



Palliser Airshed Society

Ambient Air Monitoring Network Summary

March 2005



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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 – March 2005

Enclosed is the PAS Ambient Monitoring Report for the month of **March 2005**.

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

Continuous Monitoring – Crescent Heights

Included in this report are; monthly sampling table, detailed hourly average reports and multipoint calibration reports of all instruments. The measured ambient air quality was within the Provincial and Federal guidelines with no exceedences recorded. Operational time of all instruments was above 97% uptime for the month of March. There were no significant events leading to emergency response for the month of March.

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

- Monthly average concentrations of NO₂ was 8.1 ppb
- Monthly average concentrations for O₃ was 29.0 ppb
- Monthly average concentrations for THC was 2.07 ppm
- Monthly average concentrations for PM_{2.5} was 2.5 µg/m³

Passive Monitoring – Six Stations throughout the PAS zone:

The following are the ranges for March 2005 recorded by the six passive stations located throughout the PAS zone:

- Monthly average concentrations for SO₂ passives ranged from 0.5 ppb to 0.7 ppb
- Monthly average concentrations for NO₂ passives ranged from 5.3 ppb to 9.6 ppb
- Monthly average concentrations for O₃ passives ranged from 19.3 ppb to 27.5 ppb

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



March 2005 Monthly Overall Summary Report

Ambient Air Quality Data

Mar-2005		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	4.0	0	0	98.6	Mar-02	2.3	S	13.5	Mar-04	100.0%
NO ₂ (ppb)	212	106	Crescent Heights	8.1	0	0	41.7	Mar-02	2.3	S	14.0	Mar-01	100.0%
NO _x (ppb)			Crescent Heights	12.0	0	0	139.6	Mar-02	2.3	S	26.1	Mar-01	100.0%
O ₃ (ppb)	82		Crescent Heights	29.0	0	0	49.0	Mar-29	11.2	NW	36.2	Mar-23	100.0%
CO (ppm)	13		Crescent Heights	0.00	0	0	0.00	Mar-29	11.2	NW	0.00	Mar-01	0.0%
THC (ppm)			Crescent Heights	2.07	0	0	3.16	Mar-21	1.4	E	2.30	Mar-21	100.0%
PM _{2.5} (µg/m ³)		30 ^a	Crescent Heights	2.5	0	0	32.0	Mar-06	36.3	NNW	6.3	Mar-06	97.6%
RH (%)			Crescent Heights	62.7									99.3%
SR (W/m ²)			Crescent Heights	144.8									99.3%
Temp (°C)			Crescent Heights	2.2									99.3%
WSPD v (km/hr)			Crescent Heights	4.9									100.0%
WSPD s (km/hr)			Crescent Heights	10.6									100.0%
WDIR (Deg)			Crescent Heights	W*									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

Focus technicians were working on installing the CO analyzer at the station, however difficulties were encountered and parts were required. The installation will continue next month. Alberta Environment also were on site to perform an Audit on the equipment in early March.

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	$\mu\text{g}/\text{m}^3$	Mechanic problems existed in the beginning of March, due to seating issues with the filter. Also, four hours of data was removed due to excessive drift
Wind Speed	Met One	010C	kph	No operational problems observed
Wind Direction	Met One	020C	Deg	No operational problems observed
Ambient Temperature	Met One	083D	DegC	No operational problems observed
Relative Humidity	Met One	083D	%	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

Station: Crescent Heights

HOURLY AVERAGE TABLE

Nitrogen Dioxide (NO₂)

Station Owner: PAS

Monitoring Dates: March 1, 2005 to April 1, 2005

Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	42 ppb 2-Mar 21:00 22:00
Maximum 24-hr Average:	14 ppb 1-Mar

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

AIC Time:	34 hrs	Operational Time:	702 hrs					
Calibration Time:	8 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	30	23	11	6	3	1	0	8.1 ppb

Status Flag Characters

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

Day Mountain Standard Time

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum	
1-Mar-05	38	40	14	3	3	10	12	20	10	6	7	6	7	6	7	7	7	12	16	21	23	A	26	25	14.0	39.6	
2-Mar-05	20	11	7	4	5	4	7	15	16	13	2	2	3	4	3	3	4	12	23	24	A	42	31	27	12.3	41.7	
3-Mar-05	28	18	12	11	6	6	12	12	C	C	C	C	C	C	C	A	A	16	19	A	36	28	26	N	35.9		
4-Mar-05	25	24	20	20	22	23	19	21	19	11	13	3	2	1	2	3	6	10	10	A	10	5	4	2	12.1	25.4	
5-Mar-05	4	5	6	6	6	9	13	12	10	4	2	2	2	2	3	5	7	7	A	14	6	10	4	0	6.0	14.5	
6-Mar-05	3	0	0	3	6	8	18	9	13	11	8	4	5	2	5	3	0	A	7	6	18	19	14	16	7.7	18.9	
7-Mar-05	14	13	4	5	3	8	14	20	14	20	22	8	3	7	7	4	A	5	6	7	24	22	8	5	10.6	24.5	
8-Mar-05	8	13	7	4	7	5	15	12	8	9	5	3	3	1	1	A	5	5	2	13	11	19	16	24	8.5	23.7	
9-Mar-05	22	3	4	4	6	5	12	14	11	10	6	6	14	7	A	11	9	11	6	11	16	16	10	6	9.6	22.5	
10-Mar-05	7	10	10	9	8	11	17	16	13	7	5	6	4	A	4	4	4	11	14	22	25	13	7	5	10.2	25.4	
11-Mar-05	3	2	6	5	5	9	11	19	11	4	3	5	A	5	3	2	1	2	2	2	1	6	6	7	5.3	19.4	
12-Mar-05	2	1	4	11	11	6	8	9	8	5	3	A	6	4	5	5	1	1	2	3	5	8	8	7	5.4	11.3	
13-Mar-05	2	6	9	7	6	8	6	3	3	1	A	3	2	1	1	1	1	1	4	2	4	4	2	4	3.5	9.4	
14-Mar-05	4	5	6	13	20	24	17	19	12	A	6	3	2	2	3	3	4	3	9	9	7	8	12	18	9.1	23.7	
15-Mar-05	22	20	19	25	28	30	19	17	A	20	5	2	1	1	1	1	1	2	2	1	1	1	1	1	9.7	30.4	
16-Mar-05	1	3	1	0	1	3	16	A	24	16	10	6	6	7	6	4	3	4	6	8	10	9	7	6	6.8	24.4	
17-Mar-05	8	9	4	4	9	8	A	8	6	5	3	3	1	2	2	1	1	2	3	4	7	26	21	24	6.9	26.2	
18-Mar-05	26	13	18	16	20	A	20	20	13	8	4	3	1	1	2	3	1	2	18	15	17	18	13	6	11.3	26.4	
19-Mar-05	3	3	5	4	A	8	7	8	9	6	3	3	2	2	2	3	4	4	6	10	21	18	15	9	6.7	20.5	
20-Mar-05	7	3	6	A	12	13	9	7	9	5	14	11	9	10	10	4	3	8	10	11	16	22	31	30	11.4	31.3	
21-Mar-05	26	16	A	27	23	29	28	23	24	16	6	8	7	8	7	3	4	6	8	8	7	8	4	4	13.1	29.2	
22-Mar-05	5	A	6	5	9	7	9	10	7	7	5	5	3	2	2	3	3	4	4	3	2	2	2	2	4.6	10.2	
23-Mar-05	A	3	1	2	2	3	4	8	3	2	0	1	1	0	2	0	0	0	1	1	4	5	6	A	2.2	7.9	
24-Mar-05	7	6	12	15	19	23	20	13	19	14	12	4	1	1	0	1	2	5	4	5	5	13	A	12	9.3	22.8	
25-Mar-05	10	14	18	18	21	12	5	3	1	0	0	0	2	3	2	2	2	4	11	17	10	A	22	9	8.1	22.4	
26-Mar-05	6	6	9	4	6	4	10	5	2	2	2	1	2	2	2	2	3	2	3	3	A	10	4	4	4.1	9.7	
27-Mar-05	4	3	1	4	3	4	4	5	3	2	2	2	2	3	4	3	2	3	4	4	A	6	5	4	5	3.6	6.3
28-Mar-05	5	4	6	4	5	6	9	8	9	3	1	3	3	4	10	8	7	5	A	7	6	9	4	6	5.8	9.7	
29-Mar-05	4	3	2	1	3	2	3	4	8	7	6	6	5	3	2	2	2	A	7	10	7	16	12	21	5.9	21.3	
30-Mar-05	6	3	2	3	2	5	13	9	9	7	7	6	4	3	4	3	A	6	7	16	24	19	10	4	7.6	24.4	
31-Mar-05	4	3	4	9	8	13	15	13	7	3	3	2	2	1	1	A	5	6	5	14	8	4	5	3	6.1	15.4	
Hourly Avg	11.0	8.8	7.5	8.2	9.5	10.2	12.5	12.2	10.4	7.6	5.7	4.1	3.6	3.3	3.4	3.3	3.3	5.2	7.5	10.0	10.8	13.5	11.3	10.6			
Hourly Max	38.0	39.6	19.9	26.5	28.4	30.4	28.3	23.2	24.4	19.9	22.1	10.6	14.1	10.3	9.9	11.1	8.9	12.3	22.7	24.1	25.4	41.7	31.3	30.1			

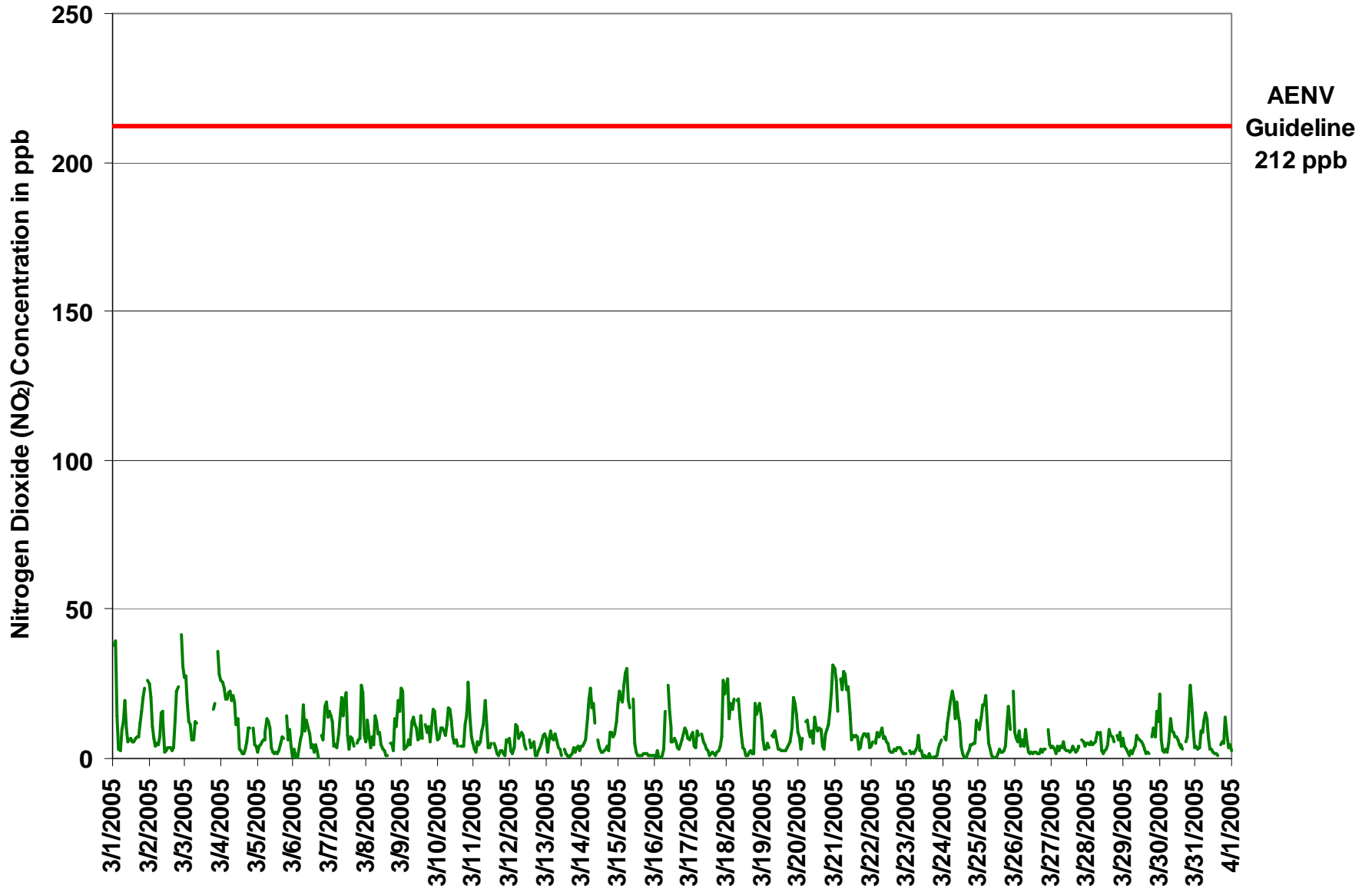


Figure 1. PAS - Crescent Heights Nitrogen Dioxide 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Nitrogen Dioxide (NO₂)

Station Owner: PAS

Monitoring Dates: March 1, 2005 to April 1, 2005
Summary

Maximum 1-hr Value:	77.4	ppb	1-Mar	1:00 2:00
Maximum 24-hr Value:	26.0	ppb	2-Mar	

AIC Time:	34 hrs	Operational Time:	702 hrs					
Calibration Time:	8 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	52	39	24	12	6	2	1	16.4 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																								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-Mar-05	52	77	42	6	7	38	26	28	22	11	9	9	8	6	17	9	9	16	24	28	34	A	31	37	23.7	77.4	
2-Mar-05	34	22	13	6	6	6	11	25	23	38	13	27	29	12	11	5	8	25	44	35	A	76	55	76	26.0	76.0	
3-Mar-05	43	24	30	22	7	8	39	26	C	C	C	C	C	C	C	A	A	27	30	A	44	34	29	N	44.3		
4-Mar-05	35	33	27	28	34	33	25	43	22	29	21	9	8	3	13	8	24	23	38	A	36	7	9	6	22.3	42.8	
5-Mar-05	6	8	7	10	28	26	33	16	25	27	21	15	25	24	16	8	43	33	A	41	26	54	17	1	22.2	53.6	
6-Mar-05	25	1	1	9	18	20	32	14	22	16	12	9	13	8	10	8	1	A	12	17	24	40	18	34	15.9	40.4	
7-Mar-05	35	16	5	24	5	21	21	33	24	34	25	21	6	19	12	9	A	7	17	14	47	32	15	16	19.9	46.7	
8-Mar-05	17	26	24	5	19	9	27	34	14	15	8	5	4	2	3	A	7	9	5	34	14	29	27	34	16.2	34.4	
9-Mar-05	39	6	31	28	19	19	23	26	20	14	10	9	23	31	A	21	17	15	12	39	42	46	16	10	22.5	46.0	
10-Mar-05	10	13	16	15	13	18	38	26	14	12	7	8	6	A	7	6	8	18	19	46	38	51	23	8	18.3	51.4	
11-Mar-05	5	5	17	6	10	38	24	42	29	10	8	8	A	11	7	3	2	7	5	2	3	21	14	15	12.7	42.3	
12-Mar-05	6	2	21	22	18	10	14	18	9	9	6	A	25	12	10	10	2	6	4	4	8	15	12	14	11.2	25.2	
13-Mar-05	4	9	35	11	12	20	9	5	8	3	A	5	7	2	1	2	2	4	8	7	5	13	11	10	8.4	34.6	
14-Mar-05	9	8	9	35	28	30	22	24	14	A	13	6	5	4	6	6	11	11	23	15	11	12	20	23	14.9	34.8	
15-Mar-05	31	33	27	29	42	41	29	24	A	29	8	4	3	2	2	2	2	2	2	2	2	2	2	2	2	14.0	41.5
16-Mar-05	3	4	2	1	3	5	39	A	38	22	21	8	24	8	7	5	4	7	9	13	14	14	8	9	11.6	39.0	
17-Mar-05	9	11	5	5	16	15	A	11	8	7	5	6	2	6	14	4	2	4	5	8	20	32	30	30	11.1	31.5	
18-Mar-05	29	33	33	30	27	A	25	24	20	13	5	5	3	2	5	8	4	3	30	36	36	20	21	10	18.4	36.1	
19-Mar-05	6	5	7	6	A	9	10	10	31	50	4	5	10	4	10	3	5	9	8	15	32	27	27	11	13.2	49.6	
20-Mar-05	14	7	12	A	21	33	18	15	11	8	20	16	21	13	13	6	4	21	14	12	19	33	37	35	17.5	36.7	
21-Mar-05	37	20	A	38	29	35	36	33	34	29	9	10	9	9	18	5	6	17	13	22	11	25	6	26	20.7	38.2	
22-Mar-05	9	A	15	24	11	10	14	25	11	10	8	9	7	3	7	5	6	7	7	4	5	3	3	3	8.9	25.0	
23-Mar-05	A	5	2	3	2	4	6	27	6	6	1	4	2	1	13	1	1	1	1	2	10	10	7	A	5.3	26.5	
24-Mar-05	10	9	14	20	23	29	25	22	25	20	15	7	16	14	6	22	6	9	15	8	20	23	A	26	16.8	29.3	
25-Mar-05	26	36	33	43	40	25	12	5	3	2	6	2	3	17	4	4	4	7	21	26	13	A	39	16	16.7	43.0	
26-Mar-05	10	8	23	8	22	8	36	19	3	2	19	3	3	3	2	8	43	11	13	31	A	41	23	27	16.0	43.0	
27-Mar-05	27	27	2	29	16	36	6	19	10	19	30	24	5	17	12	12	4	6	8	A	7	19	11	9	15.5	35.7	
28-Mar-05	8	11	9	7	9	11	23	19	54	4	2	15	5	8	34	32	11	43	A	34	36	21	6	26	18.7	54.0	
29-Mar-05	11	7	6	2	57	2	12	8	11	9	7	9	6	6	4	4	3	A	14	22	18	24	23	40	13.2	57.1	
30-Mar-05	28	3	3	16	3	8	30	14	12	10	9	12	10	12	15	11	A	9	18	26	34	29	25	5	14.9	33.9	
31-Mar-05	6	6	5	17	19	32	33	20	23	4	4	4	14	2	3	A	11	22	47	43	40	6	19	13	17.0	47.4	
Hourly Avg	19.4	15.9	15.9	16.9	18.8	20.0	23.3	21.9	18.9	15.9	11.2	9.3	10.4	9.0	9.7	8.1	9.0	12.5	16.1	21.2	21.6	26.5	19.6	20.1			
Hourly Max	51.7	77.4	42.2	43.0	57.1	40.9	39.5	42.8	54.0	49.6	29.7	27.4	29.0	30.5	34.2	32.2	43.1	43.2	47.4	45.9	46.7	75.9	54.6	76.0			

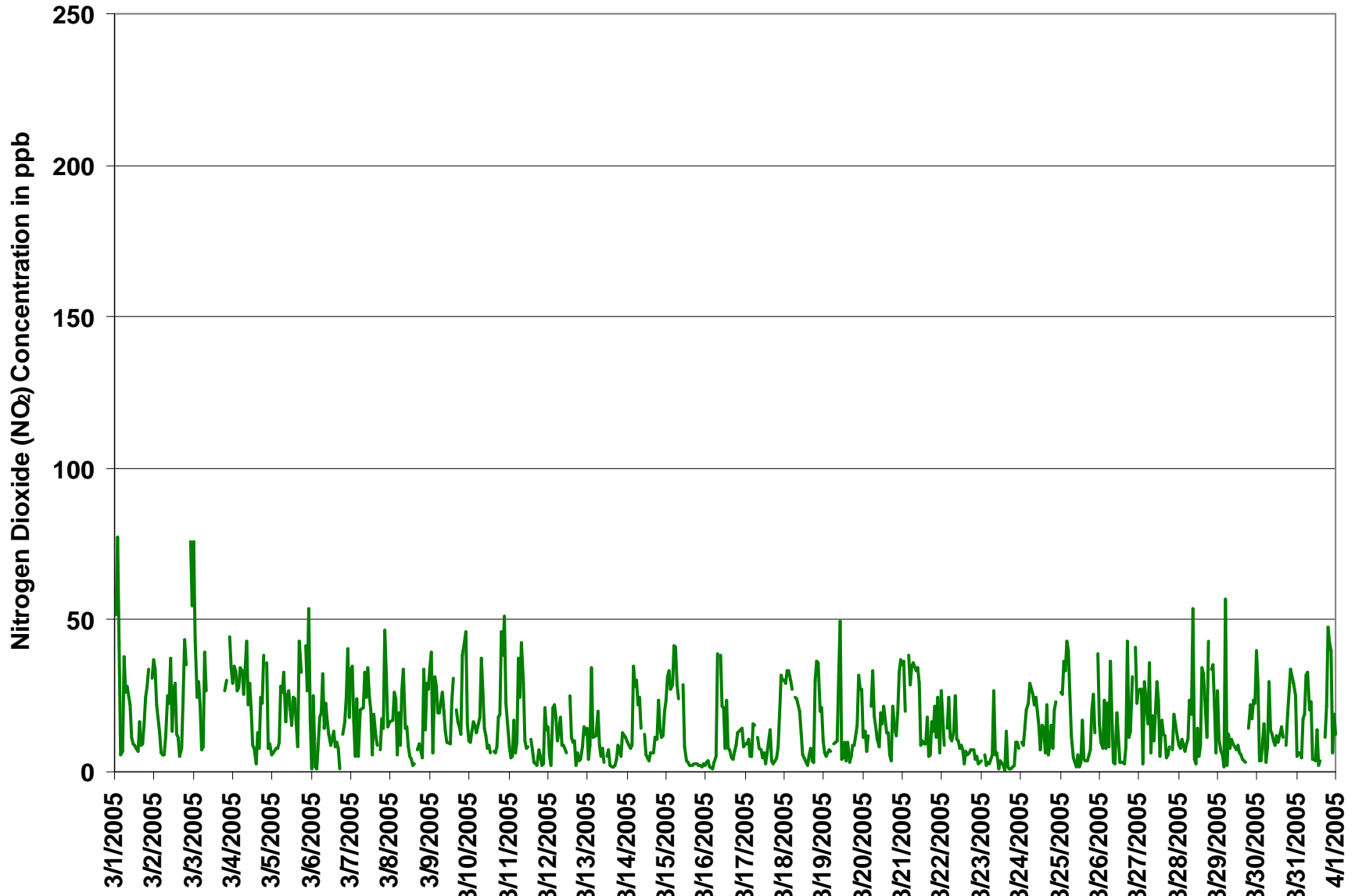
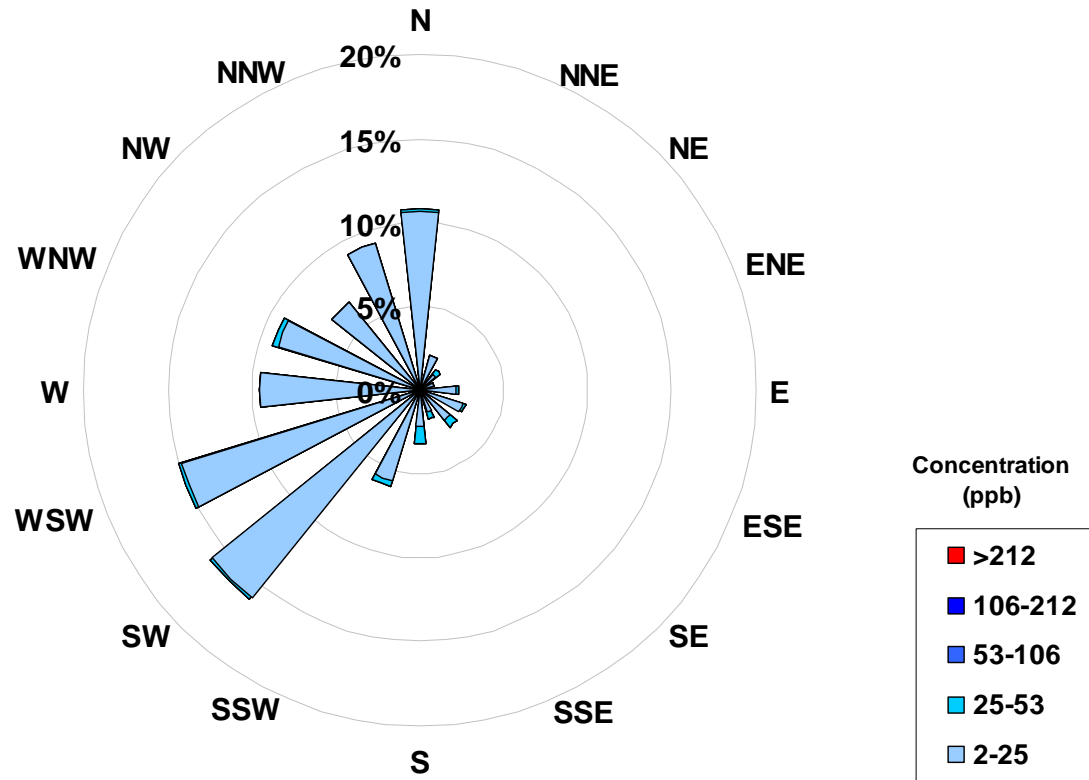


Figure 2. PAS - Crescent Heights Nitrogen Dioxide 1-hr Maximum Value Monthly Trend



Concentration Rose for the 1-hr NO₂ Average Concentration Occurrences at the Crescent Heights Site for March 2005



Frequency Distribution of NO ₂ in ppb			
Range			Frequency (hrs)
0	<	2	98
2	to	25	581
25	to	53	23
53	to	106	0
106	to	212	0
	>	212	0
Total Non-Zero Values			702

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: March 1, 2005 to April 1, 2005

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	99	ppb	2-Mar	21:00 22:00
Maximum 24-hr Average:	13	ppb	4-Mar	

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

AIC Time:	34 hrs	Operational Time:	702 hrs					
Calibration Time:	8 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	40	17	3	2	1	0	0	4.0 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
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-Mar-05	30	76	5	0	0	5	7	17	13	6	6	6	4	3	3	3	2	2	3	6	8	A	22	53	12.2	75.8
2-Mar-05	23	2	1	0	0	0	1	6	15	14	2	3	3	2	2	1	1	2	4	7	A	99	56	29	11.8	98.6
3-Mar-05	34	7	3	1	0	0	5	6	C	C	C	C	C	C	C	C	A	A	2	2	A	51	10	24	N	51.4
4-Mar-05	23	25	16	13	38	40	18	38	49	16	17	2	1	1	2	1	2	2	3	A	4	1	1	0	13.5	48.6
5-Mar-05	0	0	0	1	2	1	3	3	7	3	4	2	2	2	1	2	4	1	A	2	1	5	1	0	2.0	6.7
6-Mar-05	1	0	0	0	1	0	2	1	2	2	2	2	2	2	3	2	1	A	1	1	2	8	2	11	2.0	11.4
7-Mar-05	4	2	0	3	0	3	4	24	14	24	28	4	1	3	3	2	A	1	1	1	17	5	1	1	6.4	28.5
8-Mar-05	0	2	2	1	2	1	7	13	5	6	3	2	2	1	1	A	1	1	0	1	0	4	2	3	2.5	12.7
9-Mar-05	15	0	5	3	1	0	2	4	3	2	2	1	3	4	A	3	2	2	1	1	2	10	1	0	2.9	15.5
10-Mar-05	0	0	1	1	1	0	5	4	6	4	3	4	2	A	1	1	1	2	1	8	6	7	1	0	2.7	8.3
11-Mar-05	0	0	1	0	0	6	2	14	5	2	2	3	A	1	1	1	0	0	1	0	0	0	1	1	1.9	14.2
12-Mar-05	0	0	0	2	1	1	1	2	2	2	2	A	2	2	2	2	1	1	1	1	0	0	1	1	1.0	2.4
13-Mar-05	0	0	4	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0	1	0	1	0.9	4.0
14-Mar-05	1	1	1	7	2	5	3	13	11	A	4	2	1	1	1	1	2	1	2	1	1	1	1	2	2.7	12.8
15-Mar-05	2	3	3	4	25	37	10	15	A	25	2	1	1	1	1	1	1	0	0	0	0	0	0	0	5.8	37.1
16-Mar-05	0	0	0	0	0	0	5	A	32	19	9	4	3	2	3	1	1	1	0	2	2	2	1	2	3.9	31.6
17-Mar-05	3	2	0	1	2	2	A	4	5	4	3	3	2	2	3	2	2	2	1	1	0	2	1	1	2.2	4.6
18-Mar-05	2	3	5	2	1	A	2	7	9	6	4	4	2	2	3	2	1	0	1	1	2	1	1	1	2.7	8.7
19-Mar-05	1	1	2	1	A	1	1	2	7	6	3	3	2	2	1	1	1	1	1	1	2	1	1	0	1.9	7.2
20-Mar-05	0	0	1	A	1	3	1	1	3	2	13	7	6	8	6	2	1	2	0	0	0	1	6	4	3.1	13.0
21-Mar-05	5	1	A	8	9	27	30	35	56	26	7	10	9	8	5	1	2	2	1	1	1	2	0	2	10.7	56.4
22-Mar-05	0	A	1	1	1	1	1	5	3	3	2	3	2	1	2	2	1	2	1	1	1	1	0	0	1.6	5.1
23-Mar-05	A	0	0	0	1	1	2	8	3	4	1	2	2	1	2	1	1	1	1	1	1	1	2	A	1.6	8.1
24-Mar-05	2	2	4	4	3	3	6	11	32	20	14	4	2	1	1	2	1	2	1	1	1	2	A	1	5.2	31.9
25-Mar-05	2	2	4	7	5	2	1	1	1	1	1	1	1	3	1	1	1	1	1	1	0	A	5	0	1.8	6.6
26-Mar-05	1	0	3	0	3	0	7	3	1	1	2	1	1	1	1	1	1	3	2	3	A	6	1	1	1.8	6.8
27-Mar-05	1	2	0	3	1	4	1	3	2	3	2	2	1	2	1	1	1	1	1	A	1	2	2	1	1.7	4.3
28-Mar-05	0	1	1	0	1	1	5	11	13	2	1	2	2	2	6	5	3	3	A	3	2	1	1	3	3.0	13.2
29-Mar-05	1	1	1	0	2	0	2	1	3	2	2	2	2	1	1	1	1	A	1	1	0	1	1	8	1.4	7.5
30-Mar-05	2	0	0	1	0	1	6	5	10	8	5	3	1	1	2	1	A	2	1	2	3	2	1	1	2.6	10.4
31-Mar-05	0	0	1	1	1	4	5	6	4	2	2	1	2	1	1	A	1	2	1	6	3	0	1	0	1.9	6.2
Hourly Avg	5.1	4.5	2.2	2.2	3.5	5.1	4.8	8.7	10.8	7.5	5.1	2.9	2.3	2.1	2.1	1.6	1.2	1.4	1.2	1.9	2.2	7.5	4.1	5.1		
Hourly Max	34.1	75.8	16.3	13.1	37.5	40.1	29.9	37.9	56.4	26.3	28.5	9.8	9.1	8.3	6.4	5.5	3.6	3.3	4.3	8.3	17.1	98.6	55.7	53.3		



