Palliser Airshed Society

Ambient Air Monitoring Network Summary

July 2005

Prepared By:

FOCUS
AIR QUALITY MONITORING

TABLE OF CONTENTS

Airshed Zone Association – July PAS Ambient Air Summary Report **3**
PAS - Cresent Heights AQI Monthly Summary **5**
PAS - Cresent Heights Nitrogen Dioxide Monthly Summary **6**
PAS - Cresent Heights Nitric Oxide Monthly Summary **11**
PAS - Cresent Heights Oxides of Nitrogen Monthly Summary **13**
PAS - Cresent Heights Ozone Monthly Summary **17**
PAS - Cresent Heights Ozone Monthly Summary **22**
PAS - Cresent Heights Carbon Monoxide Monthly Summary **23**
PAS - Cresent Heights Carbon Monoxide Monthly Summary **28**
PAS - Cresent Heights Total Hydrocarbons Monthly Summary **29**
PAS - Cresent Heights Particulate Matter (less than 2.5 microns) Monthly Summary **34**
PAS - Cresent Heights Relative Humidity Monthly Summary **39**
PAS - Cresent Heights Temperature Monthly Summary **41**
PAS - Cresent Heights Solar Radiation Monthly Summary **43**
PAS - Cresent Heights Scalar Wind Speed Monthly Summary **45**
PAS - Cresent Heights Vector Wind Speed Monthly Summary **46**
PAS - Cresent Heights Wind Direction Monthly Summary **47**
PAS - Cresent Heights Standard Deviation of Wind Direction Monthly Summary **48**
Passive Monitoring – July 2005 ..... **50**
July 2005 - Calibration Reports **55**

TABLE OF FIGURES

Figure 1. PAS - Cresent Heights Nitrogen Dioxide 1-hr Average Monthly Trend 7
Figure 2. PAS - Cresent Heights Nitrogen Dioxide 1-hr Maximum Value Monthly Trend 9
Figure 3. PAS - Cresent Heights Oxides of Nitrogen 1-hr Average Monthly Trend 14
Figure 4. PAS - Cresent Heights Oxides of Nitrogen 1-hr Maximum Value Monthly Trend 16
Figure 5. PAS - Cresent Heights Ozone 1-hr Average Monthly Trend 18
Figure 6. PAS - Cresent Heights Ozone 1-hr Maximum Value Monthly Trend 20
Figure 7. PAS - Cresent Heights Carbon Monoxide 1-hr Average Monthly Trend 24
Figure 8. PAS - Cresent Heights Carbon Monoxide 1-hr Maximum Value Monthly Trend 26
Figure 9. PAS - Cresent Heights Total Hydrocarbons 1-hr Average Monthly Trend 30
Figure 10. PAS - Cresent Heights Total Hydrocarbons 1-hr Maximum Value Monthly Trend 32
Figure 11. PAS - Cresent Heights Particulate Matter (less than 2.5 microns) 1-hr Average Monthly Trend 35
Figure 12. PAS - Cresent Heights Particulate Matter (less than 2.5 microns) 1-hr Maximum Value Monthly Trend 37
Figure 13. PAS - Cresent Heights Relative Humidity 1-hr Average Monthly Trend 40
Figure 14. PAS - Cresent Heights Temperature 1-hr Average Monthly Trend 42
Figure 15. PAS - Cresent Heights Solar Radiation 1-hr Average Monthly Trend 44

Palliser Airshed Society

July 27, 2005

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 – July 2005

Enclosed is the PAS Ambient Monitoring Report for the month of **July 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 90% uptime for the month of July. There were no significant events leading to emergency response for the month of July.

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

- Monthly average concentrations of NO_2 was 6.5 ppb
- Monthly average concentrations for O_3 was 29.1 ppb
- Monthly average concentrations for CO was 0.17 ppm
- Monthly average concentrations for $PM_{2.5}$ was 3.8 $\mu g/m^3$

Passive Monitoring – Six Stations throughout the PAS zone:
The following are the ranges for July 2005 recorded by the six passive stations located throughout the PAS zone.

- Monthly average concentrations for SO_2 passives ranged from 0.1 ppb to 0.3 ppb
- Monthly average concentrations for NO_2 passives ranged from 3.6 ppb to 5.1 ppb
- Monthly average concentrations for O_3 passives ranged from 25.1 ppb to 36.6 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

July 2005 Monthly Overall Summary Report

Ambient Air Quality Data

Jul-2005	Palliser Airshed Society						Maximum Recorded Values						
							1-hr				24-hr / 8-hr		
Pollutant	**Objectives**		**Station**	**Monthly**	**Exceedence**		Conc	Day	WSPD	WDIR	Conc	Day	**Operational**
(units)	1-hr	24-hr		**Average**	1-hr	24-hr			(km/hr)	(Sector)			**Time (%)**
SO_2 (**ppb**)	172	57	Cresent Heights										
NO (**ppb**)			Cresent Heights	1.7	-	-	32.8	Jul-31 23:00	3.1	SSE	4.4	Jul-15	92.6%
NO_2 (**ppb**)	212	106	Cresent Heights	6.5	0	0	31.0	Jul-25 22:00	3.0	W	10.5	Jul-15	92.6%
NO_X (**ppb**)			Cresent Heights	8.1	-	-	56.9	Jul-31 23:00	3.1	SSE	14.8	Jul-15	92.6%
O_3 (**ppb**)	82		Cresent Heights	29.1	0	-	54.3	Jul-29 16:00	5.5	E	40.7	Jul-23	92.6%
O_3 (**ppb**) - **8-hr**	65		Cresent Heights		0						50.7	Jul-02	
CO (**ppm**)	13		Cresent Heights	0.17	0	-	0.6	Jul-01 00:00	12.5	SW	0.4	Jul-01	92.3%
CO (**ppm**) - **8-hr**	5		Cresent Heights		0						0.6	Jul-01	
THC (**ppm**)			Cresent Heights	1.93	-	-	3.0	Jul-25 22:00	3.0	W	2.2	Jul-12	92.1%
TRS (**ppb**)			Cresent Heights										
H_2S (**ppb**)	10	3	Cresent Heights										
$PM_{2.5}$ (**µg/m^3**)		30 [a]	Cresent Heights	3.8		0	25.3	Jul-13 18:00	18.1	NW	6.7	Jul-22	90.1%
RH (**%**)			Cresent Heights	52.8	-	-	-	-	-	-	-	-	92.6%
SR (**W/m^2**)			Cresent Heights	304.3	-	-	-	-	-	-	-	-	92.6%
Temp (**°C**)			Cresent Heights	21.4	-	-	-	-	-	-	-	-	92.6%
WSPD v (km/hr)			Cresent Heights	8.8	-	-	-	Jul-06 12:00	32.5	SW	13.6	6-Jul	92.6%
WSPD s (km/hr)			Cresent Heights	9.3	-	-	-	Jul-06 12:00	32.8	SW	15.3	23-Jul	92.6%
WDIR (Deg)			Cresent Heights	N	-	-	-	-	-	-	-	-	92.6%

Note: [a] the draft 1-hr Alberta Ambient Air Quality Objectives

* Wind Direction is the predominate direction for the Month

Continuous Monitoring

Ambient Air Monitoring Network

Crescent Heights Station

General Station Issues

Power to the station suffered a loss of one phase from July 9 to 11. This resulted in low voltage to the station causing all instrumentation to fail over that period. Once full power was restored, all instrumentation was checked and found to be operating properly.

Parameter	Make	Model	Units	Notes
Ozone	Teledyne - API	400E	ppb	No operational issues observed.
Nitrogen Dioxide	Teledyne - API	200E	ppb	No operational issues observed.
Total Hydrocarbons	Bendix	400A	ppm	No operational issues observed.
Carbon Monoxide	TEI	49C	ppm	No operational issues observed.
PM 2.5	R&P TEOM	1400ab	$\mu g/m^3$	No operational issues observed.
Wind Speed	Met One	010C	kph	No operational issues observed.
Wind Direction	Met One	020C	Deg	No operational issues observed.
Ambient Temperature	Met One	083D	DegC	No operational issues observed.
Relative Humidity	Met One	083D	%	No operational issues observed.
Solar Radiation	Met One	096-1	W/m^2	No operational issues observed.
Data Acquisition System	Titan Logix	AP1000		No operational issues observed.

PAS - Cresent Heights AQI Monthly Summary

Station: Cresent Heights
Station Owner: PAS

Air Quality Index (AQI)

Monitoring Dates: July 1, 2005 to August 1, 2005

Alberta's Air Quality Index

Good	1	to	25
Fair	26	to	50
Poor	51	to	100
Very Poor	>		100

Summary

Number of 1-hr Good Readings:	631
Number of 1-hr Fair Readings:	19
Number of 1-hr Poor Readings:	0
Number of 1-hr Very Poor Readings:	0

Status Flag Characters

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

Day **Mountain Standard Time**

Hour Start / Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00
1-Jul-05	13	9	9	11	12	11	11	13	14	16	20	22	24	25	26	25	26	27	27	24	21	16	A	13
2-Jul-05	14	13	15	10	9	6	9	17	21	23	25	29	25	25	28	28	25	19	21	20	15	A	19	14
3-Jul-05	12	15	12	11	9	9	9	9	10	12	16	18	18	17	18	18	17	17	17	15	A	8	7	5
4-Jul-05	3	3	3	3	7	8	8	10	12	13	14	16	16	17	18	18	19	20	19	A	14	9	8	6
5-Jul-05	4	4	6	7	8	8	8	10	13	16	18	19	20	18	17	18	18	19	A	16	10	6	6	10
6-Jul-05	7	8	12	12	9	9	9	10	14	15	18	20	20	18	19	20	18	A	10	8	8	11	10	10
7-Jul-05	11	9	11	10	9	8	8	10	13	15	18	20	22	22	21	20	A	20	18	19	14	14	10	8
8-Jul-05	6	6	10	10	8	7	10	14	17	18	20	21	21	23	22	A	22	20	21	20	17	10	9	11
9-Jul-05	7	8	7	9	N	9	11	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
11-Jul-05	N	N	N	N	N	N	N	N	N	N	17	N	N	N	19	19	19	17	15	A	9	5	7	
12-Jul-05	6	5	7	4	3	3	6	8	15	18	21	24	A	27	27	25	23	20	19	A	12	11	10	8
13-Jul-05	8	8	6	8	8	8	7	12	14	16	17	22	24	24	25	27	27	27	A	21	20	16	13	12
14-Jul-05	13	11	9	7	5	6	8	9	11	14	17	17	17	18	19	19	18	A	18	17	14	13	10	7
15-Jul-05	4	5	4	4	5	5	6	9	11	13	16	20	20	21	20	18	A	15	13	12	15	5	6	8
16-Jul-05	8	9	7	7	7	7	7	9	14	16	13	15	18	16	18	A	17	14	10	8	9	9	8	7
17-Jul-05	10	9	6	7	6	6	7	7	8	11	15	17	17	17	A	19	19	18	18	16	11	12	7	7
18-Jul-05	8	8	8	8	4	4	8	10	12	12	13	13	15	A	16	16	18	15	18	16	10	13	18	17
19-Jul-05	16	13	11	9	11	11	11	15	19	22	24	24	A	25	25	25	24	22	20	20	20	19	17	15
20-Jul-05	12	8	15	15	13	12	10	11	14	18	20	A	21	22	23	25	27	26	25	23	21	17	12	11
21-Jul-05	10	7	7	9	8	8	9	8	11	13	A	18	20	21	22	22	23	23	23	21	20	17	15	15
22-Jul-05	17	18	20	17	18	17	17	19	20	A	22	23	22	23	23	23	21	19	19	17	16	15	15	16
23-Jul-05	14	14	17	22	20	20	21	23	A	24	24	22	23	24	23	21	22	21	22	21	16	20	18	16
24-Jul-05	16	14	9	10	10	11	10	A	11	13	13	14	15	15	14	14	14	13	16	15	13	11	9	4
25-Jul-05	5	4	3	2	3	3	A	8	11	14	14	14	16	18	A	A	A	A	A	A	A	11	7	7
26-Jul-05	7	7	A	9	7	6	6	8	10	15	17	19	20	20	21	20	19	18	19	17	17	17	16	14
27-Jul-05	14	14	A	14	12	10	11	13	15	16	17	18	18	18	18	19	18	19	19	18	17	16	13	11
28-Jul-05	12	A	9	11	10	10	11	13	15	17	19	20	21	21	20	21	19	20	19	16	12	11	10	15
29-Jul-05	A	18	13	11	10	8	9	8	9	12	15	19	22	24	25	26	29	28	28	24	19	13	10	A
30-Jul-05	9	15	18	16	13	11	13	16	16	20	22	25	26	24	21	21	21	22	23	20	17	11	A	11
31-Jul-05	10	7	8	11	9	11	11	12	15	20	21	23	24	24	25	24	24	25	22	20	18	A	8	8

PAS - Cresent Heights Nitrogen Dioxide Monthly Summary

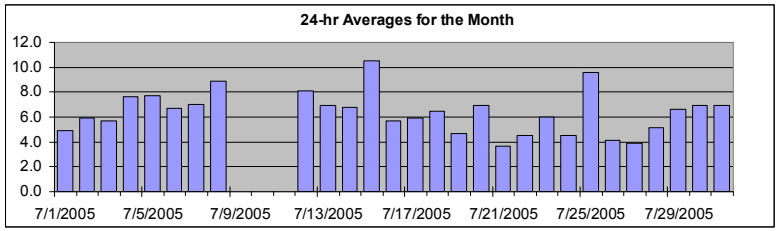
Station: Cresent Heights
Station Owner: PAS

HOURLY AVERAGE TABLE

Nitrogen Dioxide (NO_2)

Monitoring Dates: July 1, 2005 to August 1, 2005

Objective Limit: **Alberta Environment:** 1-hr 212 ppb | 24-hr 106 ppb



Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	31.0	ppb	25-Jul	22:00 23:00
Maximum 24-hr Average:	10.5	ppb	15-Jul	

AIC Time:	32 hrs	Operational Time:	654 hrs
Calibration Time:	3 hrs	AMD Operational Uptime:	92.6%

Percentile	99	95	75	50	25	5	1	Average
	22.8	15.5	8.5	5.1	3.1	1.8	1.3	6.5 ppb

Status Flag Characters

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

Day **Mountain Standard Time**

Hour Start / Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Jul-05	10	9	6	4	4	4	6	5	4	4	4	3	3	3	2	5	5	2	2	2	4	8	A	14	4.9	14.3
2-Jul-05	8	7	5	6	8	15	8	5	3	2	1	1	4	8	3	2	3	6	4	4	10	A	10	11	5.9	14.6
3-Jul-05	10	3	6	4	5	4	6	4	5	5	3	2	3	2	2	2	1	2	2	4	A	19	19	19	5.7	19.5
4-Jul-05	13	10	10	10	6	9	7	5	3	3	2	2	4	3	2	2	3	3	4	A	19	30	13	13	7.6	30.1
5-Jul-05	18	18	8	6	5	5	5	4	4	3	3	3	2	4	6	4	4	3	A	13	17	21	14	6	7.7	21.3
6-Jul-05	12	12	5	4	7	11	9	9	6	4	4	3	2	3	3	2	4	A	16	9	9	6	7	7	6.7	16.2
7-Jul-05	5	4	3	5	5	10	9	6	4	3	4	5	4	3	5	6	A	11	11	10	16	10	11	12	7.0	15.9
8-Jul-05	16	14	5	5	10	11	9	5	5	4	2	2	4	2	2	A	10	9	5	5	9	19	26	24	8.9	25.9
9-Jul-05	22	18	15	11	6	7	5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	22.3
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Jul-05	N	N	N	N	N	N	N	N	N	N	2	N	N	N	N	3	5	3	4	9	A	24	22	14	N	23.8
12-Jul-05	11	11	7	14	13	14	13	13	8	5	2	2	2	1	1	2	3	6	5	A	12	15	13	11	8.1	15.3
13-Jul-05	9	8	7	5	7	7	7	7	4	6	9	3	4	3	6	5	6	5	A	3	5	13	16	15	6.9	16.2
14-Jul-05	9	8	6	7	10	11	7	5	5	5	3	3	2	2	2	3	5	A	9	7	10	11	12	14	6.8	14.4
15-Jul-05	13	11	12	13	17	13	10	8	8	8	11	5	3	3	2	2	A	12	15	12	19	18	18	8	10.5	19.4
16-Jul-05	6	7	10	12	7	10	8	7	3	3	4	2	2	2	3	A	4	3	8	7	5	4	6	10	5.7	11.6
17-Jul-05	7	8	9	5	7	7	5	5	3	3	2	2	2	3	A	5	4	4	4	6	13	8	13	9	5.9	13.4
18-Jul-05	6	5	4	5	12	12	8	7	3	3	3	3	2	A	7	9	8	11	5	9	18	6	2	2	6.5	17.6
19-Jul-05	3	5	7	9	6	6	6	7	3	2	2	2	A	7	5	4	3	3	3	4	4	5	6	7	4.7	8.7
20-Jul-05	9	13	6	5	6	7	10	9	5	2	2	A	8	6	5	4	4	6	8	11	11	11	5	3	6.9	13.4
21-Jul-05	4	7	4	3	5	5	5	7	5	2	A	5	4	3	2	2	2	2	2	2	2	4	4	4	3.7	6.8
22-Jul-05	2	2	2	7	4	9	7	3	4	A	5	5	6	5	4	5	4	6	2	5	5	6	5	2	4.5	8.5
23-Jul-05	4	3	2	4	10	6	5	3	A	7	6	10	9	5	7	9	4	8	8	7	13	3	3	4	6.0	12.9
24-Jul-05	3	4	9	6	6	4	3	A	8	5	4	3	2	2	2	2	2	3	1	2	3	4	7	18	4.5	17.6
25-Jul-05	10	10	12	10	11	11	A	13	10	7	8	C	C	C	A	A	1	1	1	3	7	14	31	13	9.6	31.0
26-Jul-05	9	6	A	9	7	9	8	7	5	3	2	1	2	2	1	2	2	6	2	2	2	2	2	3	4.2	9.2
27-Jul-05	4	3	A	8	5	7	8	6	4	3	3	3	3	2	2	2	3	2	1	3	3	3	4	7	3.9	8.1
28-Jul-05	5	A	11	5	5	5	5	3	2	2	4	4	3	3	3	2	5	2	5	7	11	14	9	5	5.1	13.8
29-Jul-05	A	9	6	4	5	6	5	9	7	7	8	6	4	4	3	3	3	4	3	4	9	16	22	A	6.6	22.2
30-Jul-05	24	6	3	3	6	9	9	7	8	3	2	2	2	3	3	6	7	6	4	7	7	14	A	16	6.9	23.7
31-Jul-05	14	15	10	6	9	6	5	4	3	2	3	4	2	4	2	3	3	1	5	6	7	A	21	24	6.9	23.5
Hourly Avg	9.5	8.5	7.1	6.8	7.5	8.2	7.1	6.4	4.9	3.9	3.8	3.3	3.3	3.3	3.3	3.7	4.0	4.8	5.2	5.9	9.3	11.5	12.0	10.5		
Hourly Max	23.7	18.4	14.7	13.9	17.3	14.6	12.9	13.4	10.3	8.3	10.7	10.1	8.5	7.7	7.0	9.1	10.4	11.7	16.2	12.7	19.4	30.1	31.0	24.4		

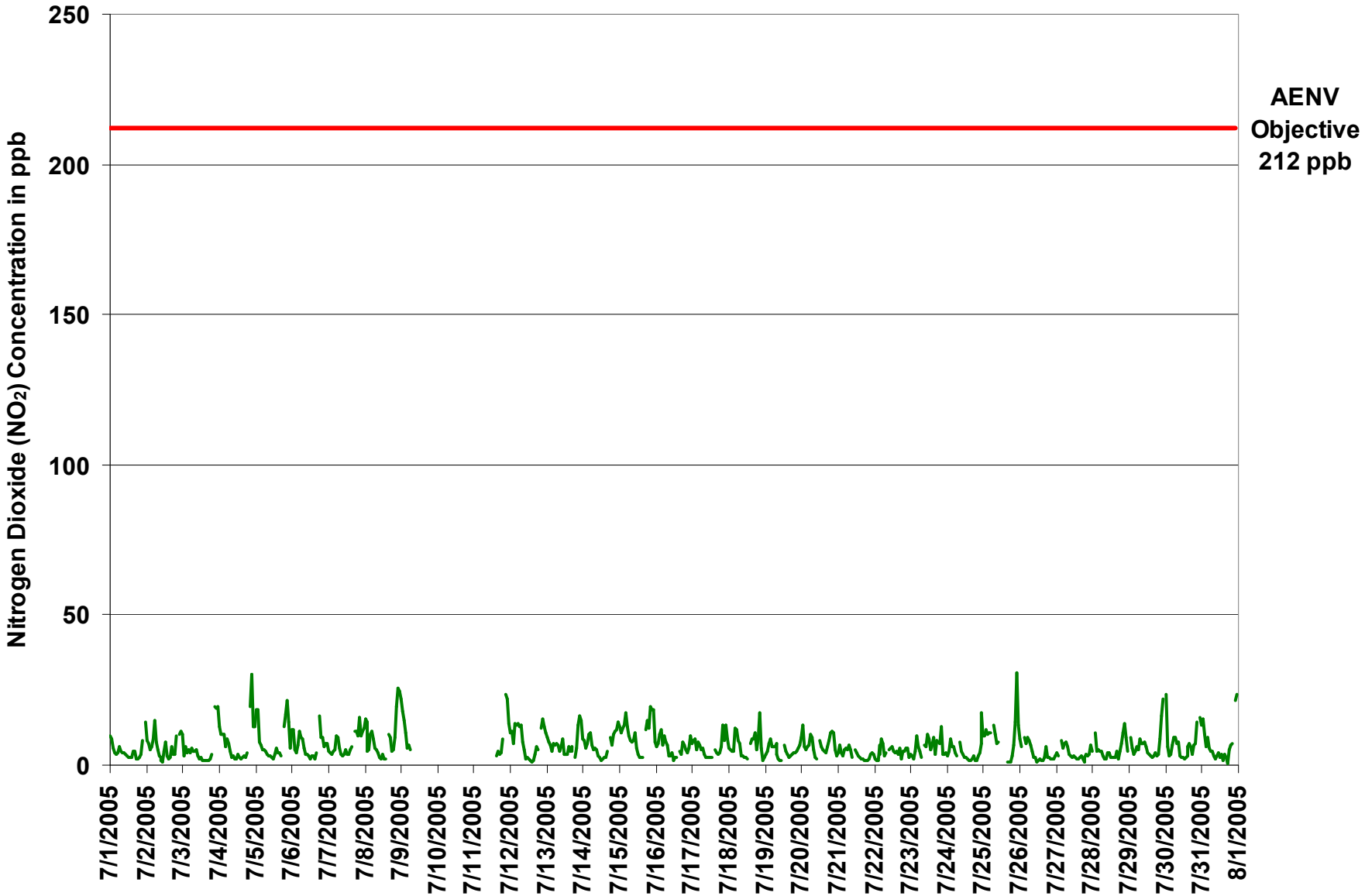


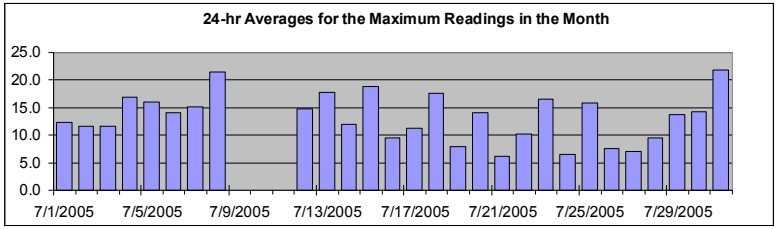
Figure 1. PAS - Cresent Heights Nitrogen Dioxide 1-hr Average Monthly Trend

Station: Cresent Heights
Station Owner: PAS

HOURLY MAXIMUM TABLE

Nitrogen Dioxide (NO_2)

Monitoring Dates: July 1, 2005 to August 1, 2005



Summary

Maximum 1-hr Value:	54.9	ppb	1-Jul	15:00 16:00
Maximum 24-hr Value:	21.8	ppb	31-Jul	

AIC Time:	32 hrs	Operational Time:	654 hrs
Calibration Time:	3 hrs	AMD Operational Uptime:	92.6%

Percentile	99	95	75	50	25	5	1	Average
	45.2	35.6	18.6	10.0	5.6	3.1	2.3	13.5 ppb

Status Flag Characters

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

Day **Mountain Standard Time**

Hour Start / Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Jul-05	17	34	17	6	5	6	10	7	12	20	7	5	4	4	4	55	13	7	3	4	7	15	A	20	12.3	54.9
2-Jul-05	11	10	8	10	21	26	12	9	9	6	3	3	9	32	10	6	5	14	8	7	14	A	15	17	11.6	32.0
3-Jul-05	29	4	27	9	15	9	23	7	8	19	5	3	6	3	3	3	3	3	3	7	A	24	29	27	11.7	29.4
4-Jul-05	20	13	28	15	9	25	15	13	4	21	3	3	41	21	4	5	5	5	29	A	28	39	18	25	17.0	41.4
5-Jul-05	25	32	16	18	9	9	7	6	6	6	4	16	11	9	36	9	10	7	A	30	32	38	27	8	16.0	38.3
6-Jul-05	21	27	9	6	10	42	15	11	7	5	5	5	4	13	36	3	10	A	34	15	15	12	9	11	14.1	42.2
7-Jul-05	6	5	7	10	9	25	12	8	5	4	5	8	42	6	30	36	A	20	21	13	28	13	19	18	15.2	42.1
8-Jul-05	26	36	15	28	33	22	25	21	32	20	4	3	35	12	3	A	19	16	6	6	15	37	42	37	21.5	41.9
9-Jul-05	32	37	28	26	14	21	8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	36.7
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Jul-05	N	N	N	N	N	N	N	N	N	N	14	N	N	N	N	37	26	15	10	13	A	33	42	28	N	41.5
12-Jul-05	15	17	12	20	16	19	14	17	14	9	6	4	3	7	3	12	27	19	20	A	17	35	16	22	14.9	34.5
13-Jul-05	26	37	16	11	10	18	9	9	10	14	23	9	17	22	15	12	13	12	A	4	10	36	44	33	17.9	44.4
14-Jul-05	16	30	7	9	21	25	11	7	17	7	6	5	3	3	4	5	7	A	15	8	16	16	17	18	12.0	30.2
15-Jul-05	15	14	19	26	21	19	13	14	9	11	23	10	46	11	4	4	A	26	25	19	32	25	33	12	18.8	45.8
16-Jul-05	9	10	12	20	10	19	12	11	4	6	10	6	3	4	6	A	8	5	16	10	11	5	7	13	9.5	19.9
17-Jul-05	9	12	17	7	11	9	9	8	7	4	3	4	5	6	A	6	5	5	7	11	34	18	45	17	11.2	44.8
18-Jul-05	10	6	23	19	19	33	28	17	5	13	4	20	4	A	10	24	32	38	11	19	47	19	2	3	17.6	47.2
19-Jul-05	6	7	12	14	9	7	7	8	7	4	2	3	A	8	6	5	4	5	5	6	7	7	8	34	7.9	34.1
20-Jul-05	12	24	8	7	8	12	15	13	8	3	3	A	16	8	12	8	5	46	34	22	22	20	14	4	14.1	46.4
21-Jul-05	6	9	8	4	8	12	8	12	14	4	A	6	6	4	4	3	3	2	2	2	3	8	6	6	6.2	14.5
22-Jul-05	6	2	2	24	6	23	23	5	7	A	7	7	9	11	13	7	6	11	4	8	8	23	20	4	10.2	23.5
23-Jul-05	35	20	3	10	13	17	7	5	A	10	10	37	14	11	31	28	10	38	16	20	28	5	5	6	16.5	38.1
24-Jul-05	5	7	13	9	8	5	5	A	10	7	5	4	3	3	2	2	3	5	2	2	5	7	14	25	6.5	25.5
25-Jul-05	13	14	15	15	13	16	A	17	13	9	9	C	C	C	A	A	3	3	6	5	11	34	47	41	15.8	46.8
26-Jul-05	14	9	A	16	9	28	10	9	6	4	5	2	3	3	4	4	4	17	4	5	4	4	3	5	7.6	28.2
27-Jul-05	6	5	A	15	9	10	9	15	6	6	4	5	5	7	6	5	7	5	2	4	5	5	9	11	7.0	15.3
28-Jul-05	7	A	23	7	6	6	7	4	3	4	6	7	4	4	6	4	28	6	9	12	17	24	14	8	9.4	27.7
29-Jul-05	A	17	8	5	6	7	7	16	19	9	11	25	22	22	22	4	4	5	4	11	19	32	30	A	13.8	31.7
30-Jul-05	39	11	5	5	11	14	16	14	12	6	3	4	11	22	6	17	41	12	12	11	10	19	A	28	14.3	41.4
31-Jul-05	26	29	40	25	26	16	10	6	5	4	27	11	6	25	16	46	35	2	45	14	10	A	30	48	21.8	48.1
Hourly Avg	16.5	17.1	14.8	13.7	12.5	17.2	12.3	10.7	9.6	8.7	7.7	8.3	12.7	10.8	11.3	13.4	12.5	13.1	13.1	10.7	16.9	20.5	20.9	18.9		
Hourly Max	39.0	37.1	40.3	27.9	32.5	42.2	28.2	21.4	32.3	21.2	26.6	36.8	45.8	32.0	36.0	54.9	41.4	46.4	44.7	30.0	47.2	39.4	46.8	48.1		

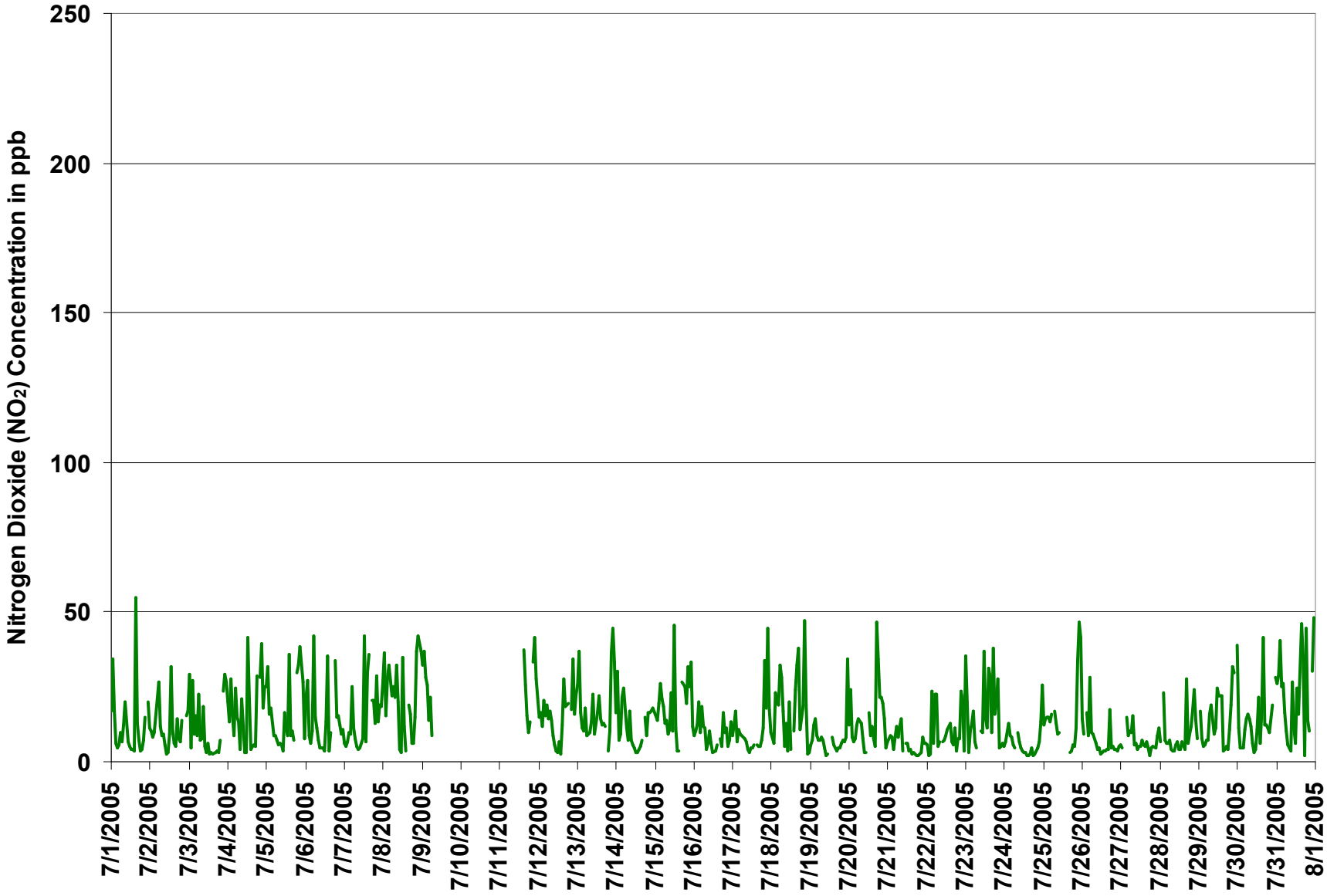
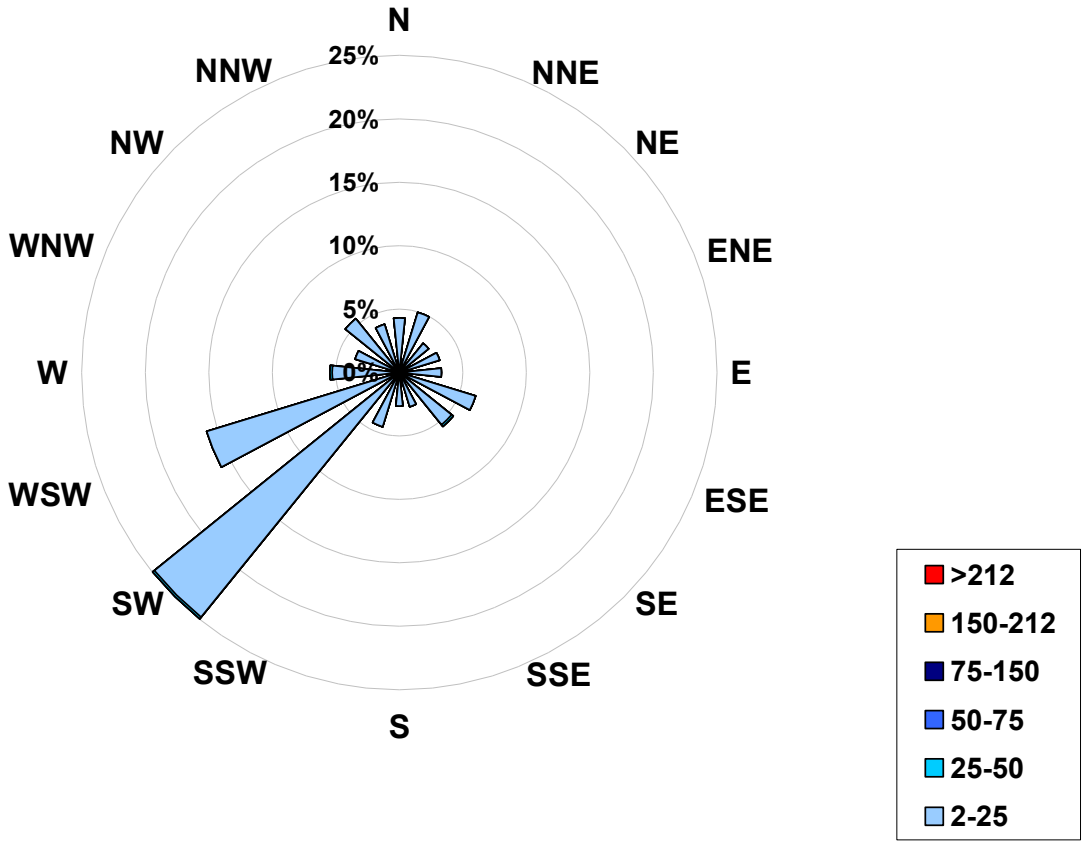


Figure 2. PAS - Cresent Heights Nitrogen Dioxide 1-hr Maximum Value Monthly Trend

1-hr Average Concentration Rose for Nitrogen Dioxide (in ppb) Located at the Cresent Heights Site for July 2005



