54	116	99	68	21.8	115.5	
12-Nov-04		27	23	22	38	61	170	147	132	108	40	A	50	74	72	8	116	32	69	102	265	143	83	130	131	88.9	264.7	
13-Nov-04		160	157	35	57	86	209	59	70	60	A	74	70	30	35	130	145	13	15	30	20	9	36	100	12	70.2	209.4	
14-Nov-04		44	148	77	6	117	100	78	37	A	60	33	7	44	10	87	18	38	87	112	116	86	99	94	107	69.9	148.3	
15-Nov-04		119	70	37	37	61	131	222	A	47	67	45	109	78	38	29	75	5	5	4	64	27	3	2	2	55.5	221.7	
16-Nov-04		59	1	1	1	2	80	A	66	10	124	7	18	98	7	63	65	36	8	173	16	16	25	2	4	38.3	173.3	
17-Nov-04		10	7	15	21	18	A	26	16	61	31	52	51	12	24	5	48	74	63	125	41	12	8	94	5	35.6	125.3	
18-Nov-04		56	5	7	100	A	8	41	35	44	30	22	11	10	7	10	22	99	65	112	132	121	125	108	56	53.2	131.7	
19-Nov-04		87	79	44	A	43	275	89	165	168	88	26	8	37	49	14	17	14	17	33	24	4	33	24	20	58.9	275.2	
20-Nov-04		12	14	A	14	13	19	16	27	24	25	11	11	23	20	39	12	22	25	45	146	75	119	25	47	34.1	146.2	
21-Nov-04		116	A	12	104	55	10	80	86	46	51	48	30	23	11	40	13	45	19	21	32	16	118	3	26	43.7	117.9	
22-Nov-04		A	12	27	127	34	90	8	100	114	5	6	57	46	6	7	9	6	6	150	5	7	28	89	A	42.7	149.6	
23-Nov-04		9	32	29	13	7	18	18	16	17	13	6	6	7	9	11	11	34	30	26	83	53	51	A	69	24.8	83.4	
24-Nov-04		45	23	24	18	25	51	78	76	131	57	31	37	8	63	13	22	78	36	105	165	80	A	99	40	56.7	165.2	
25-Nov-04		50	30	49	103	103	70	36	86	117	102	88	85	88	125	12	19	21	97	24	60	A	40	17	11	62.3	124.7	
26-Nov-04		8	12	94	35	26	45	71	156	139	64	43	35	8	13	103	31	29	59	53	A	43	27	25	23	49.7	155.8	
27-Nov-04		59	15	79	63	61	15	36	42	38	78	75	52	14	22	13	16	31	49	A	77	15	114	180	6	50.0	180.4	
28-Nov-04		5	36	9	34	6	12	9	36	49	133	146	26	46	18	12	12	42	A	22	18	17	11	19	25	32.2	145.8	
29-Nov-04		25	31	84	27	20	17	25	31	127	89	147	68	74	77	154	145	A	123	18	14	19	7	91	4	61.7	154.0	
30-Nov-04		122	84	3	5	4	47	55	71	73	79	188	94	88	94	102	A	70	74	122	8	47	103	5	19	67.6	188.0	
		46	10	6	38	16	20	145	190	177	46	21	14	16	15	A	29	34	55	34	41	73	31	10	94	50.6	190.5	
																											N	0.0
Hourly Avg		57.0	40.2	31.8	42.6	31.8	57.2	62.5	62.2	69.1	51.7	51.5	35.7	40.7	31.7	42.1	48.1	37.8	46.4	55.2	56.7	44.4	60.1	49.9	38.5			
Hourly Max		224.4	157.2	111.6	126.8	117.4	275.2	281.4	190.5	177.3	133.1	209.7	108.8	199.8	124.7	154.0	164.1	159.3	127.1	173.3	264.7	143.4	233.6	180.4	131.2			

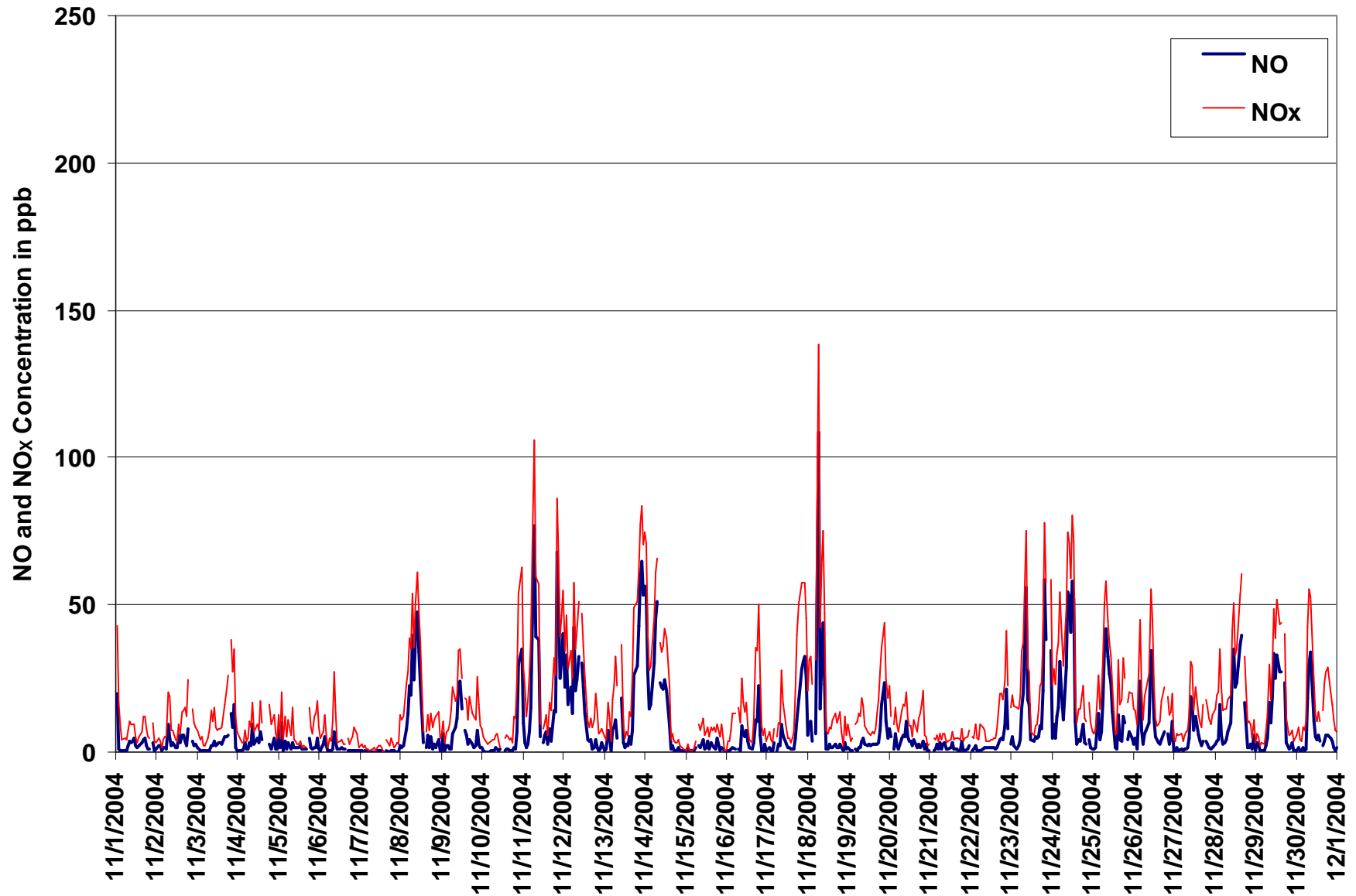


Figure 3. PAS - Crescent Heights Oxides of Nitrogen 1-hr Average Monthly Trends

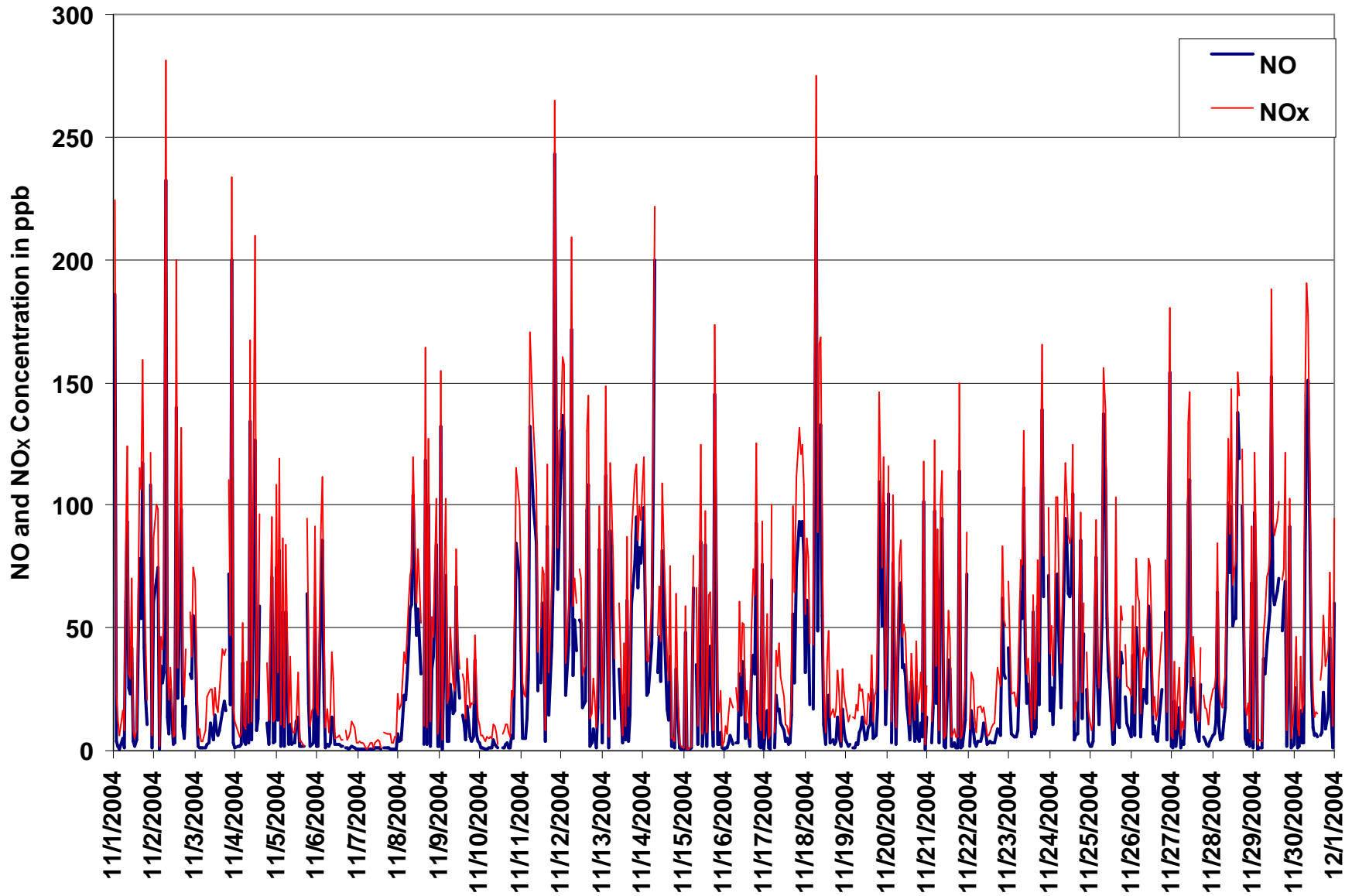


Figure 4. PAS - Crescent Heights Oxides of Nitrogen 1-hr Maximum Value Monthly Trends



PAS - Crescent Heights Ozone Monthly Summary

Station: Crescent Heights

HOURLY AVERAGE TABLE

Ozone (O₃)

Station Owner: PAS

Monitoring Dates: November 1, 2004 to December 1, 2004
Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	39 ppb 12-Nov 14:00 15:00
Maximum 24-hr Average:	30 ppb 5-Nov

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

AIC Time:	31 hrs	Operational Time:	685 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	36	34	26	19	10	2	1	18.1 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-Nov-04	2	10	15	24	26	28	23	20	17	16	22	28	33	34	35	29	27	28	27	29	A	26	28	29	24.1	34.6	
2-Nov-04	29	28	27	25	24	22	16	13	20	21	23	26	27	27	23	22	17	16	8	A	16	15	15	14	20.6	28.6	
3-Nov-04	15	19	23	31	34	32	27	21	23	21	29	31	30	32	33	29	22	14	A	8	8	10	16	20	22.8	34.1	
4-Nov-04	22	22	22	20	21	20	18	19	20	24	26	28	26	31	29	25	21	A	17	21	23	25	27	25	23.1	31.2	
5-Nov-04	27	24	27	25	29	27	29	23	31	32	34	C	C	C	C	34	29	A	33	35	31	30	29	33	29.7	35.2	
6-Nov-04	35	35	31	36	35	25	27	19	9	27	34	31	31	34	34	35	A	31	28	26	20	22	29	28	28.8	35.7	
7-Nov-04	26	26	26	29	28	29	28	29	30	30	32	35	34	35	31	A	27	22	22	22	21	20	20	12	26.6	34.6	
8-Nov-04	12	8	2	1	1	1	1	1	3	5	7	14	32	35	A	28	25	22	19	18	16	20	25	23	13.8	34.8	
9-Nov-04	22	26	23	21	17	12	5	3	5	3	5	8	10	A	15	19	17	18	17	16	7	10	12	12	13.0	26.0	
10-Nov-04	17	22	28	27	26	26	25	25	26	28	31	32	A	28	28	30	28	28	18	17	10	5	2	8	22.5	32.2	
11-Nov-04	7	13	10	3	1	1	2	2	4	16	14	A	18	18	19	14	12	5	8	2	2	1	2	2	7.6	18.8	
12-Nov-04	2	1	1	2	2	2	1	2	5	7	A	12	16	36	39	34	25	20	14	18	25	26	26	25	14.8	39.3	
13-Nov-04	26	22	24	26	19	15	8	8	13	A	26	27	26	26	23	21	8	5	3	3	2	2	2	2	14.7	27.2	
14-Nov-04	2	1	2	1	1	2	1	2	A	8	12	13	14	21	36	32	30	27	28	30	34	34	35	36	17.5	35.6	
15-Nov-04	34	35	34	32	31	28	26	A	27	27	28	29	30	29	29	29	28	27	28	26	25	30	33	32	29.5	34.9	
16-Nov-04	26	25	19	13	11	10	A	19	10	16	19	20	23	29	32	25	8	10	4	8	17	21	21	21	17.8	31.7	
17-Nov-04	21	22	24	29	29	A	23	21	12	21	30	35	36	38	37	35	22	11	4	4	3	3	6	9	20.6	37.7	
18-Nov-04	3	3	6	9	A	2	4	2	4	13	29	29	29	29	25	23	23	21	19	36	35	22	28	24	18.2	36.0	
19-Nov-04	30	26	25	A	15	11	14	13	17	21	24	27	27	26	31	28	20	15	8	7	2	5	5	3	17.4	30.5	
20-Nov-04	8	8	A	10	11	11	7	6	6	8	17	23	23	24	26	26	17	14	12	10	25	27	26	24	16.0	26.5	
21-Nov-04	21	A	18	18	19	19	19	20	20	23	25	26	25	24	26	27	24	25	22	22	22	24	25	26	22.6	27.2	
22-Nov-04	A	27	23	27	29	24	25	21	28	28	29	30	28	30	29	26	15	11	11	8	1	7	7	A	21.1	29.7	
23-Nov-04	7	8	8	9	5	2	2	2	3	9	11	18	17	16	14	11	5	4	2	2	1	1	A	6	7.1	17.9	
24-Nov-04	5	4	2	2	1	1	2	2	3	4	4	4	5	16	16	12	10	7	10	10	8	A	11	12	6.5	16.4	
25-Nov-04	11	10	3	5	2	1	1	1	2	2	3	6	22	27	11	17	12	4	4	5	A	5	5	9	7.3	27.3	
26-Nov-04	12	15	7	1	7	11	5	5	5	4	7	13	20	21	23	23	16	12	10	A	14	15	17	23	12.3	23.0	
27-Nov-04	23	21	21	20	21	19	17	18	17	15	14	15	14	19	20	22	14	15	A	11	16	16	13	10	16.9	23.1	
28-Nov-04	5	5	2	3	6	5	5	4	7	10	13	16	17	17	15	14	11	A	15	15	17	19	17	19	11.1	18.9	
29-Nov-04	19	20	20	19	20	19	18	16	18	19	19	21	23	25	25	23	A	23	26	26	26	26	26	24	21.7	26.1	
30-Nov-04	24	27	28	26	24	21	11	8	7	12	18	21	22	26	34	A	16	12	9	15	12	12	18	20	18.4	33.5	
																										N	0.0
Hourly Avg	17.1	17.6	17.2	17.1	17.2	14.6	13.4	11.8	13.5	16.2	20.1	22.0	23.5	26.9	26.3	24.7	18.9	16.5	15.3	16.0	15.7	16.5	18.1	18.2			
Hourly Max	34.9	35.2	34.1	35.7	35.5	32.4	28.9	28.6	31.1	31.8	34.2	35.3	36.1	37.7	39.3	34.7	30.2	31.1	33.2	36.0	34.7	34.0	35.4	35.5			

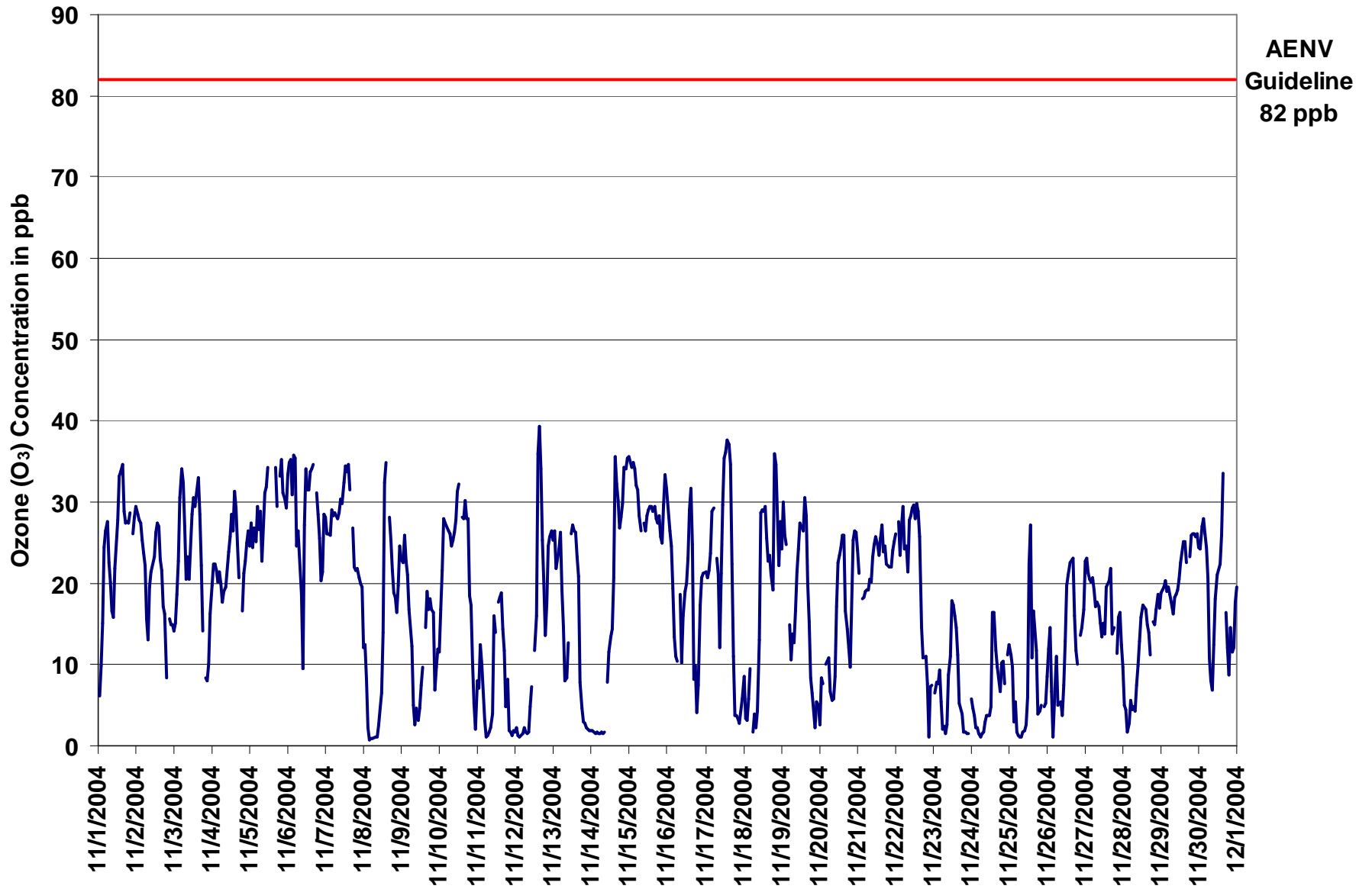


Figure 5. PAS - Crescent Heights Ozone 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Ozone (O₃)