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Nitric Oxide (NO)

Station Owner: PAS

Monitoring Dates: March 1, 2005 to April 1, 2005

Summary

Maximum 1-hr Value:	330.5	ppb	2-Mar	23:00 0:00
Maximum 24-hr Value:	52.4	ppb	4-Mar	

AIC Time:	34 hrs	Operational Time:	702 hrs					
Calibration Time:	8 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	168	78	20	5	2	1	1	19.1 ppb

Status Flag Characters

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

Day Mountain Standard Time

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum
1-Mar-05	59	319	57	1	1	113	45	66	63	12	13	8	6	4	9	5	13	3	11	32	52	A	38	108	45.1	318.9
2-Mar-05	88	20	4	2	1	1	4	28	32	54	41	71	36	10	14	2	3	5	33	31	A	246	144	330	52.1	330.5
3-Mar-05	92	20	18	10	1	2	87	44	C	C	C	C	C	C	C	C	A	A	10	7	A	133	29	41	N	132.7
4-Mar-05	44	52	46	37	324	219	35	135	71	60	47	5	6	2	44	4	7	6	20	A	38	1	2	1	52.4	324.4
5-Mar-05	1	1	2	4	47	25	34	9	34	48	73	28	43	44	25	3	47	24	A	12	12	84	5	1	26.4	84.3
6-Mar-05	9	1	1	1	1	1	19	3	5	4	4	4	6	4	5	5	2	A	2	1	2	55	4	134	11.8	134.0
7-Mar-05	48	6	1	71	1	21	23	76	80	87	37	16	2	29	5	5	A	2	9	1	168	15	2	2	30.8	168.4
8-Mar-05	1	13	11	2	12	2	69	89	11	12	6	2	3	2	2	A	2	1	0	10	1	10	19	12	12.7	89.0
9-Mar-05	168	2	108	94	4	3	6	19	7	4	4	2	9	26	A	8	5	4	5	25	18	107	4	1	27.4	167.7
10-Mar-05	1	1	2	2	1	2	54	10	9	12	6	6	4	A	4	2	3	3	2	79	26	151	23	1	17.5	151.0
11-Mar-05	1	2	3	2	1	50	26	191	31	7	4	5	A	3	2	2	1	1	3	1	1	2	2	1	14.9	191.3
12-Mar-05	1	1	5	6	3	1	1	5	3	3	3	A	18	8	4	4	3	4	1	2	1	2	2	4	3.6	18.5
13-Mar-05	1	2	69	2	3	2	1	1	3	1	A	2	4	1	1	1	1	2	2	2	1	3	2	2	4.8	69.5
14-Mar-05	3	3	3	61	4	10	6	22	17	A	8	3	3	2	2	2	4	11	10	2	1	4	6	7	8.5	60.6
15-Mar-05	6	7	8	9	100	219	38	57	A	44	4	2	2	1	2	1	1	1	1	1	1	1	1	1	22.0	218.5
16-Mar-05	1	1	1	0	1	1	20	A	85	30	29	6	28	4	7	2	2	2	2	3	4	5	2	3	10.3	85.4
17-Mar-05	4	4	1	2	4	5	A	11	6	7	5	15	3	9	17	4	3	3	3	2	2	2	2	6	5.2	16.7
18-Mar-05	5	44	24	16	6	A	4	12	12	11	6	6	7	3	7	13	3	1	4	31	26	2	2	2	10.9	44.4
19-Mar-05	2	2	3	3	A	1	2	3	35	55	5	5	12	4	6	2	2	7	2	1	9	5	3	1	7.4	54.9
20-Mar-05	1	1	3	A	16	30	6	3	5	5	22	16	19	10	10	3	2	6	2	1	1	3	16	12	8.3	29.7
21-Mar-05	30	2	A	33	20	53	89	68	130	74	10	12	12	12	10	3	4	19	2	18	2	18	1	45	29.0	130.0
22-Mar-05	1	A	4	20	2	2	3	23	5	4	4	10	12	2	12	9	8	4	5	2	4	1	1	1	5.9	22.8
23-Mar-05	A	1	1	1	2	2	3	29	5	8	2	5	3	2	23	2	2	1	1	1	3	3	3	A	4.7	28.5
24-Mar-05	3	3	6	7	7	5	11	26	50	34	19	7	23	4	9	35	3	3	14	3	18	4	A	3	13.0	50.1
25-Mar-05	21	32	32	30	30	26	6	2	2	2	12	1	2	26	2	2	1	1	4	2	1	A	88	2	14.2	88.1
26-Mar-05	16	1	25	1	44	1	119	79	1	18	41	2	1	1	2	37	22	149	10	62	A	61	27	73	34.6	149.2
27-Mar-05	41	65	1	58	23	97	3	20	8	67	28	43	3	19	14	12	6	2	4	A	2	50	61	3	27.4	97.1
28-Mar-05	1	12	2	1	1	2	65	72	76	6	2	18	3	3	51	51	4	46	A	56	48	12	1	42	25.1	76.3
29-Mar-05	4	10	3	1	45	1	42	3	5	3	2	4	3	3	2	1	1	A	2	6	1	2	1	58	8.8	57.8
30-Mar-05	40	1	1	15	1	1	50	15	16	12	7	8	2	9	15	19	A	2	5	6	6	5	3	2	10.5	50.1
31-Mar-05	1	1	1	5	4	52	23	15	28	3	2	3	52	1	2	A	2	19	35	51	72	1	11	8	17.0	71.7
Hourly Avg	23.1	21.0	14.9	16.6	23.7	31.7	29.8	37.8	28.8	23.6	15.3	10.9	11.4	8.6	10.6	8.6	5.5	11.8	7.0	15.6	18.5	34.1	16.8	30.2		
Hourly Max	167.7	318.9	108.1	93.9	324.4	218.6	119.1	191.3	130.0	86.7	73.3	70.8	52.4	43.8	50.7	51.4	46.9	149.2	34.7	78.7	168.4	245.7	143.5	330.5		



Station: Crescent Heights

HOURLY AVERAGE TABLE

Oxides of Nitrogen (NO_x)

Station Owner: PAS

Monitoring Dates: March 1, 2005 to April 1, 2005

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	140	ppb	2-Mar	21:00 22:00
Maximum 24-hr Average:	26	ppb	1-Mar	

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

AIC Time:	34 hrs							Operational Time:	702 hrs						
Calibration Time:	8 hrs							AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average							
	67	36	15	7	4	2	1	12.0 ppb							

Status Flag Characters

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

Day Mountain Standard Time

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-Mar-05	67	115	19	3	3	15	19	36	23	11	12	12	9	9	10	10	9	14	19	27	31	A	48	78	26.1	114.7	
2-Mar-05	43	13	7	5	5	5	9	22	30	27	4	5	6	5	5	3	5	14	27	31	A	140	86	55	24.0	139.6	
3-Mar-05	61	25	15	12	6	7	18	18	C	C	C	C	C	C	C	A	A	18	20	A	87	38	50	N	86.8		
4-Mar-05	48	48	36	33	60	63	37	59	68	27	30	4	3	2	3	4	7	12	13	A	14	5	5	2	25.4	67.6	
5-Mar-05	4	5	6	7	9	10	16	15	17	7	6	3	4	3	4	6	11	8	A	17	7	14	5	0	8.0	16.7	
6-Mar-05	4	0	0	4	7	8	20	10	14	13	10	5	7	4	7	4	1	A	8	7	19	27	15	27	9.7	27.3	
7-Mar-05	18	14	4	8	4	11	18	44	29	44	51	12	5	11	10	6	A	6	7	7	42	27	9	6	17.0	50.6	
8-Mar-05	9	15	9	4	9	6	21	25	13	15	8	5	4	2	2	A	6	6	2	14	11	23	17	27	10.9	26.7	
9-Mar-05	38	3	8	7	7	5	14	18	14	13	7	7	17	10	A	14	11	12	6	12	18	26	10	6	12.4	37.8	
10-Mar-05	7	11	11	10	8	12	22	20	18	12	8	10	6	A	5	5	5	13	15	30	31	20	9	5	12.7	31.3	
11-Mar-05	3	2	7	5	6	15	13	34	17	5	5	8	A	6	5	2	1	3	3	2	1	6	6	7	7.1	33.5	
12-Mar-05	2	1	4	13	12	7	8	10	9	6	4	A	8	6	7	7	2	2	3	4	5	8	8	7	6.3	12.7	
13-Mar-05	2	6	13	7	7	8	7	4	4	2	A	4	2	2	1	2	1	2	4	3	4	5	3	5	4.2	13.1	
14-Mar-05	5	6	7	20	22	28	20	31	22	A	9	5	3	3	3	4	5	4	10	10	8	9	13	20	11.7	31.3	
15-Mar-05	25	23	21	28	53	67	30	32	A	45	7	3	2	2	2	2	2	2	2	1	1	1	1	1	15.3	67.3	
16-Mar-05	1	3	0	0	1	3	20	A	56	35	20	10	8	9	8	5	4	5	7	10	13	12	8	8	10.6	56.0	
17-Mar-05	11	11	4	5	11	10	A	12	10	9	6	6	3	4	4	4	3	3	4	5	7	28	22	25	9.1	27.7	
18-Mar-05	28	17	23	18	21	A	22	27	22	14	8	7	4	2	5	5	2	2	20	16	19	20	14	7	14.0	27.9	
19-Mar-05	4	4	7	4	A	8	8	10	16	12	7	6	5	4	4	4	5	6	6	11	22	19	16	9	8.5	22.0	
20-Mar-05	8	3	7	A	13	16	11	8	12	8	27	18	15	18	16	5	4	10	10	11	16	23	37	34	14.4	37.1	
21-Mar-05	31	17	A	34	32	56	58	58	81	42	13	18	17	16	12	4	5	8	9	9	8	10	4	6	23.8	80.6	
22-Mar-05	6	A	7	7	10	8	10	15	9	10	8	8	5	3	4	5	4	5	5	4	3	2	2	2	6.1	15.3	
23-Mar-05	A	3	2	2	3	4	5	16	6	6	0	3	2	1	4	1	1	1	1	1	4	6	8	A	3.6	15.9	
24-Mar-05	9	8	15	19	22	25	26	24	51	35	25	8	3	1	1	3	4	6	6	6	6	14	A	13	14.4	50.8	
25-Mar-05	11	16	22	25	26	14	6	4	2	1	1	1	3	6	3	3	3	5	12	18	10	A	28	9	9.9	27.5	
26-Mar-05	7	6	13	4	9	4	16	8	3	2	4	2	3	3	2	3	4	5	4	6	A	16	6	5	5.9	16.3	
27-Mar-05	5	5	2	7	4	9	4	8	5	6	5	4	4	6	4	3	3	5	4	A	7	7	6	6	5.3	8.5	
28-Mar-05	6	5	6	5	5	6	14	19	22	5	3	4	4	5	6	16	13	9	8	A	10	9	10	5	10	8.8	22.1
29-Mar-05	5	4	3	1	4	2	5	5	10	8	8	8	7	4	3	3	2	A	8	11	7	17	13	29	7.3	28.8	
30-Mar-05	9	3	3	4	2	6	19	14	19	15	12	9	5	4	7	4	A	7	9	18	27	21	11	5	10.1	27.2	
31-Mar-05	4	4	4	10	9	17	20	20	11	5	5	3	4	2	2	A	6	7	6	19	12	4	5	3	7.9	20.4	
Hourly Avg	16.0	13.2	9.5	10.4	12.9	15.1	17.2	20.9	21.2	15.1	10.8	6.9	5.9	5.3	5.4	4.8	4.5	6.5	8.6	11.8	13.0	21.0	15.2	15.5			
Hourly Max	67.4	114.7	36.2	34.0	59.6	67.3	58.1	59.1	80.6	44.6	50.6	17.6	17.4	18.0	16.4	14.4	10.7	14.3	26.9	30.7	41.5	139.6	85.9	78.0			



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Oxides of Nitrogen (NO_x)

Station Owner: PAS

Monitoring Dates: March 1, 2005 to April 1, 2005

Summary

Maximum 1-hr Value:	393.4	ppb	1-Mar	1:00 2:00
Maximum 24-hr Value:	74.0	ppb	2-Mar	

AIC Time:	34 hrs	Operational Time:	702 hrs					
Calibration Time:	8 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	202	108	42	18	9	3	2	34.1 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-Mar-05	98	393	95	6	7	149	71	86	83	23	22	17	14	11	26	12	21	18	34	55	83	A	68	140	66.7	393.4	
2-Mar-05	118	40	16	8	6	6	15	51	55	89	54	97	64	22	23	7	10	29	74	59	A	311	174	375	74.0	374.7	
3-Mar-05	132	43	42	31	7	10	126	70	C	C	C	C	C	C	C	A	A	36	37	A	167	56	69	N	167.2		
4-Mar-05	75	82	71	63	334	248	61	171	92	89	66	13	13	4	57	11	31	28	58	A	72	8	11	6	72.4	334.5	
5-Mar-05	7	9	9	14	74	50	62	26	58	74	93	41	65	62	41	11	87	57	A	53	38	130	22	1	47.1	130.1	
6-Mar-05	34	2	2	9	19	20	47	17	27	20	15	12	20	11	14	12	2	A	13	18	26	88	22	167	26.8	166.7	
7-Mar-05	83	21	5	91	6	36	41	108	105	121	59	37	7	48	16	14	A	8	26	15	202	46	16	18	49.1	202.3	
8-Mar-05	18	38	35	6	30	10	91	119	25	26	14	7	7	3	4	A	8	10	5	44	15	39	45	46	28.1	119.4	
9-Mar-05	200	8	123	120	23	23	29	40	26	17	13	11	30	56	A	29	22	18	18	63	60	148	20	10	48.1	199.8	
10-Mar-05	10	14	18	18	14	19	85	34	23	23	13	14	9	A	9	8	10	19	19	125	63	193	42	9	34.3	192.9	
11-Mar-05	4	7	20	8	11	86	51	229	57	17	12	13	A	13	9	4	2	7	7	2	3	23	14	16	26.8	229.2	
12-Mar-05	6	2	26	28	21	11	15	22	12	11	8	A	43	19	14	12	5	10	5	5	8	16	14	17	14.3	43.4	
13-Mar-05	4	10	104	13	14	21	9	5	11	4	A	6	11	3	2	3	2	6	9	7	5	15	12	10	12.5	104.4	
14-Mar-05	10	10	11	94	31	39	27	45	29	A	20	8	7	5	8	7	15	21	27	16	12	16	22	29	22.1	94.3	
15-Mar-05	36	40	34	36	138	239	65	81	A	72	12	5	5	3	4	3	3	2	2	2	2	2	2	2	2	34.3	238.9
16-Mar-05	3	4	2	1	3	5	57	A	117	51	49	14	50	11	13	7	5	8	10	16	17	18	10	12	21.0	116.7	
17-Mar-05	13	14	6	7	19	19	A	22	13	14	9	22	6	15	29	8	5	6	7	9	21	33	31	33	15.6	33.1	
18-Mar-05	33	64	53	39	29	A	29	32	31	24	11	11	9	5	12	20	6	3	35	68	62	21	22	10	27.4	67.7	
19-Mar-05	8	7	9	9	A	9	12	12	56	104	9	9	21	7	15	5	7	16	10	16	38	31	30	12	19.7	104.1	
20-Mar-05	14	7	14	A	36	62	21	18	16	13	41	32	41	22	22	9	5	28	16	12	20	36	53	46	25.3	61.8	
21-Mar-05	66	22	A	71	48	83	120	101	162	103	18	22	21	21	28	8	10	35	15	35	14	41	7	71	48.7	161.5	
22-Mar-05	9	A	18	43	13	11	16	46	15	15	11	14	19	4	14	14	12	11	12	5	8	3	4	4	13.9	46.3	
23-Mar-05	A	6	3	4	4	6	8	48	10	14	2	9	4	2	33	3	2	2	2	3	13	13	10	A	9.1	47.6	
24-Mar-05	13	11	20	27	28	34	34	47	74	54	34	14	39	19	15	53	8	12	25	10	33	26	A	29	28.7	74.5	
25-Mar-05	45	58	64	73	70	52	17	6	5	3	17	2	5	37	6	5	5	8	24	28	13	A	113	18	29.3	113.1	
26-Mar-05	26	8	47	8	61	9	153	97	4	19	57	5	4	4	4	42	50	160	22	94	A	100	50	100	48.8	160.3	
27-Mar-05	68	91	3	88	39	127	9	38	18	81	58	67	8	36	26	24	11	8	12	A	8	69	72	11	42.2	127.4	
28-Mar-05	9	23	10	7	10	13	88	90	130	10	4	32	8	11	84	83	14	90	A	89	82	32	7	69	43.3	129.7	
29-Mar-05	14	14	9	2	85	3	50	10	16	11	9	12	9	8	5	5	4	A	17	29	18	25	24	86	20.2	85.8	
30-Mar-05	64	4	5	31	4	9	77	26	28	22	16	20	11	21	30	30	A	10	24	32	39	32	28	7	24.7	77.4	
31-Mar-05	6	7	5	20	22	75	56	35	50	6	6	6	58	3	4	A	13	40	81	93	92	7	29	17	31.9	93.5	
Hourly Avg	40.8	35.4	29.3	32.5	40.2	49.5	51.4	57.8	46.4	39.0	26.0	19.7	21.0	16.7	19.6	16.0	13.3	24.0	22.2	35.9	38.1	58.3	34.2	47.9			
Hourly Max	199.8	393.4	123.5	119.7	334.5	248.1	152.9	229.2	161.5	121.0	92.8	97.4	64.9	61.9	84.1	82.9	87.2	160.3	81.2	124.9	202.3	311.3	174.3	374.7			

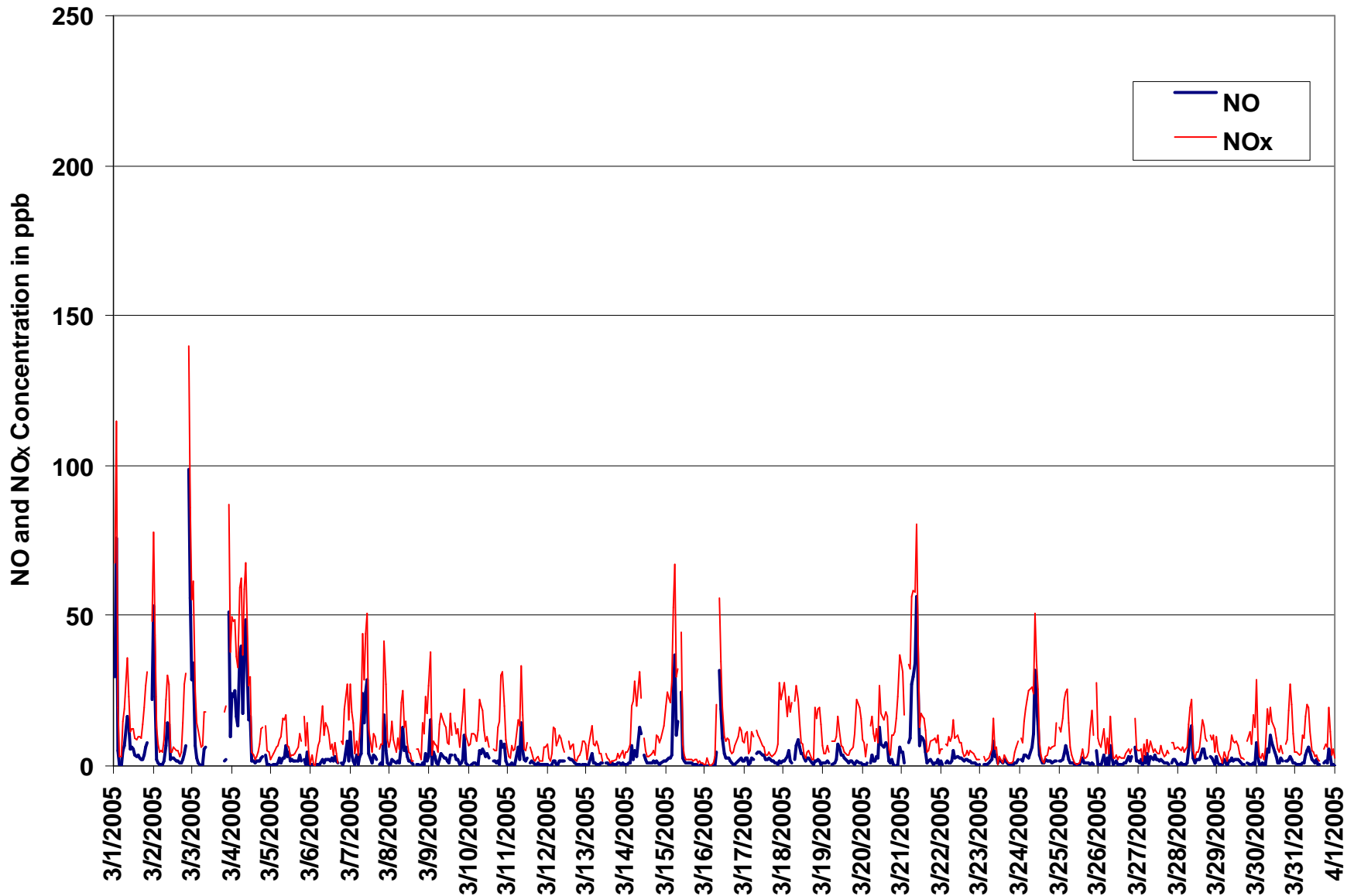


Figure 3. PAS - Crescent Heights Oxides of Nitrogen 1-hr Average Monthly Trends

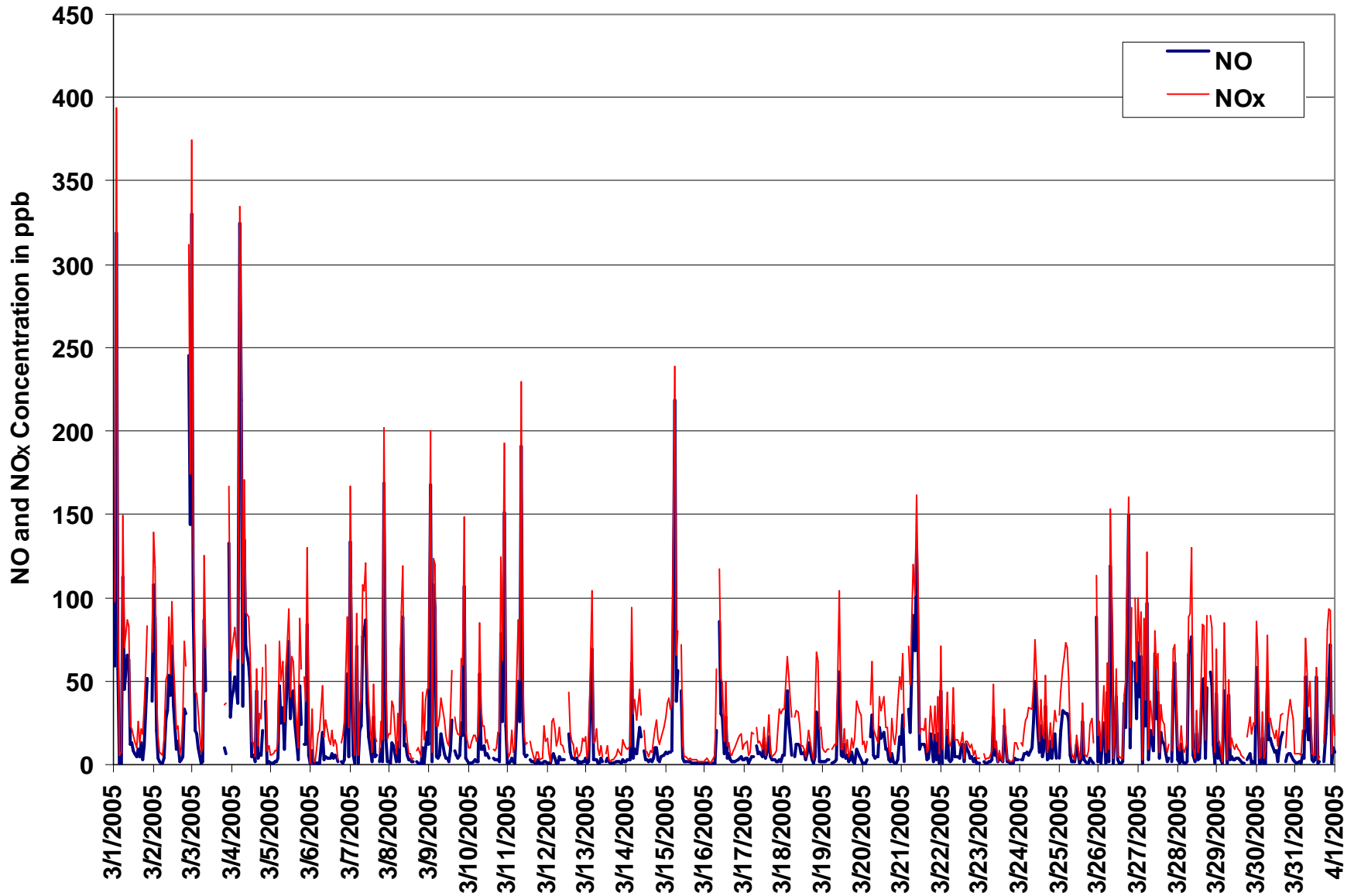


Figure 4. PAS - Crescent Heights Oxides of Nitrogen 1-hr Maximum Value Monthly Trends

**PAS - Crescent Heights Ozone Monthly Summary**

Station: Crescent Heights

HOURLY AVERAGE TABLE**Ozone (O₃)**

Station Owner: PAS

Monitoring Dates: March 1, 2005 to April 1, 2005

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	52	ppb	31-Mar	16:00 17:00
Maximum 24-hr Average:	36	ppb	23-Mar	