Calms:	0%

Frequency Distribution of NO_2 in ppb			
Range			Frequency (hrs)
2.0	<	25	653
25	to	50	1
50	to	75	0
75	to	150	0
150	to	212	0
	>	212	0
Total Non-Zero Values			654

PAS - Cresent Heights Nitric Oxide Monthly Summary

Station: Cresent Heights
Station Owner: PAS

HOURLY AVERAGE TABLE

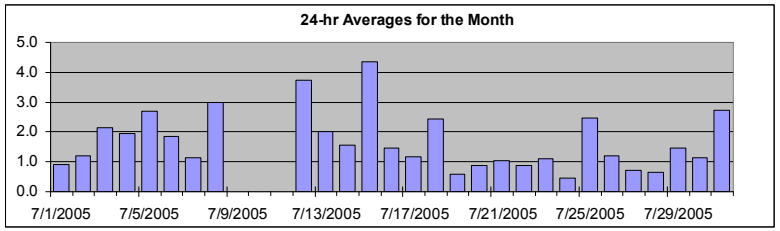
Nitric Oxide (NO)

Monitoring Dates: July 1, 2005 to August 1, 2005

Guideline Limit: 1-hr na ppb | 24-hr na ppb

Summary

Maximum 1-hr Average:	32.8	ppb	31-Jul	23:00 0:00
Maximum 24-hr Average:	4.4	ppb	15-Jul	



AIC Time:	32 hrs	Operational Time:	654 hrs
Calibration Time:	3 hrs	AMD Operational Uptime:	92.6%

Percentile	99	95	75	50	25	5	1	Average
	14.5	6.0	1.9	0.9	0.4	0.1	0.0	1.7 ppb

Status Flag Characters

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

Day — **Mountain Standard Time**

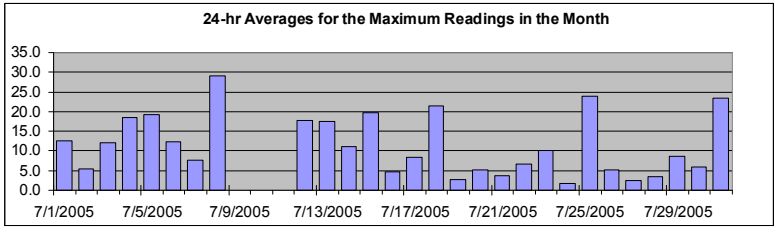
Hour Start / Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Jul-05	0	6	0	0	0	0	2	1	2	2	1	0	0	1	0	3	1	0	0	0	0	1	A	1	0.9	5.8
2-Jul-05	0	0	0	0	1	7	2	1	1	1	0	0	1	3	1	1	1	2	1	1	1	A	1	1	1.2	7.2
3-Jul-05	7	1	3	0	2	1	4	3	4	5	1	0	1	1	0	0	0	0	1	0	A	1	2	11	2.1	10.6
4-Jul-05	2	1	3	3	1	3	6	3	1	2	1	1	3	2	1	1	1	1	2	A	1	4	0	3	1.9	6.5
5-Jul-05	7	17	1	3	0	2	3	2	2	1	1	1	1	1	5	1	1	1	A	2	1	7	2	0	2.7	17.3
6-Jul-05	3	6	0	0	1	6	3	3	2	1	1	1	1	1	2	1	1	A	5	2	1	1	0	1	1.9	5.5
7-Jul-05	0	0	0	0	1	4	2	2	2	1	1	1	1	1	2	3	A	1	1	0	1	0	0	0	1.1	3.5
8-Jul-05	2	6	2	1	6	3	5	2	3	2	1	1	3	0	1	A	1	2	0	0	0	2	17	9	3.0	16.5
9-Jul-05	9	7	7	3	1	3	2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	8.9
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Jul-05	N	N	N	N	N	N	N	N	N	N	1	N	N	N	N	2	3	1	1	1	A	1	8	1	N	8.3
12-Jul-05	0	0	0	7	7	17	15	14	4	2	1	0	0	0	0	0	3	2	1	A	1	7	1	2	3.7	17.4
13-Jul-05	2	2	2	0	1	3	3	3	2	3	4	1	1	1	1	1	1	1	A	1	0	1	5	4	2.0	5.3
14-Jul-05	0	2	0	1	6	5	3	3	4	2	1	1	1	1	1	1	2	A	1	1	1	0	0	0	1.6	5.7
15-Jul-05	1	1	2	3	17	9	7	5	4	4	5	2	2	1	1	1	A	2	2	1	2	2	24	1	4.4	23.8
16-Jul-05	0	1	1	2	1	7	3	5	1	1	2	1	1	1	1	A	1	1	1	1	1	0	1	1	1.5	6.9
17-Jul-05	0	0	1	0	1	1	1	2	1	1	1	0	1	0	A	1	1	0	0	0	6	1	6	1	1.2	6.4
18-Jul-05	1	0	1	2	4	6	5	7	1	2	1	2	1	A	2	4	3	5	1	0	7	0	0	0	2.4	7.2
19-Jul-05	0	0	0	1	0	1	2	3	1	1	0	0	A	1	1	0	0	0	0	0	0	0	0	1	0.6	2.7
20-Jul-05	0	1	0	0	0	0	2	4	2	0	0	A	1	1	1	1	1	2	2	1	0	0	0	0	0.9	3.7
21-Jul-05	0	0	1	0	0	1	2	6	4	1	A	1	1	0	1	1	0	0	0	0	0	1	0	0	1.0	6.3
22-Jul-05	0	0	0	2	0	2	2	1	1	A	1	1	1	1	1	1	0	1	0	0	0	2	0	0	0.9	2.3
23-Jul-05	1	2	0	0	0	1	1	0	A	1	1	5	2	1	2	3	1	2	1	0	1	0	0	0	1.1	5.1
24-Jul-05	0	0	0	0	0	0	1	A	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4	0.4	4.2
25-Jul-05	1	1	3	5	2	6	A	4	4	2	3	C	C	C	A	A	1	0	0	0	0	1	8	5	2.5	8.1
26-Jul-05	1	0	A	1	1	5	2	3	3	1	1	1	1	1	1	1	1	2	1	1	0	0	0	0	1.2	4.7
27-Jul-05	0	0	A	0	0	1	2	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.7	1.8
28-Jul-05	0	A	1	0	0	0	1	1	0	0	1	1	1	0	1	1	2	1	1	0	0	1	0	0	0.6	2.4
29-Jul-05	A	0	0	0	0	1	2	5	5	4	4	3	1	1	1	0	1	1	1	0	1	1	1	A	1.5	5.4
30-Jul-05	1	0	0	0	0	1	2	2	3	1	1	0	1	1	1	2	3	1	1	1	0	0	A	1	1.1	3.4
31-Jul-05	1	2	7	1	2	3	1	1	1	0	1	1	1	1	1	2	1	0	1	0	0	A	0	33	2.7	32.8
Hourly Avg	1.4	2.0	1.3	1.2	1.9	3.4	3.1	3.3	2.3	1.6	1.4	1.1	1.1	1.0	1.1	1.2	1.1	1.1	1.0	0.6	1.0	1.3	2.9	2.9		
Hourly Max	8.9	17.3	7.0	7.1	17.4	17.4	15.0	14.1	5.4	4.6	5.0	5.1	2.9	3.4	5.0	3.7	3.1	5.2	5.3	2.0	7.2	7.0	23.8	32.8		

Station: Cresent Heights
Station Owner: PAS

HOURLY MAXIMUM TABLE

Nitric Oxide (NO)

Monitoring Dates: July 1, 2005 to August 1, 2005



Summary

Maximum 1-hr Value:	185.1	ppb	25-Jul	22:00 23:00
Maximum 24-hr Value:	29.1	ppb	8-Jul	

AIC Time:	32 hrs	Operational Time:	654 hrs
Calibration Time:	3 hrs	AMD Operational Uptime:	92.6%

Percentile	99	95	75	50	25	5	1	Average
	111.6	53.3	10.0	2.4	1.4	0.8	0.7	11.8 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 / 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-Jul-05	0	85	17	1	1	2	6	2	33	20	3	1	1	2	1	86	2	2	1	1	1	15	A	2	12.5	85.6
2-Jul-05	2	1	1	1	6	30	6	3	3	2	1	1	3	27	10	2	2	9	2	2	2	A	2	2	5.3	30.2
3-Jul-05	62	2	25	1	26	4	53	6	7	29	2	1	3	1	1	2	2	2	2	1	A	2	6	37	12.1	62.4
4-Jul-05	9	3	49	9	3	35	34	19	3	52	2	2	69	38	2	2	2	2	40	A	8	20	2	23	18.6	68.9
5-Jul-05	22	134	3	21	3	6	5	3	3	3	2	12	8	4	98	3	4	3	A	29	6	57	16	1	19.3	133.6
6-Jul-05	28	34	2	1	2	66	7	4	3	2	2	2	2	14	54	1	3	A	45	6	2	1	1	1	12.3	65.8
7-Jul-05	1	1	3	2	2	31	3	3	3	2	2	3	42	2	31	28	A	3	7	2	2	1	1	2	7.6	41.8
8-Jul-05	6	58	68	32	137	15	35	18	45	16	2	1	86	5	1	A	2	5	1	1	2	9	77	47	29.1	137.3
9-Jul-05	47	86	32	23	3	32	5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	86.4
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Jul-05	N	N	N	N	N	N	N	N	N	N	15	N	N	N	N	39	25	7	3	2	A	4	112	9	N	112.1
12-Jul-05	1	1	7	25	16	49	21	22	13	5	2	1	1	1	1	5	83	12	6	A	2	107	2	27	17.9	107.0
13-Jul-05	20	66	44	4	3	55	5	5	6	10	22	4	11	15	4	4	3	3	A	1	1	11	68	40	17.6	67.5
14-Jul-05	1	65	1	2	55	56	15	6	24	4	3	2	2	2	2	2	3	A	2	2	2	1	1	1	11.0	65.4
15-Jul-05	2	2	7	47	41	36	12	12	6	5	23	4	53	7	2	2	A	20	7	2	7	5	149	4	19.7	148.7
16-Jul-05	1	1	1	18	2	33	5	11	2	2	7	4	1	2	2	A	2	2	3	3	3	1	2	2	4.8	32.7
17-Jul-05	1	1	3	1	1	2	5	4	2	2	1	1	1	2	A	1	1	1	1	1	35	3	111	8	8.4	111.1
18-Jul-05	3	1	30	31	15	43	45	26	2	33	4	43	2	A	3	31	27	67	3	2	72	4	1	1	21.4	72.4
19-Jul-05	1	1	1	2	1	2	3	5	3	1	1	1	A	1	1	1	1	2	2	1	1	1	2	27	2.6	27.0
20-Jul-05	1	4	2	1	1	3	4	7	4	1	1	A	12	3	7	2	1	41	14	2	6	1	1	1	5.2	40.7
21-Jul-05	1	1	3	1	1	11	10	17	19	3	A	2	2	1	1	2	1	1	1	1	1	1	1	1	3.6	18.6
22-Jul-05	1	1	1	19	1	29	14	1	2	A	2	2	3	3	6	2	1	2	1	1	2	41	17	1	6.6	41.1
23-Jul-05	30	39	1	1	1	3	1	1	A	3	2	41	5	3	29	23	5	32	3	1	5	1	1	1	10.0	40.5
24-Jul-05	1	1	2	1	1	1	2	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	13	1.7	12.9
25-Jul-05	1	2	8	10	4	24	A	6	6	4	4	C	C	C	A	A	2	1	1	1	1	4	185	168	24.0	185.1
26-Jul-05	6	2	A	1	2	59	5	5	4	3	3	2	2	2	2	2	2	10	2	2	2	1	1	1	5.2	58.9
27-Jul-05	1	1	A	1	1	1	4	9	2	8	3	2	2	8	2	3	4	2	1	1	1	1	1	1	2.5	8.9
28-Jul-05	1	A	14	1	1	1	2	1	1	1	2	2	1	1	2	2	33	2	2	1	1	3	1	1	3.4	33.5
29-Jul-05	A	1	1	1	1	2	3	13	44	7	6	40	19	20	15	1	1	1	1	1	2	7	3	A	8.6	43.8
30-Jul-05	2	1	1	1	1	2	7	5	6	3	2	2	14	30	2	8	38	4	2	2	1	2	A	2	5.9	37.8
31-Jul-05	3	11	54	18	40	26	8	2	2	1	33	5	2	14	14	39	34	4	46	1	1	A	1	183	23.5	182.5
Hourly Avg	9.2	21.7	14.1	9.5	12.8	22.7	11.7	8.0	9.2	8.3	5.4	7.0	13.5	8.0	11.3	11.3	10.6	8.8	7.4	2.6	6.3	11.4	28.3	21.6		
Hourly Max	62.4	133.6	67.7	46.7	137.3	65.8	53.2	25.9	44.5	52.3	32.7	43.4	86.0	37.6	98.4	85.6	83.4	67.4	45.6	28.5	72.4	107.0	185.1	182.5		

PAS - Cresent Heights Oxides of Nitrogen Monthly Summary

Station: Cresent Heights
Station Owner: PAS

HOURLY AVERAGE TABLE

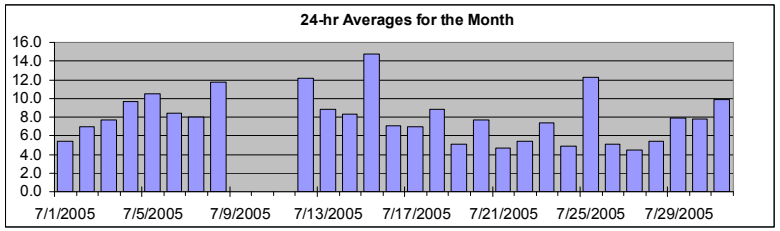
Oxides of Nitrogen (NO_x)

Monitoring Dates: July 1, 2005 to August 1, 2005

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

Summary

Maximum 1-hr Average:	56.9	ppb	31-Jul	23:00 0:00
Maximum 24-hr Average:	14.8	ppb	15-Jul	



AIC Time:	32 hrs	Operational Time:	654 hrs
Calibration Time:	3 hrs	AMD Operational Uptime:	92.6%

Percentile	99	95	75	50	25	5	1	Average
	33.9	20.6	10.2	6.2	3.8	2.1	1.6	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 / 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-Jul-05	9	14	6	3	3	4	7	6	6	6	5	3	3	3	2	7	5	2	2	2	4	9	A	15	5.5	14.9
2-Jul-05	9	7	5	6	10	22	10	6	4	3	2	1	5	11	4	3	3	7	4	4	10	A	11	12	6.9	21.7
3-Jul-05	17	4	10	4	7	5	10	7	9	10	4	2	3	2	2	2	2	2	2	4	A	20	21	30	7.7	30.1
4-Jul-05	15	11	13	14	7	12	14	8	4	5	3	3	6	5	3	3	4	3	6	A	20	34	13	16	9.6	34.3
5-Jul-05	26	36	9	9	6	7	8	7	5	4	4	4	3	5	11	5	6	4	A	15	18	28	16	6	10.5	36.0
6-Jul-05	15	17	5	4	7	17	12	12	8	5	5	4	3	4	5	3	5	A	21	11	10	7	8	8	8.4	21.4
7-Jul-05	5	4	4	5	5	13	11	8	5	4	4	6	5	4	7	8	A	13	13	10	16	10	12	13	8.0	16.4
8-Jul-05	17	20	7	6	17	14	13	8	8	6	3	2	6	2	2	A	11	11	5	5	9	21	42	34	11.7	42.1
9-Jul-05	31	25	21	14	6	9	7	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	30.9
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Jul-05	N	N	N	N	N	N	N	N	N	N	4	N	N	N	N	5	7	4	5	10	A	25	31	15	N	30.6
12-Jul-05	11	12	8	21	20	32	29	28	13	8	4	3	3	1	2	1	6	8	6	A	13	22	14	13	12.1	31.9
13-Jul-05	11	10	9	5	8	10	10	10	7	9	13	4	5	4	7	6	7	5	A	3	6	14	21	19	8.9	21.4
14-Jul-05	9	10	6	7	16	16	10	8	9	7	4	4	2	2	3	3	6	A	10	7	11	12	12	15	8.3	16.1
15-Jul-05	13	11	14	16	35	22	17	13	12	12	16	7	5	4	3	3	A	14	17	13	21	21	42	8	14.8	41.9
16-Jul-05	6	7	11	14	8	17	11	11	4	4	6	3	2	3	3	A	5	4	9	8	6	4	6	10	7.1	16.8
17-Jul-05	8	9	9	5	8	8	6	7	4	3	3	3	3	3	A	6	5	4	4	6	19	9	20	10	7.0	19.8
18-Jul-05	6	6	6	6	16	18	13	13	4	5	4	5	3	A	8	12	11	16	6	9	25	6	2	2	8.8	24.7
19-Jul-05	3	5	7	9	6	7	8	10	4	2	2	2	A	7	5	4	3	3	4	4	4	5	6	8	5.1	9.5
20-Jul-05	10	14	6	5	7	7	13	13	7	3	2	A	9	7	6	5	5	8	10	11	12	11	5	3	7.7	14.1
21-Jul-05	4	7	4	3	6	7	7	13	9	4	A	6	5	3	3	2	2	2	2	2	2	4	5	4	4.6	13.1
22-Jul-05	2	2	2	9	4	11	9	4	5	A	6	6	7	6	5	6	4	6	2	5	5	8	6	3	5.4	10.8
23-Jul-05	5	5	2	5	10	7	6	3	A	8	7	15	11	6	9	13	5	10	9	8	14	4	3	4	7.3	15.4
24-Jul-05	3	4	9	6	6	5	4	A	9	5	4	3	3	2	2	2	2	4	2	2	3	4	8	22	4.9	21.8
25-Jul-05	10	11	14	15	12	16	A	18	14	10	10	C	C	C	A	A	3	2	2	3	8	15	39	19	12.3	39.2
26-Jul-05	10	7	A	9	8	14	10	9	7	4	3	1	2	3	2	2	3	8	3	3	3	2	2	3	5.1	13.7
27-Jul-05	4	3	A	8	6	8	9	8	4	5	4	4	3	3	3	3	4	3	1	3	3	3	4	7	4.4	9.5
28-Jul-05	5	A	12	4	5	5	5	3	2	2	5	5	3	3	3	3	7	2	5	7	11	14	9	4	5.4	14.3
29-Jul-05	A	9	6	3	5	6	7	14	13	11	11	8	5	5	4	3	4	4	3	4	9	17	23	A	7.9	23.2
30-Jul-05	24	7	3	3	7	10	12	9	11	4	3	2	2	4	4	8	9	7	4	7	7	14	A	16	7.8	24.2
31-Jul-05	14	18	17	7	11	8	6	6	4	3	4	6	3	5	3	6	4	1	7	7	7	A	22	57	9.9	56.9
Hourly Avg	10.8	10.5	8.3	7.9	9.3	11.6	10.1	9.7	7.2	5.5	5.1	4.3	4.3	4.1	4.3	4.7	5.1	5.8	6.1	6.5	10.3	12.7	14.9	13.4		
Hourly Max	30.9	36.0	20.9	21.5	34.6	31.9	28.6	28.1	14.5	12.1	15.6	15.4	11.1	10.8	11.0	12.8	11.5	15.8	21.4	14.6	24.7	34.3	42.1	56.9		

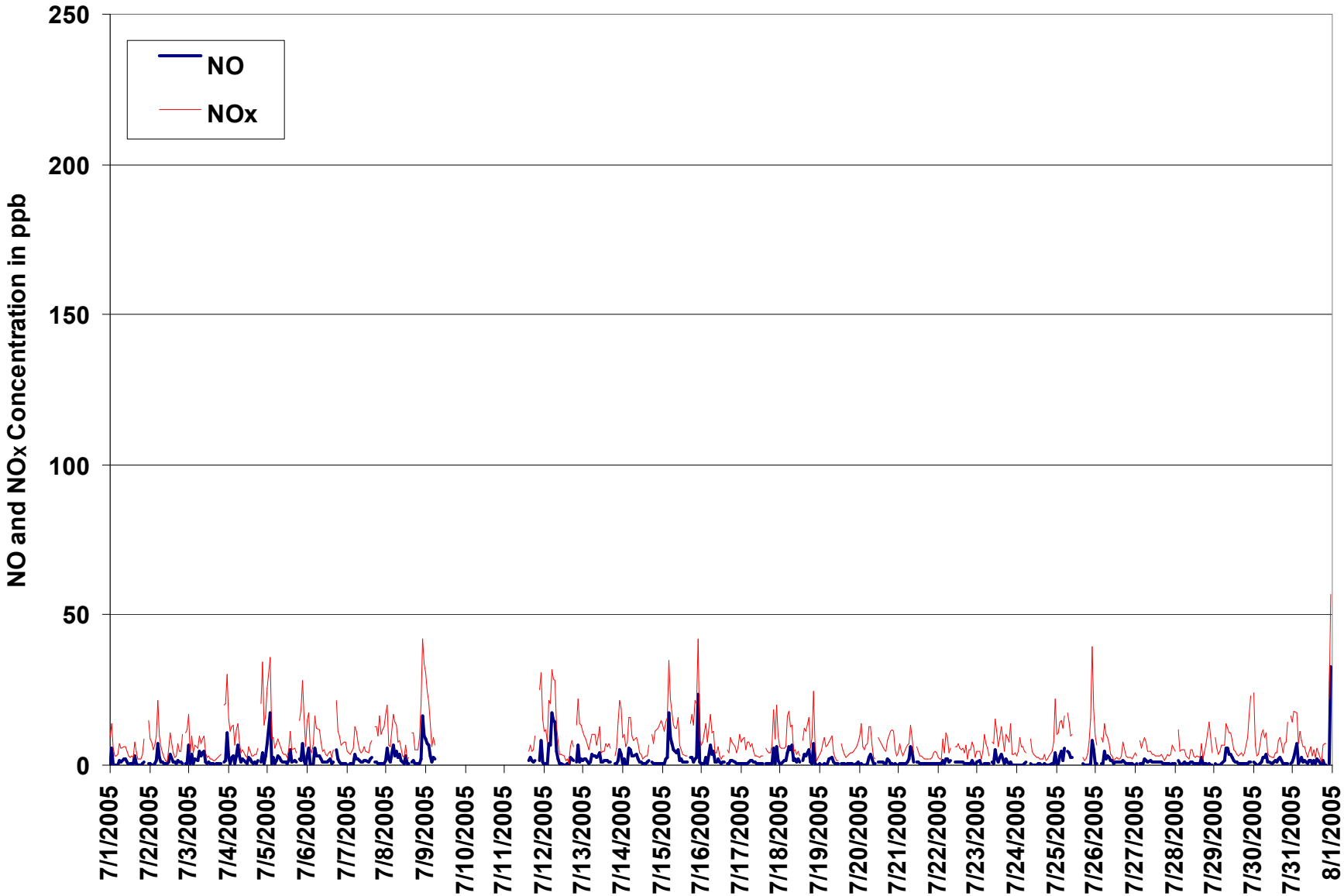


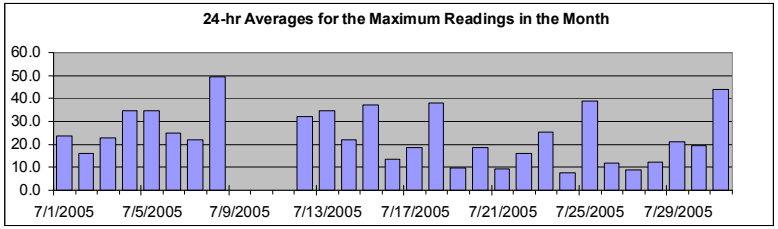
Figure 3. PAS - Cresent Heights Oxides of Nitrogen 1-hr Average Monthly Trend

Station: Cresent Heights
Station Owner: PAS

HOURLY MAXIMUM TABLE

Oxides of Nitrogen (NO_x)

Monitoring Dates: July 1, 2005 to August 1, 2005



Summary

Maximum 1-hr Value:	228.6	ppb	31-Jul	23:00 0:00
Maximum 24-hr Value:	49.6	ppb	8-Jul	

AIC Time:	32 hrs	Operational Time:	654 hrs
Calibration Time:	3 hrs	AMD Operational Uptime:	92.6%

Percentile	99	95	75	50	25	5	1	Average
	151.4	83.2	28.6	13.0	6.6	3.7	2.7	24.4 ppb

Status Flag Characters

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

Day **Mountain Standard Time**

Hour Start / Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Jul-05	16	118	34	5	4	5	14	9	44	36	9	5	5	5	4	139	15	8	4	4	7	30	A	21	23.5	138.7
2-Jul-05	12	10	7	11	25	55	16	10	12	6	3	4	12	59	21	7	5	23	9	7	16	A	17	18	15.9	59.0
3-Jul-05	86	5	51	9	41	12	74	13	14	48	8	3	9	4	3	3	3	4	4	8	A	25	35	61	22.7	86.3
4-Jul-05	29	15	77	24	11	60	47	31	7	70	5	5	110	59	6	7	8	6	63	A	37	60	18	45	34.7	110.5
5-Jul-05	42	167	18	37	12	14	12	9	9	8	5	28	19	12	132	11	15	10	A	57	37	95	42	8	34.7	166.8
6-Jul-05	50	58	9	7	10	93	22	15	10	6	6	6	5	27	87	4	13	A	78	20	17	13	10	11	25.1	93.3
7-Jul-05	6	5	9	11	11	55	14	10	7	5	6	10	84	8	61	63	A	22	27	13	29	13	19	18	22.1	83.9
8-Jul-05	32	95	77	54	169	37	57	39	76	36	6	3	120	17	4	A	21	21	7	6	16	46	119	83	49.6	169.4
9-Jul-05	78	122	60	40	17	53	13	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	121.6
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Jul-05	N	N	N	N	N	N	N	N	N	N	28	N	N	N	N	75	50	22	13	15	A	34	153	37	N	153.2
12-Jul-05	16	18	16	45	32	68	35	38	27	14	8	5	4	8	4	18	111	28	25	A	18	137	17	49	32.3	137.4
13-Jul-05	42	103	59	16	13	70	13	14	16	23	45	13	28	36	18	16	16	15	A	4	11	48	105	72	34.6	104.8
14-Jul-05	16	95	7	11	73	75	27	12	39	10	8	7	4	5	5	7	10	A	16	10	18	17	17	19	22.1	95.4
15-Jul-05	17	15	26	72	60	54	25	26	14	16	46	13	89	18	5	4	A	46	31	22	37	30	176	16	37.3	176.4
16-Jul-05	9	11	13	36	11	51	17	22	6	8	17	11	4	5	7	A	9	6	19	12	13	6	8	14	13.6	50.7
17-Jul-05	9	12	20	7	11	10	13	12	7	5	4	5	6	6	A	6	6	5	8	11	69	20	150	25	18.6	149.9
18-Jul-05	13	7	52	49	31	76	74	42	7	47	7	62	5	A	13	52	59	103	14	21	112	22	3	3	38.0	112.3
19-Jul-05	7	7	13	16	9	8	10	13	9	5	3	3	A	9	6	5	4	5	5	6	8	8	9	61	9.9	61.3
20-Jul-05	13	27	9	6	8	15	18	20	12	4	3	A	28	10	19	10	6	87	47	23	28	20	15	4	18.7	86.8
21-Jul-05	7	9	11	4	8	22	17	28	33	6	A	8	8	4	5	3	4	3	3	2	3	8	7	7	9.2	33.0
22-Jul-05	7	2	3	40	7	51	36	6	8	A	8	8	11	13	18	9	7	13	4	9	9	65	35	4	16.2	64.6
23-Jul-05	66	54	3	10	13	20	8	5	A	13	11	71	20	14	56	50	15	70	19	21	29	5	5	6	25.4	70.7
24-Jul-05	5	6	13	8	8	6	6	A	12	7	5	4	4	3	3	3	3	6	3	3	5	7	15	38	7.5	38.1
25-Jul-05	15	15	23	25	17	38	A	22	18	12	13	C	C	C	A	A	5	5	7	6	12	38	223	207	38.9	222.7
26-Jul-05	21	11	A	17	10	84	14	14	9	6	6	3	4	4	4	5	5	28	5	6	5	4	4	5	11.9	83.6
27-Jul-05	6	5	A	15	9	11	13	24	7	14	7	6	7	15	7	7	10	6	2	5	5	5	8	11	9.0	24.3
28-Jul-05	7	A	36	7	6	6	8	5	4	4	7	8	5	4	8	5	61	7	10	12	18	26	14	8	12.0	61.2
29-Jul-05	A	17	9	5	6	8	10	28	61	16	17	58	35	43	36	4	5	6	5	11	20	37	32	A	21.3	61.1
30-Jul-05	40	12	5	5	11	16	21	19	17	9	4	4	24	51	8	24	78	16	14	12	10	20	A	29	19.5	78.2
31-Jul-05	27	39	77	42	66	40	20	8	5	4	60	16	8	39	30	85	66	6	83	15	12	A	31	229	43.8	228.6
Hourly Avg	24.8	37.9	27.3	21.8	24.4	38.4	23.4	18.2	18.1	16.3	12.7	14.3	25.3	18.5	22.0	24.0	22.5	21.3	19.4	12.6	22.3	31.0	47.6	39.6		
Hourly Max	86.3	166.8	77.2	72.4	169.4	93.3	73.8	42.3	76.1	70.5	59.6	70.7	120.3	59.0	132.0	138.7	110.6	102.6	83.3	57.3	112.3	137.4	222.7	228.6		

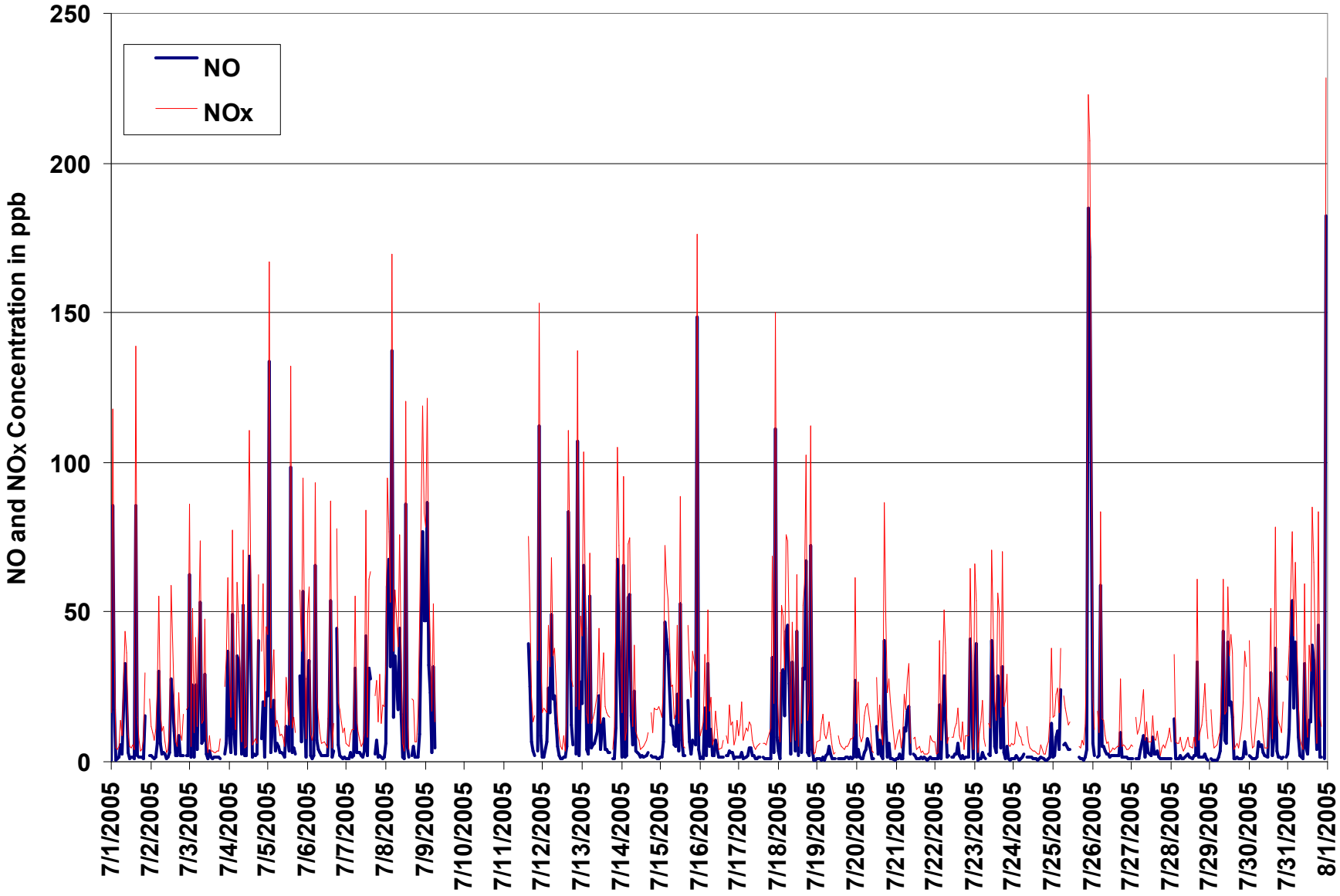


Figure 4. PAS - Cresent Heights Oxides of Nitrogen 1-hr Maximum Value Monthly Trend

PAS - Cresent Heights Ozone Monthly Summary

HOURLY AVERAGE TABLE

Ozone (O_3)

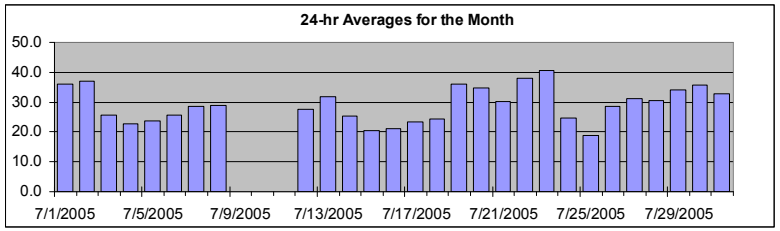
Station: Cresent Heights
Station Owner: PAS

Monitoring Dates: July 1, 2005 to August 1, 2005

Objective Limit: **Alberta Environment:** 1-hr 82 ppb | 24-hr na ppb

Summary

Number of 1-hr Exceedances:	0			
Maximum 1-hr Average:	54.3	ppb	29-Jul	16:00 17:00
Maximum 24-hr Average:	40.7	ppb	23-Jul	



AIC Time:	32 hrs	Operational Time:	654 hrs
Calibration Time:	3 hrs	AMD Operational Uptime:	92.6%

