



Palliser Airshed Society

Ambient Air Monitoring Network Summary

November 2007

Prepared By:



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December 20 2007

Alberta Environment
12th Floor, Oxbridge Place
9820-106 Street
Edmonton Alberta T6B 2X3

Attention: Director of Monitoring and Evaluation

RE: Palliser Airshed Society (PAS) Ambient Air Monitoring Report – November 2007

Enclosed is the PAS Ambient Monitoring Report for the month of **November 2007**.

Continuous Monitoring – Crescent Heights and Portable-Brooks

Included in this report are; monthly sampling table, detailed hourly average reports and multipoint calibration reports of all instruments.

Crescent Heights:

- ◆ All analyzers and instruments at the Crescent Heights Station were greater than 90% operational for for the month of November.
- ◆ The measured ambient air quality was within the Provincial and Federal guidelines with no exceedences recorded at the Crescent Heights Station
- ◆ The following is a summary of the monthly averages recorded during sampling:
 - Monthly average concentrations of NO₂ was 8.5 ppb
 - Monthly average concentrations for O₃ was 22.4 ppb
 - Monthly average concentrations for CO was 0.16 ppm
 - Monthly average concentrations for THC was 2.07 ppm
 - Monthly average concentrations for PM_{2.5} was 3.0 µg/m³
- ◆ The Air Quality Index (AQI) recorded 676 hours of Good readings for the month of November.

Portable-Brooks:

- ◆ The Portable-Brooks station was commissioned and calibrated on November 19th and 21st, it is measuring the following parameters: sulphur dioxide (SO₂), hydrogen sulphide (H₂S), ozone (O₃), and wind speed and wind direction.
- ◆ All analyzers and instruments at the Portable Brooks Station were 100% operational from the time of start-up for the month of November (based on approximately 250 hours of operation).
- ◆ There were two exceedences of the Alberta Objective (10 ppb) for H₂S in November:
 1. November 24th (18:00-19:00): H₂S 11.9 ppb: Wind speed 6.4 km/hr: Wind direction 210 degrees: **Alberta Environment reference # 195452**.
 2. November 25th (18:00-19:00): H₂S 22.3 ppb: Wind speed 5.9 km/hr: Wind direction 299 degrees: **Alberta Environment reference # 195621**.
- ◆ The following is a summary of the monthly averages recorded during sampling:
 - Monthly average concentrations of SO₂ was 0.7 ppb
 - Monthly average concentrations for H₂S was 0.4 ppb
 - Monthly average concentrations for O₃ was 16.5 ppm



Passive Monitoring – Twenty Sites throughout the PAS zone:

The passive sample analyses were performed by MAXXAM Analytics Inc. The following are the ranges for November 2007 recorded by the twenty passive stations located throughout the PAS zone.

- ◆ Average concentrations for SO₂ passives ranged from 0.2 to 0.6 ppb with a mean of 0.4 ppb.
- ◆ Average concentrations for NO₂ passives ranged from 0.5 to 8.7 ppb with a mean of 2.9 ppb.
- ◆ Average concentrations for O₃ passives ranged from 18.8 to 31.0 ppb with a mean of 24.3 ppb.

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

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Continuous Monitoring

Ambient Air Monitoring Network

Crescent Heights Station

General Station Issues

Calibrations were performed on November 20th (NO_x, O₃, THC, CO and TEOM). A power failure on November 21st resulted in three (3) hours of invalid data for NO_x, THC and PM_{2.5} analyzers; and two (2) hours of invalid data for the O₃, CO, wind speed, wind direction, relative humidity, temperature and solar radiation analyzers and sensors.

Parameter	Make	Model	Units	Notes
Ozone	TECO	43I	ppb	No operational problems observed.
Nitrogen Dioxide	Teledyne - API	200E	ppb	No operational problems observed.
Total Hydrocarbons	Bendix	400A	ppm	No operational problems observed.
Carbon Monoxide	TEI	49C	ppm	No operational problems observed.
PM _{2.5}	R&P TEOM	1400ab	µg/m ³	One (1) hour of invalid data due to excessive baseline drift.
Wind Speed	Met One	010C	kph	No operational problems observed.
Wind Direction	Met One	020C	Deg	No operational problems observed.
Ambient Temperature	Met One	083D	DegC	No operational problems observed.
Relative Humidity	Met One	083D	%	No operational problems observed.
Solar Radiation	Met One	096-1	W/m ²	No operational problems observed.
Data Acquisition System	Titan Logix	AP1000		No operational problems observed.



Continuous Monitoring

Ambient Air Monitoring Network

Portable-Brooks Station

General Station Issues

Station commissioning and start-up calibrations were performed on November 19th (O₃) and November 21st (SO₂ and H₂S).

Parameter	Make	Model	Units	Notes
Ozone	Teledyne - API	400E	ppb	No operational problems observed.
Sulphur Dioxide	TEI	43A	ppb	No operational problems observed.
Hydrogen Sulphide	TEI	43A	ppb	There were two exceedences of the Alberta Objective (10 ppb) for H ₂ S in November: November 24 th : H ₂ S 11.9 ppb: Alberta Environment reference # 195452 . November 25 th : H ₂ S 22.3 ppb: Alberta Environment reference # 195621 . No operational problems observed.
Wind Speed	Blue Sky		kph	No operational problems observed.
Wind Direction	Blue Sky		Deg	No operational problems observed.
Data Acquisition System	Titan Logix	AP1000		No operational problems observed.



November 2007 Monthly Overall Summary Report Ambient Air Quality Data

Nov-2007 Palliser Airshed Society							Maximum Recorded Values						Operational Time (%)
Pollutant (units)	Objectives		Station	Monthly Average	Exceedence		1-hr				24-hr / 8-hr		
	1-hr	24-hr			1-hr	24-hr	Conc	Day	WSPD (km/hr)	WDIR (Sector)	Conc	Day	
NO (ppb)			Crescent Heights	4.8	-	-	105.2	Nov-30 18:00	3.5	NNW	14.8	Nov-30	99.6%
NO ₂ (ppb)	212	106	Crescent Heights	8.5	0	0	35.3	Nov-19 18:00	6.5	WNW	17.8	Nov-29	99.6%
NO _x (ppb)			Crescent Heights	13.0	-	-	136.1	Nov-30 18:00	3.5	NNW	29.7	Nov-19	99.6%
O ₃ (ppb)	82		Crescent Heights	22.4	0	-	44.2	Nov-24 20:00	20.3	W	34.0	Nov-12	99.7%
O ₃ (ppb) - 8-hr		65	Crescent Heights			0					38.4	Nov-26	
CO (ppm)	13		Crescent Heights	0.16	0	-	0.9	Nov-20 09:00	5	ESE	0.3	Nov-25	99.7%
CO (ppm) - 8-hr		5	Crescent Heights			0					0.4	Nov-25	
THC (ppm)			Crescent Heights	2.07	-	-	2.7	Nov-29 05:00	11.0	NNW	2.3	Nov-29	99.6%
PM _{2.5} (µg/m ³)		30 ^a	Crescent Heights	3.0	0	0	11.6	Nov-08 08:00	5.2	WSW	5.5	Nov-29	99.4%
RH (%)			Crescent Heights	56.4	-	-	-	-	-	-	-	-	99.7%
SR (W/m ²)			Crescent Heights	65.4	-	-	-	-	-	-	-	-	99.7%
Temp (°C)			Crescent Heights	0.3	-	-	-	-	-	-	-	-	99.7%
WSPD v (km/hr)			Crescent Heights	13.6	-	-	50.9	Nov-12 19:00	50.9	SSW	35.7	Nov-12	99.7%
WSPD s (km/hr)			Crescent Heights	14.1	-	-	51.1	Nov-12 19:00	51.1	SSW	36.1	Nov-12	99.7%
WDIR			Crescent Heights	WSW	-	-	-	-	-	-	-	-	99.7%
SO ₂ (ppb)	172	57	Portable-Brooks	0.7	0	0	4.7	Nov-26 06:00	32.8	NNE	1.2	Nov-26	100.0%
O ₃ (ppb)	82		Portable-Brooks	16.5	0	-	37.6	Nov-23 14:00	9.9	SW	25.9	Nov-26	100.0%
O ₃ (ppb) - 8-hr		65	Portable-Brooks			0					30.8	Nov-26	
H ₂ S (ppb)	10	3	Portable-Brooks	0.45	2	0	20.9	Nov-25 18:00	6	WNW	1.2	Nov-25	100.0%
WSPD v (km/hr)			Portable-Brooks	9.8	-	-	34.6	Nov-26 04:00	34.6	NNE	7.4	Nov-26	100.0%
WSPD s (km/hr)			Portable-Brooks	10.0	-	-	34.7	Nov-26 04:00	34.7	NNE	18.4	Nov-26	100.0%
WDIR			Portable-Brooks	N	-	-	-	-	-	-	-	-	100.0%

Note: ^a the draft 24-hr Alberta Ambient Air Quality Objective



PAS - Crescent Heights

Monthly Summary Tables, Graphs and Roses



PAS - Crescent Heights - AQI Monthly Summary

Station: Crescent Heights
 Station Owner: PAS

Air Quality Index (AQI)

Monitoring Dates: November 1, 2007 to December 1, 2007

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:	676
Number of 1-hr Fair Readings:	0
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 0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
1-Nov-07	13	11	N	12	18	17	14	16	16	18	15	15	12	14	15	16	16	10	10	9	12	11	10	11
2-Nov-07	9	N	11	12	12	8	5	4	7	9	12	14	17	18	17	16	15	12	11	13	14	14	13	17
3-Nov-07	18	18	N	17	15	14	15	10	7	12	16	16	18	19	18	18	16	12	8	13	14	15	16	16
4-Nov-07	15	N	15	17	14	10	12	14	15	13	14	14	12	12	13	12	12	10	9	9	10	11	11	10
5-Nov-07	N	10	9	8	8	5	5	5	4	6	9	13	13	13	15	15	13	14	10	8	8	8	5	N
6-Nov-07	11	9	9	9	6	6	13	9	7	11	14	14	14	13	11	10	6	6	5	5	5	4	N	4
7-Nov-07	4	4	4	4	4	4	4	4	3	3	5	8	7	9	8	7	12	6	4	5	10	N	9	7
8-Nov-07	7	6	5	5	4	5	4	4	10	6	7	8	11	16	17	17	17	16	13	10	N	8	10	11
9-Nov-07	12	11	11	11	10	11	11	10	9	7	11	15	15	15	15	15	14	14	14	N	13	14	11	11
10-Nov-07	12	13	13	12	12	13	10	8	13	13	13	15	15	17	17	18	18	18	N	17	17	17	15	15
11-Nov-07	12	11	10	11	10	8	9	8	10	12	12	14	15	16	15	16	17	N	15	12	13	13	13	14
12-Nov-07	14	15	15	16	16	16	16	15	15	15	16	16	17	19	19	19	N	20	20	19	18	17	18	18
13-Nov-07	18	18	19	19	17	17	16	15	15	15	15	16	16	17	14	N	13	12	8	13	11	9	10	11
14-Nov-07	11	11	12	11	9	8	9	6	5	7	9	14	17	17	N	15	8	6	9	6	7	5	7	N
15-Nov-07	14	15	15	16	16	16	16	14	15	14	14	14	15	N	15	15	16	13	12	15	14	11	11	10
16-Nov-07	10	10	9	10	8	10	8	9	10	10	11	9	N	14	16	13	12	13	11	15	12	11	12	9
17-Nov-07	8	8	6	5	4	3	4	4	5	6	5	N	13	12	11	12	10	5	6	11	15	17	15	14
18-Nov-07	13	13	15	14	16	16	18	19	19	19	N	17	15	13	14	16	13	7	5	7	10	11	8	9
19-Nov-07	6	8	7	7	5	4	4	6	7	N	6	11	14	16	16	14	12	7	8	7	7	7	4	4
20-Nov-07	5	7	4	4	5	5	5	6	8	4	5	9	15	N	N	N	7	N	3	2	13	13	15	14
21-Nov-07	14	16	N	13	12	15	15	11	9	13	13	14	15	N	N	N	9	6	6	6	6	8	8	7
22-Nov-07	6	3	N	N	5	6	7	6	6	9	10	11	12	17	17	19	15	15	15	15	11	16	15	13
23-Nov-07	11	N	N	9	9	6	6	6	6	7	9	11	15	21	21	16	9	7	6	6	6	6	9	15
24-Nov-07	N	N	11	12	11	9	9	11	11	11	16	20	20	20	20	15	16	14	10	21	22	18	11	N
25-Nov-07	N	19	20	19	19	16	15	12	12	12	13	12	13	14	12	9	5	7	7	7	6	8	N	N
26-Nov-07	11	12	12	12	10	8	13	15	18	18	19	19	20	20	19	18	19	19	18	17	17	17	19	19
27-Nov-07	17	15	N	14	13	13	13	11	11	12	14	15	14	15	15	15	13	12	10	9	8	7	9	7
28-Nov-07	8	N	8	8	7	9	8	5	9	11	13	15	17	17	17	15	13	6	6	7	7	6	7	10
29-Nov-07	N	11	8	7	6	6	5	7	9	7	9	12	14	17	17	15	10	6	7	7	8	7	7	N
30-Nov-07	12	12	14	14	14	15	14	12	13	15	17	18	19	19	17	11	6	7	8	8	6	8	N	6



PAS - Crescent Heights Nitrogen Dioxide Monthly Summary

Station: Crescent Heights
Station Owner: PAS

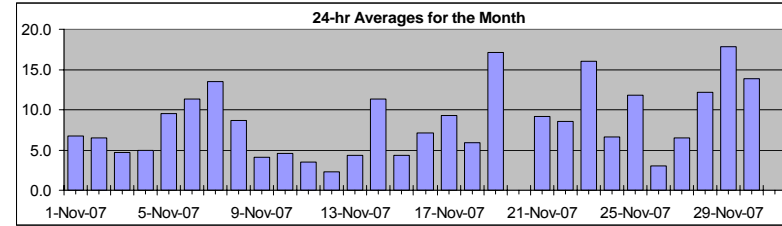
HOURLY AVERAGE TABLE

Nitrogen Dioxide (NO₂)

Monitoring Dates: November 1, 2007 to December 1, 2007

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:	35.3 ppb 19-Nov 18:00 19:00
Maximum 24-hr Average:	17.8 ppb 29-Nov



AIC Time:	38 hrs	Operational Time:	674 hrs						
Calibration Time:	5 hrs	AMD Operational Uptime:	99.6%						
Percentile	99	95	75	50	25	5	1	Average	Median
	29.3	23.7	11.4	6.5	3.4	1.5	0.9	8.5 ppb	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																							24-hour Average	Daily Maximum				
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00	0:00			
1-Nov-07	3	6	A	9	2	5	11	6	7	4	7	6	10	8	6	5	7	13	12	11	6	3	4	5			6.7	13.3	
2-Nov-07	9	A	10	6	8	14	19	14	8	6	3	3	2	2	2	4	5	9	9	6	3	3	4	2			6.5	18.5	
3-Nov-07	1	2	A	3	5	7	5	12	16	6	4	4	3	1	2	2	3	7	13	5	3	1	0	1			4.6	15.9	
4-Nov-07	1	A	2	1	4	6	2	4	4	4	4	3	7	6	6	7	6	8	9	7	6	6	7	7			5.0	8.9	
5-Nov-07	A	6	7	7	9	17	20	21	18	11	10	5	6	8	3	3	9	4	8	8	8	8	13	A			9.5	21.5	
6-Nov-07	6	8	14	10	14	21	5	13	17	7	3	4	2	2	6	5	13	24	21	14	19	17	A	16			11.4	24.0	
7-Nov-07	19	17	18	19	18	17	16	17	12	13	11	7	11	8	12	15	6	16	18	21	7	A	7	8			13.5	21.1	
8-Nov-07	6	7	12	11	9	15	16	16	15	8	8	10	7	3	2	3	4	3	7	12	A	14	7	5			8.7	16.5	
9-Nov-07	2	2	1	1	2	1	1	3	6	14	12	3	1	2	3	3	4	5	5	A	7	4	7	5			4.1	14.2	
10-Nov-07	8	4	3	6	5	3	9	13	7	6	8	5	5	4	4	2	2	2	A	3	2	2	2	3			4.6	12.5	
11-Nov-07	5	4	4	3	3	8	7	6	3	2	3	2	1	2	4	2	3	A	4	5	2	4	2	2			3.5	7.8	
12-Nov-07	2	1	2	2	1	2	4	5	4	4	3	3	3	3	3	2	A	3	2	1	2	1	1	1			2.3	4.6	
13-Nov-07	3	4	2	0	1	1	1	3	3	2	2	1	4	2	8	A	7	8	13	4	6	11	9	6			4.3	13.3	
14-Nov-07	7	5	5	7	8	7	8	18	17	10	7	4	2	2	A	9	21	24	17	14	20	16	13			11.3	23.6		
15-Nov-07	5	4	3	2	1	2	3	5	4	3	3	5	2	A	5	6	3	8	8	4	4	6	5	4			4.3	8.1	
16-Nov-07	5	3	5	4	7	4	12	8	7	8	7	11	A	6	4	8	10	9	11	6	7	8	6	8			7.2	12.2	
17-Nov-07	8	8	11	10	10	11	10	11	12	10	11	A	6	8	12	6	10	20	19	12	5	2	1	1			9.3	20.1	
18-Nov-07	2	1	1	1	1	2	3	2	1	2	A	5	5	5	5	3	8	17	21	11	7	6	13	13			5.8	21.3	
19-Nov-07	18	11	13	12	14	15	19	24	23	A	18	10	7	5	6	8	10	28	35	28	29	28	16	15			17.1	35.3	
20-Nov-07	12	7	13	15	21	20	22	23	A	C	C	C	C	C	A	9	10	16	12	6	6	5	3	2			N	23.2	
21-Nov-07	3	3	A	4	3	2	3	10	12	5	5	4	3	P	P	P	16	27	24	24	13	9	8	7			9.2	26.8	
22-Nov-07	7	11	A	A	9	8	8	10	10	6	8	3	5	4	7	9	15	13	11	9	12	7	7	9			8.6	15.0	
23-Nov-07	11	A	A	14	14	23	26	25	23	14	7	6	6	4	4	12	22	31	21	17	23	26	17	6			16.0	31.1	
24-Nov-07	A	A	10	7	4	6	6	6	6	7	4	3	3	3	4	9	8	12	19	4	1	5	10	A			6.6	19.2	
25-Nov-07	A	4	3	2	2	6	8	12	13	11	5	5	5	5	8	9	18	29	29	27	27	20	A	A			11.8	28.9	
26-Nov-07	5	3	5	5	7	7	3	3	3	3	3	3	2	2	2	4	3	2	2	1	1	1	1	2			3.0	6.9	
27-Nov-07	2	2	A	4	5	5	4	8	7	5	4	3	2	2	4	5	7	8	12	14	13	14	10	12			6.5	13.8	
28-Nov-07	10	A	12	9	11	8	11	18	14	7	5	4	3	2	3	6	8	20	27	29	28	23	16	9			12.2	28.8	
29-Nov-07	A	9	11	11	13	16	16	23	26	17	16	13	10	7	6	10	18	27	29	31	33	31	18	A			17.8	32.9	
30-Nov-07	11	9	7	8	8	6	8	11	9	8	6	4	4	4	6	16	26	29	31	28	25	26	A	27			13.8	31.1	
Hourly Avg	6.5	5.6	7.2	6.6	7.3	8.9	9.6	11.6	10.6	7.3	6.6	4.9	4.6	4.1	5.1	6.6	9.7	14.5	15.5	12.6	11.0	10.7	7.8	7.2					
Hourly Max	18.6	16.9	18.4	18.6	21.0	23.3	26.0	24.6	25.7	17.4	17.9	12.5	11.4	8.3	11.6	15.8	25.9	31.1	35.3	30.9	32.9	31.1	17.7	26.8					

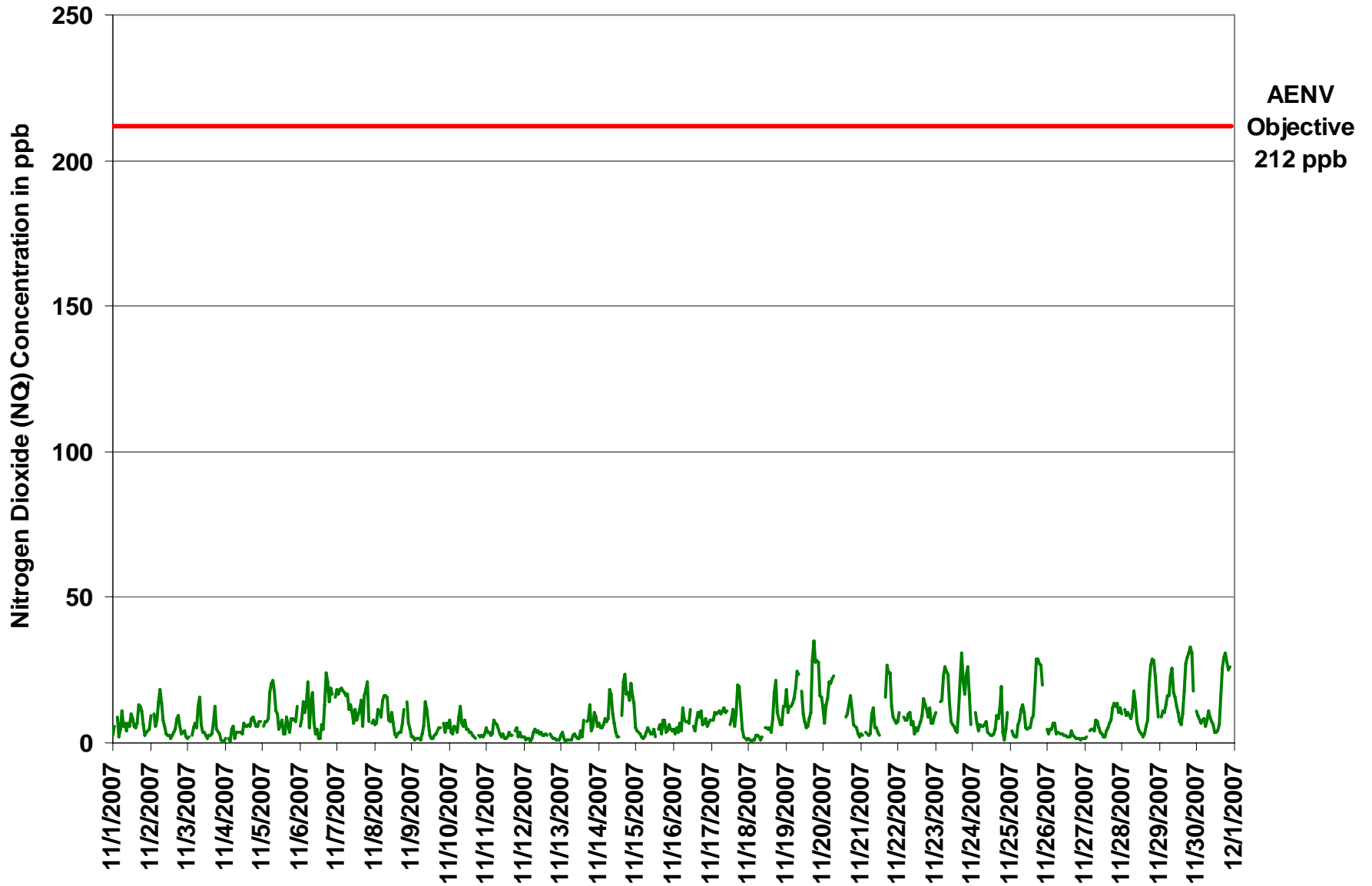


Figure 1. PAS - Crescent Heights Nitrogen Dioxide 1-hr Average Monthly Trend



Station: Crescent Heights
 Station Owner: PAS

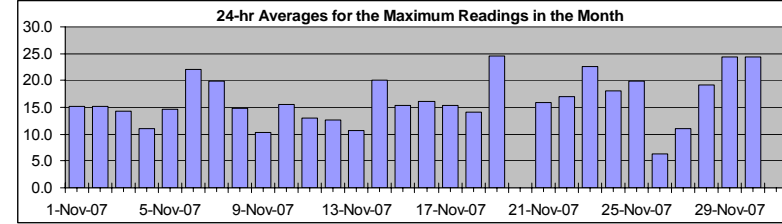
INSTANTANEOUS (30 Second) MAXIMUM TABLE

Nitrogen Dioxide (NO₂)

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Maximum 1-hr Value:	53.6	ppb	18-Nov	18:00 19:00
Maximum 24-hr Value:	24.5	ppb	19-Nov	



AIC Time:	38 hrs	Operational Time:	674 hrs						
Calibration Time:	5 hrs	AMD Operational Uptime:	99.6%						
Percentile	99	95	75	50	25	5	1	Average	Median
	43.1	34.8	23.6	14.1	8.0	3.0	1.9	16.3 ppb	14.1 ppb

Status Flag Characters

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

Day Mountain Standard Time

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Nov-07	4	30	A	12	6	9	36	14	11	6	12	13	17	26	10	8	20	38	27	15	11	5	7	10	15.2	38.1
2-Nov-07	19	A	16	8	9	27	24	34	11	12	4	5	19	3	5	31	20	23	13	23	6	18	9	8	15.2	34.0
3-Nov-07	6	10	A	4	16	18	16	50	33	8	7	9	5	3	4	4	8	10	25	9	51	13	1	17	14.3	51.0
4-Nov-07	35	A	4	3	17	11	2	7	8	7	7	5	8	8	7	10	12	18	19	12	12	17	15	11	11.1	34.9
5-Nov-07	A	8	8	9	15	27	31	28	26	15	19	9	15	10	9	5	15	8	13	12	11	14	17	A	14.7	31.3
6-Nov-07	12	12	36	13	31	40	28	31	32	8	12	19	3	21	18	9	26	29	28	23	32	24	A	19	22.0	40.0
7-Nov-07	21	29	25	20	28	19	19	25	17	15	14	10	14	12	28	19	10	27	25	28	21	A	11	22	19.9	28.8
8-Nov-07	9	16	32	17	28	22	29	22	24	11	10	15	8	5	7	5	7	8	12	15	A	21	10	8	14.8	32.2
9-Nov-07	4	3	2	2	2	2	3	7	15	19	37	31	2	4	4	11	7	7	25	A	29	6	8	8	10.4	36.8
10-Nov-07	25	9	5	28	35	5	30	16	19	10	10	24	29	15	20	27	10	12	A	4	3	4	4	15	15.6	34.6
11-Nov-07	20	22	21	4	23	22	9	19	6	3	5	4	2	15	11	4	6	A	5	21	4	32	26	14	12.9	32.3
12-Nov-07	15	2	3	23	1	4	37	7	6	20	4	20	4	30	23	16	A	14	16	10	22	2	10	3	12.7	36.6
13-Nov-07	13	25	5	1	8	6	2	6	6	8	3	3	8	4	27	A	19	23	22	9	14	15	13	8	10.6	26.9
14-Nov-07	12	11	9	9	24	21	15	22	25	19	36	7	20	4	A	20	27	27	24	23	29	29	26	23	20.1	36.4
15-Nov-07	28	6	11	22	3	3	21	22	24	4	5	8	5	A	14	14	5	16	31	16	10	43	33	7	15.3	42.7
16-Nov-07	29	6	8	6	10	6	29	22	17	9	9	15	A	9	6	13	30	26	23	13	12	35	9	27	16.1	34.8
17-Nov-07	10	11	16	13	14	14	13	13	14	13	26	A	9	14	15	11	20	27	28	33	7	20	9	2	15.3	33.1
18-Nov-07	18	2	1	11	2	9	9	25	6	10	A	10	9	6	8	5	25	27	54	17	17	9	22	24	14.2	53.6
19-Nov-07	24	14	16	15	21	32	30	29	27	A	23	15	10	9	21	14	19	44	46	31	35	29	27	33	24.5	46.2
20-Nov-07	16	8	22	24	30	24	24	27	A	C	C	C	C	C	A	10	12	20	16	10	8	6	6	4	N	29.8
21-Nov-07	4	4	A	6	5	3	5	29	19	8	12	13	4	P	P	P	26	36	34	28	19	35	19	9	16.0	35.5
22-Nov-07	10	13	A	A	26	15	10	15	20	9	30	19	8	8	11	13	25	32	40	18	15	10	12	15	17.0	39.5
23-Nov-07	14	A	A	17	17	29	32	30	26	22	9	8	31	8	5	21	32	37	30	23	26	39	28	12	22.6	38.8
24-Nov-07	A	A	31	37	15	23	7	18	10	13	7	18	25	21	22	26	10	15	40	9	5	8	20	A	18.1	39.5
25-Nov-07	A	9	8	4	5	11	12	21	18	27	7	11	18	11	25	11	26	44	33	38	38	41	A	A	19.8	43.9
26-Nov-07	8	5	21	16	12	15	4	14	5	5	4	4	3	3	4	7	5	3	3	2	2	2	2	4	6.3	21.1
27-Nov-07	3	5	A	7	9	7	9	21	13	9	8	9	3	3	8	8	8	13	18	19	15	18	17	23	11.0	22.8
28-Nov-07	12	A	18	12	32	11	28	23	24	10	8	6	6	5	10	14	15	35	29	31	41	34	29	11	19.2	40.8
29-Nov-07	A	12	14	14	16	18	22	25	28	21	18	14	22	26	8	14	32	33	34	33	40	53	40	A	24.4	53.0
30-Nov-07	14	12	15	26	21	8	30	33	12	22	22	6	18	25	10	36	36	39	39	38	35	34	A	30	24.4	39.3
Hourly Avg	14.8	11.4	14.4	13.2	16.0	15.5	18.9	21.8	17.3	12.2	13.2	11.7	11.7	11.3	12.6	13.7	17.7	23.8	25.8	19.4	19.6	21.3	15.9	14.2		
Hourly Max	34.9	30.1	35.6	36.6	34.6	40.0	36.6	50.2	33.5	26.8	36.8	30.8	31.3	29.8	27.5	35.9	36.3	43.9	53.6	37.7	51.0	53.0	39.8	33.5		

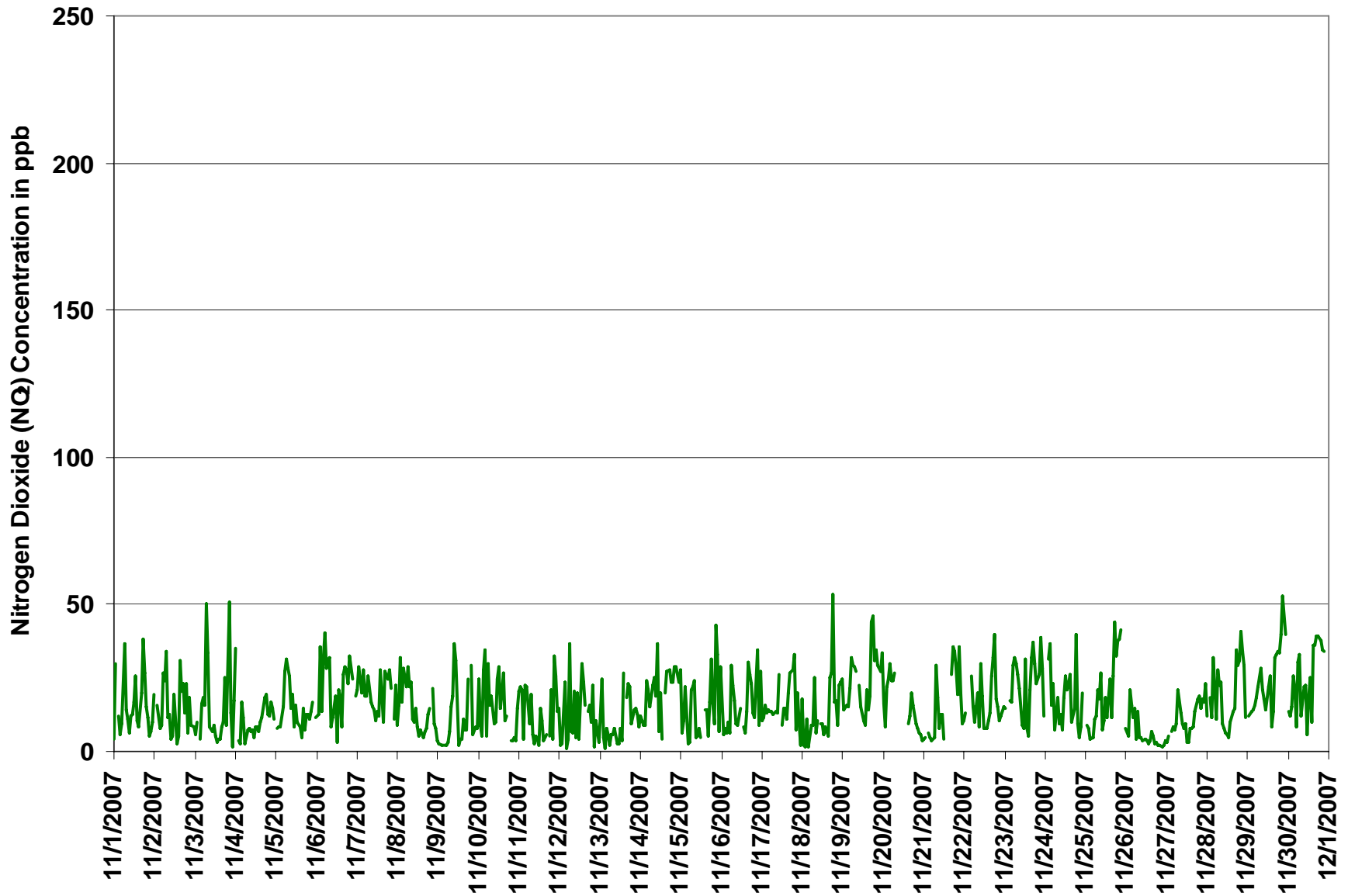
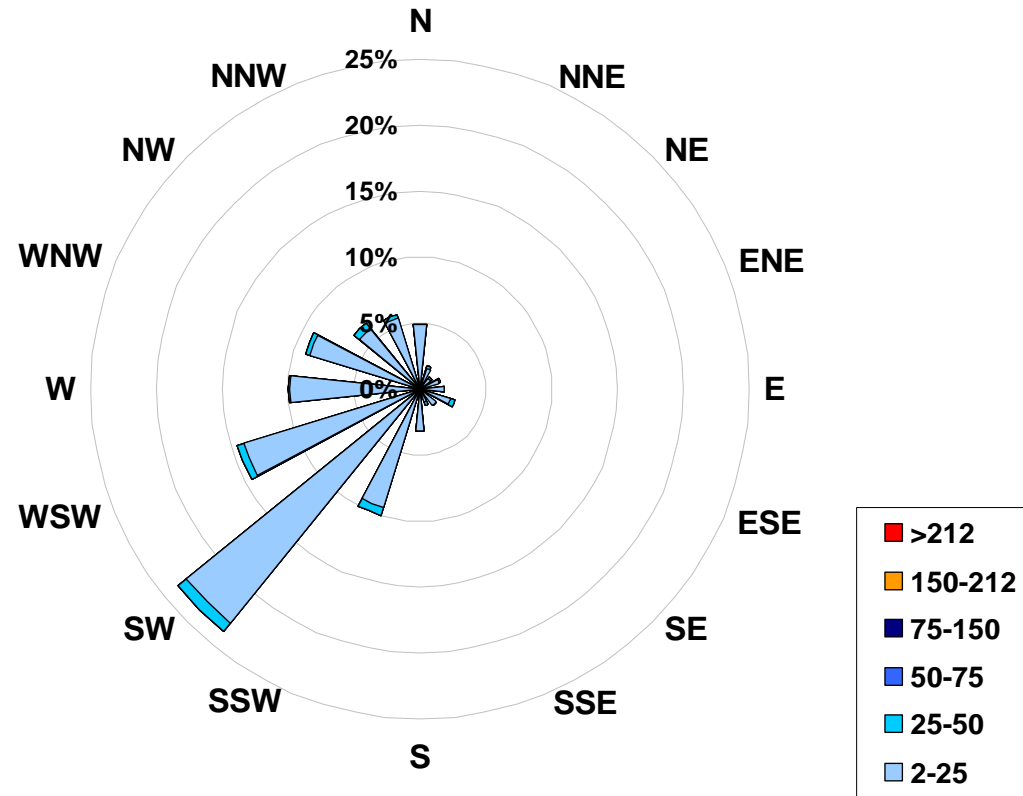


Figure 2. PAS - Crescent Heights Nitrogen Dioxide Instantaneous (30 Second) Maximum Value Monthly Trend



1-hr Average Concentration Rose for Nitrogen Dioxide (in ppb) Located at the Crescent Heights Site for November 2007