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

AIC Time:	32 hrs							Operational Time:	708 hrs	
Calibration Time:	4 hrs							AMD Operational Uptime:	100.0%	
Percentile	99	95	75	50	25	5	1	Average		
	48	45	38	30	22	8	1	29.0 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 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-Mar-05	2	2	17	24	22	17	15	7	13	19	20	23	29	31	33	34	34	28	20	12	9	A	1	1	1	17.9	34.0
2-Mar-05	4	13	20	22	19	19	16	10	12	18	32	33	36	41	41	44	42	30	21	17	A	2	1	2	21.5	43.8	
3-Mar-05	2	8	14	12	15	15	10	9	13	17	18	C	C	25	36	39	40	34	C	C	A	1	2	1	16.4	40.0	
4-Mar-05	1	1	3	3	3	1	1	3	5	13	18	41	43	45	47	46	43	37	35	A	31	32	30	37	22.6	46.7	
5-Mar-05	28	25	25	23	22	20	17	16	20	30	32	37	43	45	46	44	40	37	A	30	35	33	41	43	31.8	45.6	
6-Mar-05	43	46	47	43	34	33	21	30	26	27	33	40	39	40	37	40	43	A	38	35	22	20	17	13	33.3	46.9	
7-Mar-05	13	13	22	22	24	17	10	5	12	10	11	36	41	34	34	40	A	36	32	28	10	10	24	28	22.2	40.5	
8-Mar-05	25	19	20	21	21	22	14	14	23	25	34	37	40	46	48	A	47	42	42	26	23	13	19	12	27.5	47.8	
9-Mar-05	12	28	25	22	25	35	25	22	23	23	28	30	23	36	A	32	31	31	43	35	26	22	32	37	28.1	43.2	
10-Mar-05	35	30	28	29	29	23	14	19	23	30	35	35	41	A	48	48	48	39	33	21	11	21	26	29	30.1	48.5	
11-Mar-05	31	27	22	27	27	26	22	14	24	38	39	40	A	47	47	45	45	42	43	40	45	37	31	27	34.2	46.9	
12-Mar-05	33	34	31	21	20	23	23	23	24	29	34	A	40	39	38	38	44	43	40	37	33	30	28	26	31.8	43.5	
13-Mar-05	32	27	20	18	23	27	29	31	32	40	A	43	43	44	44	44	43	42	38	40	35	35	33	30	34.5	43.7	
14-Mar-05	27	23	20	18	10	4	12	10	16	A	34	40	45	46	45	45	42	43	35	33	32	28	24	17	28.2	46.1	
15-Mar-05	12	15	13	7	1	1	5	7	A	15	33	41	44	45	45	44	42	41	38	38	38	36	34	35	27.4	45.4	
16-Mar-05	37	31	41	42	39	35	22	A	16	19	28	31	30	28	28	29	29	31	28	19	13	14	15	15	27.0	42.2	
17-Mar-05	14	13	21	22	16	19	A	22	25	27	31	33	36	38	39	40	41	41	40	37	34	16	20	18	28.0	41.1	
18-Mar-05	14	25	20	24	17	A	20	21	28	33	39	40	42	44	42	43	45	44	26	29	25	22	27	35	30.8	45.0	
19-Mar-05	38	38	35	37	A	34	31	29	30	36	38	40	43	44	46	45	44	42	38	31	21	22	25	31	35.5	45.7	
20-Mar-05	33	32	26	A	27	27	31	35	34	37	30	35	38	38	38	40	40	34	32	31	27	17	8	6	30.1	39.8	
21-Mar-05	8	14	A	8	5	1	3	7	10	18	25	24	25	28	36	39	38	34	31	33	32	32	37	34	22.8	39.2	
22-Mar-05	23	A	30	28	26	26	26	24	28	28	31	33	37	40	39	39	39	40	39	38	39	40	38	38	33.5	40.0	
23-Mar-05	A	39	39	37	37	35	34	31	33	35	38	36	36	37	37	37	39	40	40	39	35	33	30	A	36.2	40.2	
24-Mar-05	30	29	23	19	15	11	13	19	15	22	28	38	40	41	41	39	38	35	34	32	32	23	A	27	28.0	40.9	
25-Mar-05	29	25	20	19	19	28	34	36	39	41	41	41	41	40	42	42	42	39	35	28	34	A	16	22	32.8	42.3	
26-Mar-05	23	24	19	24	23	26	24	28	34	37	38	40	39	40	41	41	41	41	39	37	A	29	29	28	32.3	41.1	
27-Mar-05	28	27	30	28	27	25	24	24	26	28	30	33	34	33	33	32	31	28	26	A	21	20	22	19	27.3	33.9	
28-Mar-05	19	20	17	19	17	15	10	11	13	21	27	30	32	31	29	31	38	45	A	38	33	28	30	27	25.3	45.3	
29-Mar-05	28	27	29	34	35	34	34	31	25	28	33	37	44	49	49	49	49	A	45	39	40	28	27	13	35.1	49.0	
30-Mar-05	25	26	25	26	28	22	15	17	14	17	27	33	43	48	48	48	A	45	40	29	19	19	25	31	29.2	47.7	
31-Mar-05	27	30	32	28	26	20	18	21	27	31	36	43	48	50	52	A	52	48	43	31	33	37	32	31	34.5	52.2	
Hourly Avg	22.5	23.7	24.5	23.5	21.7	21.3	19.0	19.2	22.1	26.5	30.8	35.9	38.3	39.8	40.9	40.6	41.0	38.4	35.5	31.6	28.1	24.2	24.2	23.7			
Hourly Max	42.8	45.5	46.9	42.8	39.1	35.2	34.4	35.8	38.6	41.4	41.3	43.0	47.5	50.4	51.9	49.0	52.2	47.6	45.4	39.6	44.6	40.0	40.8	42.9			

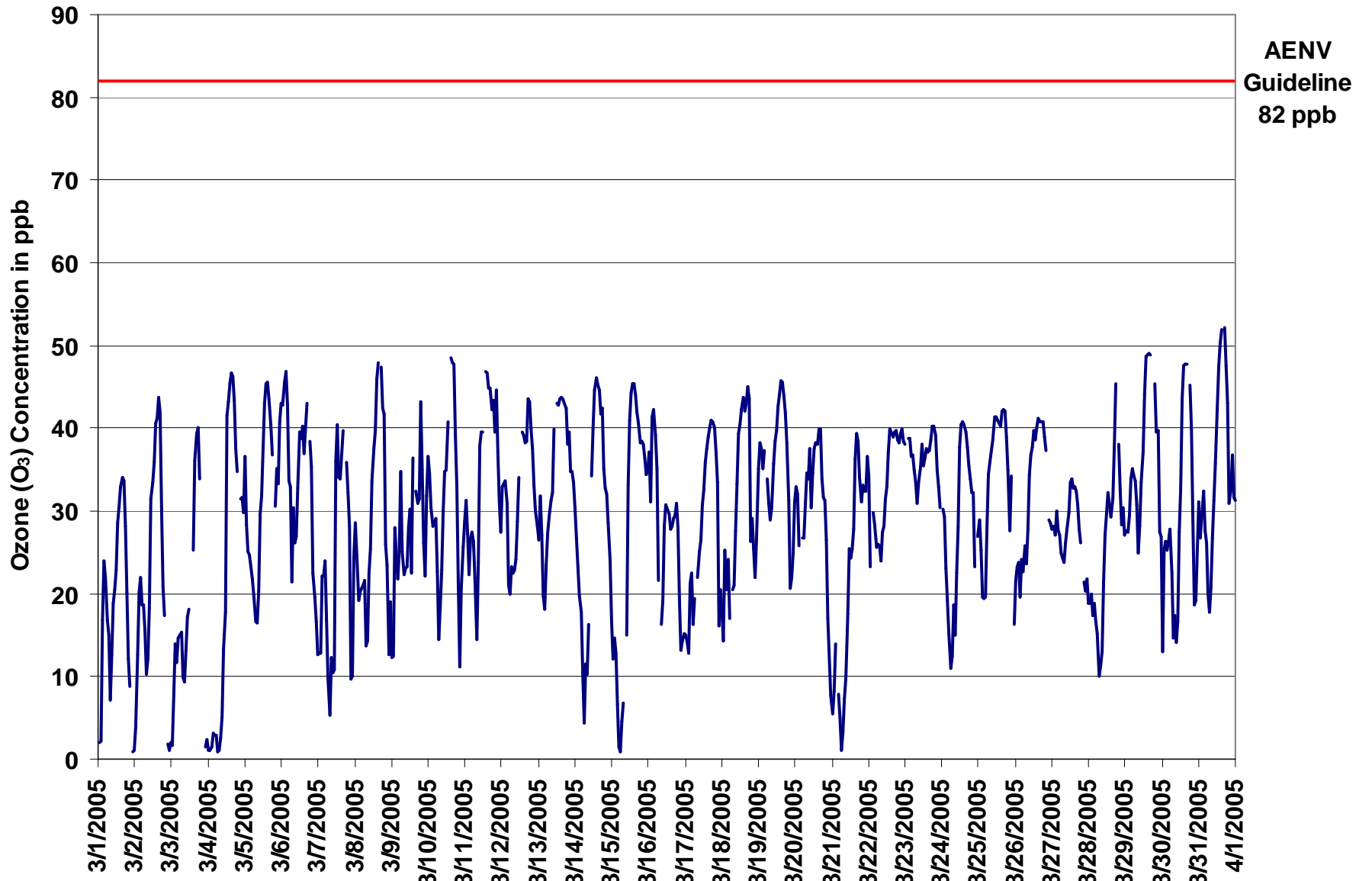


Figure 5. PAS - Crescent Heights Ozone 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Ozone (O₃)

Station Owner: PAS

Monitoring Dates: March 1, 2005 to April 1, 2005

Summary

Maximum 1-hr Value:	54.0	ppb	31-Mar	16:00 17:00
Maximum 24-hr Value:	39.7	ppb	29-Mar	

AIC Time:	32 hrs	Operational Time:	708 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	51	48	41	35	26	14	3	33.2 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-Mar-05	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-Mar-05		6	14	25	26	24	22	20	14	18	24	24	26	33	34	35	37	36	35	25	19	19	A	2	2	22.5	36.5
2-Mar-05		10	19	23	24	21	21	18	14	18	31	34	36	41	43	44	46	46	39	27	24	A	4	2	4	25.6	45.9
3-Mar-05		3	19	18	15	17	17	15	12	16	19	21	C	C	34	39	42	44	37	C	C	A	3	6	3	20.1	43.5
4-Mar-05		3	3	8	7	8	2	2	6	9	18	40	43	45	48	50	50	50	44	42	A	36	33	33	40	26.9	50.4
5-Mar-05		36	27	27	25	26	22	20	20	27	32	35	44	47	48	49	47	47	43	A	41	40	40	44	44	36.1	49.1
6-Mar-05		46	47	48	48	40	38	35	36	33	31	41	44	45	45	43	43	44	A	43	41	27	29	25	19	38.8	48.4
7-Mar-05		16	22	24	25	26	22	13	11	17	17	17	44	45	39	39	43	A	40	36	33	25	21	30	31	27.6	45.0
8-Mar-05		29	26	26	23	25	24	22	22	28	32	37	41	44	49	49	A	51	46	44	41	26	22	31	18	32.8	50.7
9-Mar-05		29	30	28	24	37	39	35	31	27	37	34	33	40	44	A	35	35	43	47	42	34	28	36	39	34.6	47.3
10-Mar-05		37	34	33	32	32	27	22	25	27	36	38	40	45	A	51	51	51	49	40	38	22	28	30	31	35.6	51.4
11-Mar-05		33	31	26	28	34	35	28	20	31	41	44	45	A	50	50	47	49	46	45	42	48	46	37	33	38.6	49.6
12-Mar-05		34	35	35	30	29	26	26	28	26	32	40	A	43	44	43	45	45	45	43	39	37	35	32	31	35.9	45.4
13-Mar-05		35	31	26	20	26	31	32	32	36	42	A	45	44	45	45	45	45	45	42	42	39	42	37	33	37.4	45.3
14-Mar-05		32	25	23	27	18	14	17	21	21	A	42	45	47	48	48	48	47	46	44	38	38	31	29	20	33.4	48.2
15-Mar-05		16	24	20	11	5	2	8	10	A	32	39	45	47	47	47	46	44	42	40	40	40	38	36	37	31.1	47.4
16-Mar-05		41	36	44	44	41	38	35	A	27	22	34	34	33	30	30	31	31	36	34	28	17	20	18	19	31.3	43.8
17-Mar-05		17	17	24	24	22	25	A	26	28	29	34	35	38	40	41	42	43	43	42	41	39	21	26	23	31.3	42.9
18-Mar-05		22	31	31	32	30	A	25	26	33	40	41	43	44	45	45	45	47	45	39	34	32	26	36	41	36.2	46.7
19-Mar-05		41	40	38	40	A	37	33	31	34	40	40	41	45	46	47	47	46	45	40	38	28	26	31	35	38.7	47.1
20-Mar-05		35	34	30	A	29	33	36	38	37	41	37	38	42	41	41	41	41	41	36	33	32	29	22	17	34.9	42.4
21-Mar-05		15	18	A	16	14	3	5	12	14	23	29	27	29	31	39	41	41	38	36	36	36	37	40	41	27.0	41.0
22-Mar-05		28	A	32	31	30	28	29	29	30	32	34	36	40	42	42	41	41	42	40	40	41	41	41	42	36.1	42.1
23-Mar-05		A	41	40	39	39	37	36	34	36	39	39	37	38	39	40	38	40	41	41	40	38	36	33	A	38.2	41.3
24-Mar-05		33	31	28	22	18	20	20	22	19	27	34	42	42	42	42	41	39	38	36	35	34	A	34	34	32.3	42.4
25-Mar-05		35	35	24	32	31	38	38	38	41	43	42	43	43	43	44	45	45	41	40	37	37	A	21	25	37.5	45.0
26-Mar-05		27	26	24	29	26	31	29	32	37	39	39	41	41	42	42	43	43	43	42	41	A	34	31	31	35.3	43.4
27-Mar-05		32	31	31	31	30	27	27	27	28	30	33	37	36	37	36	34	33	32	28	A	24	23	23	23	30.1	36.9
28-Mar-05		21	22	21	22	20	21	14	18	17	24	29	35	35	35	36	39	50	50	A	41	38	33	32	32	29.8	49.9
29-Mar-05		31	30	33	36	37	35	35	34	28	31	38	42	49	51	51	51	51	A	50	51	47	45	33	26	39.7	51.5
30-Mar-05		30	28	27	30	30	26	20	22	17	21	38	38	48	52	51	50	A	49	43	37	30	27	32	33	33.9	51.9
31-Mar-05		31	34	34	35	34	28	24	26	30	34	39	48	51	52	54	A	54	53	48	40	37	40	37	33	38.9	54.0
Hourly Avg		26.7	28.0	28.4	27.6	26.6	25.6	24.1	23.9	26.3	31.1	35.6	39.4	42.0	42.8	43.8	43.3	44.1	42.6	39.8	37.6	33.7	30.2	28.8	28.0		
Hourly Max		45.7	47.4	47.9	48.4	41.3	38.7	37.8	38.1	41.1	42.9	44.1	47.8	50.5	52.5	53.6	51.3	54.0	52.9	49.5	51.5	48.4	46.3	43.7	44.1		

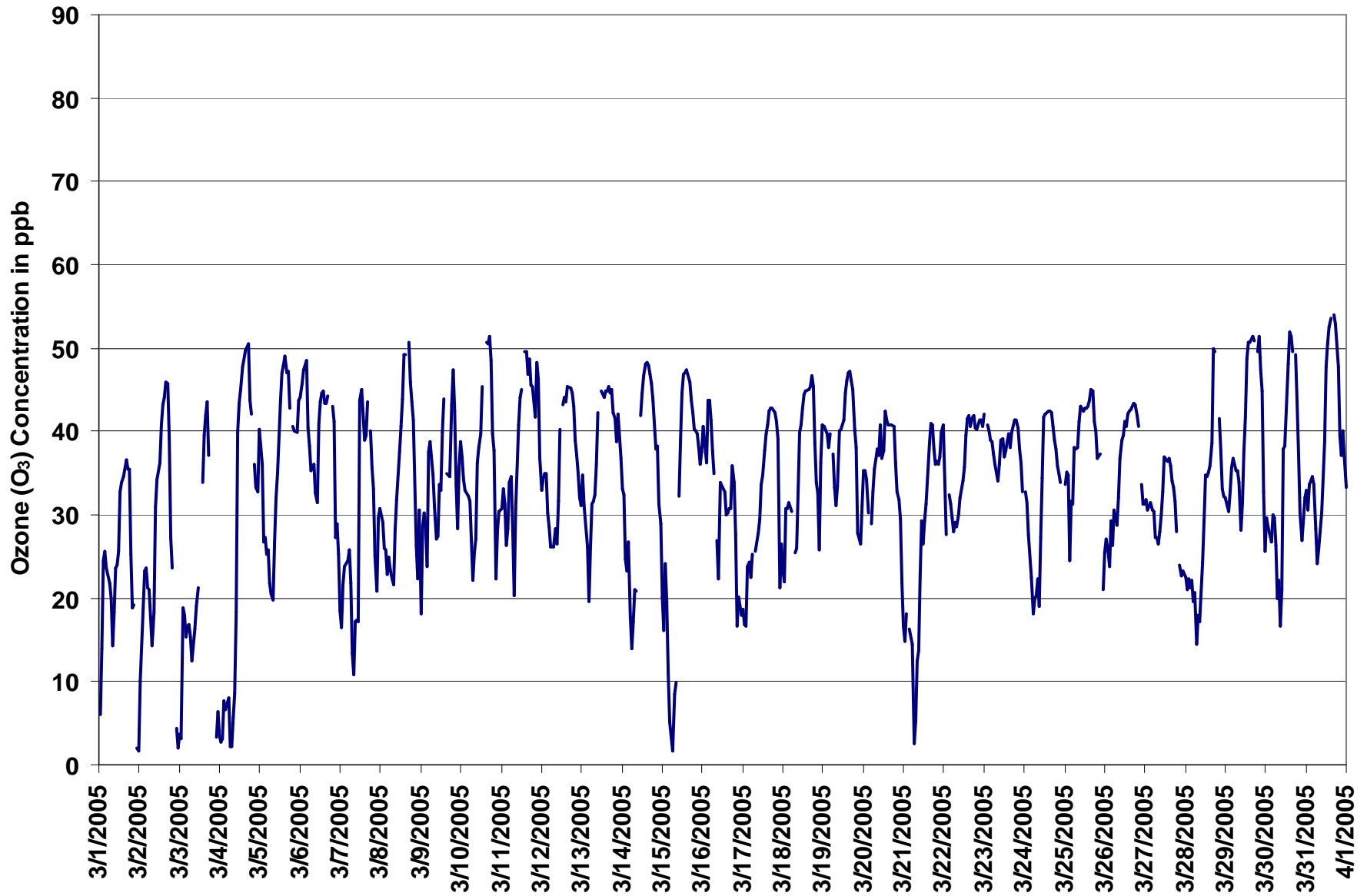


Figure 6. PAS - Crescent Heights Ozone 1-hr Maximum Value Monthly Trend



Station: Crescent Heights

EIGHT HOUR RUNNING AVERAGE TABLE

Ozone (O₃)

Station Owner: PAS

Monitoring Dates: March 1, 2005 to April 1, 2005

Summary

Number of 8-hr Exceedances:	0						
Maximum 8-hr Average:	47.9	ppb	31-Mar	18:00	19:00		

Guideline Limit: Canada Wide Standard 8-hr 65 ppb

Percentile	99	95	75	50	25	5	1
	44.2	42.0	36.2	30.1	23.7	11.8	4.4

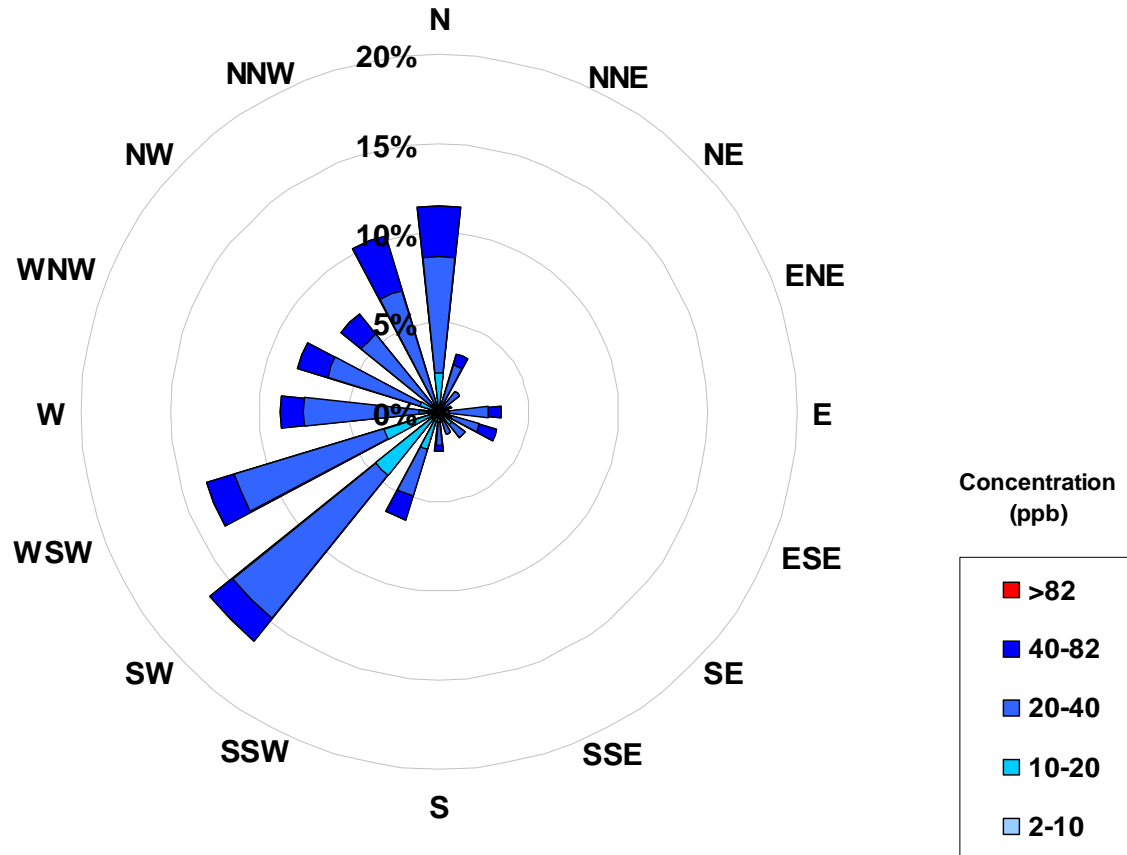
Status Flag Characters

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

Day	Mountain Standard Time																							24-hour Average	Daily Maximum	
	Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00			22:00 23:00
1-Mar-05	2	19	18	18	18	17	15	13	15	17	17	17	18	19	22	25	28	29	29	28	25	24	20	15	19.5	28.9
2-Mar-05	11	8	8	10	11	12	14	15	16	17	18	20	22	25	28	32	36	37	36	34	34	28	22	16	21.4	37.3
3-Mar-05	11	7	6	6	7	8	10	11	12	13	14	14	N	N	N	N	N	N	N	N	N	N	N	N	N	14.0
4-Mar-05	N	N	N	2	2	2	2	2	2	4	6	11	16	21	27	32	37	40	42	42	41	39	36	35	21.0	42.4
5-Mar-05	33	31	30	29	28	26	25	22	21	22	22	24	27	30	34	37	40	40	42	41	40	38	37	37	31.4	41.7
6-Mar-05	37	39	40	41	41	41	39	37	35	33	31	30	31	32	34	35	37	39	40	39	37	34	31	27	35.8	41.3
7-Mar-05	23	21	19	18	18	17	17	16	16	15	14	16	18	20	23	27	29	33	36	35	30	27	26	24	22.4	36.0
8-Mar-05	24	22	21	20	21	23	21	19	19	20	22	24	26	29	33	36	40	42	43	42	39	34	30	28	28.3	43.2
9-Mar-05	24	22	20	19	19	22	23	24	26	25	25	26	26	26	27	28	29	30	32	33	34	32	32	32	26.5	33.6
10-Mar-05	33	32	31	30	30	30	28	26	24	24	25	26	27	28	33	37	41	42	42	40	35	34	31	28	31.5	42.0
11-Mar-05	26	25	24	24	26	27	26	25	24	25	27	29	29	32	36	40	43	44	44	44	44	43	41	39	32.7	44.1
12-Mar-05	37	36	35	32	29	28	26	26	25	24	25	25	28	30	32	35	37	39	40	40	39	38	37	35	32.5	40.3
13-Mar-05	34	32	29	27	26	25	25	26	26	28	29	32	35	37	39	41	43	43	43	42	41	40	39	37	34.1	43.2
14-Mar-05	35	33	30	28	24	21	18	15	14	13	15	18	23	29	34	39	42	42	42	42	40	38	35	32	29.2	42.5
15-Mar-05	28	24	22	18	15	11	9	7	7	7	10	15	21	27	33	38	39	42	43	42	42	40	39	38	25.7	42.6
16-Mar-05	37	36	36	37	37	37	35	35	32	31	29	27	26	25	26	26	28	29	29	28	26	24	22	21	30.0	37.2
17-Mar-05	19	16	16	16	16	17	17	18	20	22	23	25	27	30	31	33	35	37	38	39	39	36	34	31	26.5	38.9
18-Mar-05	28	26	23	22	19	20	20	20	22	23	26	28	32	33	36	39	41	42	41	39	37	35	33	32	29.9	42.4
19-Mar-05	31	30	31	32	33	35	35	35	33	33	34	34	35	36	38	40	42	43	43	42	39	36	34	32	35.6	42.7
20-Mar-05	30	29	28	27	28	29	29	30	30	31	32	32	33	35	36	36	37	37	37	36	35	32	28	24	31.7	37.0
21-Mar-05	20	18	16	12	9	7	6	7	7	7	10	12	14	18	22	26	29	31	32	33	34	35	35	34	19.8	34.7
22-Mar-05	32	32	32	31	30	29	28	26	27	27	27	28	29	31	33	34	36	37	38	39	39	39	39	39	32.6	39.2
23-Mar-05	39	39	39	39	38	37	37	36	35	35	35	35	35	35	36	36	37	38	38	38	38	38	37	37	36.9	38.9
24-Mar-05	35	34	31	29	26	23	20	20	18	17	18	20	23	27	30	33	36	38	38	38	37	34	33	32	28.7	38.2
25-Mar-05	30	29	27	25	23	24	25	26	28	30	32	35	38	39	40	41	41	41	40	39	38	37	34	31	33.1	41.4
26-Mar-05	28	26	24	23	22	22	23	24	25	27	29	31	33	35	37	39	39	40	40	40	40	38	37	35	31.5	40.1
27-Mar-05	33	31	30	28	28	28	27	27	26	26	26	27	28	29	30	31	32	32	31	31	29	27	26	24	28.7	32.9
28-Mar-05	22	21	20	20	19	18	17	16	15	16	17	18	20	22	24	27	30	33	34	35	35	35	34	34	24.3	35.0
29-Mar-05	33	30	30	30	30	31	31	32	31	31	32	32	33	35	37	39	42	44	46	46	46	43	40	34	35.7	46.3
30-Mar-05	31	30	28	26	25	24	23	23	22	21	21	22	24	27	31	35	38	42	43	43	39	35	32	30	29.7	43.5
31-Mar-05	29	27	27	26	27	27	26	25	25	25	26	28	30	34	38	41	45	47	48	46	44	42	39	38	33.9	47.9
Hourly Avg	27.8	26.9	25.6	24.0	23.5	23.2	22.5	22.1	21.9	22.2	23.1	24.5	26.9	29.2	32.0	34.7	37.0	38.5	39.0	38.5	37.2	35.2	33.1	31.0		
Hourly Max	38.9	38.8	39.7	41.3	41.1	41.0	38.6	37.0	35.4	35.0	34.9	35.0	37.6	39.2	40.1	41.3	44.5	46.8	47.9	46.3	45.7	42.9	41.0	39.0		



Concentration Rose for the 1-hr O₃ Average Concentration Occurrences at the Crescent Heights Site for March 2005



Frequency Distribution of O ₃ in ppb			
Range	Frequency (hrs)		
0 < 2	15		
2 to 10	29		
10 to 20	108		
20 to 40	435		
40 to 82	121		
> 82	0		
Total Non-Zero Values	708		

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: March 1, 2005 to April 1, 2005

Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	3.2 ppm 20-Mar 23:00 0:00
Maximum 24-hr Average:	2.3 ppm 21-Mar