Percentile	99	95	75	50	25	5	1	Average
	52.9	49.4	38.6	29.7	19.0	8.9	4.2	29.1 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-Jul-05	26	19	19	21	24	22	22	26	28	31	39	44	48	50	51	50	51	53	53	48	43	32	A	26	36.0	52.9
2-Jul-05	28	27	29	21	18	12	18	35	42	46	49	54	50	50	53	53	50	38	41	40	30	A	39	29	37.1	54.3
3-Jul-05	24	30	24	22	18	18	18	19	20	24	31	36	36	35	35	36	35	34	33	30	A	16	8	2	25.5	36.4
4-Jul-05	6	7	6	6	13	15	15	21	25	26	29	31	33	34	35	36	37	40	38	A	28	10	16	13	22.6	39.6
5-Jul-05	3	3	12	14	16	16	16	20	27	31	37	38	39	36	34	37	37	38	A	32	21	9	13	20	23.8	39.1
6-Jul-05	15	15	24	23	19	19	18	19	27	31	36	40	41	37	38	40	36	A	20	16	16	21	20	20	25.6	40.6
7-Jul-05	21	18	22	21	19	16	16	20	27	30	36	40	44	44	42	40	A	41	35	37	27	28	21	17	28.7	44.1
8-Jul-05	12	13	20	19	16	15	20	28	34	36	41	42	42	45	45	A	45	41	42	39	33	20	10	7	28.9	45.4
9-Jul-05	4	8	15	19	22	18	22	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	21.8
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Jul-05	N	N	N	N	N	N	N	N	N	N	34	N	N	N	N	39	38	38	35	30	A	18	11	14	N	38.7
12-Jul-05	13	10	15	5	4	6	10	16	30	35	41	48	52	52	52	51	47	41	38	A	24	15	15	15	27.6	52.4
13-Jul-05	16	16	13	17	16	16	15	23	28	32	34	44	48	49	50	52	53	52	A	41	40	32	25	24	31.9	52.6
14-Jul-05	27	23	18	14	8	9	15	19	23	28	34	34	33	36	38	38	36	A	35	34	28	25	20	9	25.4	38.0
15-Jul-05	8	10	9	7	2	5	11	19	22	27	33	41	40	41	39	36	A	30	26	24	12	7	6	15	20.4	41.4
16-Jul-05	16	14	13	12	13	9	11	17	29	32	27	31	36	31	36	A	34	29	19	16	18	18	15	14	21.2	35.9
17-Jul-05	19	18	13	14	11	12	13	13	16	22	30	34	35	35	A	38	37	37	36	31	21	24	14	14	23.3	37.7
18-Jul-05	15	15	17	17	8	8	15	19	25	25	26	27	29	A	32	32	36	31	35	31	19	26	36	34	24.3	35.8
19-Jul-05	32	25	22	18	21	22	22	29	39	45	47	48	A	50	50	49	47	44	41	40	39	37	34	29	36.1	49.8
20-Jul-05	24	16	30	30	26	23	21	21	28	36	41	A	42	43	46	50	52	51	50	46	42	33	25	21	34.7	52.1
21-Jul-05	19	14	14	17	15	15	18	17	22	26	A	36	39	41	44	44	45	45	46	43	39	33	30	31	30.2	45.6
22-Jul-05	34	37	40	35	37	34	34	38	40	A	44	46	45	45	46	45	43	39	38	35	33	29	30	32	38.0	45.6
23-Jul-05	28	28	34	44	41	40	42	46	A	47	48	45	47	49	46	43	44	41	44	42	33	39	36	33	40.7	48.7
24-Jul-05	32	27	18	20	20	22	19	A	23	25	27	28	29	30	28	29	29	27	32	31	25	23	17	6	24.6	32.0
25-Jul-05	11	8	4	5	5	5	A	17	22	28	29	29	33	36	C	C	C	A	A	38	31	22	5	14	19.0	38.4
26-Jul-05	14	14	A	17	15	12	13	16	20	29	34	38	39	41	41	40	38	35	39	35	35	33	31	29	28.6	41.0
27-Jul-05	27	28	A	29	24	21	21	26	30	31	34	35	36	36	36	38	36	37	38	36	34	31	27	23	31.0	38.4
28-Jul-05	24	A	19	22	19	21	23	27	31	34	38	39	42	41	40	41	39	40	39	33	24	16	19	30	30.4	42.5
29-Jul-05	A	36	27	23	19	17	17	16	18	24	30	38	43	48	51	52	54	54	54	49	38	27	17	A	34.1	54.3
30-Jul-05	17	30	35	33	27	22	26	31	33	40	44	49	51	48	43	41	42	43	45	40	35	21	A	23	35.7	50.7
31-Jul-05	20	14	16	21	18	22	22	23	31	40	43	47	49	49	49	48	49	49	44	40	37	A	16	10	32.9	49.4
Hourly Avg	19.1	18.6	19.5	19.5	17.7	16.9	19.0	23.0	27.4	31.9	36.2	39.3	40.7	41.8	42.3	42.2	41.9	40.2	38.3	35.5	29.8	23.9	20.5	19.7		
Hourly Max	33.9	36.5	39.7	43.7	40.7	40.1	41.9	46.4	42.5	47.0	49.0	54.3	52.3	52.0	53.3	53.4	54.3	53.7	54.0	48.9	42.7	39.0	39.0	34.0		

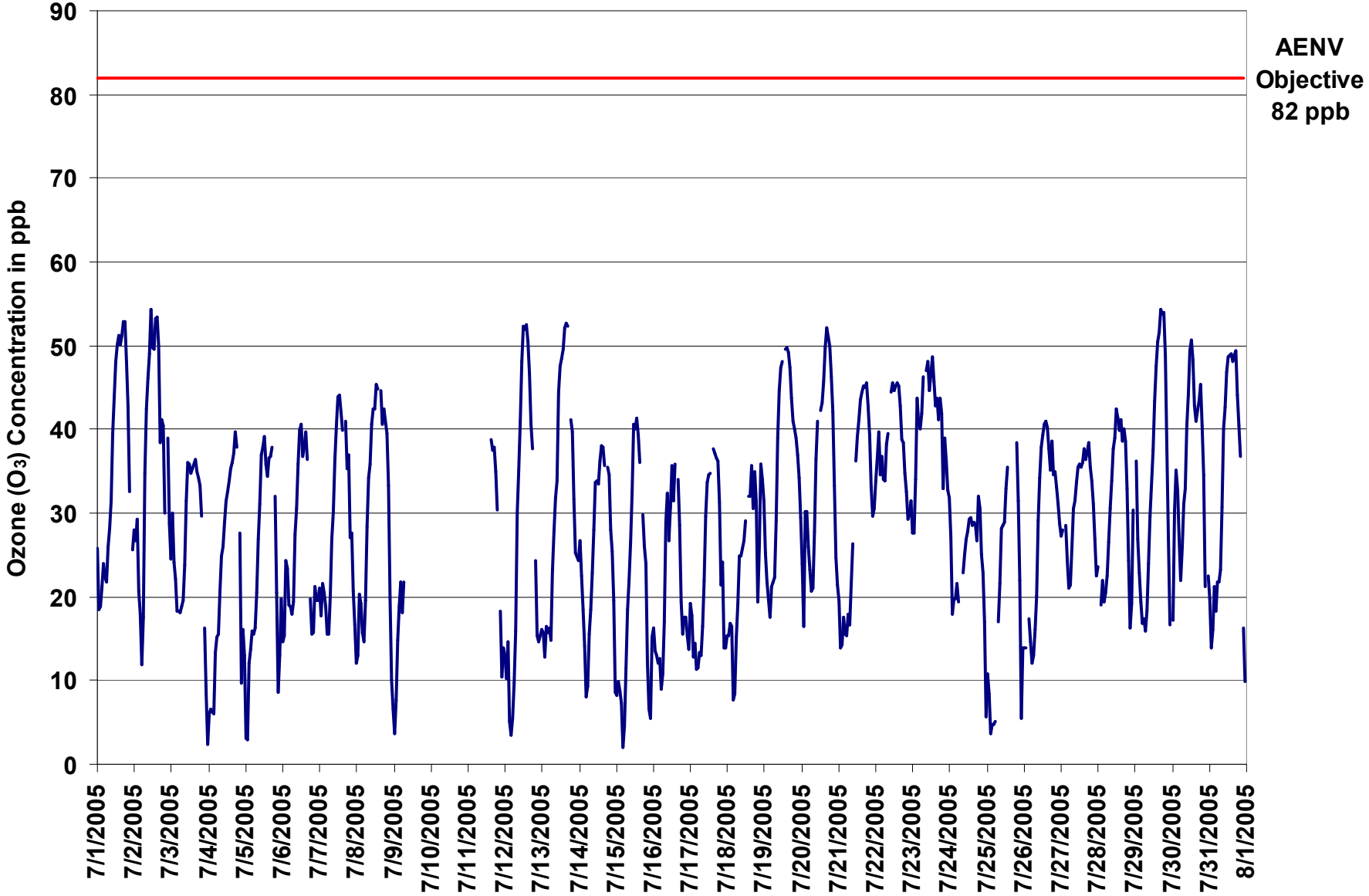


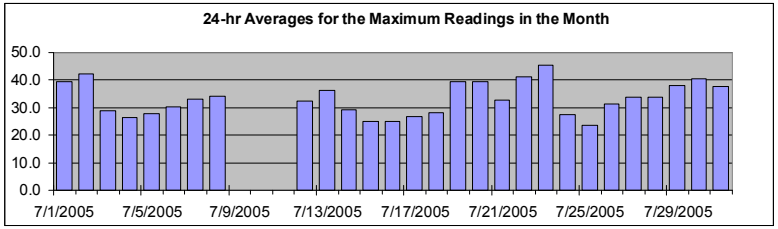
Figure 5. PAS - Cresent Heights Ozone 1-hr Average Monthly Trend

Station: Cresent Heights
Station Owner: PAS

HOURLY MAXIMUM TABLE

Ozone (O_3)

Monitoring Dates: July 1, 2005 to August 1, 2005



Summary

Maximum 1-hr Value:	58.8	ppb	2-Jul	11:00 12:00
Maximum 24-hr Value:	45.5	ppb	23-Jul	

AIC Time:	32 hrs	Operational Time:	654 hrs
Calibration Time:	3 hrs	AMD Operational Uptime:	92.6%

Percentile	99	95	75	50	25	5	1	Average
	56.0	52.4	42.1	33.5	23.5	14.6	8.9	33.1 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-Jul-05	29	23	21	24	26	24	27	29	31	36	45	46	51	52	53	55	55	55	55	51	45	40	A	36	39.6	55.5
2-Jul-05	31	30	33	26	24	19	23	43	47	49	52	59	55	58	56	56	56	48	45	43	38	A	45	34	42.1	58.8
3-Jul-05	33	31	30	25	21	21	20	21	22	29	35	38	39	36	38	39	36	35	35	33	A	21	14	9	28.8	39.1
4-Jul-05	11	9	10	14	15	19	19	26	26	29	31	33	36	37	37	38	41	42	42	A	33	17	19	18	26.2	42.2
5-Jul-05	11	10	17	17	18	18	19	24	31	35	40	40	41	40	39	40	40	40	A	37	30	15	19	21	27.9	41.2
6-Jul-05	21	23	29	26	24	28	21	27	32	33	40	44	42	40	41	42	40	A	33	20	21	24	24	23	30.3	43.8
7-Jul-05	23	20	25	25	23	19	19	23	31	34	39	44	47	47	45	44	A	45	43	40	39	32	29	21	33.0	46.8
8-Jul-05	21	19	24	24	21	18	24	32	39	39	43	45	46	47	47	A	47	46	44	43	40	32	29	15	34.0	47.1
9-Jul-05	7	18	25	27	27	21	26	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	27.3
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Jul-05	N	N	N	N	N	N	N	N	N	N	36	N	N	N	N	41	42	41	39	36	A	24	23	20	N	42.0
12-Jul-05	17	15	18	14	9	10	14	24	35	39	45	52	55	55	55	53	50	47	43	A	32	21	21	20	32.3	55.4
13-Jul-05	21	20	15	18	20	19	18	26	32	39	38	48	51	51	55	56	58	55	A	43	43	43	32	31	36.2	57.9
14-Jul-05	33	28	21	17	12	14	17	23	26	33	36	36	35	38	40	40	40	A	38	37	36	29	24	19	29.3	40.5
15-Jul-05	11	13	15	13	7	6	16	23	25	30	39	43	43	43	41	39	A	34	34	27	23	12	14	20	24.9	43.2
16-Jul-05	17	17	16	16	14	13	17	24	32	35	31	38	38	35	40	A	36	35	24	21	21	19	17	18	24.9	40.0
17-Jul-05	21	20	17	16	15	15	16	15	20	26	33	36	36	38	A	40	39	39	39	35	29	28	25	17	26.7	39.8
18-Jul-05	18	17	19	19	17	14	18	25	26	26	27	29	30	A	34	36	42	38	40	38	29	31	39	36	28.3	42.2
19-Jul-05	35	30	27	23	24	23	26	33	44	48	49	50	A	52	52	51	50	46	43	42	42	42	39	34	39.3	51.7
20-Jul-05	31	29	33	32	28	27	24	24	34	40	44	A	44	45	49	53	55	55	57	55	51	46	30	23	39.5	56.5
21-Jul-05	22	19	17	19	18	18	20	20	26	29	A	39	41	43	45	46	47	47	47	46	41	39	32	35	32.9	47.3
22-Jul-05	37	42	41	39	39	39	38	40	43	A	47	48	48	48	48	49	46	43	41	39	36	33	33	33	41.3	48.7
23-Jul-05	31	31	40	49	49	46	46	49	A	49	51	51	52	52	51	49	46	50	50	48	41	41	39	34	45.5	51.7
24-Jul-05	34	32	22	22	24	23	21	A	25	27	28	30	31	31	29	30	30	31	34	33	28	25	25	14	27.3	34.2
25-Jul-05	13	13	7	9	10	8	A	20	28	31	30	32	37	38	C	C	C	A	A	43	36	33	17	19	23.5	42.6
26-Jul-05	17	16	A	20	17	15	15	19	25	34	36	40	41	42	43	42	40	41	41	39	37	35	33	31	31.3	43.1
27-Jul-05	31	30	A	31	28	24	25	29	33	33	36	38	38	38	39	40	39	40	41	38	35	34	32	28	33.9	40.7
28-Jul-05	30	A	24	24	23	22	26	30	33	36	40	41	44	43	42	43	42	42	43	39	33	19	24	35	33.9	44.3
29-Jul-05	A	39	30	27	21	18	20	18	22	30	35	42	47	51	53	53	56	55	56	55	50	37	24	A	38.1	56.1
30-Jul-05	26	38	36	35	33	27	30	37	39	43	48	52	53	52	46	47	48	48	49	47	41	30	A	26	40.5	53.1
31-Jul-05	27	21	22	24	24	26	24	27	37	43	47	52	51	52	52	52	54	51	50	47	43	A	19	20	37.7	53.6
Hourly Avg	23.6	23.3	23.5	23.3	21.7	20.5	22.4	27.1	31.4	35.4	39.3	42.4	43.5	44.6	45.0	45.2	45.2	44.3	42.4	39.9	36.0	29.7	26.7	24.7		
Hourly Max	36.7	41.7	41.3	49.5	48.6	46.2	46.3	48.5	46.7	49.3	51.8	58.8	55.4	57.7	56.0	55.9	57.9	55.4	56.5	55.4	50.5	46.0	44.8	36.3		

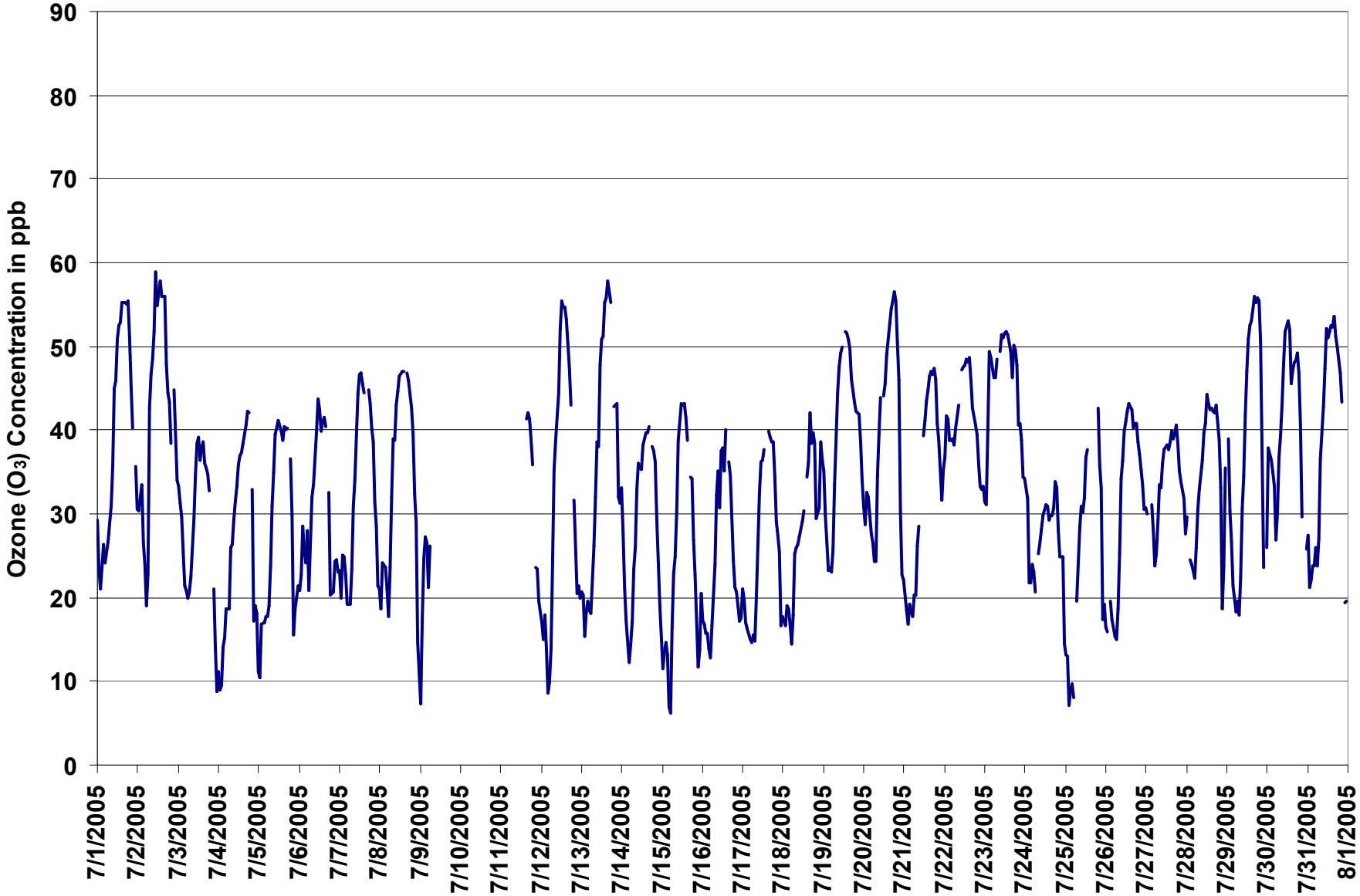
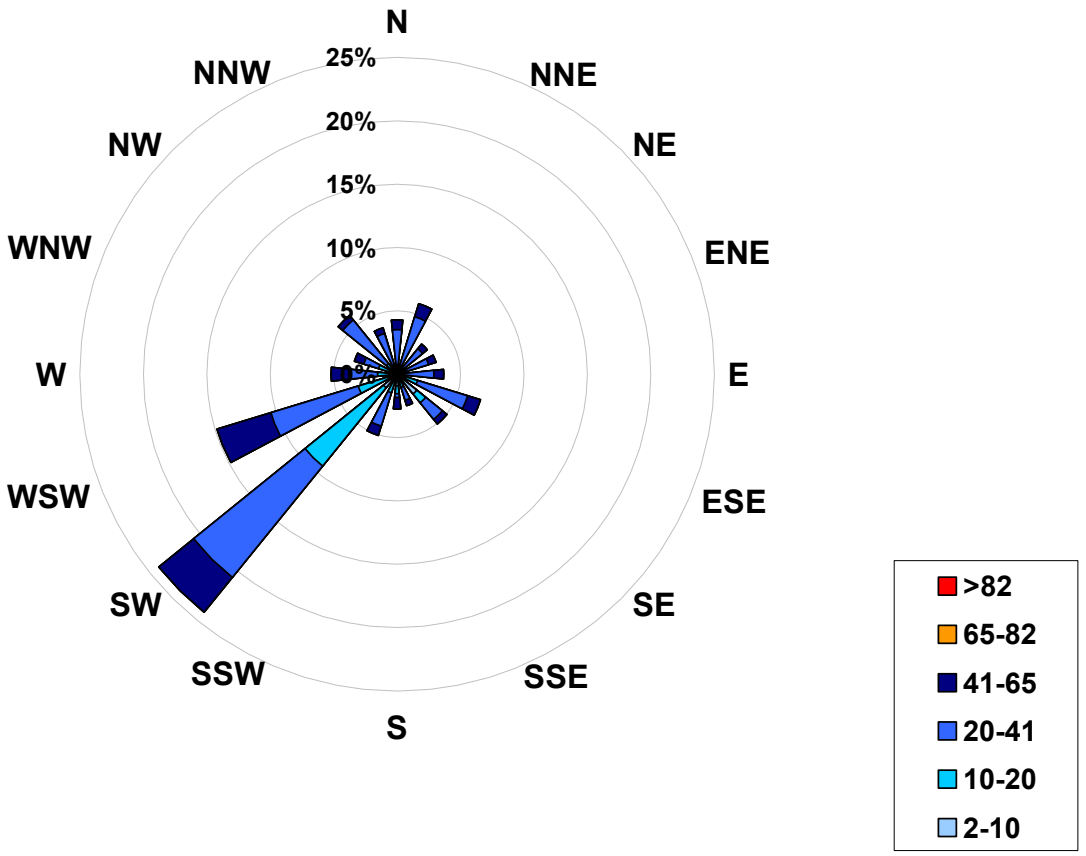


Figure 6. PAS - Cresent Heights Ozone 1-hr Maximum Value Monthly Trend

1-hr Average Concentration Rose for Ozone (in ppb) Located at the Cresent Heights Site for July 2005



Calms: 0%

Frequency Distribution of O_3 in ppb			
Range			Frequency (hrs)
2.0	<	10	39
10	to	20	148
20	to	41	347
41	to	65	120
65	to	82	0
	>	82	0
Total Non-Zero Values			654

PAS - Cresent Heights Ozone Monthly Summary

EIGHT HOUR RUNNING AVERAGE TABLE

Ozone (O_3)

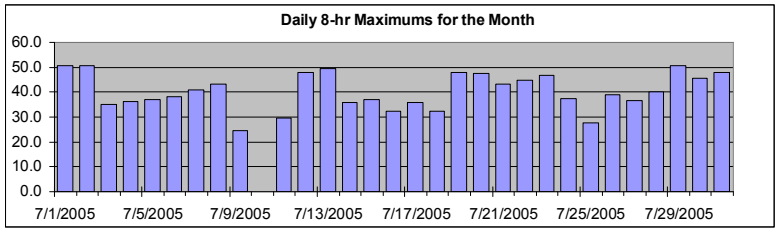
Station: Cresent Heights
Station Owner: PAS

Monitoring Dates: July 1, 2005 to August 1, 2005

Objective Limit: **Alberta Environment:** 8-hr 65 ppb

Summary

Number of 8-hr Exceedances:	0			
Maximum 8-hr Average:	50.7	ppb	2-Jul	16:00 17:00



Percentile	99	95	75	50	25	5	1
	49.7	46.8	36.5	28.9	21.1	12.6	8.5

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 / 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	Daily Maximum
1-Jul-05	12	13	14	15	16	18	20	22	23	24	27	30	33	36	40	43	46	48	50	51	50	48	47	44	50.6
2-Jul-05	40	37	33	29	26	23	22	23	25	28	30	34	38	43	47	50	51	50	49	47	45	44	42	38	50.7
3-Jul-05	35	33	31	28	27	26	23	22	21	20	21	23	25	27	29	32	34	35	35	34	34	31	28	23	35.1
4-Jul-05	19	15	11	7	8	8	9	11	14	16	19	22	24	27	29	31	33	34	35	36	35	32	29	26	36.0
5-Jul-05	21	16	12	12	11	12	12	13	15	19	22	25	28	31	33	35	36	37	37	36	33	30	26	24	36.9
6-Jul-05	21	18	19	17	17	19	19	19	21	23	24	26	29	31	34	36	37	38	36	32	29	27	24	21	38.2
7-Jul-05	19	19	19	20	20	19	19	19	20	21	23	26	29	32	36	38	40	41	41	40	38	36	33	29	41.1
8-Jul-05	27	24	22	20	18	17	16	18	21	24	26	29	32	36	39	41	42	43	43	43	42	38	33	30	43.3
9-Jul-05	24	20	17	14	13	13	14	15	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	24.5
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	30	26	29.8
12-Jul-05	23	19	16	12	11	10	9	10	12	15	18	24	30	36	41	45	47	48	48	47	43	38	33	28	48.0
13-Jul-05	23	20	16	16	15	15	15	16	18	20	22	26	30	34	38	42	45	48	50	49	48	46	42	38	49.6
14-Jul-05	34	30	29	25	21	19	17	17	16	17	19	21	24	28	31	33	35	36	36	36	35	34	31	27	35.9
15-Jul-05	23	21	18	14	11	9	8	9	11	13	16	20	25	29	33	35	37	37	36	34	30	25	20	17	37.1
16-Jul-05	17	15	13	12	12	12	13	13	15	17	19	21	24	27	30	32	32	32	31	29	26	24	21	20	32.4
17-Jul-05	18	17	16	16	15	15	14	14	14	14	16	19	22	25	26	30	33	35	36	35	34	32	30	27	35.8
18-Jul-05	24	21	19	17	15	13	14	14	16	17	18	19	22	24	26	28	29	30	32	32	31	30	31	31	32.3
19-Jul-05	30	30	28	26	27	26	24	24	25	27	30	34	36	40	44	47	48	48	47	46	45	43	41	39	48.0
20-Jul-05	36	33	31	30	28	27	25	24	24	27	28	28	30	33	37	41	44	46	48	48	47	46	44	40	47.7
21-Jul-05	36	31	27	23	20	18	17	16	17	18	19	21	25	28	32	36	39	42	43	43	43	42	41	39	43.4
22-Jul-05	37	36	36	35	34	34	35	36	37	37	37	39	40	42	43	44	45	44	43	42	40	38	36	35	44.7
23-Jul-05	33	31	31	32	33	34	36	38	39	42	44	44	45	46	47	46	46	45	45	44	43	41	40	39	46.7
24-Jul-05	37	36	32	30	28	26	24	22	21	21	22	23	25	26	27	27	28	28	29	29	29	28	26	24	37.4
25-Jul-05	21	19	16	12	10	8	6	8	9	12	16	19	23	28	28	N	N	N	N	N	N	N	N	N	27.5
26-Jul-05	N	20	20	17	14	13	14	14	15	17	20	22	25	29	32	35	38	38	39	38	38	37	36	34	38.8
27-Jul-05	33	32	31	30	29	27	26	25	26	26	27	28	29	31	33	35	35	36	37	37	36	36	35	33	36.6
28-Jul-05	31	30	27	26	23	22	21	22	23	24	27	29	32	34	36	38	39	40	40	39	37	34	31	30	40.2
29-Jul-05	29	28	27	25	24	25	24	22	22	20	21	22	25	29	33	38	42	46	49	50	50	47	43	42	50.5
30-Jul-05	36	33	30	28	27	26	27	28	30	31	32	34	37	40	42	44	45	45	45	44	42	39	38	36	45.4
31-Jul-05	32	28	24	21	19	19	19	19	21	24	27	31	34	38	41	44	47	48	48	47	46	45	41	35	48.0
Hourly Max	40.4	36.7	35.7	34.7	34.3	34.5	35.9	37.7	39.2	42.0	44.0	44.1	45.0	46.2	47.4	49.7	50.7	49.7	50.1	50.6	49.9	47.7	47.2	43.7	

PAS - Cresent Heights Carbon Monoxide Monthly Summary

HOURLY AVERAGE TABLE

Carbon Monoxide (CO)

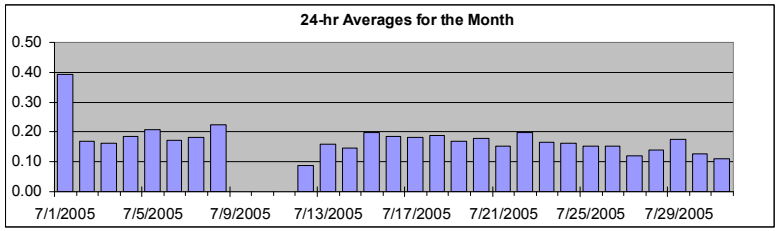
Station: Cresent Heights
Station Owner: PAS

Monitoring Dates: July 1, 2005 to August 1, 2005

Objective Limit: **Alberta Environment:** 1-hr 13 ppm | 24-hr na ppm

Summary

Number of 1-hr Exceedances:	0			
Maximum 1-hr Average:	0.6	ppm	1-Jul	0:00 1:00
Maximum 24-hr Value:	0.4	ppm	1-Jul	



AIC Time:	32 hrs	Operational Time:	653 hrs
Calibration Time:	2 hrs	AMD Operational Uptime:	92.3%

Percentile	99	95	75	50	25	5	1	Average
	0.5	0.3	0.2	0.2	0.1	0.1	0.0	0.2 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 / 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-Jul-05	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	A	0.2	0.39	0.63
2-Jul-05	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.17	0.23
3-Jul-05	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	A	0.3	0.3	0.2	0.16	0.32
4-Jul-05	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	A	0.3	0.4	0.2	0.2	0.18	0.44
5-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.4	0.3	0.2	0.2	0.21	0.39
6-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.25
7-Jul-05	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	A	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.18	0.32
8-Jul-05	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	A	0.2	0.2	0.2	0.3	0.3	0.4	0.5	0.4	0.22	0.47
9-Jul-05	0.4	0.4	0.2	0.2	N	0.3	0.2	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.42
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.00
11-Jul-05	N	N	N	N	N	N	N	N	N	N	0.3	N	N	N	N	0.3	0.2	0.2	0.2	0.1	A	0.2	0.2	0.1	N	0.29
12-Jul-05	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	D	0.0	0.0	0.0	0.0	0.1	0.2	A	0.3	0.3	0.3	0.2	0.09	0.31
13-Jul-05	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	A	0.1	0.1	0.2	0.2	0.1	0.16	0.22
14-Jul-05	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	A	0.1	0.2	0.2	0.2	0.2	0.1	0.15	0.22
15-Jul-05	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	A	0.2	0.3	0.3	0.4	0.4	0.3	0.2	0.20	0.43
16-Jul-05	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.25
17-Jul-05	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.24
18-Jul-05	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.19	0.32
19-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	A	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.24
20-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.2	0.1	0.18	0.30
21-Jul-05	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	A	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.15	0.17
22-Jul-05	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.20	0.27
23-Jul-05	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	A	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.23
24-Jul-05	0.2	0.2	0.2	0.2	0.2	0.1	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.16	0.21
25-Jul-05	0.2	0.2	0.2	0.2	0.2	0.3	A	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	C	C	A	A	0.0	0.2	0.2	0.15	0.27
26-Jul-05	0.2	0.1	A	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.15	0.21
27-Jul-05	0.1	0.1	A	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.12	0.18
28-Jul-05	0.1	A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.14	0.21
29-Jul-05	A	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.4	A	0.18	0.36
30-Jul-05	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	A	0.1	0.13	0.20
31-Jul-05	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	A	0.2	0.2	0.11	0.23
Hourly Avg	0.19	0.18	0.17	0.16	0.18	0.19	0.20	0.19	0.17	0.17	0.17	0.15	0.15	0.14	0.14	0.14	0.15	0.16	0.17	0.19	0.23	0.22	0.21	0.18		
Hourly Max	0.63	0.61	0.59	0.56	0.54	0.52	0.52	0.50	0.49	0.46	0.42	0.39	0.34	0.32	0.29	0.29	0.27	0.26	0.28	0.31	0.43	0.44	0.47	0.44		

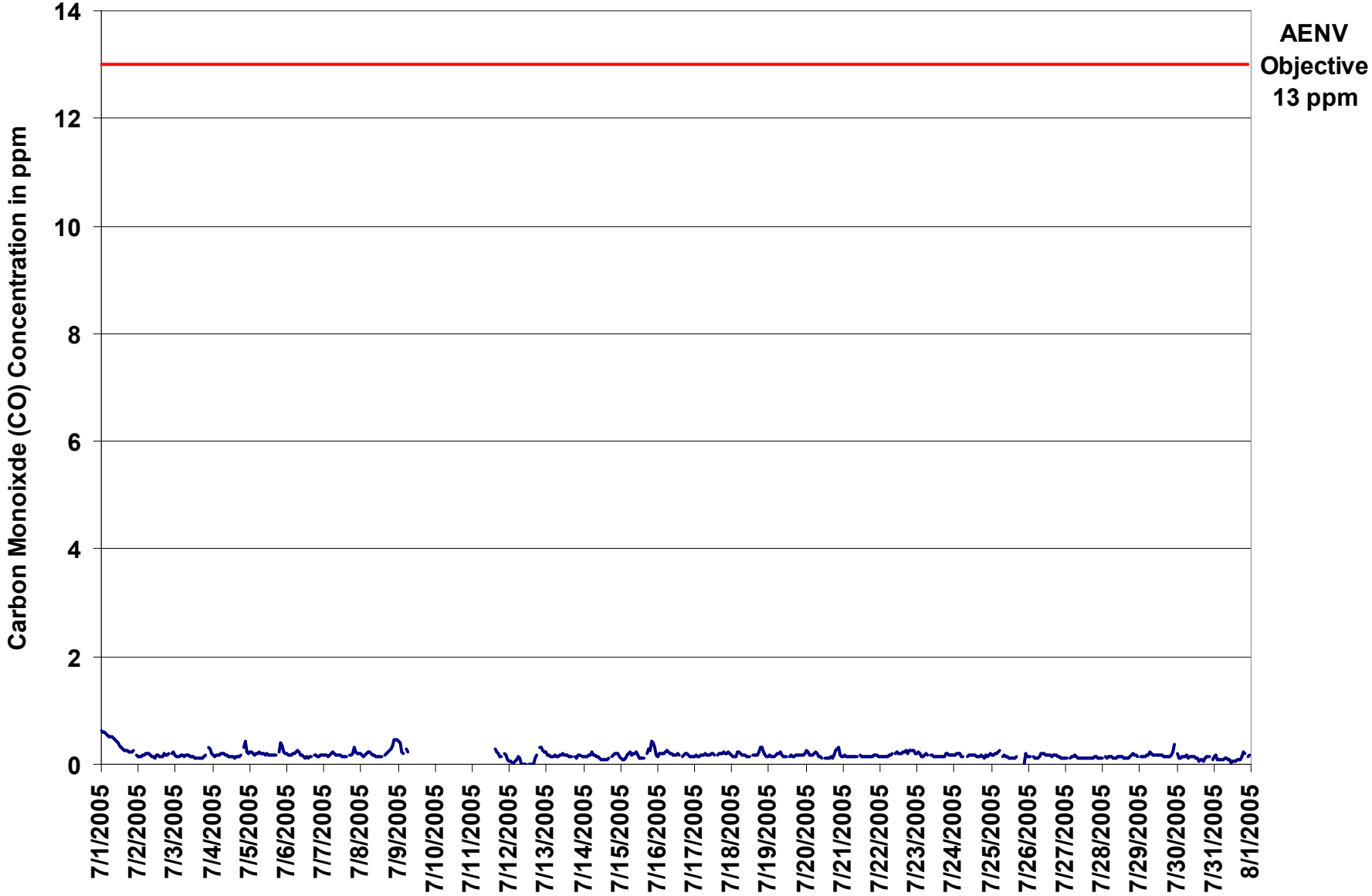


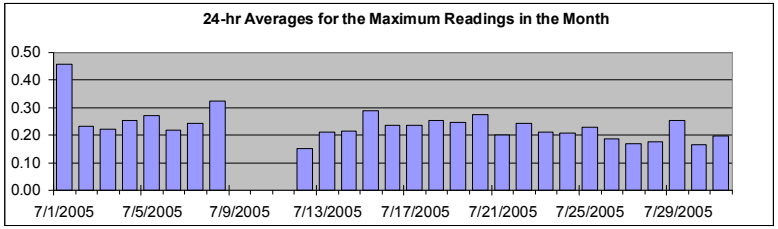
Figure 7. PAS - Cresent Heights Carbon Monoxide 1-hr Average Monthly Trend

Station: Cresent Heights
Station Owner: PAS

HOURLY MAXIMUM TABLE

Carbon Monoxide (CO)

Monitoring Dates: July 1, 2005 to August 1, 2005



Summary

Maximum 1-hr Value:	1.0	ppm	19-Jul	7:00 8:00
Maximum 24-hr Value:	0.5	ppm	1-Jul	

AIC Time:	32 hrs	Operational Time:	653 hrs
Calibration Time:	2 hrs	AMD Operational Uptime:	92.3%