Calms: 0%

Frequency Distribution of NO ₂ in ppb			Frequency (hrs)
Range			
2.0	< 25		646
25	to 50		23
50	to 75		4
75	to 150		1
150	to 212		0
	> 212		0
Total Non-Zero Values			674



PAS - Crescent Heights Nitric Oxide Monthly Summary

Station: Crescent Heights
Station Owner: PAS

HOURLY AVERAGE TABLE

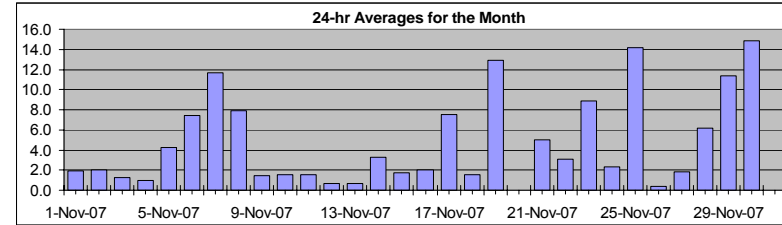
Nitric Oxide (NO)

Monitoring Dates: November 1, 2007 to December 1, 2007

Guideline Limit:
Summary

1-hr	na	ppb	24-hr	na	ppb
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Maximum 1-hr Average:	105.2	ppb	30-Nov	18:00	19:00
Maximum 24-hr Average:	14.8	ppb	30-Nov		



AIC Time:	38 hrs	Operational Time:	674 hrs						
Calibration Time:	5 hrs	AMD Operational Uptime:	99.6%						
Percentile	99	95	75	50	25	5	1	Average	Median
	46.5	21.6	4.1	1.7	0.7	0.0	0.0	4.8 ppb	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																								24-hour Average	Daily Maximum	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
1-Nov-07	0	3	A	0	0	0	4	1	2	1	2	1	3	3	2	1	1	11	5	2	1	0	0	0	0	2.0	11.3
2-Nov-07	1	A	1	0	0	2	6	10	5	5	2	2	3	1	1	3	2	1	1	1	0	1	0	0	2.1	10.0	
3-Nov-07	0	0	A	0	0	1	1	5	7	3	2	2	1	0	1	0	0	0	2	1	2	1	0	0	1.3	6.9	
4-Nov-07	1	A	0	0	1	0	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	0.9	2.1	
5-Nov-07	A	1	1	1	1	4	6	20	17	12	10	3	4	5	2	1	1	0	1	0	1	1	2	A	4.3	19.8	
6-Nov-07	0	1	6	2	4	18	2	5	11	4	3	5	1	2	4	3	11	25	17	8	20	10	A	9	7.4	25.1	
7-Nov-07	20	14	32	26	10	8	13	39	11	19	17	8	10	5	7	6	0	6	5	7	1	A	1	3	11.6	38.6	
8-Nov-07	1	2	11	12	6	20	15	20	39	10	9	13	5	2	2	2	2	1	2	4	A	3	1	0	7.9	39.4	
9-Nov-07	0	0	0	0	1	0	0	1	2	6	7	2	1	1	1	1	1	1	1	1	A	2	0	2	1	1.4	7.2
10-Nov-07	7	1	0	4	4	0	2	1	2	1	2	2	2	1	2	1	1	1	A	0	0	0	0	1	1.5	6.6	
11-Nov-07	2	2	2	0	1	3	0	2	2	1	2	1	1	1	1	1	1	A	1	5	1	3	2	1	1.6	4.6	
12-Nov-07	2	0	0	1	0	0	1	0	1	2	1	1	1	1	2	1	A	1	1	0	0	0	0	0	0.7	1.8	
13-Nov-07	1	1	0	0	0	0	0	0	1	0	0	0	1	0	4	A	1	1	3	0	1	1	0	0	0.7	4.2	
14-Nov-07	0	0	0	0	5	3	2	5	10	7	7	2	1	1	A	2	4	4	2	2	4	7	5	2	3.3	9.6	
15-Nov-07	4	0	1	1	0	0	2	2	3	1	1	2	2	A	2	2	1	1	4	1	1	4	3	1	1.7	4.1	
16-Nov-07	2	1	0	0	1	1	12	2	3	2	2	4	A	2	1	2	2	1	2	1	1	3	1	2	2.0	11.7	
17-Nov-07	0	0	2	1	1	7	6	24	50	32	22	A	2	3	2	0	1	5	7	5	0	1	0	0	7.5	49.7	
18-Nov-07	1	0	0	1	0	1	1	1	0	1	A	2	1	2	2	1	1	2	10	1	2	1	5	1	1.6	10.3	
19-Nov-07	2	1	1	1	3	7	13	41	51	A	11	6	3	2	2	2	2	19	36	8	36	37	7	6	13.0	51.5	
20-Nov-07	1	0	4	8	23	16	21	38	A	C	C	C	C	C	A	0	0	2	0	0	0	0	0	0	N	37.6	
21-Nov-07	0	0	A	1	1	1	1	3	4	2	4	3	2	P	P	P	3	20	19	21	2	7	3	1	5.0	21.1	
22-Nov-07	1	1	A	A	3	3	2	3	7	3	11	5	4	2	3	2	3	3	10	1	1	1	1	0	3.1	11.0	
23-Nov-07	0	A	A	1	1	4	13	31	36	16	6	6	4	2	1	4	4	18	7	3	10	24	5	1	8.9	35.6	
24-Nov-07	A	A	4	3	3	4	1	2	1	4	2	3	4	2	2	4	1	1	6	0	0	1	0	A	2.3	6.1	
25-Nov-07	A	0	0	0	0	0	1	1	1	5	2	2	2	2	3	2	5	60	61	45	57	49	A	A	14.2	60.6	
26-Nov-07	0	0	2	1	1	1	0	1	1	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0.4	2.5	
27-Nov-07	0	0	A	0	0	1	2	3	4	2	2	2	1	1	2	2	1	2	2	2	2	3	5	1	1.8	5.1	
28-Nov-07	1	A	2	0	4	1	3	7	6	3	3	2	2	1	2	2	1	7	11	18	35	23	6	1	6.1	35.1	
29-Nov-07	A	0	1	2	2	4	4	13	45	18	21	13	11	4	3	3	5	8	12	12	22	35	9	A	11.4	45.1	
30-Nov-07	0	1	0	3	1	0	2	7	2	4	5	3	4	3	4	8	22	36	105	45	31	37	A	16	14.8	105.2	
Hourly Avg	1.9	1.2	2.9	2.4	2.6	3.8	4.6	9.6	11.2	5.9	5.6	3.4	2.8	2.0	2.2	2.1	2.7	8.3	11.5	6.8	8.1	8.7	2.1	2.0			
Hourly Max	20.5	13.8	31.9	25.9	22.7	20.0	20.9	40.8	51.5	32.4	22.3	13.0	10.6	4.8	6.5	7.6	21.5	59.9	105.2	45.5	56.9	49.3	9.3	16.0			



PAS - Crescent Heights Oxides of Nitrogen Monthly Summary

Station: Crescent Heights
 Station Owner: PAS

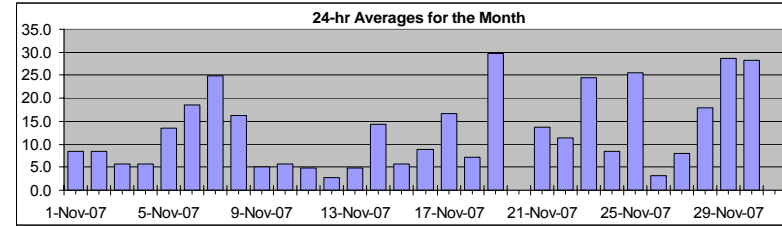
HOURLY AVERAGE TABLE

Oxides of Nitrogen (NO_x)

Monitoring Dates: November 1, 2007 to December 1, 2007

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

Maximum 1-hr Average:	136.1	ppb	30-Nov	18:00 19:00
Maximum 24-hr Average:	29.7	ppb	19-Nov	



AIC Time:	38 hrs	Operational Time:	674 hrs						
Calibration Time:	5 hrs	AMD Operational Uptime:	99.6%						
Percentile	99	95	75	50	25	5	1	Average	Median
	71.4	45.0	14.9	7.9	4.3	1.5	0.6	13.0 ppb	7.9 ppb

Status Flag Characters

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
1-Nov-07	2	9	A	9	2	5	15	6	8	5	8	7	13	12	8	6	7	24	17	13	7	3	4	5		8.5	24.4
2-Nov-07	10	A	10	6	8	16	24	24	13	10	5	4	5	2	3	6	6	10	10	7	3	4	4	2		8.4	24.1
3-Nov-07	1	2	A	2	5	7	6	17	23	9	5	6	4	2	3	2	3	7	14	5	5	2	0	1		5.7	22.6
4-Nov-07	2	A	1	0	5	6	2	5	4	4	5	4	8	8	7	8	7	9	10	8	7	6	8	8		5.7	9.6
5-Nov-07	A	6	8	8	9	21	26	41	35	23	20	8	10	12	5	4	10	4	9	9	9	9	14	A		13.5	40.9
6-Nov-07	6	9	20	12	18	39	8	18	28	10	6	9	3	4	10	7	23	49	37	21	39	26	A	24		18.5	48.8
7-Nov-07	39	30	50	44	27	25	29	55	23	32	27	15	21	13	18	20	6	21	23	27	9	A	7	11		24.9	55.2
8-Nov-07	7	8	23	23	15	35	31	36	55	18	16	23	12	5	3	5	5	4	9	15	A	16	7	5		16.3	54.6
9-Nov-07	2	2	1	2	2	1	1	4	8	20	19	4	2	2	4	4	5	5	6	A	9	4	8	6		5.2	19.5
10-Nov-07	14	4	3	9	8	3	10	14	8	7	9	6	7	4	5	3	2	2	A	3	2	2	2	4		5.8	13.9
11-Nov-07	7	6	5	3	4	11	7	7	5	3	5	3	2	3	5	3	3	A	5	10	2	6	4	3		4.8	10.7
12-Nov-07	3	1	2	2	1	2	5	5	4	6	4	4	3	4	4	3	A	3	2	2	2	1	1	1		2.7	5.8
13-Nov-07	3	4	1	0	1	1	1	3	4	2	2	1	5	2	12	A	8	9	16	4	6	11	9	5		4.8	15.9
14-Nov-07	6	6	6	7	14	10	10	23	26	16	13	5	3	3	A	11	25	28	19	20	18	27	21	15		14.4	27.5
15-Nov-07	9	4	4	3	2	2	5	7	7	4	4	6	4	A	6	8	4	9	12	5	5	10	8	5		5.8	11.6
16-Nov-07	7	4	5	4	7	4	24	10	10	9	9	15	A	7	5	9	12	10	13	7	7	11	6	10		8.9	23.6
17-Nov-07	8	7	12	11	11	18	16	35	62	43	33	A	8	11	14	6	10	24	26	17	4	3	2	1		16.6	61.7
18-Nov-07	2	1	0	2	1	3	3	2	1	3	A	7	6	6	7	4	9	19	31	12	8	6	17	13		7.2	31.3
19-Nov-07	20	12	14	13	17	22	32	65	75	A	28	15	10	7	8	10	12	47	71	35	64	64	23	21		29.7	74.5
20-Nov-07	13	6	16	23	43	36	42	60	A	C	C	C	C	C	A	8	10	19	12	7	6	5	3	2		N	60.2
21-Nov-07	3	2	A	5	4	3	4	13	16	7	8	6	4	P	P	P	18	47	43	45	15	16	10	7		13.8	46.7
22-Nov-07	8	12	A	A	11	11	10	12	17	9	18	8	8	6	10	11	17	16	21	10	13	7	7	9		11.3	20.5
23-Nov-07	11	A	A	15	15	26	38	55	59	29	13	12	10	5	4	15	25	48	27	20	32	49	22	7		24.4	58.6
24-Nov-07	A	A	13	9	6	10	6	8	7	11	6	5	6	5	6	13	9	12	25	4	1	5	10	A		8.4	24.7
25-Nov-07	A	4	2	2	1	6	8	12	14	15	7	6	7	7	11	11	23	88	89	72	83	69	A	A		25.6	88.6
26-Nov-07	4	2	7	5	7	8	3	4	3	4	3	3	2	1	2	5	2	1	1	1	1	1	1	1		3.1	7.6
27-Nov-07	2	2	A	4	5	5	6	10	11	7	5	5	3	3	6	7	8	9	13	15	14	15	13	17		8.0	16.8
28-Nov-07	11	A	13	9	14	8	14	25	19	10	7	6	4	3	5	7	9	26	37	47	63	45	21	9		17.9	62.7
29-Nov-07	A	9	12	12	15	20	20	36	70	35	37	25	21	11	9	12	23	35	41	43	54	65	26	A		28.6	70.2
30-Nov-07	11	9	7	10	9	6	10	17	11	12	11	7	7	7	10	23	47	65	136	73	56	63	A	42		28.2	136.1
Hourly Avg	8.1	6.4	9.8	8.7	9.6	12.3	13.8	20.9	21.5	12.9	11.9	8.0	7.1	5.7	7.0	8.3	12.0	22.5	26.7	19.1	18.7	19.0	9.6	8.9			
Hourly Max	38.8	30.5	50.0	44.3	43.0	38.9	42.0	64.7	74.5	42.6	36.5	25.0	21.2	12.6	17.9	23.1	46.9	88.3	136.1	73.1	82.9	68.6	26.5	42.4			

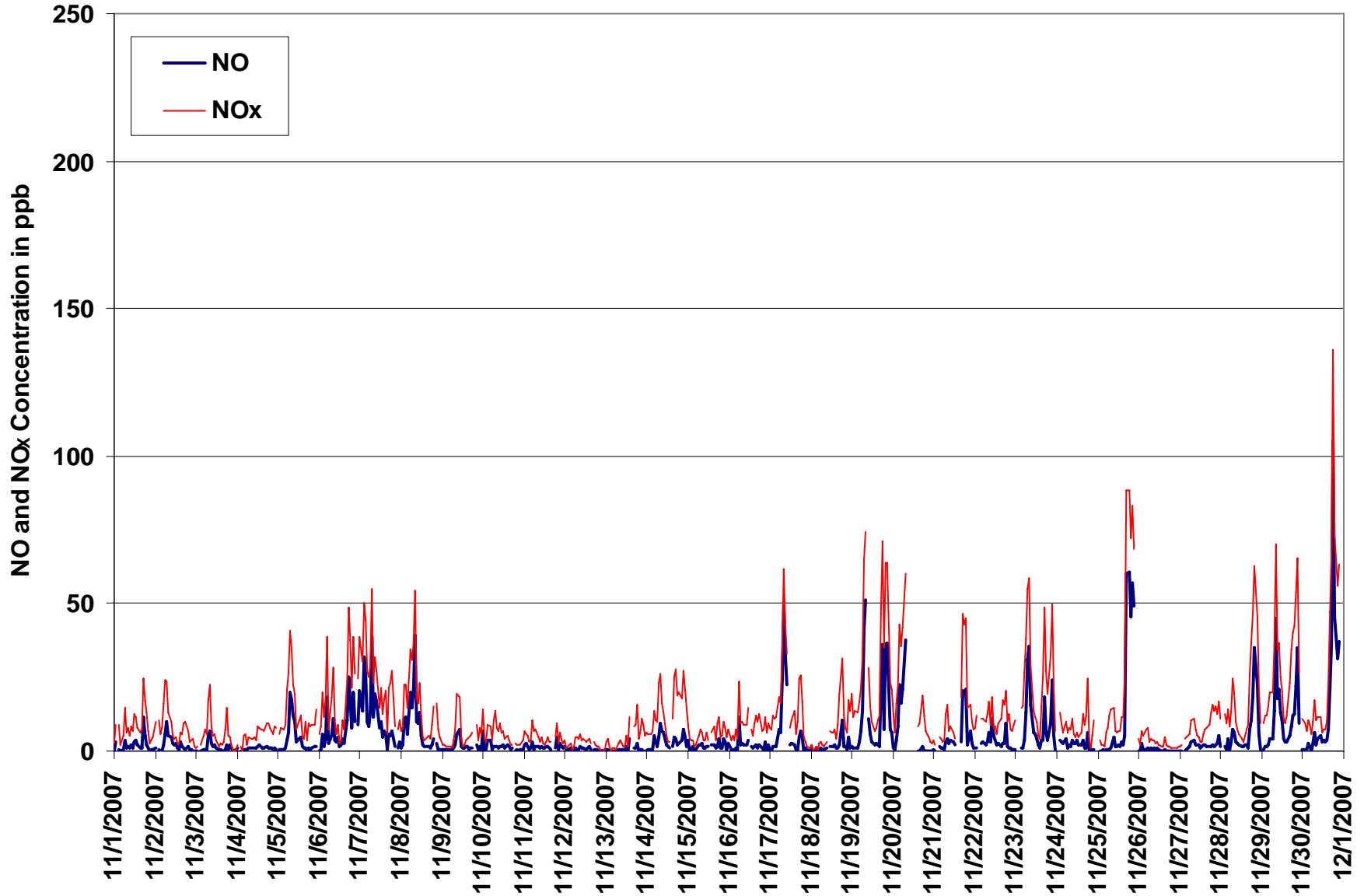


Figure 3. PAS - Crescent Heights Oxides of Nitrogen 1-hr Average Monthly Trend



Station: Crescent Heights
Station Owner: PAS

INSTANTANEOUS (30 Second) MAXIMUM TABLE

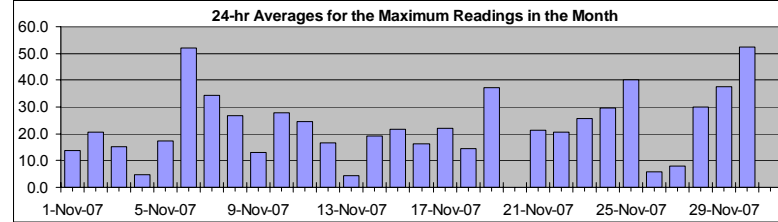
Nitric Oxide (NO)

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Maximum 1-hr Value:	245.3	ppb	29-Nov	22:00 23:00
Maximum 24-hr Value:	52.6	ppb	30-Nov	

AIC Time:	38 hrs	Operational Time:	674 hrs						
Calibration Time:	5 hrs	AMD Operational Uptime:	99.6%						
Percentile	99	95	75	50	25	5	1	Average	Median
	159.0	91.6	30.4	6.1	2.0	0.9	0.5	23.0 ppb	6.1 ppb



Status Flag Characters

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

Day Mountain Standard Time

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Nov-07	1	54	A	3	1	1	29	2	3	2	11	2	7	35	4	3	3	111	30	7	2	1	1	1	13.7	111.0
2-Nov-07	5	A	2	1	1	16	26	128	41	14	3	3	55	2	2	66	30	12	2	53	2	11	1	1	20.8	128.5
3-Nov-07	0	1	A	1	2	4	4	104	58	4	3	6	3	1	1	1	2	18	2	75	32	1	22	15.0	104.1	
4-Nov-07	60	A	1	1	4	1	2	2	2	2	2	2	3	3	3	2	3	3	2	2	2	2	1	4.6	59.7	
5-Nov-07	A	1	1	2	2	16	15	123	88	28	25	12	19	6	16	2	3	1	3	2	3	4	A	17.2	123.1	
6-Nov-07	1	2	56	6	39	244	53	23	56	6	37	34	3	27	18	5	60	80	53	102	213	46	A	36	52.1	244.2
7-Nov-07	37	133	92	33	45	17	27	107	24	27	26	12	12	8	58	10	2	15	16	29	20	A	2	43	34.5	132.6
8-Nov-07	3	13	63	73	69	71	85	47	82	16	13	20	7	3	19	3	3	2	4	6	A	10	2	1	26.8	84.6
9-Nov-07	1	1	1	1	1	1	1	3	6	10	124	32	2	2	3	21	2	2	27	A	52	1	3	2	13.0	124.4
10-Nov-07	159	3	1	66	86	1	31	2	32	2	3	49	61	29	53	29	9	16	A	1	1	1	1	6	28.0	159.4
11-Nov-07	39	70	48	1	47	20	1	32	13	2	3	3	2	26	21	2	2	A	2	72	2	63	43	47	24.4	72.1
12-Nov-07	49	1	1	45	1	1	40	1	1	34	2	18	1	33	36	21	A	21	24	13	22	1	17	1	16.8	49.2
13-Nov-07	7	23	1	0	2	2	0	2	2	3	2	1	3	1	20	A	5	7	7	3	4	2	1	1	4.3	22.7
14-Nov-07	1	1	2	1	29	28	8	9	35	27	87	5	25	2	A	17	47	7	7	6	49	23	18	5	19.1	86.9
15-Nov-07	60	2	2	55	1	2	60	37	37	2	2	3	3	A	15	6	2	3	36	4	3	55	110	2	21.7	109.9
16-Nov-07	69	2	1	1	3	1	54	30	25	3	3	6	A	3	2	3	17	5	5	10	3	73	3	48	16.1	73.5
17-Nov-07	2	1	19	5	3	15	18	42	60	53	134	A	4	7	5	1	4	8	27	45	2	25	23	1	21.9	134.4
18-Nov-07	39	1	1	24	1	11	4	14	1	4	A	3	3	3	4	2	3	6	159	4	20	2	20	3	14.4	158.8
19-Nov-07	3	2	3	3	18	71	58	85	74	A	18	11	6	4	14	4	12	70	102	14	93	57	39	91	37.1	101.7
20-Nov-07	2	1	28	59	77	42	28	68	A	C	C	C	C	C	A	0	1	4	2	2	1	0	1	2	N	76.5
21-Nov-07	2	1	A	2	2	2	2	30	9	4	15	16	4	P	P	P	26	63	56	40	7	99	43	2	21.3	99.1
22-Nov-07	3	3	A	A	61	71	6	11	58	5	36	55	5	4	4	4	5	14	101	4	3	2	2	2	20.8	100.8
23-Nov-07	1	A	A	1	2	12	61	54	40	36	8	7	37	5	2	18	7	71	25	8	17	116	30	3	25.5	115.9
24-Nov-07	A	A	54	35	37	81	2	34	4	10	8	70	102	25	28	61	2	3	56	1	1	2	2	A	29.5	102.5
25-Nov-07	A	1	1	1	1	1	1	2	2	30	3	7	14	22	36	4	26	224	108	97	116	146	A	A	40.2	223.9
26-Nov-07	0	0	83	20	3	5	1	8	2	2	1	3	2	1	1	1	0	1	1	1	0	1	1	2	5.8	82.8
27-Nov-07	1	2	A	2	2	3	3	19	13	11	4	7	3	3	8	7	3	3	6	4	3	4	27	42	7.9	42.4
28-Nov-07	3	A	6	2	104	3	71	32	17	9	6	4	4	4	12	11	4	56	24	33	116	113	55	2	30.0	115.9
29-Nov-07	A	2	5	5	4	10	9	30	61	24	26	15	43	16	6	4	24	14	19	19	70	172	245	A	37.4	245.3
30-Nov-07	2	3	17	42	24	1	76	87	4	26	64	6	54	24	7	50	81	94	224	129	81	79	A	34	52.6	223.9
Hourly Avg	21.3	13.0	20.4	16.9	22.4	25.1	25.9	38.9	29.4	14.2	23.9	14.8	17.3	11.1	14.7	12.8	13.4	31.6	39.5	24.5	33.8	39.4	25.8	15.4		
Hourly Max	159.4	132.6	92.3	72.8	103.7	244.2	84.6	128.5	87.7	52.9	134.4	70.5	102.5	35.1	58.2	66.4	81.1	223.9	223.9	128.8	212.8	172.1	245.3	91.3		



Station: Crescent Heights
 Station Owner: PAS

INSTANTANEOUS (30 Second) MAXIMUM TABLE

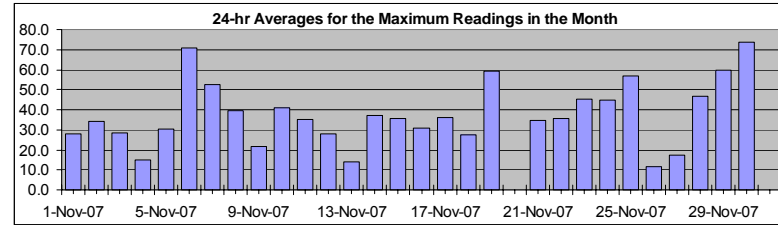
Oxides of Nitrogen (NO_x)

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Maximum 1-hr Value:	279.5	ppb	6-Nov	5:00 6:00
Maximum 24-hr Value:	73.9	ppb	30-Nov	

AIC Time:	38 hrs	Operational Time:	674 hrs						
Calibration Time:	5 hrs	AMD Operational Uptime:	99.6%						
Percentile	99	95	75	50	25	5	1	Average	Median
	190.0	117.0	51.6	19.9	9.7	3.5	1.9	37.4 ppb	19.9 ppb



Status Flag Characters

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum
Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00		
1-Nov-07	5	80	A	15	6	10	65	16	13	8	21	15	23	61	14	10	22	144	54	22	13	5	7	11	27.7	143.8
2-Nov-07	24	A	18	8	9	42	45	162	47	26	7	7	70	4	7	93	50	35	14	67	7	29	8	8	34.4	162.5
3-Nov-07	6	10	A	4	18	22	19	152	91	11	9	14	8	4	4	5	9	11	42	9	125	44	1	39	28.6	151.9
4-Nov-07	94	A	4	3	19	12	3	9	9	8	9	6	10	10	9	11	14	20	22	14	12	18	16	12	15.0	94.1
5-Nov-07	A	8	9	10	17	43	43	145	108	38	44	19	35	16	22	6	17	8	15	13	13	16	20	A	30.3	145.5
6-Nov-07	12	14	86	18	62	280	80	54	85	13	42	45	5	40	36	12	85	109	79	112	240	67	A	55	70.9	279.5
7-Nov-07	57	159	111	52	70	35	42	130	39	41	39	20	25	20	81	27	12	40	39	56	37	A	12	64	52.5	158.7
8-Nov-07	11	28	94	87	89	88	109	66	98	27	23	34	14	8	25	6	9	9	16	20	A	31	11	8	39.7	108.9
9-Nov-07	4	3	2	2	2	2	3	9	21	29	157	62	3	4	6	26	8	8	47	A	77	7	11	9	21.8	156.8
10-Nov-07	183	11	5	80	120	5	60	17	50	11	11	68	79	39	71	50	19	26	A	3	4	5	4	20	41.0	183.5
11-Nov-07	54	92	69	4	62	42	10	47	19	4	8	6	3	40	30	4	6	A	6	86	5	95	59	60	35.3	94.6
12-Nov-07	59	2	3	66	1	4	75	8	6	45	5	38	4	63	59	34	A	33	39	19	44	2	27	3	27.8	75.5
13-Nov-07	20	44	5	1	10	7	2	7	7	10	4	3	10	3	45	A	23	29	29	12	18	15	13	8	14.1	45.3
14-Nov-07	13	11	10	10	49	48	23	32	59	45	118	12	43	6	A	37	68	34	30	28	69	46	36	28	37.1	118.3
15-Nov-07	79	7	13	76	3	4	81	59	54	5	6	10	7	A	29	20	6	19	67	20	12	94	145	8	35.7	144.5
16-Nov-07	96	7	8	7	12	7	82	49	42	11	11	21	A	11	8	15	46	31	27	17	14	108	11	74	31.1	107.5
17-Nov-07	12	11	34	18	16	27	30	54	74	65	156	A	12	21	18	12	23	34	54	77	7	45	31	3	36.3	156.2
18-Nov-07	57	2	2	31	2	20	14	38	7	14	A	12	11	7	11	7	28	32	208	19	35	10	39	25	27.4	207.8
19-Nov-07	27	16	18	16	38	103	81	107	98	A	38	26	15	13	35	16	30	108	147	45	125	82	66	111	59.3	147.2
20-Nov-07	17	9	48	83	97	60	50	92	A	C	C	C	C	C	A	10	13	24	17	12	9	7	6	5	N	97.3
21-Nov-07	5	4	A	8	6	4	6	50	26	10	24	29	7	P	P	P	52	93	87	66	25	122	63	10	34.9	122.4
22-Nov-07	12	15	A	A	77	86	14	25	72	11	61	71	11	11	14	16	29	44	139	20	17	12	13	17	35.7	139.2
23-Nov-07	15	A	A	18	18	41	86	79	63	57	16	14	67	12	6	36	39	108	42	30	42	143	53	14	45.4	142.7
24-Nov-07	A	A	78	57	52	98	9	51	13	22	15	88	116	45	49	86	11	16	91	10	5	9	21	A	44.9	116.2
25-Nov-07	A	9	8	4	5	11	13	21	19	54	10	17	29	33	59	14	49	263	132	129	143	176	A	A	57.0	263.0
26-Nov-07	6	4	104	36	15	19	4	21	6	7	4	7	5	2	3	8	5	3	3	2	2	2	2	3	11.3	103.9
27-Nov-07	3	5	A	8	10	9	10	37	22	18	12	13	4	4	15	15	10	15	21	22	17	20	44	62	17.2	61.7
28-Nov-07	14	A	23	11	137	11	95	48	39	16	13	9	9	5	21	24	15	87	51	63	157	129	81	13	46.6	156.7
29-Nov-07	A	14	15	18	18	27	31	55	87	45	41	29	65	41	13	16	53	45	50	50	108	219	270	A	59.5	269.6
30-Nov-07	14	15	32	63	42	8	98	108	16	48	83	10	67	49	16	85	114	133	248	163	114	112	A	63	73.9	248.4
Hourly Avg	34.5	23.1	33.2	28.0	36.0	39.1	42.8	58.3	44.6	25.0	35.3	25.2	27.1	21.2	26.1	25.0	29.9	53.9	62.7	41.6	51.6	57.5	39.5	28.2		
Hourly Max	183.5	158.7	111.3	86.8	136.9	279.5	108.9	162.5	108.3	65.2	156.8	87.7	116.2	63.0	80.7	93.4	113.8	263.0	248.4	163.5	240.5	218.8	269.6	111.4		

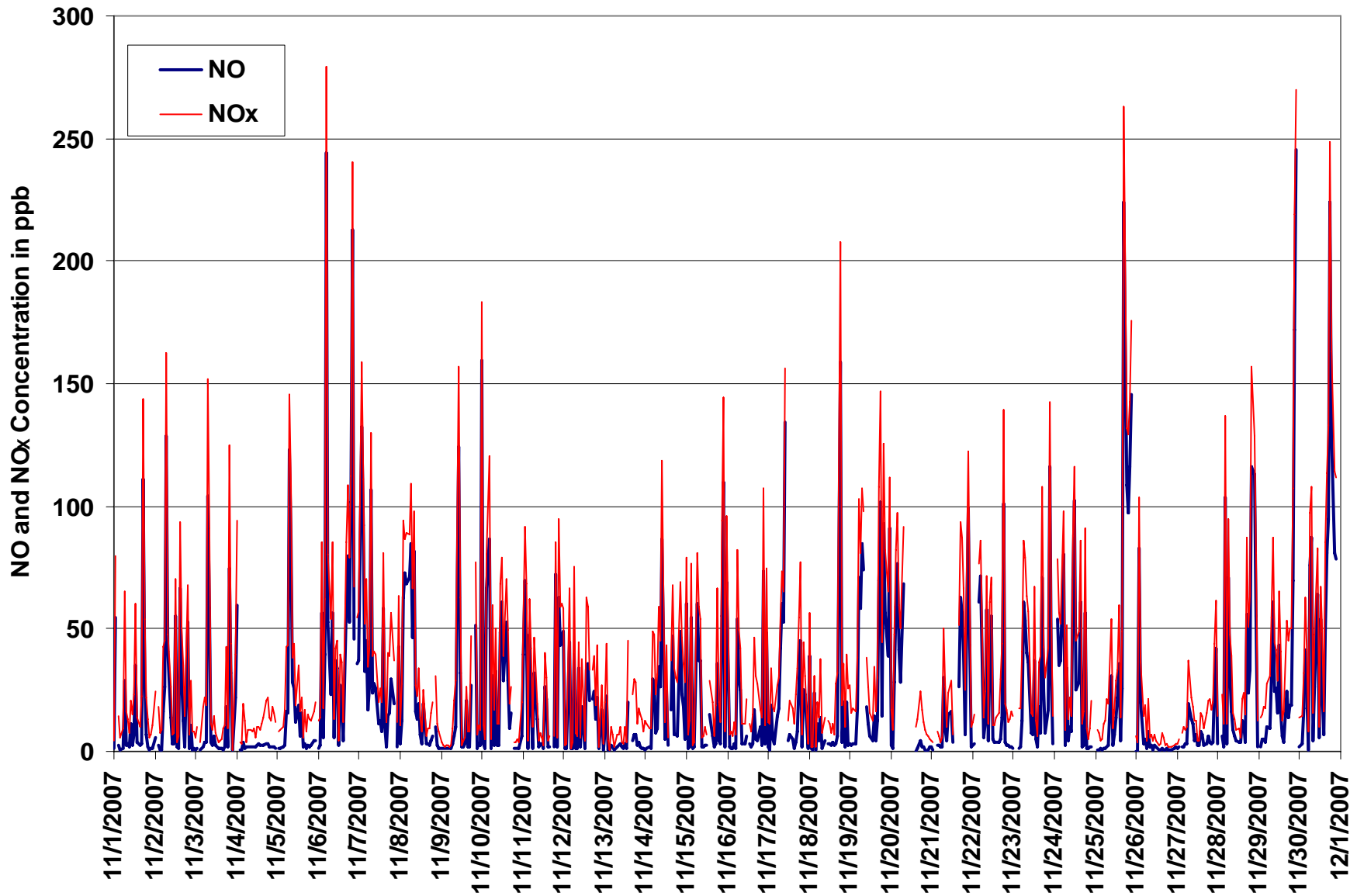


Figure 4. PAS - Crescent Heights Oxides of Nitrogen Instantaneous (30 Second) Maximum Value Monthly Trend



PAS - Crescent Heights Ozone Monthly Summary

Station: Crescent Heights
Station Owner: PAS

HOURLY AVERAGE TABLE

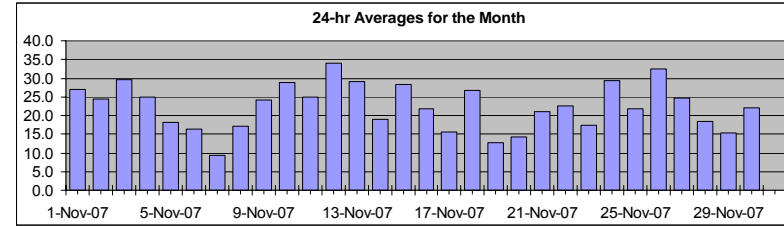
Ozone (O₃)

Monitoring Dates: November 1, 2007 to December 1, 2007

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

Number of 1-hr Exceedances:	0		
Maximum 1-hr Average:	44.2 ppb	24-Nov	20:00 21:00
Maximum 24-hr Average:	34.0 ppb	12-Nov	

AIC Time:	36 hrs	Operational Time:	679 hrs						
Calibration Time:	3 hrs	AMD Operational Uptime:	99.7%						
Percentile	99	95	75	50	25	5	1	Average	Median
	40.1	37.4	30.0	24.0	16.3	2.9	0.7	22.4 ppb	24.0 ppb