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

AIC Time:	35 hrs	Operational Time:	705 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	2.7	2.4	2.1	2.0	2.0	1.9	1.8	2.07 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-Mar-05	2.1	2.2	1.9	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.2	2.3	A	2.2	2.5	1.96	2.46	
2-Mar-05	2.2	1.9	1.8	1.8	1.9	1.9	1.8	1.9	1.9	1.8	1.7	1.7	1.6	1.6	1.7	C	C	1.7	1.8	2.0	A	2.4	2.3	2.5	1.90	2.47	
3-Mar-05	2.2	2.2	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.3	2.2	2.1	2.1	2.0	2.0	C	C	A	A	A	2.7	2.3	2.3	2.17	2.66	
4-Mar-05	2.4	2.7	2.4	2.3	2.4	2.4	2.4	2.4	2.5	2.2	2.2	2.0	2.0	2.0	1.9	1.9	1.9	1.9	2.0	A	2.0	2.0	2.0	2.0	2.17	2.72	
5-Mar-05	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	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.8	1.8	1.97	2.09	
6-Mar-05	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.1	2.3	2.3	2.3	1.97	2.35	
7-Mar-05	2.3	2.3	2.1	2.1	2.1	2.1	2.2	2.3	2.2	2.2	2.2	2.0	2.0	1.9	1.9	1.9	A	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.09	2.31	
8-Mar-05	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	1.9	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.07	2.15	
9-Mar-05	2.2	2.0	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	2.0	2.0	2.1	1.9	A	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.0	2.0	1.99	2.20	
10-Mar-05	2.1	2.2	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.3	2.1	2.1	2.0	A	1.9	A	1.9	2.0	2.0	2.0	2.1	2.3	2.2	2.2	2.1	2.12	2.30
11-Mar-05	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	1.9	1.9	1.9	A	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.96	2.10	
12-Mar-05	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	A	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.03	2.12	
13-Mar-05	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.01	2.07	
14-Mar-05	2.1	2.1	2.2	2.1	2.2	2.3	2.2	2.2	2.2	2.2	A	2.0	2.0	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.7	2.11	2.65	
15-Mar-05	2.2	2.2	2.3	2.4	2.5	2.5	2.3	2.2	2.3	A	2.1	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.13	2.55	
16-Mar-05	2.0	2.1	2.0	1.9	2.1	2.1	2.1	2.2	A	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.05	2.29	
17-Mar-05	2.0	2.1	2.1	2.1	2.0	2.0	2.0	2.1	A	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.07	2.23	
18-Mar-05	2.3	2.2	2.3	2.2	2.3	2.3	A	2.3	2.5	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.4	2.2	2.23	2.46	
19-Mar-05	2.2	2.1	2.1	2.1	2.2	A	2.3	2.4	2.4	2.3	2.5	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.3	2.2	2.2	2.3	2.3	2.2	2.24	2.47	
20-Mar-05	2.2	2.1	2.0	2.1	A	2.2	2.2	2.1	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.4	2.4	2.5	3.2	2.22	3.16	
21-Mar-05	2.6	2.6	2.4	A	2.7	2.8	2.7	2.6	2.6	2.6	2.3	2.3	2.4	2.4	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.30	2.85	
22-Mar-05	2.1	2.1	A	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.06	2.11	
23-Mar-05	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.1	2.04	2.16	
24-Mar-05	A	2.2	2.3	2.3	2.4	2.5	2.4	2.5	2.7	2.5	2.3	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.20	2.69	
25-Mar-05	2.0	2.0	2.0	2.1	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.1	A	2.2	2.01	2.22	
26-Mar-05	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	A	2.0	1.9	2.03	2.20
27-Mar-05	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.94	2.00
28-Mar-05	1.9	1.9	2.0	1.9	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.94	2.10
29-Mar-05	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	2.0	2.0	2.0	2.1	1.96	2.07	
30-Mar-05	2.0	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.2	2.2	2.1	2.1	2.0	1.9	1.9	1.9	1.9	A	2.1	2.1	2.2	2.1	2.1	2.1	2.04	2.19	
31-Mar-05	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	A	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.06	2.20	
Hourly Avg	2.12	2.11	2.07	2.05	2.10	2.12	2.11	2.14	2.14	2.11	2.07	2.02	2.01	1.99	1.98	1.97	1.97	1.98	2.01	2.03	2.07	2.11	2.10	2.15			
Hourly Max	2.59	2.72	2.42	2.37	2.67	2.85	2.68	2.64	2.69	2.62	2.47	2.29	2.39	2.45	2.16	2.15	2.16	2.17	2.34	2.22	2.39	2.66	2.49	3.16			

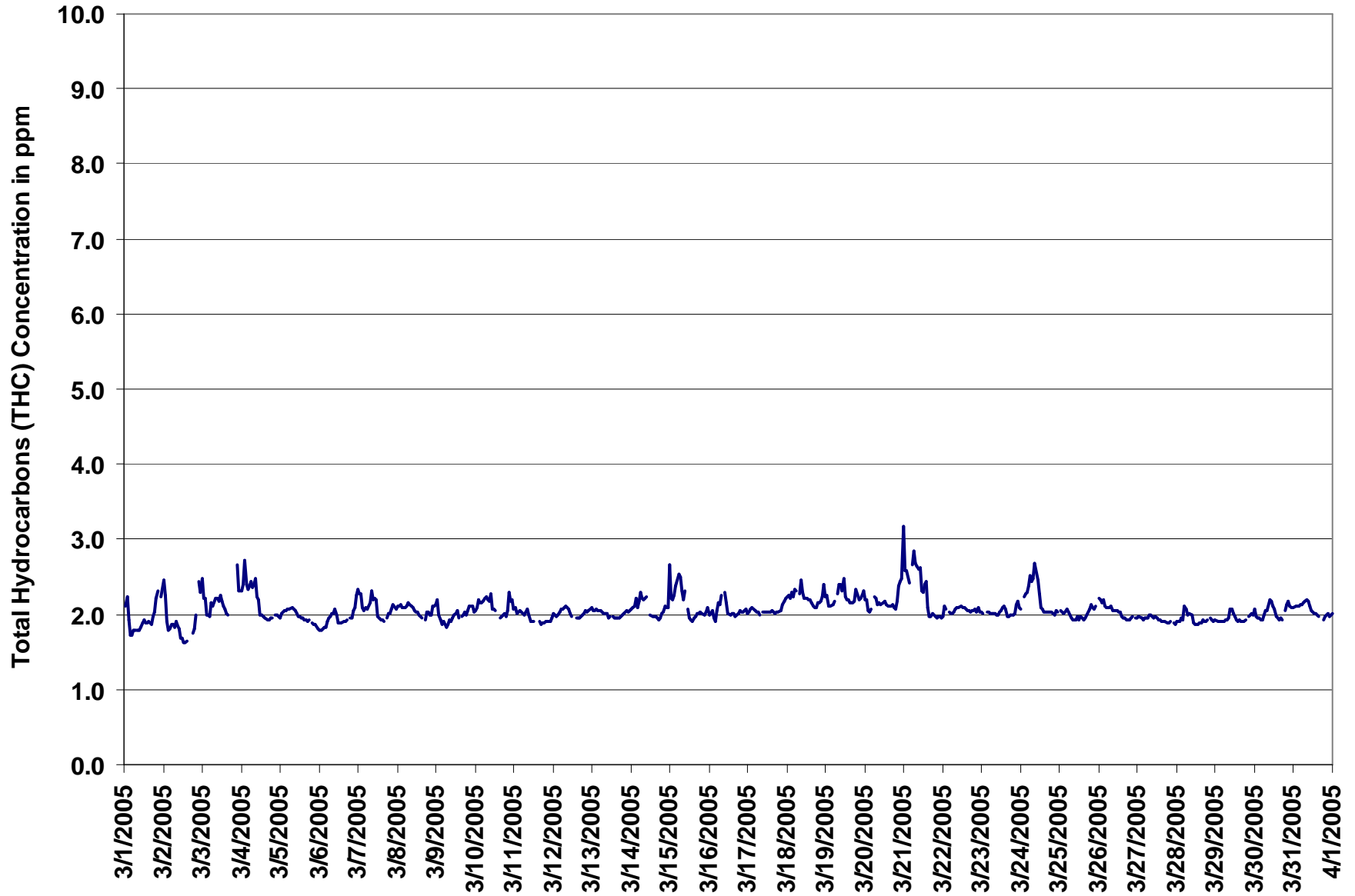


Figure 7. PAS - Crescent Heights Total Hydrocarbons 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Total HydroCarbons (THC)

Station Owner: PAS

Monitoring Dates: March 1, 2005 to April 1, 2005

Summary

Maximum 1-hr Value:	7.9	ppm	14-Mar	23:00 0:00
Maximum 24-hr Value:	2.5	ppm	21-Mar	

AIC Time:	35 hrs	Operational Time:	705 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	3.1	2.6	2.2	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

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-Mar-05	2.4	2.6	2.0	1.8	1.8	1.8	1.9	1.9	1.8	1.9	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.1	2.3	2.4	2.5	A	2.4	2.6	2.10	2.62	
2-Mar-05	2.6	2.1	1.8	1.9	1.9	2.0	1.9	2.0	2.0	1.9	1.7	1.7	1.7	1.7	1.8	C	C	2.0	1.9	2.2	A	2.7	2.5	4.3	2.11	4.31	
3-Mar-05	2.3	2.3	2.2	2.0	2.1	2.3	2.2	2.3	2.4	2.3	2.3	2.2	2.2	2.2	2.1	2.0	C	C	A	A	A	3.2	2.4	2.4	2.28	3.24	
4-Mar-05	2.7	3.1	2.5	2.5	2.5	2.6	2.4	2.5	2.7	2.3	2.3	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	A	A	2.0	2.0	2.0	2.27	3.07	
5-Mar-05	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	A	1.9	1.9	1.9	1.8	1.8	2.01	2.12	
6-Mar-05	1.8	1.8	1.8	1.9	2.0	2.0	2.0	2.1	2.1	2.2	2.1	1.9	1.9	1.9	1.9	1.9	2.0	A	2.0	2.0	2.1	2.2	2.5	2.6	2.05	2.57	
7-Mar-05	2.4	2.3	2.2	2.1	2.2	2.2	2.3	2.5	2.4	2.3	2.3	2.1	2.0	2.0	2.0	1.9	A	2.0	2.1	2.1	2.1	2.2	2.1	2.3	2.17	2.49	
8-Mar-05	2.2	2.2	2.1	2.1	2.1	2.2	2.4	2.2	2.2	2.2	2.1	2.1	2.1	2.0	2.0	A	2.0	2.3	2.4	2.1	2.0	2.2	2.2	2.2	2.15	2.43	
9-Mar-05	2.4	2.1	2.1	1.9	2.0	1.9	2.0	2.0	1.9	2.0	2.1	2.1	2.1	2.0	A	2.0	2.1	2.1	2.0	2.3	2.3	2.2	2.2	2.2	2.08	2.44	
10-Mar-05	2.1	2.3	2.3	2.2	2.3	2.3	2.3	2.2	2.2	2.5	2.1	2.1	2.1	A	2.0	2.0	2.1	2.1	2.0	2.2	2.5	2.3	2.3	2.2	2.20	2.49	
11-Mar-05	2.2	2.0	2.1	2.1	2.1	2.0	2.1	2.2	2.1	1.9	1.9	2.0	A	2.0	A	2.0	2.0	1.9	1.9	2.0	1.9	2.0	2.0	2.1	2.02	2.18	
12-Mar-05	2.0	2.0	2.1	2.1	2.2	2.1	2.2	2.2	2.1	2.1	2.1	2.0	A	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.09	2.23	
13-Mar-05	2.1	2.1	2.1	2.1	2.2	2.1	2.0	2.0	2.2	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.07	2.20	
14-Mar-05	2.2	2.2	2.3	2.2	2.3	2.4	2.3	2.3	2.4	2.4	A	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.1	7.9	2.42	7.92	
15-Mar-05	2.5	2.3	2.4	2.5	2.7	2.6	2.5	2.4	2.4	A	2.2	2.0	2.0	1.9	2.0	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.2	2.1	2.22	2.67	
16-Mar-05	2.2	2.2	2.1	1.9	2.2	2.3	2.3	2.5	A	2.3	2.5	2.1	2.0	2.0	2.1	2.0	2.0	2.1	2.2	2.2	2.2	2.1	2.2	2.0	2.16	2.52	
17-Mar-05	2.1	2.1	2.2	2.2	2.1	2.3	2.0	A	2.6	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.3	2.3	2.17	2.56	
18-Mar-05	2.3	2.3	2.4	2.3	2.5	2.4	A	2.4	2.7	2.6	2.4	2.4	2.3	2.3	2.3	2.3	2.1	2.1	2.2	2.2	2.2	2.3	2.9	2.7	2.38	2.87	
19-Mar-05	2.4	2.2	2.2	2.2	2.3	A	2.3	2.5	2.5	2.4	2.8	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.6	2.3	2.3	2.7	2.2	2.34	2.83	
20-Mar-05	2.3	2.2	2.1	2.2	A	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.1	2.3	2.5	2.6	2.6	5.4	2.38	5.35	
21-Mar-05	3.3	3.0	2.9	A	2.8	3.0	3.3	3.1	2.8	3.0	2.5	2.4	2.5	2.5	2.5	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.51	3.31	
22-Mar-05	2.1	2.1	A	2.1	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.5	2.1	2.2	2.1	2.1	2.1	2.6	2.1	2.1	2.15	2.57	
23-Mar-05	2.0	A	2.1	2.1	2.1	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.0	2.0	2.0	2.0	2.1	2.5	2.5	2.5	2.5	2.16	2.50	
24-Mar-05	A	2.5	2.3	2.4	2.6	3.3	2.7	2.8	2.9	2.6	2.4	2.2	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.0	2.0	2.1	2.1	A	2.33	3.28	
25-Mar-05	2.3	2.1	2.1	2.2	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.2	A	2.5	2.09	2.45	
26-Mar-05	2.2	2.2	2.3	2.3	2.1	2.1	2.2	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.1	2.0	2.08	2.28	
27-Mar-05	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	1.97	2.02	
28-Mar-05	2.0	2.0	2.0	2.1	2.2	2.2	2.2	2.2	2.1	1.9	1.9	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	A	2.0	2.0	1.9	2.0	2.00	2.24
29-Mar-05	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.1	2.2	2.1	2.1	2.0	2.0	1.9	2.0	2.0	1.9	2.0	A	2.3	2.1	2.1	2.0	2.2	2.02	2.28	
30-Mar-05	2.1	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.1	2.0	2.1	2.0	2.0	2.0	A	2.2	2.4	2.3	2.2	2.2	2.1	2.12	2.41	
31-Mar-05	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.3	2.2	2.1	2.1	2.1	2.0	2.1	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.11	2.31	
Hourly Avg	2.25	2.21	2.15	2.11	2.19	2.22	2.22	2.25	2.26	2.20	2.15	2.08	2.07	2.04	2.06	2.03	2.02	2.05	2.10	2.14	2.17	2.22	2.22	2.57			
Hourly Max	3.29	3.07	2.85	2.50	2.83	3.28	3.31	3.08	2.91	2.96	2.83	2.43	2.50	2.54	2.46	2.45	2.21	2.30	2.59	2.45	2.54	3.24	2.87	7.92			

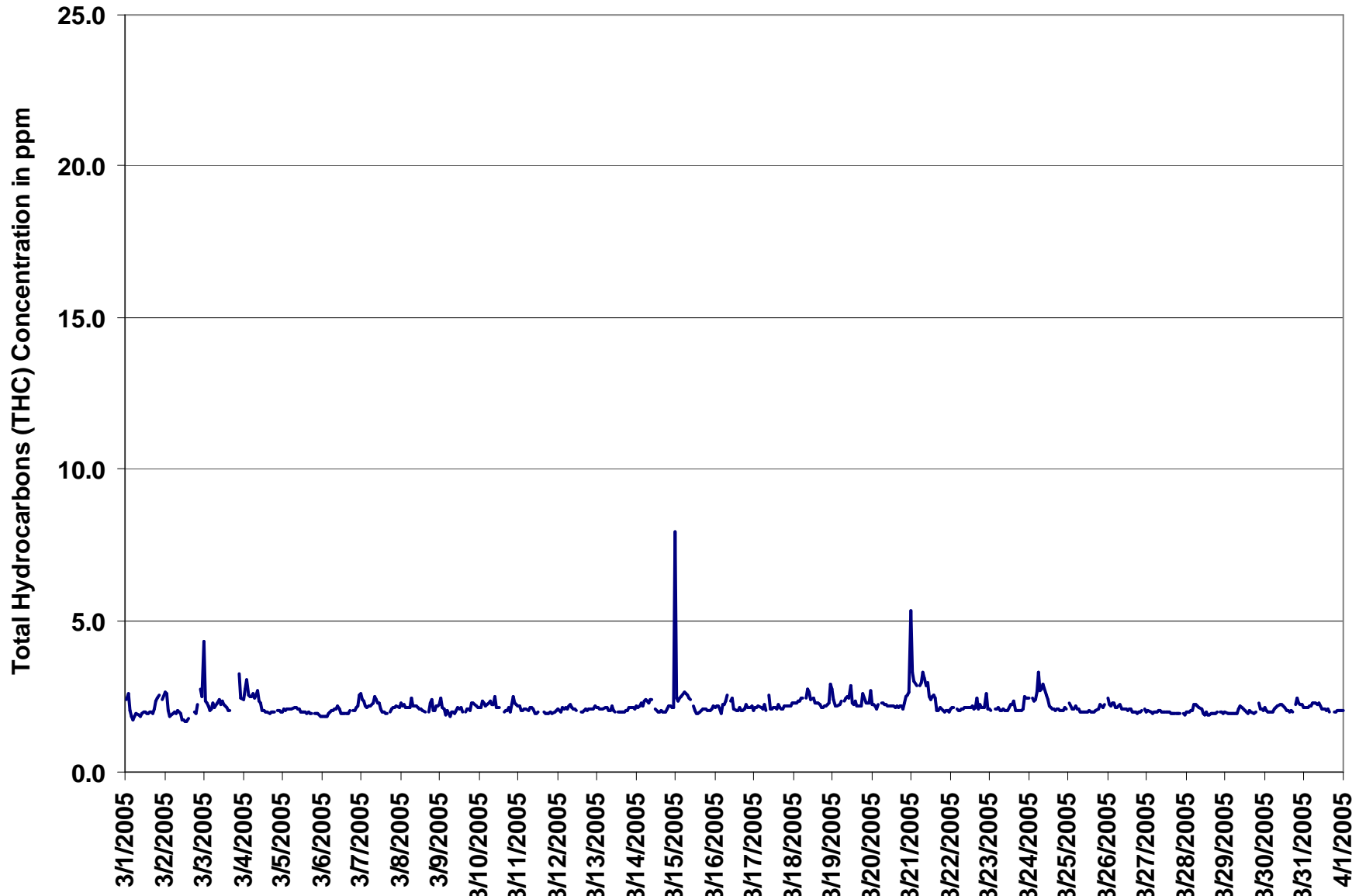


Figure 8. PAS - Crescent Heights Total Hydrocarbons 1-hr Maximum Value Monthly Trend



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: March 1, 2005 to April 1, 2005

Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	32.0 $\mu\text{g}/\text{m}^3$ 6-Mar 14:00 15:00
Maximum 24-hr Average:	6.3 $\mu\text{g}/\text{m}^3$ 6-Mar

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:	723 hrs
Calibration Time:	3 hrs	AMD Operational Uptime:	97.6%
Percentile	99	95	75
	11.3	6.9	3.5
	50	25	5
	2.0	0.4	0.0
	1	0.0	0.0
Average	2.5 $\mu\text{g}/\text{m}^3$		Geomean
	1.8 $\mu\text{g}/\text{m}^3$		

Status Flag Characters

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

Day Mountain Standard Time

Day	Hour Start	Hour End	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum
1-Mar-05	6	13	2	1	1	3	3	3	3	6	5	6	7	3	3	3	4	4	7	8	6	8	5	8	9	5.2	13.3	
2-Mar-05	6	2	0	0	0	0	0	0	0	2	4	5	1	1	0	0	0	1	C	C	C	S	S	S	S	N	6.4	
3-Mar-05	S	S	S	S	S	S	S	S	S	S	D	0	0	16	12	D	0	0	0	3	3	10	6	2	5	N	15.8	
4-Mar-05	3	3	2	1	3	2	2	4	7	4	7	1	0	0	0	0	0	1	2	2	3	3	2	3	2.3	6.9		
5-Mar-05	3	3	2	2	2	2	3	2	4	2	2	0	0	0	0	1	4	9	7	3	1	1	3	2	2.4	9.0		
6-Mar-05	2	1	3	2	4	4	5	4	5	3	2	15	18	16	32	18	8	2	0	1	2	1	1	1	6.3	32.0		
7-Mar-05	0	0	0	0	0	0	0	0	2	2	6	5	0	4	0	0	0	4	2	3	3	3	1	0	1.5	6.1		
8-Mar-05	1	2	0	0	1	0	1	1	3	4	2	3	5	3	2	2	6	4	1	4	1	2	3	1	2.1	5.7		
9-Mar-05	3	1	0	0	3	3	3	5	3	4	3	3	3	2	2	2	0	0	0	1	1	1	1	0	1.9	5.0		
10-Mar-05	0	3	1	2	2	2	2	3	3	2	2	2	1	0	0	2	2	3	3	2	5	3	1	0	1.9	4.6		
11-Mar-05	0	0	0	1	2	2	2	4	9	9	6	6	5	3	3	4	3	4	5	3	0	0	1	1	3.1	9.1		
12-Mar-05	0	0	0	0	0	0	0	2	1	1	1	0	0	2	1	2	2	2	1	1	1	0	0	0	0.6	1.9		
13-Mar-05	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	2	2	1	1	1	0	0	0.5	1.7		
14-Mar-05	0	0	0	0	1	1	1	2	1	1	0	D	0	0	2	4	1	0	0	1	1	0	1	1	0.7	3.6		
15-Mar-05	1	0	1	0	3	3	2	3	5	4	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	1.0	4.6	
16-Mar-05	1	0	1	0	0	0	1	1	4	3	1	3	1	2	2	1	1	2	2	1	0	1	1	0	1.2	4.0		
17-Mar-05	0	1	1	1	2	4	6	6	6	5	4	4	4	3	5	5	3	3	3	3	3	3	5	4	3	3.5	6.1	
18-Mar-05	2	3	3	3	9	7	5	8	7	6	3	3	3	3	3	3	4	5	6	6	8	8	4	2	4.8	9.1		
19-Mar-05	2	2	3	4	4	4	3	4	5	5	4	3	3	4	4	4	4	3	5	4	4	4	5	4	4	3.9	4.9	
20-Mar-05	3	3	3	4	7	4	4	4	6	6	7	8	6	7	6	3	3	3	4	7	6	6	4	4	5.0	7.6		
21-Mar-05	2	1	2	3	4	7	7	10	10	6	3	3	1	3	5	2	2	1	1	0	0	0	0	1	3.1	10.2		
22-Mar-05	7	4	0	1	0	0	1	1	1	1	2	3	2	2	0	1	2	2	4	4	3	2	3	2	2.0	6.8		
23-Mar-05	2	2	3	3	2	3	2	4	3	4	2	3	3	2	2	2	2	1	2	2	3	3	4	3	4	2.6	3.6	
24-Mar-05	3	3	2	3	3	3	4	6	8	7	5	2	3	2	2	2	3	2	2	3	3	4	4	3	3.5	8.5		
25-Mar-05	2	3	3	4	4	3	3	4	4	5	9	5	4	5	5	4	5	5	7	6	7	6	8	6	4.9	9.3		
26-Mar-05	4	3	2	2	3	3	7	4	2	5	3	1	1	0	0	0	0	1	0	2	2	0	1	1	2.0	6.8		
27-Mar-05	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.2		
28-Mar-05	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0.2	1.8		
29-Mar-05	0	0	0	0	0	0	0	0	3	4	4	3	2	0	0	0	1	2	4	2	3	4	3	2	1.5	4.2		
30-Mar-05	0	0	0	0	0	0	2	2	4	3	2	2	0	1	5	6	4	1	1	4	5	4	3	2	2.2	5.6		
31-Mar-05	2	0	0	1	2	2	5	3	2	0	0	D	4	0	0	0	0	1	1	2	2	1	2	1	1.4	4.9		
Hourly Avg	1.9	1.8	1.3	1.3	2.1	2.2	2.5	3.3	4.1	3.6	2.8	2.7	2.9	2.4	2.8	2.3	2.2	2.4	2.6	2.6	2.9	2.5	2.3	1.9				
Hourly Max	6.8	13.3	3.5	4.0	9.1	7.3	6.8	10.2	9.8	9.1	9.3	15.4	17.6	15.5	32.0	18.1	8.4	9.0	7.8	7.2	10.2	8.3	8.0	9.3				

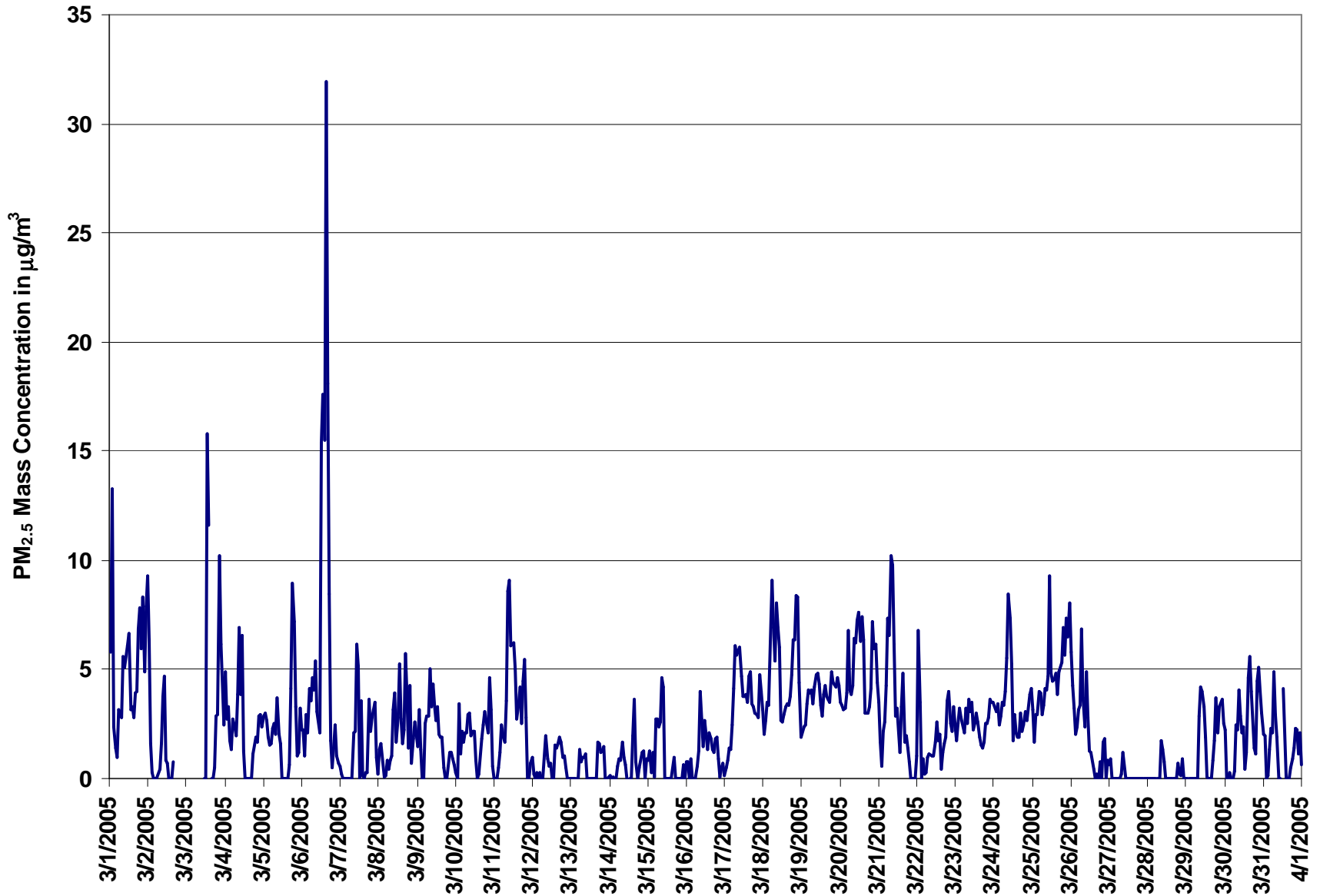


Figure 9. PAS - Crescent Heights Particulate Matter (less than 2.5 microns) 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY MAXIMUM TABLE

Particulate Matter (PM_{2.5})

Station Owner: PAS

Monitoring Dates: March 1, 2005 to April 1, 2005

Summary

Maximum 1-hr Value:	444.9	µg/m ³	3-Mar	20:00 21:00
Maximum 24-hr Value:	13.4	µg/m ³	6-Mar	