Percentile	99	95	75	50	25	5	1	Average
	0.7	0.5	0.2	0.2	0.2	0.1	0.0	0.2 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 / 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-Jul-05	0.6	0.7	0.6	0.6	0.5	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.7	A	0.2	0.46	0.68
2-Jul-05	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.6	0.3	0.23	0.57
3-Jul-05	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	A	0.4	0.5	0.3	0.22	0.49
4-Jul-05	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.2	A	0.5	0.6	0.3	0.2	0.25	0.59
5-Jul-05	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.3	0.7	0.4	0.3	0.2	0.27	0.74
6-Jul-05	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.22	0.37
7-Jul-05	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.3	0.5	0.2	0.3	0.3	0.24	0.54
8-Jul-05	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.4	0.3	0.3	0.5	0.7	0.8	0.8	0.32	0.82
9-Jul-05	0.5	0.5	0.3	0.2	N	0.3	0.3	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.52
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.00
11-Jul-05	N	N	N	N	N	N	N	N	N	N	0.3	N	N	N	N	0.3	0.3	0.2	0.2	0.2	A	0.3	0.2	0.1	N	0.34
12-Jul-05	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.0	0.0	0.0	0.0	D	0.0	0.0	0.0	0.1	0.2	0.3	A	0.6	0.4	0.4	0.4	0.15	0.58
13-Jul-05	0.3	0.3	0.3	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	A	0.2	0.2	0.2	0.2	0.1	0.21	0.34
14-Jul-05	0.1	0.1	0.3	0.2	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	A	0.1	0.2	0.6	0.2	0.3	0.2	0.21	0.61
15-Jul-05	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.1	0.2	0.2	0.2	A	0.3	0.4	0.4	0.7	0.6	0.6	0.2	0.29	0.74
16-Jul-05	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.2	A	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.24	0.34
17-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.6	0.3	0.24	0.59
18-Jul-05	0.2	0.2	0.1	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.3	0.6	0.4	0.4	0.2	0.2	0.25	0.58
19-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1.0	0.2	0.2	0.2	0.1	A	0.2	0.2	0.4	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.25	0.96
20-Jul-05	0.5	0.3	0.2	0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	A	0.1	0.2	0.2	0.1	0.1	0.2	0.4	0.4	0.4	0.7	0.3	0.2	0.27	0.74
21-Jul-05	0.2	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.35
22-Jul-05	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.3	0.3	0.24	0.40
23-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.2	0.2	0.2	0.21	0.42
24-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.21	0.27
25-Jul-05	0.2	0.2	0.8	0.3	0.4	0.4	A	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	C	C	A	A	0.0	0.3	0.2	0.23	0.81
26-Jul-05	0.2	0.1	A	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.19	0.28
27-Jul-05	0.2	0.2	A	0.1	0.2	0.2	0.5	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.45
28-Jul-05	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.18	0.30
29-Jul-05	A	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.9	A	0.26	0.85
30-Jul-05	0.3	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.2	0.2	A	0.1	0.16	0.35
31-Jul-05	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.4	0.6	A	0.2	0.3	0.20	0.61
Hourly Avg	0.24	0.23	0.24	0.20	0.22	0.24	0.25	0.28	0.25	0.20	0.21	0.20	0.19	0.19	0.18	0.18	0.19	0.20	0.24	0.27	0.37	0.32	0.34	0.24		
Hourly Max	0.63	0.66	0.81	0.58	0.54	0.57	0.55	0.96	0.60	0.48	0.51	0.48	0.37	0.34	0.32	0.38	0.38	0.35	0.45	0.58	0.74	0.74	0.85	0.82		

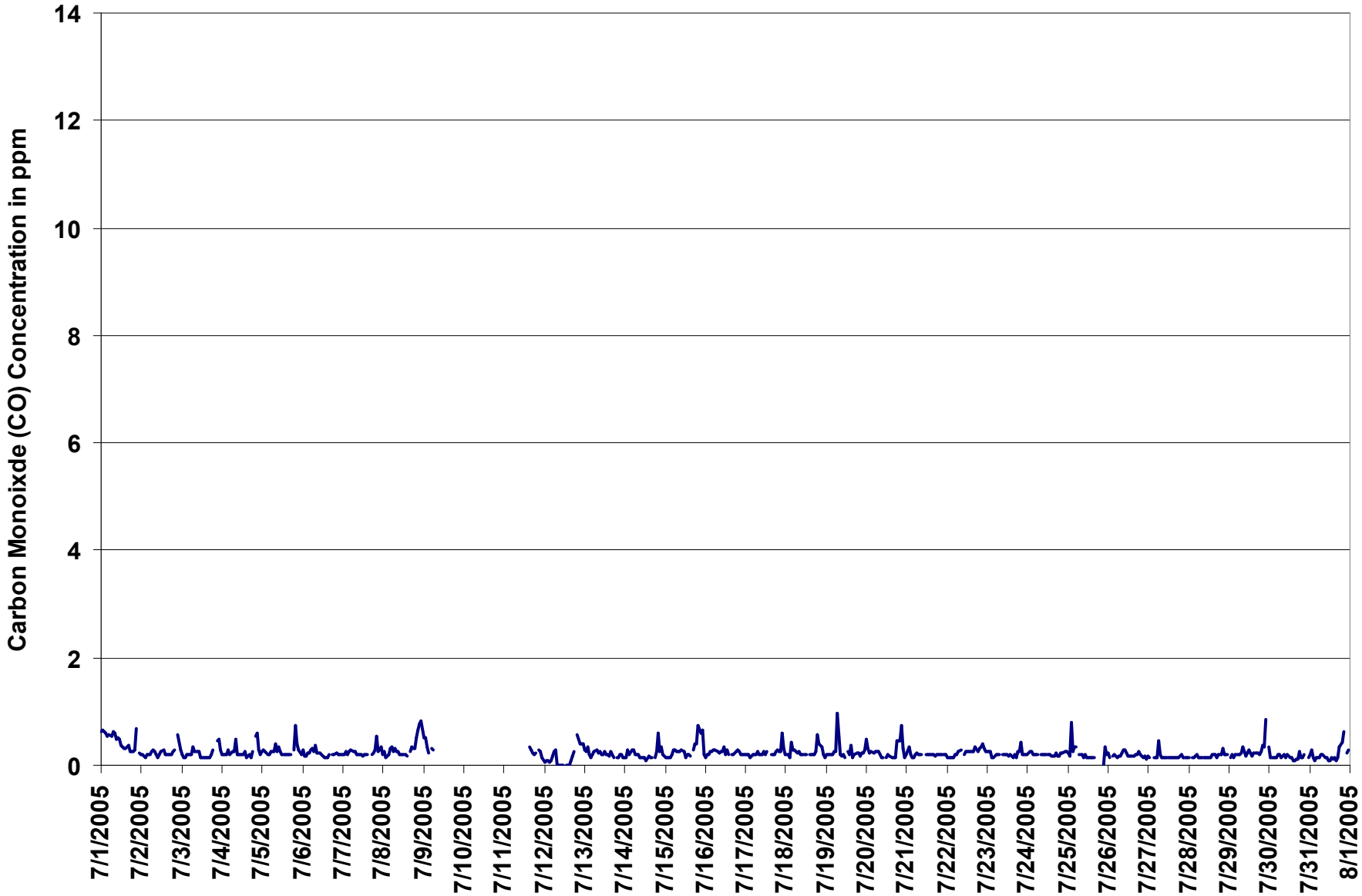
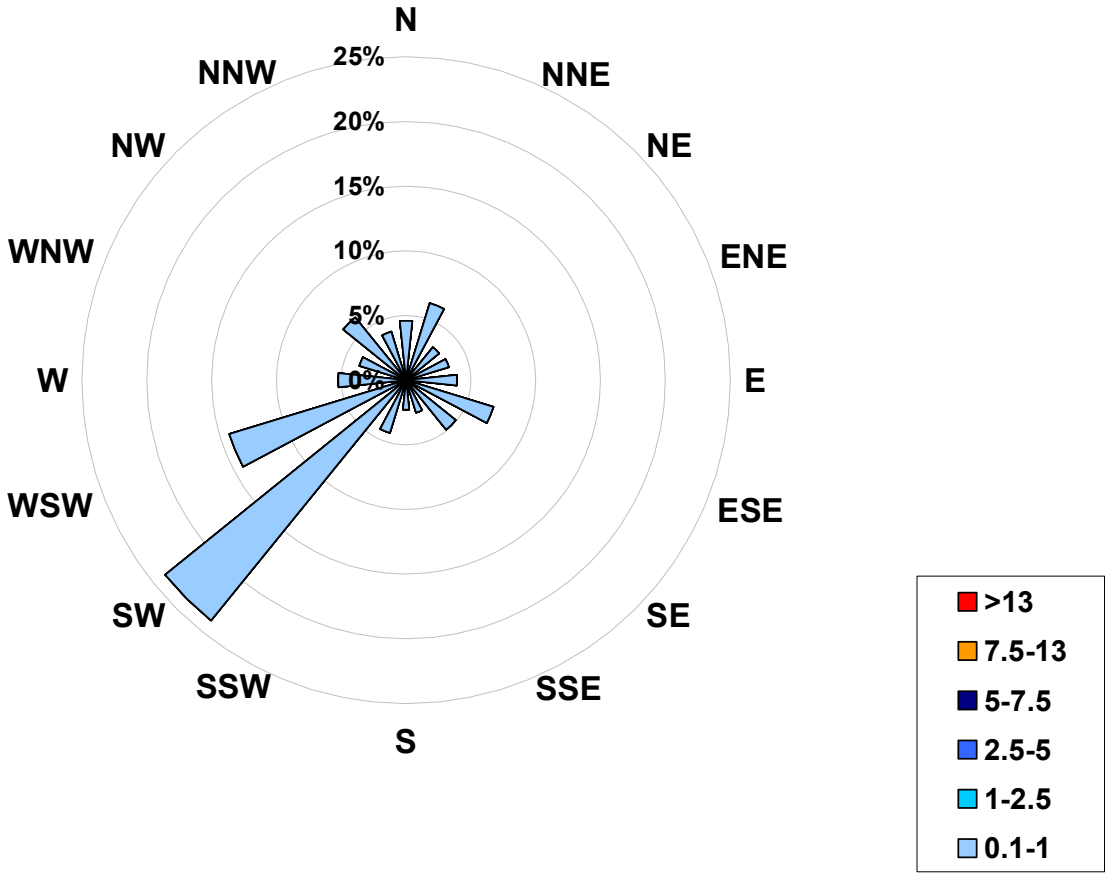


Figure 8. PAS - Cresent Heights Carbon Monoxide 1-hr Maximum Value Monthly Trend

1-hr Average Concentration Rose for Carbon Monoxide (in ppm) Located at the Cresent Heights Site for July 2005



Calms:	0%

Frequency Distribution of CO in ppm			
Range			Frequency (hrs)
0.1	<	1	653
1	to	2.5	0
2.5	to	5	0
5	to	7.5	0
7.5	to	13	0
	>	13	0
Total Non-Zero Values			653

PAS - Cresent Heights Carbon Monoxide Monthly Summary

EIGHT HOUR RUNNING AVERAGE TABLE

Carbon Monoxide (CO)

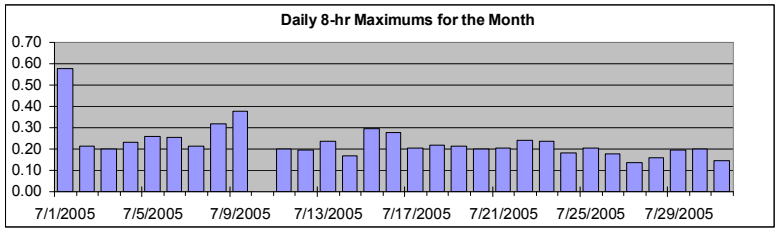
Station: Cresent Heights
Station Owner: PAS

Monitoring Dates: July 1, 2005 to August 1, 2005

Objective Limit: **Alberta Environment:** 8-hr 5 ppm

Summary

Number of 8-hr Exceedances:	0			
Maximum 8-hr Average:	0.6	ppm	1-Jul	4:00 5:00



Percentile	99	95	75	50	25	5	1
	0.5	0.3	0.2	0.2	0.1	0.1	0.1

Status Flag Characters

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

Day **Mountain Standard Time**

Hour Start / 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	Daily Maximum
1-Jul-05	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.58
2-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
3-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.20
4-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.23
5-Jul-05	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.26
6-Jul-05	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.25
7-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
8-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.32
9-Jul-05	0.4	0.4	0.4	0.4	0.4	0.3	0.3	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.38
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.00
11-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.2	0.2	0.20
12-Jul-05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	N	0.1	0.1	0.2	0.2	0.20
13-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.24
14-Jul-05	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.17
15-Jul-05	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.29
16-Jul-05	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.28
17-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
18-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.22
19-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
20-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.20
21-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20
22-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.24
23-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.24
24-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.18
25-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	N	N	N	N	N	N	0.20
26-Jul-05	N	N	N	N	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.18
27-Jul-05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.14
28-Jul-05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.16
29-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19
30-Jul-05	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.20
31-Jul-05	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15
Hourly Max	0.46	0.48	0.51	0.55	0.58	0.55	0.56	0.56	0.54	0.52	0.50	0.48	0.45	0.43	0.40	0.37	0.34	0.32	0.29	0.28	0.26	0.26	0.30	0.32	

PAS - Cresent Heights Total Hydrocarbons Monthly Summary

Station: Cresent Heights
Station Owner: PAS

HOURLY AVERAGE TABLE

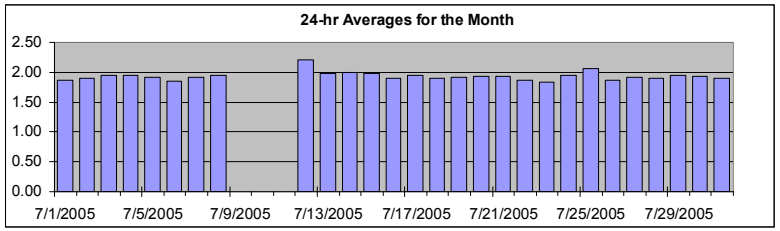
Total Hydrocarbons (THC)

Monitoring Dates: July 1, 2005 to August 1, 2005

Objective Limit: **Alberta Environment:** 1-hr na ppm | 24-hr na ppm

Summary

Maximum 1-hr Average:	3.0	ppm	25-Jul	22:00 23:00
Maximum 24-hr Value:	2.2	ppm	12-Jul	



AIC Time:	31 hrs	Operational Time:	652 hrs
Calibration Time:	2 hrs	AMD Operational Uptime:	92.1%

Percentile	99	95	75	50	25	5	1	Average
	2.4	2.2	2.0	1.9	1.9	1.8	1.8	1.9 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 / 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-Jul-05	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.0	A	2.0	1.87	2.04
2-Jul-05	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.9	1.9	A	1.9	1.9	1.90	2.03
3-Jul-05	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.1	2.4	2.1	1.95	2.43
4-Jul-05	2.0	2.0	2.1	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	2.1	2.0	2.0	1.94	2.10
5-Jul-05	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.8	A	1.9	2.0	2.0	1.9	1.9	1.92	2.12
6-Jul-05	2.0	1.9	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.9	1.85	1.97
7-Jul-05	1.9	1.9	1.8	1.8	1.8	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	A	1.8	1.9	1.9	2.0	2.0	1.9	2.0	1.91	2.04
8-Jul-05	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.9	2.2	2.1	2.2	1.95	2.19
9-Jul-05	2.2	2.2	1.9	1.8	1.5	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2.24
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.00
11-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1.6	1.6	1.7	1.8	1.8	A	2.1	2.1	2.1	N	2.13
12-Jul-05	2.2	2.3	2.2	2.3	2.3	2.4	2.4	2.3	2.2	2.2	2.4	2.5	2.5	2.3	2.6	2.0	1.8	1.8	1.8	A	2.0	2.0	2.0	2.1	2.21	2.65
13-Jul-05	2.1	2.1	2.2	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.0	1.9	1.9	2.0	2.0	1.98	2.15
14-Jul-05	2.0	2.0	2.1	2.1	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.9	A	1.9	1.9	2.0	2.1	2.2	2.0	2.00	2.21
15-Jul-05	2.0	2.0	2.0	2.0	2.1	2.3	2.2	2.1	2.2	2.1	2.0	1.9	1.9	1.8	1.8	1.8	A	1.8	1.9	1.9	2.0	2.0	1.9	1.8	1.98	2.34
16-Jul-05	1.8	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.8	1.9	1.8	1.8	1.8	1.9	A	1.9	1.8	1.9	1.9	1.9	1.9	1.9	2.0	1.90	2.02
17-Jul-05	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	1.95	2.06
18-Jul-05	2.0	2.0	1.9	2.0	2.0	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	2.0	2.0	1.8	1.8	1.8	1.89	2.06
19-Jul-05	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.8	1.8	A	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.0	2.0	1.92	2.05
20-Jul-05	2.0	2.2	2.1	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.0	2.1	1.8	1.8	1.93	2.15
21-Jul-05	1.9	2.0	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	1.9	1.9	1.9	2.0	2.0	1.9	2.0	2.0	1.92	2.02
22-Jul-05	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	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.86	1.94
23-Jul-05	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	A	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.84	1.94
24-Jul-05	2.0	2.0	2.1	2.2	2.1	2.1	2.2	A	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	1.9	2.0	2.0	1.95	2.18
25-Jul-05	2.0	2.1	2.4	2.2	2.1	2.1	A	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.8	C	C	A	3.0	2.2	2.05	2.99
26-Jul-05	2.1	2.1	A	2.0	2.0	2.1	2.0	1.8	N	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	1.87	2.13
27-Jul-05	2.0	1.9	A	1.9	2.0	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.9	2.0	1.9	1.9	1.91	2.06
28-Jul-05	2.0	A	2.0	2.0	2.0	2.0	2.0	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.0	1.9	1.89	2.04
29-Jul-05	A	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.8	1.9	2.0	1.9	1.9	2.1	A	1.94	2.09
30-Jul-05	2.1	1.9	1.9	1.9	2.0	2.0	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	1.9	1.94	2.11
31-Jul-05	1.9	2.1	2.0	1.9	2.0	1.9	2.0	2.0	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.0	A	2.0	2.0	1.90	2.10
Hourly Avg	1.99	2.00	1.99	1.98	1.98	2.01	2.01	1.97	1.95	1.92	1.90	1.89	1.89	1.87	1.88	1.84	1.84	1.84	1.84	1.88	1.92	1.97	2.02	1.97		
Hourly Max	2.24	2.33	2.35	2.33	2.35	2.38	2.35	2.31	2.22	2.25	2.37	2.50	2.55	2.31	2.65	1.97	1.95	1.92	1.91	1.99	2.03	2.19	2.99	2.23		

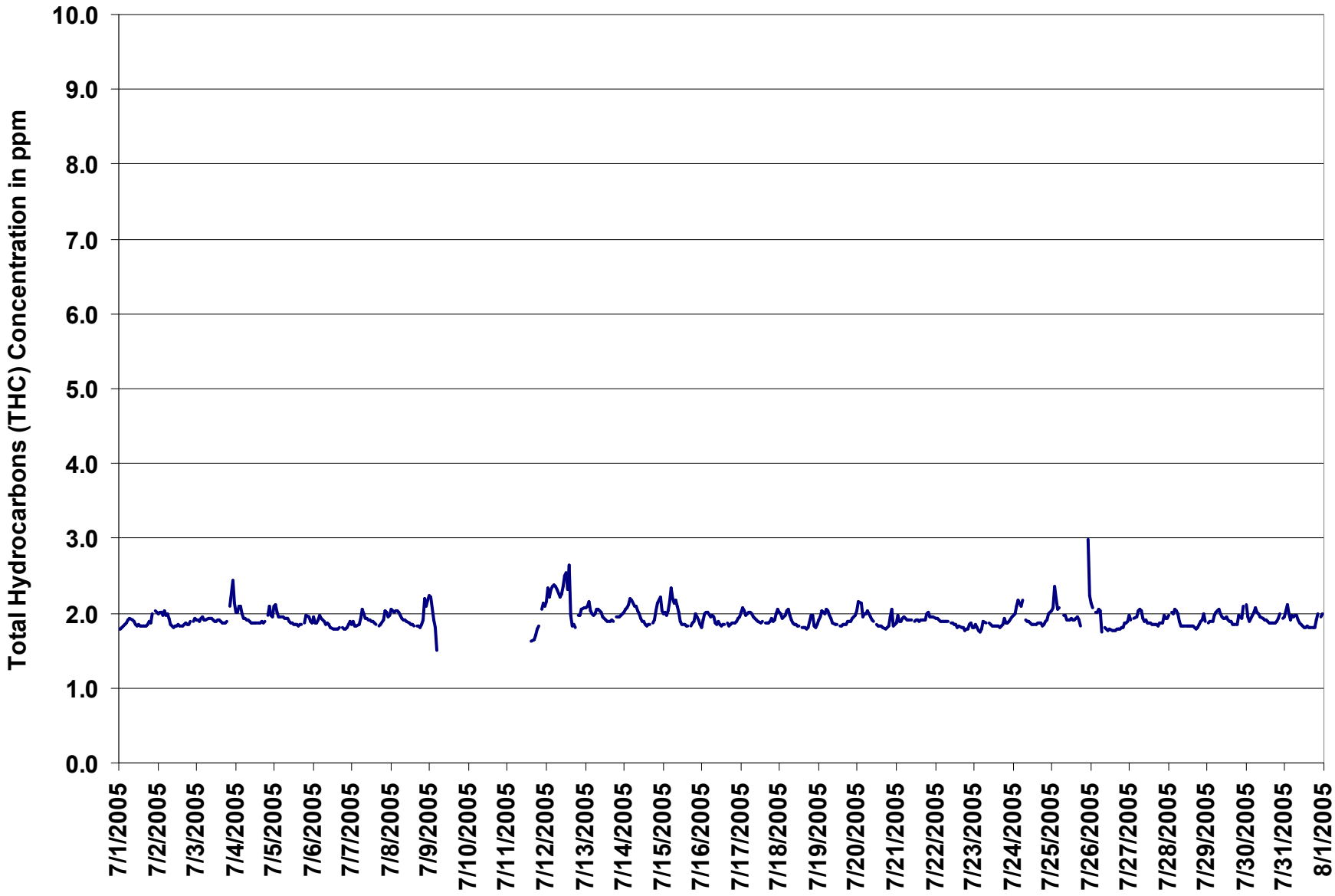


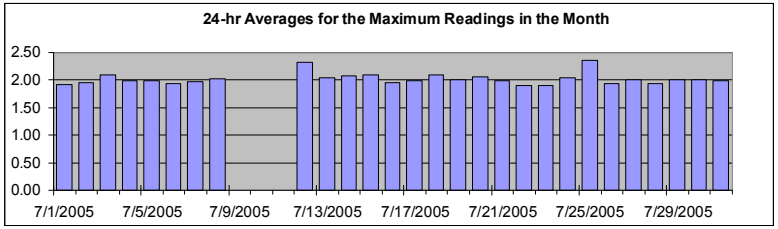
Figure 9. PAS - Cresent Heights Total Hydrocarbons 1-hr Average Monthly Trend

Station: Cresent Heights
Station Owner: PAS

HOURLY MAXIMUM TABLE

Total Hydrocarbons (THC)

Monitoring Dates: July 1, 2005 to August 1, 2005



Summary

Maximum 1-hr Value:	6.4	ppm	25-Jul	22:00 23:00
Maximum 24-hr Value:	2.4	ppm	25-Jul	

AIC Time:	31 hrs	Operational Time:	652 hrs
Calibration Time:	2 hrs	AMD Operational Uptime:	92.1%

Percentile	99	95	75	50	25	5	1	Average
	2.8	2.3	2.1	2.0	1.9	1.8	1.8	2.0 ppm

Status Flag Characters

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

Day **Mountain Standard Time**

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-Jul-05	1.8	1.8	1.8	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.9	1.8	1.9	1.9	2.0	1.9	2.2	A	2.1	1.91	2.18
2-Jul-05	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	1.9	1.9	1.8	1.8	1.9	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.0	1.95	2.12
3-Jul-05	1.9	1.9	1.9	2.0	2.0	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	A	2.3	3.9	3.2	2.10	3.88
4-Jul-05	2.1	2.1	2.2	2.2	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	2.1	2.2	2.0	2.0	1.99	2.21
5-Jul-05	2.2	2.3	2.3	2.0	2.0	2.0	2.0	2.0	2.0	2.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.1	2.0	1.9	1.9	1.99	2.32
6-Jul-05	2.3	1.9	1.9	2.0	2.1	2.0	2.0	1.9	1.9	2.5	1.9	1.8	1.8	1.8	1.8	1.8	1.8	A	1.9	1.8	1.8	1.8	1.9	1.9	1.94	2.53
7-Jul-05	1.9	1.9	1.9	1.9	1.9	2.1	2.1	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	2.2	2.2	2.0	2.0	1.97	2.18
8-Jul-05	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	1.9	A	1.9	1.9	1.9	1.9	2.0	2.5	2.2	2.3	2.02	2.55
9-Jul-05	2.3	2.3	2.1	1.9	1.8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	2.34
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.00
11-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	1.7	1.7	1.7	1.9	1.9	A	2.1	2.2	2.1	N	2.24
12-Jul-05	2.2	2.5	2.3	2.4	2.4	2.5	2.4	2.4	2.3	2.3	2.4	2.6	2.7	2.6	2.8	2.3	1.9	1.9	1.9	A	2.1	2.0	2.2	2.2	2.32	2.82
13-Jul-05	2.2	2.1	2.2	2.1	2.1	2.0	2.1	2.2	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	2.0	1.9	A	2.0	2.0	2.0	2.0	2.1	2.04	2.22
14-Jul-05	2.0	2.1	2.1	2.2	2.3	2.2	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	2.1	2.2	2.3	2.4	2.1	2.08	2.45
15-Jul-05	2.1	2.1	2.0	2.1	2.2	2.4	2.3	2.2	2.7	2.1	2.1	2.0	1.9	1.9	1.9	1.8	A	1.9	2.0	1.9	2.3	2.1	2.1	1.9	2.09	2.68
16-Jul-05	1.9	2.0	2.0	2.1	2.1	2.0	2.1	2.1	1.9	1.9	2.0	1.9	1.8	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.0	1.95	2.07
17-Jul-05	2.1	2.1	2.1	2.0	2.0	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	2.0	1.9	2.0	2.1	2.1	1.99	2.13
18-Jul-05	2.1	2.0	2.0	2.0	2.1	2.3	2.0	2.0	2.0	1.9	1.9	1.8	1.9	A	1.8	1.8	1.8	1.8	1.9	4.1	3.4	1.9	1.8	1.9	2.10	4.12
19-Jul-05	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.5	2.0	1.9	1.9	1.9	A	1.9	1.9	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.01	2.46
20-Jul-05	2.1	2.8	2.9	2.0	2.1	2.0	2.1	2.0	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.9	2.1	2.4	2.1	1.9	2.05	2.87
21-Jul-05	1.9	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	2.0	A	1.9	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.1	2.1	2.0	2.0	2.0	1.98	2.13
22-Jul-05	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.9	2.0	1.9	1.8	1.90	2.01
23-Jul-05	1.9	1.9	1.9	1.8	1.8	1.9	1.9	1.9	A	1.9	1.9	1.9	1.8	1.9	1.9	1.9	1.8	1.9	1.9	2.1	2.0	1.9	2.0	2.0	1.90	2.14
24-Jul-05	2.1	2.2	2.2	2.3	2.3	2.2	2.2	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.0	2.0	2.1	2.4	2.04	2.40
25-Jul-05	2.1	2.1	2.5	2.4	2.1	2.1	A	2.0	2.0	2.0	2.6	2.2	2.0	2.0	2.0	2.0	2.0	2.1	2.0	C	C	A	6.4	2.6	2.35	6.42
26-Jul-05	2.3	2.1	A	2.0	2.1	2.1	2.1	2.1	N	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.9	2.0	2.0	2.0	2.1	1.94	2.28
27-Jul-05	2.1	2.0	A	2.1	2.0	2.1	2.2	2.3	2.0	2.0	2.2	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.01	2.30
28-Jul-05	2.0	A	2.0	2.2	2.1	2.1	2.1	2.0	1.9	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	2.0	2.1	2.0	1.95	2.16
29-Jul-05	A	1.9	1.9	1.9	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.0	1.9	1.9	1.9	1.9	1.9	2.1	2.0	2.1	2.3	A	2.01	2.31
30-Jul-05	2.2	2.1	1.9	2.0	2.1	2.1	2.2	2.0	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	A	2.0	2.00	2.24
31-Jul-05	2.1	2.2	2.1	1.9	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.8	1.8	1.9	2.1	1.8	1.9	1.8	1.9	2.1	2.3	A	2.0	2.0	1.99	2.35
Hourly Avg	2.08	2.10	2.09	2.05	2.05	2.08	2.07	2.06	2.03	1.99	1.97	1.94	1.93	1.92	1.92	1.89	1.87	1.88	1.90	2.04	2.09	2.08	2.29	2.10		
Hourly Max	2.34	2.84	2.87	2.45	2.38	2.45	2.44	2.46	2.68	2.53	2.59	2.60	2.68	2.57	2.82	2.30	1.98	2.05	2.00	4.12	3.39	2.55	6.42	3.18		

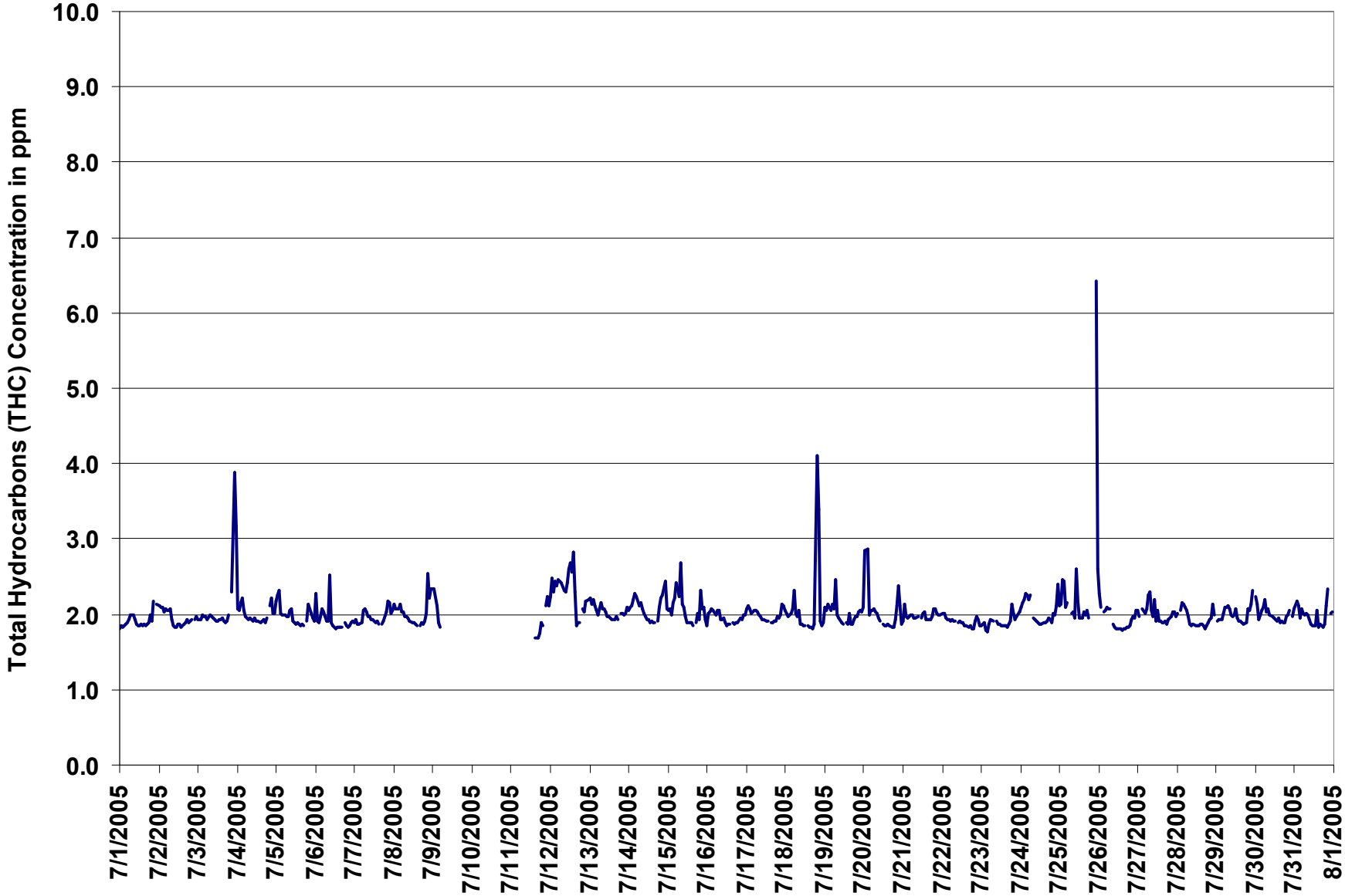
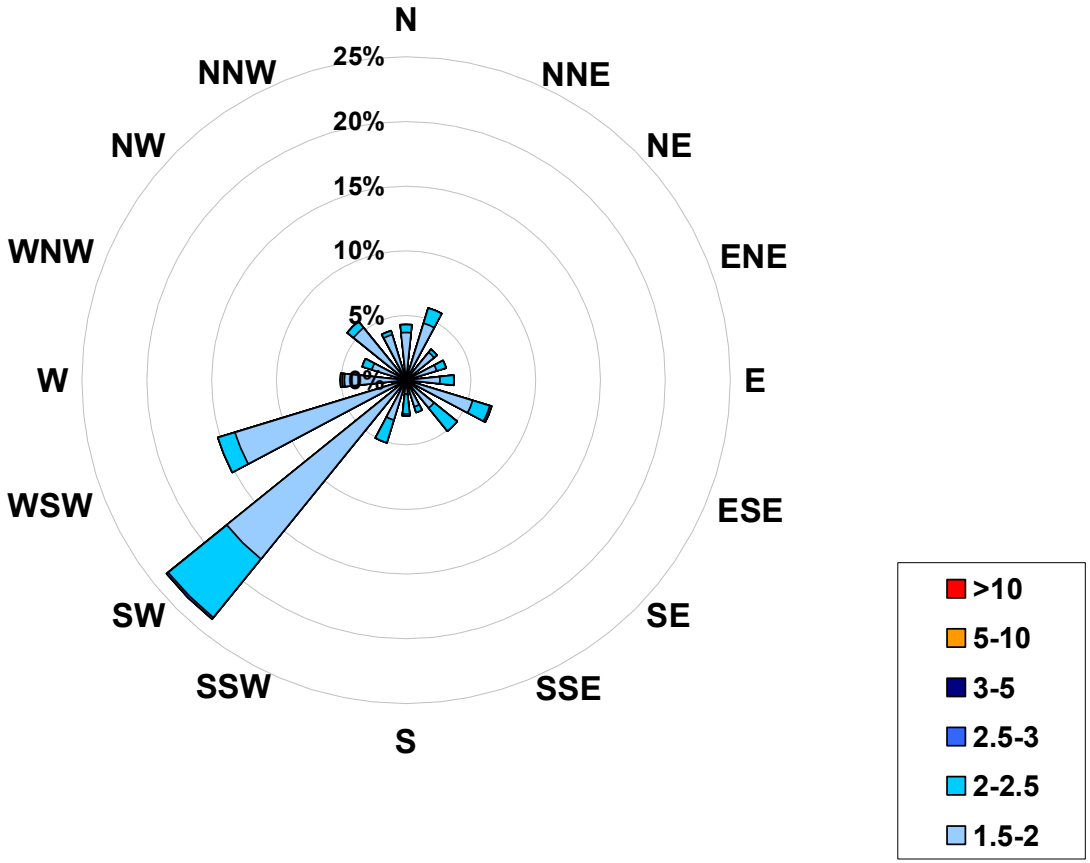


Figure 10. PAS - Cresent Heights Total Hydrocarbons 1-hr Maximum Value Monthly Trend

1-hr Average Concentration Rose for Total Hydrocarbons (in ppm) Located at the Cresent Heights Site for July 2005



Calms:	0%

Frequency Distribution of THC in ppm			
Range			Frequency (hrs)
1.5	<	2	513
2	to	2.5	135
2.5	to	3	4
3	to	5	0
5	to	10	0
	>	10	0
Total Non-Zero Values			652

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

Station: Cresent Heights
Station Owner: PAS

HOURLY AVERAGE TABLE

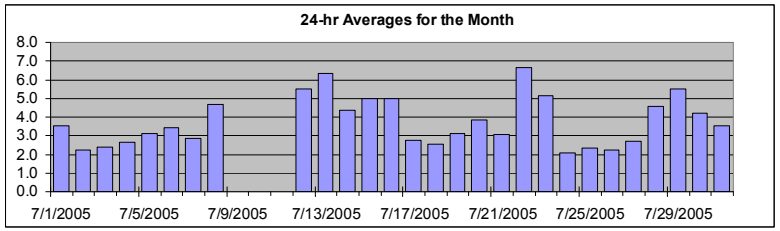
Particulate Matter ($PM_{2.5}$)