Status Flag Characters

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum		
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00	0:00		
1-Nov-07	27	23	A	25	37	34	28	32	31	36	31	29	24	27	29	31	31	21	19	18	24	23	20	23		27.0	36.5	
2-Nov-07	19	A	22	25	23	16	9	7	14	18	23	27	35	36	34	32	31	25	22	26	28	28	25	34		24.4	35.9	
3-Nov-07	36	35	A	35	30	29	30	20	15	24	31	32	36	37	37	35	32	24	17	26	29	30	31	31		29.7	37.4	
4-Nov-07	31	A	30	35	29	20	25	28	29	27	28	28	25	24	26	24	24	20	18	18	21	23	21	20		24.8	34.8	
5-Nov-07	A	20	17	17	16	9	5	4	9	13	17	25	27	27	31	30	26	29	20	17	16	16	9	A		18.2	30.8	
6-Nov-07	22	19	19	18	12	13	26	17	14	22	27	28	28	27	23	21	12	3	5	10	4	4	A	3		16.3	28.0	
7-Nov-07	1	2	1	1	3	2	2	2	5	5	9	16	14	19	17	15	25	11	8	6	19	A	17	14		9.3	24.5	
8-Nov-07	15	13	6	4	5	3	2	3	6	11	14	15	21	32	34	35	33	32	26	20	A	17	21	23		17.1	34.8	
9-Nov-07	25	23	23	21	21	21	21	20	19	14	22	30	30	30	30	30	28	27	28	A	25	27	23	22		24.3	30.2	
10-Nov-07	25	25	25	24	25	25	20	17	25	27	27	30	30	34	33	36	37	36	A	34	34	34	30	29		28.8	36.5	
11-Nov-07	23	21	20	22	20	17	17	17	21	23	24	29	30	32	30	32	34	A	29	25	26	25	27	27		24.8	33.6	
12-Nov-07	29	30	31	32	32	32	32	30	31	30	32	33	35	38	38	38	A	40	39	38	36	35	36	37		34.0	40.1	
13-Nov-07	35	37	38	37	34	33	32	30	29	30	31	32	32	35	28	A	26	24	17	25	23	17	20	23		29.0	38.1	
14-Nov-07	22	23	23	21	18	15	18	12	11	14	17	29	34	33	A	30	16	12	17	13	15	9	14	20		19.0	34.1	
15-Nov-07	28	29	29	32	33	32	31	29	29	28	29	27	30	A	31	30	32	26	25	29	28	23	22	21		28.4	32.6	
16-Nov-07	19	19	17	19	16	20	15	19	20	20	21	18	A	29	32	27	24	26	23	30	24	22	23	18		21.8	32.4	
17-Nov-07	17	17	12	10	9	0	0	1	2	4	9	A	25	24	22	25	21	8	11	23	31	34	30	27		15.7	33.5	
18-Nov-07	26	26	29	29	32	32	35	38	38	38	A	35	30	27	28	32	26	14	8	15	21	21	17	18		26.7	38.3	
19-Nov-07	12	16	13	13	10	9	5	1	3	A	13	23	28	31	32	28	24	8	2	4	3	1	7	7		12.7	31.8	
20-Nov-07	9	15	8	6	0	1	0	0	2	3	8	18	29	28	26	22	15	C	C	C	25	27	30	28		14.3	30.2	
21-Nov-07	27	31	A	26	25	30	30	22	17	26	26	28	30	P	P	31	19	6	7	3	13	17	16	14		21.0	31.4	
22-Nov-07	11	7	A	A	11	12	13	13	13	18	20	22	23	34	33	37	29	30	30	29	23	32	30	26		22.6	37.2	
23-Nov-07	22	A	A	19	18	8	5	3	4	14	19	22	30	42	43	31	17	4	10	12	6	5	18	30		17.3	42.6	
24-Nov-07	A	A	22	24	21	18	19	22	22	22	32	40	40	41	39	30	32	28	20	42	44	37	23	A		29.4	44.2	
25-Nov-07	A	37	39	39	39	32	29	24	24	25	25	25	26	28	24	18	10	3	3	3	2	3	A	A		21.8	39.1	
26-Nov-07	23	24	23	23	20	17	26	30	36	37	38	38	40	40	38	37	38	38	37	35	34	34	38	37		32.5	40.1	
27-Nov-07	35	30	A	28	27	26	26	21	23	25	28	30	29	31	30	29	27	25	19	17	17	14	17	14		24.7	34.6	
28-Nov-07	15	A	16	16	15	18	15	7	18	22	26	30	34	35	33	30	26	13	6	3	2	7	14	21		18.4	34.6	
29-Nov-07	A	22	17	14	11	10	11	4	6	15	18	25	28	33	35	31	20	10	5	3	2	5	15	A		15.3	34.7	
30-Nov-07	24	24	27	28	27	30	28	25	27	31	33	37	38	38	34	22	9	5	2	4	6	5	A	3		22.0	37.8	
Hourly Avg	22.2	22.7	21.2	22.2	20.5	18.8	18.5	16.7	18.0	21.4	23.3	27.6	29.7	31.8	31.1	29.3	24.8	19.6	16.9	18.8	20.0	19.7	21.9	21.9				
Hourly Max	36.2	37.4	39.1	38.7	38.8	34.0	35.3	38.3	38.3	37.5	37.6	39.9	40.5	41.9	42.6	38.5	38.4	40.1	39.3	41.9	44.2	36.6	37.5	37.4				

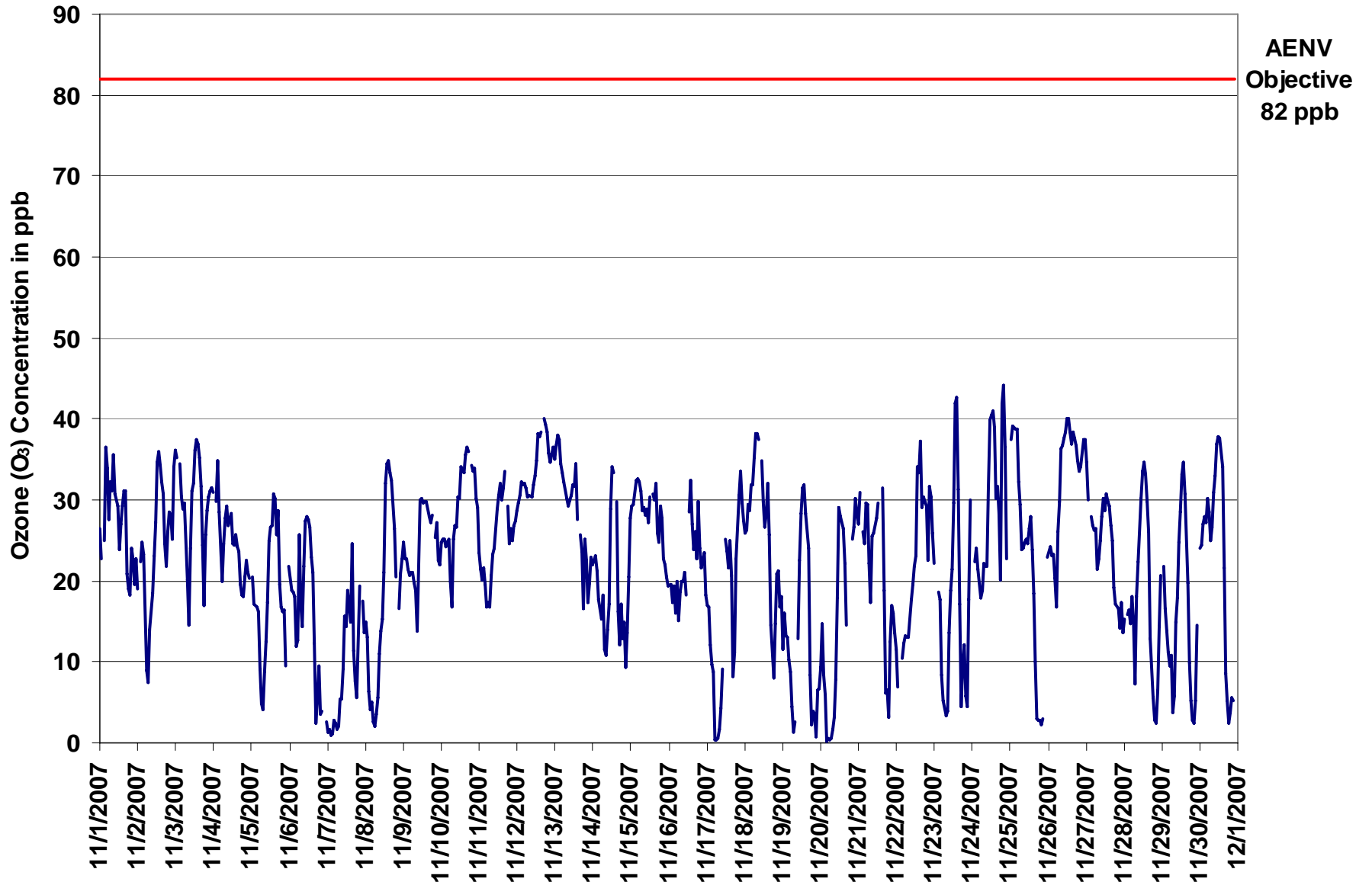


Figure 5. PAS - Crescent Heights Ozone 1-hr Average Monthly Trend



Station: Crescent Heights
Station Owner: PAS

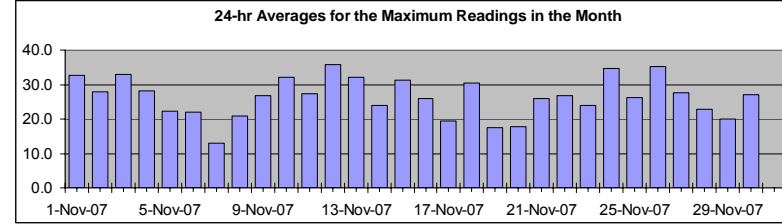
INSTANTANEOUS (30 Second) MAXIMUM TABLE

Ozone (O₃)

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Maximum 1-hr Value:	49.2	ppb	30-Nov	9:00 10:00
Maximum 24-hr Value:	35.8	ppb	12-Nov	



AIC Time:	36 hrs	Operational Time:	679 hrs						
Calibration Time:	3 hrs	AMD Operational Uptime:	99.7%						
Percentile	99	95	75	50	25	5	1	Average	Median
	43.9	39.8	33.2	28.0	20.6	6.0	1.4	26.4 ppb	28.0 ppb

Status Flag Characters

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

Day Mountain Standard Time

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Nov-07	28	26	A	38	38	37	35	37	36	40	39	35	31	32	34	35	39	31	28	26	28	27	23	26	32.5	40.4
2-Nov-07	24	A	28	27	25	25	14	11	19	22	26	31	37	38	37	35	33	29	25	29	30	30	29	38	27.9	37.8
3-Nov-07	38	37	A	36	33	33	33	29	21	31	33	34	38	38	38	38	34	28	24	31	31	32	32	33	32.9	38.5
4-Nov-07	32	A	34	36	34	25	29	31	32	30	32	33	29	28	28	27	26	25	22	21	25	25	24	23	28.3	35.5
5-Nov-07	A	22	18	18	20	13	10	8	14	16	23	28	29	30	33	32	38	31	29	22	21	23	13	A	22.3	38.4
6-Nov-07	25	24	27	26	21	23	30	28	24	24	30	30	29	29	28	25	21	6	11	15	12	7	A	7	21.9	30.5
7-Nov-07	2	5	1	2	4	5	5	5	8	10	13	17	17	22	23	20	27	26	12	14	23	A	20	17	13.0	26.8
8-Nov-07	16	16	13	6	7	5	4	6	16	16	17	20	27	38	36	36	36	35	33	26	A	22	23	25	20.8	38.1
9-Nov-07	26	24	24	22	22	22	23	22	23	20	31	32	31	31	31	31	31	30	32	A	29	29	27	25	26.8	31.7
10-Nov-07	34	30	28	27	29	28	26	21	28	30	32	32	33	36	35	38	39	39	A	35	35	37	32	33	32.1	39.2
11-Nov-07	28	25	23	24	21	20	20	21	23	25	27	31	32	34	33	36	35	A	31	28	28	27	28	29	27.4	36.0
12-Nov-07	31	31	34	33	32	33	33	33	33	33	34	34	37	40	39	40	A	41	40	40	37	36	37	41	35.8	41.3
13-Nov-07	39	40	40	38	37	35	34	32	31	32	32	33	36	36	35	A	32	30	25	27	26	23	24	25	32.1	40.0
14-Nov-07	24	24	25	23	23	18	20	16	16	17	24	35	36	35	A	35	23	20	22	21	23	20	22	29	24.0	35.7
15-Nov-07	32	33	33	34	34	33	33	30	31	30	30	31	32	A	35	35	34	31	31	32	33	26	24	23	31.3	35.0
16-Nov-07	22	21	20	21	20	21	23	23	25	22	23	23	A	35	36	31	32	32	31	35	28	25	27	21	25.9	35.5
17-Nov-07	20	19	19	12	12	1	1	1	3	8	17	A	27	26	26	27	27	20	23	33	33	36	32	28	19.6	36.0
18-Nov-07	27	28	30	31	36	33	40	41	39	40	A	38	35	29	31	34	32	23	13	18	27	26	25	25	30.5	40.7
19-Nov-07	16	18	15	15	15	13	10	2	3	A	18	25	34	34	35	33	30	21	9	9	16	1	12	13	17.3	35.0
20-Nov-07	15	17	15	11	1	4	1	1	3	4	14	30	32	29	28	27	17	C	C	27	30	34	32	17.8	33.7	
21-Nov-07	29	33	A	27	28	32	31	29	25	29	30	30	32	P	P	35	31	18	19	11	19	22	18	17	26.0	35.0
22-Nov-07	14	11	A	A	13	15	17	16	18	20	23	24	32	36	39	42	35	37	38	36	29	36	34	29	26.8	41.9
23-Nov-07	26	A	A	21	20	14	15	14	6	20	20	24	39	45	45	44	31	14	19	17	15	14	33	33	24.1	45.4
24-Nov-07	A	A	28	29	25	21	21	26	27	28	38	43	45	44	44	37	35	33	37	47	46	42	34	A	34.8	46.7
25-Nov-07	A	41	42	41	43	37	36	32	28	30	30	27	30	31	30	24	18	9	4	5	4	5	A	A	26.1	42.6
26-Nov-07	26	27	25	27	26	23	28	32	43	42	40	40	42	42	40	40	40	39	38	37	35	37	40	39	35.3	43.1
27-Nov-07	38	33	A	29	29	28	29	25	28	29	30	32	31	32	32	31	29	29	22	20	21	18	20	19	27.5	37.5
28-Nov-07	17	A	20	19	18	20	19	14	27	27	31	33	36	36	36	33	30	27	10	6	4	17	22	23	22.9	36.1
29-Nov-07	A	23	21	18	13	12	15	6	11	18	23	28	34	35	38	35	28	18	19	6	5	14	20	A	20.1	38.1
30-Nov-07	26	27	30	31	31	32	31	30	30	49	37	39	40	40	38	28	16	19	4	10	12	12	A	8	26.9	49.2
Hourly Avg	25.2	25.4	24.7	24.9	23.7	22.0	22.2	20.7	22.4	25.6	27.4	30.8	33.2	34.3	34.3	33.2	30.3	26.6	23.2	23.4	24.1	24.1	26.3	25.4		
Hourly Max	39.1	40.5	42.1	41.1	42.6	37.3	40.2	40.7	43.1	49.2	39.7	43.1	45.0	45.2	45.4	43.9	39.8	41.3	40.4	46.7	45.8	42.4	39.5	40.5		

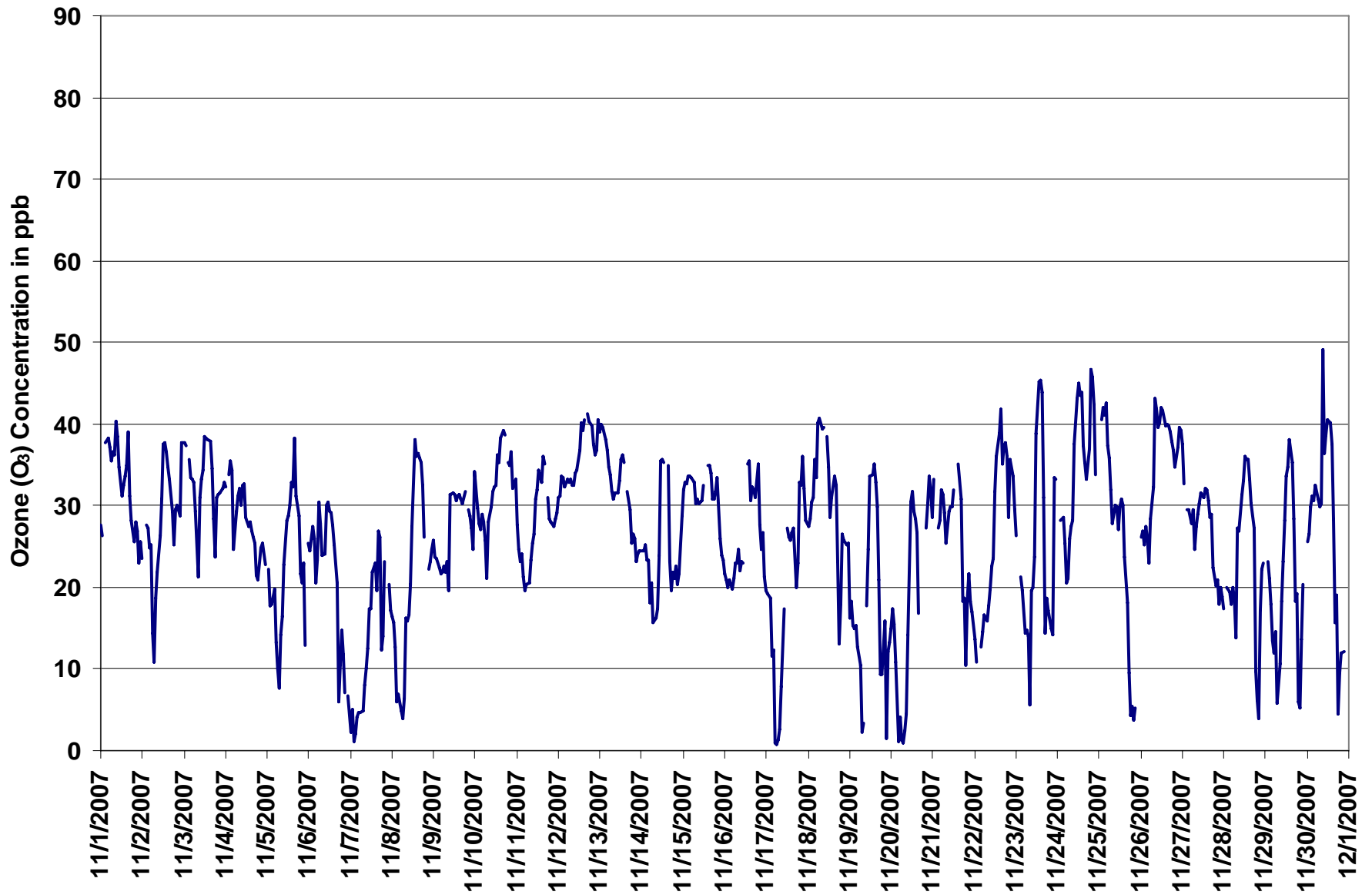
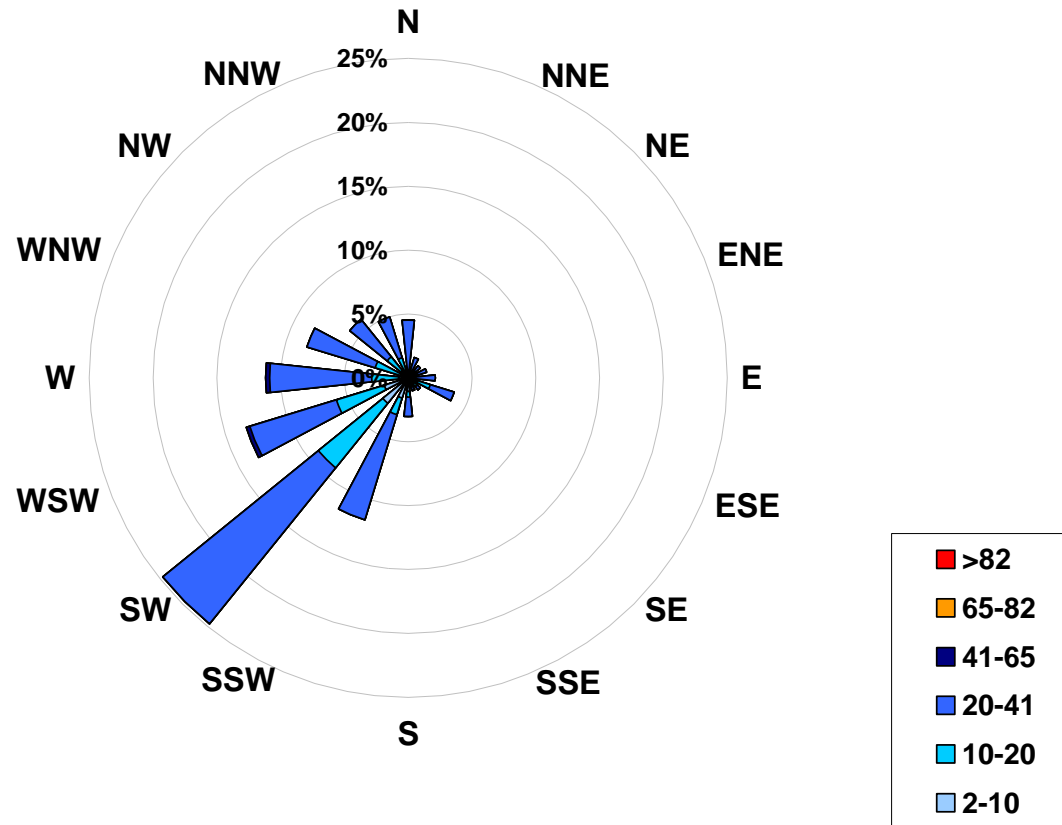


Figure 6. PAS - Crescent Heights Ozone Instantaneous (30 Second) Maximum Value Monthly Trend



1-hr Average Concentration Rose for Ozone (in ppb) Located at the Crescent Heights Site for November 2007



Calms: 0%

Frequency Distribution of O ₃ in ppb			
Range		Frequency (hrs)	
2.0	< 10	103	
10	to 20	146	
20	to 41	426	
41	to 65	4	
65	to 82	0	
	> 82	0	
Total Non-Zero Values			679



PAS - Crescent Heights Ozone Eight Hour Average Summary

Station: Crescent Heights
Station Owner: PAS

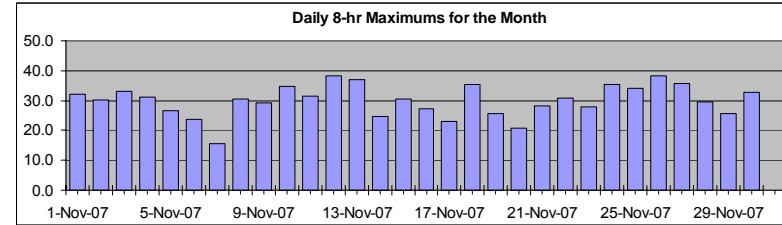
EIGHT HOUR RUNNING AVERAGE TABLE

Ozone (O₃)

Monitoring Dates: November 1, 2007 to December 1, 2007

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

Number of 8-hr Exceedances:	0		
Maximum 8-hr Average:	38.4 ppb	26-Nov	17:00 18:00



Percentile	99	95	75	50	25	5	1
	37.8	34.6	28.7	23.9	17.1	6.6	2.6

Status Flag Characters

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

Day	Mountain Standard Time																							Daily Maximum				
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00	0:00		
1-Nov-07	27	26	26	25	26	27	28	29	30	32	32	32	31	30	30	30	30	30	28	26	25	25	25	23	22		32.1	
2-Nov-07	21	21	21	22	22	21	20	17	17	17	17	17	19	21	24	27	30	30	30	30	29	28	27	27			30.3	
3-Nov-07	28	29	30	32	32	32	33	31	28	26	27	26	27	28	29	31	33	33	31	31	30	29	28	28			33.1	
4-Nov-07	27	28	30	31	31	29	29	28	28	28	27	27	26	27	27	26	26	25	24	22	22	22	21	21			31.0	
5-Nov-07	20	20	20	20	19	17	15	13	12	11	11	12	14	16	19	22	24	26	27	26	24	23	20	19			26.7	
6-Nov-07	18	17	17	17	16	16	18	18	17	18	19	20	22	24	23	24	23	21	18	16	13	10	8	6			23.7	
7-Nov-07	4	4	3	2	2	2	2	2	2	3	4	6	7	9	11	13	15	16	16	14	15	14	14	14			15.7	
8-Nov-07	13	13	13	13	11	10	8	6	5	5	6	7	9	13	17	21	24	27	29	29	31	28	26	25			30.6	
9-Nov-07	23	22	22	22	22	22	22	22	21	20	21	20	21	22	23	24	25	27	28	29	29	28	28	27	26			29.1
10-Nov-07	25	25	25	25	24	24	24	23	23	24	24	24	25	26	28	30	32	33	34	34	35	35	34	33			34.8	
11-Nov-07	31	29	28	27	25	23	21	20	19	20	20	21	22	24	26	28	29	30	31	30	30	29	28	28			31.5	
12-Nov-07	27	27	27	28	29	30	31	31	31	31	31	31	32	33	33	34	35	36	37	38	38	38	37	37			38.3	
13-Nov-07	37	37	36	36	36	36	35	35	34	33	32	32	31	31	31	31	30	29	27	26	25	23	22	22			36.9	
14-Nov-07	21	21	22	21	21	21	20	19	18	16	16	17	19	21	21	24	25	25	25	22	20	16	16	15			24.8	
15-Nov-07	16	18	20	22	24	27	29	30	31	30	30	30	29	29	29	29	30	29	29	29	29	28	27	26			30.6	
16-Nov-07	24	23	22	21	20	19	18	18	18	18	19	19	19	20	23	24	24	25	26	27	27	26	25	24			27.2	
17-Nov-07	23	22	20	18	16	13	10	8	6	5	4	4	6	9	12	16	19	19	19	20	20	22	23	23			23.0	
18-Nov-07	24	26	28	29	29	30	31	32	34	35	35	35	34	33	32	31	27	25	22	21	21	19	17			35.4		
19-Nov-07	16	16	17	16	15	13	12	10	9	8	8	9	12	15	19	23	26	23	22	20	17	13	10	7			25.6	
20-Nov-07	5	6	7	7	7	7	6	5	4	3	3	4	8	11	14	17	19	21	N	N	N	N	N	N			20.9	
21-Nov-07	N	N	N	28	28	28	28	27	26	25	25	25	26	25	N	N	N	N	N	N	N	14	14	12			28.1	
22-Nov-07	11	11	12	N	N	N	N	N	N	N	14	15	17	19	22	25	27	29	30	31	31	30	30	29			30.8	
23-Nov-07	28	27	N	N	N	N	N	N	N	10	11	12	13	17	22	25	27	26	25	24	21	16	13	13			27.8	
24-Nov-07	12	N	N	N	N	N	N	N	21	21	22	24	27	30	32	33	34	35	34	34	35	34	32	32			35.2	
25-Nov-07	N	N	N	N	N	N	N	34	33	31	30	28	26	26	25	24	23	20	17	14	11	8	6	N			34.2	
26-Nov-07	N	N	N	N	N	N	22	23	25	27	28	30	33	36	37	38	38	38	38	38	37	36	36	36			38.4	
27-Nov-07	36	35	35	34	33	31	30	28	26	25	26	26	26	27	27	28	29	29	27	26	24	22	21	19			35.8	
28-Nov-07	17	16	16	16	15	16	16	15	15	16	17	19	21	23	26	29	30	28	26	22	18	15	13	11			29.5	
29-Nov-07	9	11	12	14	15	15	15	12	12	11	11	12	14	17	20	24	26	25	23	21	17	14	11	9			25.5	
30-Nov-07	9	11	14	18	21	25	27	27	27	28	29	30	31	32	33	32	30	27	23	19	15	11	7	5			32.7	

Hourly Max 36.9 36.5 36.4 36.2 36.1 35.9 35.5 34.7 33.9 33.9 34.5 35.4 35.1 35.6 37.2 38.0 38.3 38.4 38.3 38.1 38.3 37.8 37.5 37.2

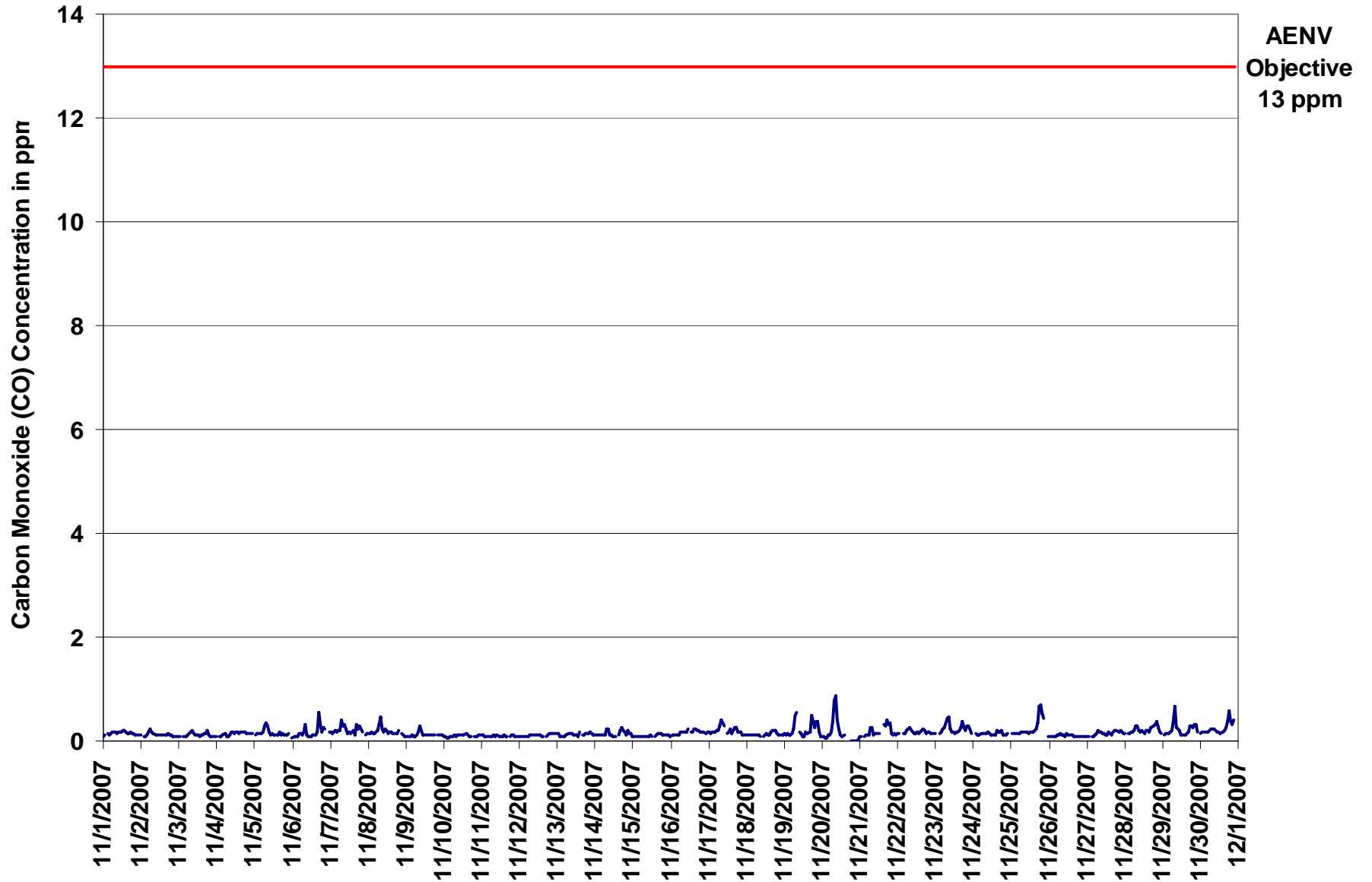


Figure 7. PAS - Crescent Heights Carbon Monoxide 1-hr Average Monthly Trend

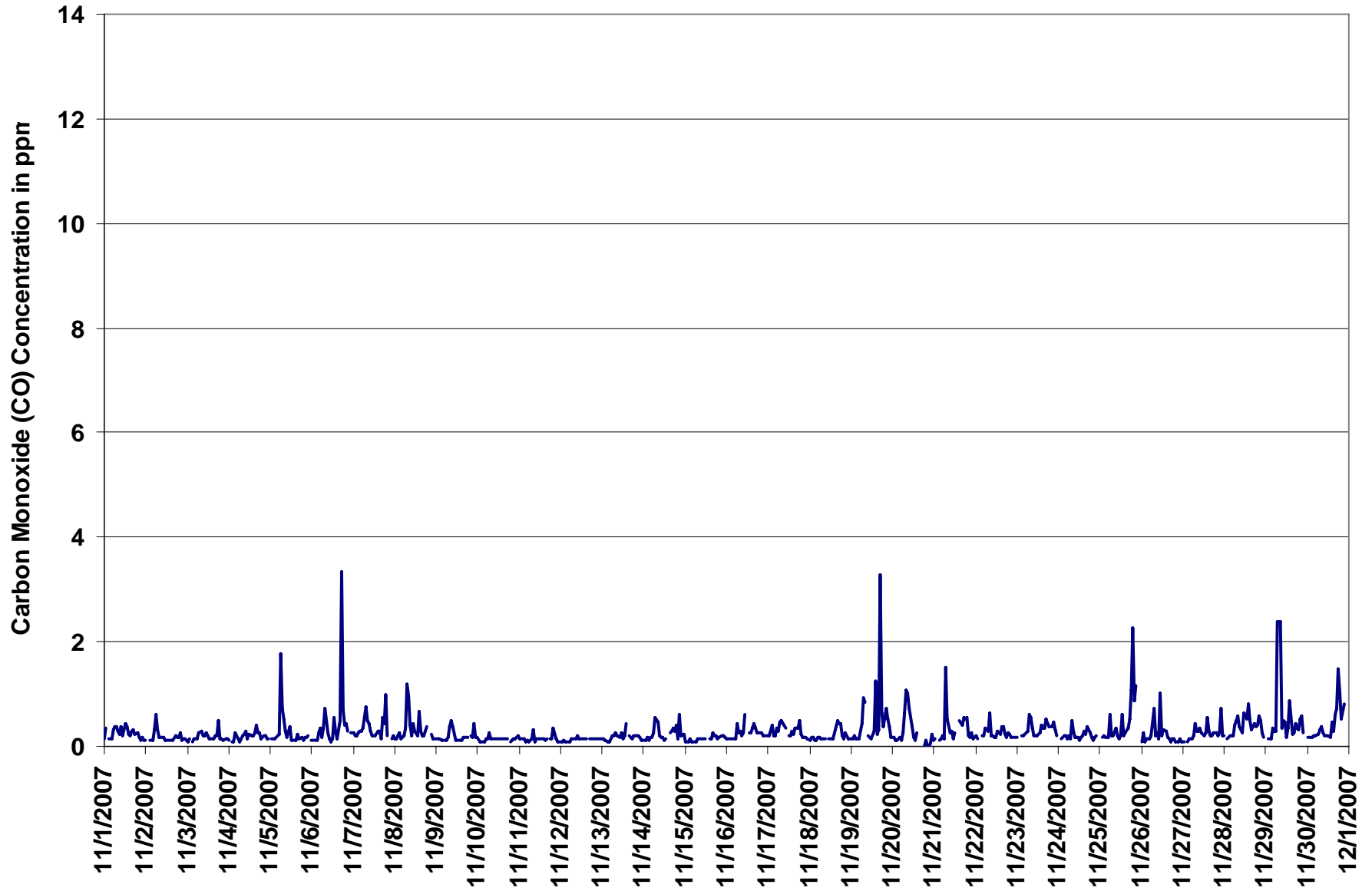
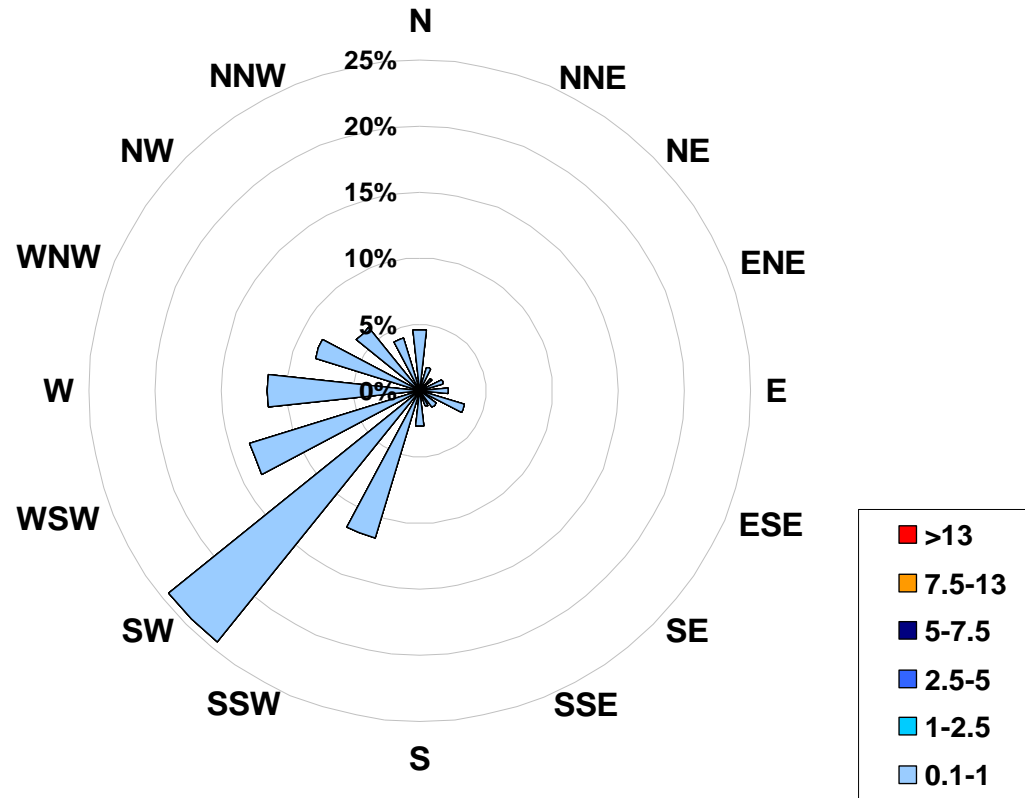