AIC Time:	0 hrs	Operational Time:	723 hrs						
Calibration Time:	3 hrs	AMD Operational Uptime:	97.6%						
Percentile	99	95	75	50	25	5	1	Average	Geomean
	31.8	12.1	7.6	5.6	3.7	1.7	0.5	8.0 µg/m ³	5.9 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-Mar-05	10	25	7	3	2	5	8	5	8	7	8	11	5	6	5	6	9	10	12	7	12	10	12	11	8.5	25.5	
2-Mar-05	10	3	2	1	1	1	2	4	8	8	3	3	2	1	1	5	C	C	C	S	S	S	S	S	N	10.3	
3-Mar-05	S	S	S	S	S	S	S	S	S	D	7	4	445	445	D	3	2	3	7	7	7	445	14	7	10	N	444.9
4-Mar-05	7	7	6	6	7	7	7	9	11	8	10	4	3	3	3	4	3	5	5	5	9	7	5	6	6.0	11.0	
5-Mar-05	6	6	5	4	4	5	5	5	8	5	6	3	3	3	4	4	10	14	12	10	5	8	7	6	6.1	14.4	
6-Mar-05	7	3	6	11	10	8	10	8	9	7	5	35	32	30	48	46	17	5	4	4	7	4	3	3	13.4	48.0	
7-Mar-05	2	3	1	3	3	2	2	4	5	9	9	5	12	8	3	5	6	8	10	10	7	6	3	2	5.3	12.2	
8-Mar-05	4	5	3	2	3	2	3	4	6	7	6	6	11	7	5	7	11	10	5	8	4	4	6	5	5.6	11.2	
9-Mar-05	7	5	2	3	6	6	6	9	8	9	8	7	10	7	8	5	5	5	6	6	4	4	5	4	6.0	10.3	
10-Mar-05	2	7	4	4	4	6	5	8	6	4	5	6	5	5	4	6	7	7	6	9	9	7	4	2	5.6	9.1	
11-Mar-05	2	2	5	4	10	5	5	7	19	13	14	12	10	8	8	8	10	10	11	9	3	6	5	5	8.0	18.9	
12-Mar-05	3	2	4	4	3	2	4	6	4	4	5	3	2	7	8	6	6	4	4	5	4	4	2	3	4.1	8.2	
13-Mar-05	5	3	3	4	5	4	5	6	4	2	1	2	2	2	2	4	6	7	4	5	7	6	3	3	3.9	6.7	
14-Mar-05	4	4	4	4	6	3	4	5	5	4	2	D	0	2	6	13	4	4	4	4	5	3	3	4	4.2	13.1	
15-Mar-05	4	4	5	2	8	7	6	7	9	10	3	1	2	2	4	8	3	3	2	2	2	3	3	4	4.4	9.7	
16-Mar-05	4	3	3	2	2	2	3	4	7	5	4	6	4	7	5	5	5	5	7	5	3	4	4	3	4.4	7.2	
17-Mar-05	4	4	3	4	5	6	9	8	9	7	6	7	6	7	9	8	7	8	6	6	6	8	7	6	6.6	9.2	
18-Mar-05	5	5	9	8	18	11	14	12	12	10	7	6	6	6	7	6	8	11	10	11	14	12	9	5	9.3	17.5	
19-Mar-05	6	6	6	7	6	8	6	7	8	8	6	7	8	9	7	8	9	7	8	9	9	8	8	7	7.4	9.3	
20-Mar-05	7	7	6	7	10	8	8	9	10	10	12	10	10	12	11	7	7	7	7	11	9	9	9	8	8.8	12.1	
21-Mar-05	5	5	7	9	11	11	14	16	16	16	7	7	6	9	9	6	5	5	4	3	2	3	1	7	7.6	16.1	
22-Mar-05	11	8	2	5	4	5	5	5	5	4	5	6	5	6	5	8	5	5	7	7	7	6	7	6	5.7	11.5	
23-Mar-05	5	5	7	6	6	7	6	7	7	9	7	6	7	6	6	6	5	6	6	8	7	8	7	7	6.5	9.0	
24-Mar-05	7	7	7	6	6	7	8	12	16	12	9	5	7	6	5	6	6	6	6	6	6	8	8	8	7.5	15.9	
25-Mar-05	6	6	7	13	8	6	9	7	9	9	36	8	9	8	8	7	9	9	11	9	21	12	13	10	10.5	36.4	
26-Mar-05	10	6	6	6	7	7	17	8	7	16	5	4	5	4	3	3	3	5	2	5	5	5	5	4	6.2	16.9	
27-Mar-05	4	2	3	4	2	2	1	6	11	2	4	1	2	3	3	3	3	3	3	2	1	2	0	0	2.8	11.2	
28-Mar-05	1	0	0	1	0	0	0	10	3	5	5	4	3	4	4	5	4	3	6	4	3	4	2	2	3.0	10.0	
29-Mar-05	2	1	0	1	1	2	2	7	7	6	5	6	4	4	3	3	4	4	7	5	6	7	6	5	4.1	7.4	
30-Mar-05	2	1	2	2	3	8	4	6	6	6	7	6	5	9	10	14	5	4	7	8	7	8	4	4	5.6	14.0	
31-Mar-05	4	3	3	3	5	4	10	7	4	2	3	D	28	2	3	2	3	4	4	5	5	3	4	3	4.9	28.5	
Hourly Avg	5.2	5.0	4.3	4.7	5.5	5.1	6.4	7.2	8.2	7.5	7.1	6.5	21.3	20.3	6.9	7.2	6.4	6.2	6.3	6.4	21.1	6.3	5.5	5.1			
Hourly Max	11.5	25.5	9.1	12.7	17.5	11.3	16.9	15.5	18.9	16.4	36.4	34.8	444.8	444.9	48.0	45.8	16.9	14.4	11.9	11.4	444.9	14.1	13.1	11.4			

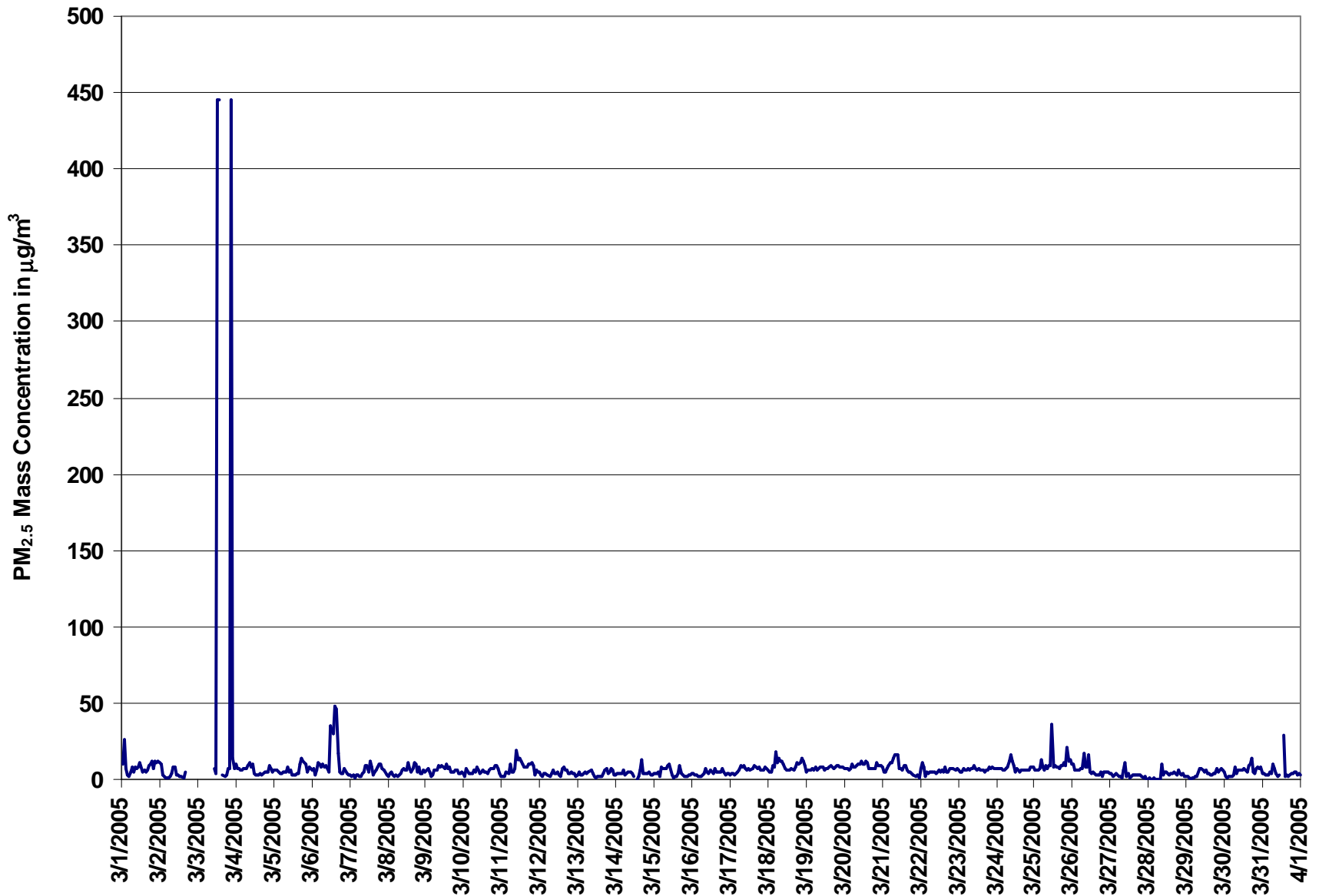
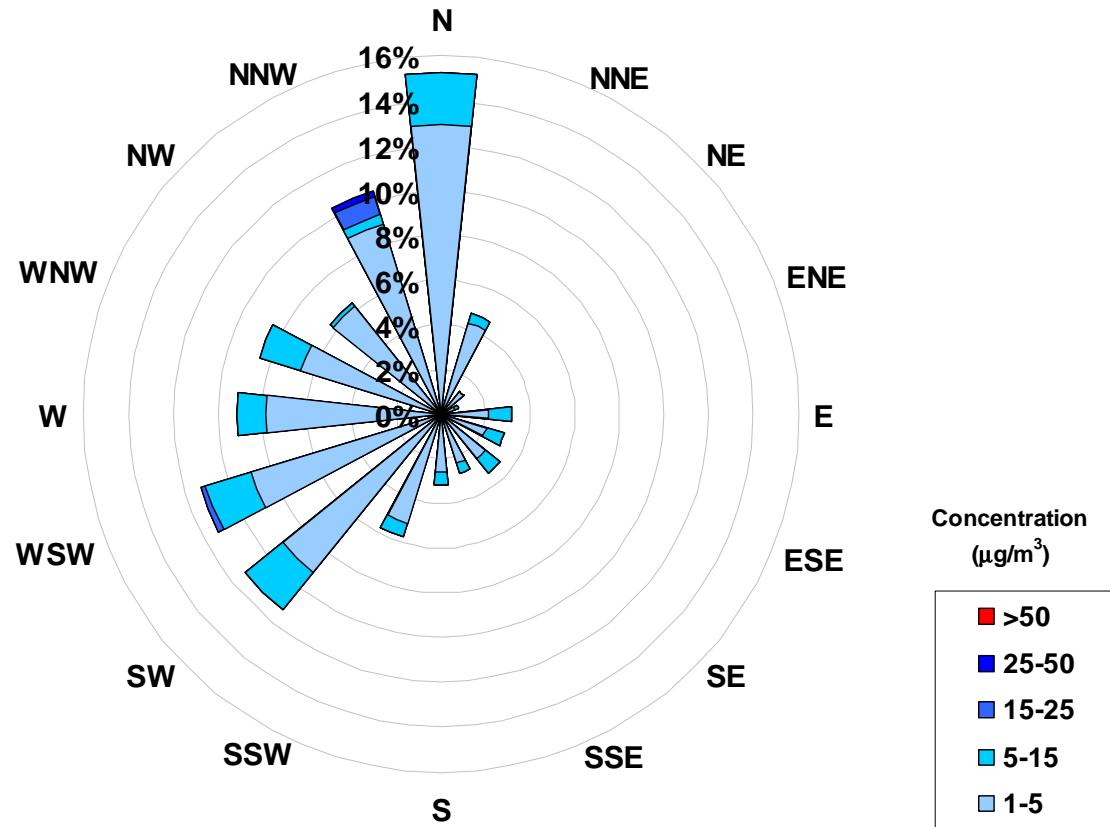


Figure 10. PAS - Crescent Heights Particulate Matter (less than 2.5 microns) 1-hr Maximum Value Monthly



Concentration Rose for the 1-hr PM_{2.5} Average Concentration Occurrences at the Crescent Heights Site for March 2005



Frequency Distribution of PM _{2.5} in µg/m ³			
Range	Frequency (hrs)		
0 < 1	246		
1 to 5	394		
5 to 15	77		
15 to 25	5		
25 to 50	1		
> 50	0		
Total Non-Zero Values			
			723

Calms	
Range	µg/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: March 1, 2005 to April 1, 2005

Summary			
Number of 1-hr Exceedances:	0		
Number of 24-hr Exceedances:	0		
Maximum 1-hr Average:	91.8 %	17-Mar	1:00 2:00
Maximum 24-hr Average:	84.4 %	17-Mar	

AIC Time:	0 hrs	Operational Time:	739 hrs					
Calibration Time:	0 hrs	AMD Operational Uptime:	99.3%					
Percentile	99	95	75	50	25	5	1	Average
	91.0	86.3	76.1	66.7	49.8	27.4	19.2	62.7 ppb

Status Flag Characters

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

Day	Mountain Standard Time																							24-hour Average	Daily Maximum		
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	Daily	
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	Average	Maximum	
1-Mar-05	58	61	58	57	61	63	64	68	66	59	51	46	40	36	31	29	29	36	47	58	63	67	70	72	54	72	
2-Mar-05	71	71	67	69	72	72	73	71	64	56	48	42	36	29	26	23	24	31	37	43	50	57	62	64	52	73	
3-Mar-05	67	68	68	70	71	71	73	72	66	62	55	47	41	35	31	29	P	P	P	P	P	64	67	72	59	73	
4-Mar-05	74	75	75	77	77	80	80	75	69	62	49	33	28	23	19	16	15	19	24	26	33	40	46	43	48	80	
5-Mar-05	53	59	61	65	68	68	68	67	60	51	44	34	25	23	21	21	22	29	36	37	39	39	38	38	44	68	
6-Mar-05	39	39	38	42	54	58	63	62	58	55	47	39	37	35	40	57	63	67	71	75	78	78	81	82	57	82	
7-Mar-05	82	82	81	80	79	81	83	81	73	67	61	38	42	71	69	56	61	77	82	82	84	84	78	75	73	84	
8-Mar-05	73	73	77	80	77	78	76	76	64	56	47	43	35	27	25	23	22	29	34	41	49	54	55	54	53	80	
9-Mar-05	58	58	60	62	53	41	43	47	48	48	48	49	55	68	72	67	65	53	41	49	55	58	54	44	54	72	
10-Mar-05	43	44	49	48	49	52	59	52	48	43	39	37	31	24	20	19	16	18	23	29	40	43	44	43	38	59	
11-Mar-05	43	48	48	41	40	36	41	42	36	26	24	22	20	17	17	25	34	45	64	84	70	56	63	65	42	84	
12-Mar-05	63	67	70	72	74	75	74	68	65	60	61	63	53	57	59	55	53	55	60	64	69	71	72	76	65	76	
13-Mar-05	81	81	84	85	89	85	84	82	73	56	48	46	47	45	44	47	57	57	63	72	77	86	84	82	69	89	
14-Mar-05	83	84	86	89	89	90	89	88	82	72	64	54	42	38	48	60	80	68	66	68	69	69	71	74	72	90	
15-Mar-05	76	76	75	76	81	80	80	79	72	65	56	47	40	38	40	43	47	54	58	58	64	67	68	81	63	81	
16-Mar-05	90	91	89	83	83	85	86	85	71	74	70	69	72	72	77	79	79	77	79	85	91	91	91	92	82	92	
17-Mar-05	92	92	92	91	91	91	90	89	86	84	81	79	78	75	75	75	78	81	83	84	84	84	85	84	84	84	92
18-Mar-05	84	85	83	82	81	81	81	82	80	80	76	71	68	67	65	65	66	71	76	80	83	85	85	84	78	85	
19-Mar-05	84	85	85	85	85	84	84	83	80	76	72	67	62	64	65	70	73	79	83	85	86	86	86	86	79	86	
20-Mar-05	86	87	86	86	87	88	86	82	76	70	66	68	65	54	59	68	72	75	79	80	82	85	87	89	78	89	
21-Mar-05	89	89	89	89	89	88	84	71	71	63	56	58	58	59	62	61	65	69	67	70	69	67	68	73	89	89	
22-Mar-05	81	81	78	77	76	76	75	75	73	71	68	64	59	53	53	53	55	57	63	68	70	69	72	74	68	81	
23-Mar-05	74	77	81	84	85	85	85	84	82	76	69	73	73	74	75	75	73	74	76	76	77	79	81	84	78	85	
24-Mar-05	84	83	83	83	83	82	81	78	71	64	58	56	51	53	56	53	58	57	60	61	65	68	71	70	68	84	
25-Mar-05	68	69	71	73	72	71	69	62	57	53	53	55	52	49	48	45	43	45	49	55	58	64	71	75	60	75	
26-Mar-05	76	77	78	76	76	74	70	62	57	52	50	49	52	53	50	49	50	51	52	55	59	66	70	70	61	78	
27-Mar-05	68	71	69	71	73	76	77	73	68	60	54	45	42	43	45	49	52	56	62	67	70	71	70	73	63	77	
28-Mar-05	75	74	77	74	76	76	80	75	68	62	53	48	46	49	46	42	37	38	45	49	56	60	65	69	60	80	
29-Mar-05	71	73	72	68	66	68	68	67	74	73	68	59	47	38	31	29	29	32	38	47	52	57	63	67	57	74	
30-Mar-05	67	71	74	71	70	72	72	67	65	61	56	48	45	49	45	57	55	50	48	52	56	62	72	75	61	75	
31-Mar-05	81	75	66	61	64	70	75	68	64	57	46	34	27	24	19	22	25	27	35	44	48	50	58	61	50	81	
Hourly Avg	72	73	73	73	74	74	75	72	67	62	56	51	47	47	46	47	50	52	57	61	65	67	69	71			
Hourly Max	92	92	92	91	91	91	90	89	86	84	81	79	78	75	77	79	80	81	83	85	91	91	91	92			

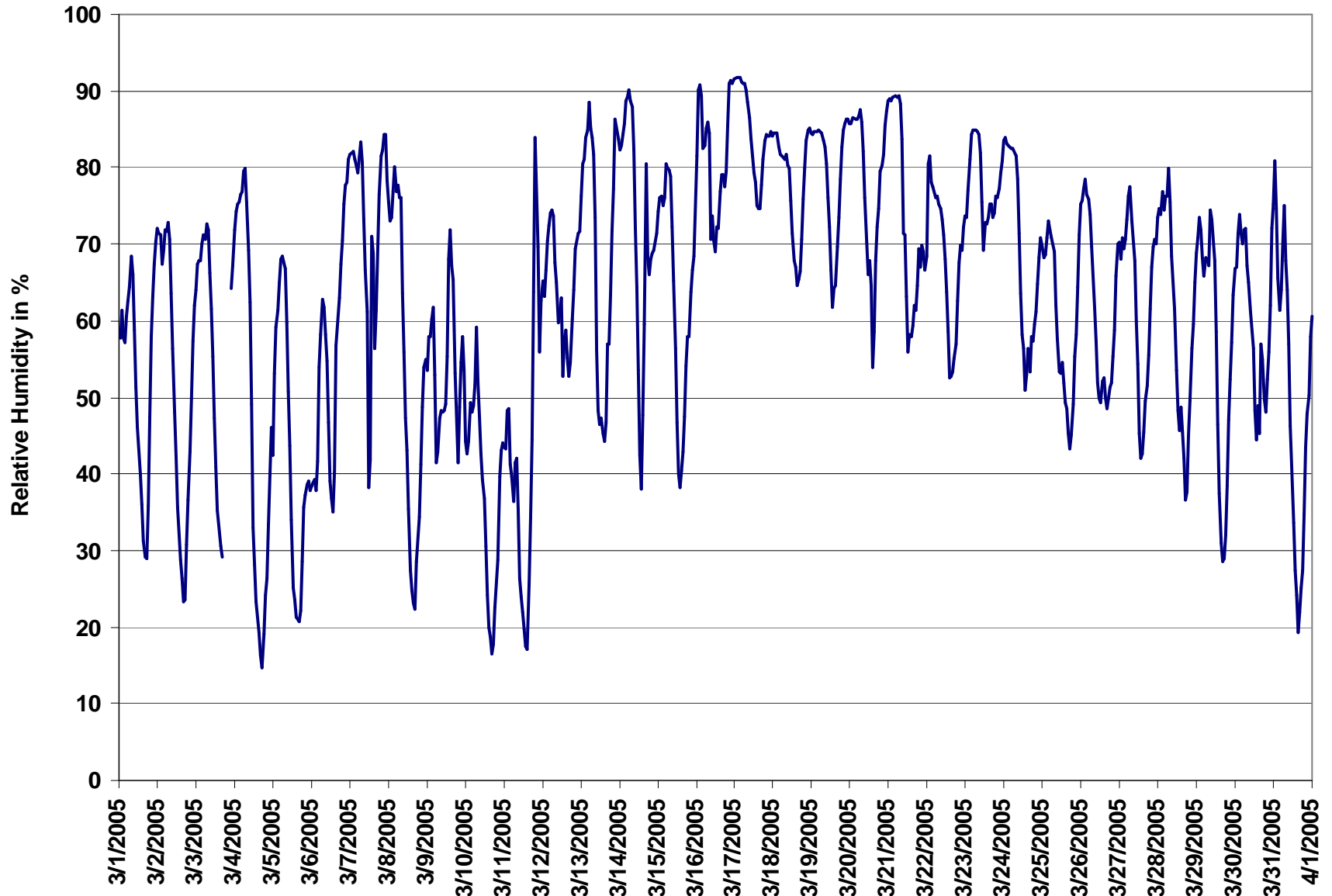


Figure 11. PAS - Crescent Heights Relative Humidity 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY AVERAGE TABLE

Ambient Temperature (AT - °C)

Station Owner: PAS

Monitoring Dates: March 1, 2005 to April 1, 2005

Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	20.7 °C 11-Mar 14:00 15:00
Maximum 24-hr Average:	10.3 °C 11-Mar

AIC Time:	0 hrs	Operational Time:	739 hrs					
Calibration Time:	0 hrs	AMD Operational Uptime:	99.3%					
Percentile	99	95	75	50	25	5	1	Average
	17.9	13.4	6.4	1.8	-2.5	-7.6	-11.8	2.2 ppb

Status Flag Characters

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

Day Mountain Standard Time

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum	
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Mar-05	-1	-1	0	0	-1	-1	-1	-2	0	3	6	8	10	11	12	13	12	10	7	4	2	0	-2	-3	3.7	12.6	
2-Mar-05	-2	-2	0	-1	-2	-2	-2	-1	1	4	8	9	12	14	15	15	15	12	9	6	4	2	0	-1	4.7	15.0	
3-Mar-05	-1	-1	-1	-1	-2	-2	-2	-3	0	3	6	9	11	13	14	14	P	P	P	P	P	2	0	-1	2.9	14.2	
4-Mar-05	-2	-3	-3	-3	-3	-4	-4	-3	-1	3	9	13	14	16	17	18	18	16	12	11	8	7	6	7	6.2	17.9	
5-Mar-05	4	2	2	1	0	0	0	1	3	7	10	13	16	18	18	18	16	13	12	11	11	11	12	12	9.1	18.3	
6-Mar-05	11	11	11	10	6	5	5	5	6	7	10	11	12	12	11	8	6	5	4	2	1	0	-1	-2	6.5	11.9	
7-Mar-05	-2	-3	-2	-2	-3	-4	-4	-4	-1	1	4	8	8	6	8	11	10	6	4	4	3	3	4	4	2.5	11.2	
8-Mar-05	4	4	2	1	2	1	1	0	3	6	8	9	11	12	12	13	14	11	9	7	4	3	3	4	6.0	13.5	
9-Mar-05	4	5	5	5	9	13	12	11	11	11	12	12	11	8	9	10	10	10	8	6	4	3	4	5	8.4	12.7	
10-Mar-05	5	4	3	3	3	2	0	2	4	6	8	10	12	13	14	14	14	14	11	8	5	4	3	3	6.9	14.4	
11-Mar-05	3	3	3	5	6	7	6	6	9	15	17	18	20	21	21	18	16	14	9	6	6	7	7	6	10.3	20.7	
12-Mar-05	5	4	3	3	2	1	1	2	2	3	4	4	5	5	4	4	3	3	2	2	1	0	-1	-2	2.4	4.9	
13-Mar-05	-2	-2	-3	-3	-2	-1	0	0	1	2	3	3	3	4	4	4	3	3	2	1	1	-1	-1	-1	0.8	4.3	
14-Mar-05	-2	-3	-3	-3	-3	-4	-4	-3	-2	0	2	3	4	4	4	3	1	1	0	-1	-2	-3	-4	-5	-0.8	4.2	
15-Mar-05	-5	-5	-6	-7	-7	-6	-6	-5	-3	-1	0	2	3	4	4	4	3	1	0	-2	-2	-2	-2	-2	-1.6	4.4	
16-Mar-05	-1	-2	-1	-1	-1	-2	-3	-4	0	0	1	2	2	2	2	2	2	2	1	0	-1	-1	-1	-2	-0.2	2.5	
17-Mar-05	-2	-2	-2	-2	-3	-3	-3	-4	-4	-4	-4	-3	-3	-3	-3	-3	-4	-5	-6	-6	-7	-7	-8	-9	-4.2	-1.7	
18-Mar-05	-11	-11	-13	-13	-13	-13	-13	-12	-11	-10	-8	-8	-7	-6	-5	-5	-5	-6	-6	-7	-7	-8	-8	-8	-8	-8.8	-5.0
19-Mar-05	-8	-8	-8	-8	-8	-8	-9	-8	-7	-6	-5	-4	-3	-3	-3	-3	-4	-4	-5	-5	-5	-5	-5	-5	-5	-5.8	-2.9
20-Mar-05	-5	-4	-3	-3	-4	-5	-5	-5	-4	-3	-1	-1	1	4	3	2	1	1	-1	-1	-2	-3	-3	-4	-1.9	3.6	
21-Mar-05	-4	-5	-5	-5	-6	-6	-7	-5	0	-1	3	6	6	7	8	8	8	7	5	4	2	2	1	1	0.9	8.1	
22-Mar-05	-1	-1	-1	-2	-2	-3	-3	-2	-3	-2	-2	-1	0	1	1	1	0	-1	-2	-3	-4	-4	-5	-5	-1.9	1.2	
23-Mar-05	-6	-6	-6	-6	-7	-7	-7	-7	-6	-4	-4	-4	-3	-3	-3	-4	-4	-5	-5	-6	-7	-8	-8	-9	-5.6	-2.8	
24-Mar-05	-10	-10	-11	-12	-12	-12	-12	-10	-8	-5	-3	-3	-1	-1	-2	-1	-3	-3	-4	-6	-6	-7	-7	-7	-6.5	-1.2	
25-Mar-05	-7	-7	-8	-8	-7	-7	-6	-4	-1	0	0	1	2	3	4	5	5	5	4	2	0	-1	-2	-2	-1.2	5.1	
26-Mar-05	-2	-3	-3	-3	-2	-2	-1	1	3	5	6	7	7	7	7	7	7	7	7	6	5	5	4	4	3.2	7.4	
27-Mar-05	4	4	4	4	4	3	3	4	6	9	11	13	14	14	13	13	13	13	11	9	8	8	7	6	8.2	13.6	
28-Mar-05	5	5	4	5	4	4	3	4	7	10	13	14	14	13	12	13	14	12	10	9	7	5	4	3	8.1	14.2	
29-Mar-05	2	1	2	3	3	3	3	4	3	4	6	8	11	12	12	12	12	11	9	8	7	6	4	3	6.1	12.1	
30-Mar-05	2	1	1	2	2	2	2	3	4	5	7	9	9	8	8	7	7	7	6	4	3	2	2	1	4.3	9.4	
31-Mar-05	0	1	1	1	-1	-1	-1	1	3	4	6	9	9	10	11	12	12	12	10	8	6	5	4	3	5.2	12.0	
Hourly Avg	-0.7	-1.0	-1.2	-1.3	-1.6	-1.6	-1.9	-1.2	0.5	2.3	4.3	5.7	6.7	7.2	7.5	7.4	6.8	5.8	4.1	2.8	1.6	0.8	0.2	-0.2			
Hourly Max	11.3	10.7	10.9	9.5	8.7	12.7	12.3	10.8	11.0	14.5	16.6	18.0	19.6	20.5	20.7	18.4	18.1	15.8	12.9	12.2	11.4	11.4	12.2	11.9			