Monitoring Dates: July 1, 2005 to August 1, 2005

Draft Objective Limit: **Alberta Environment:** 1-hr - µg/m³ | 24-hr 30 µg/m³

Summary

Number of 24-hr Exceedances (draft):	0			
Maximum 1-hr Average:	25.3	µg/m³	13-Jul	18:00 19:00
Maximum 24-hr Value:	6.7	µg/m³	22-Jul	



AIC Time:	0 hrs	Operational Time:	668 hrs
Calibration Time:	2 hrs	AMD Operational Uptime:	90.1%

Percentile	99	95	75	50	25	5	1	Average	Geomean
	13.3	9.7	5.3	3.1	1.5	0.0	0.0	3.8 µg/m˘	3.6 µg/m˘

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-Jul-05	3	3	2	2	3	5	7	5	6	6	0	2	D	1	0	2	4	4	3	4	5	7	4	4	3.5	6.7
2-Jul-05	2	1	1	3	2	6	6	3	0	0	0	0	4	0	0	2	4	9	0	2	4	1	2	2	2.2	8.5
3-Jul-05	2	0	0	1	0	1	3	3	4	3	3	2	0	0	0	1	1	2	3	4	5	7	8	5	2.4	8.3
4-Jul-05	2	1	3	3	3	4	5	2	2	3	1	0	0	1	1	0	1	2	3	3	6	11	6	1	2.6	11.0
5-Jul-05	4	4	2	1	2	3	6	5	4	2	0	6	0	3	1	1	3	0	6	4	9	7	0	0	3.1	9.2
6-Jul-05	2	0	0	1	3	6	7	7	5	5	5	0	0	4	3	2	7	7	7	2	2	1	5	1	3.5	7.2
7-Jul-05	4	4	0	3	3	7	5	5	4	4	1	1	0	1	1	0	1	2	2	0	8	8	6	0	2.8	8.0
8-Jul-05	3	2	2	3	1	3	4	3	2	8	0	1	0	2	2	6	5	9	13	6	7	9	11	13	4.7	13.1
9-Jul-05	9	10	0	0	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	9.6
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Jul-05	N	N	N	N	N	N	N	N	N	N	3	N	N	N	N	N	N	1	4	4	6	8	6	2	N	8.4
12-Jul-05	4	3	3	4	2	4	7	6	1	5	4	4	D	0	1	0	2	11	9	7	14	13	12	9	5.5	14.3
13-Jul-05	7	8	4	1	4	5	8	6	10	7	10	6	2	7	0	D	5	0	25	13	2	5	5	5	6.4	25.3
14-Jul-05	5	4	4	4	6	7	7	7	7	3	0	0	D	2	1	2	0	1	5	5	8	9	6	8	4.4	9.2
15-Jul-05	3	3	3	4	5	6	5	6	5	7	3	0	0	3	1	1	5	6	7	14	18	6	8	0	5.0	17.9
16-Jul-05	6	11	9	8	8	9	9	9	4	5	2	1	5	4	2	3	3	11	7	2	1	1	0	0	5.0	11.3
17-Jul-05	0	4	3	2	2	2	2	3	2	5	4	4	4	1	3	4	3	2	3	4	3	1	4	3	2.8	5.3
18-Jul-05	2	0	1	1	2	1	3	3	0	1	1	0	0	1	1	2	0	4	8	5	8	12	D	3	2.5	11.7
19-Jul-05	4	2	1	2	0	2	3	1	0	0	2	1	1	2	6	0	1	6	3	3	5	12	9	8	3.1	11.8
20-Jul-05	14	7	3	4	5	4	4	4	0	1	0	0	0	0	0	2	0	3	0	5	7	11	13	5	3.9	14.0
21-Jul-05	4	4	2	0	3	2	4	5	6	6	8	2	2	0	0	1	3	3	1	4	3	5	5	2	3.1	8.1
22-Jul-05	2	2	5	5	5	3	10	6	10	9	6	7	2	5	7	7	9	8	6	8	9	17	10	1	6.7	17.5
23-Jul-05	11	9	D	D	6	10	7	3	5	3	1	D	0	3	0	3	2	2	2	10	10	11	4	5	5.1	10.6
24-Jul-05	5	2	6	3	2	3	4	1	0	0	0	2	1	0	0	1	1	7	D	0	2	0	2	5	2.1	7.5
25-Jul-05	2	2	0	0	2	4	3	4	0	0	4	4	3	1	1	0	D	3	C	C	D	5	5	4	2.3	5.1
26-Jul-05	4	3	2	1	2	6	3	3	3	D	D	0	0	0	0	0	0	1	4	5	3	3	3	3	2.2	6.1
27-Jul-05	2	3	5	3	2	3	3	3	3	2	1	1	1	1	1	2	1	1	3	5	5	6	5	2.7	5.6
28-Jul-05	5	5	6	3	4	5	5	5	4	4	4	3	4	3	2	3	2	1	2	2	7	13	9	9	4.6	12.8
29-Jul-05	5	4	5	5	6	5	6	8	7	5	5	5	6	5	5	4	2	3	2	4	5	7	12	11	5.5	12.2
30-Jul-05	9	11	6	6	5	4	1	3	4	5	6	5	2	2	D	0	0	0	3	3	5	9	6	4	4.2	11.3
31-Jul-05	4	6	3	1	2	3	5	5	3	2	1	0	2	2	2	2	2	2	4	5	5	6	8	9	3.5	9.3
Hourly Avg	4.4	4.0	2.8	2.7	3.2	4.4	5.0	4.5	3.6	3.8	2.7	2.1	1.6	1.9	1.5	1.8	2.5	3.8	4.8	4.7	6.1	7.3	6.2	4.5		
Hourly Max	14.0	11.3	8.5	8.4	8.3	10.1	9.9	8.6	10.2	9.4	9.9	7.2	5.8	6.6	7.3	6.8	9.2	11.4	25.3	14.3	17.9	17.5	13.5	13.1		

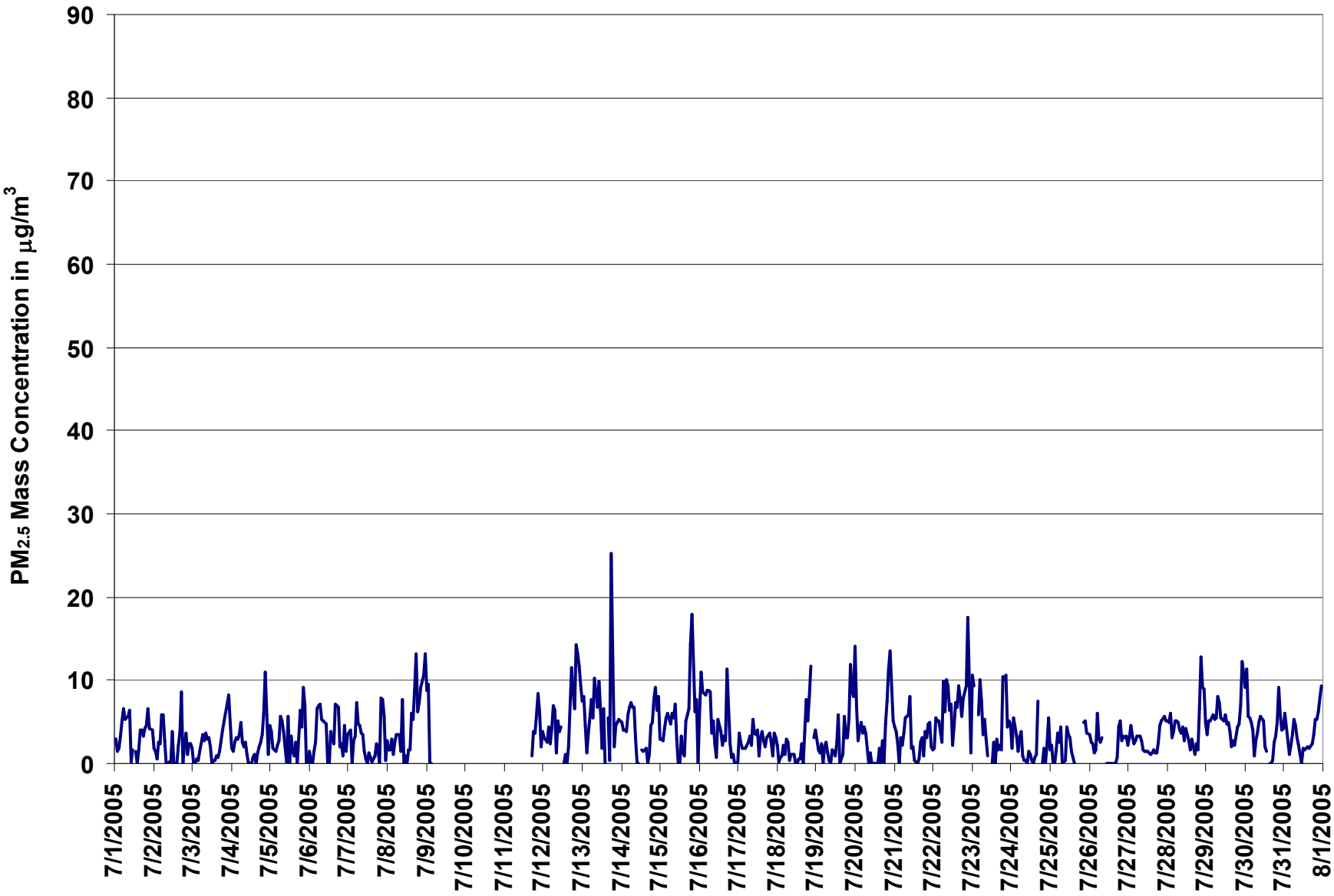


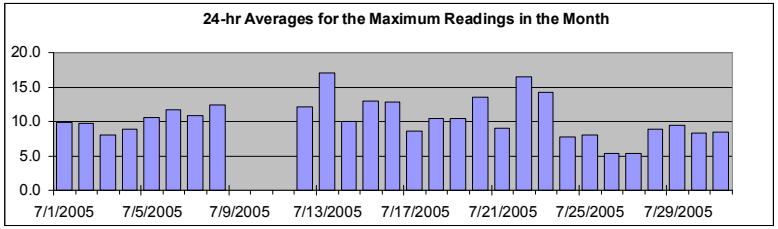
Figure 11. PAS - Cresent Heights Particulate Matter (less than 2.5 microns) 1-hr Average Monthly Trend

Station: Cresent Heights
Station Owner: PAS

HOURLY MAXIMUM TABLE

Particulate Matter ($PM_{2.5}$)

Monitoring Dates: July 1, 2005 to August 1, 2005



Summary

Maximum 1-hr Average:	90.1	µg/m³	13-Jul	18:00 19:00
Maximum 24-hr Value:	17.1	µg/m³	13-Jul	

AIC Time:	0 hrs	Operational Time:		668 hrs
Calibration Time:	2 hrs	AMD Operational Uptime:		90.1%

Percentile	99	95	75	50	25	5	1	Average	Geomean
	29.1	21.5	12.2	8.9	6.6	4.2	1.5	10.4 µg/m˘	10.0 µg/m˘

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-Jul-05	6	6	5	5	7	8	12	10	10	11	6	10	D	9	7	11	16	15	15	11	9	12	14	9	9.8	15.7
2-Jul-05	6	5	5	8	8	15	11	12	7	6	9	8	12	9	9	11	13	20	5	9	12	11	11	9	9.7	20.2
3-Jul-05	8	4	4	5	4	5	14	7	9	10	11	8	8	7	6	5	7	6	8	8	10	13	15	10	8.0	15.5
4-Jul-05	7	6	8	8	8	12	10	12	7	10	9	5	8	8	7	7	10	11	9	8	11	17	11	5	8.9	17.0
5-Jul-05	8	7	6	6	6	6	9	11	10	11	12	14	5	17	9	12	12	13	18	10	24	18	6	4	10.6	24.1
6-Jul-05	5	5	5	6	10	24	17	13	15	12	10	14	14	15	13	9	17	15	15	11	8	9	11	7	11.6	24.4
7-Jul-05	11	9	6	7	10	23	9	10	11	10	9	15	11	8	7	7	7	11	8	4	17	18	20	10	10.8	22.6
8-Jul-05	7	8	8	7	5	9	9	8	6	14	11	9	18	8	8	18	18	18	22	16	15	20	15	24	12.4	23.5
9-Jul-05	16	22	0	4	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	22.5
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Jul-05	N	N	N	N	N	N	N	N	N	N	11	N	N	N	N	N	N	9	8	8	10	11	12	5	N	12.3
12-Jul-05	7	6	5	8	4	9	12	17	11	10	11	15	D	11	11	9	8	21	14	12	18	17	21	21	12.1	21.3
13-Jul-05	14	12	8	7	12	11	10	10	14	10	15	12	12	16	24	D	24	14	90	43	6	10	10	10	17.1	90.1
14-Jul-05	9	7	7	7	9	9	11	12	12	9	6	8	D	7	7	8	8	5	10	10	18	19	20	12	10.0	20.2
15-Jul-05	7	6	6	7	9	9	11	11	14	15	15	7	7	10	10	10	13	16	24	19	27	18	29	12	12.9	29.2
16-Jul-05	9	18	15	12	11	17	13	19	15	14	21	8	17	17	8	14	10	25	18	13	5	5	1	2	12.9	25.2
17-Jul-05	3	8	8	4	4	5	5	7	5	8	14	10	16	10	14	15	11	9	10	7	7	7	10	9	8.7	15.7
18-Jul-05	5	3	3	4	7	10	8	8	7	7	10	8	9	7	10	10	9	12	27	12	15	44	D	6	10.4	44.4
19-Jul-05	8	5	5	7	5	5	6	9	9	8	10	8	8	22	21	6	6	13	9	7	11	23	16	22	10.4	22.9
20-Jul-05	29	17	9	9	10	9	14	11	8	12	15	0	12	10	8	10	9	11	13	24	16	18	43	9	13.6	42.6
21-Jul-05	8	9	10	3	6	7	7	11	10	10	21	13	11	8	11	6	10	10	5	10	6	8	9	5	8.9	21.4
22-Jul-05	6	5	9	10	11	11	17	19	24	26	20	27	21	14	15	21	21	16	11	14	15	32	22	8	16.4	31.6
23-Jul-05	29	25	D	D	12	18	14	8	12	10	11	D	7	10	11	14	8	11	6	19	27	27	7	12	14.2	28.9
24-Jul-05	10	10	12	7	6	6	11	6	6	6	6	9	9	6	3	6	9	17	D	5	5	3	7	12	7.8	16.8
25-Jul-05	6	8	4	4	5	7	7	9	11	8	12	9	7	7	6	9	D	13	C	C	D	12	9	6	8.0	12.8
26-Jul-05	7	5	6	4	6	19	6	7	8	D	D	0	1	1	1	2	2	3	13	8	6	5	5	6	5.4	19.1
27-Jul-05	7	6	7	7	5	4	5	6	5	4	4	4	4	4	4	3	5	5	3	6	6	7	8	8	5.3	7.6
28-Jul-05	7	10	9	7	7	8	7	7	6	6	6	6	6	5	5	5	6	4	5	4	10	32	28	14	8.8	32.5
29-Jul-05	10	8	8	9	9	8	8	10	10	8	8	7	10	10	9	6	6	10	4	8	8	15	20	18	9.5	20.3
30-Jul-05	17	25	9	8	8	8	5	6	7	8	8	9	8	6	D	2	2	3	7	7	7	16	8	7	8.3	24.9
31-Jul-05	8	10	6	4	8	17	16	9	6	6	8	5	5	5	6	5	6	5	8	14	9	10	11	16	8.4	16.5
Hourly Avg	9.7	9.5	6.9	6.6	7.5	10.6	10.1	10.2	9.8	10.1	10.9	9.1	9.9	9.5	9.3	8.9	10.1	11.8	14.3	11.7	12.2	15.8	14.3	10.3		
Hourly Max	29.1	24.9	14.5	12.3	12.1	24.4	16.9	18.9	24.2	26.0	21.4	27.2	21.0	22.1	23.6	21.2	24.3	25.2	90.1	42.6	27.4	44.4	42.6	23.5		

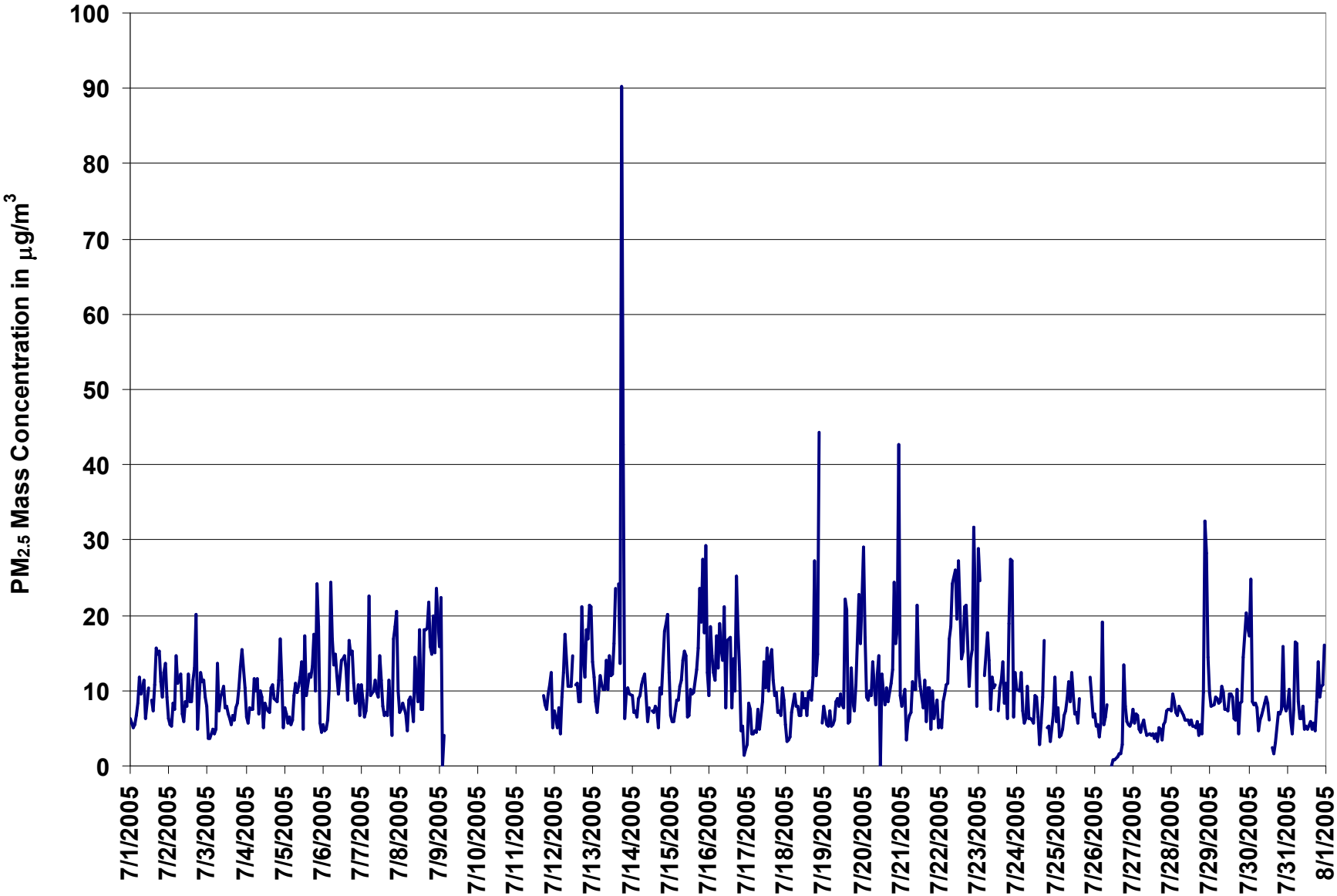
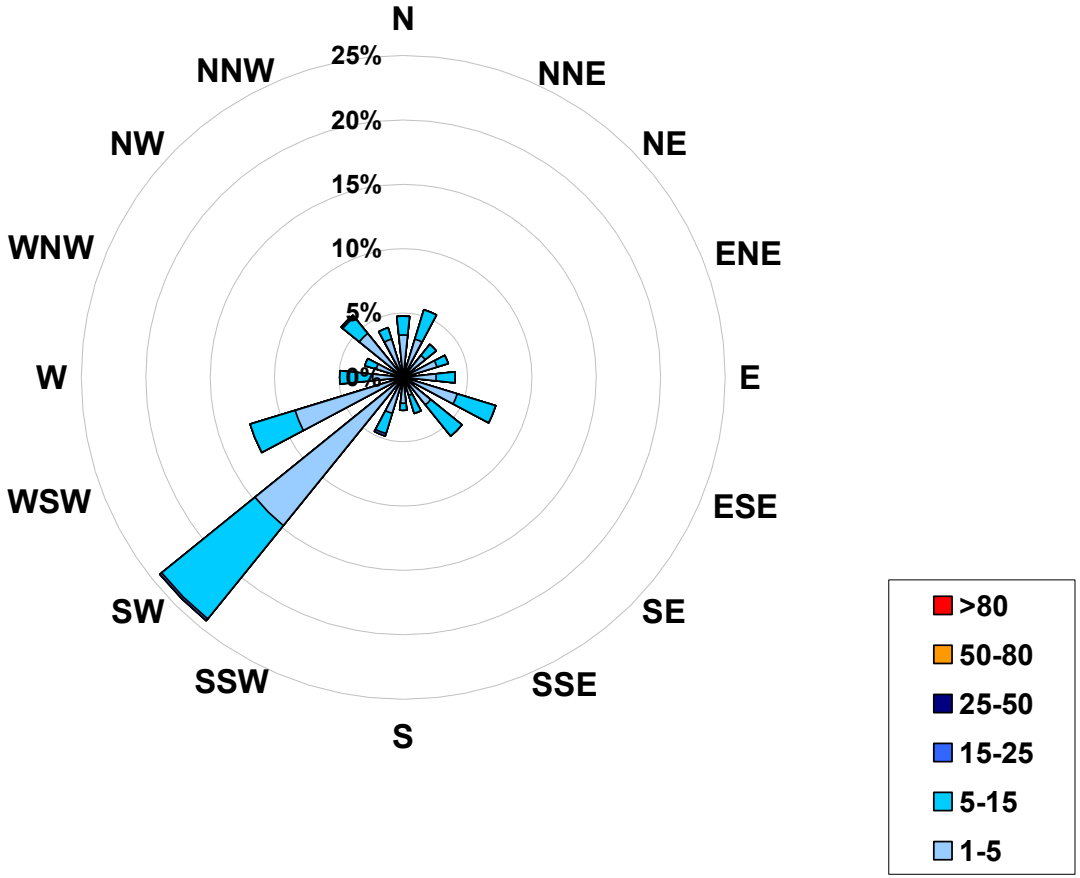


Figure 12. PAS - Cresent Heights Particulate Matter (less than 2.5 microns) 1-hr Maximum Value Monthly Trend

1-hr Average Concentration Rose for Particulate Matter (less than 2.5 microns) (in micrograms per cubic meter) Located at the Cresent Heights Site for July 2005



Calms:	0%

Frequency Distribution of $PM_{2.5}$ in $\mu g/m^3$			
Range			Frequency (hrs)
1.0	<	5	467
5	to	15	198
15	to	25	2
25	to	50	1
50	to	80	0
	>	80	0
Total Non-Zero Values			668

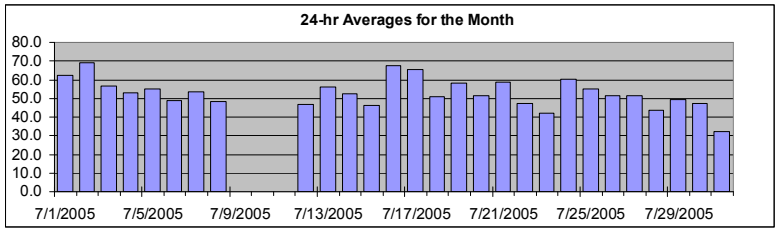
PAS - Cresent Heights Relative Humidity Monthly Summary

Station: Cresent Heights
Station Owner: PAS

HOURLY AVERAGE TABLE

Relative Humidity (RH)

Monitoring Dates: July 1, 2005 to August 1, 2005



Summary

Maximum 1-hr Average:	88.5	%	16-Jul	18:00 19:00
Maximum 24-hr Value:	69.0	%	2-Jul	

AIC Time:	0 hrs	Operational Time:	689 hrs
Calibration Time:	0 hrs	AMD Operational Uptime:	92.6%

Percentile	99	95	75	50	25	5	1	Average
	84.9	80.5	69.2	53.1	36.9	22.4	14.4	52.8 %

Status Flag Characters

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

Day **Mountain Standard Time**

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-Jul-05	71	77	78	78	77	80	78	77	72	68	59	54	45	41	39	36	40	49	44	52	61	67	71	77	62.1	80.5
2-Jul-05	77	78	75	79	80	76	74	74	69	61	57	48	66	53	45	46	61	76	69	71	73	77	84	86	69.0	86.2
3-Jul-05	84	80	80	80	82	74	68	63	59	54	50	47	40	36	33	33	32	33	35	41	49	57	68	76	56.4	84.2
4-Jul-05	77	82	81	79	75	71	69	60	54	49	44	39	33	31	30	29	30	31	33	37	45	54	68	70	53.0	81.7
5-Jul-05	77	78	78	78	75	72	68	63	56	49	40	42	36	37	35	35	33	32	36	42	51	65	68	70	54.8	78.4
6-Jul-05	69	67	62	64	68	59	62	58	51	49	43	34	27	33	30	29	32	35	40	45	48	49	56	60	48.8	69.4
7-Jul-05	62	69	64	64	67	70	73	71	64	58	52	47	44	43	39	37	34	34	37	34	40	50	60	64	53.3	73.5
8-Jul-05	67	67	68	71	71	69	62	52	43	42	35	31	27	24	24	25	26	29	38	46	51	60	65	72	48.5	71.6
9-Jul-05	76	76	58	45	47	57	52	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	76.1
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Jul-05	N	N	N	N	N	N	N	N	N	N	41	N	N	N	N	29	30	30	34	38	45	54	60	67	N	67.0
12-Jul-05	70	73	73	78	79	71	61	52	42	38	35	31	29	23	19	18	17	22	28	34	45	54	61	64	46.6	79.4
13-Jul-05	67	72	76	73	69	67	68	64	64	60	57	52	45	45	39	28	29	26	36	57	57	62	65	69	56.1	76.3
14-Jul-05	72	77	82	84	86	81	77	70	61	51	42	35	30	30	29	28	26	25	29	33	41	47	56	66	52.3	85.8
15-Jul-05	69	71	71	74	78	74	62	53	46	42	35	27	23	21	20	19	22	26	28	38	48	56	56	50	46.1	77.7
16-Jul-05	52	62	66	69	73	75	74	65	56	53	62	60	58	61	59	57	60	69	88	84	80	80	81	81	67.8	88.5
17-Jul-05	78	79	80	81	82	82	80	78	75	69	63	58	57	56	52	48	46	46	46	51	57	61	70	76	65.5	82.1
18-Jul-05	78	79	78	79	81	76	66	57	47	42	38	34	31	30	29	29	26	26	30	36	44	61	60	63	51.0	81.0
19-Jul-05	65	71	76	80	81	78	70	62	54	48	45	43	40	38	43	41	40	46	50	52	56	63	73	77	58.0	80.8
20-Jul-05	82	83	82	83	86	86	78	72	63	56	47	36	30	27	24	22	21	21	18	22	29	40	62	69	51.7	85.6
21-Jul-05	74	79	84	80	82	80	75	72	66	61	56	51	47	44	39	37	36	38	39	43	47	55	62	63	58.7	83.7
22-Jul-05	61	58	54	55	56	49	49	45	43	41	39	38	34	36	34	33	35	39	44	47	51	61	69	61	47.2	68.8
23-Jul-05	63	71	61	47	46	51	58	53	50	46	43	33	29	28	24	23	24	24	22	25	35	48	53	58	42.3	71.2
24-Jul-05	62	64	72	74	75	72	68	60	56	52	49	47	46	46	47	49	52	64	55	57	64	67	73	78	60.4	77.6
25-Jul-05	80	83	86	85	85	82	77	70	59	47	45	45	42	40	40	36	29	29	30	35	42	45	52	63	55.2	85.5
26-Jul-05	71	78	77	76	77	75	74	69	62	49	42	37	33	30	25	24	26	27	30	45	49	51	55	57	51.7	77.7
27-Jul-05	60	64	72	74	76	72	69	64	58	51	44	41	37	34	33	32	29	32	31	38	48	53	58	61	51.2	75.9
28-Jul-05	62	65	76	73	72	71	64	55	45	37	32	30	27	25	21	21	21	19	20	27	36	46	50	48	43.5	76.2
29-Jul-05	54	56	72	77	79	79	73	68	68	62	55	48	44	39	34	29	25	22	20	26	31	31	42	48	49.2	78.8
30-Jul-05	49	66	79	80	82	80	69	61	58	57	54	47	37	31	20	20	18	16	18	26	32	40	47	48	47.3	81.9
31-Jul-05	51	55	56	54	54	53	52	46	37	27	21	13	13	13	13	13	12	13	14	19	25	33	41	45	32.2	56.2
Hourly Avg	68.4	71.8	73.1	72.9	73.8	71.8	67.9	62.6	56.2	50.6	45.7	40.9	37.5	35.6	32.8	31.2	31.4	33.8	36.0	41.4	47.6	54.7	61.6	65.1		
Hourly Max	84.2	83.4	85.5	85.4	85.8	85.5	80.4	77.7	74.9	69.1	62.9	60.3	66.1	61.5	59.1	57.3	61.1	76.4	88.5	83.7	80.2	80.0	84.2	86.2		

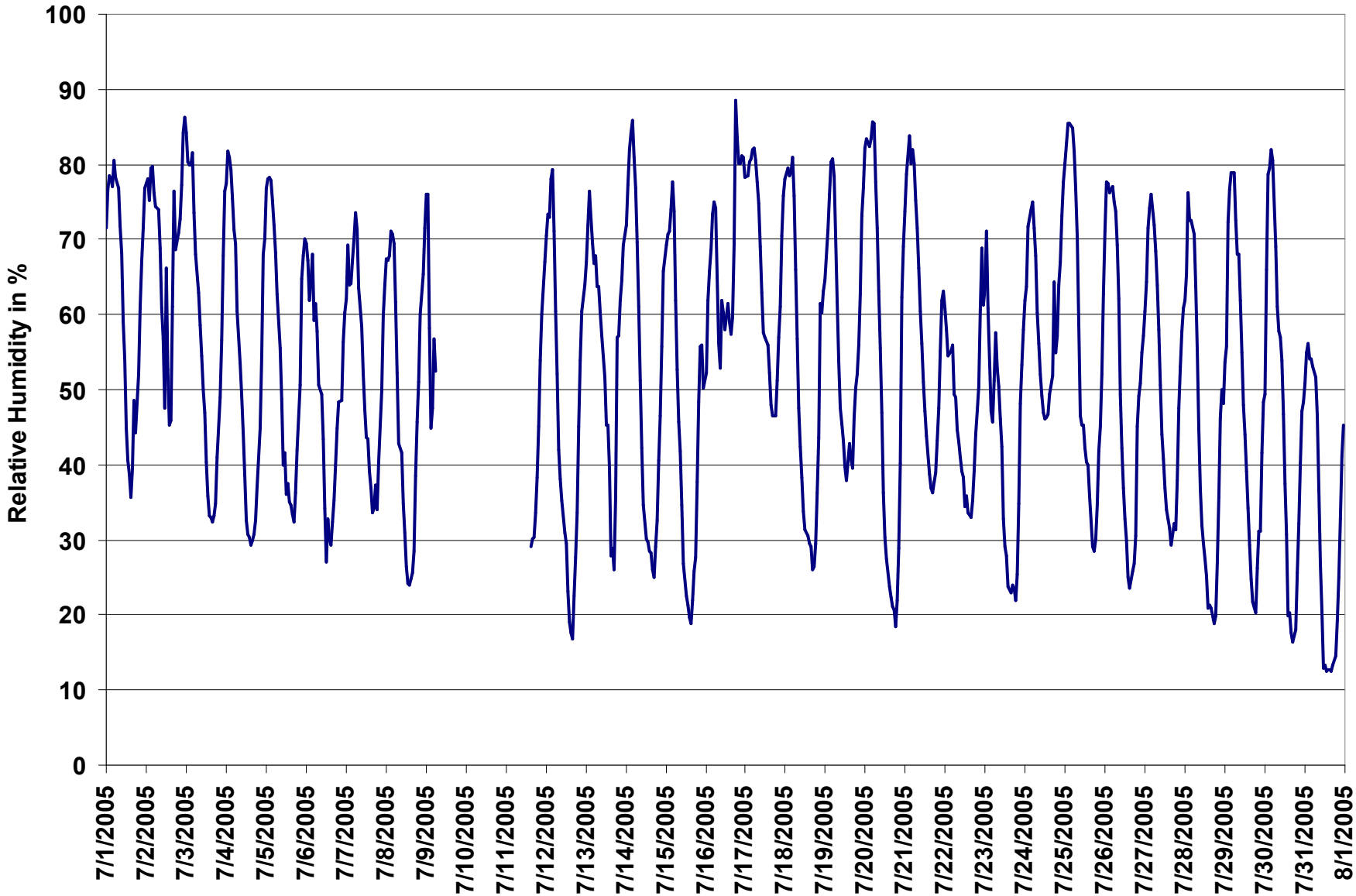


Figure 13. PAS - Cresent Heights Relative Humidity 1-hr Average Monthly Trend

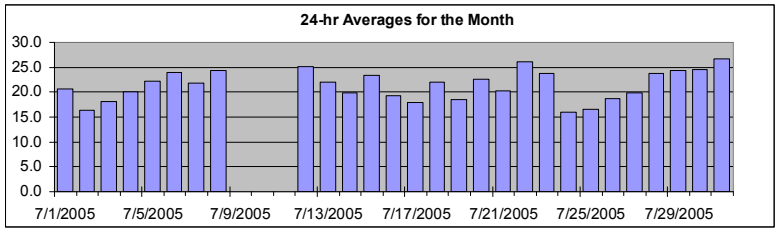
PAS - Cresent Heights Temperature Monthly Summary

Station: Cresent Heights
Station Owner: PAS

HOURLY AVERAGE TABLE

Ambient Temperature (T)

Monitoring Dates: July 1, 2005 to August 1, 2005



Summary

Maximum 1-hr Average:	35.6	°C	12-Jul	16:00 17:00
Maximum 24-hr Value:	26.7	°C	31-Jul	

AIC Time:	0 hrs	Operational Time:	689 hrs
Calibration Time:	0 hrs	AMD Operational Uptime:	92.6%

Percentile	99	95	75	50	25	5	1	Average
	34.8	32.3	25.9	20.9	16.5	12.3	10.5	21.4 °C