Figure 8. PAS - Crescent Heights Carbon Monoxide Instantaneous (30 Second) Maximum Value Monthly Trend



1-hr Average Concentration Rose for Carbon Monoxide (in ppm) Located at the Crescent Heights Site for November 2007



Calms: 0%

Frequency Distribution of CO in ppm Range			Frequency (hrs)
0.1	<	1	679
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			679



PAS - Crescent Heights Carbon Monoxide Eight Hour Average Summary

Station: Crescent Heights
Station Owner: PAS

EIGHT HOUR RUNNING AVERAGE TABLE

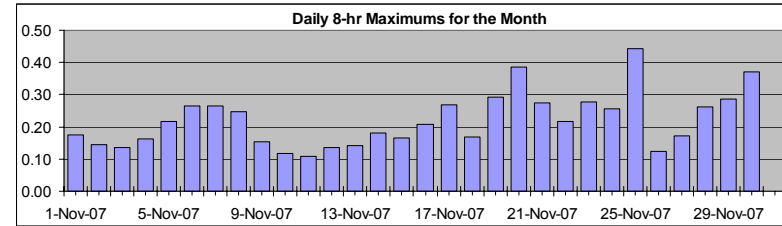
Carbon Monoxide (CO)

Monitoring Dates: November 1, 2007 to December 1, 2007

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

Number of 8-hr Exceedances:	0						
Maximum 8-hr Average:	0.4	ppm	25-Nov	22:00	23:00		

Percentile	99	95	75	50	25	5	1
	0.4	0.3	0.2	0.1	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																							Daily Maximum		
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	
1-Nov-07	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	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.17
2-Nov-07	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	0.1	0.15
3-Nov-07	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	0.1	0.14
4-Nov-07	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	0.2	0.2	0.2	0.16
5-Nov-07	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.22
6-Nov-07	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.27
7-Nov-07	0.3	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.27
8-Nov-07	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	0.2	0.2	0.2	0.2	0.2	0.1	0.25
9-Nov-07	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.15
10-Nov-07	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	0.1	0.12
11-Nov-07	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	0.1	0.11
12-Nov-07	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	0.1	0.14
13-Nov-07	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	0.1	0.14
14-Nov-07	0.1	0.1	0.1	0.1	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	0.2	0.2	0.2	0.2	0.2	0.2	0.18
15-Nov-07	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	0.1	0.1	0.1	0.1	0.1	0.1	0.17
16-Nov-07	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21
17-Nov-07	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	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.27
18-Nov-07	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	0.2	0.2	0.2	0.2	0.2	0.2	0.17
19-Nov-07	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.29
20-Nov-07	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	N	N	N	N	N	N	N	N	N	0.39
21-Nov-07	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	N	N	N	N	N	N	N	N	0.3	0.3	0.2	0.27
22-Nov-07	0.2	0.2	0.2	N	N	N	N	N	N	N	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
23-Nov-07	0.2	0.2	N	N	N	N	N	N	N	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.28
24-Nov-07	0.3	N	N	N	N	N	N	N	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	0.1	0.1	0.26
25-Nov-07	N	N	N	N	N	N	N	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	0.4	0.4	0.4	N	0.44	
26-Nov-07	N	N	N	N	N	N	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	0.12
27-Nov-07	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	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.17
28-Nov-07	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	0.3	0.3	0.3	0.26
29-Nov-07	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.29
30-Nov-07	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	0.3	0.3	0.3	0.3	0.4	0.4	0.37

Hourly Max 0.27 0.24 0.22 0.20 0.18 0.17 0.18 0.21 0.25 0.32 0.37 0.39 0.39 0.39 0.38 0.38 0.22 0.22 0.26 0.33 0.37 0.41 0.44 0.37

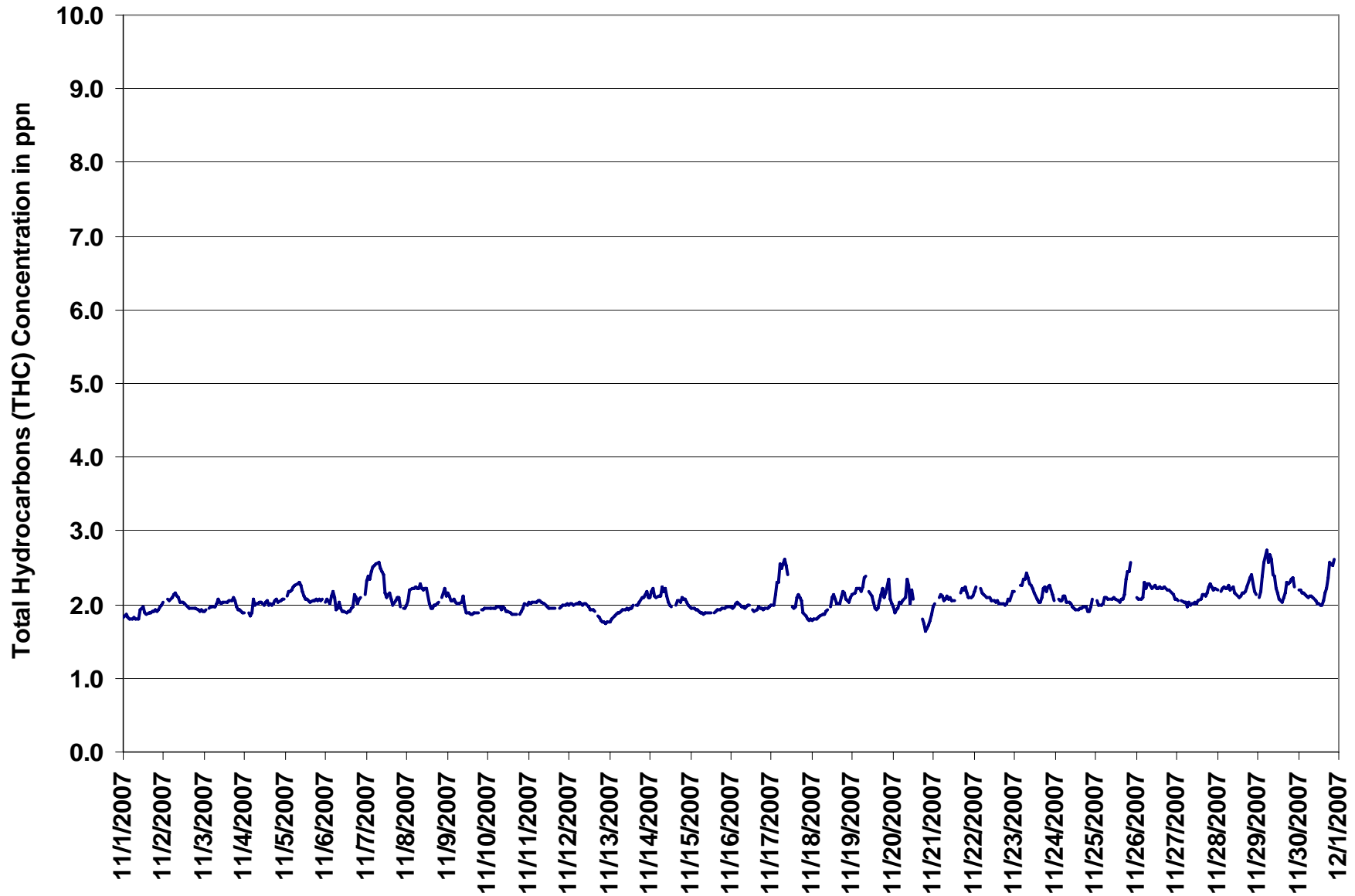


Figure 9. PAS - Crescent Heights Total Hydrocarbons 1-hr Average Monthly Trend

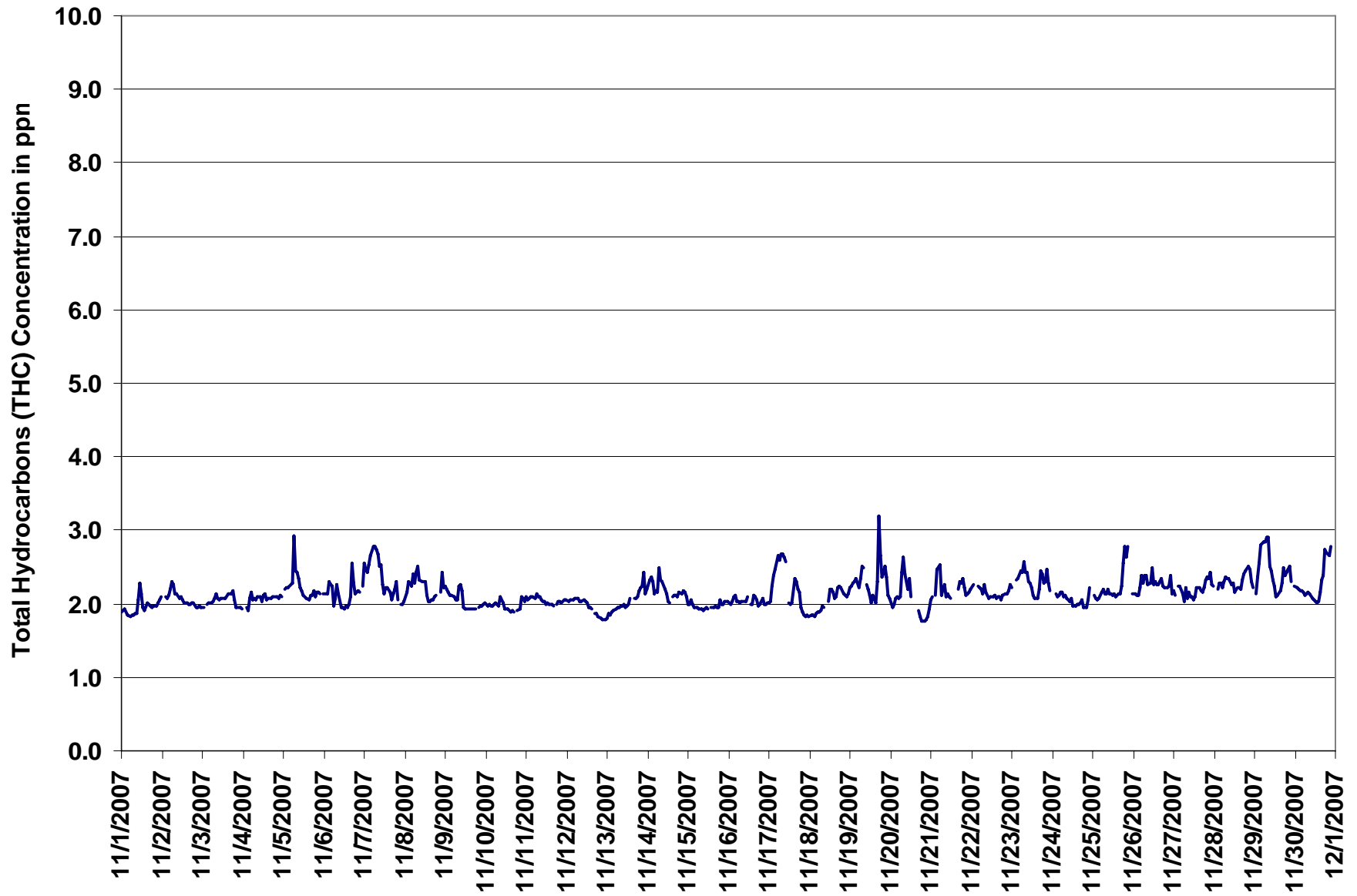
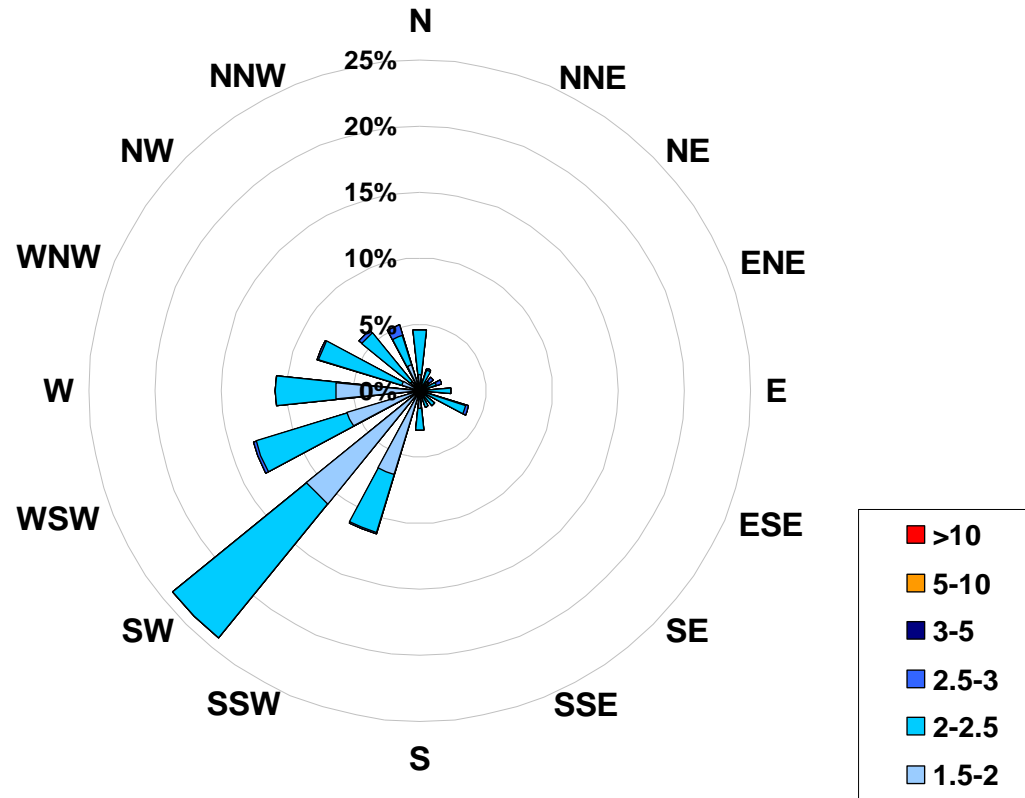


Figure 10. PAS - Crescent Heights Total Hydrocarbons Instantaneous (30 Second) Maximum Value Monthly Trend



**1-hr Average Concentration Rose for Total Hydrocarbons (in ppm)
Located at the Crescent Heights Site for November 2007**



Calms: 0%

Frequency Distribution of THC in ppm		Frequency (hrs)
Range		
1.5	< 2	234
2	to 2.5	405
2.5	to 3	18
3	to 5	0
5	to 10	0
	> 10	0
Total Non-Zero Values		678



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

Station: Crescent Heights
 Station Owner: PAS

HOURLY AVERAGE TABLE

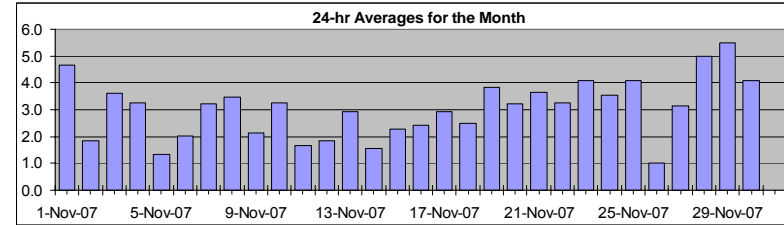
Particulate Matter (PM_{2.5})

Monitoring Dates: November 1, 2007 to December 1, 2007

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:	11.6 µg/m ³ 8-Nov 8:00 9:00
Maximum 24-hr Value:	5.5 µg/m ³ 29-Nov

AIC Time:	0 hrs	Operational Time:	713 hrs
Calibration Time:	3 hrs	AMD Operational Uptime:	99.4%
Percentile	99	95	75
	9.4	6.9	4.3
	50	25	5
	2.9	1.5	0.0
	0.0	0.0	0.0
	Average / Median		3.0 3 µg/m ³
			Geomean 2.8 µg/m ³



Status Flag Characters

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum	
	Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00			23:00
1-Nov-07	5	4	10	10	5	4	4	5	6	7	10	7	6	6	5	2	0	2	3	3	2	2	3	2	4.6	9.8	
2-Nov-07	2	2	1	1	2	2	2	3	2	2	2	1	0	0	0	0	0	1	1	1	2	3	6	7	1.9	7.5	
3-Nov-07	7	6	7	7	6	5	4	5	7	5	4	3	2	2	2	2	3	3	0	0	2	1	1	3.6	7.0		
4-Nov-07	2	3	2	3	5	3	6	7	6	5	4	4	3	3	2	3	3	2	3	3	1	2	3	2	3.3	7.3	
5-Nov-07	1	1	2	1	2	2	3	6	4	2	2	1	1	0	0	1	3	0	0	0	0	0	0	0	1.3	5.5	
6-Nov-07	0	0	0	0	0	0	0	1	2	2	1	1	1	2	2	3	4	5	5	4	4	4	3	4	2.0	5.4	
7-Nov-07	3	5	5	4	3	3	3	5	3	4	4	2	3	2	2	3	1	2	3	5	4	4	3	3	3.2	5.1	
8-Nov-07	4	5	6	6	5	6	4	5	12	7	5	5	2	0	0	0	1	1	1	2	1	2	2	0	3.5	11.6	
9-Nov-07	2	2	1	1	1	0	0	0	0	0	2	0	0	2	2	4	4	4	3	5	6	5	5	4	2.1	5.5	
10-Nov-07	4	2	2	3	3	4	4	4	4	3	4	3	4	6	4	4	0	2	2	3	3	1	6	5	3	3.2	6.1
11-Nov-07	3	1	1	1	0	0	0	2	1	1	2	0	1	0	0	0	1	3	3	2	3	4	4	3	3	1.6	4.4
12-Nov-07	1	1	2	1	2	0	1	0	1	0	0	0	0	0	0	2	2	6	4	3	3	3	6	5	1.9	6.2	
13-Nov-07	3	1	0	3	4	3	3	3	3	3	3	1	2	3	6	3	3	3	3	3	4	4	4	2	2.9	6.1	
14-Nov-07	2	3	3	2	1	1	1	2	3	4	4	1	0	0	0	0	2	2	1	1	1	1	1	D	1.6	3.8	
15-Nov-07	1	0	0	0	0	0	3	2	4	5	4	3	3	3	3	3	3	3	2	2	3	2	2	2	2.3	5.3	
16-Nov-07	2	2	2	2	2	1	3	2	3	3	4	4	3	1	1	1	2	2	2	2	2	4	3	3	2.4	3.9	
17-Nov-07	3	3	3	3	4	4	4	4	6	7	5	3	1	1	2	2	4	5	4	1	0	1	0	0	2.9	7.2	
18-Nov-07	0	0	0	1	2	3	3	5	3	3	3	6	3	1	1	2	3	6	4	3	2	1	1	1	2.5	6.4	
19-Nov-07	2	1	3	2	2	2	3	7	8	8	4	2	2	1	2	3	2	5	8	4	6	7	4	2	3.8	8.1	
20-Nov-07	2	1	2	2	3	3	4	5	10	5	6	4	2	C	C	C	0	2	2	2	2	4	2	3	3.2	10.2	
21-Nov-07	3	1	2	1	2	2	3	4	5	5	6	4	2	P	P	P	5	5	5	5	4	4	5	4	3.7	5.6	
22-Nov-07	4	4	5	4	3	3	4	4	5	5	4	3	1	3	0	0	1	2	2	4	4	4	4	4	3.2	5.4	
23-Nov-07	1	3	3	3	3	5	6	4	6	6	5	4	4	4	2	2	2	6	7	6	6	5	4	1	4.1	6.8	
24-Nov-07	0	2	2	2	2	4	3	3	3	5	2	1	0	3	4	5	4	5	6	4	5	6	7	9	3.5	8.5	
25-Nov-07	9	5	2	3	3	1	2	2	2	4	4	3	3	2	4	3	4	6	8	7	7	9	3	2	4.1	9.4	
26-Nov-07	0	0	0	1	4	6	3	4	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1.0	5.5	
27-Nov-07	0	0	1	0	1	1	3	3	2	3	3	3	4	4	4	5	5	5	5	5	6	5	5	5	3.1	5.6	
28-Nov-07	5	5	6	4	6	5	6	6	4	3	4	5	3	3	5	4	4	5	5	6	7	7	6	5	5.0	7.2	
29-Nov-07	4	4	5	5	6	7	6	9	11	8	5	3	3	2	2	4	6	8	7	6	7	7	2	3	5.5	11.2	
30-Nov-07	3	3	4	3	3	3	3	3	3	4	4	1	1	0	0	3	5	6	9	9	7	9	5	6	4.1	9.5	
Hourly Avg	2.6	2.4	2.7	2.6	2.8	2.7	3.2	3.9	4.3	4.1	3.7	2.5	2.3	1.9	2.0	2.1	2.6	3.5	3.8	3.4	3.5	3.9	3.3	3.0			
Hourly Max	9.4	6.5	9.8	9.7	6.4	7.5	6.5	8.7	11.6	8.2	9.7	7.4	6.4	5.5	6.1	4.7	5.8	7.7	9.0	9.4	7.4	9.5	7.2	8.5			

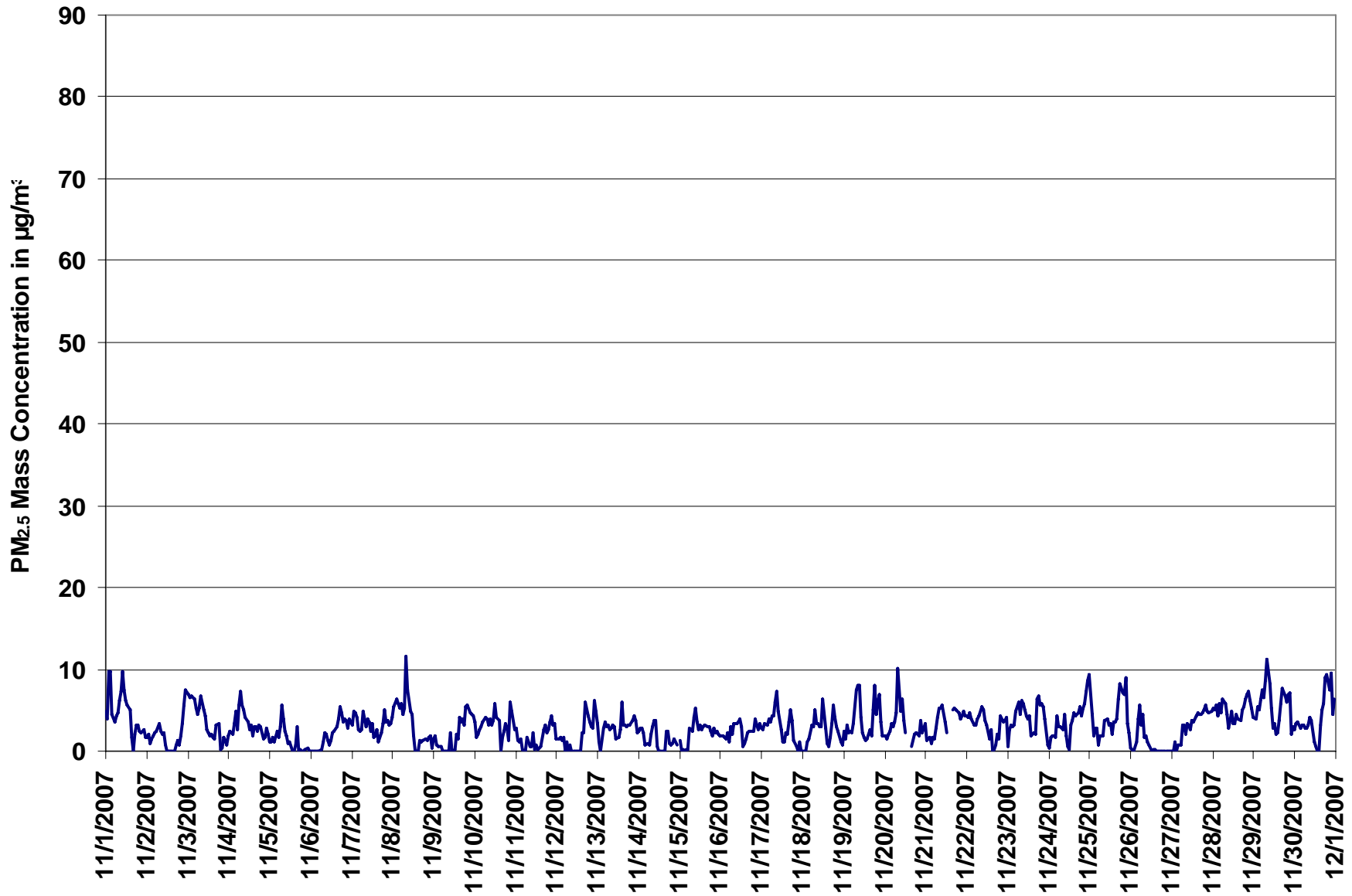


Figure 11. PAS - Crescent Heights Particulate Matter (less than 2.5 microns) 1-hr Average Monthly Trend



Station: Crescent Heights
Station Owner: PAS

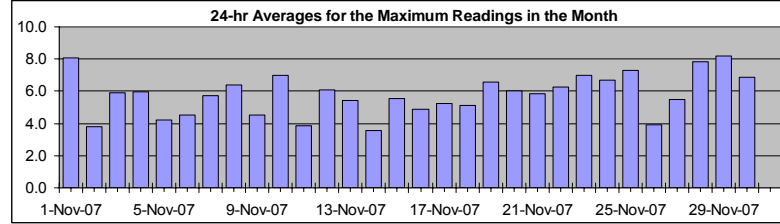
INSTANTANEOUS (30 Second) MAXIMUM TABLE

Particulate Matter (PM_{2.5})

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Maximum 1-hr Average:	28.9	µg/m ³	8-Nov	8:00 9:00
Maximum 24-hr Value:	8.2	µg/m ³	29-Nov	



AIC Time:	0 hrs	Operational Time:	713 hrs						
Calibration Time:	3 hrs	AMD Operational Uptime:	99.4%						
Percentile	99	95	75	50	25	5	1	Average / Median	Geomean
	15.8	11.4	7.2	5.3	3.9	1.8	0.9	5.8	5 µg/m ³
									5.6 µg/m ³

Status Flag Characters

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

Day Mountain Standard Time

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Nov-07	12	7	15	15	7	5	8	7	9	10	16	15	10	10	8	5	5	4	5	5	4	4	4	4	8.1	15.9
2-Nov-07	3	3	2	3	3	5	4	5	5	4	4	2	2	1	2	1	1	4	4	4	4	6	8	10	3.8	9.9
3-Nov-07	9	8	8	9	9	7	7	8	9	8	6	6	5	4	4	3	4	6	6	2	3	5	3	2	5.9	9.0
4-Nov-07	3	4	4	5	9	6	11	12	11	7	7	6	5	5	5	5	5	6	6	5	3	3	5	4	5.9	11.8
5-Nov-07	4	3	4	3	4	3	4	11	6	4	4	3	7	3	1	3	20	2	2	2	1	2	2	2	4.2	20.0
6-Nov-07	2	1	2	1	1	2	3	3	5	5	3	3	3	4	3	5	9	8	9	10	7	5	5	7	4.5	10.1
7-Nov-07	6	9	8	7	5	4	4	7	4	6	6	4	6	4	5	6	3	4	5	8	6	6	5	7	5.7	9.2
8-Nov-07	6	7	10	9	7	10	6	7	29	14	8	8	4	2	2	1	3	3	3	4	3	3	4	3	6.4	28.9
9-Nov-07	3	3	4	4	4	2	3	1	2	2	6	1	4	5	5	7	7	6	6	9	7	6	7	5	4.5	8.8
10-Nov-07	6	4	5	5	5	6	6	6	6	5	5	6	8	7	6	2	4	5	6	5	5	27	22	6	7.0	26.8
11-Nov-07	5	3	2	3	2	2	2	4	3	2	4	4	3	4	2	6	6	6	4	4	5	6	5	5	3.9	6.3
12-Nov-07	3	4	4	4	5	2	9	2	2	2	2	1	0	0	6	6	6	14	16	13	7	6	17	17	6.1	17.3
13-Nov-07	7	5	1	8	5	5	5	5	5	4	5	3	6	6	15	6	6	5	5	5	5	6	6	4	5.4	14.5
14-Nov-07	5	4	4	4	2	4	3	4	6	6	6	4	0	2	0	4	4	5	3	3	3	4	3	D	3.5	6.0
15-Nov-07	5	12	12	1	2	2	9	5	8	8	5	5	5	6	6	5	5	5	5	4	4	4	5	4	5.5	12.0
16-Nov-07	3	3	5	3	5	3	9	3	6	5	5	6	5	3	3	5	5	5	5	5	6	6	5	6	4.9	9.3
17-Nov-07	4	4	7	6	6	6	7	6	8	10	7	4	3	3	5	4	6	8	8	5	4	2	2	2	5.3	10.1
18-Nov-07	3	1	3	3	4	5	6	7	6	6	5	6	12	5	4	4	5	8	8	6	5	6	3	2	5.1	12.0
19-Nov-07	4	4	6	5	4	5	6	11	12	11	7	5	5	3	5	5	4	9	11	6	10	10	7	4	6.6	11.7
20-Nov-07	3	3	3	5	5	5	6	8	13	9	11	11	6	C	C	C	3	9	4	4	4	5	4	5	6.0	13.2
21-Nov-07	5	3	3	3	4	3	5	6	8	7	9	6	5	P	P	P	8	8	8	7	5	7	8	6	5.8	8.8
22-Nov-07	6	5	6	6	5	5	6	6	7	7	8	9	6	5	5	6	6	4	6	6	8	7	8	8	6.3	8.7
23-Nov-07	7	4	5	5	5	8	8	8	8	8	8	8	6	7	5	5	6	10	11	8	10	7	8	4	7.0	10.7
24-Nov-07	4	6	6	6	6	7	5	7	5	7	5	4	3	6	8	8	8	9	8	7	8	8	11	11	6.7	11.4
25-Nov-07	14	7	7	5	5	4	4	4	3	9	7	6	6	4	7	6	6	10	11	13	11	14	9	4	7.3	13.7
26-Nov-07	3	2	4	4	15	9	7	8	7	3	4	4	1	3	2	1	3	1	3	1	2	4	2	2	3.9	14.8
27-Nov-07	4	1	5	1	4	6	6	5	4	6	5	5	6	5	7	6	6	6	7	7	9	7	7	6	5.5	9.1
28-Nov-07	7	6	8	9	10	7	13	9	10	6	6	8	7	6	7	7	6	8	7	8	10	9	8	7	7.8	13.1
29-Nov-07	6	5	9	7	8	10	9	10	13	12	7	5	10	4	6	7	8	11	9	8	11	12	5	6	8.2	12.9
30-Nov-07	4	5	6	5	5	5	5	5	5	14	8	3	3	3	3	5	7	10	11	12	11	12	7	10	6.9	14.1
Hourly Avg	5.2	4.6	5.5	5.1	5.3	5.0	6.2	6.5	7.5	6.9	6.3	5.4	5.0	4.2	4.9	4.8	5.8	6.5	6.7	6.1	6.0	7.0	6.5	5.6		
Hourly Max	13.7	11.7	15.2	14.5	14.8	9.6	13.1	11.8	28.9	14.1	15.9	14.8	12.0	9.9	14.5	7.5	20.0	13.6	15.9	13.2	10.8	26.8	22.4	16.7		

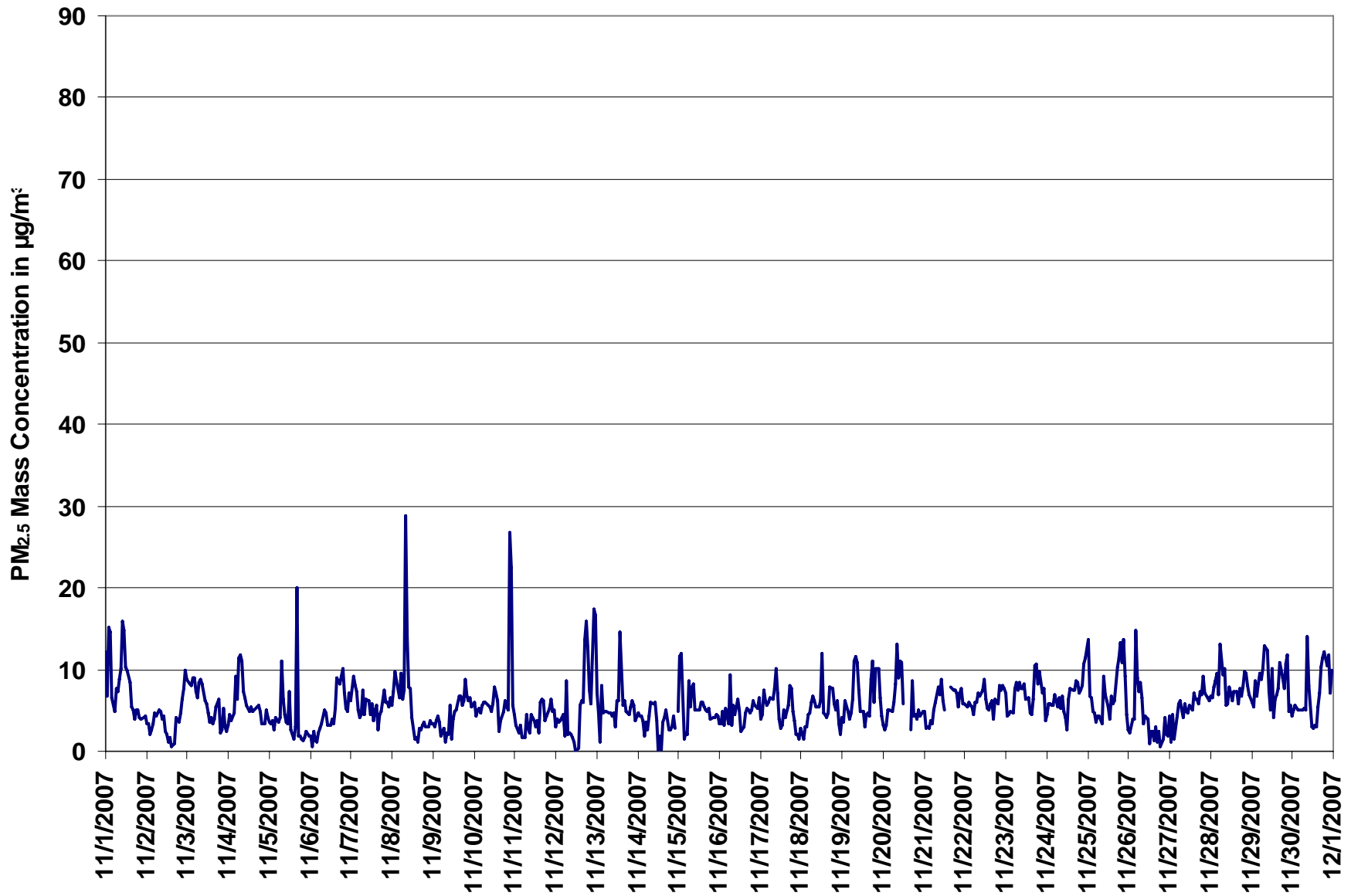
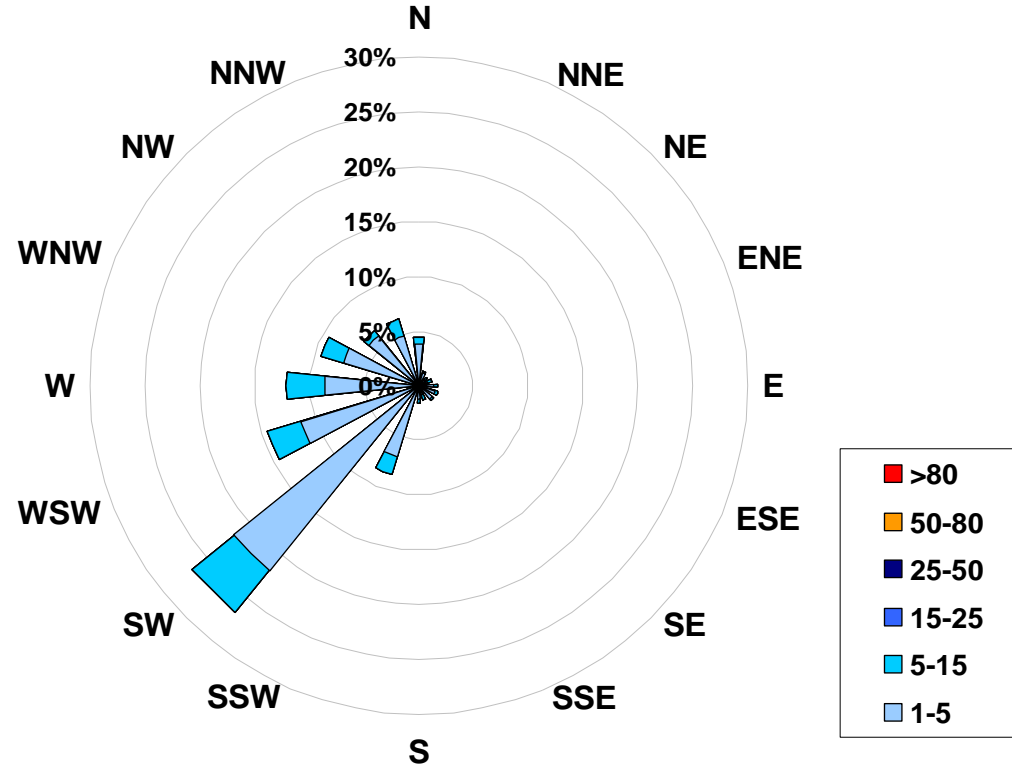