Station Owner: PAS

Monitoring Dates: November 1, 2004 to December 1, 2004

Summary

Maximum 1-hr Value:	44.2	ppb	12-Nov	13:00 14:00
Maximum 24-hr Value:	34.9	ppb	5-Nov	

AIC Time:	31 hrs	Operational Time:	685 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	40	36	30	23	15	3	2	21.8 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																								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-Nov-04	19	15	22	28	32	32	27	24	21	19	26	31	35	36	36	34	31	30	29	31	A	29	30	32	28.2	36.5	
2-Nov-04	30	29	29	27	26	25	20	22	22	23	25	28	29	30	28	27	23	19	16	A	20	17	17	17	24.0	30.1	
3-Nov-04	17	22	29	33	39	37	31	25	26	26	32	33	32	36	38	37	30	23	A	13	13	20	19	24	27.5	39.1	
4-Nov-04	24	24	23	23	24	22	21	22	24	26	28	32	35	35	33	32	25	A	19	24	27	28	30	30	26.7	35.4	
5-Nov-04	35	32	31	31	32	33	35	30	33	35	36	C	C	C	C	36	35	A	38	40	36	37	38	40	34.9	40.2	
6-Nov-04	39	38	37	40	39	29	29	25	15	40	38	34	35	36	36	36	A	33	32	27	26	26	30	30	32.6	40.0	
7-Nov-04	27	28	29	31	30	30	29	32	31	32	36	36	35	36	34	A	28	27	23	23	22	22	21	17	28.7	36.4	
8-Nov-04	15	15	5	2	3	3	2	2	5	10	8	25	36	38	A	32	27	26	23	23	23	25	27	26	17.4	37.5	
9-Nov-04	26	29	27	24	20	17	11	4	9	6	6	11	12	A	20	23	24	21	21	20	15	16	14	15	17.0	28.5	
10-Nov-04	18	29	31	31	28	28	26	28	28	30	33	35	A	30	31	32	30	29	25	21	16	17	5	14	26.0	35.1	
11-Nov-04	12	17	16	8	2	3	4	5	9	19	15	A	21	21	21	18	17	10	13	3	3	2	3	2	10.6	21.4	
12-Nov-04	4	3	2	4	3	4	3	3	9	10	A	16	21	44	43	42	32	24	21	23	26	28	30	28	18.5	44.2	
13-Nov-04	28	25	30	28	27	22	23	13	22	A	30	29	28	29	26	26	16	9	6	6	3	4	3	3	18.9	30.2	
14-Nov-04	3	3	4	3	2	3	2	2	A	12	20	20	20	37	38	36	32	29	30	32	36	36	37	38	20.6	37.8	
15-Nov-04	36	37	35	34	33	32	29	A	29	30	30	32	32	31	31	33	29	30	31	29	32	34	35	34	32.2	36.7	
16-Nov-04	31	27	24	17	17	16	A	23	19	22	23	23	28	32	34	32	16	20	11	16	21	23	24	25	22.7	33.7	
17-Nov-04	24	25	26	37	32	A	28	26	21	26	34	38	39	39	41	41	31	22	11	12	8	8	15	14	26.0	41.0	
18-Nov-04	7	8	14	14	A	4	12	6	10	29	30	31	32	32	28	25	26	24	25	42	37	33	30	30	23.1	41.8	
19-Nov-04	34	31	28	A	19	14	19	18	22	24	28	30	30	30	33	32	27	20	18	15	7	9	8	6	22.0	34.2	
20-Nov-04	11	10	A	13	14	13	9	8	8	13	23	25	26	29	30	32	21	20	19	15	29	29	27	26	19.6	31.7	
21-Nov-04	24	A	20	21	21	22	22	22	22	26	27	28	28	25	28	29	27	27	24	24	25	27	27	27	24.9	29.1	
22-Nov-04	A	31	31	32	32	29	32	25	30	31	33	32	30	32	31	30	25	17	17	14	2	13	10	A	25.4	33.4	
23-Nov-04	14	11	11	13	9	6	7	3	5	12	13	21	20	18	16	16	7	6	3	3	3	2	A	11	9.9	20.9	
24-Nov-04	10	7	4	6	2	2	3	4	5	5	4	11	21	19	14	15	10	13	12	12	A	14	15	15	9.3	20.7	
25-Nov-04	14	14	8	11	3	3	3	4	4	3	5	16	30	32	21	22	17	7	9	11	A	9	8	14	11.7	32.4	
26-Nov-04	17	18	17	4	14	15	10	10	10	6	15	19	22	25	28	26	22	20	15	A	16	18	24	25	17.1	28.1	
27-Nov-04	25	24	22	22	24	22	20	20	20	20	17	18	20	22	24	27	20	21	A	13	19	18	15	15	20.4	27.1	
28-Nov-04	8	7	4	5	8	8	7	8	11	12	16	19	20	19	18	18	16	A	19	18	20	20	19	20	14.0	20.2	
29-Nov-04	22	22	21	20	21	21	20	18	22	22	23	24	27	29	30	26	A	27	28	28	28	28	27	28	24.5	29.9	
30-Nov-04	30	29	30	30	29	24	19	14	15	17	21	23	24	32	35	A	24	17	14	19	17	16	22	23	22.7	35.3	
																									N	0.0	
Hourly Avg	20.8	21.0	21.0	20.4	20.2	17.8	17.4	15.4	17.5	20.2	23.4	25.5	27.1	30.6	29.7	29.1	24.1	21.0	19.9	20.0	19.4	20.5	21.0	21.7			
Hourly Max	38.8	38.1	37.4	39.9	39.1	37.0	34.7	31.7	33.0	40.0	38.4	38.3	38.7	44.2	43.3	42.3	35.4	32.9	38.2	41.8	37.4	36.9	37.6	40.2			

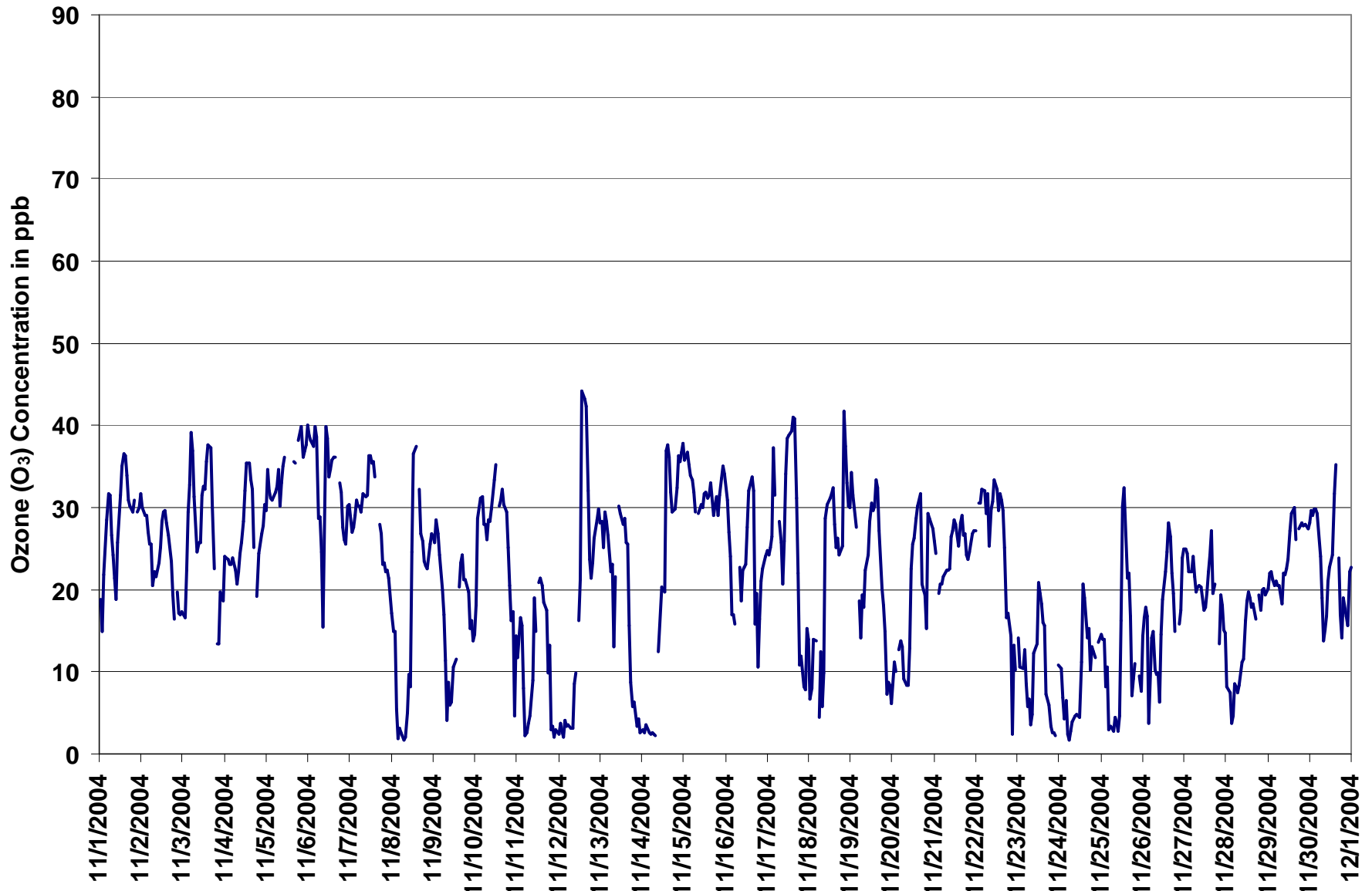


Figure 6. PAS - Crescent Heights Ozone 1-hr Maximum Value Monthly Trend



Station: Crescent Heights

EIGHT HOUR RUNNING AVERAGE TABLE

Ozone (O₃)

Station Owner: PAS

Monitoring Dates: November 1, 2004 to December 1, 2004

Summary

Number of 8-hr Exceedances:	0						
Maximum 8-hr Average:	34.3	ppb	15-Nov	3:00	4:00		

Guideline Limit: Canada Wide Standard 8-hr 65 ppb

Percentile	99	95	75	50	25	5	1
	32.8	30.1	25.1	19.2	11.0	3.0	1.7

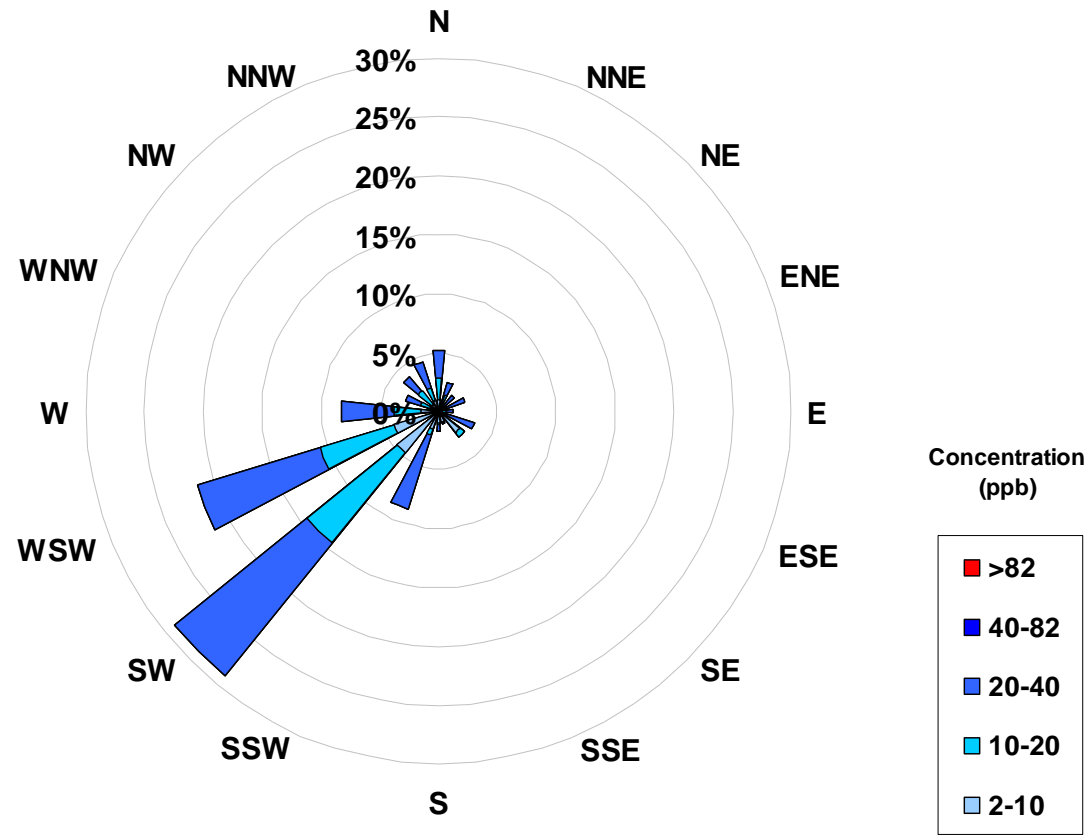
Status Flag Characters

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	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00			23:00	0:00
1-Nov-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-Nov-04		6	19	17	17	18	18	19	19	20	21	22	22	23	24	25	27	28	29	30	30	30	29	28	28		22.9	30.2
2-Nov-04		28	28	28	28	27	27	25	23	22	21	21	21	22	23	24	23	23	21	20	18	17	16	14		22.4	28.0	
3-Nov-04		14	15	17	18	21	23	24	25	26	26	27	27	26	27	28	28	27	27	24	21	18	15	14		22.8	28.2	
4-Nov-04		14	15	16	18	19	21	21	21	20	20	21	22	23	24	25	26	26	27	25	24	24	23	22	22		21.7	26.7
5-Nov-04		23	24	25	25	26	26	27	26	27	28	29	29	N	N	N	N	N	N	N	N	N	32	32		N	31.8	
6-Nov-04		32	33	33	33	33	32	32	30	27	26	26	26	25	27	28	30	32	33	32	31	30	28	27	26		29.7	33.1
7-Nov-04		26	26	25	26	27	28	28	28	28	29	29	30	31	31	32	32	32	31	29	27	26	23	22	21		27.7	32.4
8-Nov-04		19	17	15	12	10	7	5	3	2	2	2	4	8	12	14	18	21	23	25	26	23	21	22	21		13.8	25.6
9-Nov-04		21	21	22	22	22	21	19	16	14	11	9	7	6	5	7	9	11	13	15	16	15	15	14	13		14.3	22.0
10-Nov-04		13	14	15	17	19	21	23	25	26	26	27	28	28	28	29	29	29	28	25	24	21	17	15		23.1	29.4	
11-Nov-04		12	10	9	7	6	6	6	5	4	5	5	6	8	10	13	15	16	14	13	12	10	8	6	4		8.8	15.8
12-Nov-04		3	3	2	2	2	2	2	2	2	3	3	4	6	11	17	21	24	26	25	25	26	25	23	22		11.7	26.3
13-Nov-04		22	23	24	25	24	23	21	19	17	16	16	17	18	19	21	23	23	20	17	14	11	8	6	3		18.0	25.1
14-Nov-04		3	2	2	2	2	2	2	2	2	2	4	6	7	10	15	19	21	23	25	27	30	31	31	32		12.5	31.8
15-Nov-04		32	33	34	34	34	33	32	32	31	29	29	28	28	28	29	29	29	29	29	28	28	28	28	29		30.1	34.3
16-Nov-04		28	28	27	25	24	21	20	18	15	14	14	15	17	19	21	22	21	21	19	17	17	16	14	14		19.5	28.5
17-Nov-04		15	17	19	22	23	24	24	24	23	23	24	25	26	27	29	30	32	30	27	23	19	15	11	8		22.5	31.8
18-Nov-04		5	4	5	5	6	5	5	4	4	6	9	12	14	17	20	23	25	26	25	26	27	26	26	26		14.6	26.5
19-Nov-04		27	27	28	27	24	23	21	19	17	16	16	18	19	21	23	25	26	25	23	20	17	15	11	8		20.7	28.2
20-Nov-04		7	6	5	6	7	8	8	9	8	8	9	11	13	14	17	19	21	21	21	19	19	20	20	19		13.1	21.3
21-Nov-04		20	21	22	23	22	21	20	19	19	20	21	21	22	23	24	24	25	25	25	24	24	24	24	24		22.3	25.0
22-Nov-04		24	24	24	25	26	26	26	25	26	26	27	27	27	27	28	28	27	25	22	20	16	13	11	9		23.2	28.4
23-Nov-04		7	7	7	7	7	7	6	5	5	5	5	6	8	10	11	12	13	12	11	9	7	5	4	3		7.5	12.7
24-Nov-04		3	3	3	3	3	3	3	2	2	2	2	2	3	5	7	8	9	9	10	11	11	10	10	10		5.6	11.1
25-Nov-04		10	10	9	9	8	7	6	4	3	2	2	2	5	8	9	11	12	13	13	13	11	8	7	6		7.9	12.9
26-Nov-04		6	8	8	8	8	8	8	8	7	6	6	7	9	10	12	14	16	17	17	18	17	16	15	15		11.0	17.7
27-Nov-04		16	17	19	19	20	21	21	20	19	18	18	17	16	16	16	17	17	17	17	16	17	16	15	13		17.4	20.6
28-Nov-04		12	11	10	9	7	6	5	4	4	5	6	8	10	11	12	14	14	15	15	15	15	15	15	16		10.6	16.1
29-Nov-04		17	18	18	19	19	19	19	19	19	19	18	19	19	20	21	22	22	23	24	24	25	25	25	25		20.7	25.4
30-Nov-04		25	26	26	26	26	25	23	21	19	17	16	15	15	16	19	20	21	21	20	19	18	16	13	14		19.9	25.9
																											N	0.0
Hourly Avg		16.4	17.0	17.1	17.2	17.3	17.1	16.6	15.9	15.3	15.1	15.5	16.1	16.5	18.1	19.7	21.4	22.2	22.3	21.7	20.9	19.8	18.4	17.7	16.9			
Hourly Max		32.5	33.3	34.0	34.3	34.0	33.3	32.2	31.7	30.7	29.5	29.4	30.1	30.8	31.5	31.9	32.4	32.4	32.9	32.1	31.3	29.7	31.4	31.8	31.8			



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



Frequency Distribution of O ₃ in ppb			
Range			Frequency (hrs)
0	<	2	48
2	to	10	132
10	to	20	176
20	to	40	329
40	to	82	0
	>	82	0
Total Non-Zero Values			685

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: November 1, 2004 to December 1, 2004

Summary				
Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	3.7	ppm	24-Nov	10:00 11:00
Maximum 24-hr Average:	2.4	ppm	24-Nov	

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

AIC Time:	31 hrs							Operational Time:	685 hrs						
Calibration Time:	4 hrs							AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average							
	3.0	2.6	2.2	2.0	1.9	1.9	1.8		2.09	ppb					

Status Flag Characters

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

Day	Mountain Standard Time																							24-hour Average	Daily Maximum		
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00		
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Nov-04	2.3	2.3	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	A	2.0	2.0	1.9	2.10	2.34	
2-Nov-04	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.0	A	1.9	1.9	1.9	1.9	1.91	1.98	
3-Nov-04	1.9	2.0	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.1	A	2.2	2.1	2.1	2.1	2.0	2.04	2.16	
4-Nov-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	1.9	1.9	1.9	2.0	2.0	A	2.0	1.9	1.9	1.9	1.9	1.8	1.97	2.04	
5-Nov-04	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	C	C	C	C	1.9	1.8	1.8	1.8	A	1.9	1.9	1.9	1.9	1.9	1.9	1.82	1.88	
6-Nov-04	1.9	1.9	1.9	1.8	1.9	2.0	2.0	2.1	2.2	2.1	2.0	2.0	2.0	2.0	1.9	1.9	A	2.0	2.0	2.1	2.2	2.1	2.0	2.0	2.00	2.19	
7-Nov-04	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.04	2.11	
8-Nov-04	2.2	2.5	2.7	2.6	2.7	2.8	2.8	2.3	2.2	2.2	2.3	2.1	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.19	2.77	
9-Nov-04	1.9	1.9	1.9	1.9	2.0	2.1	2.3	2.3	2.4	2.4	2.4	2.3	2.2	A	2.1	2.0	2.0	2.1	2.1	2.2	2.2	2.1	2.2	2.2	2.13	2.41	
10-Nov-04	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	A	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.3	2.5	2.4	2.08	2.45	
11-Nov-04	2.5	2.4	2.3	2.4	2.8	2.7	2.9	2.9	2.7	2.0	2.1	A	2.1	2.0	2.0	2.0	2.1	2.2	2.3	2.6	2.4	2.4	2.3	2.4	2.36	2.91	
12-Nov-04	2.3	2.3	2.4	2.3	2.3	2.3	2.3	2.2	2.2	2.2	A	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.11	2.35	
13-Nov-04	1.9	2.0	1.9	1.9	2.0	2.0	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.1	2.1	2.3	2.5	2.6	2.8	3.1	3.1	3.0	3.0	2.28	3.11	
14-Nov-04	3.0	2.9	2.5	2.5	2.7	2.6	2.6	2.5	A	2.2	2.2	2.2	2.1	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.22	3.03	
15-Nov-04	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	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.88	1.94	
16-Nov-04	2.0	2.0	2.0	2.1	2.2	2.3	A	2.2	2.3	2.1	2.0	2.0	2.0	1.9	1.9	2.0	2.1	2.1	2.2	2.1	2.0	2.0	1.9	1.9	2.05	2.27	
17-Nov-04	2.0	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.3	2.3	2.3	2.4	2.3	2.2	2.07	2.38	
18-Nov-04	2.2	2.2	2.2	2.2	A	2.2	2.1	2.2	2.2	2.1	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	2.0	1.98	2.25	
19-Nov-04	1.9	1.9	1.9	A	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.2	2.1	2.1	2.1	2.3	2.2	2.1	2.2	2.07	2.31	
20-Nov-04	2.1	2.1	A	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.2	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.1	2.0	2.0	1.9	1.9	2.09	2.26	
21-Nov-04	2.0	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.91	1.97	
22-Nov-04	A	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.1	2.1	A	2.04	2.31
23-Nov-04	2.1	2.1	2.1	2.2	2.4	2.5	2.5	2.4	2.8	2.5	2.3	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.4	2.4	2.3	A	2.1	2.29	2.81	
24-Nov-04	2.2	2.0	2.2	2.1	2.5	2.3	2.6	3.2	3.3	3.4	3.7	2.8	2.6	2.0	1.9	1.9	2.0	2.0	1.9	1.9	2.0	A	1.9	2.0	2.37	3.69	
25-Nov-04	2.0	2.0	2.1	2.1	2.3	2.4	2.6	2.6	2.8	2.9	3.0	2.7	2.1	1.9	2.1	2.0	2.1	2.2	2.2	2.2	A	2.2	2.1	2.1	2.29	3.02	
26-Nov-04	2.0	2.0	2.1	2.2	2.3	2.2	2.3	2.4	2.3	2.5	2.4	2.3	2.2	2.1	2.1	2.0	2.0	2.1	2.0	A	2.0	2.0	2.0	2.0	2.16	2.47	
27-Nov-04	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.2	2.1	2.2	2.1	A	A	2.2	2.2	2.2	2.3	2.09	2.26	
28-Nov-04	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.19	2.44	
29-Nov-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	1.9	2.0	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.95	2.03	
30-Nov-04	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.0	A	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.04	2.17	
																									N	0.00	
Hourly Avg	2.08	2.08	2.08	2.09	2.14	2.16	2.19	2.21	2.20	2.19	2.17	2.10	2.05	1.99	1.99	1.99	2.02	2.05	2.05	2.09	2.09	2.08	2.06	2.07			
Hourly Max	3.03	2.87	2.72	2.59	2.78	2.77	2.90	3.17	3.26	3.40	3.69	2.84	2.63	2.20	2.24	2.25	2.30	2.47	2.59	2.84	3.11	3.08	3.05	3.05			