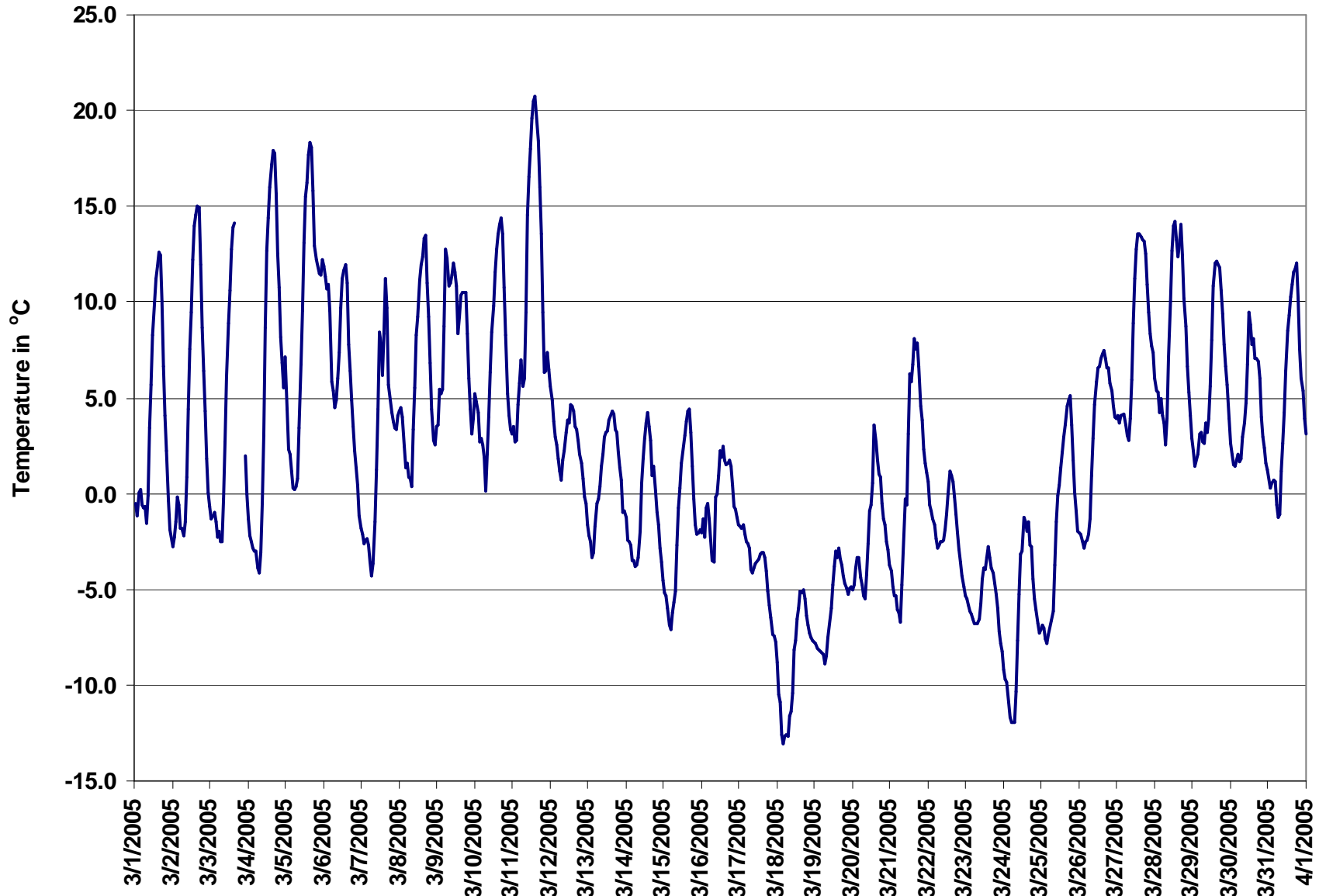


Figure 12. PAS - Crescent Heights Temperature 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY AVERAGE TABLE

Solar Radiation (SR - W/m²)

Station Owner: PAS

Monitoring Dates: March 1, 2005 to April 1, 2005

Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	831.3 W/m ² 24-Mar 12:00 13:00
Maximum 24-hr Average:	244.8 W/m ² 31-Mar

AIC Time:	0 hrs	Operational Time:	739 hrs					
Calibration Time:	0 hrs	AMD Operational Uptime:	99.3%					
Percentile	99	95	75	50	25	5	1	Average
	735.4	570.5	257.4	5.1	-0.1	-0.2	-0.3	144.8 ppb

Status Flag Characters

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

Day Mountain Standard Time

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
1-Mar-05	0	0	0	0	0	1	1	42	183	325	453	535	560	549	377	356	219	51	2	0	0	0	0	1	154	560
2-Mar-05	1	1	1	1	1	1	1	45	189	333	453	536	560	549	377	356	219	51	2	0	0	0	0	1	153	560
3-Mar-05	1	0	0	0	0	0	1	45	203	333	434	524	478	515	381	347	P	P	P	P	P	0	0	0	172	524
4-Mar-05	0	0	0	0	0	0	0	48	191	338	470	555	581	571	387	378	241	69	2	0	0	0	0	0	159	581
5-Mar-05	0	0	0	0	0	0	1	56	200	346	466	550	571	558	394	316	183	50	2	0	0	0	0	0	154	571
6-Mar-05	0	0	0	0	0	0	0	29	55	91	142	194	267	431	391	366	253	56	2	0	0	0	0	0	95	431
7-Mar-05	0	0	0	0	0	0	1	62	202	257	275	253	94	198	322	455	210	13	0	0	0	0	0	0	97	455
8-Mar-05	0	0	0	0	0	0	2	82	211	350	472	469	585	525	329	428	214	39	3	0	0	0	0	0	154	585
9-Mar-05	0	0	0	0	0	0	1	34	69	90	149	78	83	70	231	299	173	77	4	0	0	0	0	0	57	299
10-Mar-05	0	0	0	0	0	0	4	75	220	371	530	600	622	609	419	413	284	99	4	0	0	0	0	0	177	622
11-Mar-05	0	0	0	0	0	0	4	54	178	388	467	576	585	528	417	333	111	13	1	0	0	0	0	0	152	585
12-Mar-05	0	0	0	0	0	0	4	100	96	232	136	133	225	269	171	91	101	32	2	0	0	0	0	0	66	269
13-Mar-05	0	0	0	0	0	0	3	57	214	334	451	317	234	239	194	136	113	54	4	0	0	0	0	0	98	451
14-Mar-05	0	0	0	0	0	0	1	48	121	390	560	500	398	379	220	123	219	60	5	0	0	0	0	0	126	560
15-Mar-05	0	0	0	0	0	0	5	58	181	354	443	590	666	570	566	444	234	75	7	0	0	0	0	0	175	666
16-Mar-05	0	0	0	0	0	0	5	71	253	405	427	465	234	247	171	176	105	19	3	0	0	0	0	0	107	465
17-Mar-05	0	0	0	0	0	0	3	32	127	235	325	342	397	410	348	284	176	73	7	0	0	0	0	0	115	410
18-Mar-05	0	0	0	0	0	0	9	58	188	258	456	507	522	437	409	279	167	56	5	0	0	0	0	0	140	522
19-Mar-05	0	0	0	0	0	0	5	56	175	367	509	608	554	419	404	266	175	88	12	0	0	0	0	0	152	608
20-Mar-05	0	0	0	0	0	0	3	35	123	240	381	339	392	497	433	309	199	85	13	0	0	0	0	0	127	497
21-Mar-05	0	0	0	0	0	0	16	120	259	418	571	671	736	684	623	435	339	113	19	0	0	0	0	0	208	736
22-Mar-05	0	0	0	0	0	0	6	93	139	162	249	318	357	523	494	334	188	80	12	0	0	0	0	0	123	523
23-Mar-05	0	0	0	0	0	0	8	46	160	443	409	250	401	447	163	105	88	45	8	0	0	0	0	0	107	447
24-Mar-05	0	0	0	0	0	0	33	166	333	503	653	699	831	741	664	521	207	119	20	0	0	0	0	0	229	831
25-Mar-05	0	0	0	0	0	0	26	175	346	503	628	706	737	703	626	504	345	176	22	0	0	0	0	0	229	737
26-Mar-05	0	0	0	0	0	0	32	192	300	457	541	457	262	219	271	174	67	21	6	0	0	0	0	0	125	541
27-Mar-05	0	0	0	0	0	0	25	117	284	401	412	519	449	366	286	206	167	83	12	0	0	0	0	0	139	519
28-Mar-05	0	0	0	0	0	0	17	161	306	501	622	643	608	268	176	311	296	124	21	0	0	0	0	0	169	643
29-Mar-05	0	0	0	0	0	0	57	176	123	156	258	615	766	737	551	323	244	55	8	0	0	0	0	0	170	766
30-Mar-05	0	0	0	0	0	0	35	159	362	451	446	451	104	147	223	152	219	124	34	0	0	0	0	0	121	451
31-Mar-05	0	0	0	0	0	0	50	211	383	540	664	747	769	735	662	513	359	200	40	0	0	0	0	0	245	769
Hourly Avg	0	0	0	0	0	0	12	87	206	341	434	476	472	456	377	314	204	73	9	0	0	0	0	0		
Hourly Max	1	1	1	1	1	1	57	211	383	540	664	747	831	741	664	521	359	200	40	1	1	1	1	1		

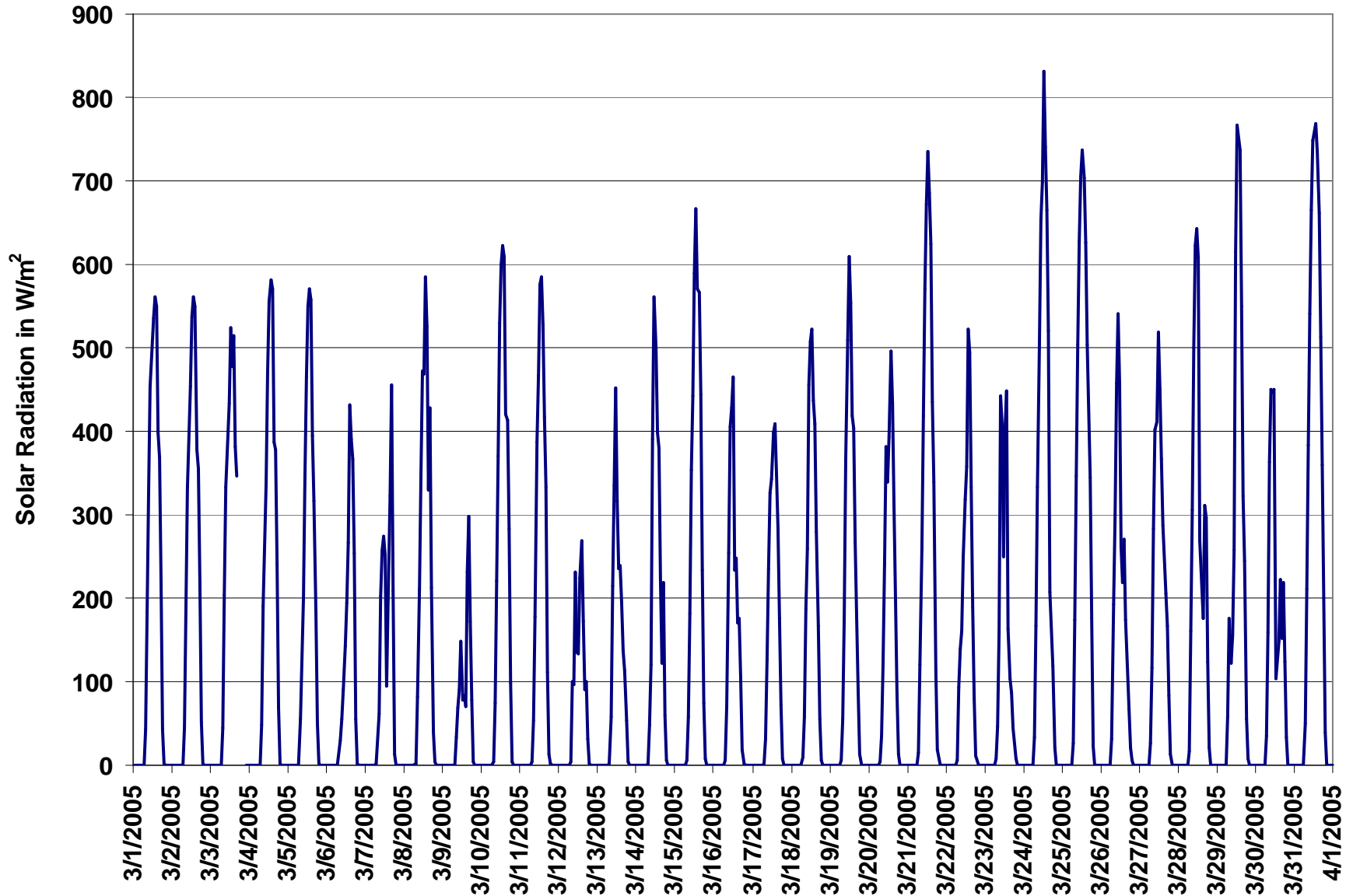


Figure 13. PAS - Crescent Heights Solar Radiation 1-hr Average Monthly Trend



Station: Crescent Heights

HOURLY AVERAGE TABLE

Wind Speed (WSv - km/hr)

Station Owner: PAS

Monitoring Dates: March 1, 2005 to April 1, 2005
Summary

Maximum 1-hr Average:	38.1	km/hr	6-Mar	15:00 16:00
Maximum 24-hr Average:	19.5	km/hr	26-Mar	

Calm Time:	5 hrs	1% calms	Operational Time:	739 hrs					
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	AverageS	AverageV
	32.6	23.9	13.7	9.2	5.7	2.7	1.9	10.6 km/hr	4.9 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-Mar-05	2	5	9	12	13	9	8	5	7	6	6	7	8	9	9	7	7	8	5	4	6	3	3		4.2	13.3		
2-Mar-05	7	7	10	8	9	9	9	3	5	8	15	15	13	9	8	7	6	8	7	5	2	2	4	4		5.7	15.2	
3-Mar-05	4	8	6	8	12	11	9	11	10	11	9	9	9	8	6	7	7	8	7	4	5	4	5	6		4.3	12.1	
4-Mar-05	4	5	5	3	3	4	5	4	5	5	5	16	17	20	20	17	18	14	10	11	13	17	13	14		9.0	20.2	
5-Mar-05	11	13	8	7	8	7	7	9	9	13	15	14	15	18	17	16	14	12	9	15	15	18	19	23		12.6	22.8	
6-Mar-05	24	23	25	22	10	5	5	5	7	9	13	31	32	33	36	38	33	23	16	6	6	6	4	5		14.1	38.1	
7-Mar-05	4	6	9	9	10	6	5	4	4	3	4	10	15	9	9	9	12	13	8	7	3	5	10	8		2.8	15.4	
8-Mar-05	9	12	11	9	9	8	7	7	10	12	12	12	11	12	9	8	3	6	8	7	8	6	2	4		4.7	12.3	
9-Mar-05	10	14	13	11	12	18	20	12	9	8	10	10	2	14	5	10	9	8	11	4	8	10	9	11		7.2	19.7	
10-Mar-05	10	11	11	14	13	9	5	8	5	7	9	10	13	14	15	14	12	10	4	5	6	11	9	8		8.6	15.4	
11-Mar-05	11	16	11	10	10	8	8	7	9	17	21	22	17	15	19	26	21	25	28	16	28	16	12	8		10.0	28.3	
12-Mar-05	12	12	11	12	11	9	9	12	12	14	21	21	24	22	28	31	33	27	16	10	4	2	3	7		13.6	32.6	
13-Mar-05	5	4	5	5	7	11	12	14	21	30	27	28	27	28	31	27	23	21	13	14	11	12	8	8		14.8	30.8	
14-Mar-05	7	5	5	3	3	2	3	3	4	5	8	12	13	14	16	21	17	18	11	9	6	8	5	3		7.5	21.1	
15-Mar-05	3	3	3	2	3	3	5	4	2	3	6	9	9	9	10	13	17	19	18	16	17	16	12	12		7.2	19.1	
16-Mar-05	10	9	8	9	7	7	5	4	1	5	6	5	4	2	8	8	8	4	7	7	8	8	8	9		4.2	10.2	
17-Mar-05	7	8	9	10	11	10	12	16	17	16	17	14	15	16	14	14	12	12	9	5	4	4	4	4		10.4	17.1	
18-Mar-05	3	3	4	3	Calm	Calm	Calm	Calm	3	4	7	8	7	7	6	6	3	2	3	4	5	3	4	7		2.8	7.5	
19-Mar-05	9	8	8	7	8	8	6	5	7	8	8	7	6	7	6	7	7	6	3	2	2	3	2	2		5.3	8.6	
20-Mar-05	2	7	6	6	5	4	5	5	3	3	4	5	4	2	4	6	4	2	5	5	3	2	3	1		0.7	7.1	
21-Mar-05	3	3	5	4	3	2	1	2	1	5	4	3	5	4	9	16	18	16	12	11	9	12	15	14		4.5	17.7	
22-Mar-05	12	14	14	13	12	11	12	11	13	14	13	12	12	12	15	14	14	14	12	12	12	12	12	11		10.1	14.5	
23-Mar-05	11	13	11	11	12	11	10	11	13	16	14	12	15	14	13	18	19	18	17	14	10	10	8	10		12.7	19.1	
24-Mar-05	8	7	5	5	2	Calm	3	4	4	4	4	4	7	8	9	11	9	9	8	8	10	11	6	3	5		3.2	11.5
25-Mar-05	5	3	2	3	5	6	8	4	12	20	27	24	17	15	13	12	12	7	6	7	6	5	6	11		7.5	27.1	
26-Mar-05	8	7	8	9	6	10	9	6	18	23	27	27	22	25	29	31	37	34	33	33	30	18	13	12		19.5	37.1	
27-Mar-05	16	16	18	15	19	17	14	10	15	12	16	16	12	12	13	15	11	11	18	22	17	13	13	5		14.1	22.0	
28-Mar-05	5	13	10	14	7	10	8	8	9	14	16	15	18	17	15	12	12	24	21	23	14	10	15	13		13.1	23.8	
29-Mar-05	15	14	15	24	24	17	20	15	12	11	12	13	15	13	13	11	7	5	8	5	5	4	4	4		8.3	24.1	
30-Mar-05	8	10	11	10	8	4	4	5	7	9	9	5	17	19	22	19	18	13	8	5	4	4	7	9		6.2	21.6	
31-Mar-05	7	8	11	10	6	6	4	4	9	13	13	17	23	27	24	23	23	18	14	9	12	15	9	9		12.6	26.7	
1-hr Vector	4.2	5.7	6.0	6.0	5.7	5.4	5.2	4.9	5.1	5.8	6.0	6.5	7.6	7.8	8.0	7.3	5.5	4.7	3.4	2.6	3.1	3.7	3.5	3.9				
Hourly Max	23.6	22.9	25.0	24.1	24.0	17.8	19.9	16.2	20.8	30.2	27.3	31.2	31.6	33.2	36.3	38.1	37.1	34.3	32.9	33.1	29.7	18.4	19.0	22.8				



Station: Crescent Heights

HOURLY AVERAGE TABLE

Wind Direction (WD - Degrees)

Station Owner: PAS

Monitoring Dates: March 1, 2005 to April 1, 2005
Summary

Calm Time:	5 hrs	1% calms	Operational Time:	739 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%				
Percentile	99	95	75	50	25	5	1	Average
	357.3	350.9	296.6	238.8	188.5	10.0	1.2	277 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-Mar-05	253	225	240	245	238	252	264	252	242	264	274	287	297	310	311	323	319	6	8	20	100	141	143	172	276
2-Mar-05	203	234	235	243	235	227	228	237	219	216	220	218	223	256	269	266	289	332	343	358	161	175	169	187	237
3-Mar-05	181	221	244	233	239	241	239	241	235	228	239	248	240	231	294	316	340	17	13	5	82	123	130	137	244
4-Mar-05	160	153	183	155	162	129	144	193	182	197	211	217	213	218	227	243	241	248	254	261	245	233	238	262	225
5-Mar-05	238	237	225	209	220	217	228	231	226	216	219	216	236	238	249	252	246	251	254	257	252	247	262	265	241
6-Mar-05	270	270	272	286	354	348	267	281	287	280	317	340	330	327	334	340	353	358	14	0	262	254	212	219	319
7-Mar-05	203	212	231	237	232	223	183	179	195	132	145	186	209	177	141	143	82	61	30	357	233	258	315	307	197
8-Mar-05	291	278	266	268	267	266	268	246	267	281	293	298	302	319	312	311	74	83	105	122	117	127	121	209	281
9-Mar-05	213	239	240	237	254	278	281	284	264	311	354	20	54	348	209	219	260	298	5	323	244	246	270	300	276
10-Mar-05	298	286	275	278	282	285	207	292	286	307	305	284	287	304	303	288	290	284	262	231	199	235	231	227	279
11-Mar-05	239	236	239	234	249	248	225	215	231	270	275	283	290	316	350	12	19	8	0	351	344	337	333	305	313
12-Mar-05	310	311	299	281	282	298	298	284	293	308	333	338	341	323	337	336	347	352	348	345	44	330	358	45	328
13-Mar-05	51	240	253	246	273	294	293	308	324	351	348	351	349	345	346	347	3	352	343	354	329	322	317	339	338
14-Mar-05	344	327	354	144	24	270	312	246	244	299	321	317	310	302	298	324	339	343	341	329	328	314	307	320	321
15-Mar-05	310	275	318	345	174	202	229	201	148	109	118	119	123	113	103	103	96	103	101	102	99	99	99	101	107
16-Mar-05	93	73	100	99	87	82	36	33	215	245	339	316	256	349	31	32	24	73	53	4	1	357	355	2	36
17-Mar-05	2	4	32	7	4	5	5	359	0	0	356	354	350	345	348	353	358	355	356	336	306	292	293	298	355
18-Mar-05	296	257	261	265	Calm	Calm	Calm	Calm	5	10	342	336	343	352	345	351	8	94	177	216	221	221	318	351	327
19-Mar-05	353	356	356	352	344	340	327	326	333	338	341	340	337	342	338	337	339	341	309	293	264	85	110	121	342
20-Mar-05	98	111	139	169	239	256	259	270	252	249	261	266	255	6	6	91	84	129	100	96	82	91	51	84	159
21-Mar-05	9	340	315	37	105	161	150	107	212	340	36	70	10	2	223	221	220	212	215	207	233	209	212	246	224
22-Mar-05	240	265	270	267	265	266	266	265	274	282	294	308	309	313	326	340	347	350	351	352	356	346	344	347	306
23-Mar-05	353	346	348	345	354	0	1	358	359	5	34	16	10	23	24	16	16	19	21	27	12	10	5	10	9
24-Mar-05	10	7	2	3	6	Calm	355	21	113	121	133	202	177	186	212	168	176	158	180	181	186	163	144	142	168
25-Mar-05	161	166	88	141	166	190	186	192	197	215	221	218	250	259	279	290	292	307	289	283	303	233	218	237	236
26-Mar-05	235	218	230	232	243	230	229	228	208	206	205	204	201	203	204	205	203	211	213	220	228	230	232	231	214
27-Mar-05	235	228	228	243	238	233	247	251	223	231	214	233	254	254	232	224	232	214	216	212	212	218	226	277	230
28-Mar-05	292	231	226	227	234	230	229	222	217	223	225	237	256	253	260	256	251	237	223	220	242	220	234	243	236
29-Mar-05	235	247	234	224	221	222	222	248	281	296	304	294	287	292	307	310	316	360	320	119	95	132	112	198	258
30-Mar-05	237	233	226	238	241	241	242	266	292	257	289	15	344	353	344	348	1	1	349	347	282	245	265	271	309
31-Mar-05	238	261	273	277	257	236	228	237	212	213	212	214	218	221	230	240	232	240	244	237	230	236	245	237	233
Hourly Avg	264	259	258	254	256	257	257	267	260	271	279	280	285	294	301	308	320	328	323	279	258	247	259	270	



Station: Crescent Heights

STANDARD DEVIATION TABLE

Wind Direction (WD - Degrees)

Station Owner: PAS

Monitoring Dates: March 1, 2005 to April 1, 2005

Summary

Determined by the Yamartino 15-min interval calculation

Calm Time:	5 hrs	1% calms	Operational Time:	739 hrs			
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%			
Percentile	99	95	75	50	25	5	1
	49.8	31.2	14.6	9.1	6.2	4.4	3.5