Figure 12. PAS - Crescent Heights Particulate Matter (less than 2.5 microns) Instantaneous (30 Second) Maximum Value Monthly Trend



1-hr Average Concentration Rose for Particulate Matter (less than 2.5 microns) (in micrograms per cubic meter) Located at the Crescent Heights Site for November 2007



Calms: 0%

Frequency Distribution of PM _{2.5} in µg/m ³			
Range		Frequency (hrs)	
1.0	< 5	590	
5	to 15	122	
15	to 25	0	
25	to 50	0	
50	to 80	0	
	> 80	0	
Total Non-Zero Values			713



PAS - Crescent Heights Relative Humidity Monthly Summary

Station: Crescent Heights
 Station Owner: PAS

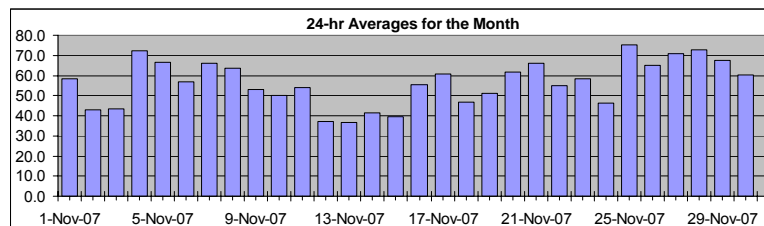
HOURLY AVERAGE TABLE

Relative Humidity (RH)

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Maximum 1-hr Average:	90.2	%	4-Nov	10:00 11:00
Maximum 24-hr Value:	75.1	%	25-Nov	



AIC Time:	0 hrs	Operational Time:	718 hrs						
Calibration Time:	0 hrs	AMD Operational Uptime:	99.7%						
Percentile	99	95	75	50	25	5	1	Average	Median
	86.9	79.8	69.1	57.3	44.8	30.7	23.6	56.4 %	57.3 %

Status Flag Characters

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum
	Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00		
1-Nov-07	41	42	45	47	41	40	39	39	37	32	46	85	89	87	76	60	45	59	72	79	76	82	82	62	58.4	89.0
2-Nov-07	50	45	45	44	44	47	56	65	60	55	52	45	34	31	31	31	32	36	37	35	37	38	43	37	42.9	64.7
3-Nov-07	36	39	39	42	45	45	45	51	53	47	39	34	31	30	29	30	36	45	51	54	54	55	55	54	43.2	55.1
4-Nov-07	54	54	57	50	51	62	63	75	83	90	90	90	89	84	81	79	82	80	76	73	71	66	66	67	72.2	90.2
5-Nov-07	69	71	73	75	74	76	78	79	73	71	67	61	53	48	49	49	52	58	65	71	71	69	74	73	66.6	78.7
6-Nov-07	65	63	58	60	65	61	58	61	59	54	47	45	45	42	43	44	51	61	61	61	65	67	68	68	57.1	68.2
7-Nov-07	70	74	75	77	74	76	80	80	75	69	63	55	52	50	49	50	54	59	63	64	67	69	69	72	66.0	79.6
8-Nov-07	73	77	82	82	83	84	83	81	78	74	66	59	56	49	44	37	38	43	48	53	55	60	62	61	63.6	83.6
9-Nov-07	61	64	65	66	66	65	64	64	59	55	52	50	48	44	40	39	41	41	40	41	47	49	54	58	53.0	65.9
10-Nov-07	49	53	55	52	53	52	53	56	53	52	47	43	42	41	40	34	33	40	45	50	46	46	84	82	50.0	83.8
11-Nov-07	85	85	83	83	79	69	66	68	62	56	53	41	35	29	28	23	27	33	40	46	50	54	51	48	53.9	85.4
12-Nov-07	46	45	44	40	42	38	36	34	35	34	31	27	24	20	20	23	31	35	37	41	46	51	51	59	37.1	58.7
13-Nov-07	62	60	48	35	33	34	35	34	34	32	31	28	19	15	20	26	29	33	39	43	48	48	49	50	36.8	61.9
14-Nov-07	50	51	51	50	52	54	48	46	49	49	46	34	30	28	26	24	27	32	37	42	43	45	43	34	41.2	54.2
15-Nov-07	31	29	27	25	25	25	28	31	38	45	46	45	43	39	37	35	37	42	47	46	49	56	61	62	39.5	62.2
16-Nov-07	65	67	69	69	71	70	69	67	65	62	58	54	47	43	37	37	37	40	41	39	46	53	56	65	55.2	70.6
17-Nov-07	68	69	66	68	70	77	78	80	74	68	60	51	46	45	45	48	48	51	53	56	55	54	62	61	60.6	80.3
18-Nov-07	63	65	59	60	55	50	41	36	36	31	29	29	43	48	43	37	39	45	54	57	56	55	49	40	46.7	64.9
19-Nov-07	43	49	50	50	51	54	57	60	62	59	52	41	39	37	35	36	41	47	51	54	60	64	68	68	51.2	67.7
20-Nov-07	68	67	69	70	73	74	75	75	69	61	57	52	51	50	44	37	46	50	53	64	69	68	67	70	61.5	75.0
21-Nov-07	74	72	70	70	71	70	70	72	75	71	67	62	58	P	P	47	50	56	60	64	66	68	70	73	66.2	74.8
22-Nov-07	74	74	73	73	72	70	70	68	67	65	62	58	49	35	33	31	35	38	41	43	47	44	44	49	54.8	74.4
23-Nov-07	53	58	61	64	67	67	71	75	71	66	63	56	50	44	42	44	50	53	55	57	59	61	59	52	58.1	74.6
24-Nov-07	55	58	60	61	65	66	65	62	61	56	47	36	33	27	27	30	32	33	35	37	39	42	46	47	46.4	66.1
25-Nov-07	71	84	88	88	85	78	75	67	62	65	70	71	69	66	66	73	73	72	77	78	83	84	80	80	75.1	87.7
26-Nov-07	78	77	74	71	69	75	73	68	64	64	63	59	54	53	57	54	58	62	64	65	65	65	63	63	64.9	77.8
27-Nov-07	63	65	66	65	65	64	74	80	81	80	78	74	74	71	64	65	67	69	70	72	73	72	73	76	70.8	80.5
28-Nov-07	74	71	71	73	74	74	76	79	81	76	67	64	61	62	67	70	73	76	76	77	77	76	75	75	72.6	80.9
29-Nov-07	75	75	76	77	77	76	74	74	74	71	66	58	55	53	52	53	60	64	68	70	72	71	68	66	67.6	77.0
30-Nov-07	64	64	64	62	62	60	59	59	58	54	52	51	49	45	46	48	57	64	72	72	72	73	71	71	60.3	73.4
Hourly Avg	61.0	62.1	62.1	61.6	61.7	61.7	61.9	62.8	61.5	58.7	55.5	52.0	48.9	45.4	43.8	43.0	46.0	50.5	54.2	56.8	58.8	60.1	62.0	61.4		
Hourly Max	84.5	85.4	87.7	87.6	84.9	83.6	82.6	81.3	83.3	89.7	90.2	89.9	89.0	87.2	80.7	79.0	81.5	79.8	77.3	78.6	82.7	84.1	83.8	82.0		

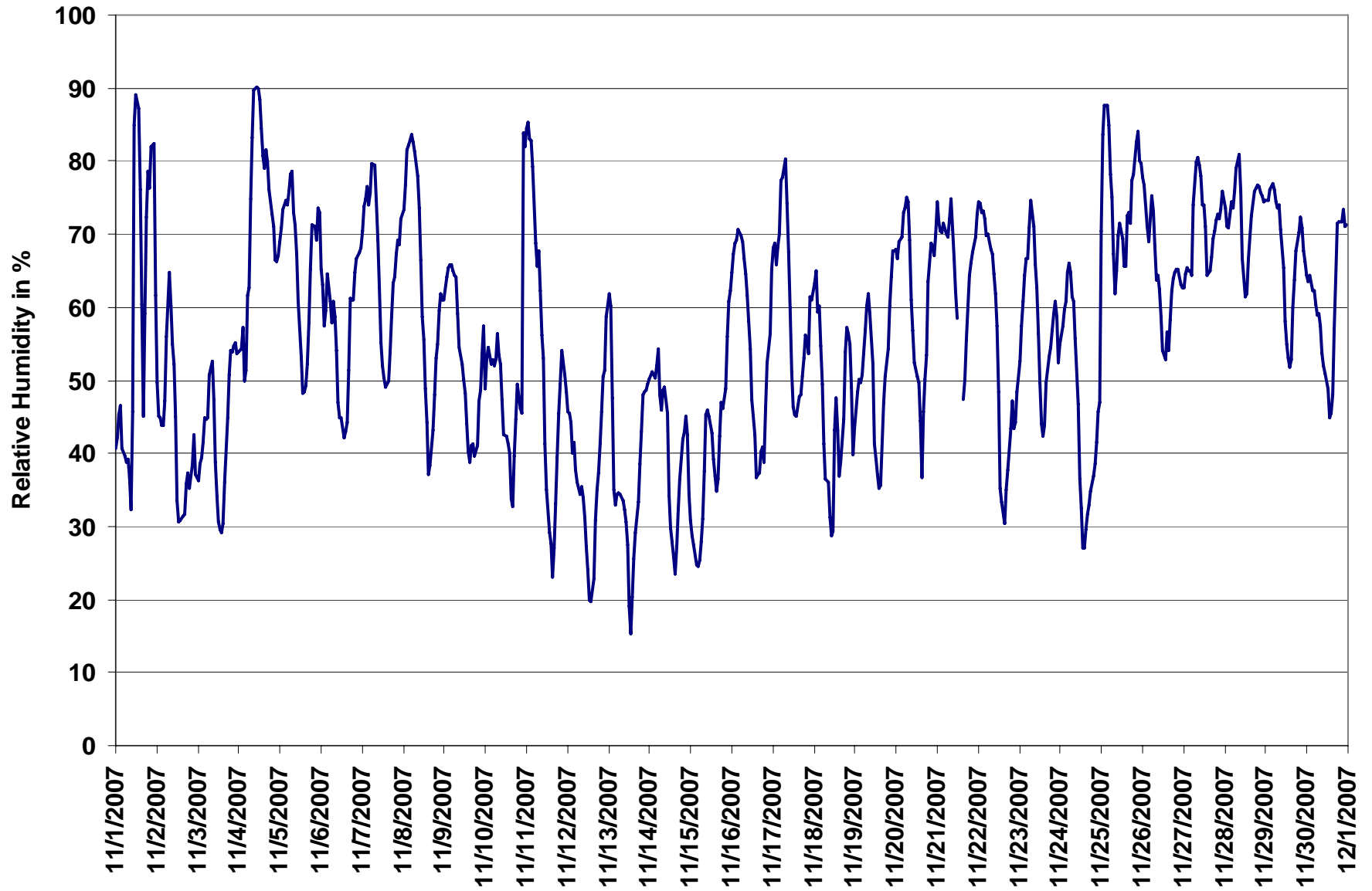


Figure 13. PAS - Crescent Heights Relative Humidity 1-hr Average Monthly Trend



PAS - Crescent Heights Temperature Monthly Summary

Station: Crescent Heights
 Station Owner: PAS

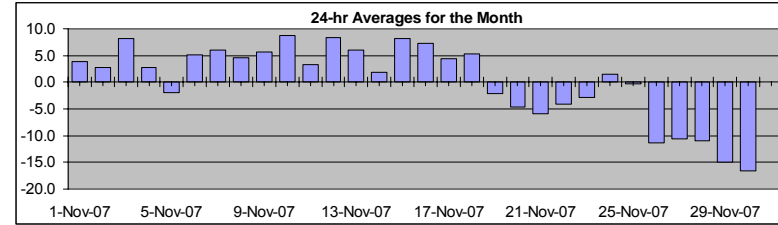
HOURLY AVERAGE TABLE

Ambient Temperature (T)

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Maximum 1-hr Average:	16.5 °C	10-Nov	15:00 16:00
Maximum 24-hr Value:	8.7 °C	10-Nov	



AIC Time:	0 hrs	Operational Time:	718 hrs						
Calibration Time:	0 hrs	AMD Operational Uptime:	99.7%						
Percentile	99	95	75	50	25	5	1	Average	Median
	13.9	11.4	6.5	1.6	-4.7	-13.9	-19.7	0.3 °C	1.6 °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																								24-hour Average	Daily Maximum	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00			0:00
1-Nov-07	5	5	5	5	7	7	7	6	6	8	7	2	1	3	5	5	5	2	1	0	0	-1	-2	0	3.8	8.0	
2-Nov-07	1	1	1	0	0	-1	-3	-5	-4	-1	2	5	7	7	7	8	7	5	4	5	4	4	4	7	2.8	7.8	
3-Nov-07	8	7	7	7	5	6	6	4	4	7	10	11	11	12	12	12	10	7	7	7	8	9	9	9	8.2	12.4	
4-Nov-07	9	10	9	11	11	3	-1	-1	0	0	1	1	1	2	2	2	2	2	2	1	1	0	0	-1	2.8	11.3	
5-Nov-07	-2	-3	-4	-5	-5	-5	-6	-6	-4	-3	-1	1	2	3	3	3	2	0	-2	-3	-3	-3	-4	-4	-2.0	3.4	
6-Nov-07	-2	-1	1	1	0	1	2	1	3	5	8	9	10	12	12	13	11	8	7	6	5	4	4	4	5.0	12.5	
7-Nov-07	4	3	3	3	3	2	0	0	1	3	6	8	10	10	11	11	10	9	8	8	8	8	7	5.9	10.7		
8-Nov-07	6	5	3	3	2	2	2	2	3	5	7	9	10	11	11	10	8	6	4	2	1	0	0	-1	4.6	10.9	
9-Nov-07	0	0	-1	-1	-1	0	0	0	1	3	7	9	10	11	13	14	12	11	10	10	9	8	7	5	5.7	13.5	
10-Nov-07	8	6	5	5	4	5	5	5	7	9	11	12	13	15	16	17	15	13	12	10	8	7	3	3	8.7	16.5	
11-Nov-07	2	2	1	1	-1	-1	-2	-3	-2	1	3	6	8	10	10	11	9	7	5	3	2	2	2	2	3.3	10.5	
12-Nov-07	3	3	4	5	5	5	5	5	6	6	7	9	10	11	12	12	12	12	12	12	11	12	10	8.3	12.3		
13-Nov-07	8	7	6	7	7	6	6	6	6	7	8	8	10	10	9	8	6	5	4	3	2	2	2	2	6.1	9.8	
14-Nov-07	2	2	2	2	1	-1	-1	-1	-1	-1	2	5	6	7	7	7	5	3	1	-1	-1	-2	-1	3	1.9	7.0	
15-Nov-07	4	4	5	5	5	6	7	7	7	8	10	10	11	13	14	14	13	11	9	10	8	6	5	5	8.2	14.2	
16-Nov-07	4	4	3	3	2	3	3	3	4	6	8	9	12	13	15	14	14	11	10	10	8	7	6	3	7.4	14.8	
17-Nov-07	3	2	2	1	0	-2	-2	-3	-2	1	3	6	8	8	8	7	7	6	6	8	9	10	9	9	4.3	9.5	
18-Nov-07	8	7	7	7	7	7	8	8	7	7	7	7	7	7	7	6	5	3	1	1	1	2	2	1	5.4	8.4	
19-Nov-07	-1	-2	-2	-3	-3	-4	-4	-5	-5	-4	-3	0	3	4	4	4	2	-1	-2	-3	-4	-6	-7	-8	-2.1	3.9	
20-Nov-07	-8	-8	-9	-9	-10	-10	-11	-11	-9	-6	-4	0	2	3	3	2	-1	-3	-2	-3	-4	-4	-4	-5	-4.6	3.2	
21-Nov-07	-6	-5	-5	-6	-6	-7	-7	-7	-7	-6	-6	-4	-3	P	P	-1	-2	-4	-6	-7	-8	-8	-8	-10	-5.8	-0.9	
22-Nov-07	-11	-11	-11	-11	-11	-11	-11	-10	-10	-8	-6	-3	0	3	4	4	3	2	1	0	-1	0	0	-1	-4.1	4.4	
23-Nov-07	-3	-4	-5	-5	-6	-6	-7	-8	-8	-6	-4	-1	1	3	4	3	1	-1	-2	-3	-3	-4	-3	-1	-2.8	3.6	
24-Nov-07	-2	-3	-4	-4	-6	-5	-5	-4	-4	-2	2	5	7	9	9	8	6	5	5	6	5	4	3	2	1.5	8.7	
25-Nov-07	2	2	1	1	2	2	1	0	0	1	1	1	1	2	2	2	1	0	0	-2	-3	-4	-5	-7	-8	-0.3	2.0
26-Nov-07	-7	-7	-7	-7	-8	-9	-11	-12	-13	-14	-14	-14	-14	-14	-13	-13	-13	-13	-14	-13	-13	-12	-11	-10	-10	-11.4	-6.9
27-Nov-07	-10	-9	-9	-8	-8	-8	-8	-9	-9	-9	-9	-9	-9	-11	-12	-13	-13	-13	-13	-13	-13	-13	-13	-13	-13	-10.6	-7.8
28-Nov-07	-12	-11	-10	-10	-10	-9	-8	-7	-6	-8	-11	-11	-11	-11	-11	-11	-12	-12	-13	-14	-14	-15	-14	-13	-12	-11.0	-6.2
29-Nov-07	-12	-12	-12	-13	-15	-17	-18	-19	-18	-15	-14	-13	-12	-11	-11	-11	-13	-14	-16	-18	-18	-19	-20	-20	-15.0	-11.1	
30-Nov-07	-20	-20	-20	-19	-19	-18	-18	-19	-18	-16	-14	-12	-11	-10	-9	-9	-12	-15	-17	-18	-20	-20	-21	-22	-16.5	-9.4	
Hourly Avg	-0.6	-0.9	-1.1	-1.2	-1.5	-2.0	-2.4	-2.7	-2.1	-0.7	0.8	2.3	3.4	4.5	4.8	4.5	3.2	1.7	0.7	0.1	-0.5	-0.9	-1.3	-1.4			
Hourly Max	9.4	9.5	8.5	11.3	10.6	7.2	7.8	7.8	7.4	8.5	10.6	12.1	13.1	14.6	15.7	16.5	15.0	13.3	12.3	12.1	11.6	10.9	12.1	10.1			

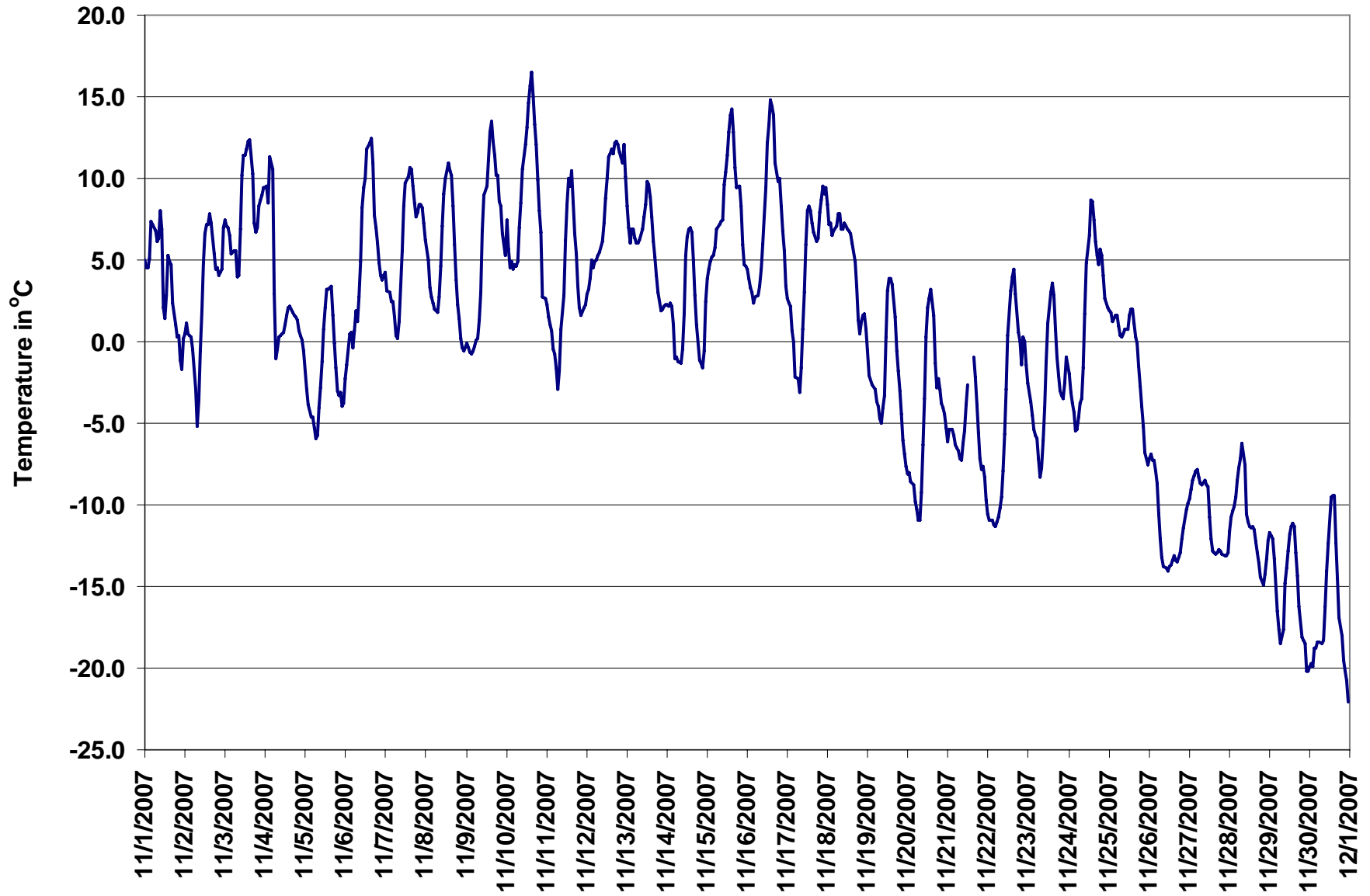


Figure 14. PAS - Crescent Heights Temperature 1-hr Average Monthly Trend



PAS - Crescent Heights Solar Radiation Monthly Summary

Station: Crescent Heights
 Station Owner: PAS

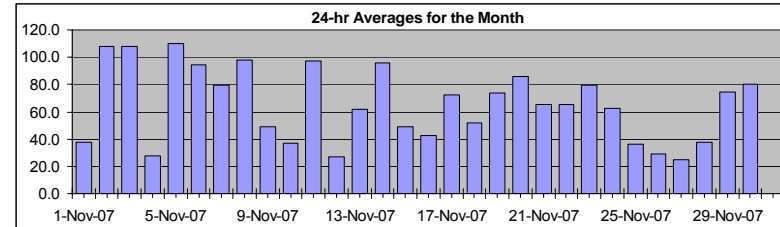
HOURLY AVERAGE TABLE

Solar Radiation (SR)

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Maximum 1-hr Average:	475.7	W/m ²	2-Nov	11:00 12:00
Maximum 24-hr Value:	110.3	W/m ²	5-Nov	



AIC Time:	0 hrs	Operational Time:	718 hrs						
Calibration Time:	0 hrs	AMD Operational Uptime:	99.7%						
Percentile	99	95	75	50	25	5	1	Average	Median
	433.8	355.0	96.0	0.0	0.0	0.0	0.0	65.4 W/m ²	0.0 W/m ²

Status Flag Characters

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum	
	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00			0:00
1-Nov-07	0	0	0	0	0	0	0	0	5	103	154	114	25	94	120	169	91	28	1	0	0	0	0	0	0	37.6	168.7
2-Nov-07	0	0	0	0	0	0	0	34	176	312	419	476	428	333	183	184	54	1	0	0	0	0	0	0	108.2	475.7	
3-Nov-07	0	0	0	0	0	0	0	34	120	288	406	444	457	415	188	200	45	0	0	0	0	0	0	0	108.2	456.5	
4-Nov-07	0	0	0	0	0	0	0	10	23	56	54	123	110	139	97	46	9	0	0	0	0	0	0	0	27.8	139.4	
5-Nov-07	0	0	0	0	0	0	0	24	158	291	398	455	458	418	191	203	51	0	0	0	0	0	0	0	110.3	457.9	
6-Nov-07	0	0	0	0	0	0	0	16	146	285	340	329	335	407	171	208	32	0	0	0	0	0	0	0	94.6	407.3	
7-Nov-07	0	0	0	0	0	0	0	9	86	147	330	452	310	273	180	102	10	0	0	0	0	0	0	0	79.2	451.9	
8-Nov-07	0	0	0	0	0	0	0	9	121	247	377	434	364	373	193	192	41	0	0	0	0	0	0	0	97.9	433.8	
9-Nov-07	0	0	0	0	0	0	0	8	44	78	111	144	157	253	192	162	31	0	0	0	0	0	0	0	49.1	252.9	
10-Nov-07	0	0	0	0	0	0	0	7	52	109	116	67	67	140	172	134	20	0	0	0	0	0	0	0	36.8	172.2	
11-Nov-07	0	0	0	0	0	0	0	15	150	315	259	434	436	347	162	178	32	0	0	0	0	0	0	0	97.1	436.4	
12-Nov-07	0	0	0	0	0	0	0	7	24	45	83	150	132	102	76	31	6	0	0	0	0	0	0	0	27.3	150.0	
13-Nov-07	0	0	0	0	0	0	0	6	70	163	210	262	361	172	149	74	9	0	0	0	0	0	0	0	61.5	360.5	
14-Nov-07	0	0	0	0	0	0	0	10	117	245	350	413	409	374	237	127	23	0	0	0	0	0	0	0	96.0	412.7	
15-Nov-07	0	0	0	0	0	0	0	3	27	43	58	92	172	338	294	140	16	0	0	0	0	0	0	0	49.3	338.2	
16-Nov-07	0	0	0	0	0	0	0	3	29	73	124	117	292	121	128	101	37	0	0	0	0	0	0	0	42.7	292.0	
17-Nov-07	0	0	0	0	0	0	0	6	102	230	333	397	365	180	88	33	7	0	0	0	0	0	0	0	72.5	396.6	
18-Nov-07	0	0	0	0	0	0	0	3	68	88	203	180	194	282	162	54	9	0	0	0	0	0	0	0	51.8	282.1	
19-Nov-07	0	0	0	0	0	0	0	2	34	94	121	396	390	354	217	141	18	0	0	0	0	0	0	0	73.6	396.2	
20-Nov-07	0	0	0	0	0	0	0	4	90	214	314	373	380	335	205	138	16	0	0	0	0	0	0	0	86.2	380.0	
21-Nov-07	0	0	0	0	0	0	0	3	35	194	320	378	369	P	P	130	15	0	0	0	0	0	0	0	0	65.6	377.6
22-Nov-07	0	0	0	0	0	0	0	4	43	103	216	338	263	321	161	114	11	0	0	0	0	0	0	0	65.6	338.3	
23-Nov-07	0	0	0	0	0	0	0	3	79	204	303	365	364	329	169	76	7	0	0	0	0	0	0	0	79.2	365.1	
24-Nov-07	0	0	0	0	0	0	0	3	39	170	293	243	296	310	113	27	4	0	0	0	0	0	0	0	62.5	309.9	
25-Nov-07	0	0	0	0	0	0	0	2	24	109	141	178	164	133	67	39	6	0	0	0	0	0	0	0	36.0	178.1	
26-Nov-07	0	0	0	0	0	0	0	1	27	84	124	108	131	118	76	19	3	0	0	0	0	0	0	0	28.8	131.3	
27-Nov-07	0	0	0	0	0	0	0	0	15	64	75	118	93	116	78	39	4	0	0	0	0	0	0	0	25.1	118.2	
28-Nov-07	0	0	0	0	0	0	0	1	18	50	107	160	164	172	165	64	6	0	0	0	0	0	0	0	37.7	171.7	
29-Nov-07	0	0	0	0	0	0	0	2	29	141	255	339	363	331	181	138	13	0	0	0	0	0	0	0	74.6	362.5	
30-Nov-07	0	0	0	0	0	0	0	1	59	197	300	364	366	333	181	120	10	0	0	0	0	0	0	0	80.5	365.8	
Hourly Avg	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	70.2	159.7	228.5	278.4	282.8	263.4	160.2	110.1	19.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	37.6	168.7	
Hourly Max	0.1	0.1	0.2	0.1	0.1	0.1	0.1	33.7	175.7	315.4	419.4	475.7	457.9	417.7	294.4	208.0	53.6	0.8	0.3	0.1	0.1	0.1	0.1	0.1	80.5	365.8	

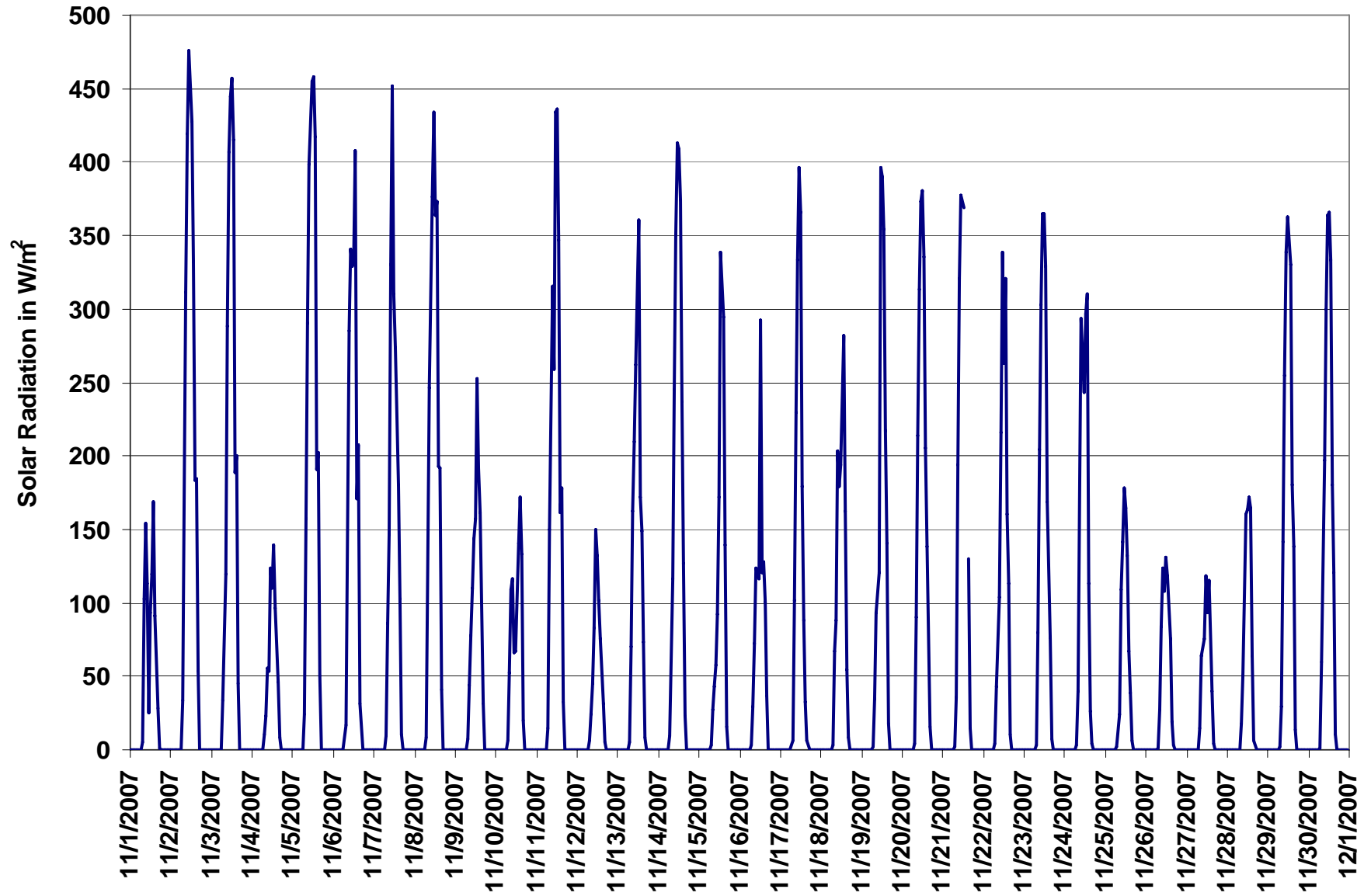


Figure 15. PAS - Crescent Heights Solar Radiation 1-hr Average Monthly Trend



PAS - Crescent Heights Scalar Wind Speed Monthly Summary

Station: Crescent Heights
 Station Owner: PAS

HOURLY AVERAGE TABLE

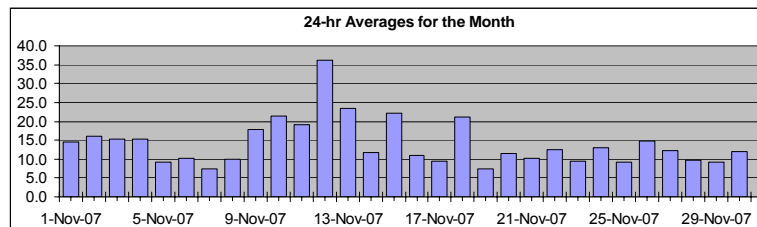
Wind Speed (WSs)

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Maximum 1-hr Average:	51.1	km/hr	12-Nov	19:00 20:00
Maximum 24-hr Value:	36.1	km/hr	12-Nov	

Calm Time:	0 hrs	0% calms	Operational Time:	718 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	99.7%				
Percentile	99	95	75	50	25	5	1	AverageS
	37.1	30.8	17.2	12.3	8.6	5.4	4.0	14.1 km/hr