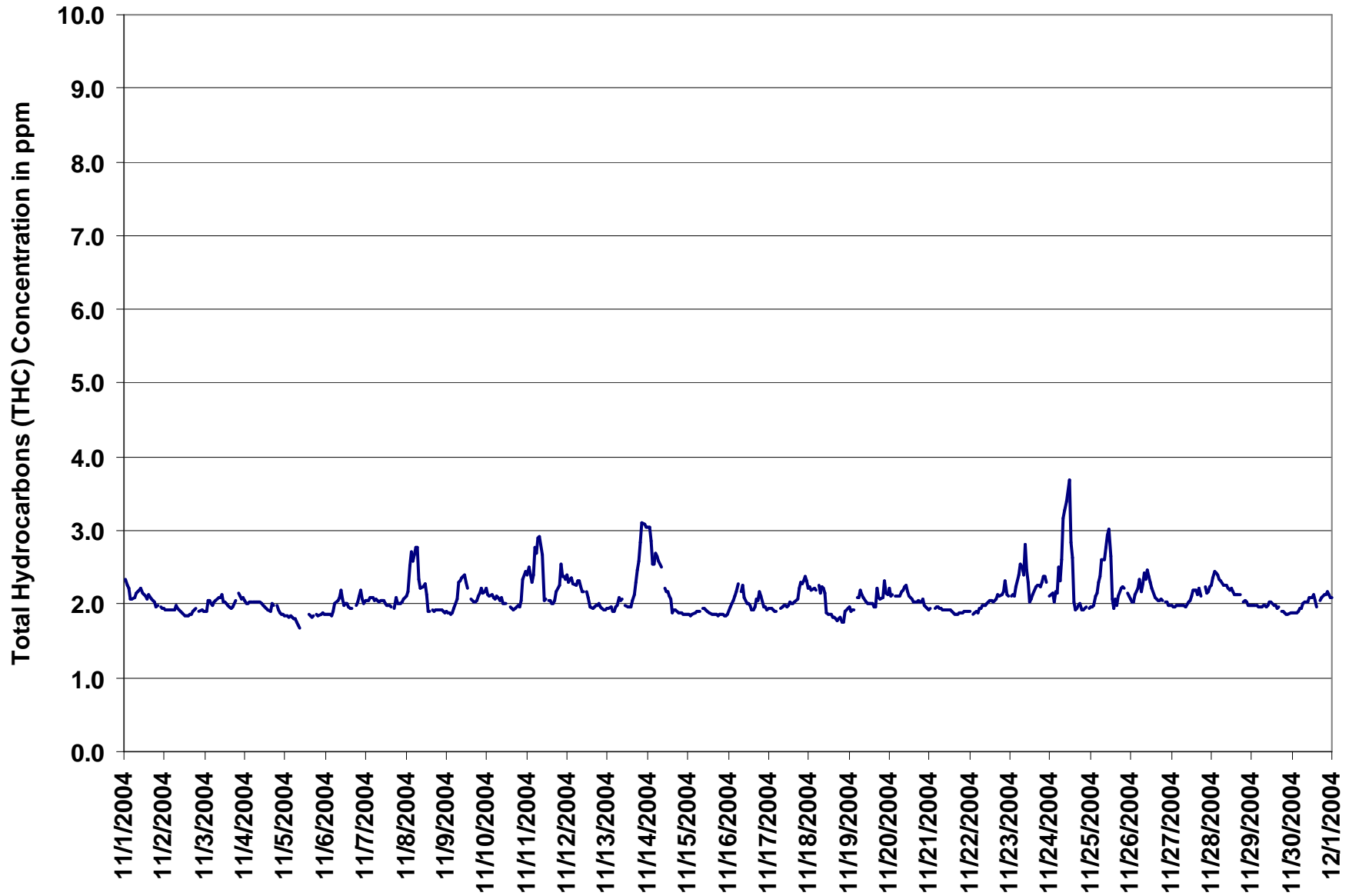


Figure 7. PAS - Crescent Heights Total Hydrocarbons 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Total HydroCarbons (THC)

Station Owner: PAS

Monitoring Dates: November 1, 2004 to December 1, 2004

Summary

Maximum 1-hr Value:	4.1	ppm	11-Nov	6:00 7:00
Maximum 24-hr Value:	2.7	ppm	11-Nov	

AIC Time:	31 hrs	Operational Time:	685 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	3.6	3.0	2.3	2.1	2.0	1.9	1.8	2.2 ppm

Status Flag Characters

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

Day Mountain Standard Time

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-Nov-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-Nov-04		2.6	2.3	2.3	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.2	2.2	2.4	2.1	2.5	2.1	2.1	2.1	2.0	2.0	A	2.0	2.0	2.0	2.18	2.59	
2-Nov-04		2.0	1.9	2.0	1.9	2.0	2.0	2.1	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	2.0	A	2.0	1.9	1.9	1.9	1.95	2.06	
3-Nov-04		2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.1	A	2.2	2.2	2.2	2.2	2.2	2.11	2.22	
4-Nov-04		2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.2	2.1	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.02	2.17	
5-Nov-04		1.9	1.8	1.9	1.9	1.8	1.8	1.8	1.8	1.7	C	C	C	C	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.86	1.94	
6-Nov-04		1.9	1.9	1.9	1.9	2.1	2.1	2.2	2.2	2.3	2.3	2.1	2.1	2.1	2.1	2.0	2.1	A	2.1	2.2	2.2	2.3	2.1	2.0	2.1	2.08	2.28	
7-Nov-04		2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	A	1.9	2.4	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.09	2.44	
8-Nov-04		2.2	2.8	2.9	2.7	3.4	2.8	2.9	2.6	2.3	2.3	2.3	2.4	1.9	1.9	A	2.0	1.9	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.31	3.42	
9-Nov-04		1.9	1.9	1.9	1.9	2.0	2.2	2.4	2.4	2.5	2.5	2.5	2.4	2.2	A	2.2	2.1	2.1	2.2	2.2	2.3	2.4	2.5	2.3	2.3	2.24	2.53	
10-Nov-04		2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.0	A	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.2	2.9	2.8	2.6	2.17	2.87	
11-Nov-04		2.9	3.0	2.4	3.0	3.5	2.9	4.1	3.1	3.0	2.5	2.1	A	2.1	2.2	2.1	2.1	2.1	2.4	2.6	2.8	2.5	2.5	2.6	2.5	2.66	4.11	
12-Nov-04		2.6	2.4	2.4	2.3	2.5	2.4	2.4	2.4	2.3	2.3	A	2.3	2.2	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.1	1.9	2.0	2.0	2.20	2.61	
13-Nov-04		2.0	2.1	2.0	1.9	2.0	2.0	2.3	2.2	2.5	A	2.1	2.0	2.0	2.0	2.1	2.2	2.4	3.2	3.2	3.1	3.2	3.2	3.2	4.1	2.48	4.05	
14-Nov-04		3.2	3.0	3.1	2.8	2.8	2.8	2.7	2.6	A	2.5	2.3	2.2	2.2	2.3	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.33	3.19
15-Nov-04		1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.91	1.97	
16-Nov-04		2.0	2.2	2.4	2.6	3.3	2.5	A	2.3	2.4	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.4	2.5	2.3	2.0	2.0	2.0	2.0	2.23	3.25	
17-Nov-04		2.0	2.0	2.0	2.0	1.9	A	2.0	2.0	2.0	2.1	2.0	2.1	2.1	2.1	2.0	2.1	2.1	2.5	2.4	2.6	2.5	2.6	2.5	2.4	2.16	2.57	
18-Nov-04		2.3	2.3	2.3	2.4	A	2.4	2.7	3.0	2.9	2.6	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.8	1.8	2.1	2.0	2.0	2.15	3.02	
19-Nov-04		1.9	2.0	2.0	A	2.2	2.2	2.3	2.2	2.3	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.4	2.2	2.1	2.2	2.5	2.3	2.2	2.3	2.16	2.49	
20-Nov-04		2.2	2.2	A	2.2	2.2	2.2	2.2	2.3	2.3	2.3	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.14	2.33	
21-Nov-04		2.0	A	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	2.0	1.95	2.01	
22-Nov-04		A	1.9	2.0	2.0	2.0	2.0	2.1	2.2	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.3	2.3	2.4	2.4	2.3	2.1	A	2.12	2.39	
23-Nov-04		2.2	2.2	2.1	2.5	2.6	3.8	2.7	2.6	3.1	2.6	2.4	2.2	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.5	2.5	2.4	A	2.2	2.47	3.76	
24-Nov-04		2.3	2.1	2.7	2.2	3.8	2.5	2.9	3.7	3.5	4.0	4.0	3.2	2.9	2.5	2.0	2.0	2.1	2.1	2.1	1.9	2.1	A	2.0	2.0	2.63	4.05	
25-Nov-04		2.0	2.1	2.2	2.3	2.4	2.6	2.9	3.4	3.1	3.4	3.3	3.0	2.2	2.1	2.2	2.1	2.3	2.3	2.3	2.3	A	2.2	2.2	2.1	2.47	3.36	
26-Nov-04		2.1	2.3	2.3	2.3	2.7	2.5	2.5	2.6	2.5	2.8	2.6	2.4	2.3	2.2	2.1	2.2	2.1	2.1	2.1	A	2.1	2.1	2.0	2.0	2.30	2.80	
27-Nov-04		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.2	2.3	2.3	2.3	2.3	2.2	2.3	2.2	A	2.3	2.2	2.2	2.3	2.4	2.16	2.36	
28-Nov-04		2.4	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.4	2.3	2.4	2.6	2.4	2.2	2.3	2.2	2.3	A	2.1	2.1	2.1	2.0	2.0	2.0	2.29	2.57	
29-Nov-04		2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.1	2.1	3.1	2.3	2.4	2.3	2.0	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.08	3.07	
30-Nov-04		1.9	1.9	1.9	1.9	2.0	2.0	2.4	3.0	2.1	2.2	2.1	2.1	2.7	2.1	2.0	A	2.2	2.1	2.2	2.3	2.4	2.2	2.4	3.1	2.25	3.13	
																										N	0.00	
Hourly Avg		2.16	2.18	2.19	2.19	2.34	2.29	2.36	2.41	2.34	2.35	2.26	2.24	2.17	2.09	2.07	2.05	2.10	2.17	2.15	2.18	2.17	2.17	2.14	2.20			
Hourly Max		3.19	3.04	3.09	2.99	3.76	3.76	4.11	3.73	3.52	3.99	4.05	3.20	2.91	2.50	2.47	2.34	2.42	3.16	3.16	3.09	3.21	3.21	3.15	4.05			

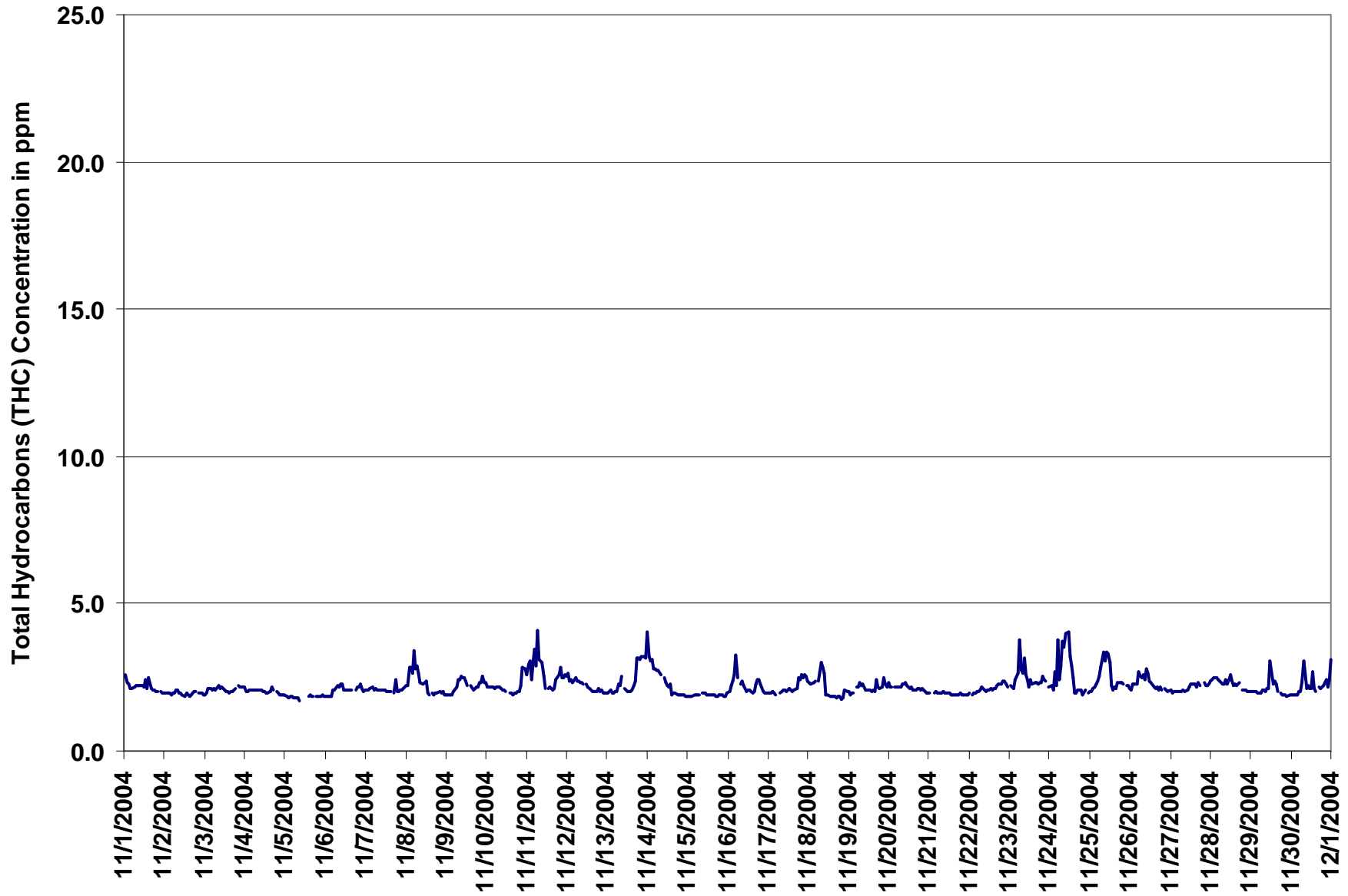


Figure 8. PAS - Crescent Heights Total Hydrocarbons 1-hr Maximum Value Monthly Trend



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: November 1, 2004 to December 1, 2004

Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	21.7 $\mu\text{g}/\text{m}^3$ 14-Nov 13:00 14:00
Maximum 24-hr Average:	5.7 $\mu\text{g}/\text{m}^3$ 13-Nov

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:	717 hrs
Calibration Time:	1 hrs	AMD Operational Uptime:	99.7%
Percentile	99	95	75
	11.1	6.7	3.8
	1.8	0.7	0.0
	0.0	0.0	0.0
Average	2.5 $\mu\text{g}/\text{m}^3$		
Geomean	2.2 $\mu\text{g}/\text{m}^3$		

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	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-Nov-04	4	4	4	2	2	2	4	5	3	5	2	0	D	D	0	0	0	0	0	0	0	1	0	1	1.7	5.1	
2-Nov-04	2	1	2	1	2	1	7	1	1	2	2	0	0	0	0	0	1	2	1	2	0	1	1	1	1.3	6.5	
3-Nov-04	2	3	3	0	1	1	1	1	2	2	1	2	2	0	0	1	1	2	5	8	6	4	3	2	2.3	7.5	
4-Nov-04	2	1	1	1	1	1	3	4	3	4	3	2	0	1	2	4	4	7	5	4	2	3	1	4	2.6	6.7	
5-Nov-04	4	3	4	4	5	4	4	4	5	4	2	4	4	5	C	13	12	7	5	5	3	4	5	6	5.0	12.8	
6-Nov-04	5	5	5	5	6	10	6	4	6	3	3	2	1	0	0	0	1	1	1	2	2	2	1	1	2.9	10.4	
7-Nov-04	2	1	1	0	0	1	0	0	1	0	1	0	0	0	0	0	1	2	1	2	1	1	0	1	0.6	1.9	
8-Nov-04	1	0	0	1	1	2	3	3	4	7	6	4	0	0	0	1	2	3	2	2	1	0	0	1	1.8	7.0	
9-Nov-04	1	1	0	1	4	4	8	7	6	7	9	8	7	6	5	1	1	5	4	4	5	6	6	6	4.7	8.9	
10-Nov-04	5	2	1	3	3	3	2	2	2	1	2	0	0	1	0	0	0	0	0	0	0	1	2	4	2	1.5	4.9
11-Nov-04	1	1	1	1	2	4	7	4	6	5	6	5	3	3	3	4	3	7	6	11	9	7	6	6	4.5	11.1	
12-Nov-04	4	4	3	4	2	4	3	3	4	6	7	5	3	3	0	2	4	3	3	3	2	2	1	2	2	3.1	6.7
13-Nov-04	1	1	2	1	1	3	4	3	5	6	2	2	3	3	4	5	9	8	10	11	16	15	12	11	5.7	16.0	
14-Nov-04	12	4	6	4	6	7	6	9	7	6	7	11	6	22	0	0	0	3	1	0	0	6	0	2	5.2	21.7	
15-Nov-04	1	1	2	0	1	1	0	2	1	1	2	1	1	3	2	2	3	3	3	3	5	5	4	4	2.1	5.4	
16-Nov-04	4	2	3	3	2	2	3	1	4	5	3	2	2	0	1	2	4	3	5	6	1	1	1	1	2.6	6.2	
17-Nov-04	2	2	1	3	2	2	1	3	5	5	2	0	0	1	1	0	0	5	5	6	7	6	4	2	2.7	6.6	
18-Nov-04	2	3	1	1	1	5	3	4	8	4	3	3	4	2	4	4	5	5	2	0	0	3	8	7	3.3	8.2	
19-Nov-04	3	1	1	1	2	3	2	3	2	3	2	3	1	2	0	0	1	0	3	2	3	3	3	4	2.1	4.4	
20-Nov-04	5	7	7	6	6	5	5	6	5	6	2	0	0	0	0	0	0	0	0	0	0	0	0	1	2.6	7.1	
21-Nov-04	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	1	0	1	1	1	1	1	0.6	1.5	
22-Nov-04	0	2	4	6	2	1	1	3	4	1	2	1	2	0	0	1	2	2	1	0	2	1	2	2	1.8	6.1	
23-Nov-04	0	3	2	0	0	1	1	4	10	5	3	0	2	1	2	4	4	2	3	5	3	2	2	0	2.4	9.6	
24-Nov-04	0	0	1	1	5	3	1	1	4	5	4	8	8	1	0	0	1	0	0	0	0	1	0	0	1.8	8.1	
25-Nov-04	0	0	1	0	1	3	2	3	3	3	4	4	1	0	2	1	2	1	1	1	0	1	2	0	1.5	4.1	
26-Nov-04	0	0	0	1	2	2	4	4	5	8	6	1	1	1	0	1	1	1	0	0	0	0	0	1	1.7	7.8	
27-Nov-04	0	0	1	0	0	0	1	0	2	2	3	2	1	0	2	2	2	0	2	4	2	1	2	2	1.3	3.6	
28-Nov-04	3	3	3	1	1	1	3	1	4	4	6	3	4	4	4	4	2	0	0	0	0	0	0	0	2.2	6.4	
29-Nov-04	2	0	1	0	1	0	3	1	1	2	4	4	0	1	2	2	2	0	0	0	0	2	0	0	1.1	3.6	
30-Nov-04	0	3	0	1	0	1	5	3	5	4	3	1	1	1	0	2	2	3	2	2	2	2	2	0	1.9	5.5	
																									N	0.0	
Hourly Avg	2.3	2.0	2.1	1.8	2.1	2.6	3.1	2.9	3.9	3.9	3.4	2.6	2.0	2.0	1.2	2.0	2.3	2.5	2.4	2.7	2.5	2.7	2.4	2.4			
Hourly Max	11.6	7.1	6.7	6.4	6.1	10.4	7.9	8.6	9.6	7.8	8.9	10.6	7.8	21.7	4.5	12.8	12.0	8.5	9.9	11.1	16.0	15.1	12.2	10.9			