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-Jul-05	18	16	16	15	15	15	16	17	19	21	23	24	26	27	27	28	26	24	25	24	21	19	18	17	20.6	27.7
2-Jul-05	16	16	16	15	14	15	15	16	16	17	18	20	16	20	22	21	17	16	16	15	15	13	12	12	16.4	21.8
3-Jul-05	12	12	12	12	11	12	14	16	18	20	21	22	23	23	24	24	24	23	23	22	20	18	15	14	18.0	23.8
4-Jul-05	13	11	12	12	13	14	15	18	20	22	23	25	26	26	26	27	27	26	26	25	22	20	17	16	20.0	26.8
5-Jul-05	15	15	15	15	15	15	17	19	21	24	25	27	28	27	29	29	29	29	29	27	24	21	19	18	22.2	29.2
6-Jul-05	17	17	18	17	17	18	19	21	24	25	27	29	30	29	30	31	30	30	29	26	25	24	21	20	24.0	31.2
7-Jul-05	19	18	19	19	18	17	16	17	20	22	23	24	25	25	26	27	28	27	26	25	23	21	19	17	21.8	27.6
8-Jul-05	16	15	15	14	14	14	17	20	23	26	28	30	31	32	33	34	34	34	31	29	27	24	23	21	24.4	34.1
9-Jul-05	20	20	22	22	20	19	20	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	21.8
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Jul-05	N	N	N	N	N	N	N	N	N	N	23	N	N	N	N	27	27	27	26	24	22	20	19	16	N	27.1
12-Jul-05	15	15	14	13	13	15	18	22	24	26	28	30	32	34	35	35	36	35	34	31	28	26	24	22	25.2	35.6
13-Jul-05	20	19	18	17	17	18	19	20	21	23	24	27	28	29	29	30	29	29	27	19	18	16	16	15	22.0	30.2
14-Jul-05	14	13	12	11	11	12	14	16	19	21	23	25	26	26	27	28	27	27	26	24	22	21	18	15	19.9	27.6
15-Jul-05	13	13	12	12	11	13	16	19	23	25	29	31	31	32	32	32	32	31	30	28	26	23	22	23	23.4	32.4
16-Jul-05	22	20	20	19	18	18	18	21	23	24	21	21	22	21	21	21	20	19	15	16	16	15	14	13	19.2	24.4
17-Jul-05	13	14	13	13	13	13	14	15	16	18	19	20	21	21	22	23	24	23	24	22	20	19	17	15	18.0	23.6
18-Jul-05	14	13	13	13	12	13	16	19	22	24	26	28	28	29	30	30	30	30	30	28	25	21	17	16	21.9	30.1
19-Jul-05	15	14	13	12	12	12	15	17	19	20	21	22	23	24	24	24	23	22	21	20	19	19	17	17	18.6	23.7
20-Jul-05	16	16	15	15	15	15	16	18	19	21	23	26	28	29	30	31	31	31	31	30	26	23	19	17	22.6	31.2
21-Jul-05	17	15	14	13	12	13	14	16	18	20	22	23	24	25	26	27	28	27	27	25	23	21	19	18	20.3	27.7
22-Jul-05	18	19	20	21	21	22	23	25	27	29	30	30	31	30	33	33	32	30	28	27	26	24	23	23	26.0	32.7
23-Jul-05	22	21	20	21	22	21	20	21	22	24	25	27	28	28	29	29	28	28	28	26	23	21	19	17	23.8	28.8
24-Jul-05	16	15	14	13	13	13	14	17	18	19	20	21	21	21	19	18	17	16	17	15	13	12	11	11	16.0	21.2
25-Jul-05	10	10	9	9	9	10	12	14	17	19	20	20	21	22	21	22	23	22	22	20	18	17	15	13	16.5	23.1
26-Jul-05	12	11	11	10	10	11	12	13	17	20	23	24	25	26	27	27	26	25	24	21	19	18	17	17	18.6	27.5
27-Jul-05	16	16	15	14	14	15	15	17	18	20	22	23	24	25	25	26	26	25	25	23	21	19	18	16	20.0	26.0
28-Jul-05	16	16	14	14	14	14	17	20	23	26	28	29	31	32	32	32	32	32	32	28	25	22	20	22	23.8	32.5
29-Jul-05	21	20	17	17	16	16	18	19	20	22	24	26	28	30	31	33	33	34	33	30	27	26	23	21	24.3	33.8
30-Jul-05	21	19	18	17	17	16	18	20	22	24	26	28	30	32	32	32	32	33	33	29	26	23	20	19	24.5	33.1
31-Jul-05	18	18	17	17	17	17	19	22	27	30	33	34	35	35	35	36	35	35	34	32	29	25	22	21	26.7	35.5
Hourly Avg	16.5	15.8	15.3	14.9	14.6	15.0	16.4	18.4	20.6	22.6	24.1	25.5	26.5	27.1	27.8	28.1	27.8	27.3	26.6	24.6	22.4	20.4	18.4	17.3		
Hourly Max	22.3	21.0	21.8	21.7	21.7	21.6	22.9	25.0	26.9	30.1	32.6	34.2	34.6	34.8	35.3	35.5	35.6	35.0	34.4	31.9	28.7	25.8	23.5	23.2		

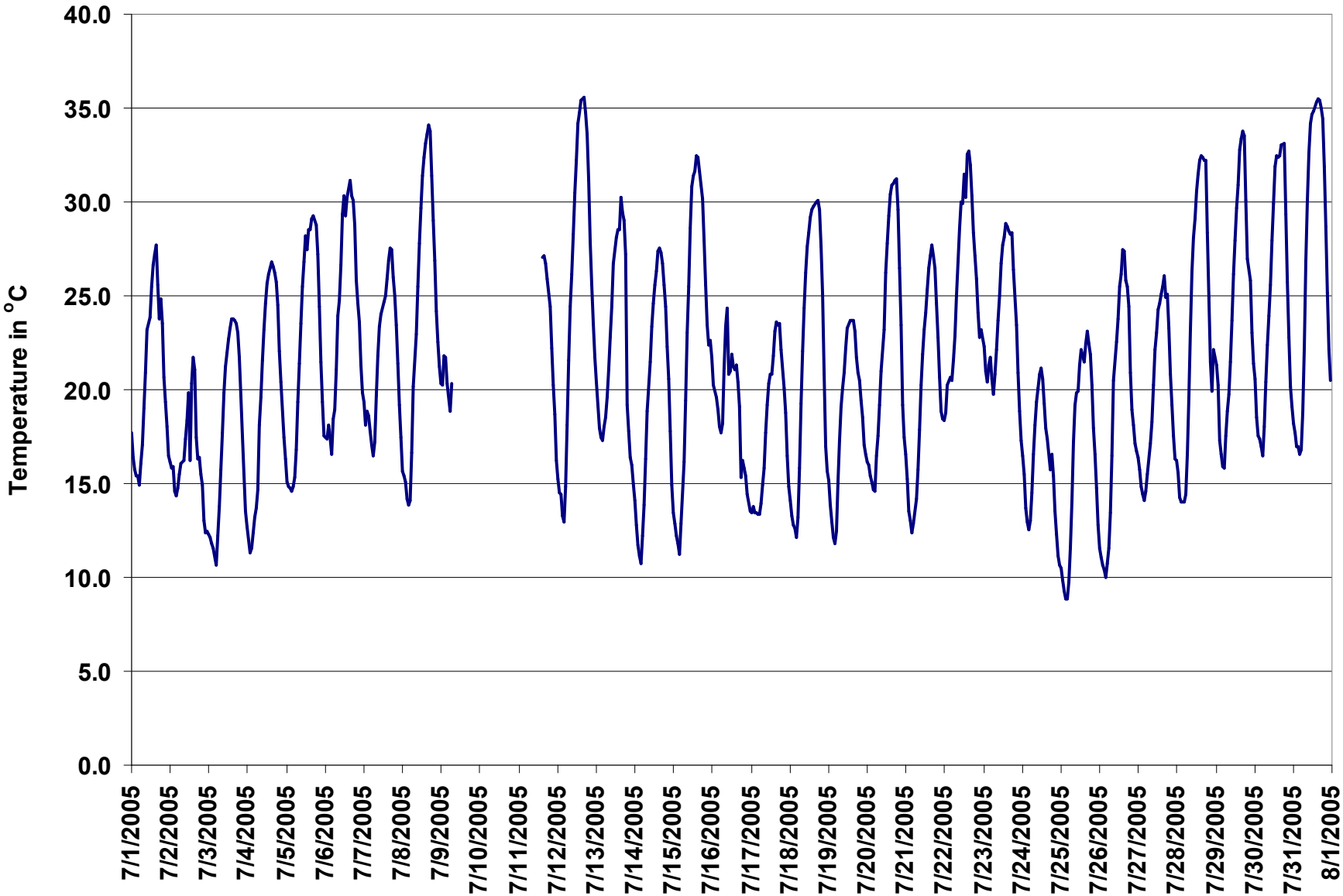


Figure 14. PAS - Cresent Heights Temperature 1-hr Average Monthly Trend

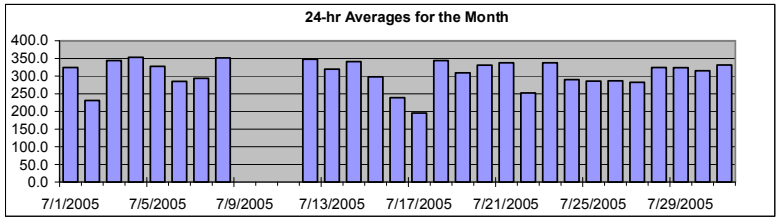
PAS - Cresent Heights Solar Radiation Monthly Summary

HOURLY AVERAGE TABLE

Solar Radiation (SR)

Station: Cresent Heights
Station Owner: PAS

Monitoring Dates: July 1, 2005 to August 1, 2005



Summary

Maximum 1-hr Average:	941.6	W/m²	4-Jul	12:00 13:00
Maximum 24-hr Value:	353.0	W/m²	4-Jul	

AIC Time:	0 hrs	Operational Time:	689 hrs
Calibration Time:	0 hrs	AMD Operational Uptime:	92.6%

Percentile	99	95	75	50	25	5	1	Average
	905.9	872.6	591.6	189.5	0.0	0.0	0.0	304.3 W/m²

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-Jul-05	0	0	0	0	14	52	246	313	584	723	839	653	926	890	829	668	261	434	253	84	9	0	0	0	324.1	925.7
2-Jul-05	0	0	0	0	6	53	147	180	339	424	693	770	257	908	791	481	79	183	162	62	7	0	0	0	230.9	907.6
3-Jul-05	0	0	0	0	7	120	266	431	592	728	839	800	801	824	777	717	583	430	255	85	7	0	0	0	344.1	839.2
4-Jul-05	0	0	0	0	10	66	258	426	584	742	837	903	942	841	825	718	576	418	235	82	7	0	0	0	353.0	941.6
5-Jul-05	0	0	0	0	13	108	258	425	558	719	827	899	832	529	719	643	568	428	254	81	6	0	0	0	327.7	899.4
6-Jul-05	0	0	0	0	14	136	151	253	471	463	645	877	883	538	753	634	453	342	177	43	7	0	0	0	285.1	883.0
7-Jul-05	0	0	0	0	4	39	89	221	588	719	733	652	839	614	756	651	566	412	121	39	3	0	0	0	293.5	839.0
8-Jul-05	0	0	0	0	14	72	266	421	584	721	828	895	914	890	821	710	567	406	247	76	3	0	0	0	351.5	914.4
9-Jul-05	0	0	0	0	11	67	254	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	254.2
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Jul-05	N	N	N	N	N	N	N	N	N	N	833	N	N	N	N	716	579	414	248	77	5	0	0	0	N	833.4
12-Jul-05	0	0	0	0	7	97	249	414	574	707	815	884	902	887	826	710	569	379	241	77	5	0	0	0	347.7	902.1
13-Jul-05	0	0	0	0	7	115	129	382	582	708	813	887	912	684	598	737	430	376	231	72	4	0	0	0	319.5	911.5
14-Jul-05	0	0	0	0	7	91	210	421	570	711	819	889	906	865	805	713	576	360	160	76	5	0	0	0	341.0	906.3
15-Jul-05	0	0	0	0	5	83	231	404	567	690	797	883	851	651	755	563	325	193	116	40	2	0	0	0	298.0	883.4
16-Jul-05	0	0	0	0	3	48	134	368	503	661	560	736	768	565	489	446	232	150	25	40	4	0	0	0	238.8	767.7
17-Jul-05	0	0	0	0	2	28	78	123	272	454	514	465	449	294	384	538	483	325	210	72	4	0	0	0	195.6	538.3
18-Jul-05	0	0	0	0	5	86	234	398	563	705	815	884	910	881	812	705	561	395	234	68	3	0	0	0	344.1	910.0
19-Jul-05	0	0	0	0	4	80	227	393	557	696	806	882	894	874	801	684	301	90	74	57	1	0	0	0	309.2	893.7
20-Jul-05	0	0	0	0	2	46	164	354	545	692	775	827	896	872	809	710	563	396	228	65	3	0	0	0	331.1	895.7
21-Jul-05	0	0	0	0	4	78	225	389	552	693	803	873	891	855	804	694	553	392	229	64	3	0	0	0	337.7	891.2
22-Jul-05	0	0	0	0	6	56	227	373	483	598	692	427	732	393	748	578	366	213	123	37	2	0	0	0	252.3	748.5
23-Jul-05	0	0	0	0	3	74	221	389	553	694	804	879	906	887	830	705	520	342	236	59	3	0	0	0	337.7	905.8
24-Jul-05	0	0	0	0	3	70	217	383	548	690	799	870	892	830	673	270	239	119	267	91	3	0	0	0	290.1	892.0
25-Jul-05	0	0	0	0	3	61	211	382	545	720	606	584	780	758	488	465	574	399	225	58	3	0	0	0	285.9	779.7
26-Jul-05	0	0	0	0	3	45	79	225	468	682	784	829	854	817	828	615	325	212	87	24	1	0	0	0	286.6	854.1
27-Jul-05	0	0	0	0	2	53	119	189	295	660	764	759	809	740	692	595	571	264	211	53	2	0	0	0	282.5	808.6
28-Jul-05	0	0	0	0	1	39	193	365	528	671	780	853	876	852	789	677	538	376	208	40	1	0	0	0	324.4	875.6
29-Jul-05	0	0	0	0	2	57	199	360	518	662	776	849	875	858	794	684	526	361	200	49	2	0	0	0	323.8	874.9
30-Jul-05	0	0	0	0	1	55	194	354	518	662	774	850	856	871	700	579	514	382	206	47	1	0	0	0	315.2	870.8
31-Jul-05	0	0	0	0	2	58	208	375	544	689	799	869	892	864	794	682	540	377	207	51	2	0	0	0	331.3	891.7
Hourly Avg	0	0	0	0	6	70	196	347	521	667	764	801	830	762	739	631	467	330	196	61	4	0	0	0		
Hourly Max	0	0	0	0	14	136	266	431	592	742	839	903	942	908	830	737	583	434	267	91	9	0	0	0		

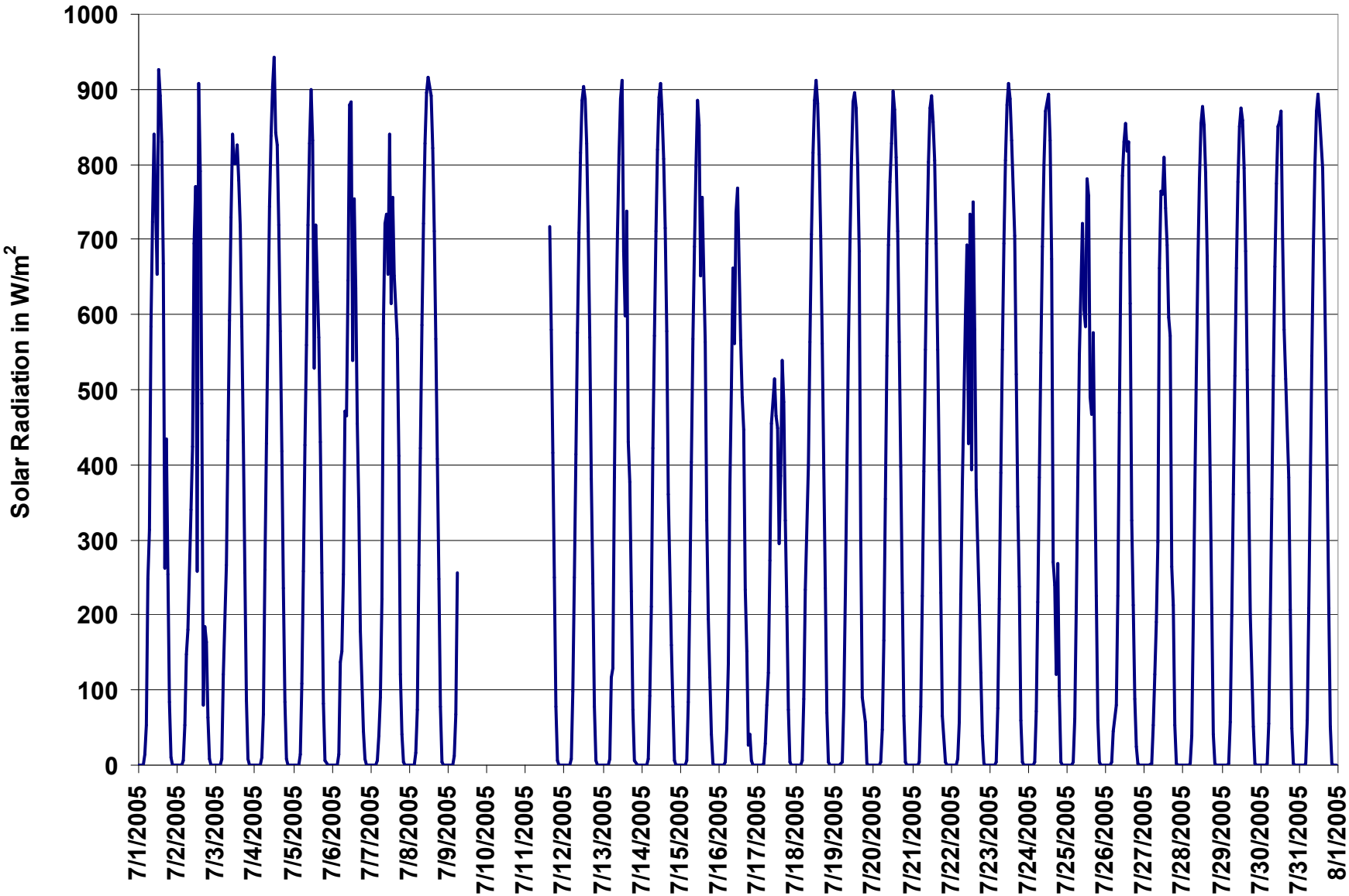


Figure 15. PAS - Cresent Heights Solar Radiation 1-hr Average Monthly Trend

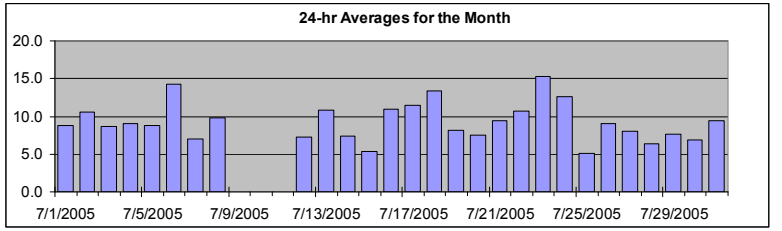
PAS - Cresent Heights Scalar Wind Speed Monthly Summary

HOURLY AVERAGE TABLE

Wind Speed (WSs)

Station: Cresent Heights
Station Owner: PAS

Monitoring Dates: July 1, 2005 to August 1, 2005



Summary

Maximum 1-hr Average:	32.8	km/hr	6-Jul	12:00 13:00
Maximum 24-hr Value:	15.3	km/hr	23-Jul	

Calm Time:	1 hrs	**0%** calms	Operational Time:	688 hrs
Calibration Time:	0 hrs		AMD Operational Uptime:	92.6%

Percentile	99	95	75	50	25	5	1	AverageS
	24.6	19.0	11.8	8.3	5.4	2.9	1.9	9.3 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**

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-hr Scalar Average	Daily Max
1-Jul-05	13	12	10	11	15	14	9	7	9	10	9	8	8	7	9	8	12	11	6	5	3	4	6	5	8.8	14.5
2-Jul-05	11	11	7	5	2	3	9	16	20	18	18	16	9	8	11	15	14	10	12	4	7	11	7	11	10.6	20.5
3-Jul-05	11	11	11	8	9	8	8	7	7	8	9	10	12	12	12	13	12	11	9	6	4	2	4	4	8.7	12.5
4-Jul-05	4	4	4	3	5	9	10	12	17	18	22	19	17	12	9	8	9	12	9	4	2	3	4	5	9.1	21.9
5-Jul-05	3	3	6	5	7	11	11	12	12	11	12	12	14	15	12	12	11	11	11	6	3	4	4	4	8.8	14.8
6-Jul-05	5	5	9	12	9	11	10	5	12	20	24	29	33	27	27	27	20	13	8	8	11	10	4	6	14.3	32.8
7-Jul-05	11	12	12	10	8	7	5	4	6	5	4	5	8	7	10	11	12	9	5	4	3	4	4	4	7.1	11.9
8-Jul-05	3	8	11	8	7	8	8	11	12	13	17	16	17	17	18	14	9	8	8	7	4	4	3	3	9.8	17.6
9-Jul-05	2	6	9	9	11	9	9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	10.9
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Jul-05	N	N	N	N	N	N	N	N	N	N	22	N	N	N	N	13	13	14	15	8	5	3	4	5	N	22.3
12-Jul-05	4	5	3	3	2	3	2	3	7	7	7	5	7	8	19	18	19	14	9	6	5	7	6	6	7.3	19.4
13-Jul-05	6	8	8	6	6	9	8	9	14	12	12	12	12	12	13	14	14	12	18	31	13	2	3	5	10.8	30.6
14-Jul-05	5	8	8	7	5	7	10	10	9	7	8	7	8	9	7	8	12	11	6	6	5	4	5	4	7.4	12.4
15-Jul-05	5	5	4	3	2	3	2	2	2	3	3	6	10	8	17	14	10	5	3	3	2	4	5	9	5.4	17.1
16-Jul-05	10	6	4	5	9	6	4	6	7	8	24	20	19	16	16	16	15	18	13	9	9	7	8	9	10.9	24.3
17-Jul-05	9	10	12	13	12	11	13	11	14	16	17	16	15	15	15	13	12	12	8	5	5	6	6	8	11.4	17.0
18-Jul-05	9	7	10	7	3	8	11	12	19	18	16	18	21	22	20	19	18	16	11	4	5	21	21	7	13.4	21.6
19-Jul-05	5	5	10	11	9	8	2	2	4	6	7	5	6	8	11	12	13	15	13	12	10	9	6	4	8.1	14.8
20-Jul-05	2	6	6	9	5	3	4	4	7	8	9	10	10	10	10	14	14	8	3	2	6	4	18	8	7.5	18.4
21-Jul-05	3	10	19	11	11	7	6	7	7	9	12	13	11	8	8	7	6	9	11	12	13	11	10	8	9.5	18.7
22-Jul-05	11	10	8	16	14	13	11	12	14	10	5	3	9	10	13	10	9	10	13	7	10	12	11	17	10.7	17.0
23-Jul-05	17	19	19	18	19	17	14	15	13	13	14	17	20	21	20	20	20	15	12	7	8	14	11	5	15.3	21.1
24-Jul-05	6	5	3	5	8	10	10	15	15	16	18	18	20	24	26	22	20	10	19	16	7	6	3	2	12.6	26.1
25-Jul-05	3	3	calm	3	3	5	8	5	3	5	4	4	5	7	5	6	8	9	8	5	5	4	3	5	5.1	9.1
26-Jul-05	7	5	6	9	10	9	10	10	10	9	8	7	4	6	6	8	8	6	11	21	19	11	7	9	9.0	21.4
27-Jul-05	13	12	10	7	5	4	3	2	6	7	8	9	9	10	11	8	7	8	6	8	11	12	8	8	8.1	13.3
28-Jul-05	6	7	5	6	9	7	6	8	8	4	4	5	4	6	7	6	8	5	3	3	5	4	7	17	6.3	17.1
29-Jul-05	15	16	16	10	6	7	5	9	11	10	9	7	7	7	7	4	5	4	3	6	7	4	2	5	7.7	16.5
30-Jul-05	6	18	14	6	3	8	6	4	6	7	7	6	10	8	8	9	10	5	2	3	6	5	4	5	6.9	18.1
31-Jul-05	5	7	9	8	8	10	7	4	6	12	11	15	16	18	17	17	15	13	6	4	7	6	4	3	9.4	17.8
1-hr Average	7.2	8.4	8.9	8.0	7.6	8.0	7.5	8.0	9.9	10.4	11.9	11.3	12.2	12.1	12.9	12.6	12.3	10.5	9.0	7.7	6.8	6.9	6.5	6.6		
Hourly Max	17.3	19.2	19.2	18.3	18.8	17.5	14.4	15.5	20.5	19.7	24.3	29.1	32.8	26.8	26.8	27.1	20.4	17.7	19.3	30.6	19.0	21.2	21.3	17.1		

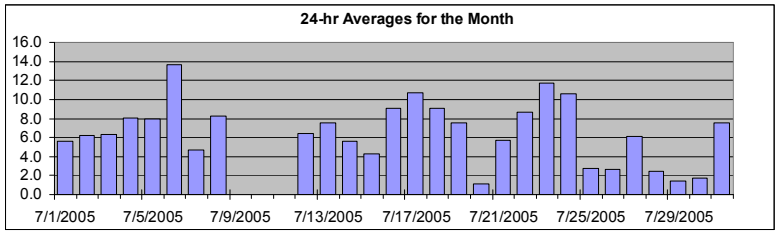
PAS - Cresent Heights Vector Wind Speed Monthly Summary

Station: Cresent Heights
Station Owner: PAS

HOURLY AVERAGE TABLE

Wind Speed (WSv)

Monitoring Dates: July 1, 2005 to August 1, 2005



Summary

Maximum 1-hr Average:	32.5	km/hr	6-Jul	12:00 13:00
Maximum 24-hr Value:	13.6	km/hr	6-Jul	

Calm Time:	3 hrs	**0%** calms	Operational Time:	686 hrs
Calibration Time:	0 hrs		AMD Operational Uptime:	92.6%

Percentile	99	95	75	50	25	5	1	AverageV
	24.2	18.5	11.5	7.9	4.9	2.2	1.4	10.8 km/hr

Status Flag Characters

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

Day — **Mountain Standard Time**

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-hr Vector Average	Daily Max
1-Jul-05	12	12	10	10	14	14	8	7	9	10	9	7	7	7	8	7	9	10	6	5	3	3	6	4	5.6	14.3
2-Jul-05	11	10	6	3	2	3	8	15	20	18	18	15	6	8	9	14	12	10	11	4	5	11	5	11	6.2	20.3
3-Jul-05	11	11	11	8	8	7	8	6	7	7	9	10	12	11	11	12	12	11	9	6	4	1	4	4	6.3	12.1
4-Jul-05	4	4	3	2	5	8	10	12	16	18	22	18	16	11	8	7	9	12	9	4	2	3	4	5	8.0	21.7
5-Jul-05	3	3	5	4	7	11	11	12	12	11	12	12	13	15	12	11	10	10	11	6	3	4	4	4	7.9	14.5
6-Jul-05	4	4	7	12	9	11	10	5	12	20	24	29	32	27	27	27	20	13	8	6	10	10	4	5	13.6	32.5
7-Jul-05	11	12	11	10	8	7	5	4	4	4	2	4	8	6	9	11	11	8	4	4	2	4	4	3	4.7	11.6
8-Jul-05	3	8	11	8	7	7	7	11	12	12	17	16	17	16	17	14	8	6	8	6	4	3	3	1	8.2	17.2
9-Jul-05	calm	5	9	8	10	9	9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	10.4
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Jul-05	N	N	N	N	N	N	N	N	N	N	22	N	N	N	N	13	13	14	14	8	5	3	4	5	N	22.0
12-Jul-05	3	5	3	2	2	2	2	3	6	7	6	2	5	5	18	18	19	13	9	6	5	7	6	6	6.5	19.0
13-Jul-05	6	8	8	6	6	9	7	9	14	12	11	11	12	11	13	14	13	11	12	30	13	1	3	5	7.5	30.4
14-Jul-05	5	8	8	7	5	7	9	10	8	7	8	6	7	8	3	6	12	11	5	6	5	4	5	4	5.7	12.0
15-Jul-05	5	5	4	3	2	3	2	2	1	3	3	5	9	8	17	14	9	5	3	2	2	3	4	9	4.3	16.9
16-Jul-05	10	5	3	5	9	5	3	5	6	7	24	20	18	16	15	16	15	17	12	9	9	7	8	8	9.0	23.8
17-Jul-05	9	10	12	12	12	11	13	11	14	16	17	16	15	15	15	13	12	12	8	4	5	6	6	8	10.7	16.8
18-Jul-05	9	7	10	7	3	8	11	11	18	18	16	17	20	21	19	18	18	16	9	3	5	19	21	6	9.1	21.2
19-Jul-05	5	5	10	11	9	8	2	2	3	5	5	5	5	7	11	11	12	15	13	12	9	8	6	2	7.5	14.6
20-Jul-05	1	5	6	9	5	2	3	4	7	7	8	8	10	9	9	13	13	7	3	2	6	3	18	7	1.2	18.2
21-Jul-05	1	9	18	10	11	6	6	6	7	9	11	12	10	8	7	5	5	8	11	12	13	11	10	8	5.7	18.1
22-Jul-05	10	10	7	16	14	12	10	11	13	10	4	2	9	8	12	10	8	9	13	6	9	12	10	17	8.7	17.0
23-Jul-05	17	19	19	18	19	17	14	14	12	12	14	17	19	21	20	19	19	14	11	7	6	14	11	5	11.7	20.8
24-Jul-05	6	4	2	5	8	9	9	14	15	15	17	17	19	23	26	22	20	9	19	16	7	6	3	2	10.6	25.9
25-Jul-05	3	2	calm	2	3	5	8	5	3	3	3	3	4	5	3	3	7	9	8	5	5	4	2	5	2.7	8.6
26-Jul-05	7	5	6	9	10	9	10	10	10	8	7	7	2	4	4	7	7	4	11	21	18	10	7	7	2.6	20.9
27-Jul-05	13	12	9	6	4	4	2	2	6	6	8	8	7	10	10	8	7	8	6	8	11	12	8	8	6.1	13.1
28-Jul-05	6	6	5	6	8	6	6	8	8	3	3	3	1	4	5	4	8	5	2	3	5	4	3	16	2.4	15.8
29-Jul-05	15	14	15	10	5	7	5	8	11	9	9	6	6	6	6	3	4	4	3	6	6	1	calm	2	1.4	14.7
30-Jul-05	2	17	14	6	1	8	6	3	5	6	6	5	9	7	7	9	10	5	2	3	6	5	4	5	1.7	16.5
31-Jul-05	4	7	8	8	7	9	7	4	6	11	11	15	16	17	17	16	15	13	5	3	6	6	4	2	7.6	17.3
1-hr Vector	2.1	1.8	2.4	2.6	3.2	3.9	4.1	3.4	4.7	4.9	5.6	5.1	6.2	6.8	7.6	8.1	7.7	5.5	3.8	3.4	1.7	1.9	1.5	1.6		
Hourly Max	17.1	19.1	19.1	17.9	18.7	17.1	14.2	15.3	20.3	19.6	23.9	28.8	32.5	26.7	26.6	26.8	20.3	17.4	19.1	30.4	17.7	19.5	21.0	17.0		

PAS - Cresent Heights Wind Direction Monthly Summary

Station: Cresent Heights
Station Owner: PAS

HOURLY AVERAGE TABLE

Wind Direction (WD)

Monitoring Dates: July 1, 2005 to August 1, 2005

Summary

Calm Time:	0 hrs	**0%** calms						Operational Time:	689 hrs																	
Calibration Time:	0 hrs							AMD Operational Uptime:	92.6%																	
Percentile	99	95	75	50	25	5	1	Average																		
	354.4	328.3	249.8	223.8	123.7	19.1	5.4	253 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 / 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	WD Sector
1-Jul-05	230	235	241	230	230	236	258	247	225	230	240	249	243	254	233	238	274	16	68	110	116	84	66	98	238	WSW
2-Jul-05	61	62	82	109	141	227	249	333	340	358	5	11	328	242	281	324	292	230	334	308	295	354	348	231	333	NNW
3-Jul-05	249	258	255	231	229	248	226	244	274	269	310	315	328	314	306	317	312	316	322	337	5	75	129	139	287	WNW
4-Jul-05	139	127	175	208	241	245	245	229	222	217	222	218	228	242	250	251	244	238	235	234	167	139	122	157	224	SW
5-Jul-05	167	187	225	238	242	231	227	226	226	221	225	226	226	235	246	242	241	226	219	208	147	131	128	123	224	SW
6-Jul-05	227	259	241	219	213	214	229	272	224	220	214	222	223	224	225	231	242	245	277	267	266	271	253	213	231	SW
7-Jul-05	214	229	230	256	250	268	310	333	53	110	146	242	221	241	242	244	246	257	270	282	105	117	133	169	237	WSW
8-Jul-05	139	220	226	217	223	233	223	227	231	222	230	223	226	229	222	228	227	279	317	348	25	123	215	223	230	SW
9-Jul-05	127	226	288	273	262	228	274	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	-
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	-
11-Jul-05	N	N	N	N	N	N	N	N	N	N	234	N	N	N	N	242	245	250	242	260	240	184	164	145	N	-
12-Jul-05	181	199	188	170	164	207	196	183	234	236	219	177	117	195	227	209	214	229	262	259	231	232	226	220	216	SW
13-Jul-05	209	219	216	223	227	236	238	253	234	250	248	260	266	261	246	247	272	266	321	2	10	124	246	264	265	W
14-Jul-05	263	239	238	220	216	220	222	224	235	239	222	239	230	207	248	275	250	246	270	333	360	26	112	121	238	WSW
15-Jul-05	127	136	140	129	137	124	120	134	198	210	214	195	207	224	226	224	224	227	215	252	198	146	221	247	205	SSW
16-Jul-05	230	254	265	232	232	227	250	244	298	304	324	353	341	321	327	319	325	317	326	326	315	303	312	303	311	NW
17-Jul-05	299	297	302	306	297	289	289	295	309	312	322	320	314	324	314	304	307	311	305	292	256	256	225	231	302	WNW
18-Jul-05	235	218	226	229	186	215	228	228	219	222	213	221	217	222	237	245	252	253	276	299	243	9	32	76	236	SW
19-Jul-05	20	18	15	1	22	18	45	45	144	43	32	56	33	10	13	12	26	32	38	43	53	23	10	85	28	NNE
20-Jul-05	320	340	357	4	9	68	128	122	117	96	91	154	178	180	188	217	224	232	239	67	66	81	4	18	128	SE
21-Jul-05	5	340	352	34	9	9	343	339	324	321	342	3	12	19	42	59	92	95	102	94	91	117	125	124	35	NE
22-Jul-05	106	102	123	155	145	152	139	121	145	149	162	86	171	127	129	177	163	124	116	145	222	234	223	202	152	SSE
23-Jul-05	212	215	218	248	255	281	295	306	282	262	252	251	247	242	243	248	241	253	289	290	292	25	44	79	257	WSW
24-Jul-05	100	68	41	20	29	63	81	94	102	94	65	43	18	13	15	19	17	32	15	21	28	76	119	222	41	NE
25-Jul-05	252	252	173	172	186	223	230	224	202	163	164	172	180	210	243	249	309	331	333	327	315	306	265	200	246	WSW
26-Jul-05	221	228	223	235	228	228	229	230	220	226	228	208	208	283	268	235	233	296	355	30	62	78	105	59	235	SW
27-Jul-05	40	39	35	92	102	90	16	33	11	10	358	332	337	347	348	342	339	356	29	42	60	82	102	96	28	NNE
28-Jul-05	113	100	119	92	73	85	92	100	110	115	242	250	133	221	245	269	233	224	157	124	127	116	35	19	110	ESE
29-Jul-05	60	32	38	68	52	32	112	208	237	246	236	227	205	192	214	224	84	119	106	105	124	193	305	30	107	ESE
30-Jul-05	217	359	32	37	271	319	335	353	238	214	230	224	221	210	248	251	233	239	158	112	111	116	121	122	252	WSW
31-Jul-05	148	222	220	226	218	212	213	192	218	228	238	252	257	248	242	238	236	233	257	7	69	126	124	156	230	SW
Hourly Avg	193	252	258	234	236	239	241	243	235	237	250	254	247	250	254	257	259	268	312	360	40	62	68	155		

PAS - Cresent Heights Standard Deviation of Wind Direction Monthly Summary

Station: Cresent Heights
Station Owner: PAS

HOURLY AVERAGE TABLE

Wind Direction (WD)

Monitoring Dates: July 1, 2005 to August 1, 2005

Summary

Determined by the Yamartino 15-min interval calculation

Calm Time:	0 hrs	**0%** calms		Operational Time:		689 hrs	
Calibration Time:	0 hrs			AMD Operational Uptime:		92.6%	
Percentile	99	95	75	50	25	5	1
	57.4	44.1	19.6	12.4	9.1	6.0	4.9