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

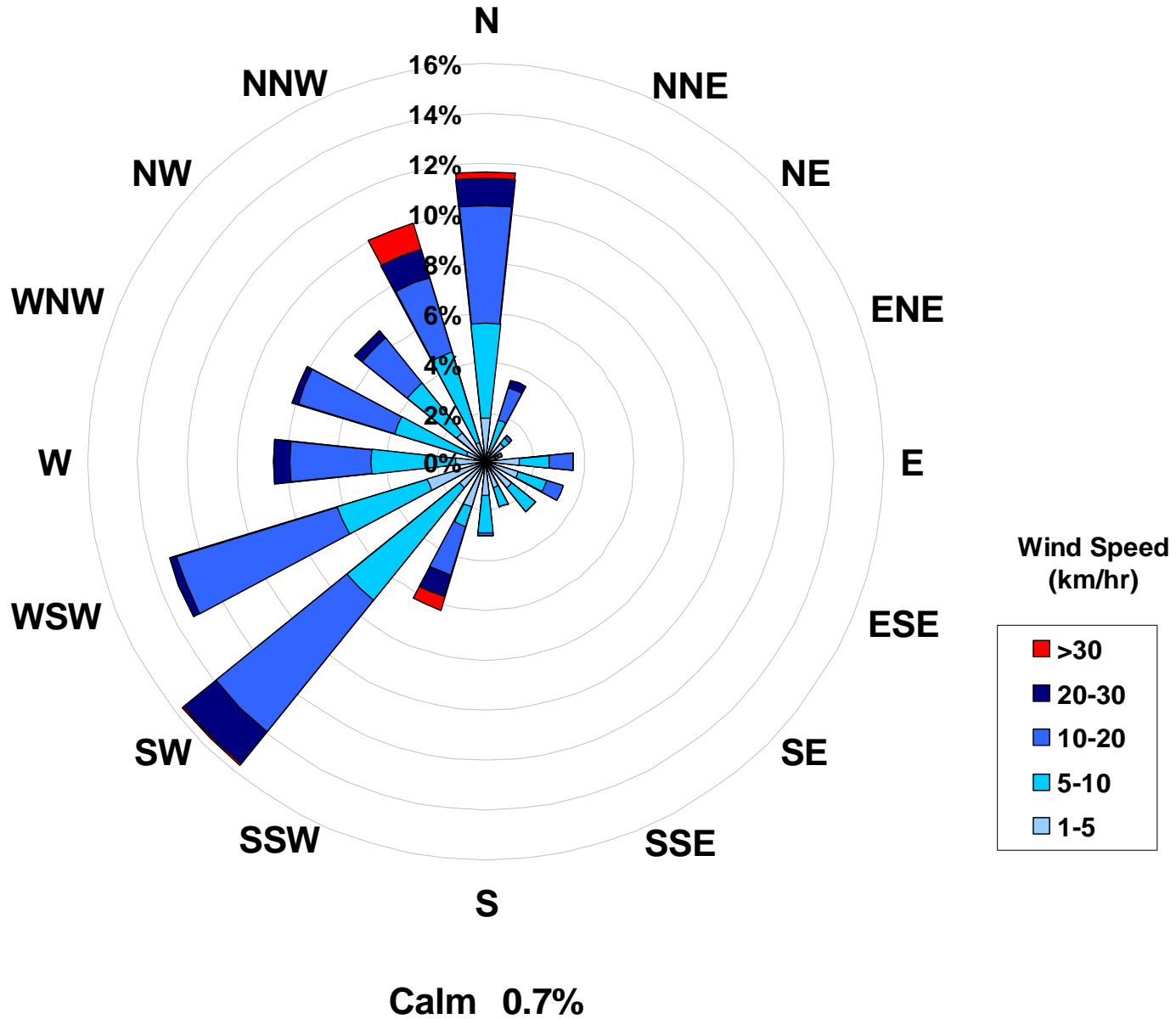
Day Mountain Standard Time

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00	0:00	Daily Maximum
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Mar-05	18	8	8	6	6	7	8	9	9	14	16	19	17	20	19	14	15	5	5	13	18	10	46	12		45.6	
2-Mar-05	10	8	7	8	6	6	5	20	17	15	9	9	14	18	23	27	22	4	3	28	24	15	8	8		27.6	
3-Mar-05	6	8	10	5	2	6	4	6	7	8	14	16	19	16	22	21	31	5	5	5	46	14	6	7		46.1	
4-Mar-05	7	11	10	15	9	11	9	10	11	11	19	8	10	13	9	9	7	6	7	7	5	4	5	8		18.8	
5-Mar-05	9	3	9	10	6	6	6	4	5	8	8	10	13	10	11	7	7	7	8	6	6	6	6	5		12.7	
6-Mar-05	5	5	4	15	14	23	14	23	11	8	9	6	8	6	6	5	4	4	4	28	13	14	11	9		28.5	
7-Mar-05	11	14	4	4	7	11	9	10	9	18	12	13	14	14	11	17	14	14	45	26	30	11	9	7		44.6	
8-Mar-05	11	7	6	7	5	5	6	6	11	7	12	14	16	16	18	25	39	15	6	9	6	5	14	25		39.3	
9-Mar-05	7	8	5	3	6	5	6	10	8	9	7	7	52	25	13	9	17	12	6	27	6	5	6	8		52.3	
10-Mar-05	7	6	5	4	6	19	47	36	31	18	15	18	12	12	14	11	10	8	8	11	12	5	8	10		47.2	
11-Mar-05	12	5	4	9	10	8	12	9	10	8	6	7	10	10	10	5	6	5	4	7	9	10	10	10		12.2	
12-Mar-05	7	7	7	6	8	9	10	8	8	8	7	6	5	8	7	6	5	5	5	6	24	45	29	12		45.3	
13-Mar-05	21	17	6	7	10	9	8	7	6	5	6	6	5	6	5	6	6	6	6	7	8	6	8	7		20.5	
14-Mar-05	8	14	15	41	17	21	15	16	15	20	19	17	16	12	13	9	5	5	6	5	19	6	27	31		41.0	
15-Mar-05	21	18	16	31	40	14	8	16	28	24	16	15	14	29	19	13	10	6	6	7	8	6	8	6		40.2	
16-Mar-05	8	8	7	6	10	8	13	12	59	14	19	22	32	66	12	10	11	21	9	6	4	6	4	4		65.6	
17-Mar-05	4	4	9	5	4	5	6	3	4	4	4	5	6	6	5	5	7	5	6	9	10	11	12	16		16.1	
18-Mar-05	13	15	10	16	Calm	Calm	Calm	Calm	12	12	15	15	17	18	14	12	27	24	21	14	6	9	14	5		26.7	
19-Mar-05	4	4	4	4	3	4	7	9	10	10	12	14	16	15	18	15	12	9	14	22	16	18	11	17		21.7	
20-Mar-05	18	12	13	18	11	16	9	10	21	16	20	25	35	54	25	16	14	16	8	6	13	26	28	41		54.1	
21-Mar-05	16	10	13	25	45	27	41	58	43	12	24	43	21	28	33	7	8	7	6	6	11	6	7	7		57.8	
22-Mar-05	6	6	6	7	8	6	9	8	7	11	12	12	14	16	11	9	7	6	5	6	5	6	5	6		16.1	
23-Mar-05	6	5	5	6	4	5	5	5	5	6	12	9	8	10	11	6	5	5	6	7	4	4	4	3		11.9	
24-Mar-05	3	5	5	4	32	Calm	5	38	24	25	32	20	22	25	13	29	16	19	10	8	7	9	31	45		45.5	
25-Mar-05	12	50	57	34	19	14	7	25	16	11	7	8	12	14	12	13	12	13	8	6	9	6	7	7		57.0	
26-Mar-05	7	9	6	8	20	9	14	31	8	8	8	7	8	6	7	6	5	5	5	4	4	6	9	11		30.8	
27-Mar-05	7	7	7	6	4	6	6	6	6	8	8	12	12	13	7	8	9	8	5	5	6	9	8	31		30.6	
28-Mar-05	19	11	10	8	15	16	11	17	10	8	9	12	12	9	7	9	15	4	4	4	6	12	8	6		19.4	
29-Mar-05	7	5	8	5	5	6	4	9	10	11	11	13	13	18	21	16	19	22	50	37	17	29	27	15		49.7	
30-Mar-05	7	8	6	9	10	12	12	11	19	21	18	50	12	10	8	6	7	6	6	5	19	22	16	7		50.5	
31-Mar-05	6	9	6	12	22	30	33	39	15	14	14	14	12	9	12	12	11	10	6	11	9	8	12	13		38.8	

Hourly Max	21	50	57	41	45	30	47	58	59	25	32	50	52	66	33	29	39	24	50	37	46	45	46	45	
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Wind Rose for the 1-hr Average Meterological Data at the Crescent Heights Site for March 2005





Station: Crescent Heights

STANDARD DEVIATION TABLE

Wind Direction (WD - Degrees)

Station Owner: PAS

Monitoring Dates: February 1, 2005 to March 1, 2005

Summary

Determined by the Yamartino 15-min interval calculation

Calm Time:	8 hrs	1% calms	Operational Time:	651 hrs			
Calibration Time:	0 hrs		AMD Operational Uptime:	98.1%			
Percentile	99	95	75	50	25	5	1
	46.3	33.3	15.4	9.4	6.7	4.5	4.0

Status Flag Characters

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

Day Mountain Standard Time

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00	0:00	Daily Maximum
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Feb-05	23	6	9	7	9	14	7	7	6	6	5	6	6	12	9	8	6	8	13	11	6	5	5	5	5	22.6	
2-Feb-05	4	7	8	5	5	4	4	5	4	4	5	4	5	5	12	8	8	49	22	36	21	25	15	14	49.0		
3-Feb-05	6	12	7	7	6	11	9	7	7	6	7	4	5	5	6	5	6	5	6	7	5	17	17	6	6	17.4	
4-Feb-05	5	7	6	6	13	4	4	7	8	8	6	7	9	9	10	8	7	7	7	7	9	9	6	7	7	12.8	
5-Feb-05	7	9	8	9	6	6	7	7	8	9	9	11	14	13	10	8	7	5	6	6	5	9	5	7	7	13.9	
6-Feb-05	8	21	14	7	7	9	7	5	10	11	18	20	20	13	10	12	10	6	8	9	9	11	9	8	8	21.0	
7-Feb-05	9	8	17	33	16	21	7	26	14	10	25	26	26	38	39	16	14	9	5	6	9	13	6	9	9	38.6	
8-Feb-05	21	7	12	Calm	Calm	Calm	36	16	9	7	8	10	13	9	10	11	8	7	7	9	7	10	4	5	5	36.4	
9-Feb-05	5	5	4	6	6	5	7	7	6	6	6	7	7	7	7	6	5	6	6	7	8	11	9	10	10	10.9	
10-Feb-05	14	13	7	7	25	15	24	7	6	5	9	10	11	12	9	9	7	8	6	5	9	9	10	4	4	25.4	
11-Feb-05	5	7	10	16	14	11	18	11	12	8	8	15	10	19	16	19	10	20	26	11	13	24	21	10	10	25.6	
12-Feb-05	15	17	36	15	12	16	5	9	21	9	17	11	8	5	8	6	8	7	N	N	N	N	N	N	N	36.2	
13-Feb-05	N	N	N	7	7	31	34	8	8	7	7	14	10	8	7	6	4	4	13	7	20	35	10	6	6	34.7	
14-Feb-05	5	6	6	5	6	8	49	8	11	43	19	N	33	21	29	27	20	15	27	20	23	18	17	37	7	49.3	
15-Feb-05	5	7	15	8	7	5	7	6	6	9	8	9	9	9	9	8	10	8	8	12	5	4	17	34	4	33.8	
16-Feb-05	10	11	3	17	11	7	5	4	7	7	11	11	7	11	15	N	N	4	19	35	54	Calm	21	18	18	53.8	
17-Feb-05	19	40	30	15	8	14	29	18	10	N	35	18	15	16	12	9	8	6	13	19	13	47	18	26	26	46.9	
18-Feb-05	35	19	11	12	15	15	15	13	18	10	6	11	10	11	10	27	10	8	5	7	9	7	6	5	5	34.6	
19-Feb-05	5	9	7	5	6	16	9	14	14	15	21	33	15	19	15	13	9	8	7	8	9	8	7	8	8	33.3	
20-Feb-05	10	8	12	14	17	18	10	6	8	9	12	11	11	14	11	14	12	9	19	6	17	39	Calm	22	22	38.6	
21-Feb-05	32	9	9	10	11	8	7	4	7	8	16	14	18	25	16	14	12	10	7	7	9	19	15	6	6	32.3	
22-Feb-05	8	13	12	9	12	14	12	32	6	6	6	9	13	16	18	9	6	5	3	15	43	39	16	14	14	42.8	
23-Feb-05	13	5	4	10	6	4	5	13	12	12	7	9	14	17	14	16	17	22	8	13	7	5	4	6	6	21.8	
24-Feb-05	5	4	5	6	3	5	5	5	4	6	8	9	9	12	22	30	22	4	11	19	35	13	15	33	33	35.3	
25-Feb-05	12	48	20	12	14	26	29	14	7	12	13	20	23	37	19	20	17	12	12	40	17	18	29	13	13	48.3	
26-Feb-05	30	20	28	46	17	17	15	14	16	13	11	21	11	14	13	9	6	6	5	43	15	8	8	6	6	45.7	
27-Feb-05	14	8	7	7	6	7	9	16	19	23	33	41	20	19	18	13	10	4	5	6	5	5	11	8	8	40.8	
28-Feb-05	Calm	16	20	Calm	14	23	15	18	Calm	36	13	63	55	30	31	19	18	23	26	9	9	6	30	14	14	62.5	
																											0.0
																											0.0
																											0.0

Hourly Max	35	48	36	46	25	31	49	32	21	43	35	63	55	38	39	30	22	49	27	43	54	47	30	37	37
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Passive Monitoring – March 2005

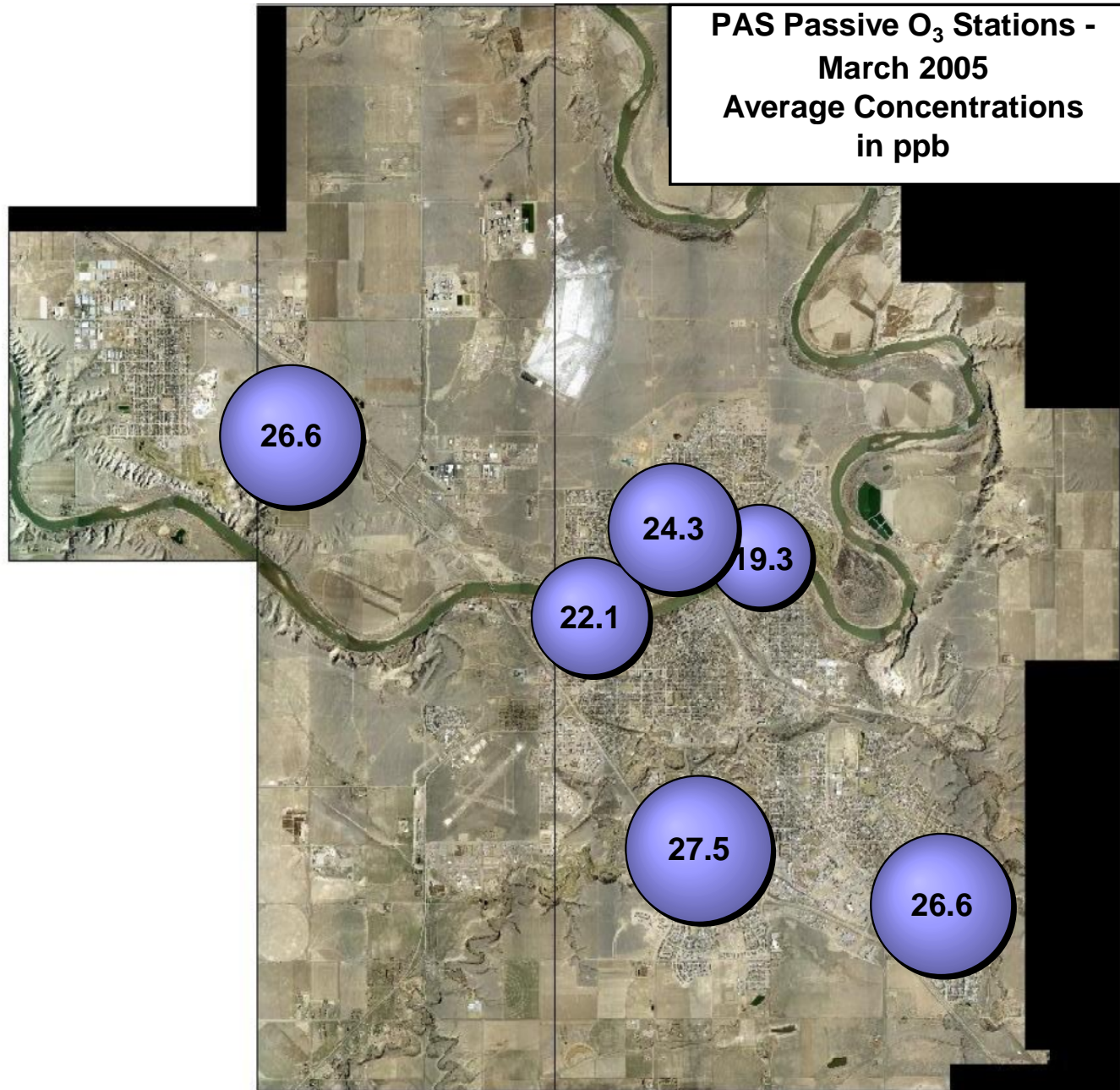
Ambient Air Compliance Network

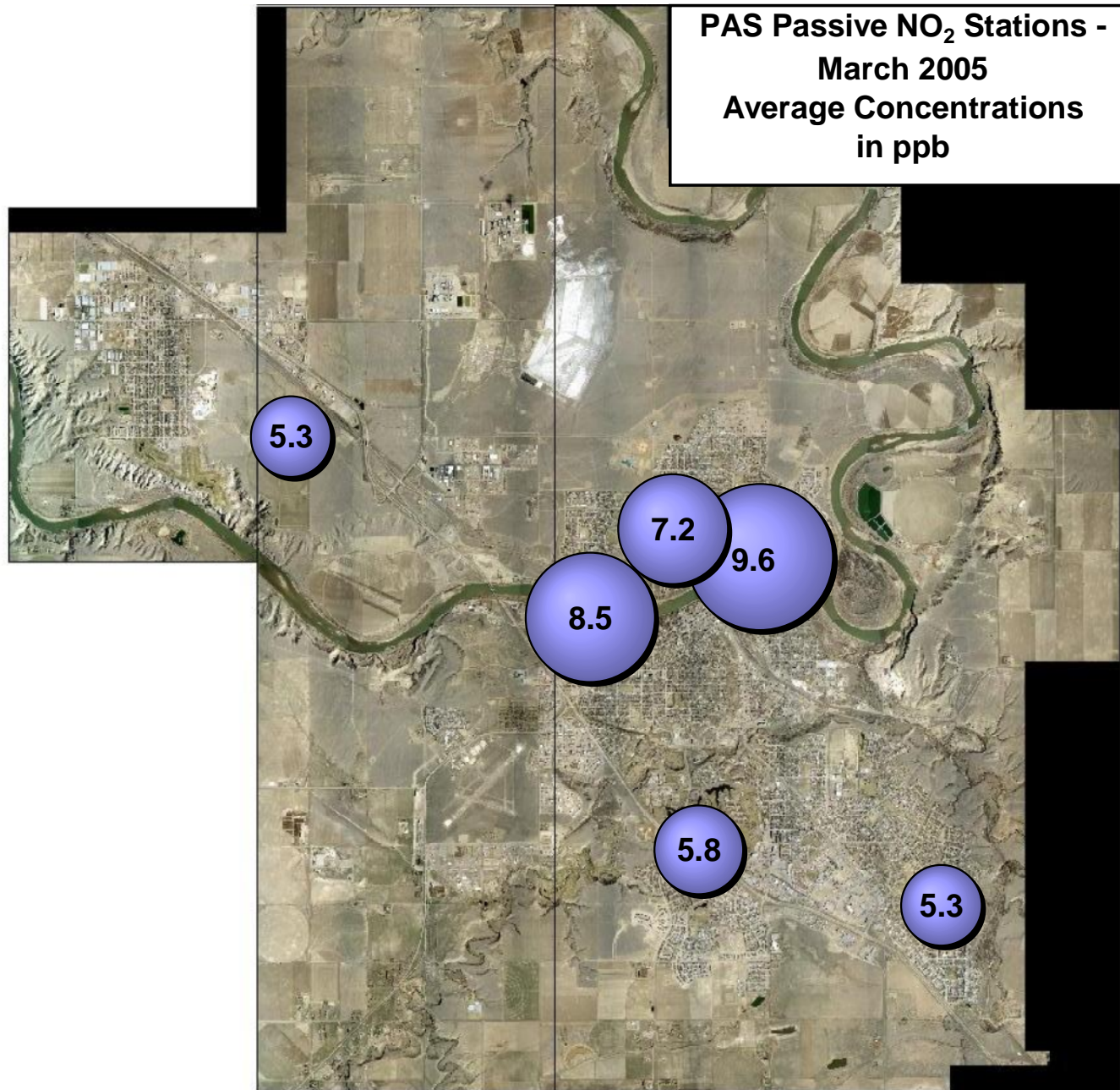


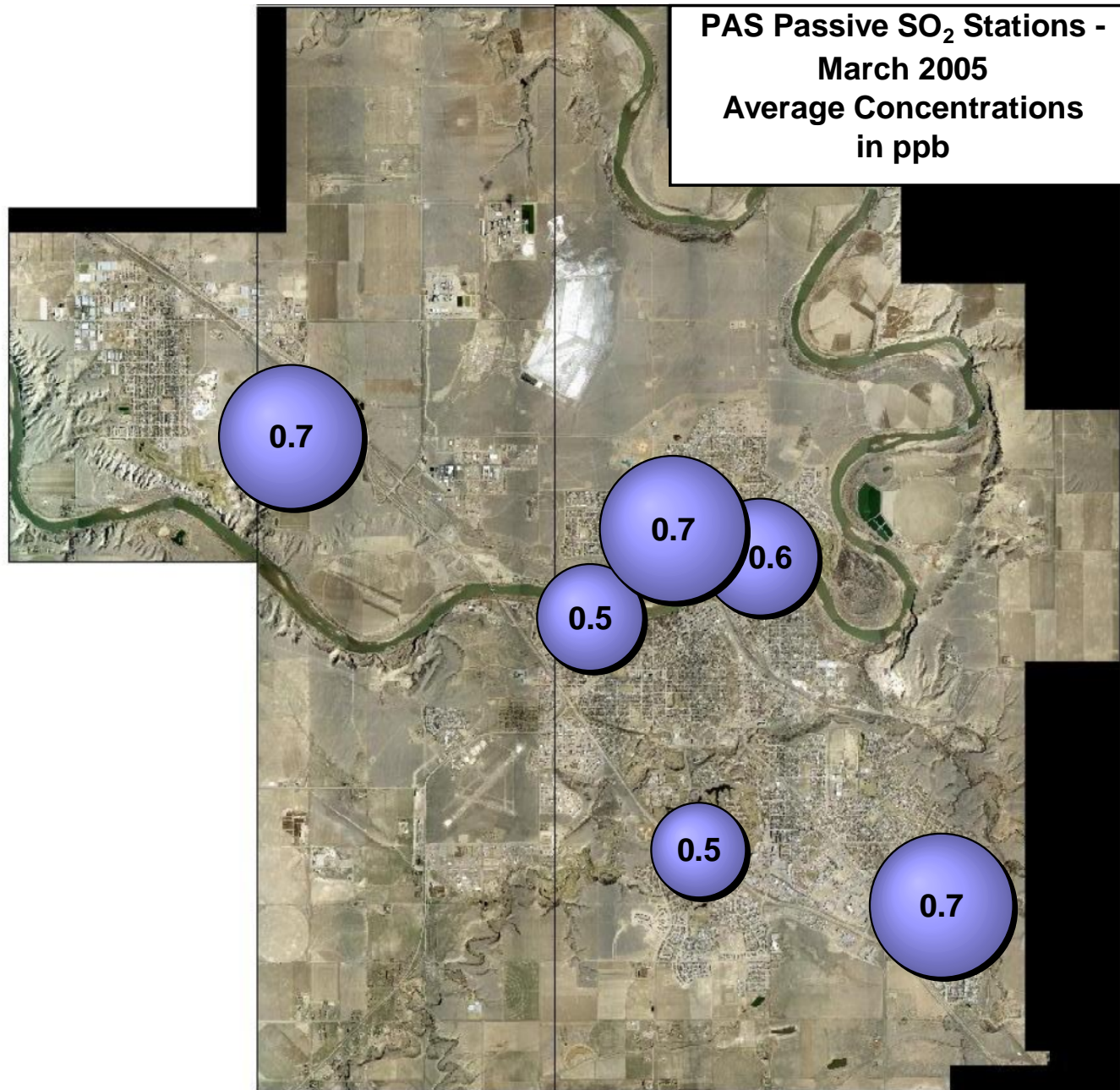
Palliser Airshed Society - PAS Passive Stations for March 2005

Station Number	Station	SO ₂ ppb	O ₃ ppb	NO ₂ ppb	Location		
	Name				Easting	Northing	Elevation
Duplicates							
4a	Redcliff	0.6	27.9	3.9			
4b	Redcliff	0.8	25.3	6.7			
1	Hospital	0.5	22.1	8.5	521648	5542721	698
2	Ball Park	0.6	19.3	9.6	524019	5543686	660
3	Monitoring Station	0.7	24.3	7.2	522812	5544133	714
4	Redcliff	0.7	26.6	5.3	517448	5545608	725
5	Southridge	0.5	27.5	5.8	523172	5539016	721
6	Christian School Park	0.7	26.6	5.3	526577	5538133	709

Stats:							
	Mean	0.6	24.0	7.3			
	Standard Deviation	0.1	3.3	1.8			
	Minimum	0.5			5	Southridge	
	Maximum	0.7			3	Monitoring Station	
	Minimum		19.3		2	Ball Park	
	Maximum		27.5		5	Southridge	
	Minimum			5.3	4	Redcliff	
	Maximum			9.6	2	Ball Park	







March 2005 - Calibration Reports

PAS - Crescent Heights Station

O₃, NO_x, NO, NO₂, THC

Calibration Report

Parameter 03
 Air Monitoring Network Palliser Airshed



Station Information

Calibration Date	March 3, 2005	Previous Calibration	February 16, 2005
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)	18:22	End Time (MST)	20:55
Barometric Pressure	0.924 ATM	Station Temperature	22.0 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	0.995335	Calculated slope	1.037485
Calculated intercept	2.094589	Calculated intercept	2.149496
Analyzer make	API Model 400E	Analyzer serial #	331

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	-2.3	ppb	-2.4	ppb
coefficient	1.137		1.149	
Lamp measure	2962	mV	2937	mV
Lamp Reference	2963	mV	2941	mV
Pressure	26.0	inches Hg	25.6	inches Hg
Sample Flow	726	ccm	718	ccm
Lamp temp	52	Deg C	52	Deg C

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	-1.8	N/A
4995	0.00	323.7	310.2	1.0436
4995	0.00	182.6	173.6	1.0520
4995	0.00	89.4	83.9	1.0657
4995	0.00	0.0	-1.8	0.0000
4995	0.00	323.7	304.4	1.0634
Average Correction Factor				1.0537

Calculated value of As Found Response: 306.8 ppm Percent Change of As Found: -5.2%

	before calibration		after calibration	
Auto zero	0.6	ppb	0.5	ppb
Auto span	349.1	ppb	364.2	ppb

Notes: Analyzer was span adjusted. Could not adjust right to calculated concentration due to analyzer limits on slope factor.

Calibration Performed By: Kelly Baragar

Calibration Summary

Parameter O3
 Air Monitoring Network Palliser Airshed

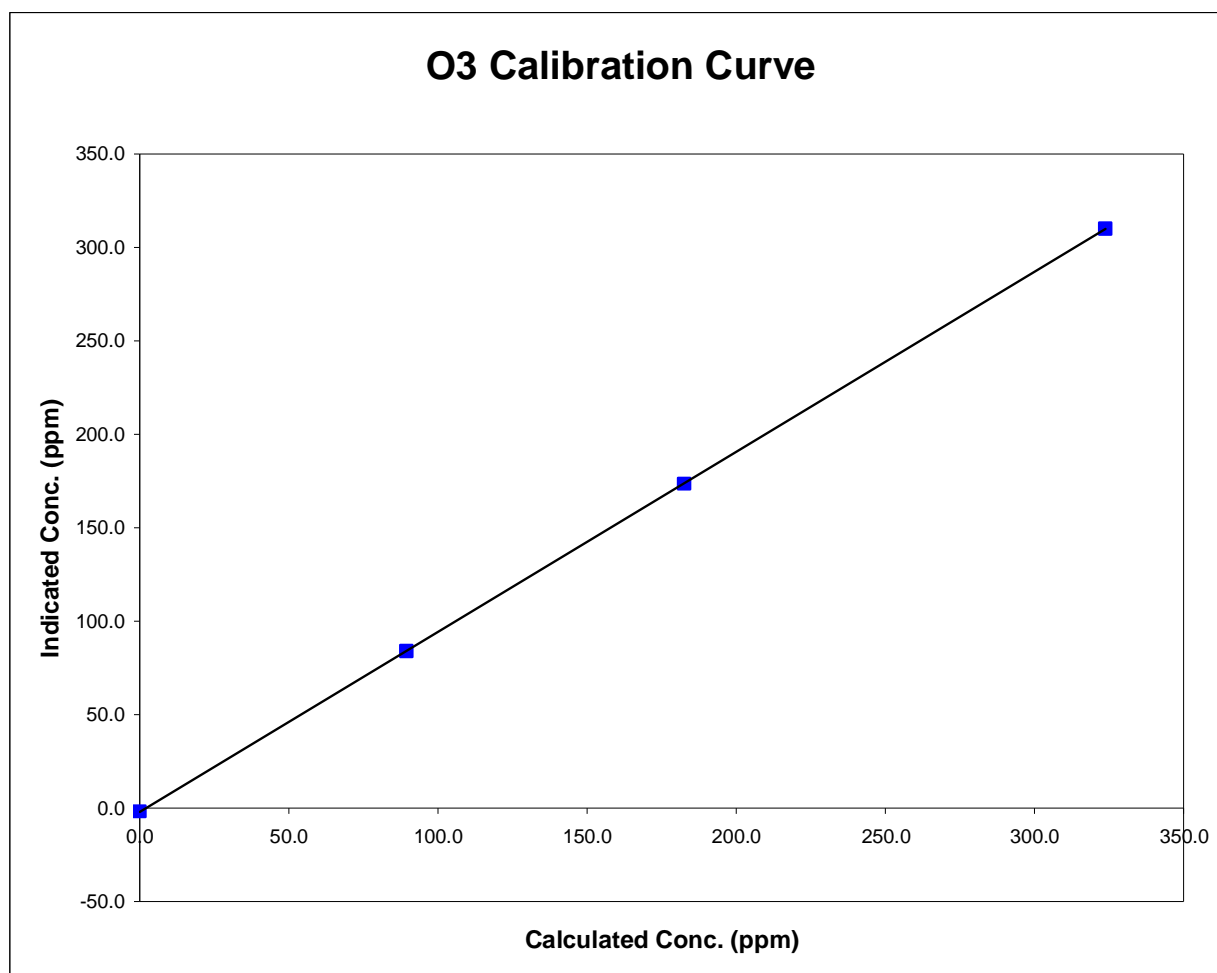


Station Information

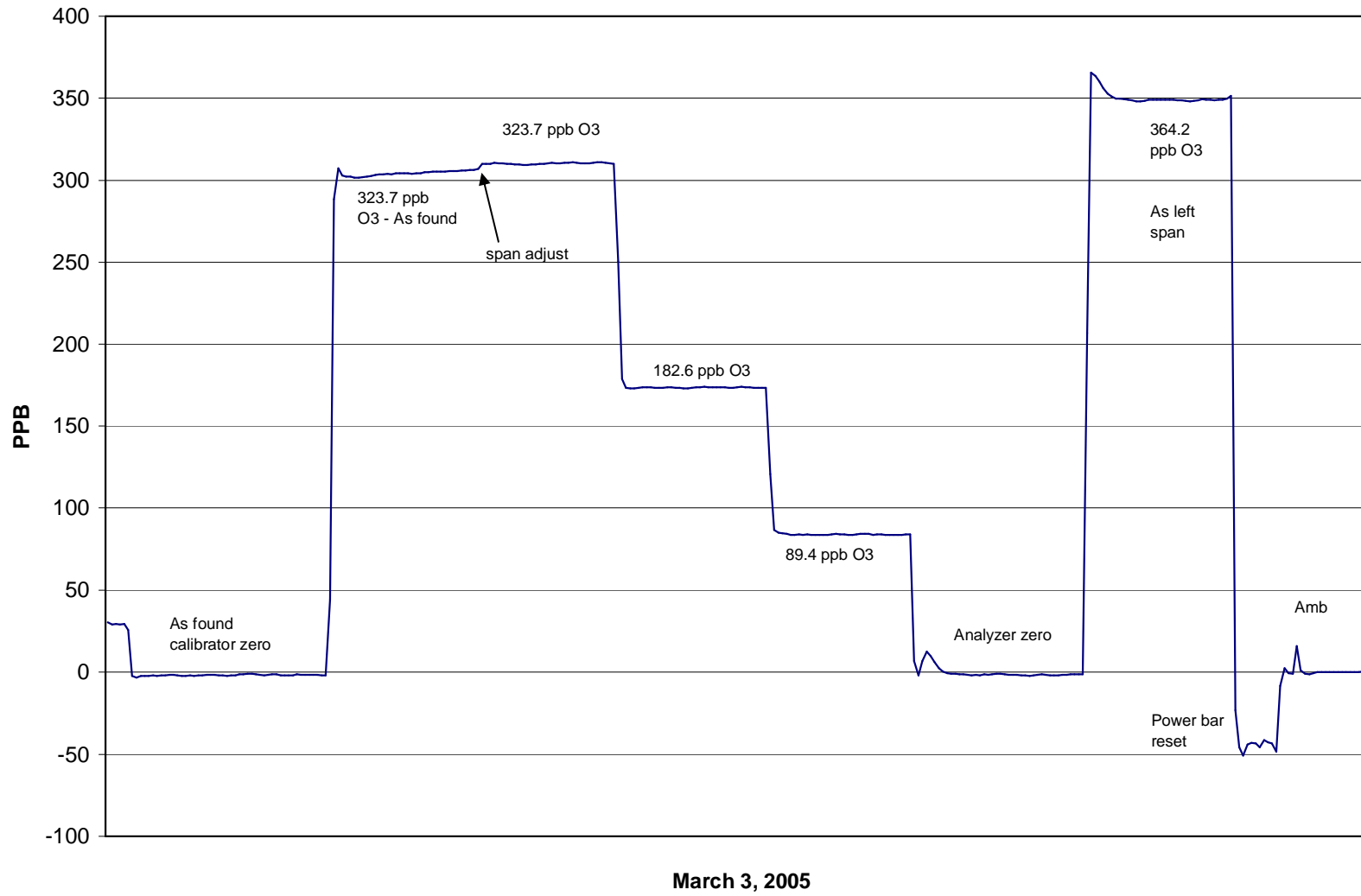
Calibration Date	March 3, 2005	Previous Calibration	February 16, 2005
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	18:22	End Time (MST)	20:55
Analyzer make/model	API Model 400E	Analyzer serial #	331