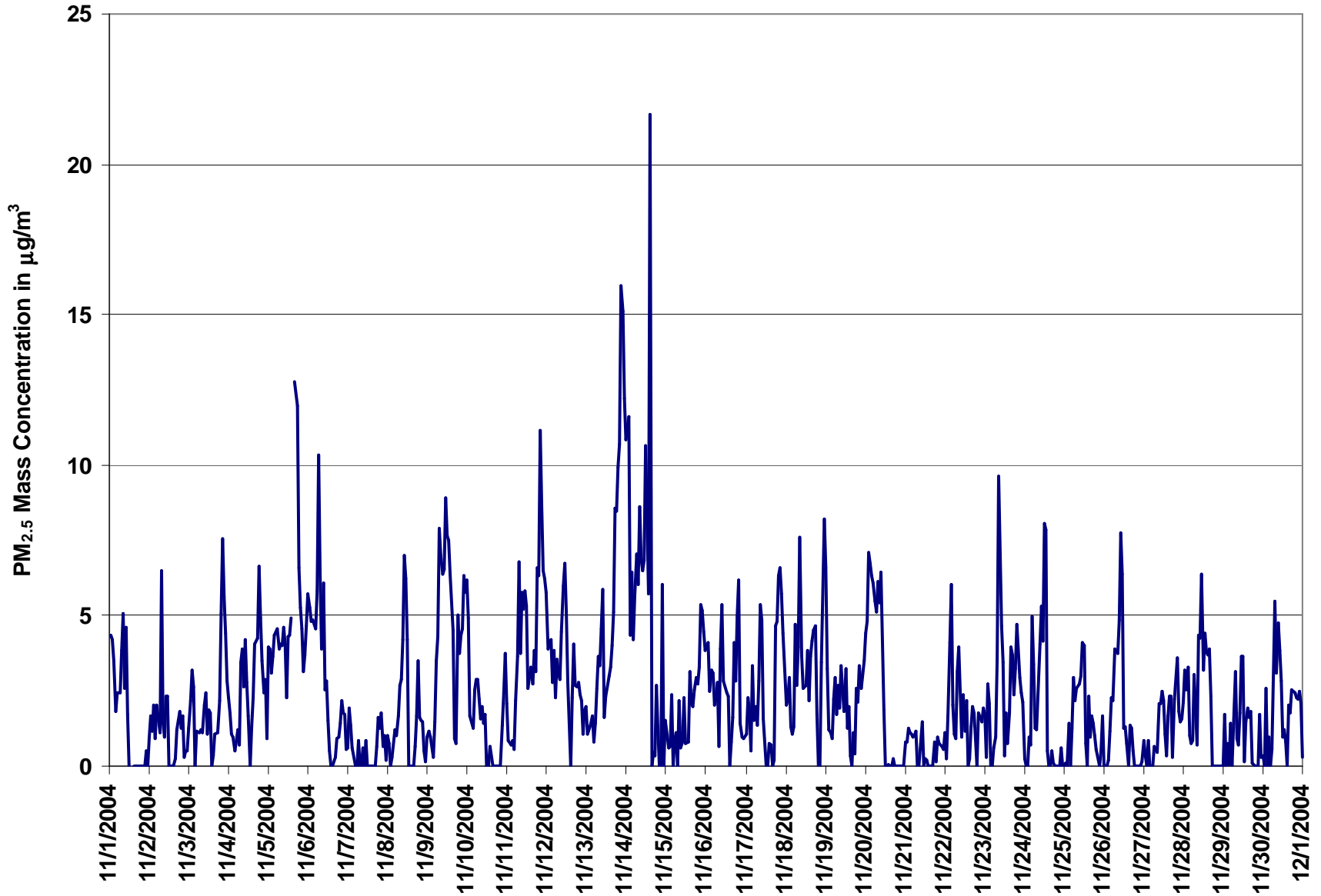


Figure 9. PAS - Crescent Heights Particulate Matter (less than 2.5 microns) 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Particulate Matter (PM_{2.5})

Station Owner: PAS

Monitoring Dates: November 1, 2004 to December 1, 2004
Summary

Maximum 1-hr Value:	125.1	µg/m ³	14-Nov	13:00 14:00
Maximum 24-hr Value:	15.9	µg/m ³	14-Nov	

AIC Time:	0 hrs	Operational Time:	717 hrs						
Calibration Time:	1 hrs	AMD Operational Uptime:	99.7%						
Percentile	99	95	75	50	25	5	1	Average	Geomean
	20.8	14.3	8.9	6.6	4.8	2.6	1.6	7.4 µg/m ³	7.1 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

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-Nov-04	9	9	6	6	6	5	8	9	8	8	6	1	D	D	0	2	2	2	2	3	2	3	2	5	4.7	9.0
2-Nov-04	5	5	6	4	4	3	34	4	4	8	7	5	6	3	2	3	5	4	4	5	2	4	3	3	5.6	34.0
3-Nov-04	7	7	5	3	4	3	3	7	7	6	4	5	5	2	3	3	3	4	8	22	8	8	6	5	5.9	22.3
4-Nov-04	4	4	3	5	4	4	8	7	8	6	10	5	3	5	7	7	9	8	6	5	6	4	12	6.1	11.9	
5-Nov-04	8	6	7	7	8	7	7	7	8	11	15	12	10	11	C	26	30	14	10	10	7	9	9	8	10.6	29.5
6-Nov-04	8	7	8	9	13	14	10	6	10	6	5	4	2	2	2	3	12	4	4	5	4	4	3	4	6.2	14.2
7-Nov-04	5	6	4	3	2	5	1	2	4	2	5	2	1	0	10	3	4	5	5	4	4	4	3	3	3.6	10.5
8-Nov-04	3	4	5	4	6	6	5	6	7	12	10	12	4	6	7	5	7	9	5	6	5	5	4	3	6.1	12.3
9-Nov-04	3	3	3	4	6	7	11	9	9	10	12	11	11	12	12	8	3	9	7	7	8	9	8	9	8.0	12.2
10-Nov-04	8	6	4	5	5	8	4	4	5	4	7	3	1	5	4	2	3	2	1	2	4	6	5	6	4.3	8.5
11-Nov-04	3	3	2	2	4	11	10	8	10	7	12	21	6	8	7	8	6	11	9	17	12	9	9	9	8.5	21.1
12-Nov-04	8	6	5	7	5	6	5	7	8	12	12	10	6	2	8	9	7	6	5	4	5	3	5	4	6.5	12.0
13-Nov-04	4	8	5	7	5	7	11	6	9	11	7	7	7	7	11	11	12	15	15	15	19	19	16	15	10.4	19.4
14-Nov-04	18	9	11	7	10	10	11	16	19	11	11	18	11	125	15	9	5	11	5	2	3	34	4	7	15.9	125.1
15-Nov-04	4	5	8	5	6	6	3	7	6	6	9	8	8	11	8	8	6	9	7	9	15	12	9	11	7.8	14.8
16-Nov-04	9	7	6	5	6	5	6	3	8	10	7	6	7	5	5	9	11	8	11	11	3	3	3	4	6.5	10.7
17-Nov-04	6	4	3	9	5	5	5	5	9	9	7	4	5	6	6	5	6	11	10	10	8	9	7	4	6.7	10.7
18-Nov-04	5	5	4	4	3	8	6	8	12	11	7	8	9	7	10	9	9	11	6	6	5	10	15	12	7.9	15.4
19-Nov-04	7	4	4	5	5	6	6	6	5	10	7	10	7	8	6	5	4	2	6	5	7	5	6	7	6.0	9.8
20-Nov-04	9	11	10	10	10	10	11	13	9	15	8	4	4	4	4	7	5	3	5	4	6	4	5	5	7.3	14.9
21-Nov-04	6	8	7	5	5	6	8	5	5	8	7	8	7	5	8	5	5	6	7	10	7	6	7	7	6.6	10.2
22-Nov-04	6	7	11	15	6	6	9	12	14	9	8	7	8	7	5	11	7	6	6	4	4	5	7	17	8.2	16.6
23-Nov-04	4	6	6	2	3	4	6	9	18	12	9	6	7	6	7	7	8	5	6	10	9	6	18	5	7.6	18.4
24-Nov-04	4	2	4	6	12	12	7	6	11	11	13	13	14	7	3	5	4	6	4	3	5	7	3	3	6.9	13.9
25-Nov-04	4	3	7	6	6	8	7	11	10	9	8	12	7	5	7	7	6	5	7	6	5	5	5	6	6.7	12.3
26-Nov-04	8	6	8	7	8	9	12	10	13	15	13	6	6	7	5	9	5	7	5	17	4	5	5	8	8.2	16.8
27-Nov-04	5	4	6	4	4	6	6	6	9	9	10	8	7	4	8	9	9	7	13	10	7	6	7	8	7.2	13.0
28-Nov-04	10	10	11	8	7	9	13	14	13	9	16	8	18	11	10	9	10	8	6	5	11	6	4	6	9.7	18.3
29-Nov-04	5	4	6	6	8	6	19	8	5	7	11	10	6	8	7	7	7	4	4	5	5	9	6	6	7.2	19.0
30-Nov-04	7	12	5	8	5	9	19	10	15	10	8	7	6	4	4	8	9	8	8	11	12	21	12	9	9.4	21.2
																									N	0.0
Hourly Avg	6.3	6.1	6.0	6.0	6.1	7.1	9.1	7.7	9.2	9.0	9.1	8.1	6.9	10.1	6.6	7.3	7.3	7.0	6.6	7.8	6.8	8.1	6.7	7.0		
Hourly Max	17.6	11.7	11.0	14.8	12.9	14.2	34.0	15.9	19.3	14.9	16.3	21.1	18.3	125.1	14.8	25.8	29.5	14.9	14.7	22.3	19.0	33.5	18.4	16.6		

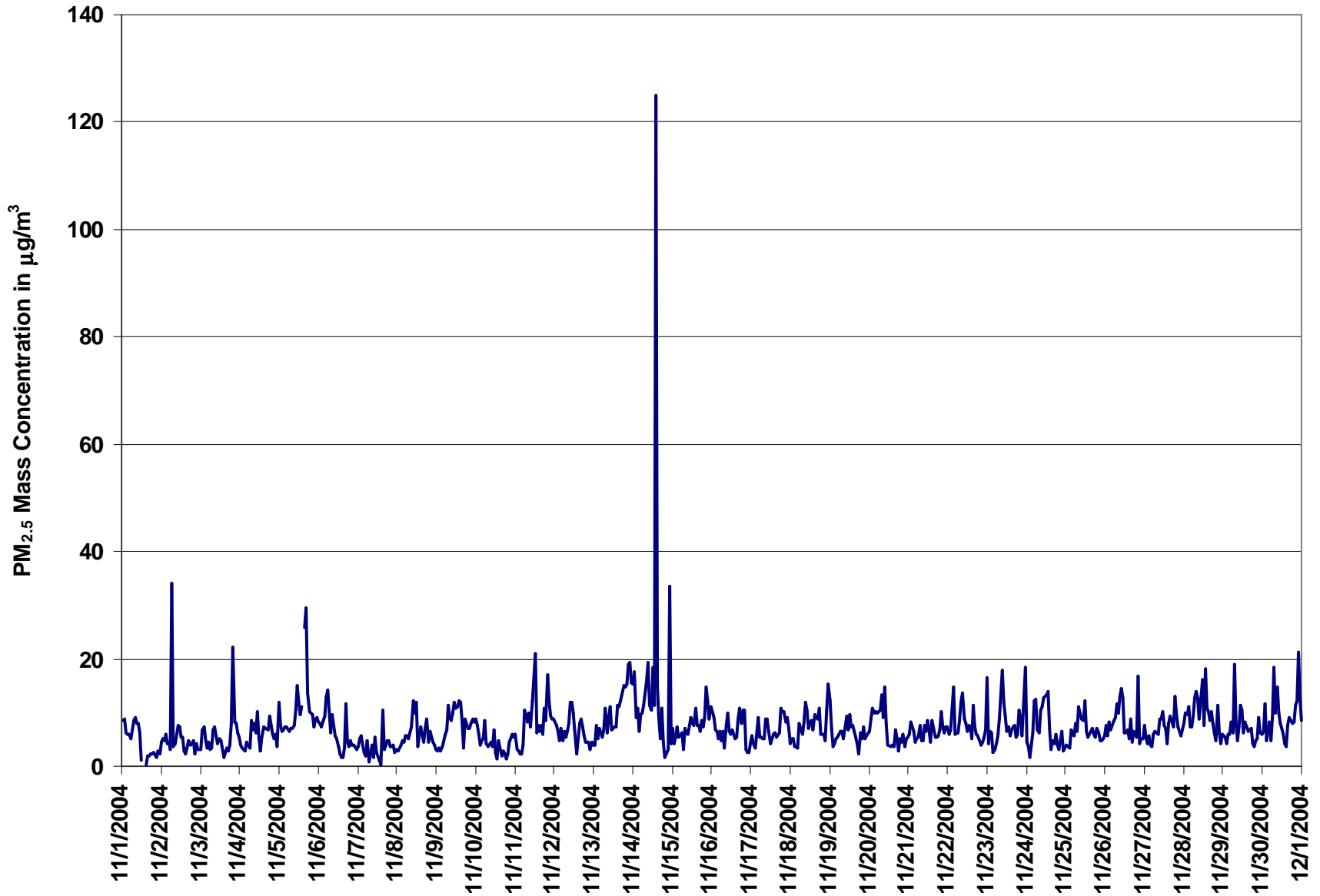
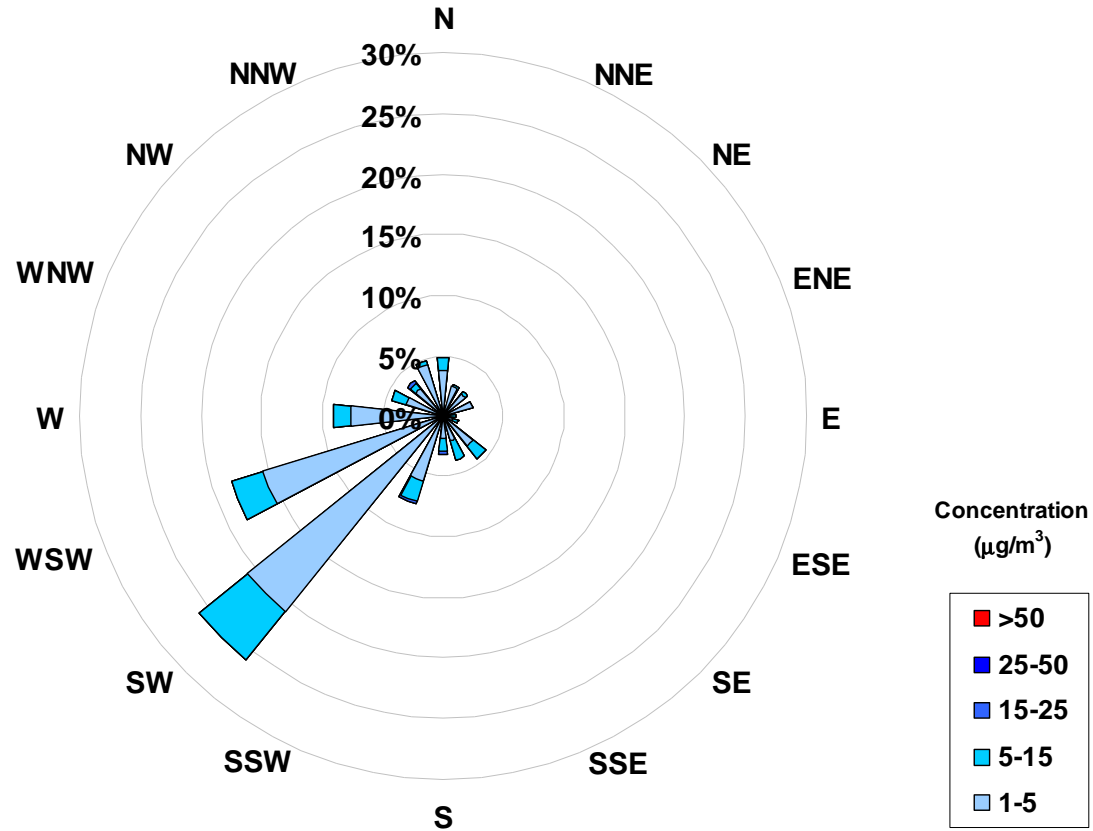


Figure 10. PAS - Crescent Heights Particulate Matter (less than 2.5 microns) 1-hr Maximum Value Monthly



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



Frequency Distribution of PM _{2.5} in $\mu\text{g}/\text{m}^3$			
Range		Frequency (hrs)	
0	< 1	241	
1	to 5	379	
5	to 15	94	
15	to 25	3	
25	to 50	0	
	> 50	0	
Total Non-Zero Values			717

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: November 1, 2004 to December 1, 2004

Summary			
Number of 1-hr Exceedances:	0		
Number of 24-hr Exceedances:	0		
Maximum 1-hr Average:	91.2 %	1-Nov	7:00 8:00
Maximum 24-hr Average:	83.9 %	25-Nov	

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
	88.4	85.3	73.3	62.0	47.4	28.3	21.2	60.1 ppb

Status Flag Characters

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

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

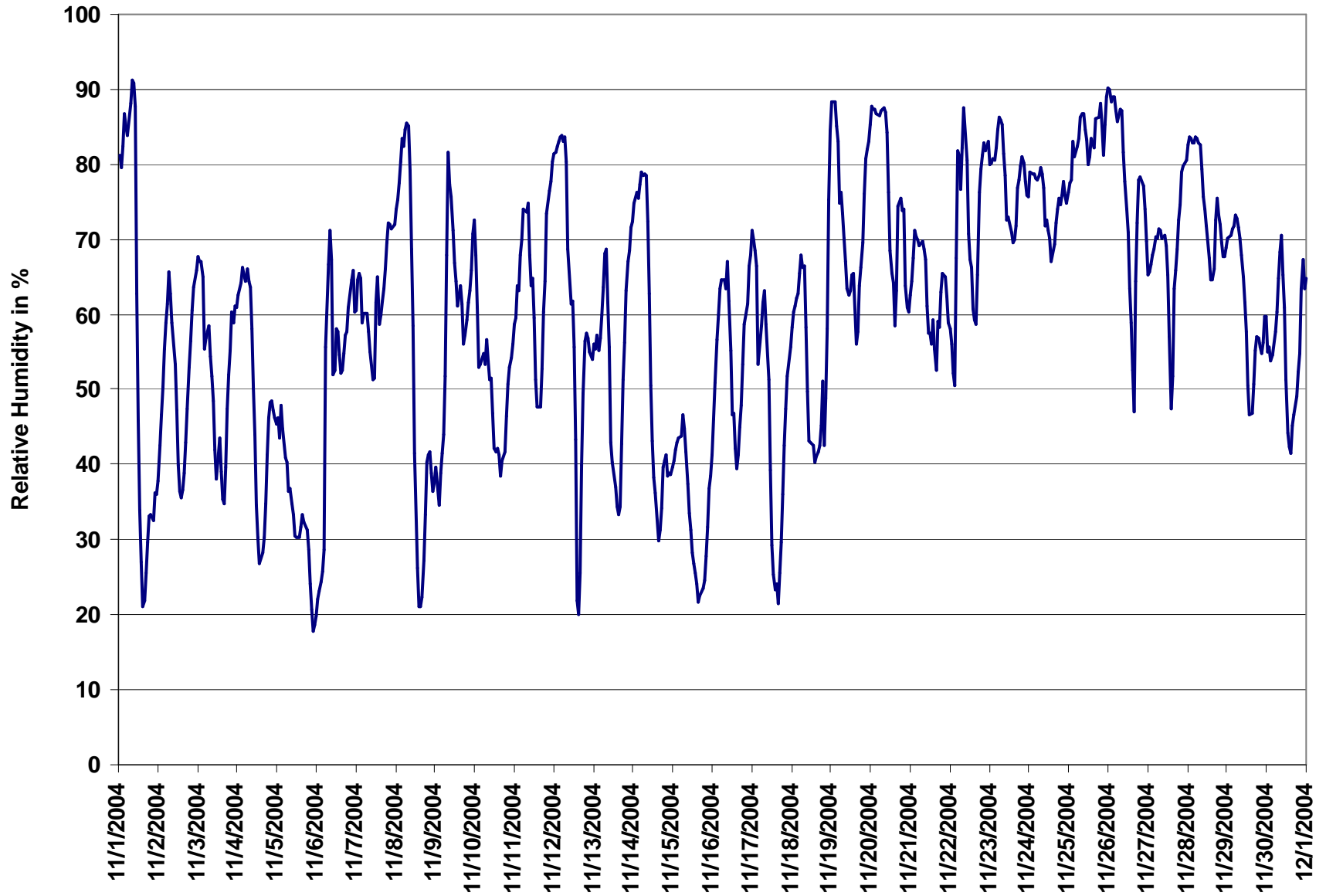


Figure 11. PAS - Crescent Heights Relative Humidity 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY AVERAGE TABLE