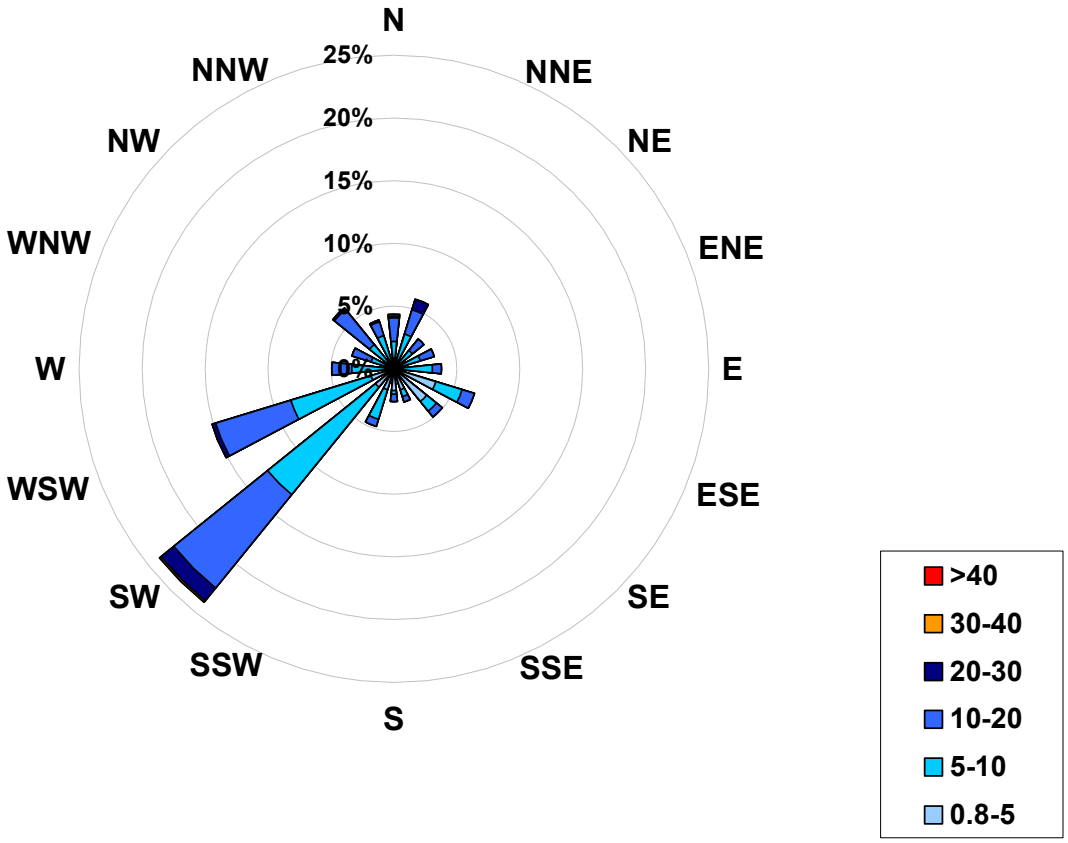
Status Flag Characters

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	Daily Maximum
1-Jul-05	8	7	7	8	8	5	12	17	20	16	17	25	23	28	31	26	19	12	12	8	11	29	15	24	30.9
2-Jul-05	9	22	16	33	44	33	9	9	5	9	12	14	41	28	24	12	14	10	21	18	21	6	28	8	44.4
3-Jul-05	8	7	6	9	8	21	15	19	17	21	18	20	19	18	19	14	13	13	11	8	7	14	7	13	20.8
4-Jul-05	8	7	9	48	10	12	6	10	10	11	6	9	10	21	30	32	18	14	9	11	19	10	9	10	48.0
5-Jul-05	10	18	13	35	9	5	6	7	8	11	13	13	16	11	12	12	12	11	11	12	16	12	11	5	35.2
6-Jul-05	20	20	17	6	11	10	9	16	10	6	6	8	8	6	6	6	6	8	16	28	19	7	22	13	28.1
7-Jul-05	7	5	11	12	8	11	16	20	38	40	55	34	27	28	24	16	17	17	17	11	23	7	14	22	55.3
8-Jul-05	28	14	11	11	11	6	7	8	8	10	9	12	11	11	13	12	18	24	9	9	9	11	13	20	28.2
9-Jul-05	62	29	11	12	8	11	14	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	62.3
10-Jul-05	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Jul-05	N	N	N	N	N	N	N	N	N	N	18	N	N	N	N	13	13	11	10	9	13	14	9	8	18.0
12-Jul-05	16	10	9	12	11	14	18	30	17	17	26	57	38	45	8	13	8	9	9	9	5	3	14	21	57.3
13-Jul-05	11	8	8	10	17	8	9	11	13	12	16	16	14	15	15	14	14	12	22	5	9	40	19	12	40.3
14-Jul-05	9	5	5	8	11	8	7	8	15	22	19	48	34	26	41	35	14	12	15	9	6	18	13	7	47.6
15-Jul-05	8	11	19	15	14	7	20	36	55	31	38	30	17	21	11	11	11	12	15	21	27	17	10	13	54.6
16-Jul-05	6	18	58	29	10	37	15	20	20	26	7	10	12	9	11	10	10	8	12	9	8	8	9	10	58.0
17-Jul-05	9	9	10	9	9	9	9	12	9	10	8	9	11	10	9	14	12	12	12	13	7	6	9	11	13.7
18-Jul-05	5	7	5	8	16	10	6	8	8	9	12	14	11	10	11	11	10	7	15	19	9	14	6	11	18.9
19-Jul-05	14	10	7	8	12	8	36	42	24	37	59	35	50	35	21	18	13	9	6	7	10	17	12	50	58.9
20-Jul-05	58	45	10	6	13	23	14	23	14	23	21	21	22	22	20	15	10	44	23	23	7	39	9	19	57.8
21-Jul-05	17	6	6	12	6	18	13	19	23	19	20	15	22	28	33	37	31	18	10	6	4	8	9	9	36.8
22-Jul-05	10	13	19	9	9	9	18	13	12	17	24	52	18	12	21	15	14	17	7	16	17	11	16	4	52.5
23-Jul-05	6	5	5	6	6	7	10	10	11	13	12	12	10	10	10	12	9	12	11	10	16	7	7	9	16.5
24-Jul-05	11	13	31	7	9	9	10	10	12	14	16	18	15	9	8	9	7	17	8	6	8	7	14	31	31.2
25-Jul-05	13	49	46	27	8	14	8	13	32	43	44	33	55	48	61	50	38	18	16	10	6	5	19	9	61.4
26-Jul-05	5	5	11	11	5	8	6	6	10	19	24	30	69	32	56	24	22	33	9	8	12	16	19	11	69.3
27-Jul-05	6	8	8	17	15	13	23	30	25	27	20	28	42	23	24	29	24	14	24	9	6	9	12	9	42.1
28-Jul-05	14	17	14	12	10	9	12	13	14	45	42	56	67	54	47	36	19	48	31	9	7	7	13	11	67.1
29-Jul-05	14	12	9	12	17	5	17	18	15	17	14	29	36	28	29	46	23	15	15	23	32	48	48	34	47.9
30-Jul-05	26	15	9	13	51	12	13	30	39	24	34	47	20	34	28	15	10	19	22	8	7	8	13	12	51.1
31-Jul-05	17	12	17	11	16	11	7	13	12	10	13	10	12	11	11	9	10	6	13	18	8	6	10	46	46.5
Hourly Max	62	49	58	48	51	37	36	42	55	45	59	57	69	54	61	50	38	48	31	28	32	48	48	50	

1-hr Average Wind Rose (in km/hr) Located at the Cresent Heights Site for July 2005



Calms:	0%

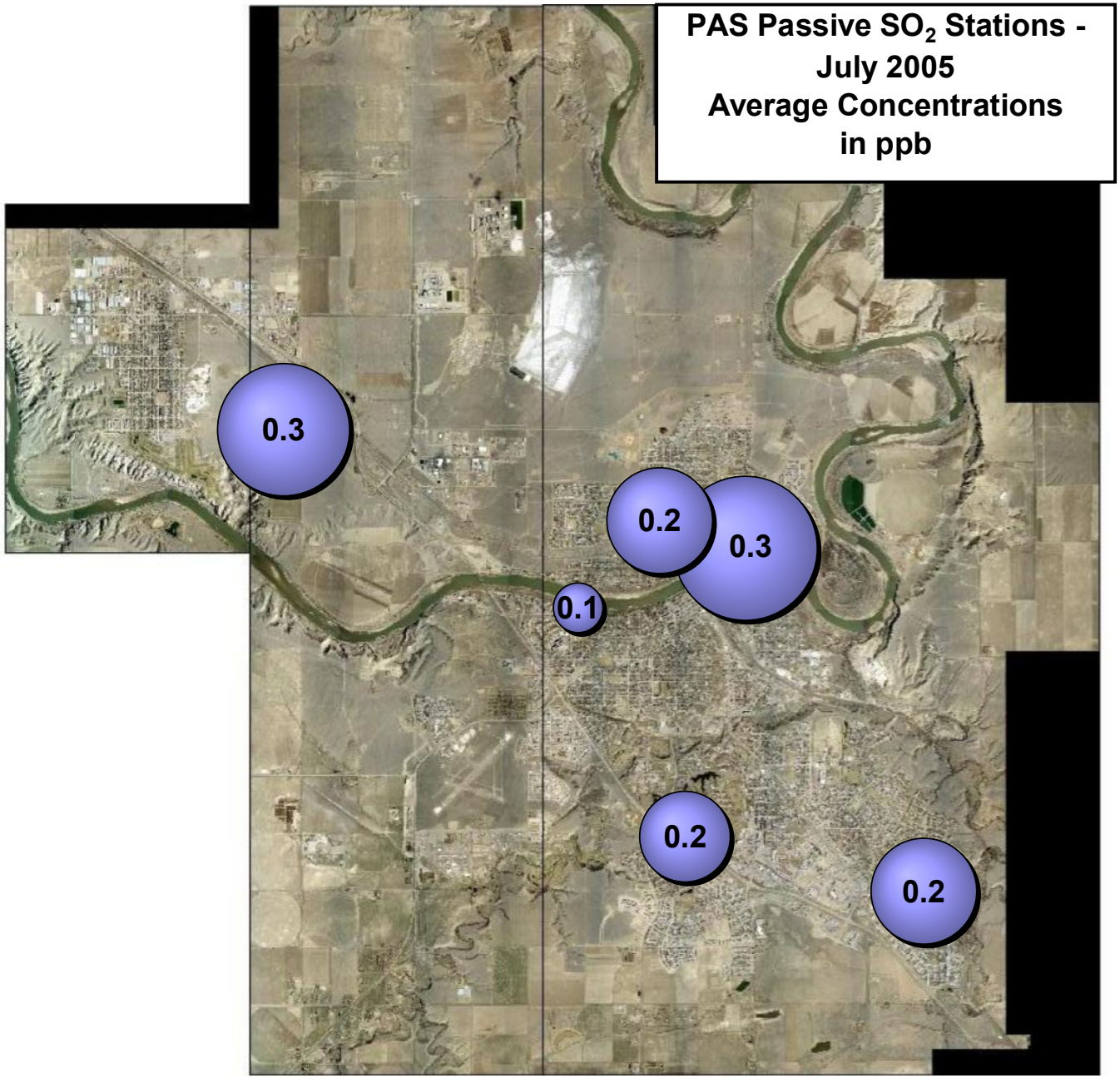
Frequency Distribution of Wind in km/hr			
Range			Frequency (hrs)
0.8	<	5	146
5	to	10	286
10	to	20	234
20	to	30	20
30	to	40	2
	>	40	0
Total Non-Zero Values			688

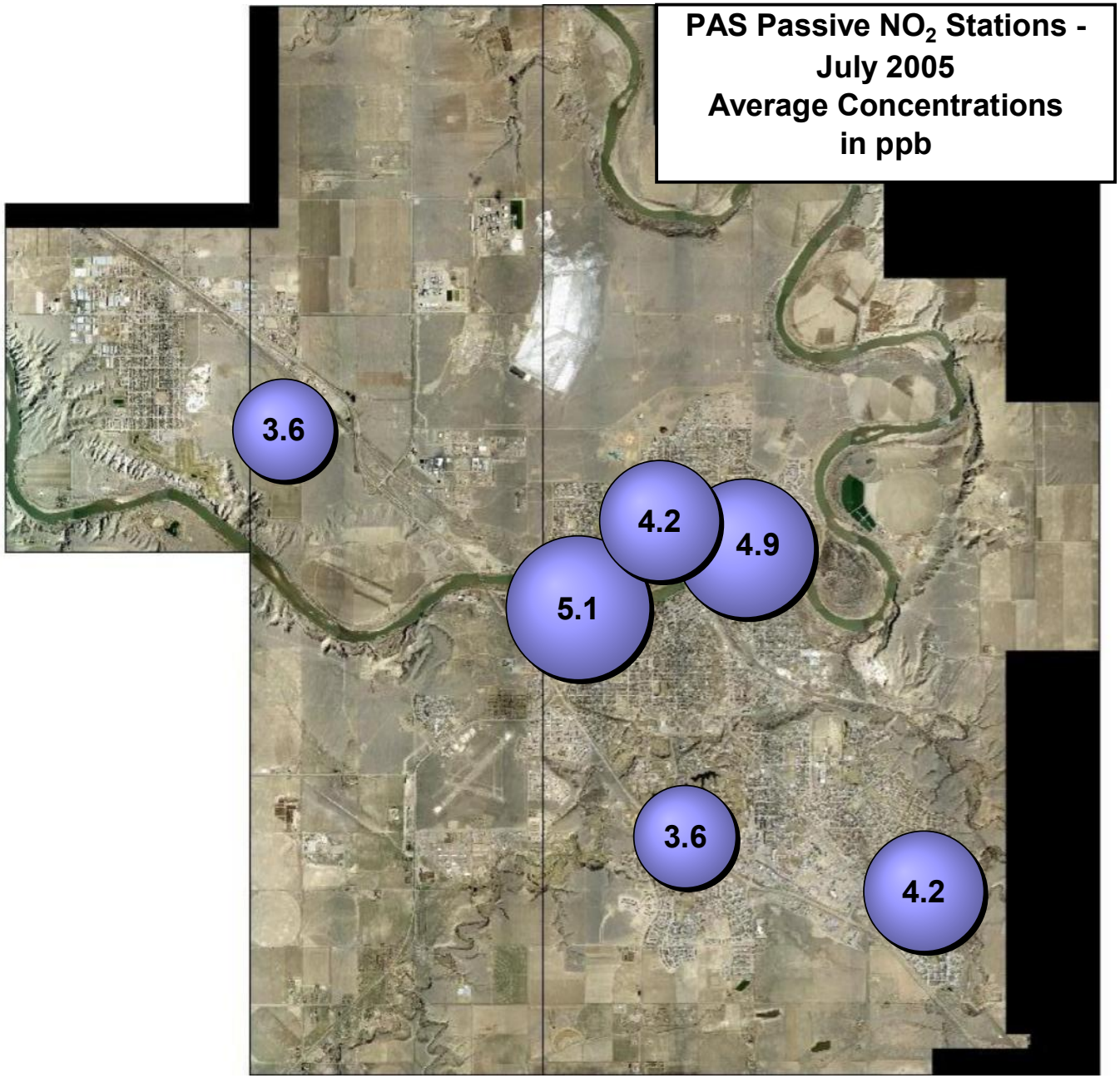
Passive Monitoring – July 2005

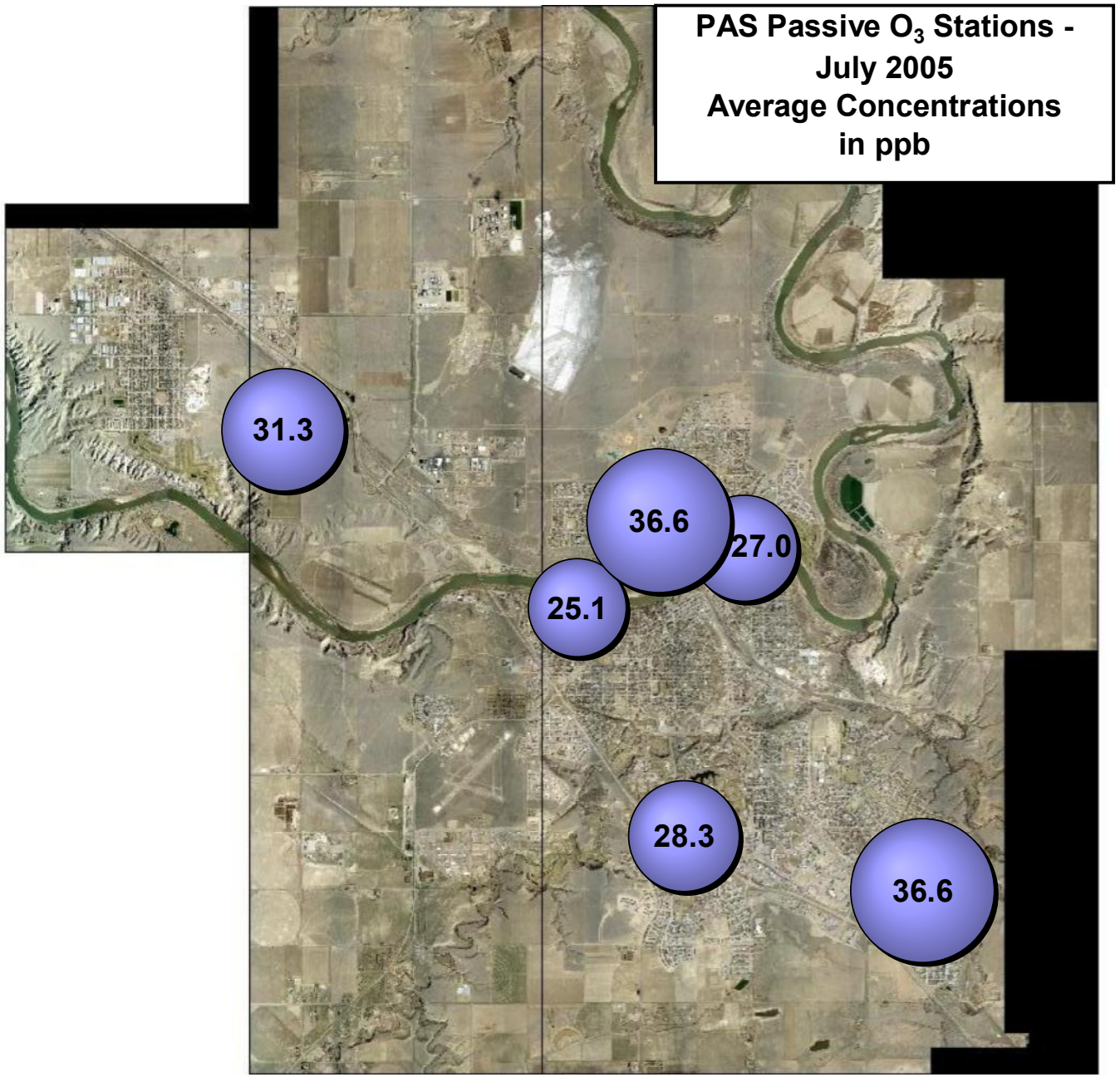
Ambient Air Compliance Network

Palliser Airshed Society - PAS Passive Stations for July 2005

Station Number	Station Name	SO_2 ppb	O_3 ppb	NO_2 ppb	Location Easting	Northing	Elevtion
Duplicates							
3a	Monitoring Station	**0.3**	**38.7**	**4.8**			
3b		**0.2**	**34.6**	**3.7**			
1	Hospital	**0.1**	**25.1**	**5.1**	521648	5542721	698
2	Ball Park	**0.3**	**27.0**	**4.9**	524019	5543686	660
3	Monitoring Station	**0.2**	**36.6**	**4.2**	522812	5544133	714
4	Redcliff	**0.3**	**31.3**	**3.6**	517448	5545608	725
5	Southridge	**0.2**	**28.3**	**3.6**	523172	5539016	721
6	Christian School Park	**0.2**	**36.6**	**4.2**	526577	5538133	709
Stats:							
	Mean	**0.2**	**30.8**	**4.3**			
	Standard Deviation	**0.1**	**4.9**	**0.6**			
	Minimum	**0.1**			**1**	**Hospital**	
	Maximum	**0.3**			**2**	**Ball Park**	
	Minimum		**25.1**		**1**	**Hospital**	
	Maximum		**36.6**		**3**	**Monitoring Station**	
	Minimum			**3.6**	**4**	**Redcliff**	
	Maximum			**5.1**	**1**	**Hospital**	


PAS Passive SO_2 Stations - July 2005
Average Concentrations in ppb
0.3
0.2
0.3
0.1
0.2
0.2


PAS Passive NO_2 Stations - July 2005
Average Concentrations in ppb
3.6
4.2
4.9
5.1
3.6
4.2


PAS Passive O_3 Stations -
July 2005
Average Concentrations
in ppb
31.3
36.6
27.0
25.1
28.3
36.6

July 2005 - Calibration Reports

PAS - Crescent Heights Station:

O_3, NO_x, NO, NO_2, THC, CO, $PM_{2.5}$, and Wind Speed / Wind Direction

Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **O3**

Air Monitoring Network **Palliser Airshed**

Station Information

Calibration Date	July 25, 2005	Previous Calibration	June 20, 2005
Station Number	1	Station Location	Crescent Heights

Reason: [Routine] [Install] [Removal] [Other:]

Start Time (MST)	14:35	End Time (MST)	18:15
Barometric Pressure	0.926 ATM	Station Temperature	20.5 Deg C
Calibrator	Environics 6100	Serial Number	3016
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA

DACS make	Focus AP1000	DACS serial No.	NA
DACS voltage range	0 - 1 volt	DACS channel #	5
	Before		After
DACS slope	0.050000	DACS slope	0.050000
DACS intercept	0.000000	DACS intercept	0.000000
Calculated slope	0.998781	Calculated slope	1.002594
Calculated intercept	2.608307	Calculated intercept	1.097165

Analyzer make	API Model 400E	Analyzer serial #	331

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	-2.6	ppb	-5.3	ppb
coefficient	1.148		1.075	
Lamp measure	2791.5	mV	2759.0	mV
Lamp Reference	2792.5	mV	2759.7	mV
Pressure	25.7	inches Hg	26.0	inches Hg
Sample Flow	725	ccm	732	ccm
Lamp temp	52	Deg C	52	Deg C

Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	-0.9	N/A
4995	0.00	325.5	323.8	1.0053
4995	0.00	186.3	184.4	1.0101
4995	0.00	92.6	91.1	1.0165
4995	0.00	0.0	-3.3	0.0000
4995	0.00	325.5	312.8	1.0406
			Average Correction Factor	1.0106

Calculated value of As Found Response: 318.3 ppm Percent Change of As Found: -2.2%

	before calibration		after calibration	
Auto zero	0.0	ppb	0.2	ppb
Auto span	359.2	ppb	357.1	ppb

Notes: Both zero and span adjustments performed.

Calibration Performed By: Kelly Baragar

Calibration Summary

Parameter **O3**

Air Monitoring Network **Palliser Airshed**

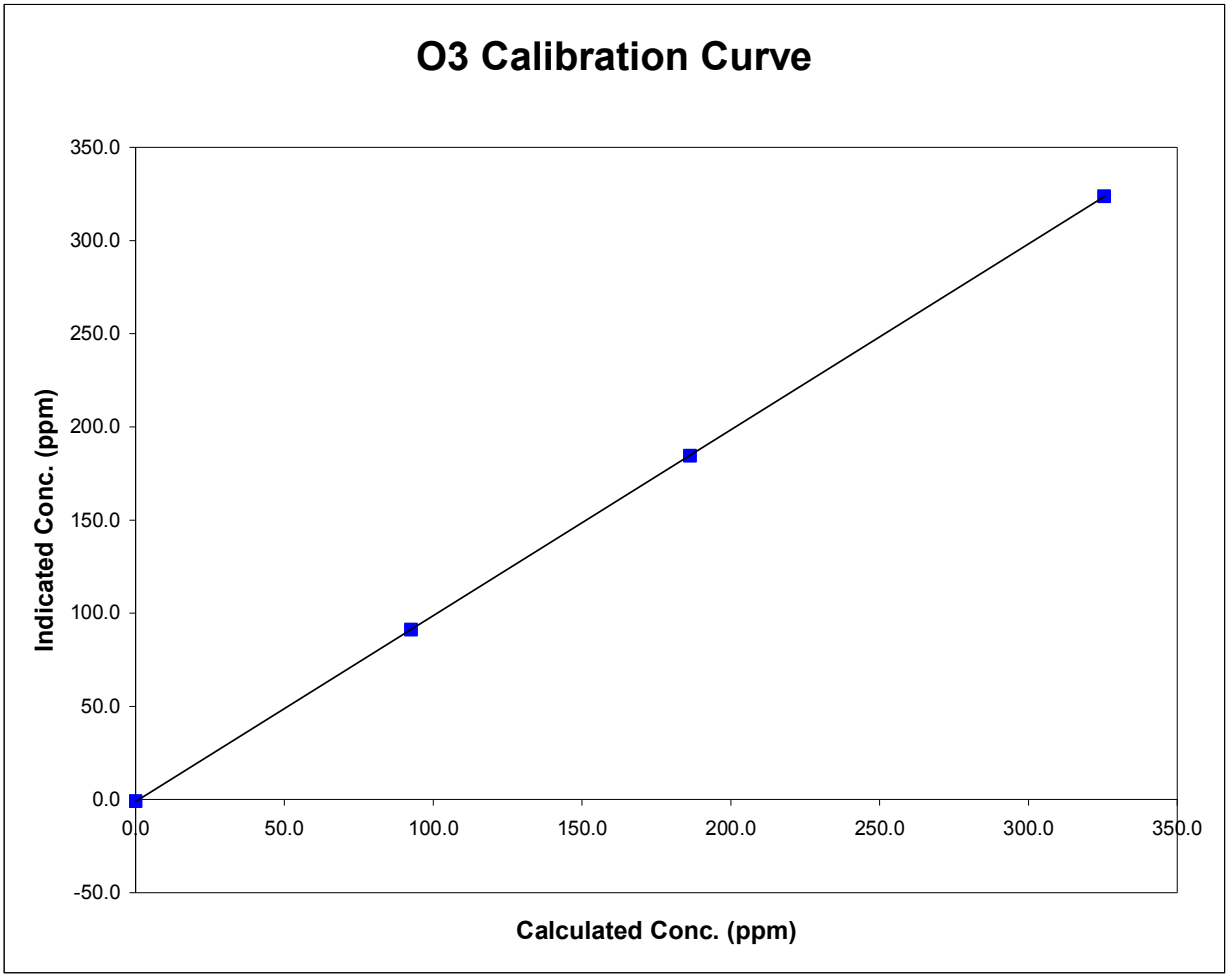
FOCUS AIR QUALITY MONITORING

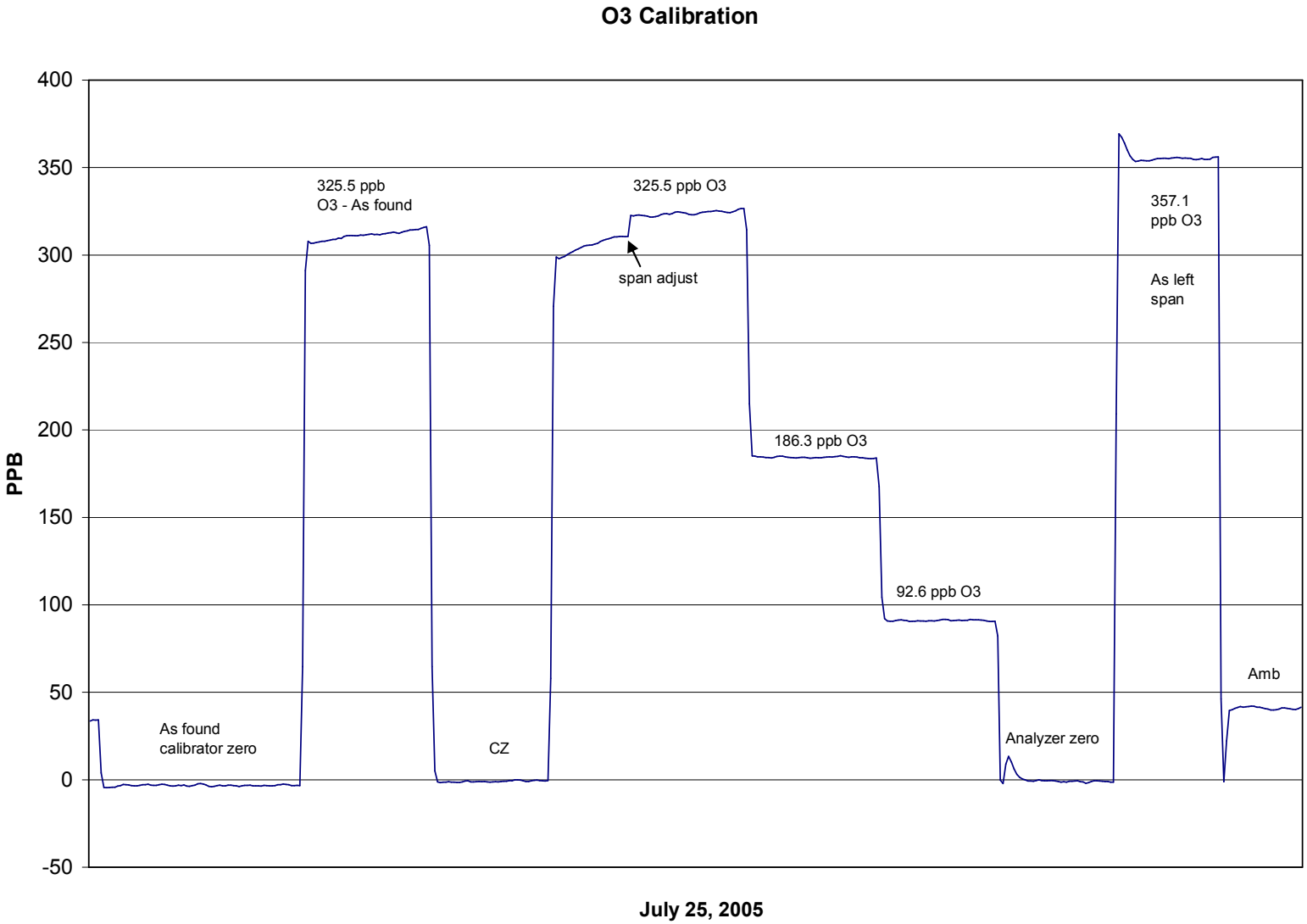
Station Information

Calibration Date	July 25, 2005	Previous Calibration	June 20, 2005
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	14:35	End Time (MST)	18:15
Analyzer make/model	API Model 400E	Analyzer serial #	331

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
325.5	323.8	1.0053		
186.3	184.4	1.0101	Correlation Coefficient	0.999996
92.6	91.1	1.0165		
0.0	-0.9	N/A	Slope	1.002594
			Intercept	1.097165




O3 Calibration
400
350
300
250
200
150
100
50
0
-50
PPB
325.5 ppb
O3 - As found
325.5 ppb O3
span adjust
357.1
ppb O3
As left
span
186.3 ppb O3
92.6 ppb O3
Amb
As found
calibrator zero
CZ
Analyzer zero
July 25, 2005

Calibration Report

Parameter **$NOx-NO-NO_2$**

Air Monitoring Network **Palliser Airshed**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 25, 2005	Previous Calibration	June 20, 2005
Station Number	1	Station Location	Crescent Heights

Reason: Routine | Installation | Removal | Other:

Start Time (MST)	11:15		End Time (MST)	15:30	
Barometric Pressure	0.926	ATM	Station Temperature	20.0	Deg C
Calibrator	Environics 6100		Serial Number	3016	
NO Cal Gas Conc	49.8	ppm	Cal Gas Expiry Date	12-Dec-05	
NOx Cal Gas Conc	49.8	ppm	Cal Gas Serial #	ALM011558	

DACS Information

DACS make	FOCUS AP1000	DACS serial No.	45270

Parameter		NO2	NOx	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	0.995076	0.995836	0.995604
	Data Offset	-0.013963	-0.908161	-0.955972
After	Data Slope	1.006548	0.998057	0.995388
	Data Offset	-2.887676	-2.544346	-1.071806
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	-0.5	mV	-0.5	mV
NOx background	0.4	mV	0.4	mV
NO coefficient	1.809		1.855	
NOx coefficient	1.825		1.881	
Chamber Temp	49.9	Deg C	50.0	Deg C
Cooler Temp	7.1	Deg C	7.0	Deg C
Azero	33.6		32.6	
Perm Temp	40.0	Deg C	40.0	Deg C
Pressure	4.0	inches Hg	4.1	inches Hg
Sample Flow	455.0	ccm	459.0	ccm

Notes: Analyzer was span adjusted.