Status Flag Characters

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

Day	Mountain Standard Time																								24-hr Scalar Average	Daily Max	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00		
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Nov-07	16	15	15	12	16	12	13	15	12	17	21	19	9	10	13	18	14	10	13	13	21	20	14	14	14.6	21.3	
2-Nov-07	14	15	15	15	14	10	9	14	14	15	15	18	18	18	21	20	18	16	17	20	20	19	16	16	16.1	20.6	
3-Nov-07	17	18	18	16	13	12	12	9	9	10	15	15	15	11	7	11	13	12	9	19	24	28	30	29	15.4	30.0	
4-Nov-07	27	21	16	19	20	22	22	19	14	8	12	12	12	14	12	13	13	12	13	12	12	13	14	14	15.2	26.6	
5-Nov-07	15	13	12	11	8	7	5	6	8	9	9	9	7	7	8	9	9	10	9	12	12	10	6	7	9.1	14.9	
6-Nov-07	8	5	8	8	6	7	10	6	10	11	17	23	23	20	16	11	8	3	9	9	7	8	7	5	10.1	23.0	
7-Nov-07	10	7	4	7	9	7	6	6	8	4	6	8	4	5	5	7	9	7	6	7	10	12	13	9	7.3	12.7	
8-Nov-07	9	8	7	6	7	6	6	7	5	7	7	8	11	18	17	16	15	16	15	12	11	9	6	11	10.0	18.2	
9-Nov-07	12	13	13	13	13	15	13	12	7	6	14	19	33	33	35	28	26	24	19	17	16	19	16	17	17.9	35.1	
10-Nov-07	15	18	14	23	17	13	9	6	20	16	16	23	26	27	26	35	34	35	32	35	22	23	20	10	21.4	34.6	
11-Nov-07	14	16	17	18	16	11	11	15	18	19	15	18	21	21	21	23	25	25	18	19	22	21	26	28	19.1	27.9	
12-Nov-07	31	31	32	33	33	34	37	32	32	30	26	29	30	35	34	36	36	49	49	51	46	39	51	36	36.1	51.1	
13-Nov-07	31	24	28	33	31	29	26	24	22	23	24	26	29	29	31	29	22	15	13	12	13	15	14	14	23.4	32.8	
14-Nov-07	14	15	14	14	11	12	12	11	10	13	15	12	12	15	18	14	12	9	10	9	10	5	8	10	11.8	18.0	
15-Nov-07	12	12	17	21	24	27	35	37	41	28	28	27	31	30	30	18	16	12	13	18	15	15	10	10	22.1	41.2	
16-Nov-07	11	13	11	9	11	14	15	17	16	10	7	7	12	13	15	8	8	10	9	10	11	10	12	10	11.1	17.3	
17-Nov-07	6	6	8	9	6	9	11	5	3	5	6	8	6	6	6	8	7	6	7	14	12	19	23	29	9.3	28.6	
18-Nov-07	31	33	32	30	32	27	28	28	28	29	29	28	21	19	18	13	8	7	8	12	17	13	10	9	21.1	32.7	
19-Nov-07	10	6	6	7	7	5	5	6	5	5	6	7	10	13	13	11	9	7	7	5	5	6	8	9	7.3	13.3	
20-Nov-07	10	11	7	7	5	6	5	4	4	5	7	10	20	21	13	13	13	12	18	20	14	18	18	17	11.5	21.0	
21-Nov-07	14	13	12	14	10	10	11	6	6	7	10	10	12	P	P	13	8	5	6	6	10	15	12	12	10.1	15.1	
22-Nov-07	8	8	11	11	12	12	11	14	13	14	17	18	15	13	15	15	12	10	11	10	10	14	13	13	12.6	18.4	
23-Nov-07	12	13	10	10	10	9	6	6	7	10	9	12	15	13	11	7	5	8	9	8	7	6	8	13	9.3	15.3	
24-Nov-07	13	7	11	13	14	15	14	15	14	8	13	20	25	21	12	10	8	8	7	14	20	13	10	9	12.9	24.9	
25-Nov-07	10	14	13	11	13	12	9	10	10	9	12	14	14	11	9	8	4	4	4	5	5	6	8	10	9.2	14.0	
26-Nov-07	12	19	20	14	12	19	18	22	21	18	17	13	11	10	8	11	15	18	17	15	13	14	10	10	14.9	21.5	
27-Nov-07	9	9	9	8	7	10	13	13	10	13	14	17	20	21	20	18	15	11	11	10	9	9	9	8	12.1	20.5	
28-Nov-07	9	9	8	8	10	13	10	5	9	18	20	16	14	12	9	9	6	5	7	7	7	7	7	8	9.7	19.8	
29-Nov-07	11	10	6	9	11	11	7	6	6	7	9	10	11	11	12	11	8	7	9	7	6	9	13	12	9.1	12.7	
30-Nov-07	15	16	18	19	17	18	16	15	16	14	15	16	18	12	7	8	7	7	4	8	5	5	9	4	11.9	18.9	
1-hr Average	14.0	14.0	13.8	14.2	13.8	13.7	13.5	13.0	13.3	12.8	14.2	15.7	16.8	16.8	15.9	14.9	13.4	12.9	12.6	13.8	13.6	13.8	14.1	13.4			
Hourly Max	31.0	32.7	32.0	32.9	32.8	33.7	36.6	37.2	41.2	29.8	29.3	28.5	33.1	34.5	35.1	36.2	35.9	48.6	49.1	51.1	46.2	38.7	50.5	35.7			



PAS - Crescent Heights Vector Wind Speed Monthly Summary

Station: Crescent Heights
Station Owner: PAS

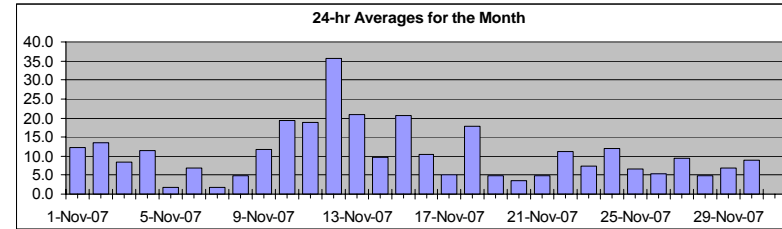
HOURLY AVERAGE TABLE

Wind Speed (WSv)

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Maximum 1-hr Average:	50.9	km/hr	12-Nov	19:00 20:00
Maximum 24-hr Value:	35.7	km/hr	12-Nov	



Calm Time:	0 hrs	0% calms	Operational Time:	718 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	99.7%				
Percentile	99	95	75	50	25	5	1	AverageV
	36.9	30.6	17.0	12.0	8.2	4.2	1.8	63.6 km/hr

Status Flag Characters

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

Day	Mountain Standard Time																								24-hr Vector Average	Daily Max	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Nov-07	16	14	15	12	16	12	13	15	12	16	20	19	6	10	12	18	13	10	12	13	21	20	14	14	12.2	21.2	
2-Nov-07	14	15	15	15	14	10	9	14	14	15	15	17	17	18	20	20	18	16	16	20	19	19	16	16	13.5	20.4	
3-Nov-07	17	18	18	16	13	12	12	9	9	9	14	15	14	10	5	10	13	11	8	19	24	28	30	29	8.5	29.9	
4-Nov-07	27	21	16	19	17	22	22	19	14	7	12	12	12	14	12	12	13	12	13	12	12	13	14	13	11.4	26.5	
5-Nov-07	15	13	12	11	7	6	3	6	8	9	9	8	4	5	7	8	8	10	9	12	12	10	6	7	1.8	14.9	
6-Nov-07	8	5	7	3	6	5	10	5	9	11	17	23	23	20	15	10	8	2	9	9	6	6	0	0	7.0	22.8	
7-Nov-07	4	1	3	7	9	7	5	4	8	1	6	7	1	5	4	7	9	7	5	3	9	12	13	9	1.8	12.5	
8-Nov-07	9	8	5	5	6	4	4	7	3	7	6	7	11	18	17	16	15	16	14	12	11	9	4	11	4.8	17.7	
9-Nov-07	12	13	13	13	13	15	13	12	6	5	13	19	33	32	35	28	26	23	19	17	15	18	16	17	11.7	35.0	
10-Nov-07	14	18	14	22	17	13	8	5	19	16	15	23	26	27	26	34	34	35	32	35	22	20	20	9	19.5	34.5	
11-Nov-07	14	16	17	18	16	11	11	15	18	19	14	18	21	20	21	22	24	24	18	19	22	21	26	28	18.8	27.8	
12-Nov-07	31	31	32	33	33	34	37	32	32	30	25	28	29	34	33	36	36	48	49	51	46	39	50	35	35.7	50.9	
13-Nov-07	30	23	28	33	31	29	26	24	22	23	24	26	29	28	30	29	22	22	15	13	12	13	15	14	21.0	32.7	
14-Nov-07	14	15	14	14	11	11	12	11	9	13	14	10	12	15	18	14	11	9	10	9	9	3	7	9	9.7	17.8	
15-Nov-07	11	9	15	21	24	27	35	37	41	28	28	27	31	30	30	18	15	12	13	18	13	15	15	10	20.6	41.1	
16-Nov-07	10	12	11	9	11	14	15	17	16	9	5	5	11	12	15	8	7	10	8	9	10	10	12	9	10.4	17.1	
17-Nov-07	4	6	8	9	5	9	10	4	2	3	5	8	4	5	3	7	7	6	6	14	11	19	23	28	5.0	28.4	
18-Nov-07	30	33	32	30	32	27	28	28	27	29	29	28	21	19	18	13	8	6	8	12	17	12	9	9	17.9	32.6	
19-Nov-07	9	5	6	7	7	5	3	4	3	5	5	6	5	13	13	11	8	7	6	2	3	5	8	9	4.7	13.1	
20-Nov-07	10	11	7	6	5	6	5	3	4	5	6	9	20	21	11	13	13	11	18	20	13	17	17	17	3.6	20.5	
21-Nov-07	14	13	11	13	10	10	11	5	5	7	10	9	12	P	P	13	8	4	4	6	10	15	11	11	4.8	15.0	
22-Nov-07	8	8	11	11	12	12	11	14	13	14	17	18	15	13	14	15	12	10	11	9	9	14	13	13	11.3	18.2	
23-Nov-07	11	13	10	10	9	9	4	5	7	10	9	12	15	12	11	7	5	8	9	8	7	5	7	13	7.4	15.1	
24-Nov-07	12	7	11	12	13	15	14	15	13	7	12	19	25	20	12	9	8	7	7	14	20	12	9	9	11.9	24.7	
25-Nov-07	10	13	13	10	12	11	8	9	10	7	12	14	13	11	8	8	1	2	3	2	3	6	8	10	6.6	13.7	
26-Nov-07	12	19	20	14	9	18	18	21	21	18	17	13	11	10	8	11	14	17	17	15	13	13	10	10	5.5	21.4	
27-Nov-07	9	9	9	7	6	10	13	13	10	12	14	16	20	20	20	18	15	11	11	10	9	9	9	8	9.5	20.4	
28-Nov-07	9	9	8	7	10	13	10	4	8	17	20	16	14	12	8	8	6	4	7	7	7	6	7	8	4.8	19.7	
29-Nov-07	11	10	5	9	11	11	7	5	6	7	9	10	10	11	12	11	8	6	8	5	5	9	13	12	6.8	12.6	
30-Nov-07	15	16	18	19	17	18	16	15	16	13	14	16	18	10	7	8	5	6	2	8	3	5	7	3	9.0	18.8	
1-hr Vector	9.0	9.5	10.1	9.5	9.0	7.5	7.8	7.4	8.4	8.8	9.2	10.2	10.6	9.4	8.6	7.6	6.1	6.2	7.2	8.3	9.2	9.3	9.5	8.7			
Hourly Max	30.9	32.6	31.9	32.7	32.7	33.6	36.5	37.0	41.1	29.7	29.1	28.4	32.9	34.3	35.0	35.8	35.7	48.4	48.9	50.9	46.0	38.5	50.3	35.0			



PAS - Crescent Heights Wind Direction Monthly Summary

Station: Crescent Heights
Station Owner: PAS

HOURLY AVERAGE TABLE

Wind Direction (WD)

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Calm Time:	0 hrs	0% calms	Operational Time:	718 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	99.7%				
Percentile	99	95	75	50	25	5	1	Average
	354.0	331.0	272.8	232.5	208.0	35.9	4.0	245 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																								24-hour Average	WD Sector
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	WD Sector
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
1-Nov-07	236	239	234	244	273	265	254	258	259	281	338	343	300	245	269	296	307	260	237	232	229	232	237	278	264	W
2-Nov-07	291	284	282	291	294	287	241	224	214	218	231	216	202	193	196	194	195	208	211	216	229	238	240	261	231	SW
3-Nov-07	268	275	276	279	278	270	268	235	210	245	287	328	4	29	68	100	109	115	230	204	213	216	218	224	245	WSW
4-Nov-07	217	224	231	269	291	344	360	3	359	331	328	314	293	294	295	292	276	287	290	300	310	304	294	305	298	WNW
5-Nov-07	324	319	318	313	293	336	264	238	223	219	221	219	217	177	189	187	127	93	115	114	121	115	110	103	200	SSW
6-Nov-07	83	43	161	359	5	180	199	152	212	221	220	223	229	231	247	236	248	80	238	247	214	198	206	305	223	SW
7-Nov-07	36	136	276	16	35	37	57	75	31	57	140	141	84	78	131	129	104	115	113	233	232	241	243	244	109	ESE
8-Nov-07	268	248	204	219	232	174	218	259	249	270	237	337	7	16	10	2	5	8	4	2	3	13	83	77	347	NNW
9-Nov-07	87	95	107	103	97	103	108	109	72	16	193	191	193	198	201	199	201	214	226	234	224	227	230	235	187	S
10-Nov-07	247	235	252	231	232	234	249	307	213	221	210	210	211	208	209	225	231	224	224	230	242	279	313	283	232	SW
11-Nov-07	240	234	235	236	239	245	223	233	238	232	236	221	209	215	209	221	241	232	241	226	226	226	215	213	227	SW
12-Nov-07	213	215	213	211	212	210	210	211	211	207	204	209	204	203	199	207	216	222	213	212	212	221	225	246	213	SSW
13-Nov-07	257	251	260	265	268	269	269	266	268	266	267	272	290	308	329	328	326	327	326	315	315	286	293	293	285	WNW
14-Nov-07	290	286	285	280	266	257	273	277	237	223	220	236	227	211	212	204	200	182	181	207	225	259	197	183	236	SW
15-Nov-07	202	177	202	186	193	199	209	214	213	219	226	218	238	237	241	258	259	252	251	266	235	224	228	218	222	SW
16-Nov-07	228	224	227	222	221	237	236	233	237	282	282	234	218	246	278	275	282	255	249	242	224	234	225	224	240	WSW
17-Nov-07	204	222	257	249	291	327	326	312	58	246	197	215	147	113	133	90	97	124	122	161	175	178	190	206	191	S
18-Nov-07	209	214	221	218	232	242	260	266	271	271	274	280	302	308	311	316	295	240	227	238	229	238	272	305	255	WSW
19-Nov-07	317	335	244	250	280	270	213	248	245	222	253	211	288	328	334	333	328	310	283	319	237	159	216	184	279	W
20-Nov-07	216	220	180	191	161	137	117	79	97	122	166	205	221	219	260	310	330	334	347	358	346	341	346	342	295	WNW
21-Nov-07	344	331	335	356	2	338	323	355	259	237	223	214	213	P	P	219	198	154	186	183	235	236	227	230	263	W
22-Nov-07	216	212	224	229	226	234	245	232	239	233	230	223	226	274	285	289	280	268	261	242	227	274	289	287	248	WSW
23-Nov-07	302	313	306	313	308	289	246	190	218	225	215	211	225	247	253	266	245	229	239	216	205	193	238	237	249	WSW
24-Nov-07	224	246	228	237	233	238	229	234	236	248	221	225	223	243	262	238	240	228	244	263	273	286	308	299	244	WSW
25-Nov-07	286	271	272	271	279	285	276	298	310	263	233	229	222	233	228	209	153	103	59	38	139	205	212	218	252	WSW
26-Nov-07	244	234	234	243	291	6	12	13	10	6	5	7	28	62	93	120	96	102	110	105	102	100	59	56	43	NE
27-Nov-07	54	53	54	65	31	13	358	347	349	341	329	319	318	321	321	323	321	302	295	289	290	279	271	261	329	NNW
28-Nov-07	268	278	274	231	233	231	236	254	309	349	1	3	4	7	5	334	360	238	231	210	214	224	229	215	294	WNW
29-Nov-07	220	242	301	333	341	348	329	316	290	284	289	297	284	275	280	283	275	255	220	209	195	225	229	230	273	W
30-Nov-07	234	234	237	238	237	234	240	236	232	236	233	231	230	243	325	201	266	305	333	344	45	14	32	104	243	WSW
Hourly Avg	247	244	244	249	255	258	253	251	245	251	248	242	240	245	252	249	249	236	235	234	230	237	240	243		



PAS - Crescent Heights Standard Deviation of Wind Direction Monthly Summary

Station: Crescent Heights
Station Owner: PAS

HOURLY AVERAGE TABLE

Wind Direction (WD)

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Determined by the Yamartino 15-min interval calculation

Calm Time:	0 hrs	0% calms	Operational Time:	718 hrs			
Calibration Time:	0 hrs		AMD Operational Uptime:	99.7%			
Percentile	99	95	75	50	25	5	1
	76.0	55.0	19.0	10.0	7.0	5.0	4.0

Status Flag Characters

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

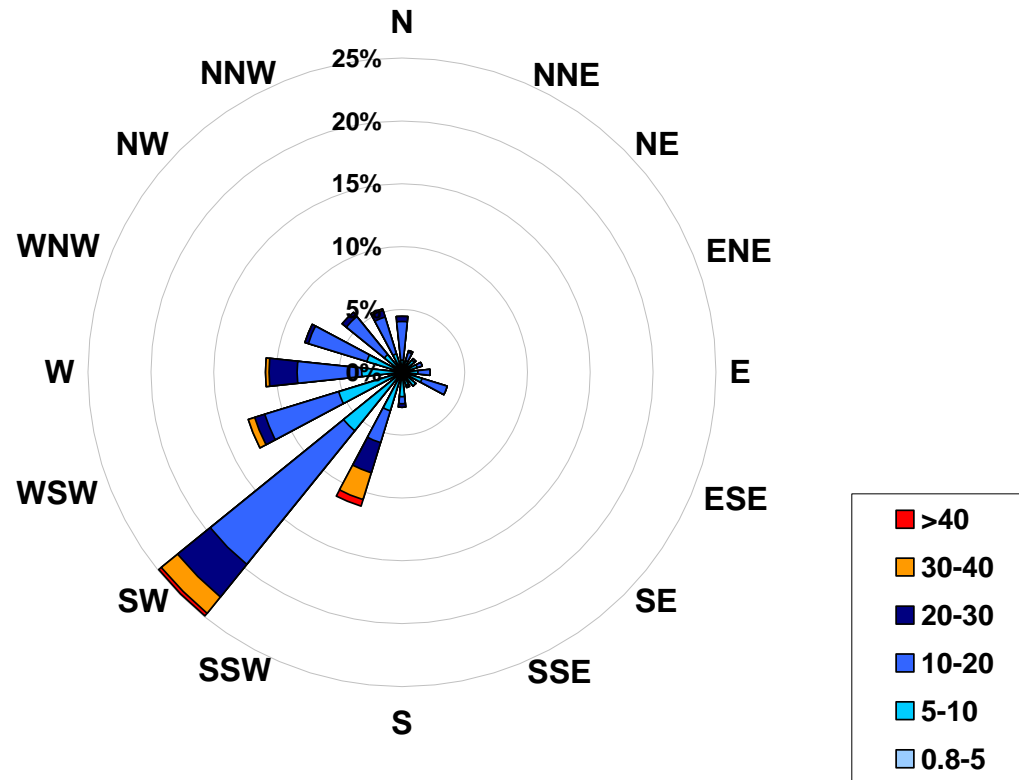
Day Mountain Standard Time

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	Daily Maximum
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	
1-Nov-07	7	6	5	9	6	9	6	7	12	16	20	12	50	18	17	10	21	11	12	8	7	4	4	14	50.0
2-Nov-07	8	6	6	8	8	15	17	6	5	7	13	11	11	10	8	8	7	9	6	6	10	7	6	8	17.0
3-Nov-07	6	5	5	6	5	8	5	20	12	20	13	16	19	18	35	15	7	18	29	6	6	4	5	5	35.0
4-Nov-07	5	6	11	6	29	6	11	6	8	20	11	14	9	10	11	10	7	10	8	10	7	10	7	9	29.0
5-Nov-07	5	10	8	6	34	27	57	18	14	15	22	28	75	55	31	22	19	6	10	6	7	8	12	9	75.0
6-Nov-07	12	29	32	84	14	59	14	40	26	12	8	8	6	8	9	11	31	61	13	13	46	61	47	96	96.0
7-Nov-07	85	89	55	18	6	17	44	45	23	82	30	29	90	31	30	20	5	11	14	88	23	10	9	7	90.0
8-Nov-07	9	17	51	70	58	47	54	22	76	27	41	32	14	14	9	5	6	3	3	4	4	10	43	16	76.0
9-Nov-07	11	8	8	9	9	7	7	8	39	32	22	14	6	8	5	8	6	16	8	8	12	7	5	5	39.0
10-Nov-07	24	9	14	6	6	13	25	42	9	15	22	13	5	6	6	10	4	5	4	5	9	26	10	27	42.0
11-Nov-07	11	6	9	6	7	9	15	9	6	8	17	13	10	10	7	18	9	5	7	8	7	6	5	5	18.0
12-Nov-07	3	5	5	6	4	4	4	5	4	5	7	6	6	7	6	8	7	5	5	5	5	6	5	11	11.0
13-Nov-07	6	7	6	5	5	5	5	5	6	5	6	6	11	11	10	6	6	5	7	7	15	7	11	9	15.0
14-Nov-07	8	6	7	6	10	7	6	6	27	8	8	30	16	14	9	9	12	9	12	16	15	67	21	19	67.0
15-Nov-07	31	46	28	10	6	6	6	5	5	8	6	9	7	6	8	9	9	8	11	6	31	12	9	19	46.0
16-Nov-07	27	7	10	10	12	8	8	9	14	23	50	62	11	23	10	12	39	12	14	25	25	8	13	17	62.0
17-Nov-07	58	25	20	12	34	14	14	35	58	60	38	23	65	23	54	7	12	15	31	11	28	15	7	7	65.0
18-Nov-07	5	5	7	6	5	8	5	4	5	5	6	6	10	9	11	8	15	20	14	14	7	12	12	13	20.0
19-Nov-07	17	29	25	12	24	23	56	48	63	22	35	40	63	11	12	11	10	19	10	75	61	34	19	12	75.0
20-Nov-07	19	9	18	19	22	28	17	40	25	21	22	27	10	13	35	11	8	7	5	5	11	10	8	8	40.0
21-Nov-07	7	9	17	11	11	12	9	20	45	26	16	27	17	P	P	10	16	45	66	23	12	6	7	6	66.0
22-Nov-07	10	6	5	5	4	7	9	6	5	8	6	8	11	13	10	8	8	7	6	32	20	12	8	7	32.0
23-Nov-07	10	6	10	8	9	8	62	43	8	9	13	11	9	18	18	19	47	11	15	7	23	51	36	15	62.0
24-Nov-07	21	21	13	14	9	8	6	9	13	32	13	8	7	13	12	11	23	19	28	22	9	16	21	18	32.0
25-Nov-07	12	10	11	18	17	10	12	10	8	30	11	12	8	8	60	11	75	55	57	76	55	20	19	14	76.0
26-Nov-07	11	7	5	12	38	22	6	6	7	10	10	11	18	18	19	13	10	10	7	9	9	11	12	16	38.0
27-Nov-07	12	15	9	12	25	9	6	5	10	8	7	9	7	7	7	8	9	12	10	9	9	13	11	8	25.0
28-Nov-07	10	9	13	27	10	5	10	41	29	18	7	10	11	8	21	12	10	67	17	13	18	35	38	9	67.0
29-Nov-07	8	11	30	11	6	5	10	27	27	18	18	16	17	12	10	12	11	31	12	37	34	8	6	5	37.0
30-Nov-07	5	5	4	5	6	5	7	8	6	6	7	8	11	32	25	13	36	29	72	12	43	19	41	37	72.0

Hourly Max 85 89 55 84 58 59 62 48 76 82 50 62 90 55 60 22 75 67 72 88 61 67 47 96



1-hr Average Wind Rose (in km/hr) Located at the Crescent Heights Site for November 2007



Calms: 0%

Frequency Distribution of Wind in km/hr			
Range			Frequency (hrs)
0.8	<	5	20
5	to	10	235
10	to	20	341
20	to	30	79
30	to	40	35
	>	40	6
Total Non-Zero Values			718



PAS – Portable-Brooks

Monthly Summary Tables, Graphs and Roses



PAS – Portable-Brooks Sulphur Dioxide Monthly Summary

HOURLY AVERAGE TABLE

Sulphur Dioxide (SO₂)

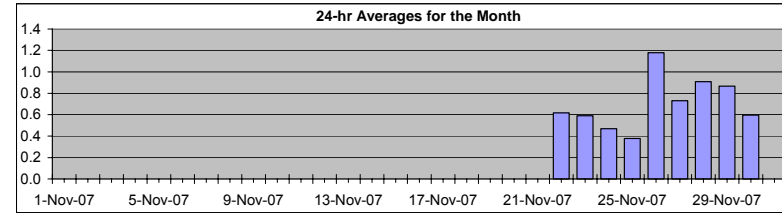
Station: Portable-Brooks
 Station Owner: PAS

Monitoring Dates: November 1, 2007 to December 1, 2007

Objective Limit: Alberta Environment: 1-hr 172 ppb 24-hr 57 ppb

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	4.7 ppb	26-Nov	6:00 7:00	
Maximum 24-hr Average:	1.2 ppb	26-Nov		



AIC Time:	11 hrs		Operational Time:	214 hrs					
Calibration Time:	2 hrs		AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average	Median
	3.7	1.9	0.9	0.5	0.3	0.1	0.0	0.7 ppb	0.5 ppb

Status Flag Characters

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00		
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
2-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
3-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
4-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
5-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
6-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
7-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
8-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
9-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
10-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
11-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
12-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
13-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
14-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
15-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
16-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
17-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
18-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
19-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
20-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
21-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	C	C	A	0	0	0	0	0	0	0	0	0	-	0.1
22-Nov-07	0	A	1	1	0	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	0	0.6	1.0	
23-Nov-07	A	0	0	0	0	0	0	0	1	1	2	1	1	1	1	1	1	1	0	0	1	1	A	0.6	1.6		
24-Nov-07	1	0	0	0	0	0	0	0	0	1	1	1	0	1	1	0	1	1	1	1	0	1	A	0	0.5	0.9	
25-Nov-07	0	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1	0	A	0	0	0.4	0.9	
26-Nov-07	0	0	0	0	1	1	5	2	1	4	4	4	2	1	1	1	0	0	0	A	0	0	0	0	1.2	4.7	
27-Nov-07	0	0	0	0	1	0	0	0	0	0	1	0	1	1	1	2	3	2	A	2	2	1	1	1	0.7	2.5	
28-Nov-07	1	1	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	A	1	1	1	1	1	0.9	1.9	
29-Nov-07	0	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	0	A	0	0	0	0	1	1	0.9	2.3	
30-Nov-07	2	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	A	1	1	1	1	1	1	1	0.6	1.6	
Hourly Avg	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		
Hourly Max	1.6	0.5	0.7	0.7	1.4	2.3	4.7	2.3	1.1	3.7	3.6	4.0	2.4	1.1	1.3	1.3	1.8	2.5	1.9	0.8	2.1	1.6	0.9	0.7			

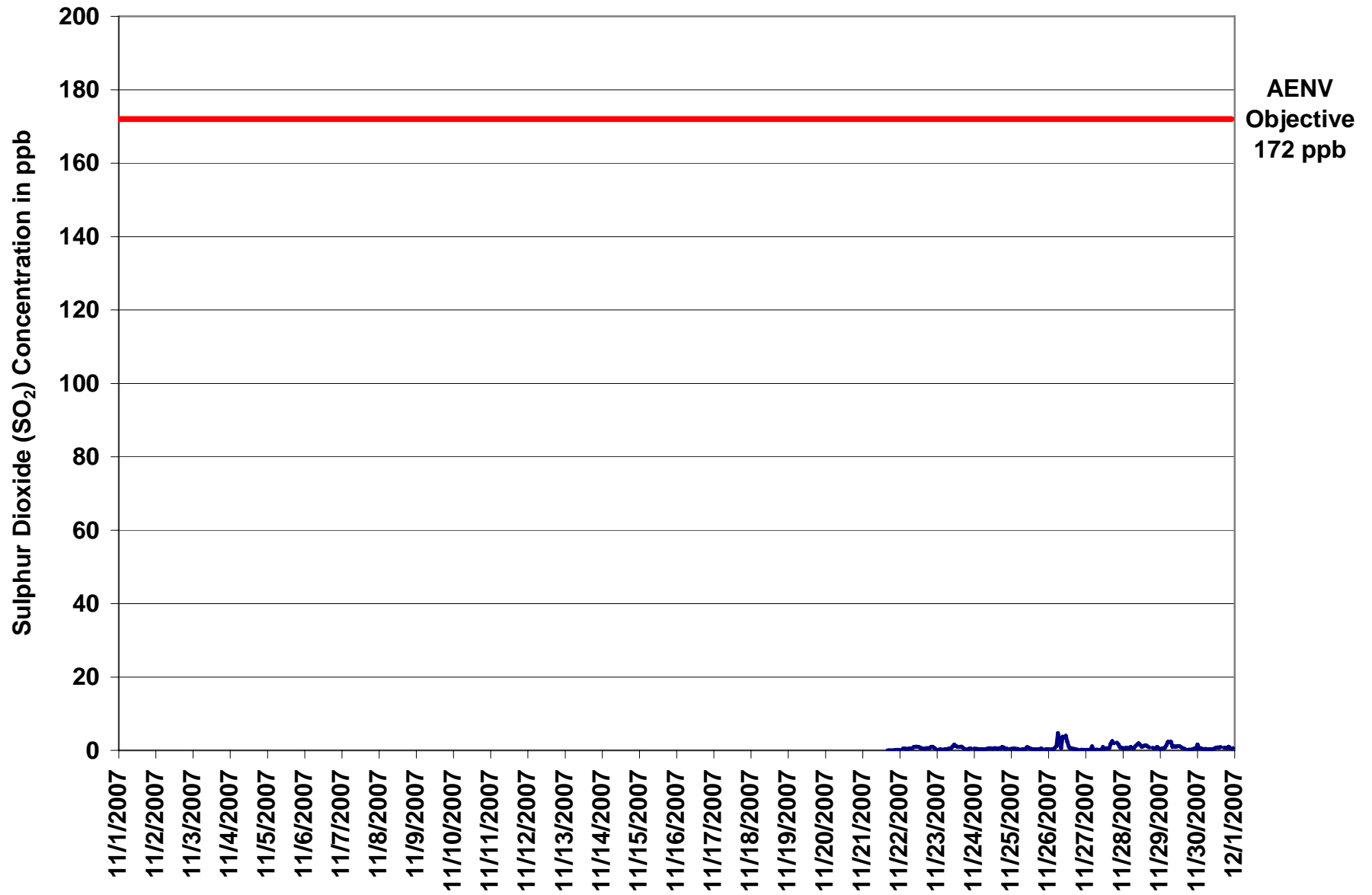


Figure 16. PAS – Portable-Brooks Sulphur Dioxide 1-hr Average Monthly Trend



Station: Portable-Brooks
 Station Owner: PAS

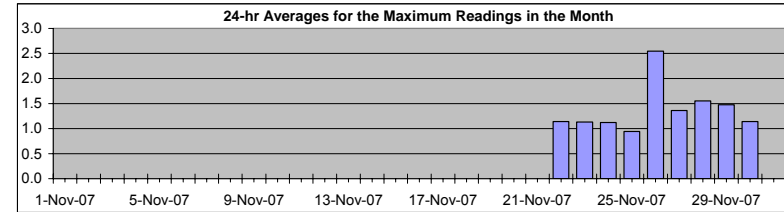
INSTANTANEOUS (30 Second) MAXIMUM TABLE

Sulphur Dioxide (SO₂)

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Maximum 1-hr Value:	13.6	ppb	26-Nov	6:00 7:00
Maximum 24-hr Value:	2.5	ppb	26-Nov	



AIC Time:	11 hrs	Operational Time:	214 hrs						
Calibration Time:	2 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	5.7	2.9	1.4	1.1	0.8	0.6	0.3	1.3 ppb	1.1 ppb

Status Flag Characters

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

Day Mountain Standard Time

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
2-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
3-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
4-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
5-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
6-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
7-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
8-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
9-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
10-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
11-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
12-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
13-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
14-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
15-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
16-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
17-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
18-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
19-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
20-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
21-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	C	C	A	0	1	0	0	0	1	1	1	-	0.7
22-Nov-07	1	A	1	1	1	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	2	1	1	1.1	1.6
23-Nov-07	A	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	1	1	1	1	1	1	1	A	1.1	2.4
24-Nov-07	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	3	3	1	1	A	1	1.1	2.9	
25-Nov-07	1	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	A	1	1	0.9	1.8
26-Nov-07	1	1	1	1	1	4	14	5	1	6	6	6	4	2	1	1	1	1	1	A	1	1	1	1	2.5	13.6
27-Nov-07	1	1	1	1	3	1	1	1	1	1	1	2	1	1	1	3	3	2	A	3	2	1	1	1	1.4	3.1
28-Nov-07	1	1	1	1	1	2	2	1	2	3	3	2	2	2	2	2	1	A	1	1	1	1	1	1	1.6	2.6
29-Nov-07	1	1	1	1	3	3	3	4	2	2	1	2	2	1	1	1	A	1	1	1	1	1	1	1	1.5	3.6
30-Nov-07	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	2	1	1	1	1	1.1	2.8
Hourly Avg	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	-	-
Hourly Max	2.8	1.1	1.4	1.4	2.6	3.8	13.6	4.8	2.2	5.7	5.5	6.2	3.7	2.0	1.7	1.8	3.1	3.1	2.9	2.9	2.7	2.3	1.4	1.4	-	-

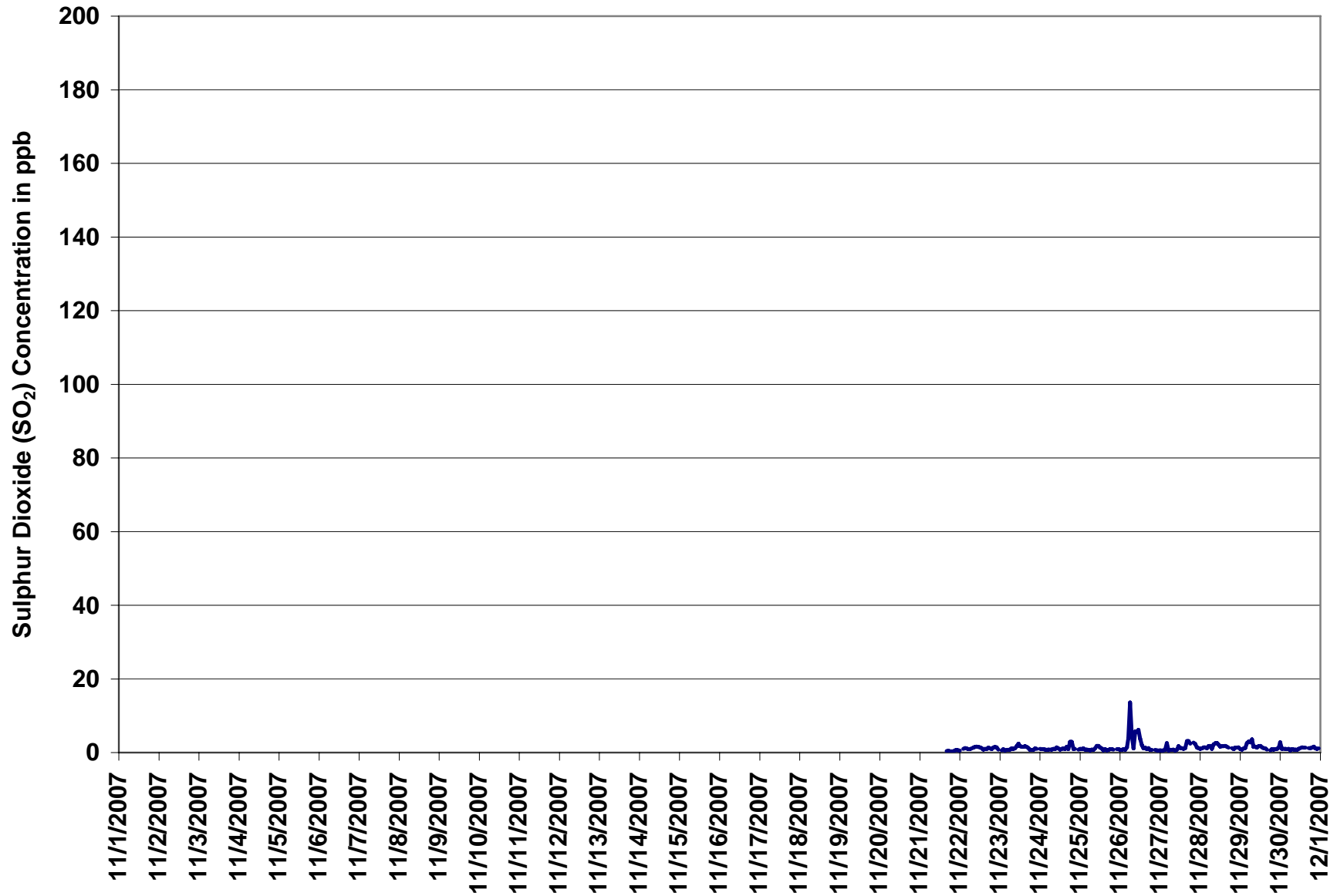
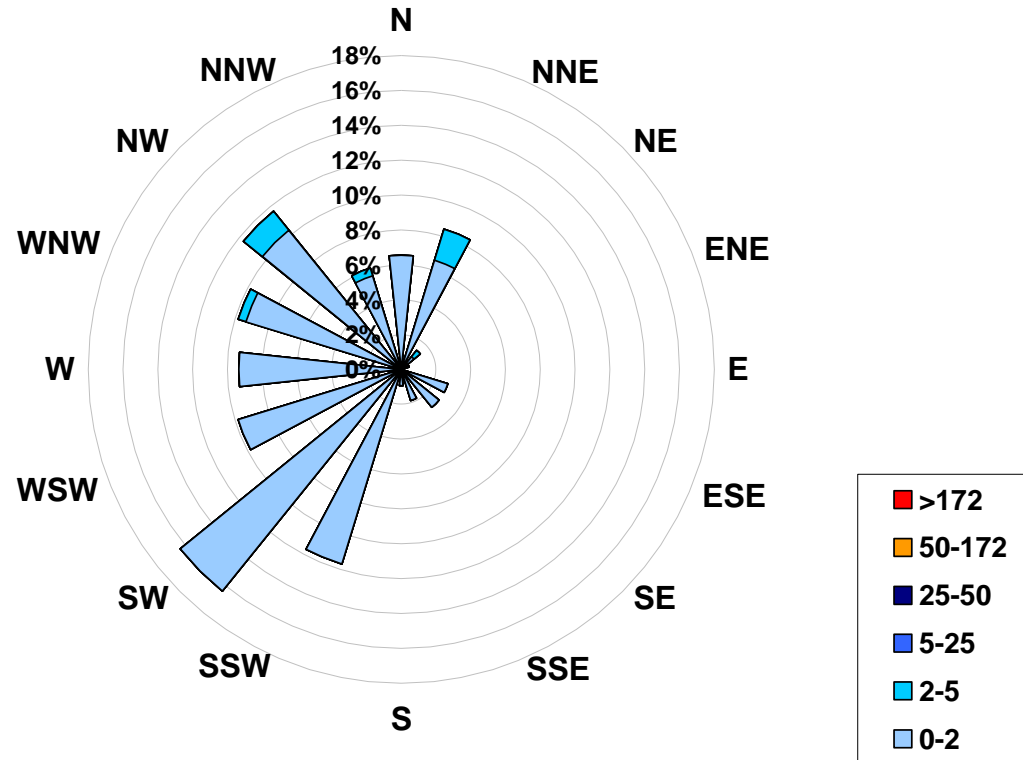