Ambient Temperature (AT - °C)

Station Owner: PAS

Monitoring Dates: November 1, 2004 to December 1, 2004

Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	19.2 °C 8-Nov 14:00 15:00
Maximum 24-hr Average:	12.6 °C 5-Nov

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
	16.9	13.5	6.0	2.2	-2.2	-7.1	-8.8	2.3 ppb

Status Flag Characters

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

Day Mountain Standard Time

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-Nov-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	2.4	8.0
2-Nov-04		-3	-2	-1	0	0	-1	-2	-2	-3	-2	2	5	6	7	8	7	7	6	5	5	5	4	4	5	2.4	8.0
3-Nov-04		5	5	5	4	5	4	3	5	7	9	12	15	16	17	16	16	14	13	11	10	9	8	7	6	9.2	16.6
4-Nov-04		7	5	5	5	4	4	4	3	3	4	5	6	7	8	9	9	8	5	3	2	0	1	0	0	4.5	8.9
5-Nov-04		-1	-1	-2	-2	-2	-2	-2	-1	0	3	6	9	11	12	12	11	9	7	5	4	4	5	5	5	4.0	11.7
6-Nov-04		5	7	5	6	7	7	9	10	11	13	15	16	17	18	18	17	17	16	16	15	15	14	14	14	12.6	18.0
7-Nov-04		13	13	13	13	13	8	6	5	5	7	7	6	6	6	5	5	4	4	4	4	3	3	2	2	6.5	13.5
8-Nov-04		2	2	1	1	1	1	1	0	1	2	3	3	3	4	4	5	5	4	3	3	2	1	0	0	2.1	4.7
9-Nov-04		-1	-2	-3	-4	-4	-4	-4	-5	-2	2	7	13	18	19	19	19	16	14	12	11	10	9	9	8	6.5	19.2
10-Nov-04		7	8	6	5	4	2	1	0	0	1	3	5	7	9	9	8	7	7	6	6	5	5	4	4	5.0	9.1
11-Nov-04		4	3	3	2	2	2	1	1	1	1	2	3	3	3	4	4	3	3	1	-1	-2	-2	-3	-3	1.4	3.8
12-Nov-04		-4	-5	-5	-6	-6	-6	-7	-7	-4	-1	1	3	5	6	6	6	5	3	2	-1	-3	-4	-5	-5	-1.4	6.4
13-Nov-04		-6	-6	-7	-7	-7	-7	-8	-8	-6	-3	1	5	9	13	13	12	9	6	4	4	4	5	5	4	1.3	13.3
14-Nov-04		4	4	4	3	2	1	0	0	2	4	7	7	8	10	9	9	6	3	1	-1	-3	-3	-4	-5	3.0	9.7
15-Nov-04		-5	-6	-6	-6	-7	-7	-8	-8	-6	-3	3	6	10	11	14	13	11	10	11	10	10	10	10	10	3.2	13.6
16-Nov-04		10	10	10	10	9	8	9	9	10	11	12	14	14	15	15	16	15	14	14	13	13	13	12	12	12.1	15.8
17-Nov-04		10	9	7	6	5	5	5	4	6	8	11	12	14	14	13	12	10	8	6	5	3	3	2	2	7.6	14.0
18-Nov-04		2	2	3	6	4	4	3	2	4	7	10	11	11	12	12	11	9	7	4	2	0	-1	-2	-3	5.0	12.0
19-Nov-04		-4	-4	-3	-3	-2	-3	-1	-1	2	5	8	8	9	10	10	10	10	10	8	8	6	5	3	2	3.9	10.2
20-Nov-04		2	2	2	2	2	2	1	1	0	0	0	1	1	1	2	1	0	-1	-2	-3	-4	-5	-6	-6	-0.3	2.3
21-Nov-04		-7	-7	-7	-7	-7	-6	-6	-5	-4	-3	0	1	1	2	3	2	0	-1	-1	-2	0	0	0	0	-2.2	3.0
22-Nov-04		0	0	-1	0	0	1	1	2	2	4	5	6	7	6	7	6	5	4	3	3	3	4	5	5	3.4	6.9
23-Nov-04		5	6	6	5	3	3	3	2	-1	-1	-1	-2	-1	-1	0	0	-2	-4	-5	-6	-7	-8	-8	-7	-0.9	6.3
24-Nov-04		-7	-7	-7	-7	-8	-8	-9	-9	-9	-9	-5	-4	-3	-2	-2	-2	-4	-5	-7	-8	-8	-9	-8	-8	-6.5	-2.2
25-Nov-04		-9	-9	-9	-9	-9	-9	-8	-7	-6	-3	-2	0	2	4	4	4	4	3	4	3	3	3	4	3	-1.5	4.4
26-Nov-04		3	2	1	1	0	0	0	-1	-1	-1	0	2	2	2	3	3	2	1	0	0	0	-1	-1	-2	0.6	2.7
27-Nov-04		-2	-3	-4	-4	-4	-4	-3	-4	-4	-3	-1	1	3	3	3	1	-1	-3	-4	-5	-5	-5	-5	-5	-2.2	3.4
28-Nov-04		-5	-5	-6	-6	-6	-5	-5	-4	-4	-3	-2	-1	1	1	0	-1	-2	-3	-3	-2	-2	-2	-3	-3	-2.9	1.0
29-Nov-04		-4	-5	-6	-7	-7	-8	-9	-9	-9	-9	-7	-5	-3	-2	-1	0	-1	-2	-4	-5	-6	-6	-7	-7	-5.3	-0.4
30-Nov-04		-7	-7	-6	-7	-6	-6	-6	-5	-5	-3	-1	1	3	5	5	4	3	2	1	0	0	0	0	0	-1.5	4.8
		0	0	0	0	-1	-2	-3	-4	-4	-3	-1	1	4	5	6	4	3	2	1	1	0	-1	-1	-2	0.2	5.6
Hourly Avg		0.6	0.3	0.0	-0.1	-0.4	-0.9	-1.1	-1.2	-0.5	1.2	3.1	4.8	6.2	7.3	7.6	7.2	5.9	4.6	3.4	2.5	1.9	1.5	1.2	0.8	N	0.0
Hourly Max		13.3	13.2	13.0	13.5	12.9	8.2	9.0	10.0	11.3	13.0	15.1	15.7	17.6	18.9	19.2	18.7	16.6	15.9	15.8	15.4	14.9	14.3	13.8	14.0		

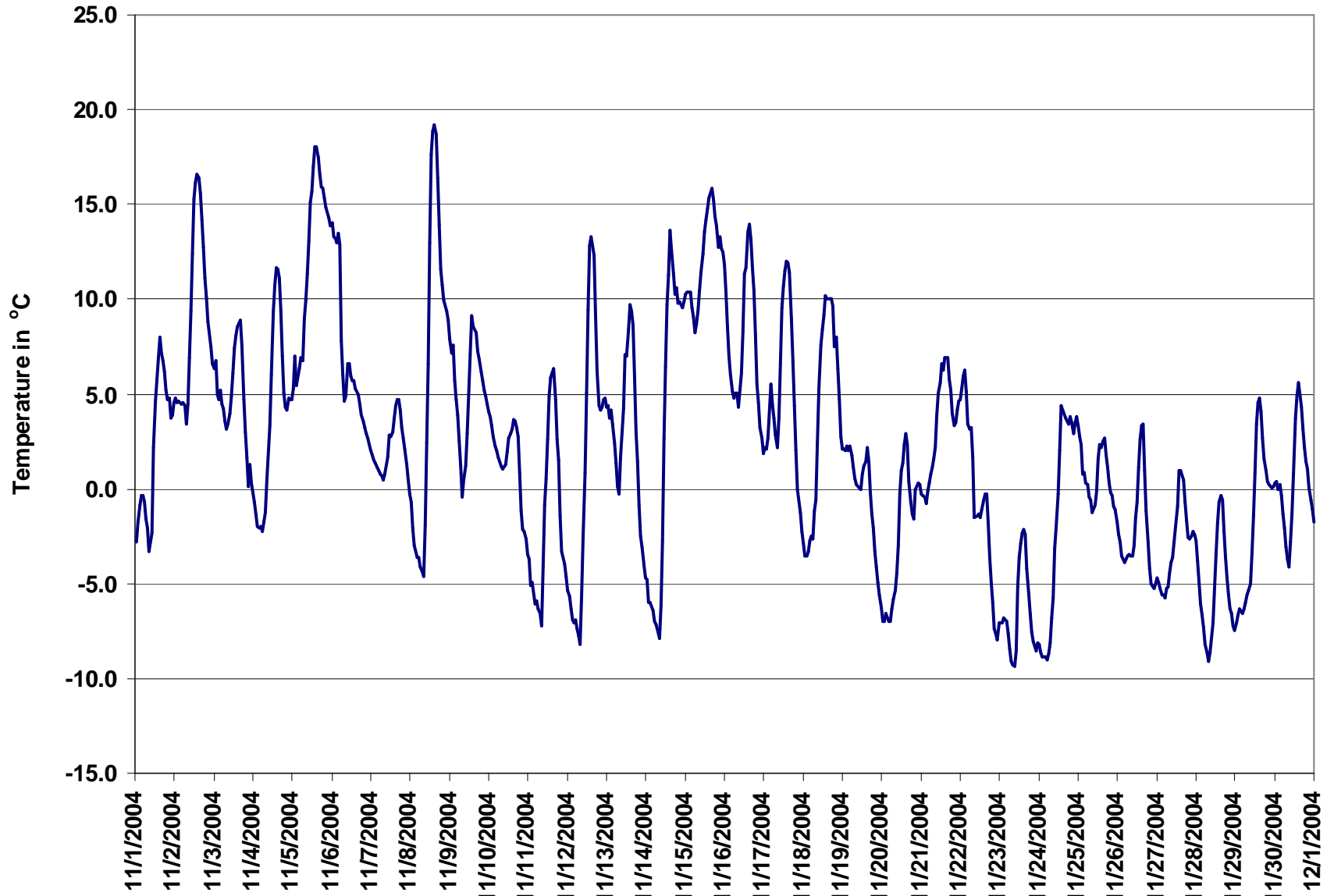


Figure 12. PAS - Crescent Heights Temperature 1-hr Average Monthly Trend

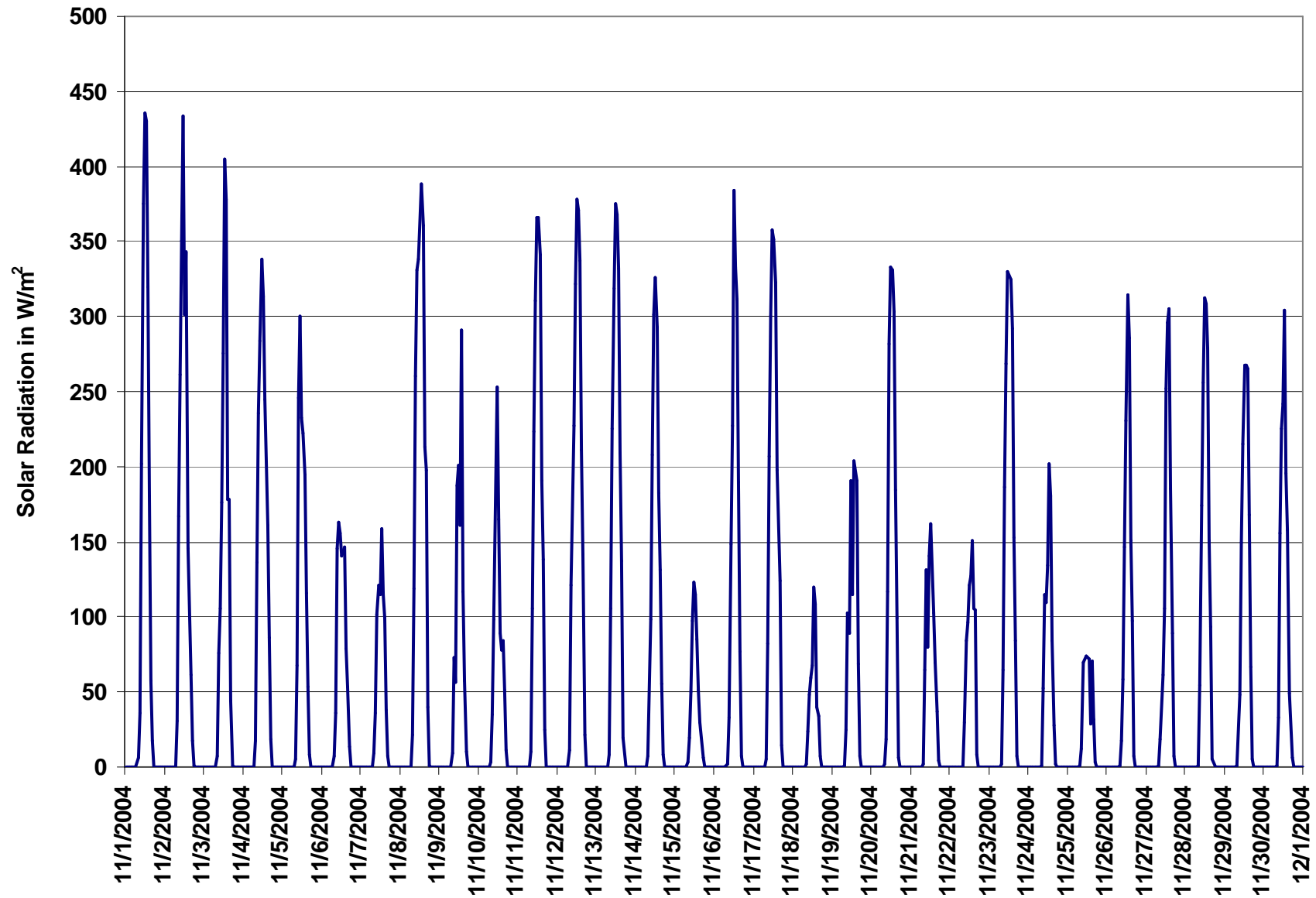


Figure 13. PAS - Crescent Heights Solar Radiation 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY AVERAGE TABLE

Wind Speed (WSv - km/hr)

Station Owner: PAS

Monitoring Dates: November 1, 2004 to December 1, 2004
Summary

Maximum 1-hr Average:	35.5	km/hr	5-Nov	18:00 19:00
Maximum 24-hr Average:	25.4	km/hr	15-Nov	

Calm Time:	0 hrs	0% calms	Operational Time:	720 hrs					
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%					
Percentile	99	95	75	25	5	1	AverageS	AverageV	
	31.8	26.0	16.4	11.2	6.8	4.0	2.5	12.4 km/hr	8.0 km/hr

Status Flag Characters

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

Day	Mountain Standard Time																								24-hr 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-Nov-04	5	7	7	6	7	9	12	13	15	12	13	18	24	23	26	20	19	25	24	21	25	21	23	24	15.9	26.0
2-Nov-04	25	23	21	16	16	13	8	6	27	29	30	29	26	21	18	14	12	11	12	12	11	12	12	16	17.0	30.0
3-Nov-04	13	13	8	14	15	8	9	8	7	9	11	10	14	16	17	18	13	10	10	11	12	9	10	16	8.4	17.7
4-Nov-04	17	18	17	20	18	14	13	19	19	24	22	20	19	19	14	13	11	11	14	16	19	16	16	19	16.8	24.3
5-Nov-04	19	15	15	12	13	11	13	15	16	15	20	22	19	19	24	35	32	32	36	34	30	26	25	25	21.6	35.5
6-Nov-04	20	20	18	22	21	24	13	4	6	10	15	14	13	12	13	12	11	11	10	10	11	13	13	12	6.5	23.9
7-Nov-04	13	13	15	14	15	15	14	15	14	14	12	13	17	17	18	13	9	8	13	13	12	10	7	4	12.0	18.4
8-Nov-04	7	6	4	3	4	3	4	6	5	4	5	5	22	25	25	24	21	16	12	10	14	17	14	9	8.1	25.3
9-Nov-04	14	12	12	13	8	4	6	11	4	5	7	8	4	4	4	8	8	8	12	9	6	5	7	10	3.9	13.5
10-Nov-04	13	12	12	12	10	9	9	10	12	10	10	6	6	7	10	11	11	14	9	9	4	3	3	5	6.9	13.9
11-Nov-04	4	9	7	5	3	2	3	5	5	16	16	14	12	10	8	6	5	5	6	6	6	7	7	7	4.7	15.9
12-Nov-04	7	6	6	7	7	6	5	7	7	6	6	5	4	14	14	14	14	9	9	9	15	16	14	13	8.0	15.6
13-Nov-04	11	10	10	6	6	7	6	7	7	7	19	24	19	17	11	9	6	4	6	4	3	4	5	5	7.6	23.7
14-Nov-04	5	6	6	4	5	5	6	7	6	5	3	3	4	11	18	18	23	24	27	27	28	32	29	32	12.5	31.8
15-Nov-04	30	35	28	30	33	24	28	28	27	26	27	26	30	31	30	29	28	25	24	15	21	22	21	20	25.4	34.8
16-Nov-04	11	10	7	5	4	6	6	8	5	7	8	8	12	14	14	11	6	6	5	10	10	10	9	9	3.4	14.0
17-Nov-04	13	12	10	24	23	16	15	17	11	13	14	15	15	15	12	9	7	7	6	7	7	7	7	6	10.8	24.3
18-Nov-04	6	5	5	4	3	4	4	3	10	17	21	21	23	20	19	21	23	20	12	27	30	24	22	16	12.8	29.5
19-Nov-04	11	11	9	5	6	6	9	7	12	11	14	14	11	14	16	13	7	6	6	4	7	10	8	9	6.5	16.3
20-Nov-04	12	10	10	10	10	9	8	9	9	8	10	11	14	15	16	16	11	7	4	7	22	22	22	18	11.9	22.2
21-Nov-04	18	16	14	16	15	15	17	21	19	21	20	23	18	15	17	18	22	19	19	17	18	18	18	16	17.8	23.1
22-Nov-04	21	16	18	23	10	8	16	21	25	20	21	16	12	13	10	10	7	7	7	6	6	6	7	8	9.0	25.2
23-Nov-04	5	4	2	5	5	2	4	5	6	8	6	16	15	16	15	12	8	6	7	6	6	6	4	4	4.2	16.0
24-Nov-04	6	5	2	4	4	4	3	3	2	2	3	3	5	13	13	11	8	11	11	12	8	10	12	13	4.8	13.0
25-Nov-04	12	7	3	6	5	6	4	4	9	7	7	13	19	11	5	7	8	7	6	7	8	6	7	9	4.1	18.7
26-Nov-04	8	7	5	3	6	9	7	6	4	4	6	11	14	13	14	10	8	9	12	12	12	11	13	15	6.8	15.1
27-Nov-04	13	8	8	9	10	12	11	13	11	8	7	7	7	11	10	8	6	7	8	5	6	9	7	5	5.6	13.1
28-Nov-04	7	5	4	5	6	8	7	9	10	12	17	19	18	19	17	13	10	14	14	16	14	17	18	17	12.0	19.1
29-Nov-04	17	17	17	18	15	15	19	20	22	19	22	19	25	28	25	25	23	22	22	21	20	18	16	13	19.7	28.3
30-Nov-04	11	7	9	8	6	8	8	8	8	10	11	10	9	10	13	9	8	8	6	6	9	11	12	13	7.9	13.1
																									N	0.0
1-hr Vector	8.8	7.0	6.4	5.8	5.4	4.3	4.2	5.1	5.8	6.7	7.9	8.9	9.7	10.7	10.6	9.8	9.0	8.4	8.8	8.9	10.4	10.2	9.7	9.8		
Hourly Max	29.9	34.8	27.7	30.3	33.0	24.5	27.6	27.9	26.9	29.4	30.0	29.2	30.2	30.9	30.2	34.7	32.2	32.0	35.5	34.2	29.8	31.6	29.0	31.8		



Station: Crescent Heights

HOURLY AVERAGE TABLE

Wind Direction (WD - Degrees)

Station Owner: PAS

Monitoring Dates: November 1, 2004 to December 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
	355.7	336.1	252.3	230.2	201.3	40.2	6.3	236 deg