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **Palliser Airshed**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date: July 25, 2005 Station Location: Crescent Heights

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4993	0.00	0.0	0.0	0.0	1.9	0.2	1.9	N/A	N/A
1	4993	39.97	395.5	395.5	0.0	398.4	397.8	1.3	0.9927	0.9941
2	4993	19.97	198.4	198.4	0.0	201.9	201.2	1.1	0.9827	0.9862
3	4993	9.97	99.2	99.2	0.0	102.5	101.5	1.1	0.9679	0.9778
AFZ	4993	0.00	0.0	0.0	0.0	1.9	0.2	1.9	0.0000	0.0000
AFS	4993	39.97	395.5	395.5	0.0	384.9	386.0	-0.4	1.0274	1.0246
							Average Correction Factor		0.9811	0.9860

As Found Concentrations NO_X= 382.2 NO= 384.9 As Found Percent Change NO_X= -3.4% NO= -2.7%

GPT Calibration Data

Dilution Flow 4993 ccm Source Gas Flow 39.97 ccm

O3 Setpoint (ppb)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	396.5	394.2	2.3	400.6	397.1	1.9	N/A	N/A	N/A	N/A
350	396.5	71.1	325.5	397.6	72.5	325.3	0.9973	0.9806	1.0004	100.0%
200	396.5	210.3	186.3	400.9	212.3	189.2	0.9891	0.9903	0.9846	101.6%
100	396.5	303.9	92.6	401.1	306.4	95.4	0.9887	0.9919	0.9704	103.1%
					Average Correction Factor		0.9917	0.9876	0.9851	101.5%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	0.1	0.0	0.1	ppb	0.2	-1.2	0.2	ppb
Auto span	474.0	465.4	9.8	ppb	457.0	450.0	9.9	ppb

Calibration Performed By: Kelly Baragar

Calibration Summary

Parameter **NO_2**

Air Monitoring Network **Palliser Airshed**

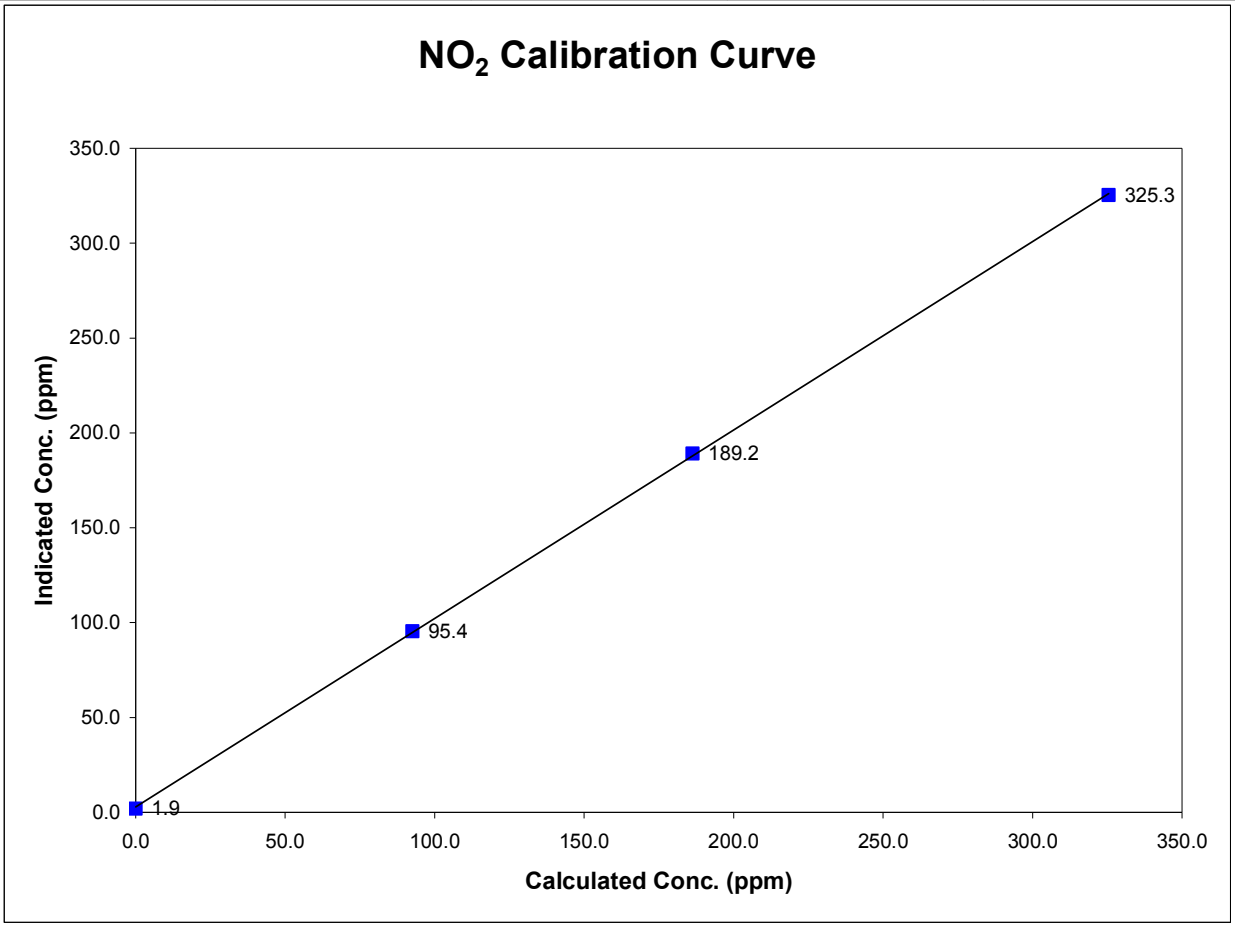
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 25, 2005	Previous Calibration	June 20, 2005
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	11:15	End Time (MST)	15:30
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	1.9	0.0000		
92.6	95.4	0.9704	Correlation Coefficient	0.999938
186.3	189.2	0.9846		
325.5	325.3	1.0004	Slope	1.006548
			Intercept	-2.887676



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **Palliser Airshed**

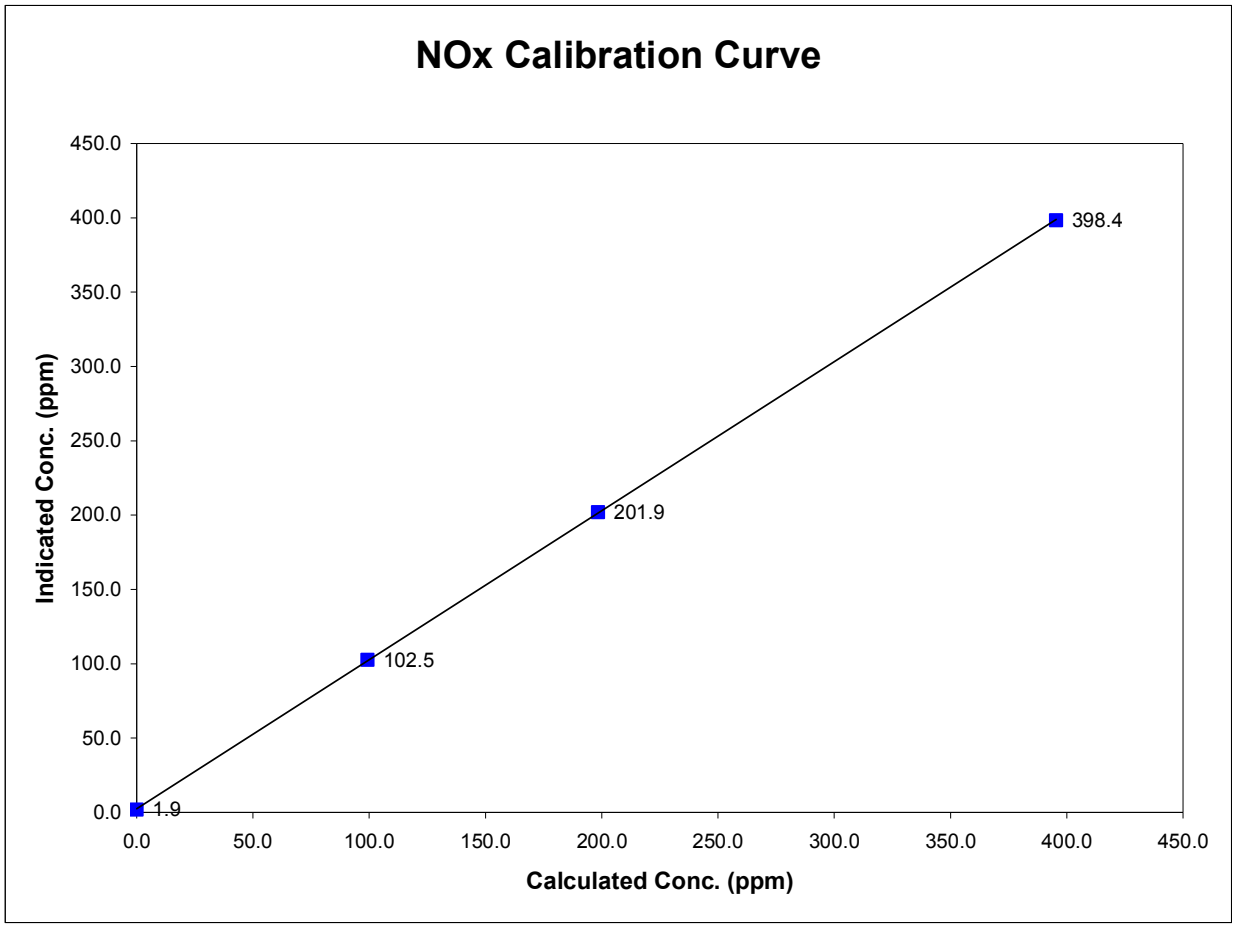
FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 25, 2005	Previous Calibration	June 20, 2005
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	11:15	End Time (MST)	15:30
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	1.9	0.0000		
395.5	398.4	0.9927	Correlation Coefficient	0.999985
198.4	201.9	0.9827		
99.2	102.5	0.9679	Slope	0.998057
			Intercept	-2.544346



Calibration Summary

Parameter **NO**

Air Monitoring Network **Palliser Airshed**

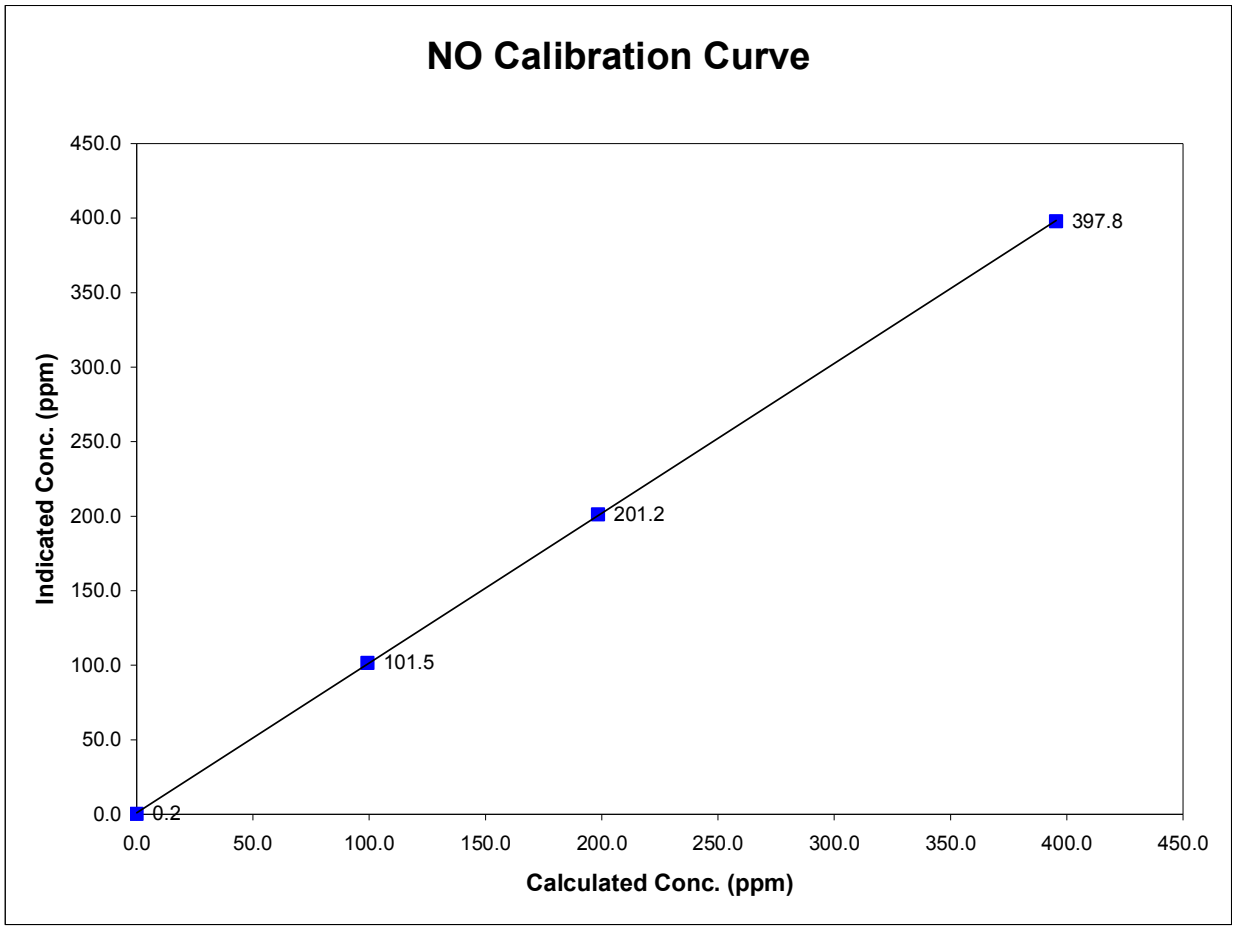
FOCUS AIR QUALITY MONITORING

Station Information

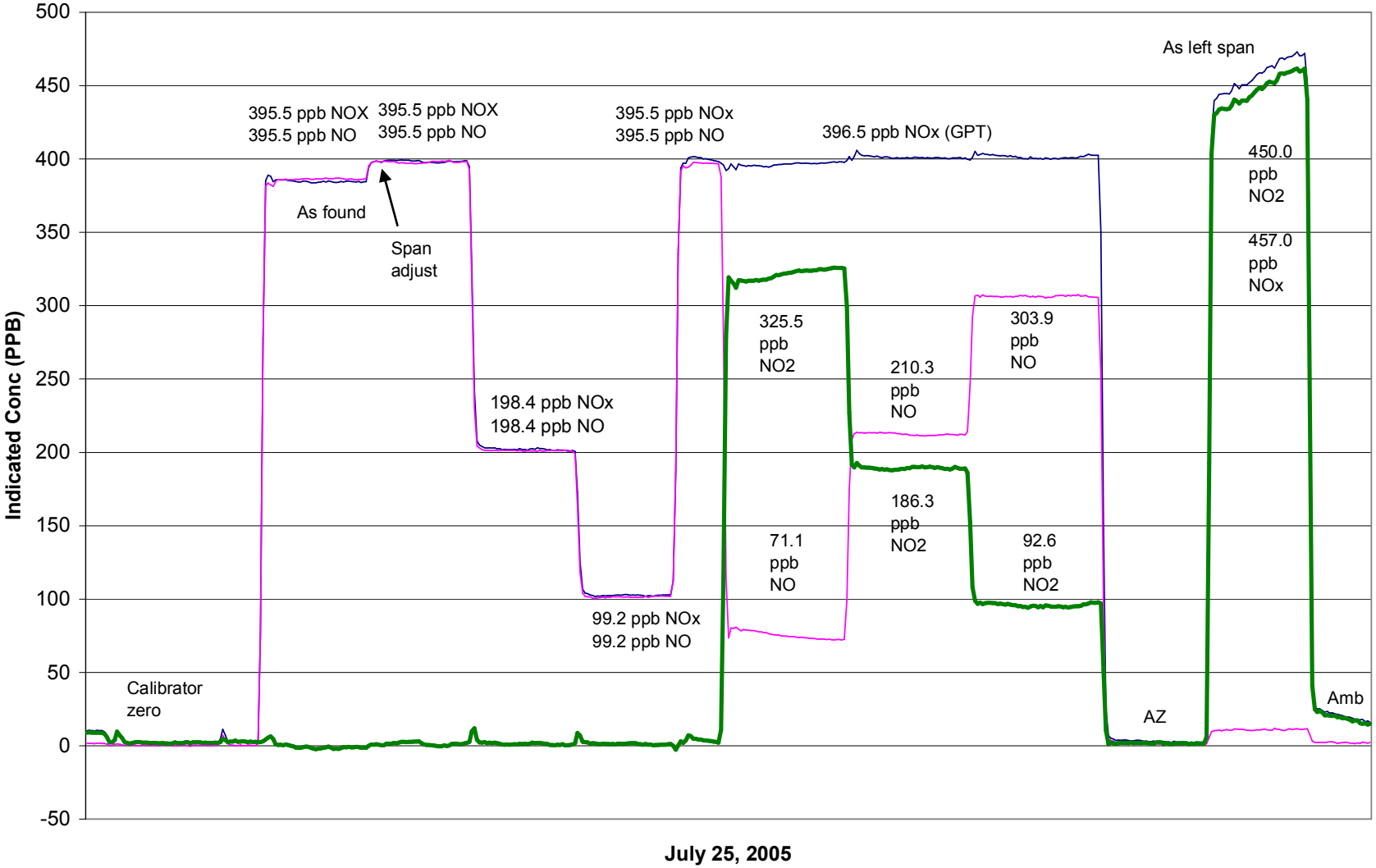
Calibration Date	July 25, 2005	Previous Calibration	June 20, 2005
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	11:15	End Time (MST)	15:30
Analyzer make	API Model 200E	Analyzer serial #	219

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
395.5	397.8	0.9941	Correlation Coefficient	0.999973
198.4	201.2	0.9862		
99.2	101.5	0.9778	Slope	0.995388
			Intercept	-1.071806



NOx Calibration



Calibration Report

FOCUS AIR QUALITY MONITORING

Parameter **THC**

Air Monitoring Network **Palliser Airshed**

Station Information

Calibration Date	July 25, 2005	Previous Calibration	June 21, 2005
Station Number	1	Station Location	Crescent Heights
Reason:	Routine ☒	Install ☐	Removal ☐	Other: ☐
Start Time (MST)	18:35	End Time (MST)	22:00
Barometric Pressure	0.926 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3016
Cal Gas Concentration	700 ppm CH_4 / 301 ppm C_3H_8	Cal Gas Expiry Date	8/28/2005
Cal Gas CH4 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
	Before		After
DACS slope	0.005000	DACS slope	0.005000
DACS intercept	0.000000	DACS intercept	0.000000
Calculated slope	1.004649	Calculated slope	1.001951
Calculated intercept	-0.128735	Calculated intercept	-0.083577
Analyzer make	TEI model 51C-LT	Analyzer serial #	407505596

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
THC sample pressure	5.75	PSI	5.75	PSI
THC span counts	10965	raw	10965	raw
THC zero counts	1784	raw	1784	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	0.07	N/A
2994	39.98	20.13	20.18	0.9974
2994	19.98	10.13	10.15	0.9974
2994	9.97	5.07	5.19	0.9778
zero	0.00	0.00	0.07	As Found Zero
2994	39.98	20.13	20.18	As Found Span
			Average Correction Factor	0.9909

Calculated value of As Found Response: 20.078 ppm Percent Change of As Found: 0.3%

	before calibration		after calibration	
Auto zero	-0.04	ppm	0.02	ppm
Auto span	23.41	ppm	23.43	ppm

Notes: No adjustments or maintenance performed.

Calibration Summary

Parameter **THC**

Air Monitoring Network **Palliser Airshed**

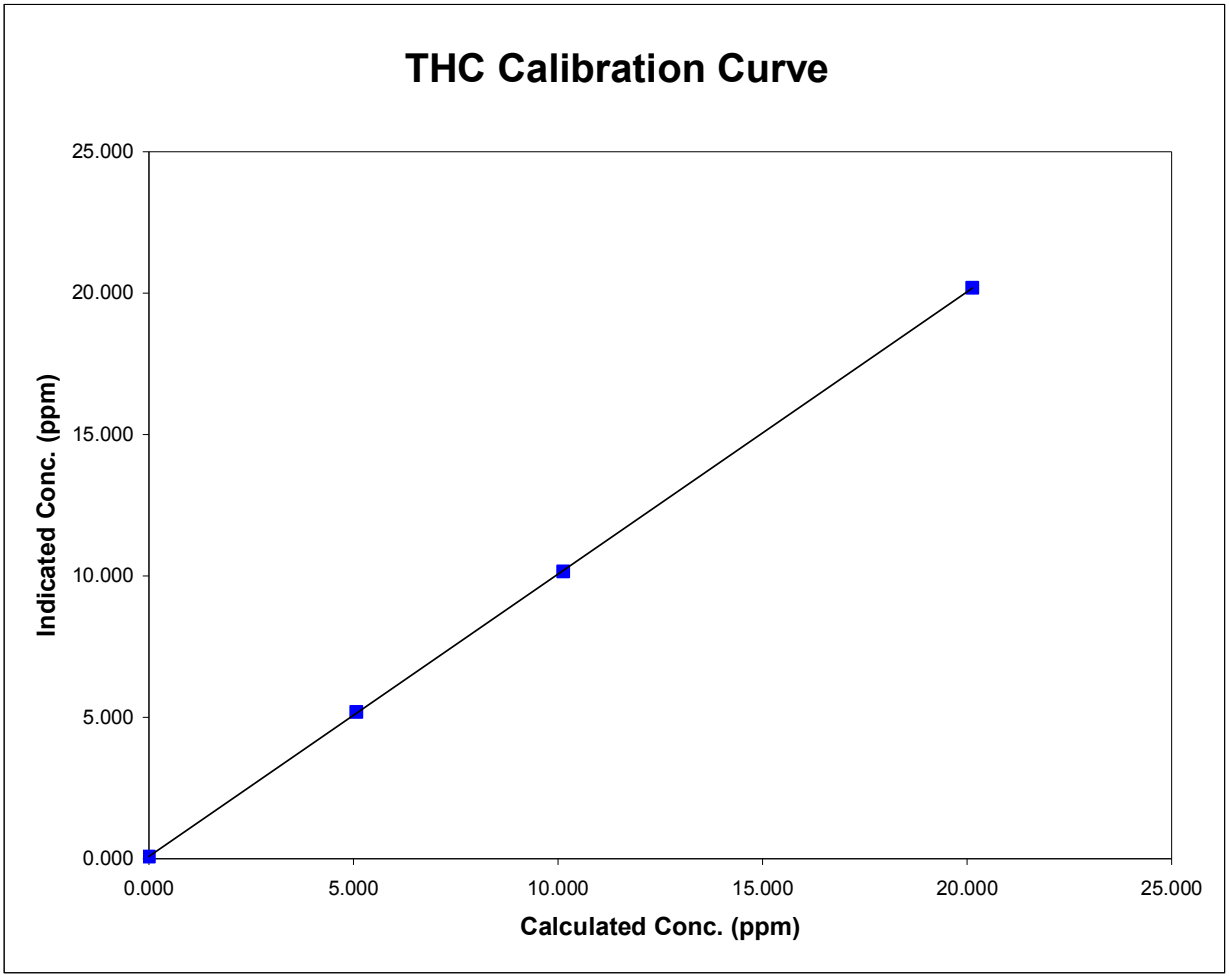
FOCUS AIR QUALITY MONITORING

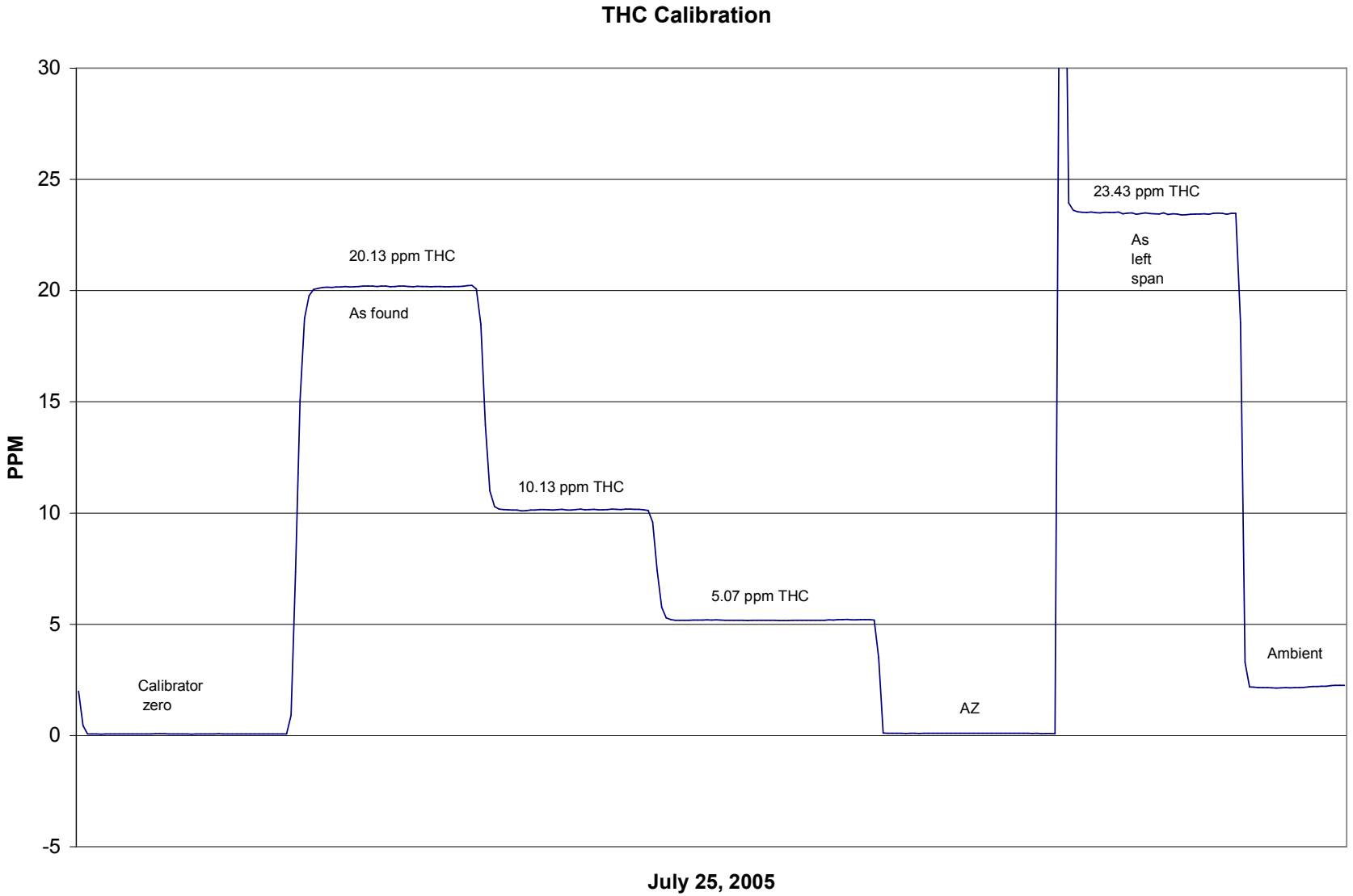
Station Information

Calibration Date	July 25, 2005	Previous Calibration	June 21, 2005
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	18:35	End Time (MST)	22:00
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	0.071	N/A		
20.132	20.184	0.9974	Correlation Coefficient	0.999985
10.128	10.154	0.9974		
5.071	5.186	0.9778	Slope	1.001951
			Intercept	-0.083577




THC Calibration
30
25
20
15
10
5
0
-5
PPM
20.13 ppm THC
As found
10.13 ppm THC
5.07 ppm THC
AZ
23.43 ppm THC
As
left
span
Ambient
Calibrator
zero
July 25, 2005

Calibration Report

Parameter **CO**

Air Monitoring Network **Palliser**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 25, 2005	Previous Calibration	June 21, 2005
Station Number	1	Station Location	Crescent Heights
Reason:	Routine: Install	Removal	Other:
Start Time (MST)	17:20	End Time (MST)	20:30
Barometric Pressure	0.926 ATM	Station Temperature	20.0 Deg C
Calibrator	Environics 6100	Serial Number	3016
Cal Gas Conc	2998 ppm	Cal Gas Expiry Date	3/14/2008
		Cal Gas Cylinder #	BLM002248
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
DACS slope	0.005000	DACS slope	0.005000
DACS intercept	0.000000	DACS intercept	0.000000
Calculated slope	0.992240	Calculated slope	1.009148
Calculated intercept	0.524037	Calculated intercept	-0.031214
Analyzer make	TEI Model 48CLT	Analyzer serial #	436609887

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO coefficient	NA		1.015	
CO bkg setting	NA		4.844	
Lamp ratio	1.1599		1.1566	
Lamp intensity	199885	Hz	199960	Hz
Sample Flow	1.012	LPM	1.009	LPM

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)
4993	0.00	0.00	0.02	N/A
4993	49.97	29.71	29.48	1.0077
4993	19.96	11.94	11.80	1.0116
4993	9.97	5.97	6.01	0.9941
4993	0.00	0.00	0.02	0.0000
4993	49.97	29.71	30.89	0.9616
			Average Correction Factor	1.0045

Calculated value of As Found Response: 31.158 ppm Percent Change of As Found: -4.9%

	before calibration		after calibration	
Auto zero	0.05	ppm	0.04	ppm
Auto span	20.00	ppm	19.22	ppm

Notes: A span adjustment was performed.

Calibration Performed By: Kelly Baragar

Calibration Summary

Parameter **CO**

Air Monitoring Network **Palliser**

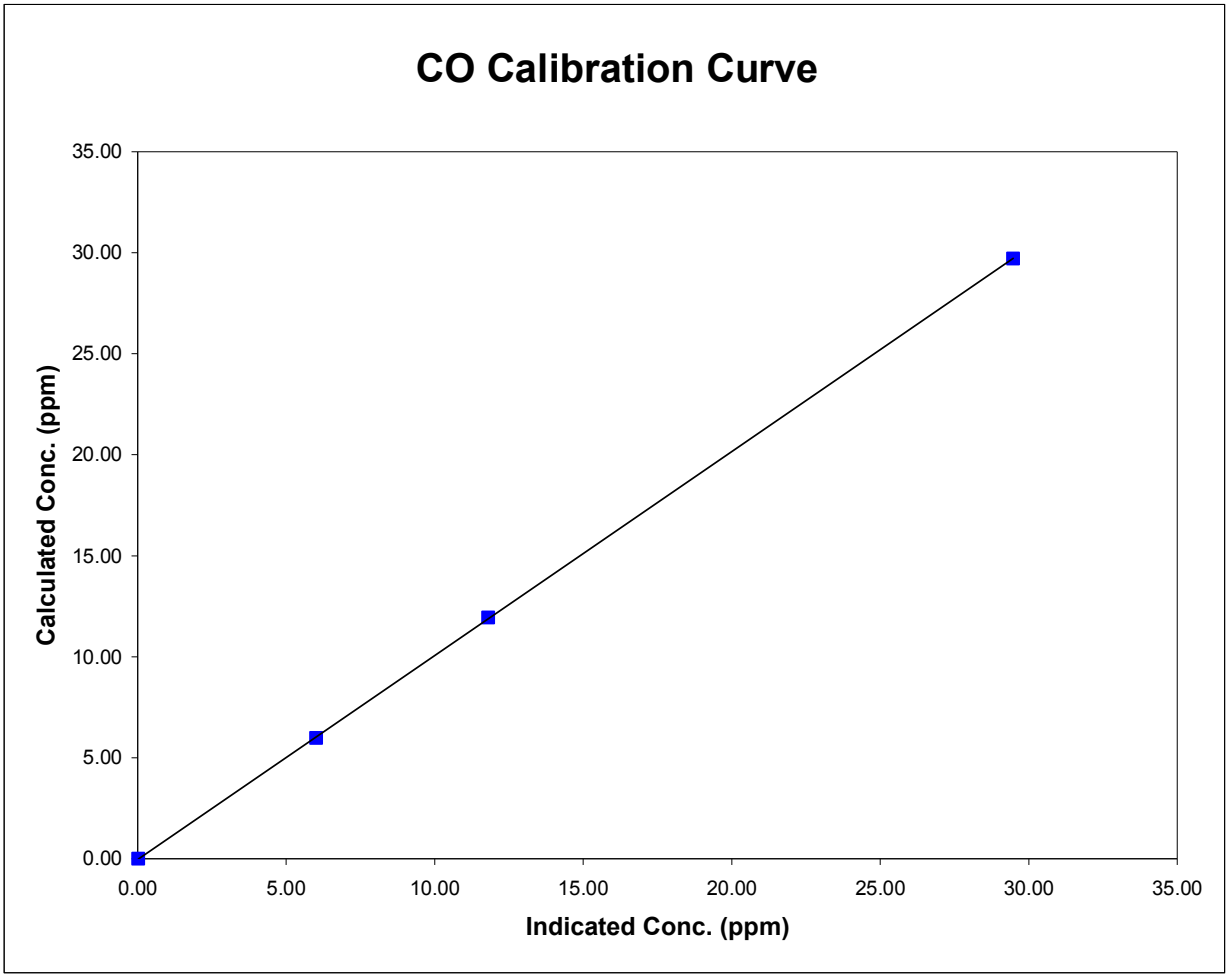
FOCUS AIR QUALITY MONITORING

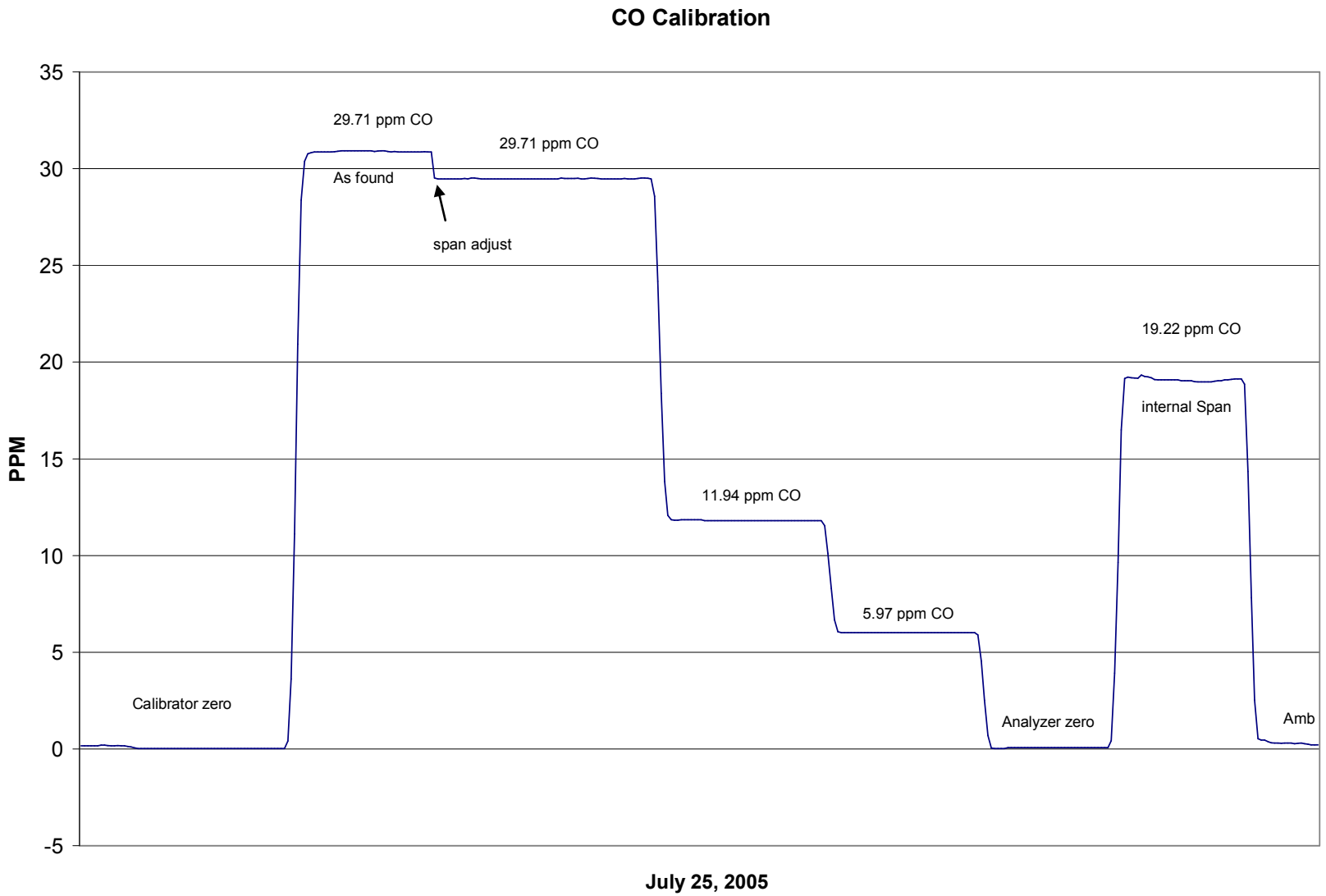
Station Information

Calibration Date	July 25, 2005	Previous Calibration	June 21, 2005
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	17:20	End Time (MST)	20:30
Analyzer make/model	TEI Model 48CLT	Analyzer serial #	436609887

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.00	0.02	N/A		
29.71	29.48	1.0077	Correlation Coefficient	0.999985
11.94	11.80	1.0116		
5.97	6.01	0.9941	Slope	1.009148
			Intercept	-0.031214




CO Calibration
35
30
25
20
15
10
5
0
-5
PPM
29.71 ppm CO
29.71 ppm CO
As found
span adjust
19.22 ppm CO
internal Span
11.94 ppm CO
5.97 ppm CO
Calibrator zero
Analyzer zero
Amb
July 25, 2005

Calibration Report

Parameter **PM2.5**

Air Monitoring Network **Palliser Airshed**

FOCUS AIR QUALITY MONITORING

Station Information

Calibration Date	July 25, 2005	Previous Calibration	June 20, 2005
Station Number	1	Station Location	Crescent Heights

Reason: [Routine] [Install] [Removal] [Other:]

Start Time (MST)	18:00	End Time (MST)	19:30
Barometric Pressure	0.926 ATM	Station Temperature	20.0 Deg C
Flow Calibrator	BIOS Drycal DCL-MH	Serial Number	101780
DACS make	AP 1000	DACS serial No.	45269
DACS voltage range	0 - 1 V	DACS channel #	15
	Before		After
DACS slope	0.050000	DACS slope	0.050000
DACS intercept	-50.000000	DACS intercept	-50.000000

Analyzer Information

Analyzer make	R&P	Control Unit serial #	140AB237960110
Analyzer model	TEOM 1400AB	Sensor Unit serial #	140AB237960110

	before		after	
Main Flow Set Point	3.000	SLPM	3.000	SLPM
Aux Flow Set Point	16.67	SLPM	16.67	SLPM
Filter Load	39	%	20	%
Ko Factor	12758		12758	
Temperature	23.6	Deg C	23.0	Deg C
Pressure	0.933	ATM	0.926	ATM

Calibration Data

Parameter	Set Point	Indicated Reading (measured externally)	Tolerance	TEOM Reading
zero flow - main	0.0	0.0	0.00	0.08
zero flow - auxillary	0.0	0.0	0.01	0.12
flow recovery - main	45 - 60 Seconds	40.0	45 - 60 Seconds	40.0
flow recovery - aux	46 - 60 Seconds	40.0	46 - 60 Seconds	40.0
Temperature	measured	23.0	+/- 1.0 Deg C	23.0
Pressure	measured	0.926	+/- 1.5% Δ_{ATM}	0.926
Total Flow	16.67 SLPM	16.70		16.70
Main Flow	13.67 SLPM	3.000	+/- 1.0 SLPM	3.000
Auxillary Flow	3.0 SLPM	13.70	+/- 0.2 SLPM	13.70
Leak Check - main	0.0	0.00	<0.15 SLPM	0.00
Leak Check - aux	0.0	0.00	<0.15 SLPM	0.01
Ko Factor (w/o filter)	measured	328.816	filter weight (g)	0.11352
Ko Factor (w/ filter)	measured	234.941	% Ko difference	-0.3%

Notes: As found flows appear good. Adjusted temperature and barometric pressure readings.

Calibration Performed By: Kelly Baragar