Figure 16. PAS – Portable –Brooks Sulphur Dioxide Instantaneous (30 Second) Maximum Value Monthly Trend



1-hr Average Concentration Rose for Sulphur Dioxide (in ppb) Located at the Portable-Brooks Site for November 2007



Calms: 0%

Frequency Distribution of SO ₂ in ppb			Frequency (hrs)
Range			
0.0	< 2		204
2	to 5		10
5	to 25		0
25	to 50		0
50	to 172		0
	> 172		0
Total Non-Zero Values			214



PAS – Portable-Brooks Ozone Monthly Summary

HOURLY AVERAGE TABLE

Ozone (O₃)

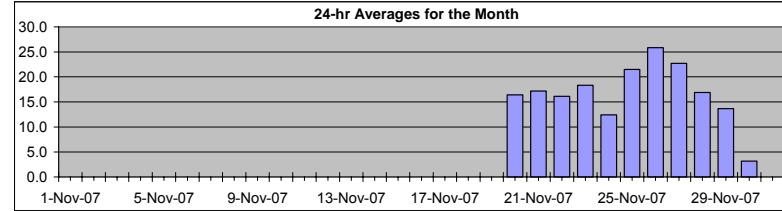
Station: Portable-Brooks
Station Owner: PAS

Monitoring Dates: November 1, 2007 to December 1, 2007

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

Summary

Number of 1-hr Exceedances:	0				
Maximum 1-hr Average:	37.6	ppb	23-Nov	14:00	15:00
Maximum 24-hr Average:	25.9	ppb	26-Nov		



AIC Time:	13 hrs	Operational Time:	258 hrs						
Calibration Time:	2 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	33.8	32.5	25.6	17.1	6.6	0.0	0.0	16.5 ppb	17.1 ppb

Status Flag Characters

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00		
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
2-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
3-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
4-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
5-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
6-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
7-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
8-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
9-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
10-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
11-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
12-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
13-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
14-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
15-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
16-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
17-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
18-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
19-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	C	C	A	3	3	11	7	8	16	-	16.4	
20-Nov-07	13	A	9	4	6	6	4	4	6	8	11	19	20	21	23	23	29	23	26	23	24	25	24	28	16.4	28.5	
21-Nov-07	A	24	22	18	14	23	25	22	21	23	23	25	26	27	27	25	14	4	4	3	6	6	5	8	17.2	26.9	
22-Nov-07	7	A	3	3	4	5	3	3	5	18	24	27	33	33	34	31	25	14	15	14	19	18	14	22	16.1	33.9	
23-Nov-07	A	22	12	14	17	13	5	3	6	15	22	27	33	36	38	34	21	12	18	16	16	12	14	A	18.3	37.6	
24-Nov-07	4	4	3	5	7	6	8	9	8	11	17	22	25	24	25	21	17	15	10	6	8	5	A	28	12.4	27.5	
25-Nov-07	32	33	28	24	25	26	22	18	20	20	22	30	30	34	32	28	23	20	12	3	3	A	5	6	21.5	33.6	
26-Nov-07	6	14	15	15	23	26	26	28	31	28	29	30	32	34	33	29	28	30	30	29	A	27	26	27	25.9	33.6	
27-Nov-07	28	27	27	27	25	26	24	25	26	26	27	28	29	29	28	25	21	18	14	A	13	4	11	13	22.7	29.2	
28-Nov-07	13	9	14	16	16	15	14	21	20	21	0	29	31	30	29	27	21	12	A	5	7	9	16	14	16.9	30.5	
29-Nov-07	0	8	9	6	9	12	9	8	0	0	23	0	0	33	33	33	29	A	13	15	18	22	19	17	13.7	33.1	
30-Nov-07	0	0	0	0	10	0	0	5	0	0	0	20	0	0	0	0	A	0	0	12	27	0	0	0	3.2	26.5	
Hourly Avg	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		
Hourly Max	31.6	32.7	27.7	26.7	25.0	26.1	26.1	28.3	31.4	28.4	29.0	30.4	33.4	35.7	37.6	33.7	29.3	29.6	29.5	28.5	26.5	26.8	25.6	27.9			

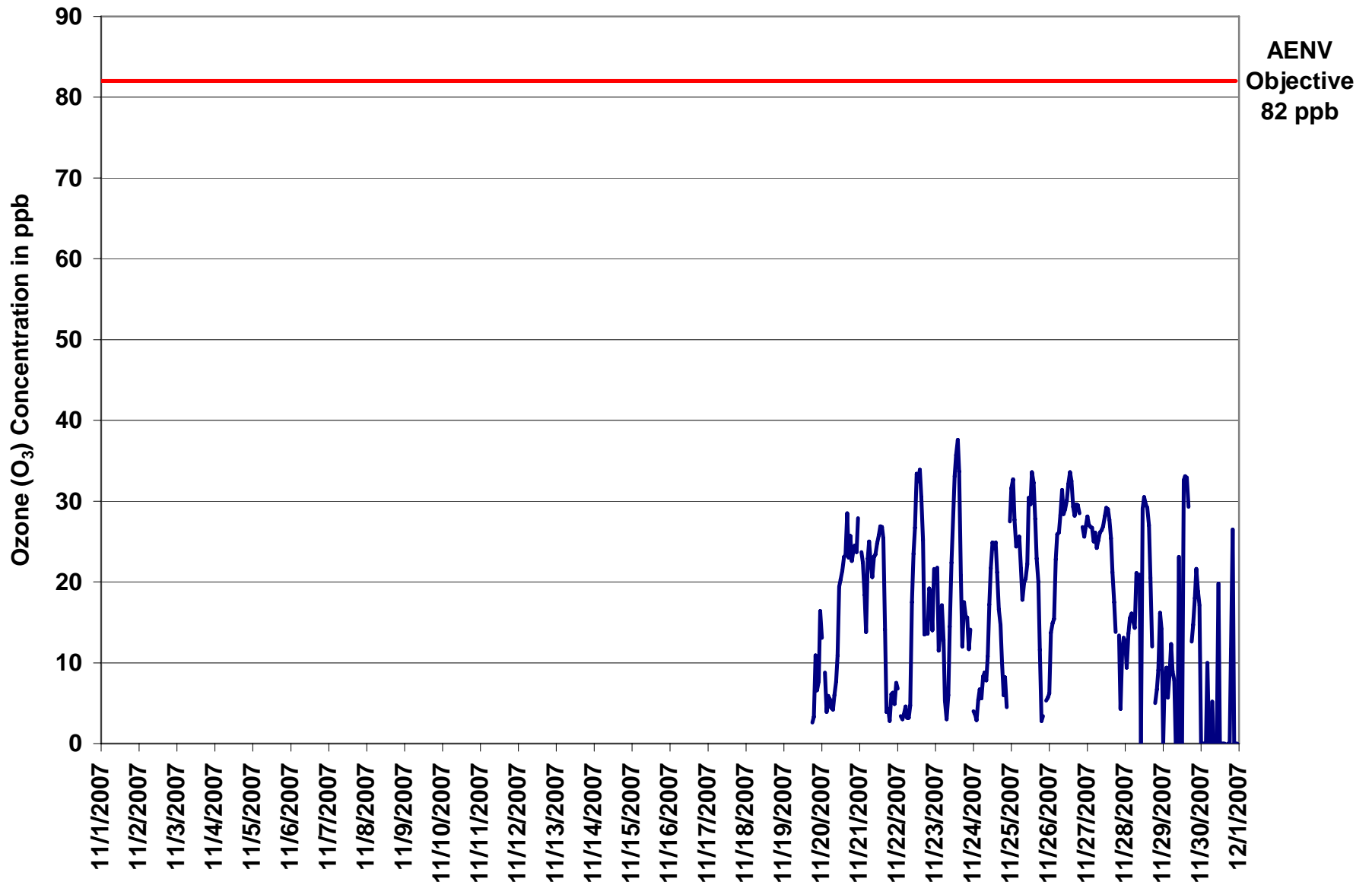


Figure 18. PAS – Portable-Brooks Ozone 1-hr Average Monthly Trend



Station: Portable-Brooks
Station Owner: PAS

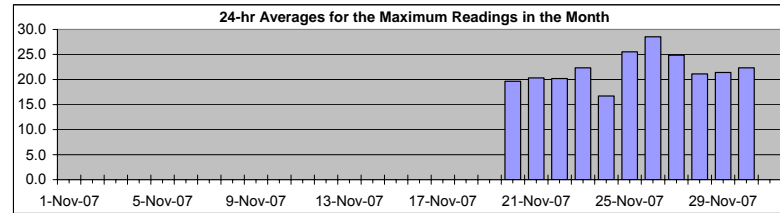
INSTANTANEOUS (30 Second) MAXIMUM TABLE

Ozone (O₃)

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Maximum 1-hr Value:	39.5	ppb	22-Nov	13:00 14:00
Maximum 24-hr Value:	28.5	ppb	26-Nov	



AIC Time:	13 hrs	Operational Time:	258 hrs						
Calibration Time:	2 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	38.6	35.4	28.4	23.2	15.9	6.5	4.0	21.9 ppb	23.2 ppb

Status Flag Characters

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

Day Mountain Standard Time

Day	Hour Start	Hour End	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum
1-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
2-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
3-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
4-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
5-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
6-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
7-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
8-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
9-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
10-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
11-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
12-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
13-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
14-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
15-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
16-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
17-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
18-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
19-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	C	C	A	4	12	20	17	17	22	-	21.5	
20-Nov-07	21	A	16	8	9	8	7	5	7	10	16	24	23	23	25	26	31	29	27	27	27	27	27	30	19.6	31.4		
21-Nov-07	A	26	25	22	19	27	27	26	26	25	25	26	28	28	28	28	23	9	9	4	11	10	7	10	20.3	28.3		
22-Nov-07	10	A	6	4	5	6	5	6	9	22	27	32	37	40	39	37	35	20	20	16	23	22	20	25	20.2	39.5		
23-Nov-07	A	27	17	16	19	18	8	4	10	19	26	33	35	38	39	38	30	18	22	19	19	16	19	A	22.3	39.4		
24-Nov-07	15	8	4	9	10	9	12	11	10	14	21	25	26	26	29	29	23	23	18	11	12	8	A	33	16.7	33.1		
25-Nov-07	33	37	33	28	30	29	24	23	24	24	27	37	37	38	34	32	27	25	16	6	5	A	8	10	25.5	38.2		
26-Nov-07	11	16	18	18	26	28	30	34	34	31	31	33	33	36	35	32	30	32	31	30	A	31	28	29	28.5	36.0		
27-Nov-07	30	28	28	28	28	28	28	28	28	28	28	28	29	31	30	30	27	23	19	16	A	16	10	15	17	24.8	30.6	
28-Nov-07	14	14	17	18	18	19	17	26	26	25	27	31	32	31	30	30	25	19	A	7	10	14	19	18	21.1	31.8		
29-Nov-07	17	12	11	8	11	15	14	14	11	20	26	31	33	34	34	34	32	A	19	21	25	26	22	22	21.4	34.3		
30-Nov-07	28	28	18	17	19	12	12	9	14	16	20	23	26	28	26	22	A	19	20	20	33	36	34	32	22.3	36.0		
Hourly Avg	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	N		
Hourly Max	33.4	37.2	33.0	28.2	29.8	29.0	29.7	33.9	33.9	31.0	31.3	37.3	37.1	39.5	39.4	38.0	34.7	31.5	31.0	30.2	32.8	36.0	34.3	33.1				

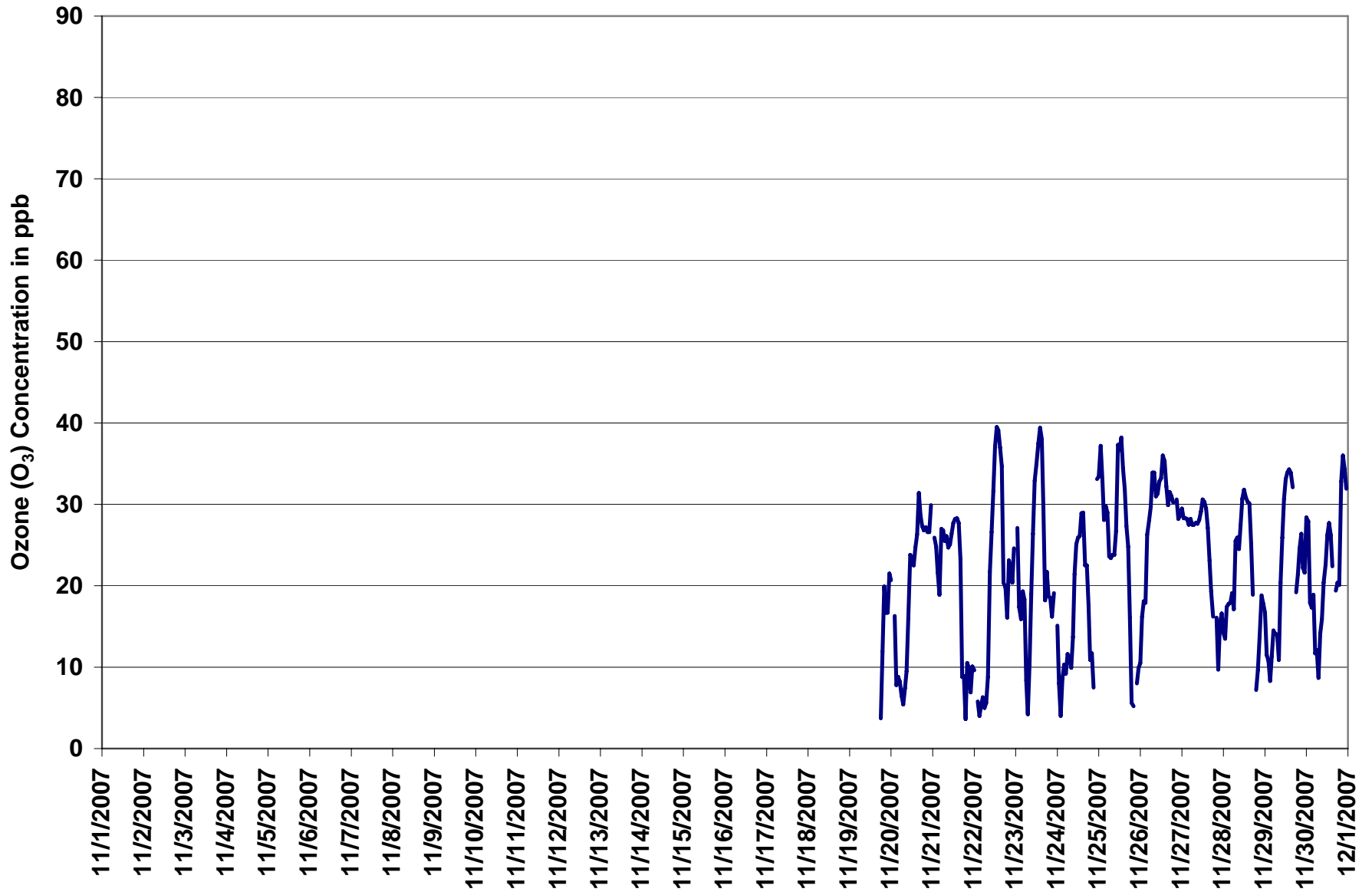
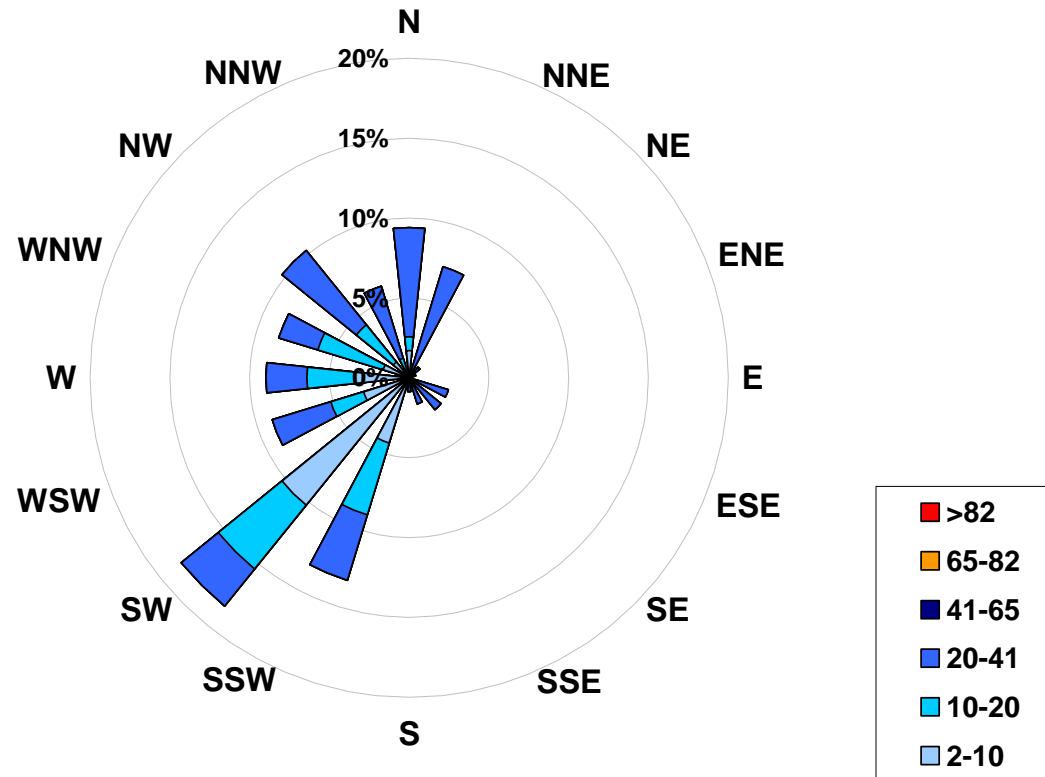


Figure 17. PAS – Portable –Brooks Ozone Instantaneous (30 Second) Maximum Value Monthly Trend



1-hr Average Concentration Rose for Ozone (in ppb) Located at the Portable-Brooks Site for November 2007



Calms: 0%

Frequency Distribution of O ₃ in ppb		
Range		Frequency (hrs)
2.0	< 10	83
10	to 20	60
20	to 41	114
41	to 65	0
65	to 82	0
	> 82	0
Total Non-Zero Values		258



PAS – Portable-Brooks Ozone Eight Hour Average Summary

EIGHT HOUR RUNNING AVERAGE TABLE

Ozone (O₃)

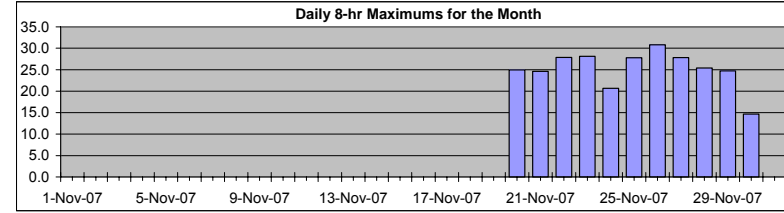
Station: Portable-Brooks
Station Owner: PAS

Monitoring Dates: November 1, 2007 to December 1, 2007

Objective Limit: Alberta Environment: 8-hr 65 ppb

Summary

Number of 8-hr Exceedances:	0		
Maximum 8-hr Average:	30.8 ppb	26-Nov	15:00 16:00



Percentile	99	95	75	50	25	5	1
	30.6	27.9	24.0	17.2	9.0	3.7	1.9

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																								Daily Maximum		
	Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00		23:00 0:00	
1-Nov-07	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	-	
2-Nov-07	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	N	-
3-Nov-07	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	N	-
4-Nov-07	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	N	-
5-Nov-07	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	N	-
6-Nov-07	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	N	-
7-Nov-07	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	N	-
8-Nov-07	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	N	-
9-Nov-07	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	N	-
10-Nov-07	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	N	-
11-Nov-07	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	N	-
12-Nov-07	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	N	-
13-Nov-07	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	N	-
14-Nov-07	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	N	-
15-Nov-07	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	N	-
16-Nov-07	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	N	-
17-Nov-07	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	N	-
18-Nov-07	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	N	-
19-Nov-07	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	N	-
20-Nov-07	9	9	10	10	9	9	8	7	6	6	6	8	10	12	14	17	19	21	23	23	24	24	24	25		25.0	
21-Nov-07	24	25	24	24	22	22	22	21	21	21	21	22	23	24	24	25	24	21	19	16	14	11	8	6		24.6	
22-Nov-07	5	6	5	5	5	5	5	4	4	5	8	11	15	18	22	25	28	27	26	25	23	21	19	18		27.9	
23-Nov-07	16	18	17	17	17	16	15	12	11	11	12	14	16	18	22	26	28	28	27	26	24	21	18	15		28.1	
24-Nov-07	13	12	10	8	7	6	5	6	6	7	9	11	13	15	18	19	20	21	20	18	16	13	12	13		20.7	
25-Nov-07	15	17	20	22	25	28	27	26	24	23	22	23	23	24	26	27	27	27	26	23	19	17	13	10		27.8	
26-Nov-07	8	7	7	9	12	14	16	19	22	24	26	28	29	30	31	31	30	31	31	30	30	29	28	28		30.8	
27-Nov-07	28	27	27	27	27	27	26	26	26	26	26	27	27	27	27	27	27	26	24	23	21	18	15	14		27.8	
28-Nov-07	12	11	11	12	12	13	14	15	16	17	15	17	19	21	23	23	23	22	25	22	19	16	14	12		25.4	
29-Nov-07	9	9	9	9	9	9	8	8	8	7	8	8	7	9	12	15	19	22	20	22	25	23	21	19		24.7	
30-Nov-07	15	13	11	9	8	6	3	2	2	2	2	4	3	3	3	2	3	3	3	2	5	5	5	5		14.7	

Hourly Max 27.8 27.5 27.1 26.8 26.6 27.8 27.0 26.1 25.9 25.8 25.9 27.8 28.9 29.9 30.7 30.8 30.4 30.6 30.6 30.4 30.2 29.2 28.2 27.9



PAS – Portable-Brooks Hydrogen Sulphide Monthly Summary

HOURLY AVERAGE TABLE

Hydrogen Sulphide (H₂S)

Station: Portable-Brooks
Station Owner: PAS

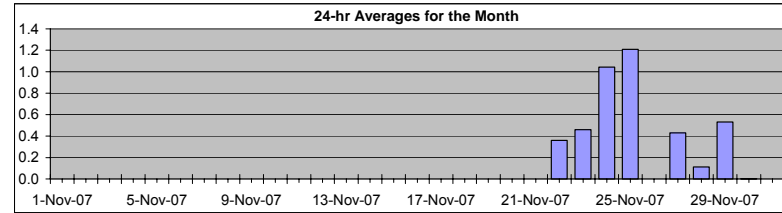
Monitoring Dates: November 1, 2007 to December 1, 2007

Objective Limit: Alberta Environment: 1-hr 10 ppb 24-hr 3 ppb

Summary

Number of 1-hr Exceedances:	2
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	20.9 ppb 25-Nov 18:00 19:00
Maximum 24-hr Value:	1.2 ppb 25-Nov

AIC Time:	11 hrs	Operational Time:	213 hrs						
Calibration Time:	5 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	8.6	2.6	0.1	0.0	0.0	0.0	0.0	0.4 ppb	0.0 ppb



Status Flag Characters

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

Day Mountain Standard Time

Day	Hour Start	Hour End	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum
1-Nov-07	0:00	1:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
2-Nov-07	1:00	2:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
3-Nov-07	2:00	3:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
4-Nov-07	3:00	4:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
5-Nov-07	4:00	5:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
6-Nov-07	5:00	6:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
7-Nov-07	6:00	7:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
8-Nov-07	7:00	8:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
9-Nov-07	8:00	9:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
10-Nov-07	9:00	10:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
11-Nov-07	10:00	11:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
12-Nov-07	11:00	12:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
13-Nov-07	12:00	13:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
14-Nov-07	13:00	14:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
15-Nov-07	14:00	15:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
16-Nov-07	15:00	16:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
17-Nov-07	16:00	17:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
18-Nov-07	17:00	18:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
19-Nov-07	18:00	19:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
20-Nov-07	19:00	20:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
21-Nov-07	20:00	21:00	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	C	C	C	C	C	A	0	0	0	0	0	0	0	-	0.0
22-Nov-07	21:00	22:00	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	0.4	3.8
23-Nov-07	22:00	23:00	A	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.5	5.9
24-Nov-07	23:00	0:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5	11	1	0	4	A	0	1.0	10.9
25-Nov-07	0:00	1:00	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0	1	21	3	0	A	0	0	1.2	20.9
26-Nov-07	1:00	2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.0	0.0
27-Nov-07	2:00	3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	3	1	1	6	0.4	5.7
28-Nov-07	3:00	4:00	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0.1	1.5
29-Nov-07	4:00	5:00	0	0	0	0	0	0	9	2	0	0	0	0	0	0	0	0	1	A	0	0	0	0	0	0	0.5	9.0
30-Nov-07	5:00	6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.0	0.1
Hourly Avg	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	N		
Hourly Max	1.5	5.9	2.5	0.7	1.6	0.7	9.0	2.2	0.3	0.2	0.1	0.0	0.0	0.0	0.0	1.3	0.5	5.0	20.9	2.8	2.9	4.4	3.2	5.7				

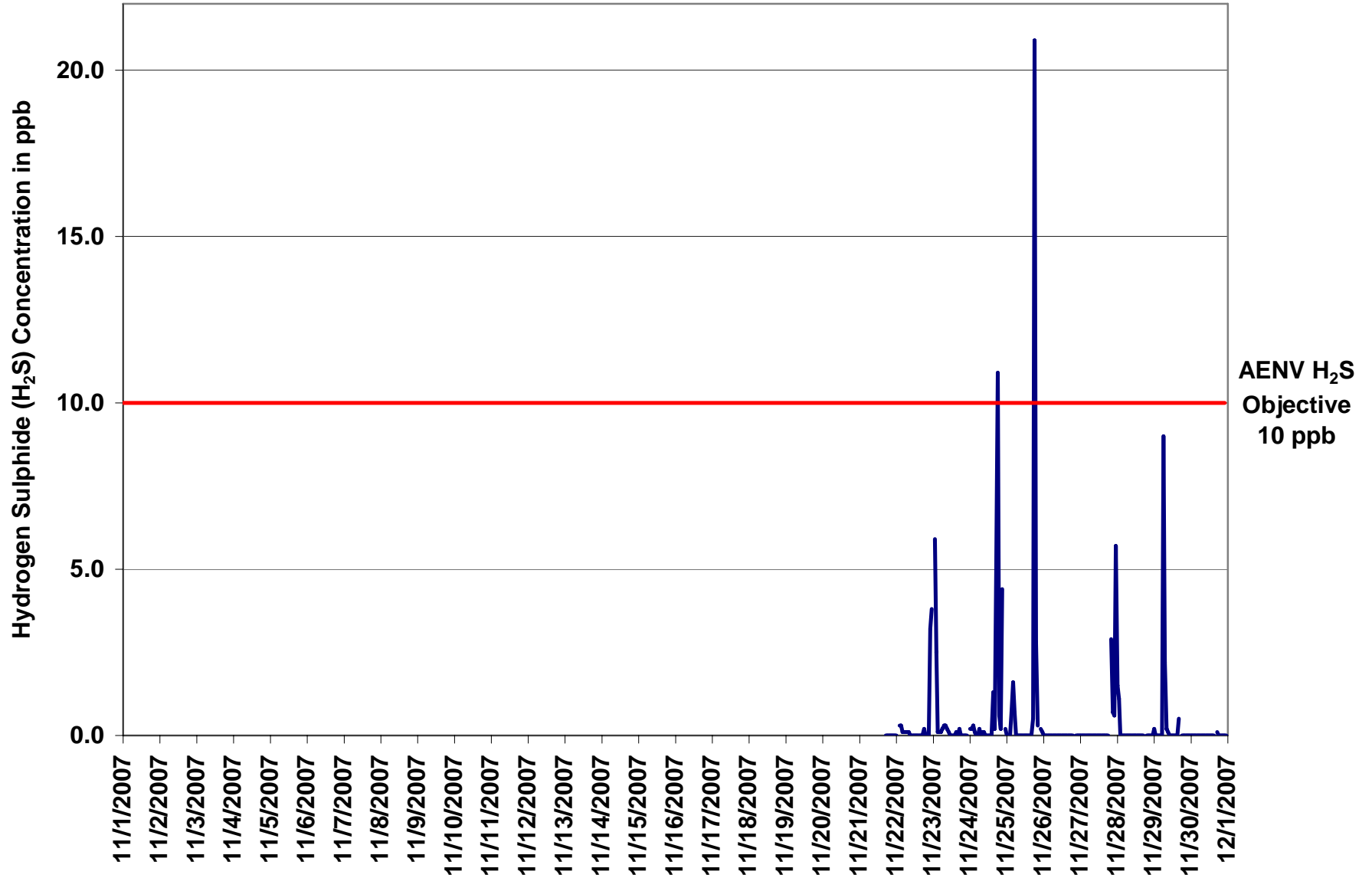


Figure 20. PAS – Portable-Brooks Hydrogen Sulphide 1-hr Average Monthly Trend



Station: Portable-Brooks
 Station Owner: PAS

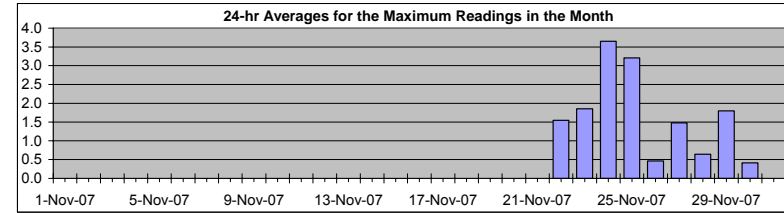
INSTANTANEOUS (30 Second) MAXIMUM TABLE

Hydrogen Sulphide (H₂S)

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Maximum 1-hr Value:	36.2	ppb	24-Nov	18:00 19:00
Maximum 24-hr Value:	3.7	ppb	24-Nov	



AIC Time:	11 hrs	Operational Time:	213 hrs						
Calibration Time:	5 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Median
	18.9	9.6	0.8	0.6	0.4	0.1	0.0	1.6 ppb	0.6 ppb

Status Flag Characters

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

Day Mountain Standard Time

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
2-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
3-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
4-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
5-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
6-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
7-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
8-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
9-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
10-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
11-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
12-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
13-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
14-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
15-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
16-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
17-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
18-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
19-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
20-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
21-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	C	C	C	C	C	A	0	0	0	0	0	0	1	-	0.5
22-Nov-07	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	11	9	1.5	11.4	
23-Nov-07	A	19	8	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	A	1.9	18.5
24-Nov-07	1	1	1	1	1	1	1	1	1	1	1	1	1	1	10	2	12	36	2	1	10	A	1	3.7	36.2	
25-Nov-07	0	1	1	2	3	3	1	1	1	1	1	1	1	0	1	0	1	14	29	11	1	A	1	3.2	29.3	
26-Nov-07	1	0	1	1	1	0	1	0	1	0	1	0	0	0	0	0	1	0	1	A	0	0	0	0.5	0.8	
27-Nov-07	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	0	1	1	A	6	4	4	13	1.5	13.2	
28-Nov-07	5	3	1	1	1	1	1	1	1	0	0	0	0	0	0	0	1	A	1	1	0	0	0	0.6	4.8	
29-Nov-07	2	0	0	0	0	1	19	6	1	1	1	1	0	0	0	0	6	A	1	0	0	0	1	0	1.8	19.0
30-Nov-07	0	0	0	1	0	1	0	1	0	1	0	0	0	0	0	0	A	1	0	1	0	0	0	0	0.4	0.8
Hourly Avg	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N		
Hourly Max	4.8	18.5	7.7	2.3	3.3	2.7	19.0	6.1	0.9	0.8	0.9	0.6	0.6	0.7	1.1	9.8	5.8	14.3	36.2	10.7	5.5	10.4	11.4	13.2		