Status Flag Characters

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

Day Mountain Standard Time

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	
1-Nov-04	148	257	262	260	258	245	234	223	211	216	215	209	208	209	215	202	194	199	206	198	206	203	206	214	211
2-Nov-04	219	221	227	237	230	231	221	234	217	213	213	221	237	240	252	249	250	265	256	254	246	241	242	238	232
3-Nov-04	261	357	330	360	353	328	311	313	311	302	310	282	251	253	252	256	257	245	240	222	240	230	221	225	274
4-Nov-04	237	240	238	233	240	254	247	238	231	231	234	241	245	243	249	242	244	247	234	226	236	242	234	234	238
5-Nov-04	242	251	239	247	244	241	249	266	265	262	272	264	260	263	260	264	247	253	257	258	256	251	248	252	255
6-Nov-04	253	232	245	260	294	2	20	298	276	334	346	357	353	6	11	17	21	46	61	68	52	55	59	71	350
7-Nov-04	73	76	87	99	98	91	106	106	111	115	123	121	115	108	107	109	106	57	55	63	76	73	80	26	95
8-Nov-04	27	335	129	136	345	70	104	127	134	121	141	233	215	217	218	218	222	229	231	263	249	237	225	221	220
9-Nov-04	237	243	237	241	301	329	296	319	324	229	210	213	165	52	289	356	3	358	11	5	351	341	355	8	305
10-Nov-04	19	33	37	43	22	26	25	23	37	54	64	75	97	123	118	109	112	113	126	112	78	60	20	349	63
11-Nov-04	0	355	1	323	222	161	84	341	218	233	229	230	242	248	260	242	248	264	245	177	194	199	193	187	239
12-Nov-04	188	161	155	181	193	175	153	132	144	166	175	162	127	199	197	189	191	213	224	230	231	223	224	226	196
13-Nov-04	215	200	214	226	236	239	205	235	236	233	223	226	220	240	265	283	306	295	243	216	191	311	158	135	231
14-Nov-04	256	142	241	113	167	165	151	157	129	144	192	132	88	187	192	187	191	195	208	206	214	215	215	217	198
15-Nov-04	220	221	223	221	219	225	216	218	216	215	214	210	209	212	214	217	208	210	225	232	259	262	266	272	223
16-Nov-04	293	329	13	337	21	23	73	78	87	108	123	170	208	202	213	216	218	251	208	227	224	250	237	259	223
17-Nov-04	256	259	264	242	229	245	246	246	244	227	263	277	272	268	263	269	259	287	214	193	201	180	181	176	246
18-Nov-04	157	143	131	155	164	222	239	258	221	212	216	209	208	212	209	208	208	214	220	247	226	259	298	286	224
19-Nov-04	269	247	257	107	301	316	318	320	334	339	347	345	329	316	329	330	328	317	254	230	209	237	232	224	304
20-Nov-04	232	224	215	231	225	225	226	234	231	232	238	249	235	233	248	229	230	216	254	196	204	217	226	233	228
21-Nov-04	230	234	227	230	222	229	229	226	230	234	226	228	240	244	241	237	224	234	231	227	228	235	223	213	230
22-Nov-04	207	254	288	352	341	281	324	342	349	343	350	360	331	325	310	307	281	262	268	244	227	232	224	226	312
23-Nov-04	149	142	137	16	36	276	334	227	328	350	224	219	226	226	228	223	226	243	228	205	160	142	144	103	219
24-Nov-04	135	130	139	137	150	107	94	38	40	87	139	132	174	227	233	229	237	234	236	234	239	246	240	237	217
25-Nov-04	238	249	223	252	290	297	134	39	354	8	27	355	10	358	263	264	269	263	251	266	255	240	236	237	293
26-Nov-04	242	243	185	177	54	8	3	351	268	276	271	266	276	267	277	271	252	235	231	237	229	228	229	232	255
27-Nov-04	231	241	237	230	233	240	239	240	237	246	247	311	336	358	6	355	337	345	341	317	307	312	323	291	279
28-Nov-04	283	283	276	254	248	234	248	234	238	229	223	222	224	227	224	229	238	230	239	232	241	240	241	233	235
29-Nov-04	229	228	235	237	235	235	239	237	239	239	228	224	230	231	231	230	225	218	220	220	227	237	232	242	231
30-Nov-04	241	228	254	247	192	206	230	239	248	229	226	247	253	288	315	302	276	274	271	254	222	223	219	212	245
Hourly Avg	234	238	238	243	245	251	244	248	242	236	234	237	235	237	239	237	230	233	233	230	229	235	233	234	N



Station: Crescent Heights

STANDARD DEVIATION TABLE

Wind Direction (WD - Degrees)

Station Owner: PAS

Monitoring Dates: November 1, 2004 to December 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
	55.1	32.7	14.0	8.4	6.1	4.3	3.6

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

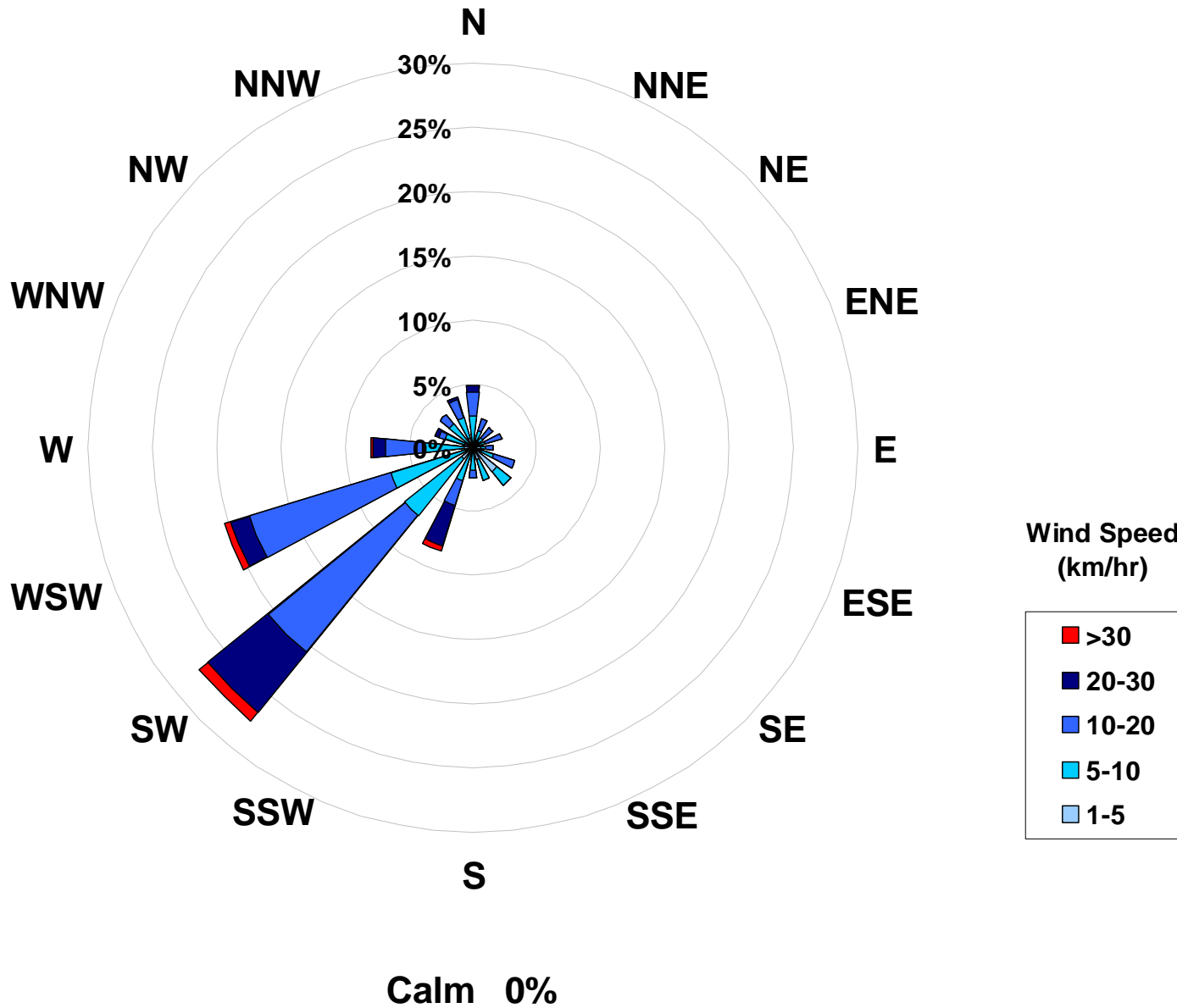
Day Mountain Standard Time

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	23:00	0:00	Daily Maximum
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00	23:00	0:00		
1-Nov-04	18	15	11	11	11	11	11	8	8	9	10	13	11	10	10	8	6	5	5	6	6	5	4	4	4	5	17.6	
2-Nov-04	5	5	6	9	6	6	6	8	44	9	4	5	12	7	7	7	7	8	7	7	10	8	6	5	5	44.0		
3-Nov-04	13	18	15	7	6	9	8	8	8	11	11	12	16	12	10	11	8	7	6	5	6	8	14	6	8	17.6		
4-Nov-04	6	4	5	6	7	11	11	10	9	5	4	8	8	13	8	7	6	8	6	6	5	10	10	7	7	13.2		
5-Nov-04	5	6	5	7	5	7	7	5	6	8	7	8	8	9	10	11	4	6	5	4	4	5	6	6	6	10.7		
6-Nov-04	7	7	7	5	10	7	9	19	14	11	8	8	10	14	9	8	7	7	8	8	8	5	6	6	8	19.4		
7-Nov-04	8	7	7	7	6	5	8	7	7	7	12	8	7	5	8	8	7	8	5	6	8	9	10	29	29	28.9		
8-Nov-04	9	19	50	52	40	57	32	14	15	26	19	55	7	27	5	5	4	8	18	17	6	7	7	25	25	56.5		
9-Nov-04	6	7	6	8	43	24	17	7	38	16	19	14	49	44	48	10	4	5	4	5	10	21	5	5	5	49.1		
10-Nov-04	6	6	6	6	5	6	7	6	6	10	13	26	21	18	10	6	7	6	6	8	21	28	54	14	14	54.0		
11-Nov-04	27	5	23	19	33	60	50	23	19	7	7	17	28	26	12	9	7	7	8	8	11	5	7	8	5	60.1		
12-Nov-04	11	9	10	7	8	12	15	4	6	11	17	28	26	12	9	7	7	8	8	11	5	7	8	5	5	27.8		
13-Nov-04	5	8	10	17	22	15	26	25	14	13	9	6	7	12	10	10	10	17	16	27	23	59	39	30	30	58.6		
14-Nov-04	17	16	25	54	31	19	17	17	7	18	34	59	32	12	8	5	5	5	5	4	4	4	4	4	4	58.7		
15-Nov-04	4	4	5	6	4	5	4	4	4	6	5	5	5	5	4	4	5	5	5	5	12	9	7	5	15	15.4		
16-Nov-04	23	11	14	25	25	14	20	9	19	13	15	21	12	14	14	9	13	8	20	9	15	13	20	18	18	25.2		
17-Nov-04	15	10	27	13	8	10	11	8	9	7	9	8	9	10	12	11	14	6	29	23	16	32	12	13	13	31.7		
18-Nov-04	10	24	27	32	37	19	34	43	15	4	4	7	7	6	5	5	5	5	12	6	5	8	7	8	8	43.1		
19-Nov-04	8	8	7	34	13	9	10	13	10	9	7	9	14	9	9	6	11	10	16	13	20	4	4	5	5	33.9		
20-Nov-04	3	4	5	7	7	8	7	8	6	6	13	17	13	9	9	6	8	15	39	16	5	6	7	9	9	38.9		
21-Nov-04	6	7	5	5	7	8	5	5	5	6	6	5	8	8	7	6	4	6	5	6	5	4	5	5	5	8.4		
22-Nov-04	6	10	8	5	10	12	9	10	4	4	5	6	11	9	12	10	11	15	19	23	12	17	18	9	9	23.4		
23-Nov-04	14	14	33	28	18	51	45	20	14	7	23	9	9	8	7	8	11	11	4	19	11	6	10	16	16	50.6		
24-Nov-04	10	24	63	8	9	16	24	16	41	55	16	23	20	8	6	6	14	7	7	5	9	9	6	4	4	63.1		
25-Nov-04	4	11	45	15	31	28	42	29	8	12	25	17	6	16	22	15	7	8	7	6	9	18	10	11	11	44.8		
26-Nov-04	8	15	16	21	12	6	25	15	33	13	12	12	12	7	8	9	7	10	7	7	4	8	7	8	8	33.3		
27-Nov-04	7	10	10	10	6	10	7	8	9	11	12	19	20	12	14	8	12	9	7	39	13	7	10	25	25	39.0		
28-Nov-04	9	37	64	17	12	8	8	8	9	6	7	7	7	6	6	7	7	6	10	11	5	7	5	5	5	63.5		
29-Nov-04	5	5	5	3	4	5	4	4	4	4	6	4	7	4	4	5	3	4	5	5	5	5	7	6	7	6.9		
30-Nov-04	8	29	20	14	28	20	7	11	12	17	10	15	21	12	9	10	5	4	7	9	8	7	15	11	11	28.9		
																											0.0	

Hourly Max	27	37	64	54	43	60	50	44	41	55	34	59	49	44	48	19	14	17	39	39	23	59	54	30
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Wind Rose for the 1-hr Average Meterological Data at the Crescent Heights Site for November 2004





Passive Monitoring

Ambient Air Compliance Network



Palliser Airshed Society - PAS Passive Stations for November 2004

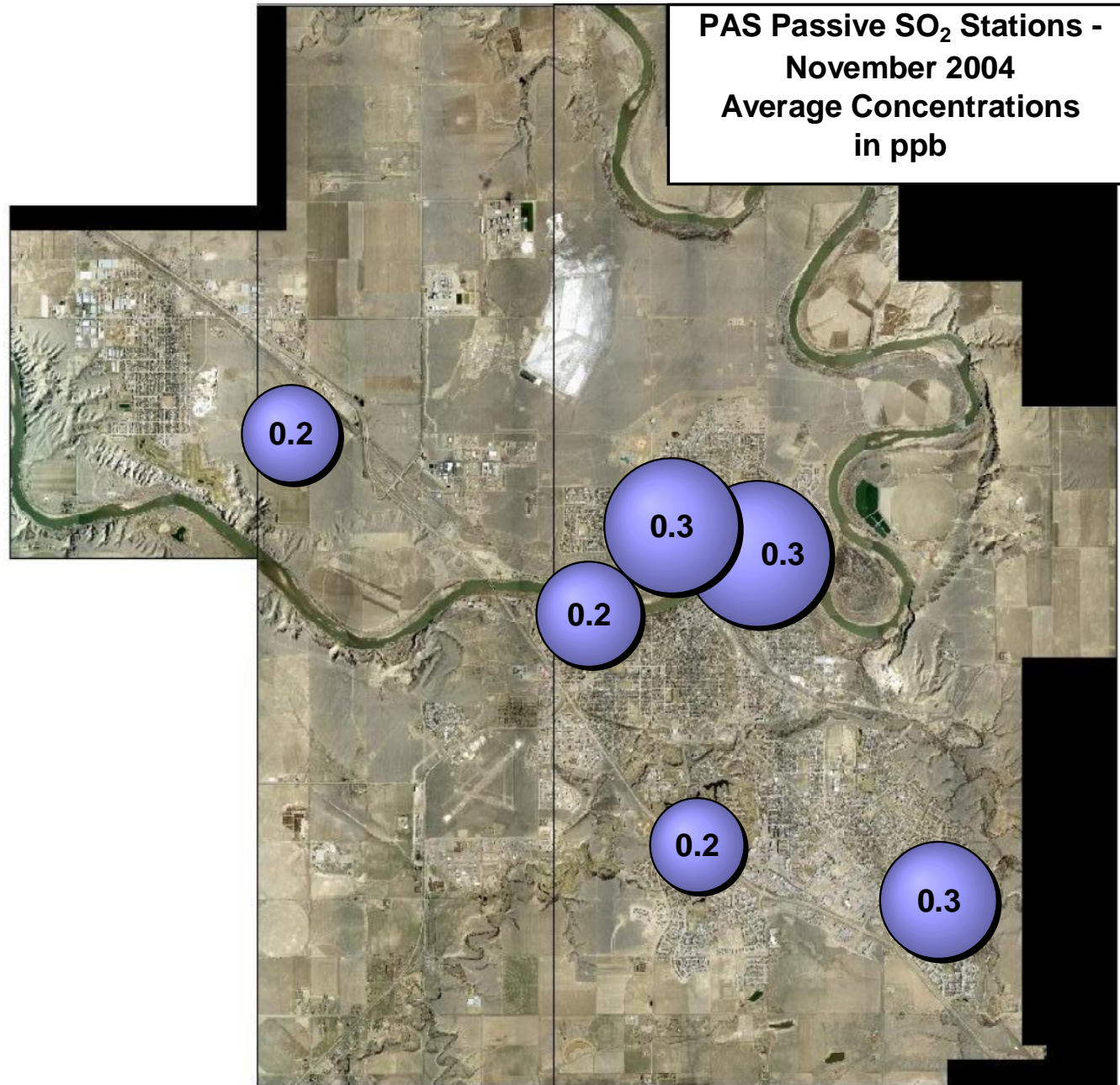
Station Number	Station Name	SO ₂ ppb	O ₃ ppb	NO ₂ ppb	Easting	Northing	Elevation
Duplicates							
6a	Redcliff	na	na	na			
6b		0.3	16.4	12.3			
1	Hospital	0.2	18.0	7.9	521648	5542721	698
2	Ball Park	0.3	16.0	10.1	524019	5543686	660
3	Monitoring Station	0.3	22.2	10.1	522812	5544133	714
4	Redcliff	0.2	23.4	4.8	517448	5545608	725
5	Southridge	0.2	25.7	5.7	523172	5539016	721
6	Christian School Park	0.3	16.4	12.3	526577	5538133	709

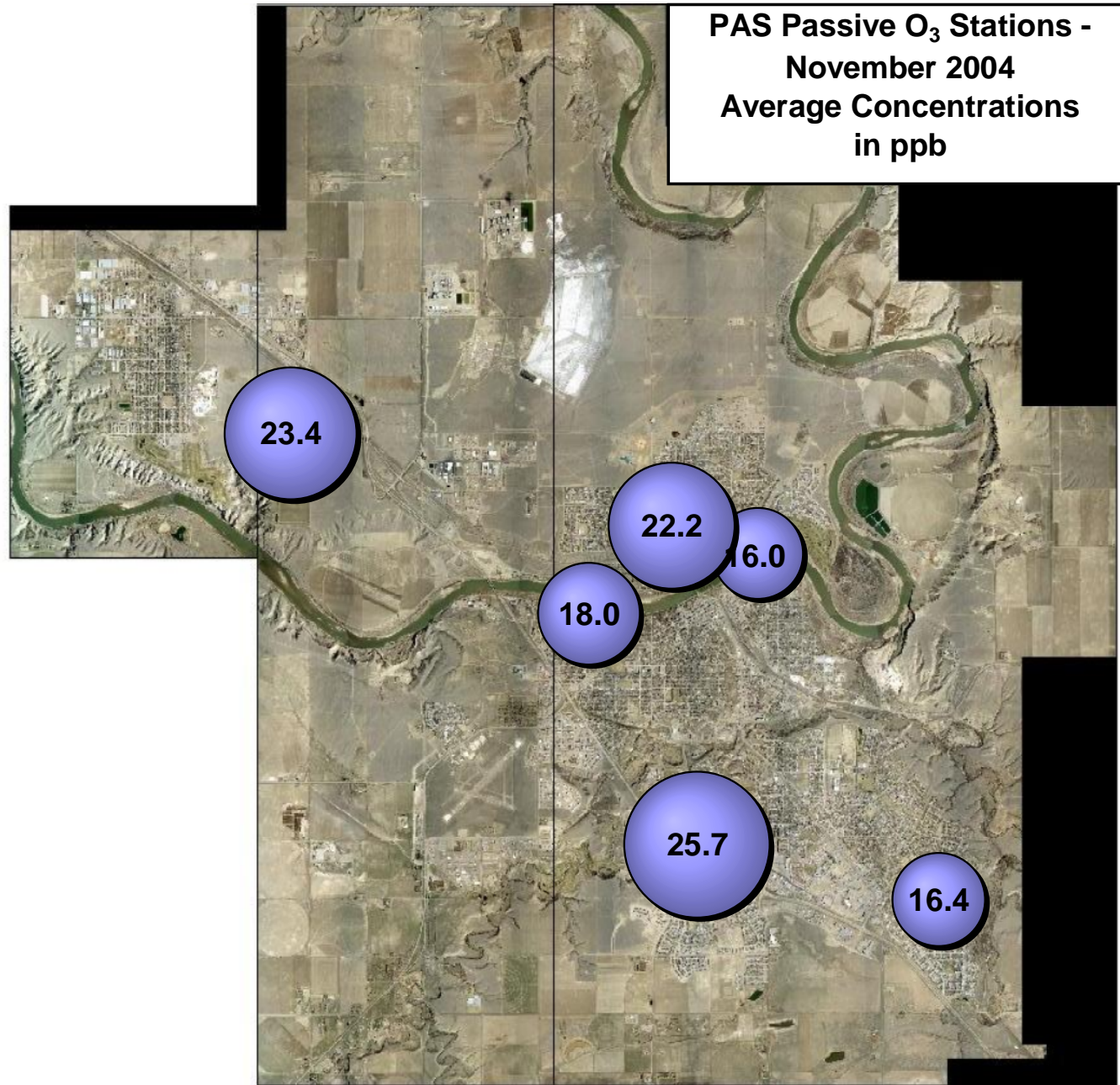
Stats:							
Mean		0.3	21.1	7.7			
Standard Deviation		0.1	4.0	2.4			
Minimum		0.2			5	Southridge	
Maximum		0.3			2	Ball Park	
Minimum			16.0		2	Ball Park	
Maximum			25.7		5	Southridge	
Minimum				4.8	4	Redcliff	
Maximum				10.1	2	Ball Park	