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
323.7	310.2	1.0436	Correlation Coefficient	0.999994
182.6	173.6	1.0520		
89.4	83.9	1.0657		
0.0	-1.8	N/A	Slope	1.037485
			Intercept	2.149496



O3 Calibration



Calibration Report

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



Station Information

Calibration Date March 3, 2005 Previous Calibration February 16, 2005
 Station Number 1 Station Location Crescent Heights

Reason: Routine Installation Removal Other: _____

Start Time (MST) 12:45 End Time (MST) 17:20
 Barometric Pressure 0.924 ATM Station Temperature 20.0 Deg C
 Calibrator Envionics 6100 Serial Number 3016
 NO Cal Gas Conc 50.5 ppm Cal Gas Expiry Date 12-Dec-05
 NOx Cal Gas Conc 50.5 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	0.998427	0.996635	1.003811
	Data Offset	-1.761479	-0.930582	-0.771769
After	Data Slope	1.013112	1.010299	1.010444
	Data Offset	-2.440406	-1.765449	-0.708667
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	-1.1	mV	-1.1	mV
NO _x background	0.9	mV	0.9	mV
NO coefficient	1.704		1.706	
NO _x coefficient	1.703		1.702	
Chamber Temp	50.0	Deg C	49.9	Deg C
Cooler Temp	7.1	Deg C	7.0	Deg C
Azero	32.9		34.1	
Perm Temp	40.2	Deg C	40.2	Deg C
Pressure	3.6	inches Hg	3.6	inches Hg
Sample Flow	460.0	ccm	455.0	ccm

Notes: Analyzer was span adjusted.

Calibration Report

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



Station Information

Calibration Date: March 3, 2005 Station Location: Crescent Heights

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NO _x conc (ppb)	Calculated NO conc (ppb)	Calculated NO ₂ conc (ppb)	Indicated NO _x conc (ppb)	Indicated NO conc (ppb)	Indicated NO ₂ conc (ppb)	NO _x Correction factor	NO Correction factor
zero	4993	0.00	0.0	0.0	0.0	1.8	1.2	1.5	N/A	N/A
1	4993	39.97	401.1	401.1	0.0	399.1	398.4	2.1	1.0049	1.0068
2	4993	19.97	201.2	201.2	0.0	199.7	198.1	2.7	1.0074	1.0157
3	4993	9.97	100.6	100.6	0.0	102.1	100.8	2.1	0.9855	0.9989
AFZ	4993	0.00	0.0	0.0	0.0	1.8	1.2	1.5	0.0000	0.0000
AFS	4993	39.97	401.1	401.1	0.0	402.2	404.8	-1.2	0.9970	0.9906
Average Correction Factor									0.9993	1.0071

As Found Concentrations NO_x= 399.5 NO= 402.8 As Found Percent Change NO_x= -0.4% NO= 0.4%

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	403.2	402.2	0.9	399.5	398.8	1.5	N/A	N/A	N/A	N/A
350	403.2	79.4	323.7	399.6	79.3	321.0	1.0090	1.0015	1.0085	99.2%
200	403.2	220.5	182.6	401.9	218.9	184.2	1.0032	1.0072	0.9917	100.8%
100	403.2	313.8	89.4	400.9	311.2	91.0	1.0056	1.0082	0.9821	101.8%
Average Correction Factor							1.0059	1.0056	0.9941	100.6%

AIC Data

Parameter	Previous calibration				Current calibration			
	NO _x	NO ₂	NO	ppb	NO _x	NO ₂	NO	ppb
Auto zero	1.5	-0.6	0.6	ppb	0.5	-1.4	1.1	ppb
Auto span	474.9	466.2	8.4	ppb	458.0	449.6	9.1	ppb

Calibration Performed By: Kelly Baragar

Calibration Summary

Parameter NO₂
 Air Monitoring Network Palliser Airshed

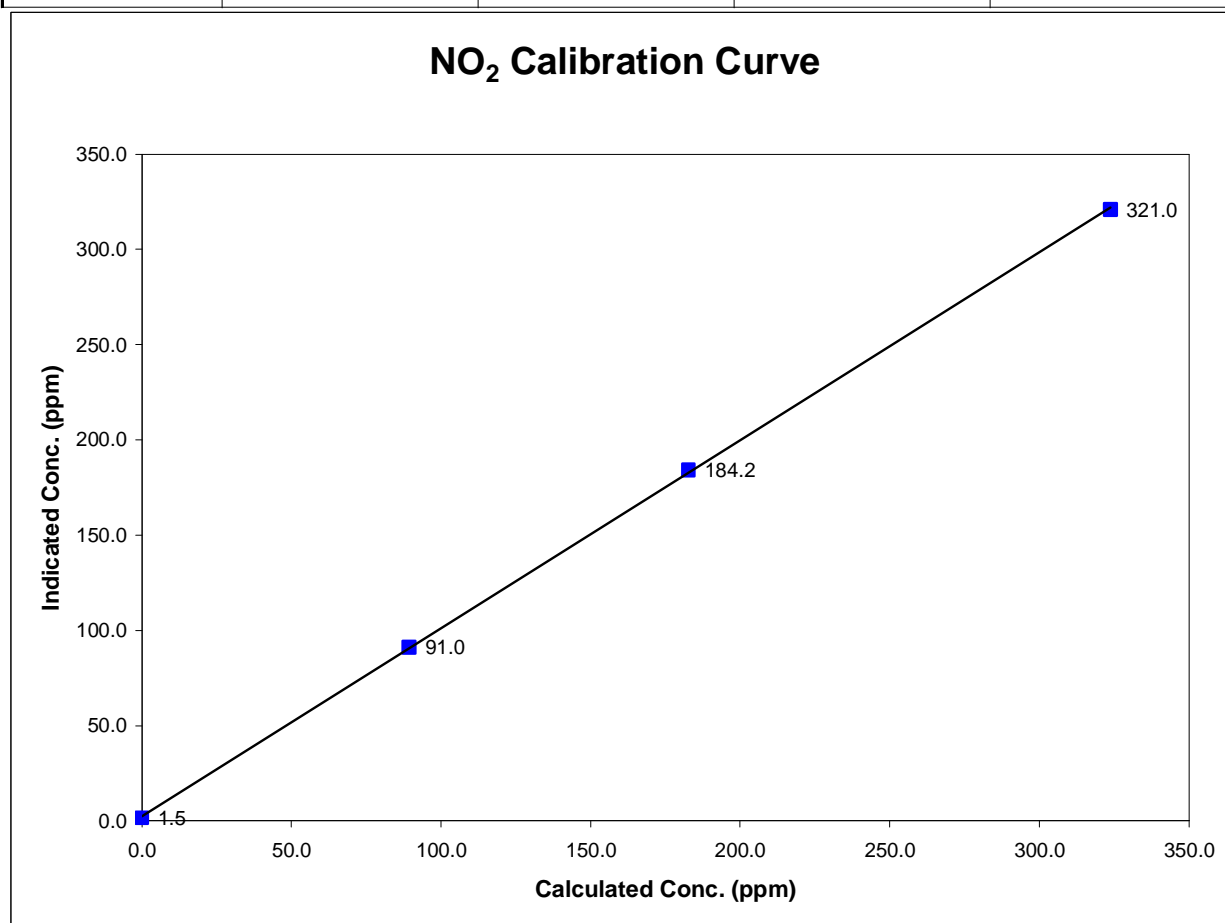


Station Information

Calibration Date	March 3, 2005	Previous Calibration	February 16, 2005
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	12:45	End Time (MST)	17:20
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	1.5	0.0000	Correlation Coefficient	0.999926
89.4	91.0	0.9821		
182.6	184.2	0.9917		
323.7	321.0	1.0085		
			Slope	1.013112
			Intercept	-2.440406



Calibration Summary

Parameter NO_x
 Air Monitoring Network Palliser Airshed

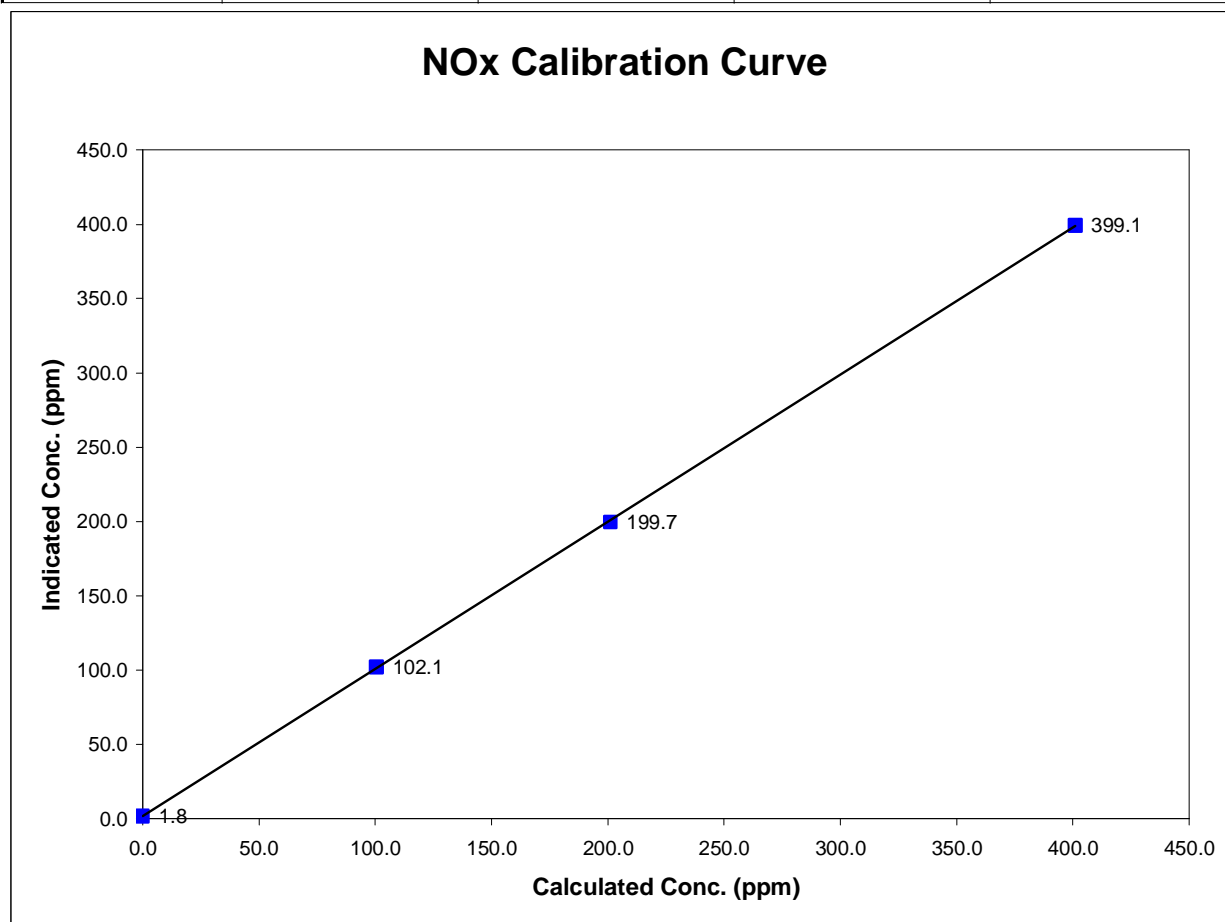


Station Information

Calibration Date	March 3, 2005	Previous Calibration	February 16, 2005
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	12:45	End Time (MST)	17:20
Analyzer make	API Model 200E	Analyzer serial #	219

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.8	0.0000	Correlation Coefficient	0.999976
401.1	399.1	1.0049		
201.2	199.7	1.0074		
100.6	102.1	0.9855		
			Slope	1.010299
			Intercept	-1.765449



Calibration Summary

Parameter NO
 Air Monitoring Network Palliser Airshed

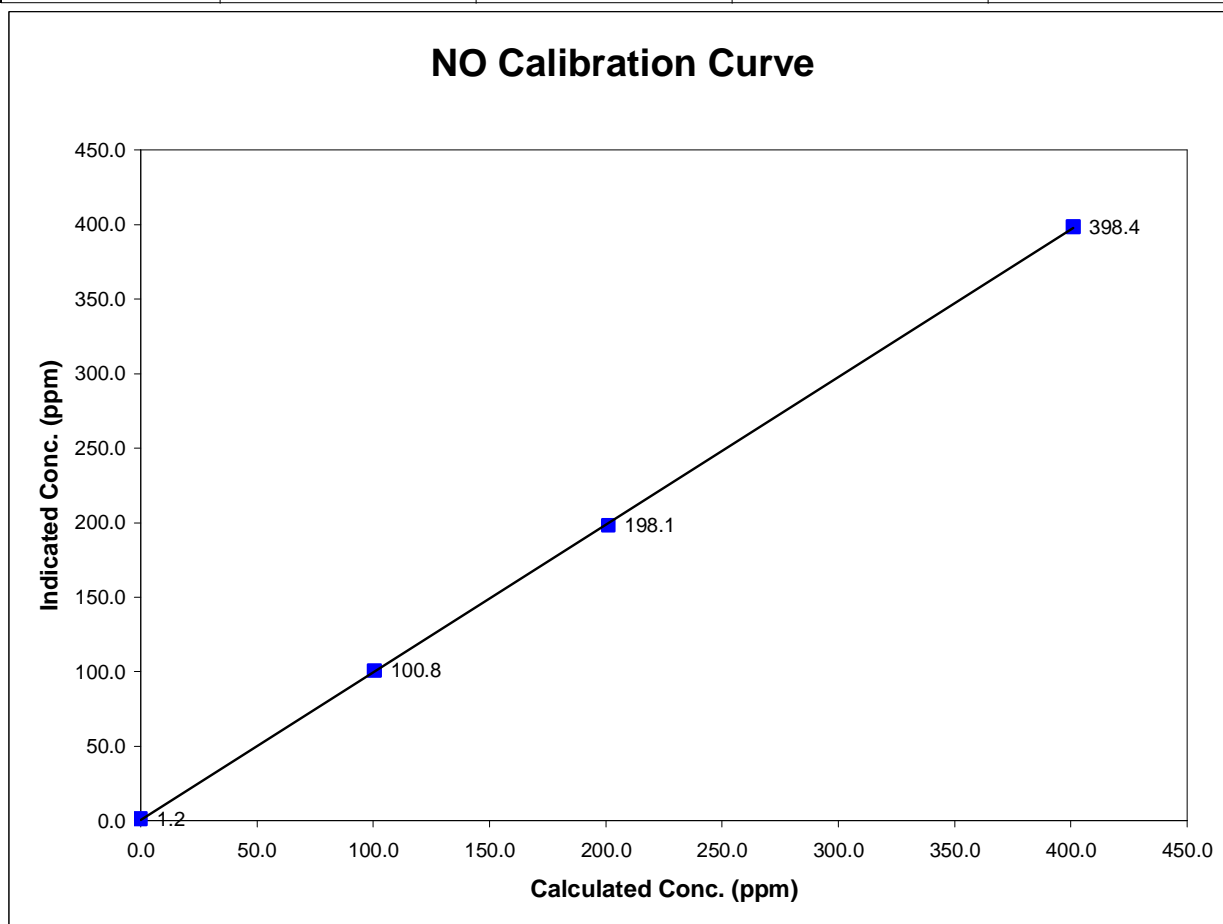


Station Information

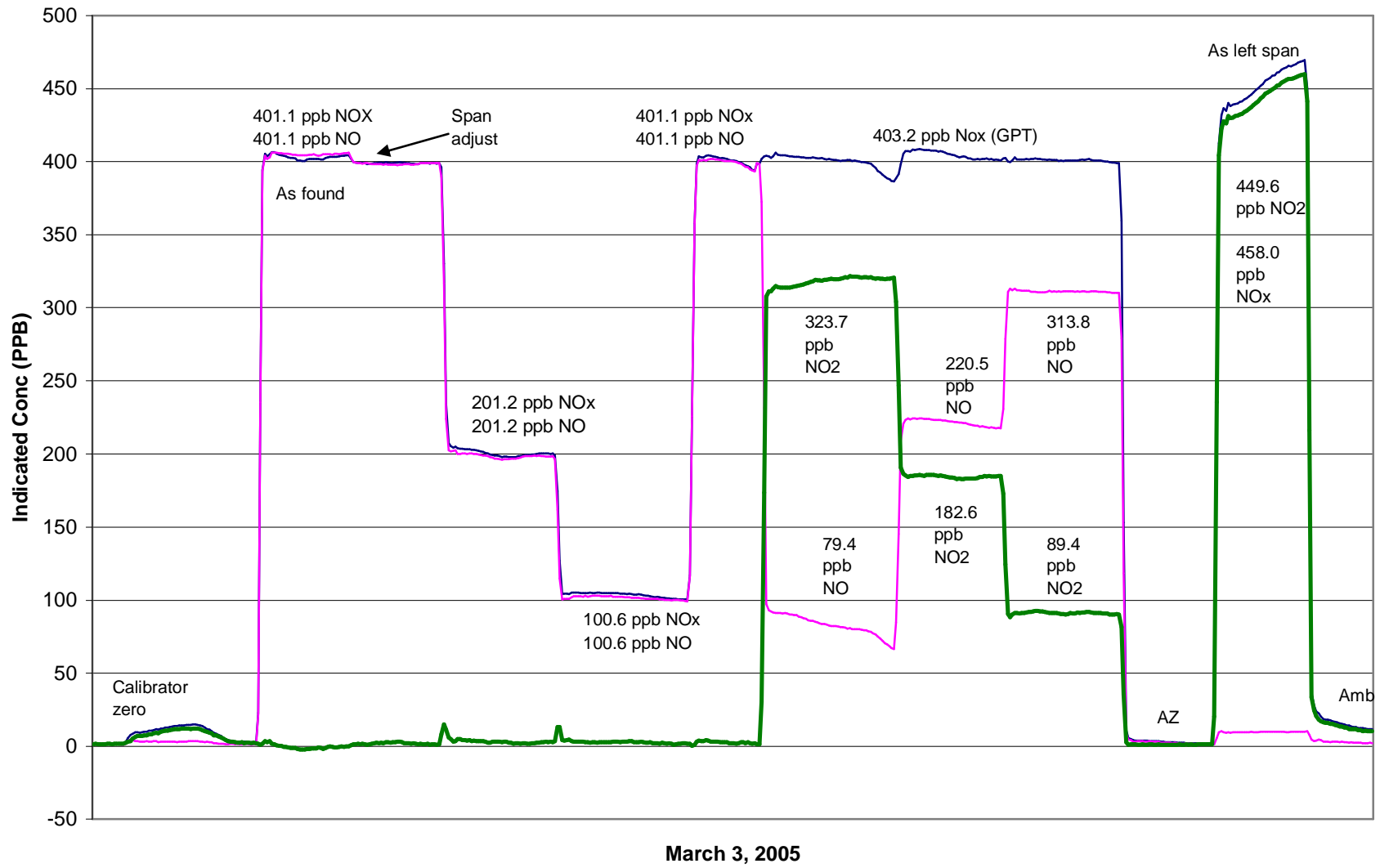
Calibration Date	March 3, 2005	Previous Calibration	February 16, 2005
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	12:45	End Time (MST)	17:20
Analyzer make	API Model 200E	Analyzer serial #	219

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.2	N/A		
401.1	398.4	1.0068	Correlation Coefficient	0.999953
201.2	198.1	1.0157		
100.6	100.8	0.9989	Slope	1.010444
			Intercept	-0.708667



NOx Calibration



Calibration Report

Parameter THC
 Air Monitoring Network Palliser Airshed



Station Information

Calibration Date	March 3, 2005	Previous Calibration	Feb 16 & 17, 2005
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)		End Time (MST)	
Barometric Pressure	0.924 ATM	Station Temperature	21.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas Concentration	700 ppm CH ₄ / 301 ppm C ₃ H ₈	Cal Gas Expiry Date	8/28/2005
Cal Gas CH ₄ equiv	1527.75 ppm	Cal Gas Cylinder #	ALM030358
DACS make	Focus AP1000	DACS serial No.	45270
DACS voltage range	0 - 10 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
DACS slope	0.005000	DACS slope	0.005000
DACS intercept	0.000000	DACS intercept	0.000000
Calculated slope	1.008397	Calculated slope	0.988595
Calculated intercept	-0.058267	Calculated intercept	0.078515
Analyzer make	TEI model 51C-LT	Analyzer serial #	407505596

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
THC sample pressure	5.74	PSI	5.74	PSI
THC span counts	10690	raw	10690	raw
THC zero counts	1711	raw	1711	raw

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
2994	0.00	0.00	-0.06	N/A
2994	39.98	20.13	20.31	0.9913
2994	19.98	10.13	10.11	1.0018
2994	9.97	5.07	5.06	1.0016
zero	0.00	0.00	-0.06	As Found Zero
2994	39.98	20.13	20.31	As Found Span
Average Correction Factor				0.9982

Calculated value of As Found Response: 20.483 ppm Percent Change of As Found: -1.7%

	before calibration		after calibration	
Auto zero	-0.03	ppm	0.00	ppm
Auto span	22.08	ppm	21.61	ppm

Notes: No adjustments performed.

Calibration Performed By: Kelly Baragar

Calibration Summary

Parameter THC
 Air Monitoring Network Palliser Airshed

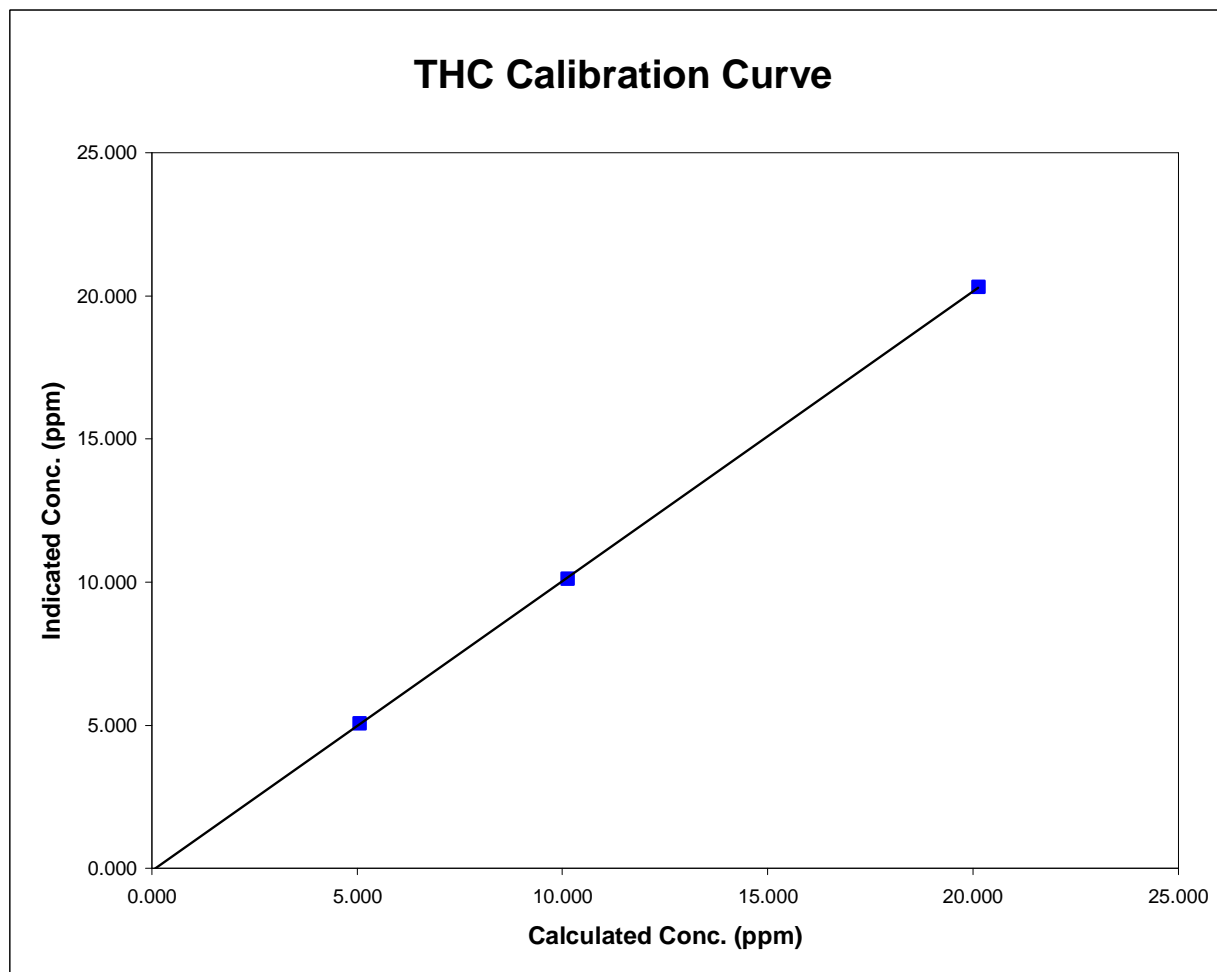


Station Information

Calibration Date	March 3, 2005	Previous Calibration	Feb 16 & 17, 2005
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	0:00	End Time (MST)	0:00
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	-0.061	N/A		
20.132	20.309	0.9913	Correlation Coefficient	0.999981
10.128	10.109	1.0018		
5.071	5.062	1.0016	Slope	0.988595
			Intercept	0.078515



THC Calibration