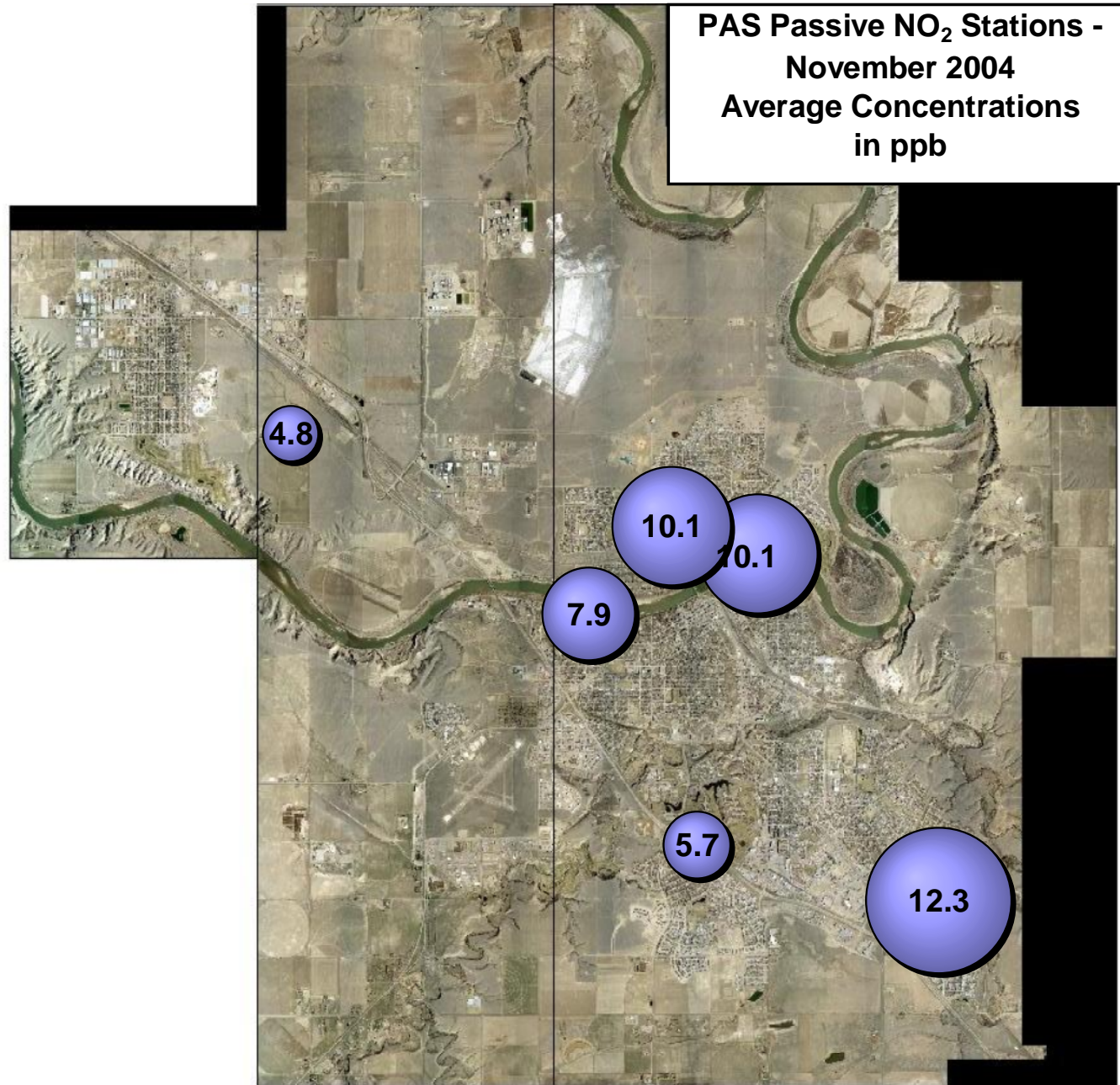
Please Note: The Mean, Standard Deviation, Minimum and Maximum for SO₂, O₃ and NO₂ does not include Station 6 as no data was available.

Comparison between Continuous and Passive monitoring (passive #3)

	SO ₂	O ₃	NO ₂
PAS Station	-	19.3	8.3
PAS Passive	0.3	22.2	10.1







November 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	November 5, 2003	Previous Calibration	October 21, 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)	11:25	End Time (MST)	14:20
Barometric Pressure	0.923 mb	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 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	1.006244	Calculated slope	0.996840
Calculated intercept	2.850651	Calculated intercept	2.035564
Analyzer make	API Model 400E	Analyzer serial #	331

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	-1.3	ppb	-1.4	ppb
coefficient	1.055		1.109	
Lamp measure	3163.3	mV	3148	mV
Lamp Reference	3166.2	mV	3147	mV
Pressure	25.7	inches Hg	25.3	inches Hg
Sample Flow	718	ccm	710	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	-1.1	N/A
4995	0.00	317.9	317.9	1.0001
4995	0.00	183.7	180.7	1.0166
4995	0.00	91.3	89.1	1.0248
4995	0.00	0.0	-1.1	0.0000
4995	0.00	317.9	296.1	1.0735
Average Correction Factor				1.0138

Calculated value of As Found Response: 301.9 ppm Percent Change of As Found: -5.0%

	before calibration		after calibration	
Auto zero	1.9	ppb	0.5	ppb
Auto span	343.5	ppb	347.5	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

Calibration Summary



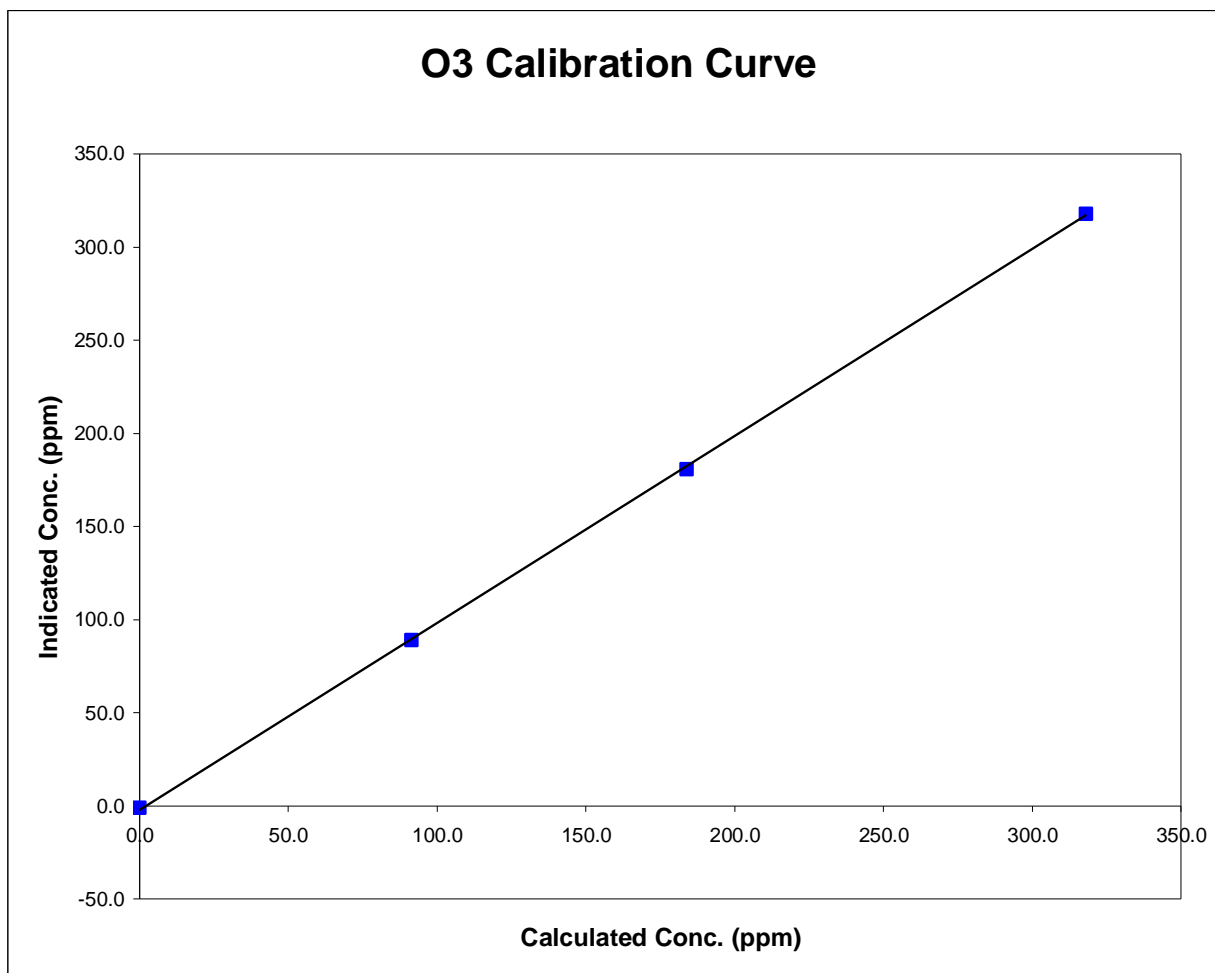
Parameter
 Air Monitoring Network
O3 **Palliser Airshed**

Station Information

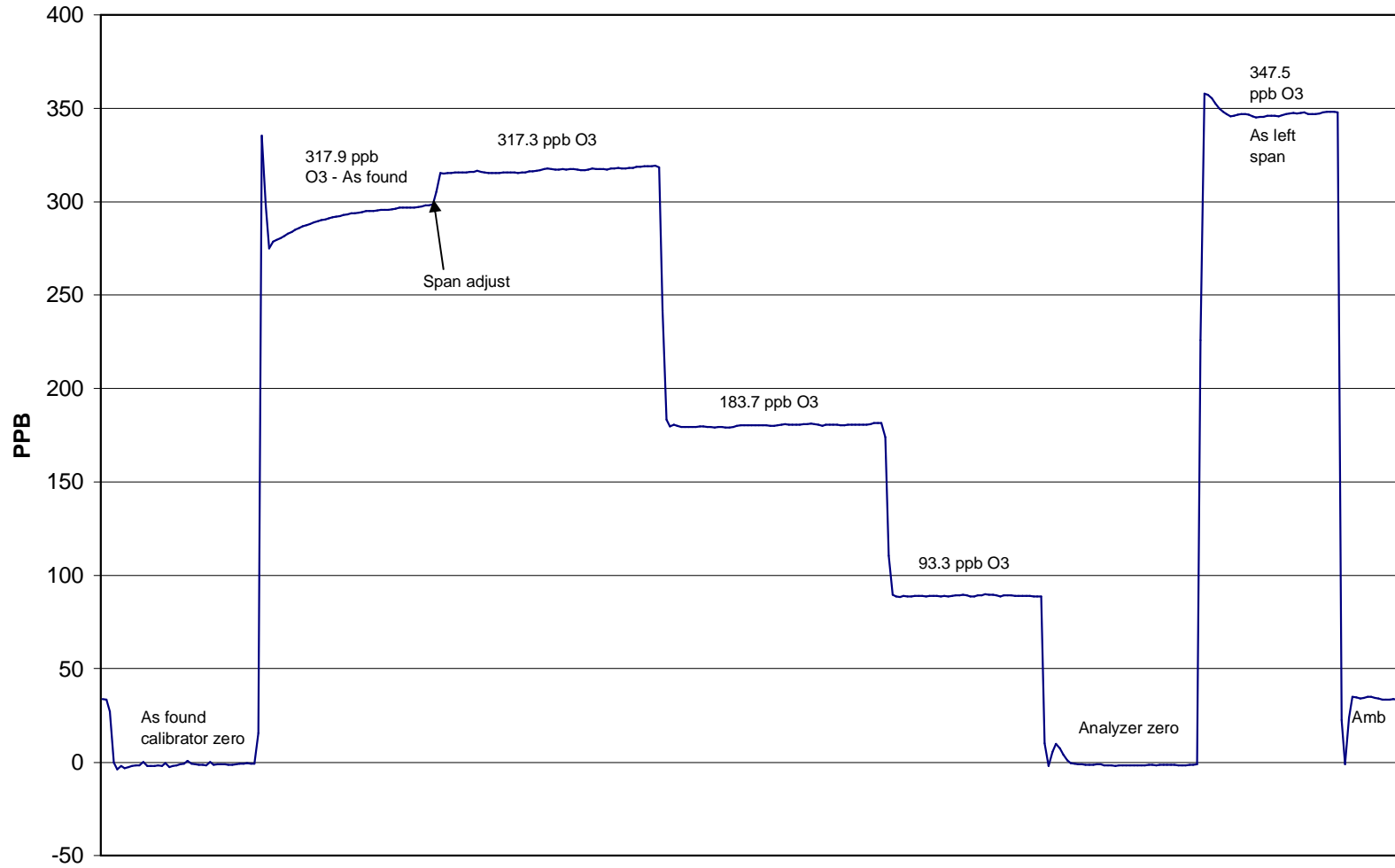
Calibration Date	<u> </u> November 5, 2003	Previous Calibration	<u> </u> October 21, 2003
Station Number	<u> </u> 1	Station Location	<u> </u> Crescent Heights
Start Time (MST)	<u> </u> 11:25	End Time (MST)	<u> </u> 14:20
Analyzer make/model	<u> </u> API Model 400E	Analyzer serial #	<u> </u> 331

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
317.9	317.9	1.0001		
183.7	180.7	1.0166	Correlation Coefficient	0.999918
91.3	89.1	1.0248		
0.0	-1.1	N/A	Slope	0.996840
			Intercept	2.035564



O3 Calibration



November 05, 2004

Calibration Report

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



Station Information

Calibration Date November 4, 2004 Previous Calibration October 21, 2004
 Station Number 1 Station Location Crescent Heights

Reason: Routine Installation Removal Other: _____

Start Time (MST) 14:00 End Time (MST) 17:50
 Barometric Pressure 0.919 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	1.004681	1.006497	1.012842
	Data Offset	-1.701707	-1.456555	-0.153379
After	Data Slope	1.008182	1.006935	1.009801
	Data Offset	-1.919751	-2.958650	-1.221765
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 _x background	-0.7	mV	-0.7	mV
NO coefficient	1.446		1.473	
NO _x coefficient	1.449		1.461	
Chamber Temp	49.9	Deg C	50.1	Deg C
Cooler Temp	7.0	Deg C	7.1	Deg C
Azero	30.1		29.9	
Perm Temp	40.3	Deg C	40.1	Deg C
Pressure	3.6	inches Hg	3.6	inches Hg
Sample Flow	446.0	ccm	434.0	ccm

Notes: Analyzer was 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: November 4, 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	2.3	1.6	1.0	N/A	N/A
1	4993	39.97	396.3	395.5	0.8	396.0	392.9	4.2	1.0007	1.0066
2	4993	19.97	198.8	198.4	0.4	201.1	197.9	3.8	0.9885	1.0025
3	4993	9.97	99.4	99.2	0.2	102.1	98.8	3.4	0.9741	1.0040
AFZ	4993	0.00	0.0	0.0	0.0	2.3	1.6	1.0	0.0000	0.0000
AFS	4993	39.97	396.3	395.5	0.8	395.0	383.5	12.6	1.0032	1.0312
Average Correction Factor									0.9878	1.0044

As Found Concentrations NO_x= 391.3 NO= 381.8 As Found Percent Change NO_x= -1.3% NO= -3.5%

GPT Calibration Data

Dilution Flow 4993 ccm Source Gas Flow 39.97 ccm

O ₃ 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	397.7	398.3	-0.6	395.0	395.6	1.0	N/A	N/A	N/A	N/A
350	397.7	79.8	317.9	397.1	80.2	316.7	1.0015	0.9946	1.0038	99.6%
200	397.7	213.9	183.7	397.9	213.1	184.5	0.9994	1.0041	0.9961	100.4%
100	397.7	304.4	93.3	398.6	302.7	95.5	0.9976	1.0058	0.9762	102.4%
Average Correction Factor							0.9995	1.0015	0.9920	100.8%

AIC Data

Parameter	Previous calibration				Current calibration			
	NO _x	NO ₂	NO	ppb	NO _x	NO ₂	NO	ppb
Auto zero	1.4	-0.1	1.4	ppb	0.3	-0.3	0.8	ppb
Auto span	423.6	415.6	7.5	ppb	434.8	428.1	7.5	ppb

Calibration Performed By: Kelly Baragar

Calibration Summary

Parameter NO₂
 Air Monitoring Network Palliser Airshed

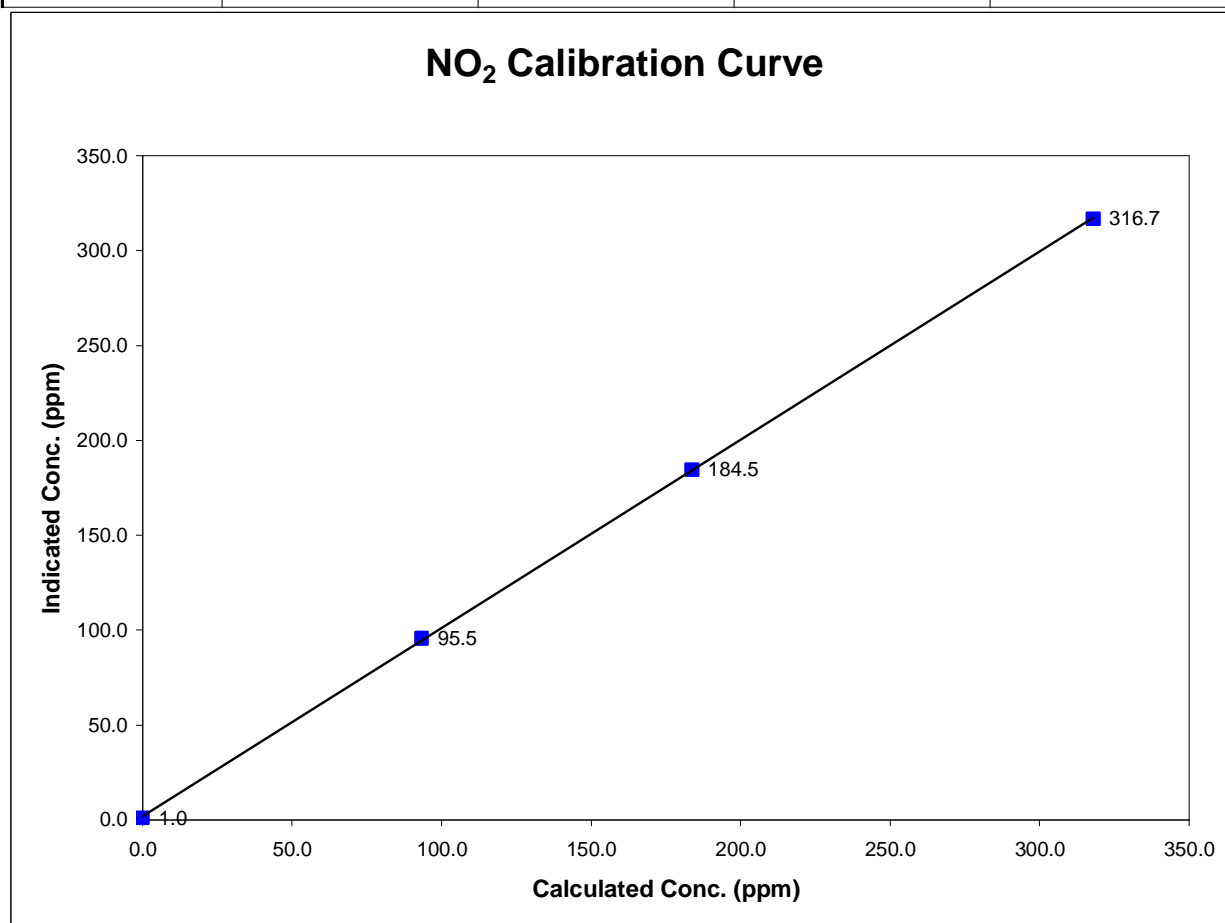


Station Information

Calibration Date	November 4, 2004	Previous Calibration	October 21, 2004
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	14:00	End Time (MST)	17:50
Analyzer make	API Model 200E	Analyzer serial #	219

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.0	0.0000		
93.3	95.5	0.9762	Correlation Coefficient	0.999954
183.7	184.5	0.9961		
317.9	316.7	1.0038	Slope	1.008182
			Intercept	-1.919751



Calibration Summary

Parameter NO_x
 Air Monitoring Network Palliser Airshed



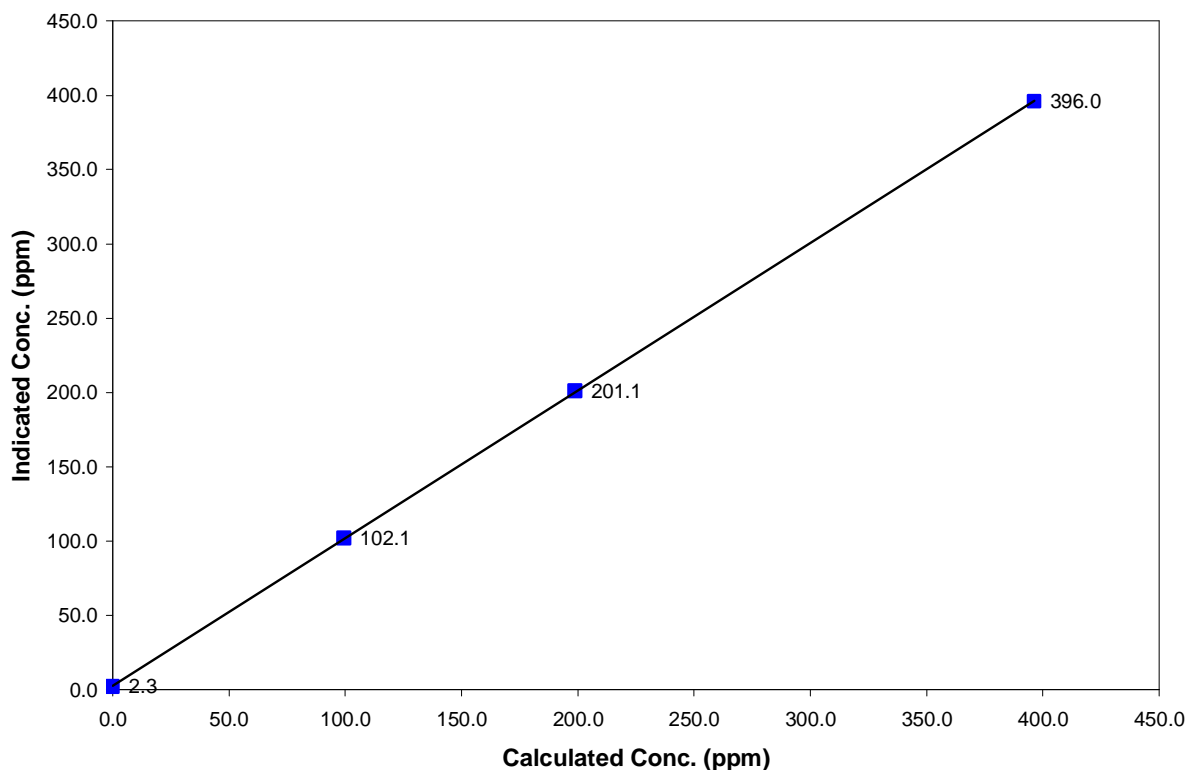
Station Information

Calibration Date	November 4, 2004	Previous Calibration	October 21, 2004
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	14:00	End Time (MST)	17:50
Analyzer make	API Model 200E	Analyzer serial #	219

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	2.3	0.0000	Correlation Coefficient	0.999984
396.3	396.0	1.0007		
198.8	201.1	0.9885		
99.4	102.1	0.9741		
			Slope	1.006935
			Intercept	-2.958650

NO_x Calibration Curve



Calibration Summary

Parameter NO
 Air Monitoring Network Palliser Airshed

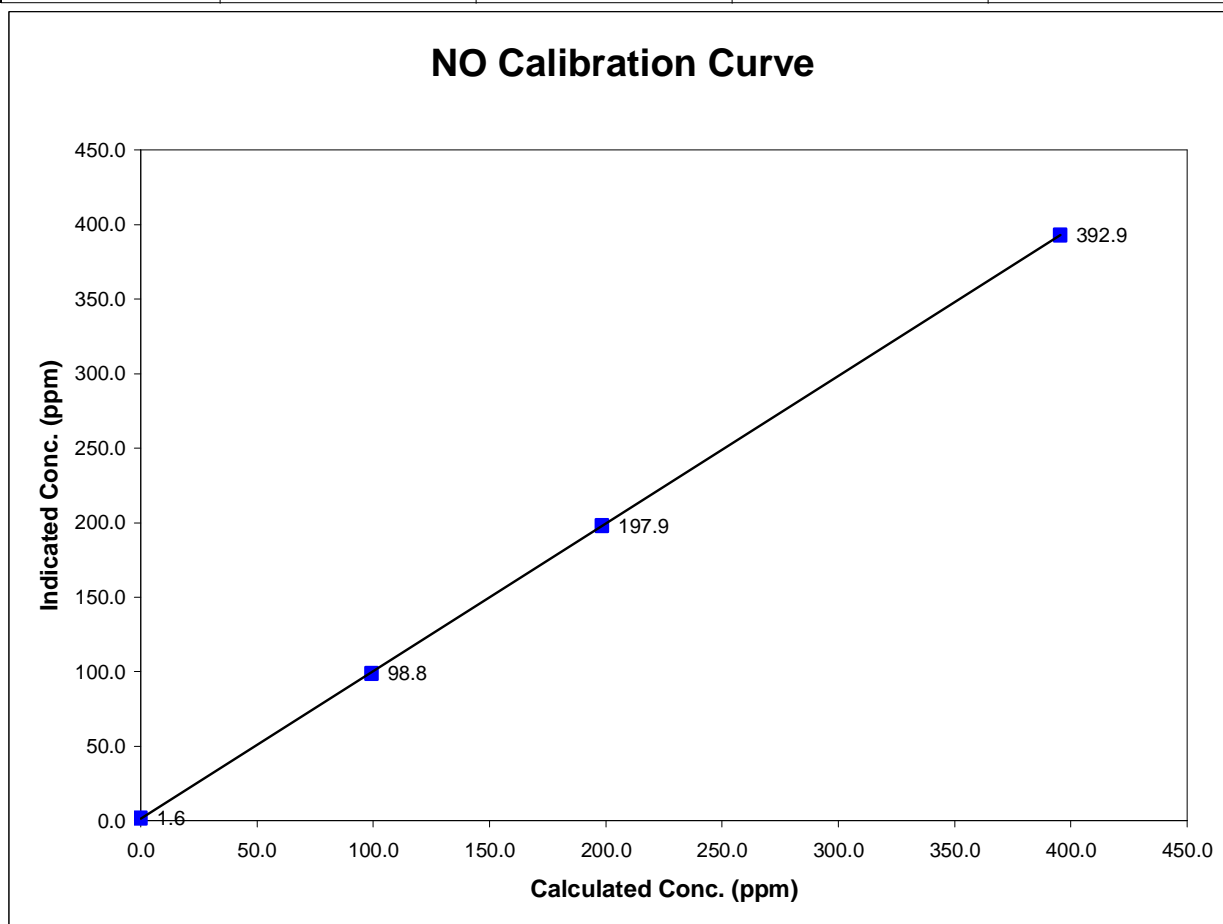


Station Information

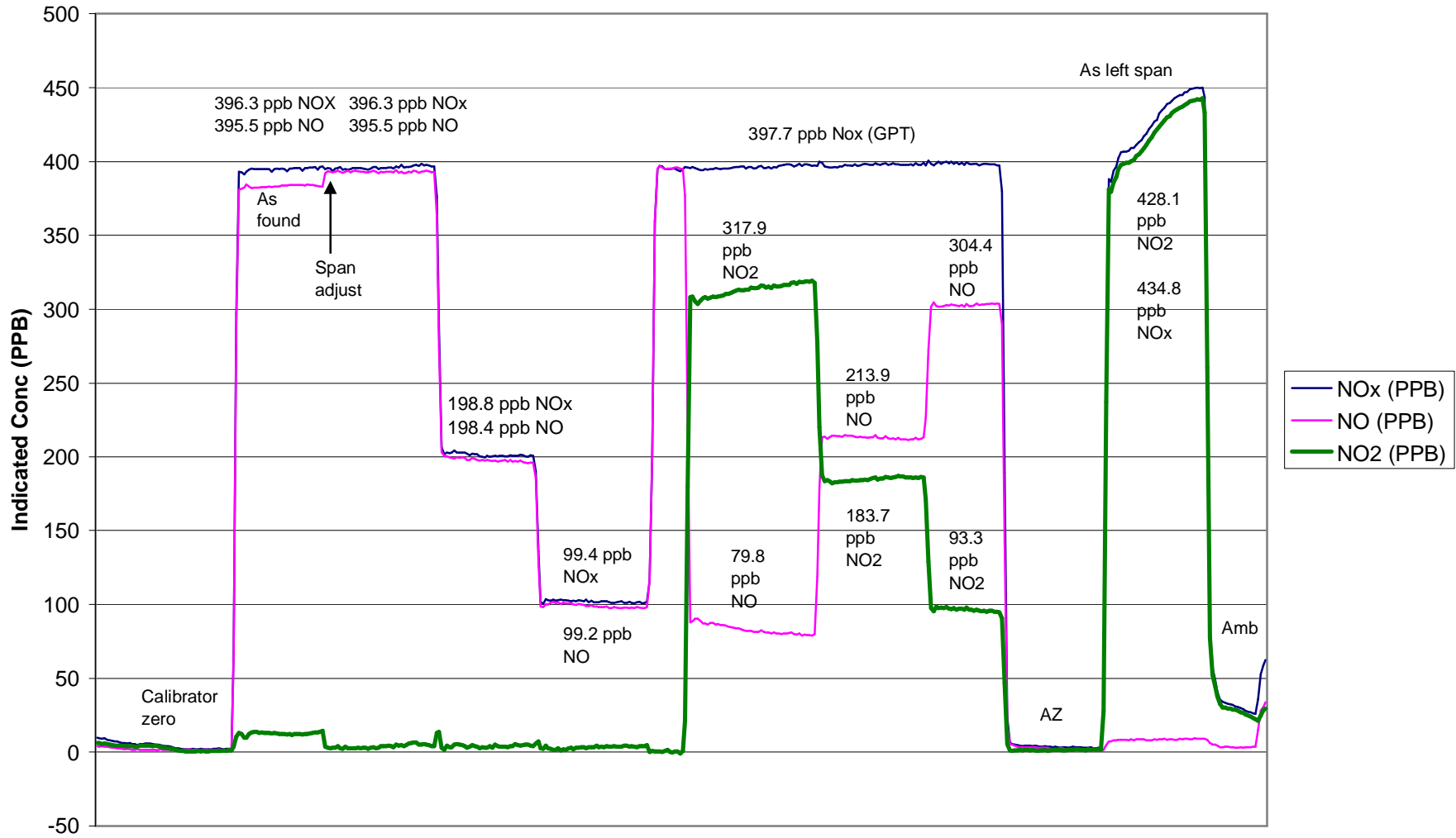
Calibration Date	November 4, 2004	Previous Calibration	October 21, 2004
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	14:00	End Time (MST)	17:50
Analyzer make	API Model 200E	Analyzer serial #	219

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.6	N/A		
395.5	392.9	1.0066	Correlation Coefficient	0.999993
198.4	197.9	1.0025		
99.2	98.8	1.0040	Slope	1.009801
			Intercept	-1.221765



NOx Calibration



November 04, 2004

Calibration Report

Parameter THC
 Air Monitoring Network Palliser Airshed



Station Information

Calibration Date	November 4, 2004	Previous Calibration	October 21, 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)	9:10	End Time (MST)	12:10
Barometric Pressure	0.921 mb	Station Temperature	20.5 Deg C
Calibrator	Envionics 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	1.019245	Calculated slope	1.016915
Calculated intercept	-0.001021	Calculated intercept	0.053311
Analyzer make	TEI model 51C-LT	Analyzer serial #	407505596

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
THC sample pressure	5.75	PSI	5.73	PSI
THC span counts	11019	raw	10958	raw
THC zero counts	1846	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	0.00	N/A
2994	39.98	20.13	19.79	1.0175
2994	19.98	10.13	9.83	1.0302
2994	9.97	5.07	4.92	1.0305
zero	0.00	0.00	-0.28	As Found Zero
2994	39.98	20.13	19.68	As Found Span
Average Correction Factor				1.0261

Calculated value of As Found Response: 20.350 ppm Percent Change of As Found: -1.1%

	before calibration		after calibration	
Auto zero	-0.01	ppm	0.04	ppm
Auto span	22.49	ppm	22.65	ppm

Notes: Analyzer was zero and 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

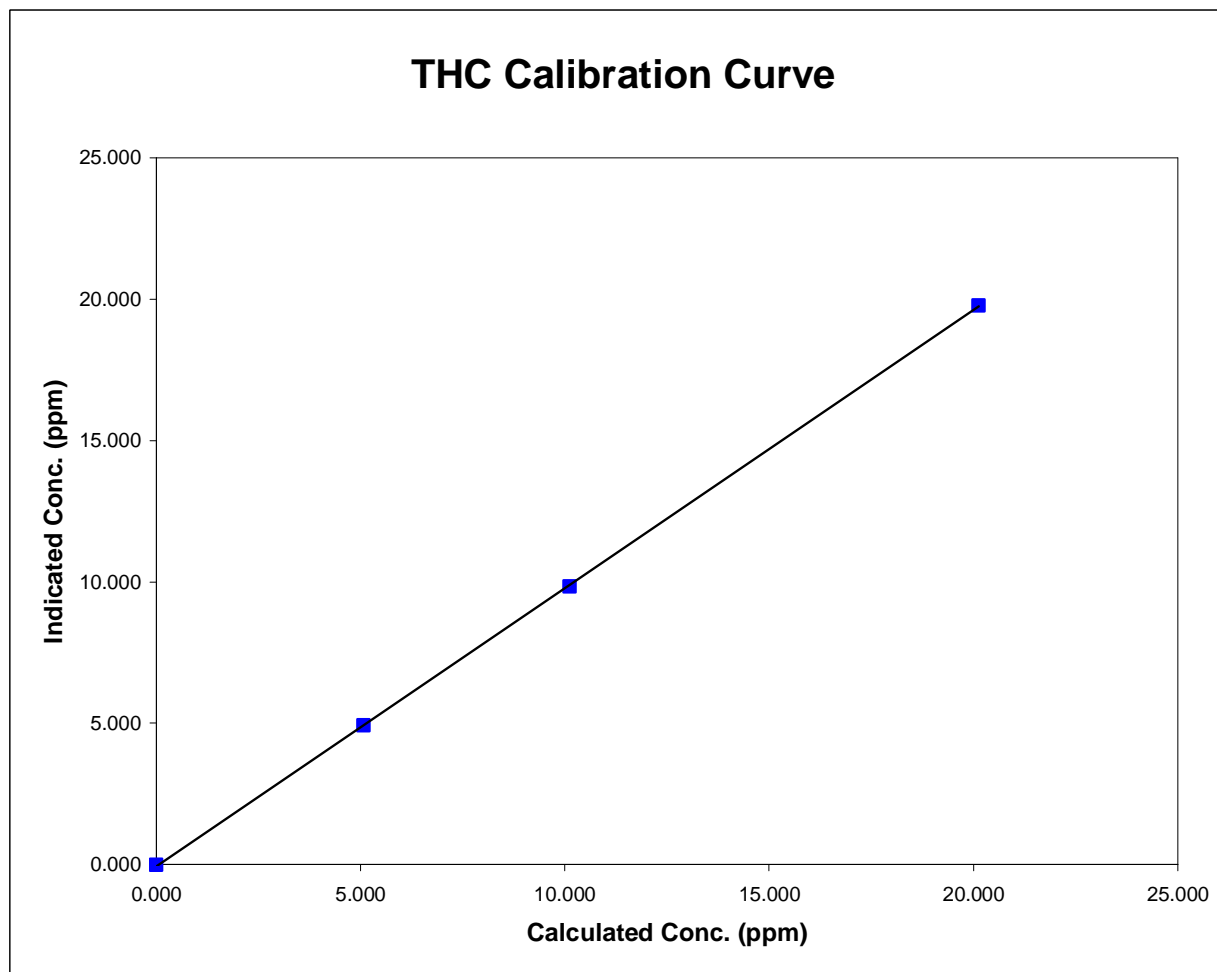


Station Information

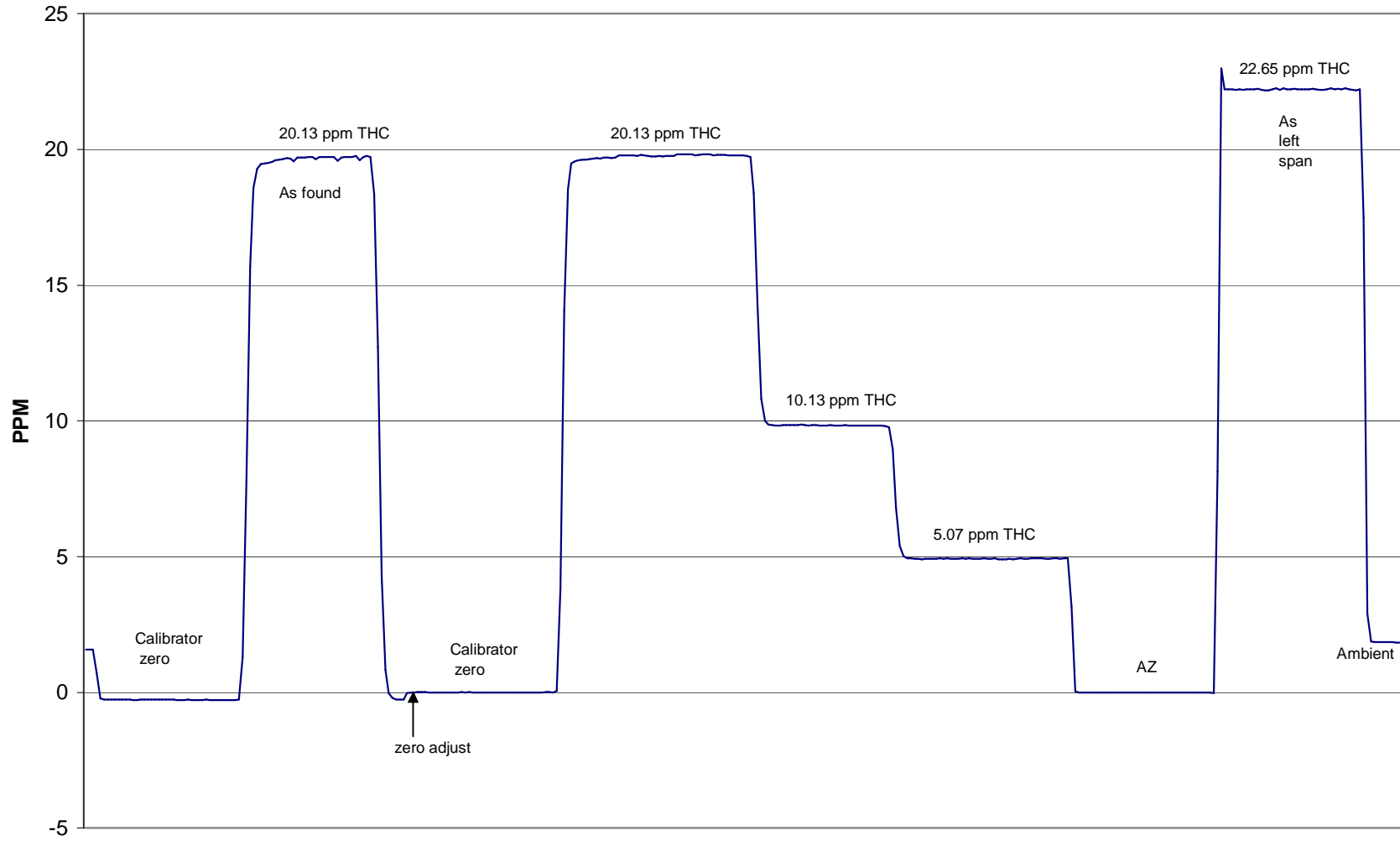
Calibration Date	November 4, 2004	Previous Calibration	October 21, 2004
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	9:10	End Time (MST)	12:10
Analyzer make/model	TEI model 51C-LT	Analyzer serial #	407505596

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.004	N/A		
20.132	19.786	1.0175	Correlation Coefficient	0.999953
10.128	9.831	1.0302		
5.071	4.920	1.0305	Slope	1.016915
			Intercept	0.053311



THC Calibration



November 05, 2004

Calibration Report



Parameter PM2.5
 Air Monitoring Network Palliser Airshed

Station Information

Calibration Date	November 5, 2004	Previous Calibration	October 21, 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)	14:05	End Time (MST)	14:35
Barometric Pressure	0.923 inches Hg	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	34	%	34	%
Ko Factor	12758		12758	
Temperature	18.1	Deg C	18.1	Deg C
Pressure	0.923	ATM	0.923	ATM

Calibration Data

Parameter	Set Point	Indicated Reading (measured externally)	Tolerance	TEOM 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	18.1	+/- 1.0 Deg C	17.6
Pressure	measured	0.921	+/- 1.5% ΔATM	0.923
Total Flow	16.67 SLPM	15.90		16.60
Main Flow	13.67 SLPM	12.80	+/- 1.0 SLPM	13.55
Auxillary Flow	3.0 SLPM	2.890	+/- 0.2 SLPM	3.050
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)	NA
Ko Factor (w/ filter)	measured	NA	% Ko difference	N/A

Notes: Performed flow audit; noted as found flow low. Adjusted flow up.
All other TEOM functions seem fine.

Calibration Performed By: Kelly Baragar