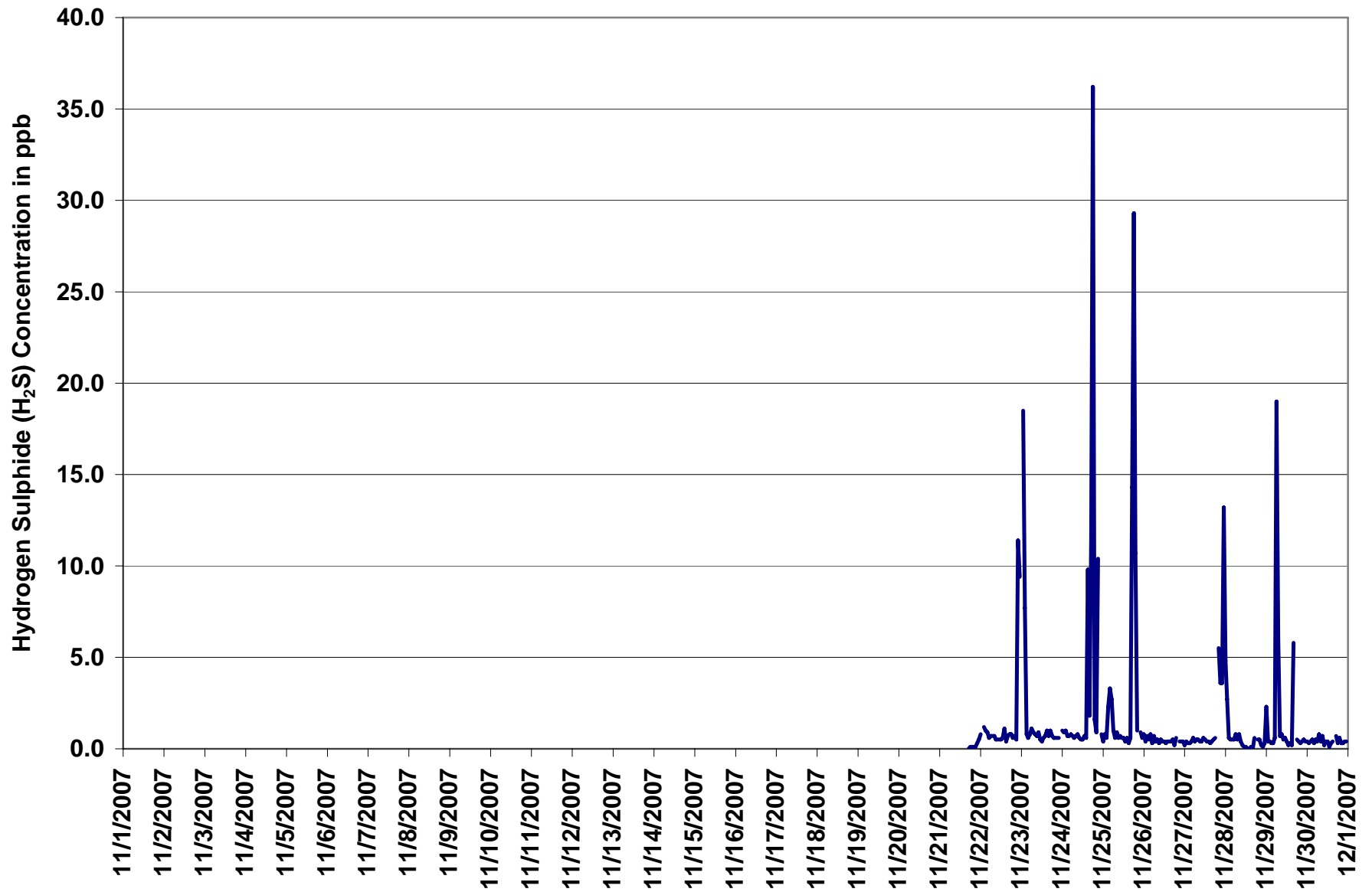
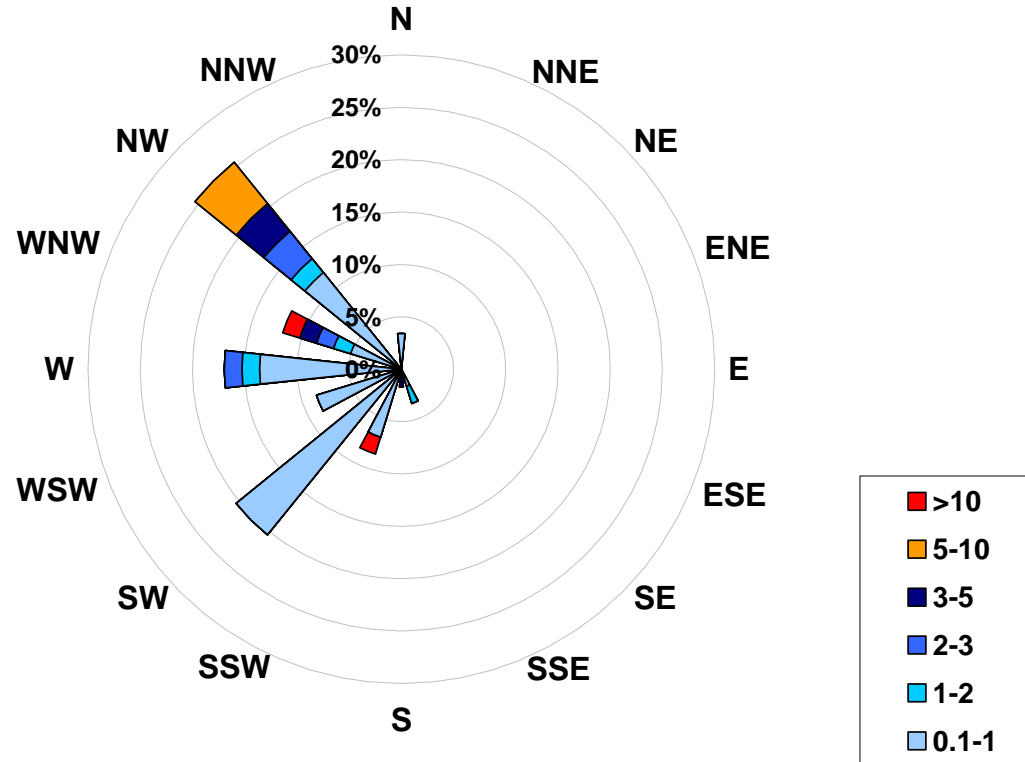


Figure 21. PAS – Portable –Brooks Hydrogen Sulphide Instantaneous (30 Second) Maximum Value Monthly Trend



1-hr Average Concentration Rose for Hydrogen Sulphide (in ppb) Located at the Portable-Brooks Site for November 2007



Calms: 0%

Frequency Distribution of H ₂ S in ppb			
Range		Frequency (hrs)	
0.1	< 1		196
1	to 2		4
2	to 3		4
3	to 5		4
5	to 10		3
	> 10		2
Total Non-Zero Values			213



PAS – Portable-Brooks Scalar Wind Speed Monthly Summary

HOURLY AVERAGE TABLE

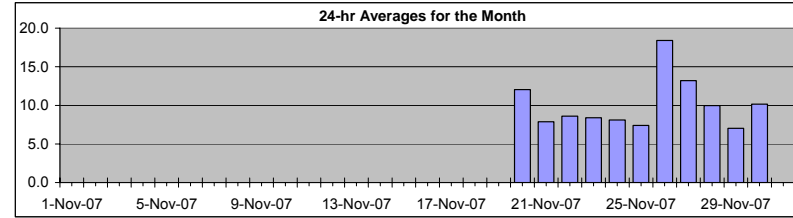
Wind Speed (WSs)

Station: Portable-Brooks
Station Owner: PAS

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Maximum 1-hr Average:	34.7	km/hr	26-Nov	4:00 5:00
Maximum 24-hr Value:	18.4	km/hr	26-Nov	



Calm Time:	0 hrs	0% calms	Operational Time:	273 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%				
Percentile	99	95	75	50	25	5	1	AverageS
	27.5	21.3	11.4	8.6	6.4	4.5	3.4	10.0 km/hr

Status Flag Characters

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

Day	Mountain Standard Time																								24-hr Scalar Average	Daily Max	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
2-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
3-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
4-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
5-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
6-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
7-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
8-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
9-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
10-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
11-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
12-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
13-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
14-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
15-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
16-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
17-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
18-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
19-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	9	4	4	5	7	7	10	9	10	-	9.8
20-Nov-07	9	6	5	7	9	9	9	11	11	8	7	7	10	14	13	19	22	15	20	10	17	14	18	20	12.0	21.6	
21-Nov-07	11	10	8	6	4	6	4	7	7	9	9	10	12	17	13	9	6	7	5	6	5	7	6	6	7.9	17.2	
22-Nov-07	7	6	6	8	11	8	8	10	7	9	10	10	13	12	12	9	6	6	7	7	8	8	9	8	8.6	12.6	
23-Nov-07	8	8	7	6	5	6	6	7	7	6	7	9	10	10	10	12	10	11	12	11	10	10	9	6	8.4	12.0	
24-Nov-07	7	7	8	11	11	13	12	13	12	7	4	8	8	6	6	6	6	6	7	9	4	6	8	11	8.1	13.3	
25-Nov-07	12	11	10	7	7	6	5	6	6	8	9	5	7	9	9	8	7	5	6	6	6	7	7	10	7.4	12.1	
26-Nov-07	11	9	9	19	35	34	33	22	23	13	8	7	6	8	12	16	18	19	21	24	25	26	24	23	18.4	34.7	
27-Nov-07	23	18	18	16	13	15	14	16	18	19	16	17	18	19	17	10	12	9	5	5	4	4	5	5	13.2	23.1	
28-Nov-07	2	3	6	6	6	6	7	17	21	21	23	22	17	12	4	4	6	8	9	8	9	7	8	7	10.0	22.7	
29-Nov-07	7	7	9	9	5	5	3	5	4	5	7	10	11	11	10	8	6	6	6	6	7	8	7	9	7.0	11.3	
30-Nov-07	9	11	9	13	11	10	11	14	11	9	11	11	11	8	5	5	10	11	12	11	16	13	9	6	10.2	15.9	

1-hr Average	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	N	N
Hourly Max	23.1	17.7	18.0	19.4	34.7	33.8	32.8	22.4	22.6	20.7	22.7	22.0	18.4	19.2	16.6	18.6	21.6	18.5	20.5	24.0	25.1	25.5	24.4	22.9			



PAS – Portable-Brooks Vector Wind Speed Monthly Summary

HOURLY AVERAGE TABLE

Wind Speed (WSv)

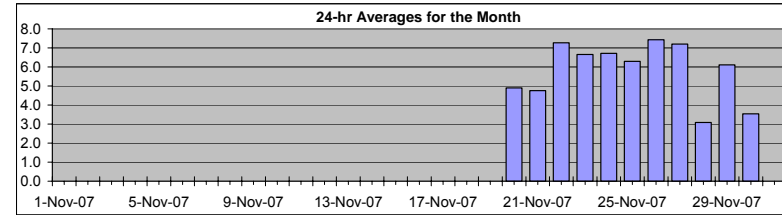
Station: Portable-Brooks
 Station Owner: PAS

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Maximum 1-hr Average:	34.6	km/hr	26-Nov	4:00 5:00
Maximum 24-hr Value:	7.4	km/hr	26-Nov	

Calm Time:	0 hrs	0% calms	Operational Time:	273 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%				
Percentile	99	95	75	50	25	5	1	AverageV
	27.5	21.2	11.4	8.4	6.1	4.2	2.9	7.6 km/hr



Status Flag Characters

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

Day	Mountain Standard Time																								24-hr Vector Average	Daily Max	
Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24:00		
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
2-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
3-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
4-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
5-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
6-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
7-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
8-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
9-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
10-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
11-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
12-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
13-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
14-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
15-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
16-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
17-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
18-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-	-
19-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	8	4	4	5	7	7	9	9	10	-	9.8	
20-Nov-07	9	6	5	7	9	9	9	11	11	7	7	7	10	14	13	19	22	15	20	10	16	14	18	20	4.9	21.6	
21-Nov-07	11	9	8	6	4	5	4	6	7	8	8	10	12	17	13	9	5	7	5	6	5	7	6	6	4.8	17.1	
22-Nov-07	7	6	6	8	11	8	8	10	7	9	10	10	13	12	12	9	6	6	7	7	8	8	9	8	7.3	12.5	
23-Nov-07	8	8	7	5	5	6	6	7	7	6	7	8	9	10	10	11	10	11	12	11	10	10	9	6	6.6	12.0	
24-Nov-07	6	7	8	11	11	13	12	13	12	7	4	8	5	5	5	5	5	6	6	6	2	6	8	11	6.7	13.3	
25-Nov-07	12	11	9	7	7	5	5	5	6	8	9	5	7	9	8	8	7	5	6	5	6	7	7	10	6.3	11.8	
26-Nov-07	11	9	9	16	35	34	33	22	23	13	8	6	5	7	12	16	17	18	20	24	25	26	24	23	7.4	34.6	
27-Nov-07	23	18	18	16	13	14	14	16	18	19	16	17	18	19	17	10	12	9	5	5	3	4	5	5	7.2	23.1	
28-Nov-07	2	3	6	6	6	6	6	17	21	21	23	22	17	12	3	4	6	8	9	8	9	6	8	6	3.1	22.6	
29-Nov-07	7	7	9	9	4	4	3	4	4	5	7	10	11	11	10	8	6	6	6	6	7	7	7	8	6.1	11.3	
30-Nov-07	9	11	9	13	11	10	11	14	10	9	11	11	10	8	4	5	10	11	12	11	15	12	9	5	3.5	15.4	
1-hr Vector	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		
Hourly Max	23.1	17.6	17.9	16.1	34.6	33.7	32.7	22.2	22.5	20.6	22.6	21.8	18.3	19.1	16.5	18.5	21.6	18.3	20.4	24.0	25.0	25.5	24.3	22.8			



PAS – Portable-Brooks Standard Deviation of Wind Direction Monthly Summary

HOURLY AVERAGE TABLE

Wind Direction (WD)

Station: Portable-Brooks
Station Owner: PAS

Monitoring Dates: November 1, 2007 to December 1, 2007

Summary

Determined by the Yamartino 15-min interval calculation

Calm Time:	0 hrs	0% calms	Operational Time:	273 hrs			
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%			
Percentile	99	95	75	50	25	5	1
	62.6	35.6	15.8	8.7	6.1	4.0	3.1

Status Flag Characters

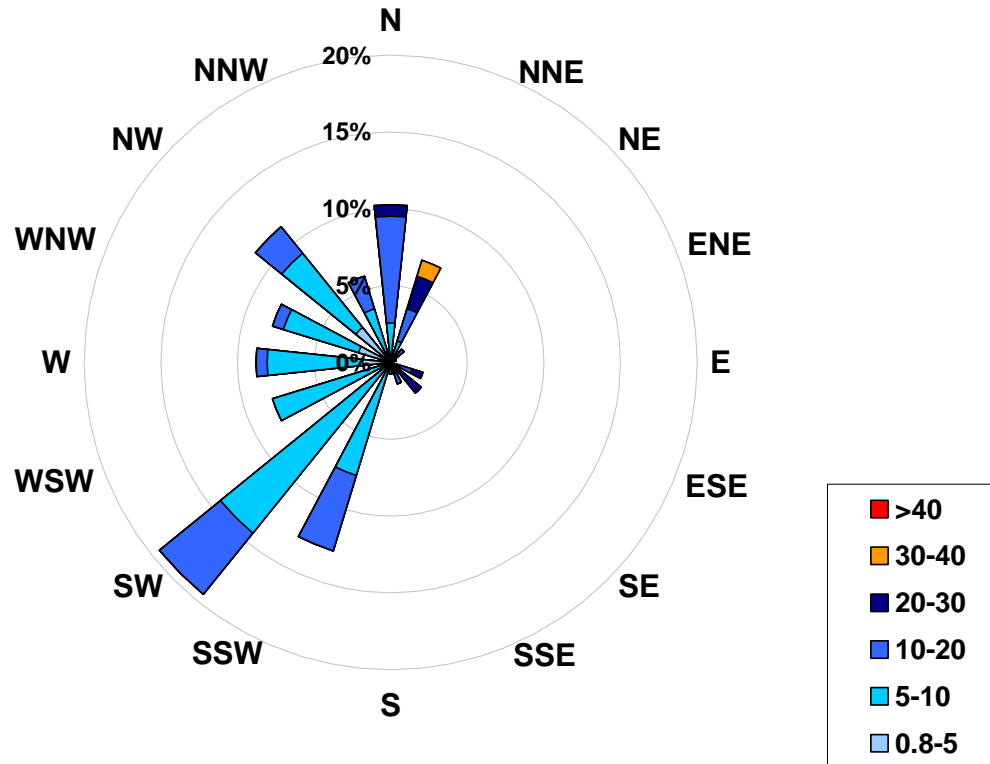
C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	X	Filter Exchange
N	No Data	M	Equipment Maintenance
D	Excessive Instrument Drift	P	Power Failure

Day	Mountain Standard Time																								Daily Maximum		
	Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00		23:00	Hour End
1-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
2-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
3-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
4-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
5-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
6-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
7-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
8-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
9-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
10-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
11-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
12-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
13-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
14-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
15-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
16-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
17-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
18-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	-
19-Nov-07	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	OS	8	23	19	16	8	41	13	4	5		40.8
20-Nov-07	2	8	18	7	5	10	7	5	4	20	16	31	16	12	9	5	4	6	4	7	4	6	5	4		31.0	
21-Nov-07	7	8	13	21	18	31	23	17	18	17	21	18	14	8	12	15	21	4	9	11	15	5	8	8		30.9	
22-Nov-07	11	10	10	7	7	4	6	10	9	8	9	9	7	8	8	9	17	8	8	6	11	5	5	5		17.3	
23-Nov-07	4	6	9	22	11	9	12	7	4	12	18	11	14	13	15	7	6	4	4	6	9	4	12	18		21.7	
24-Nov-07	25	9	5	5	4	4	4	4	8	17	38	21	63	38	42	36	36	21	17	62	81	32	20	12		81.3	
25-Nov-07	13	8	29	15	10	16	15	18	27	7	8	19	17	14	28	9	9	12	9	17	5	13	9	6		28.7	
26-Nov-07	4	11	20	71	3	4	5	7	7	10	18	26	46	33	14	9	7	8	7	4	5	4	5	3		70.7	
27-Nov-07	4	4	6	8	7	13	4	6	4	5	7	5	7	6	6	7	8	6	10	10	22	16	12	12		21.8	
28-Nov-07	51	28	21	6	12	17	40	7	6	6	7	7	7	11	51	23	12	6	6	7	4	8	8	22		50.8	
29-Nov-07	13	7	6	9	38	16	16	9	9	6	6	9	6	10	8	6	4	5	7	20	14	15	11	9		37.7	
30-Nov-07	10	7	9	5	7	10	7	3	8	7	6	5	16	23	35	14	5	7	4	4	15	26	13	27		34.5	

Hourly Max	51	28	29	71	38	31	40	18	27	20	38	31	63	38	51	36	36	21	17	62	81	32	20	27
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1-hr Average Wind Rose (in km/hr) Located at the Portable-Brooks Site for November 2007



Calms: 0%

Frequency Distribution of Wind in km/hr Range			Frequency (hrs)
0.8	<	5	22
5	to	10	152
10	to	20	79
20	to	30	15
30	to	40	3
	>	40	0
Total Non-Zero Values			273



PALLISER AIRSHED SOCIETY

Passive Monitoring – November 2007



Palliser Airshed Society - Palliser Passive Stations for November 2007
Palliser Passive Monitoring Expansion

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Location		Elevation meter
					Easting	Northing	
Duplicates							
3a	Site 3	0.4	26.1	1.2			
3b	Site 3	0.3	23.3	1.5			
13a	Site 13	0.3	25.6	1.3			
13b	Site 13	0.4	26.9	1.7			
1	Site 1	0.3	26.7	1.8	562434	5583139	719
2	Site 2	0.3	24.7	1.9	565416	5616277	
3	Site 3	0.4	24.7	1.3	533794	5675379	779
4	Site 4	0.4	24.1	1.6	554771	5717338	718
5	Site 5	0.3	20.6	2.1	494218	5715862	735
6	Site 6	0.4	22.8	2.4	433039	5673766	818
7	Site 7	0.3	22.2	3.4	400808	5620907	780
8	Site 8	0.5	24.3	3.1	498530	5621839	747
9	Site 9	0.6	21.3	3.9	487701	5591707	763
10	Site 10	0.4	23.4	3.4	478223	5613583	774
11	Site 11 - Brooks	0.5	19.6	8.7	439773	5604548	736
12	Site 12	0.2	18.8	2.8	450287	5587201	726
13	Site 13	0.4	26.3	1.5	464279	5548934	
14	Site 14	0.2	27.7	0.9	493206	5521201	870
15	Site 15	0.3	31.0	1.4	465824	5485742	874
16	Site 16	0.2	30.2	0.8	503827	5446942	903
17	Site 17	0.2	27.9	0.5	557668	5452307	942
18	Site 18 - Christian School Park	0.3	23.0	6.1	526575	5538135	709
19	Site 19 - Monitoring Station	0.4	23.0	6.8	522813	5544137	714
20	Site 20 - Redcliff	0.4	24.2	3.6	517479	5546059	725



Alberta Ambient Air Quality Objective - Annual SO₂ Objective is 11 ppb

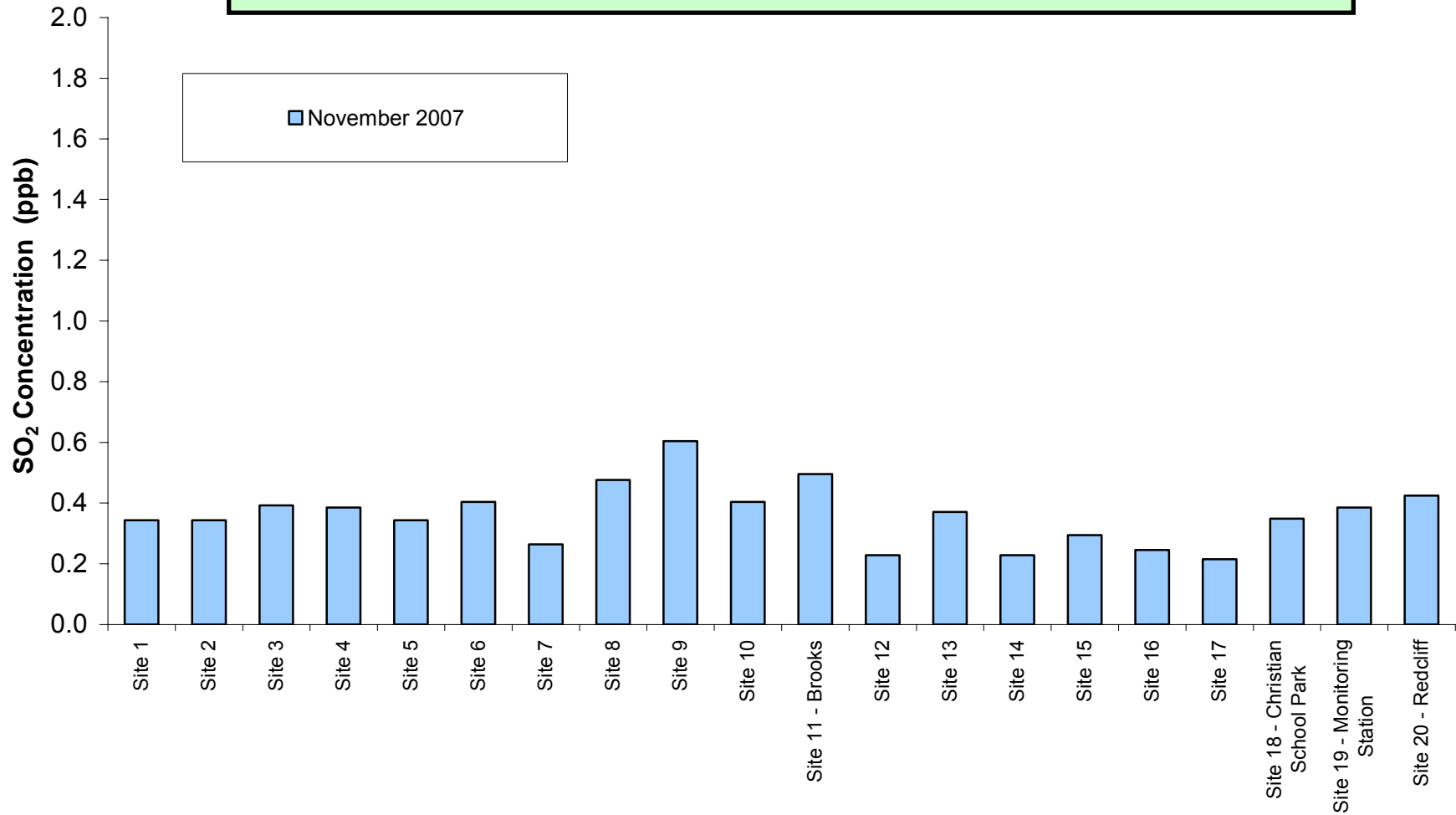


Figure 22. PAS – SO₂ Passive Summary Chart



Alberta Ambient Air Quality Objective - No Annual O₃ Objective

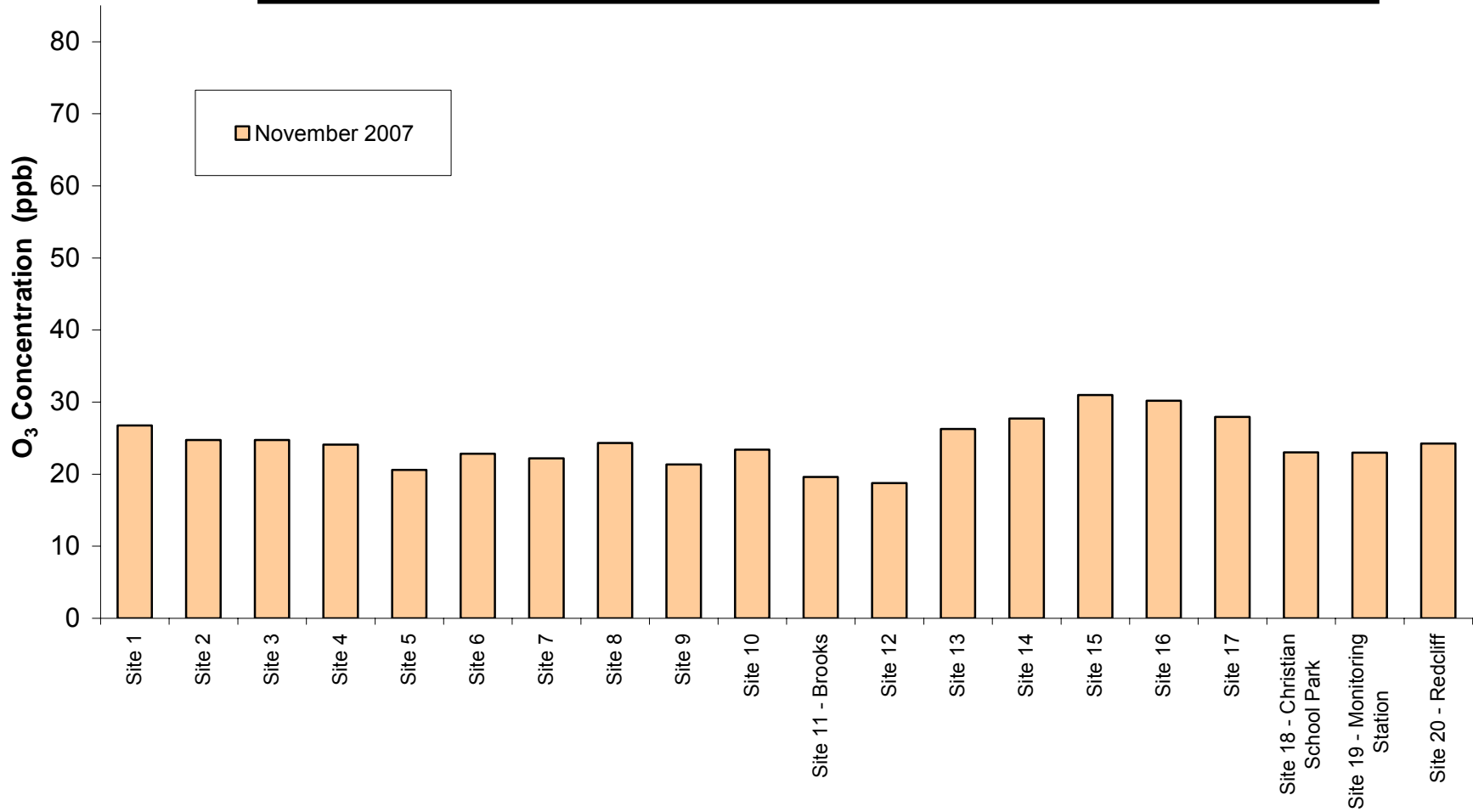


Figure 23. PAS – O₃ Passive Summary Chart



Alberta Ambient Air Quality Objective - Annual NO₂ Objective is 32 ppb

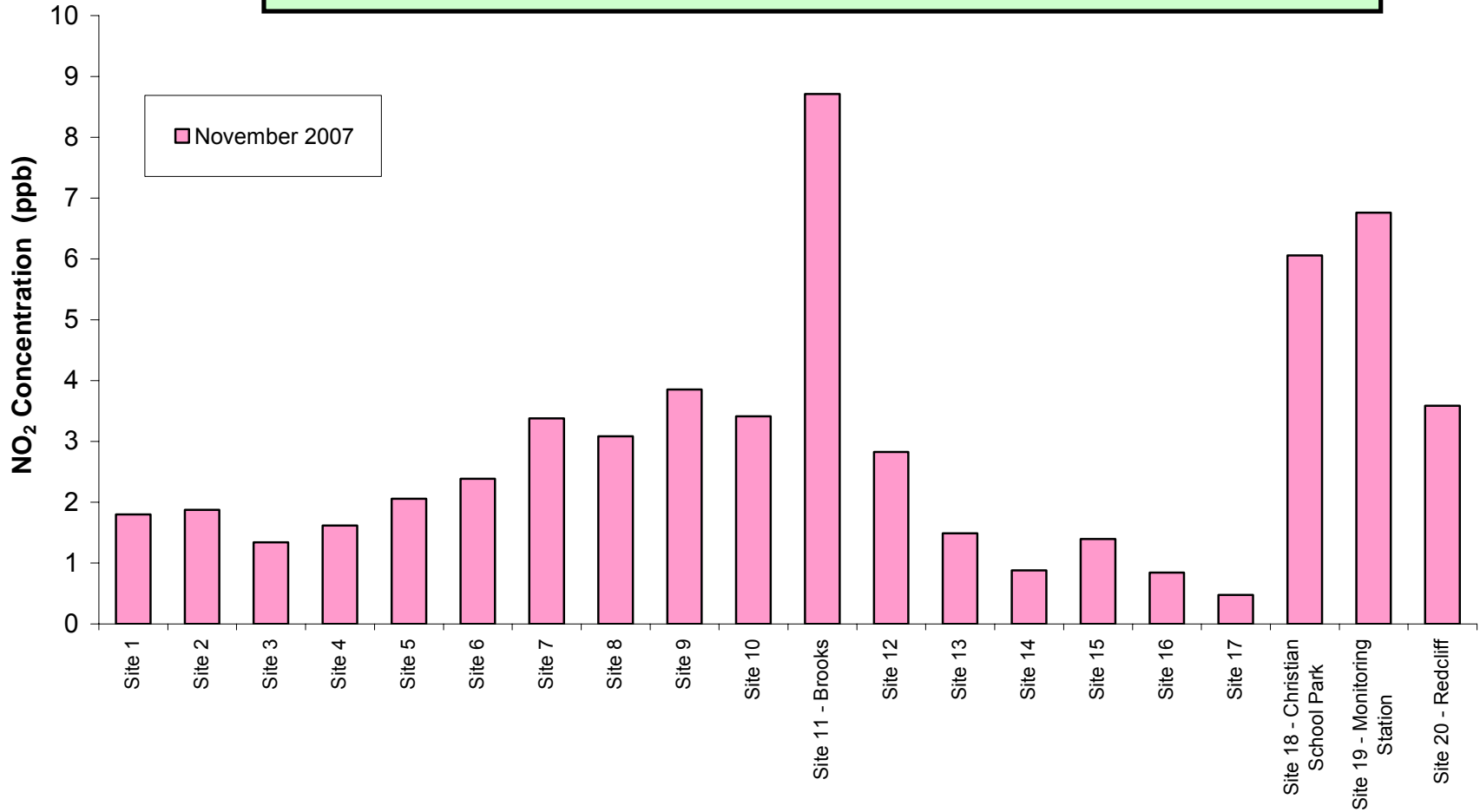


Figure 24. PAS – NO₂ Passive Summary Chart

Palliser Airshed Society November 2007 - Calibration Reports

Crescent Heights Station: O₃, NO_x, NO, NO₂, THC, CO and TEOM

Portable-Brooks: O₃, SO₂, and H₂S

Calibration Report

Parameter **O3**Air Monitoring Network **Palliser Airshed**

Station Information

Calibration Date	November 20, 2007	Previous Calibration	October 30, 2007
Station Number	1	Station Location	Crescent Heights
Reason:	Routine	Calibration	Removal
			Other:
Start Time (MST)	17:00	End Time (MST)	20:00
Barometric Pressure	27.8 inches Hg	Station Temperature	20.0 Deg C
Calibrator	Envionics 6103	Serial Number	2844
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45270
DACS voltage range	0 - 10 volt	DACS channel #	5
	Before		After
Calculated slope	0.947741	Calculated slope	0.990293
Calculated intercept	1.500558	Calculated intercept	0.988183
Analyzer make	TEI 49i	Analyzer serial #	713021144

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
O3 Background	0.6	ppb	0.6	ppb
O3 Coeff	1.099		1.099	
CellA	86926.0	Hz	86926.0	Hz
CellB	116655.0	Hz	116655.0	Hz
Pressure	699.1	mmHg	699.1	mmHg
Cell A Flow	724.0	ccm	724.0	ccm
Cell B Flow	714	ccm	714	ccm
Bench	32.2	Deg C	32.2	Deg C

Calibration Data

Dilution air flow rate (cc/min)	Ozone Set Point	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4997	0.0	0.0	1.2	N/A
4997	300.0	281.8	283.7	0.9933
4997	200.0	188.4	190.9	0.9868
4997	100.0	93.9	89.8	1.0453
4997	0.0	0.0	1.2	0.0000
4997	300.0	281.8	238.2	1.1832
Average Correction Factor				1.0085

Calculated value of As Found Response: 226.1 ppm Percent Change of As Found: -19.8%

	before calibration		after calibration	
Auto zero	-3.4	ppb	2.6	ppb
Auto span	370.3	ppb	141.9	ppb

Notes: Adjusted Span ...

Calibration Performed By: Lenin Flores

Calibration Summary

Parameter **O3**
 Air Monitoring Network **Palliser Airshed**

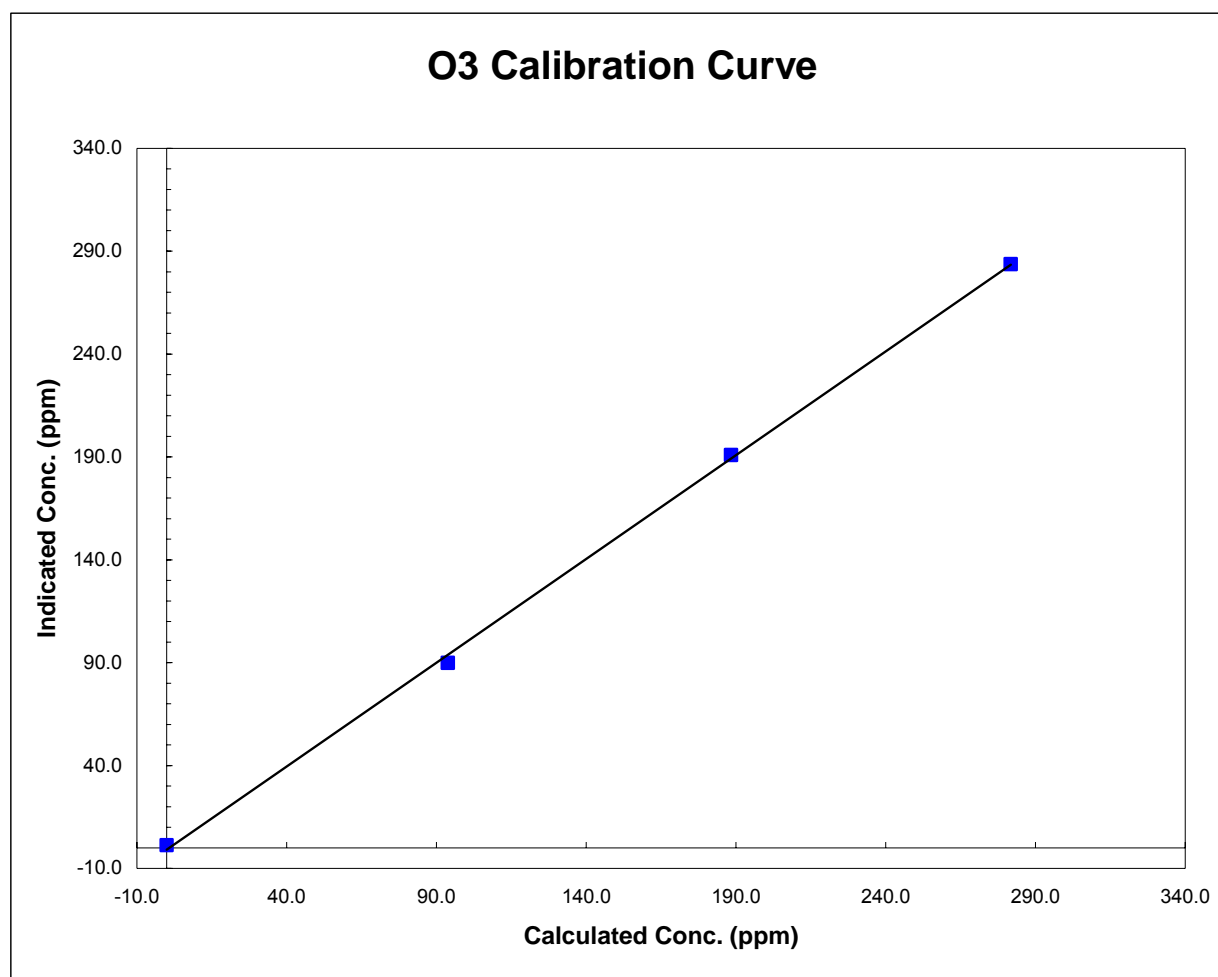


Station Information

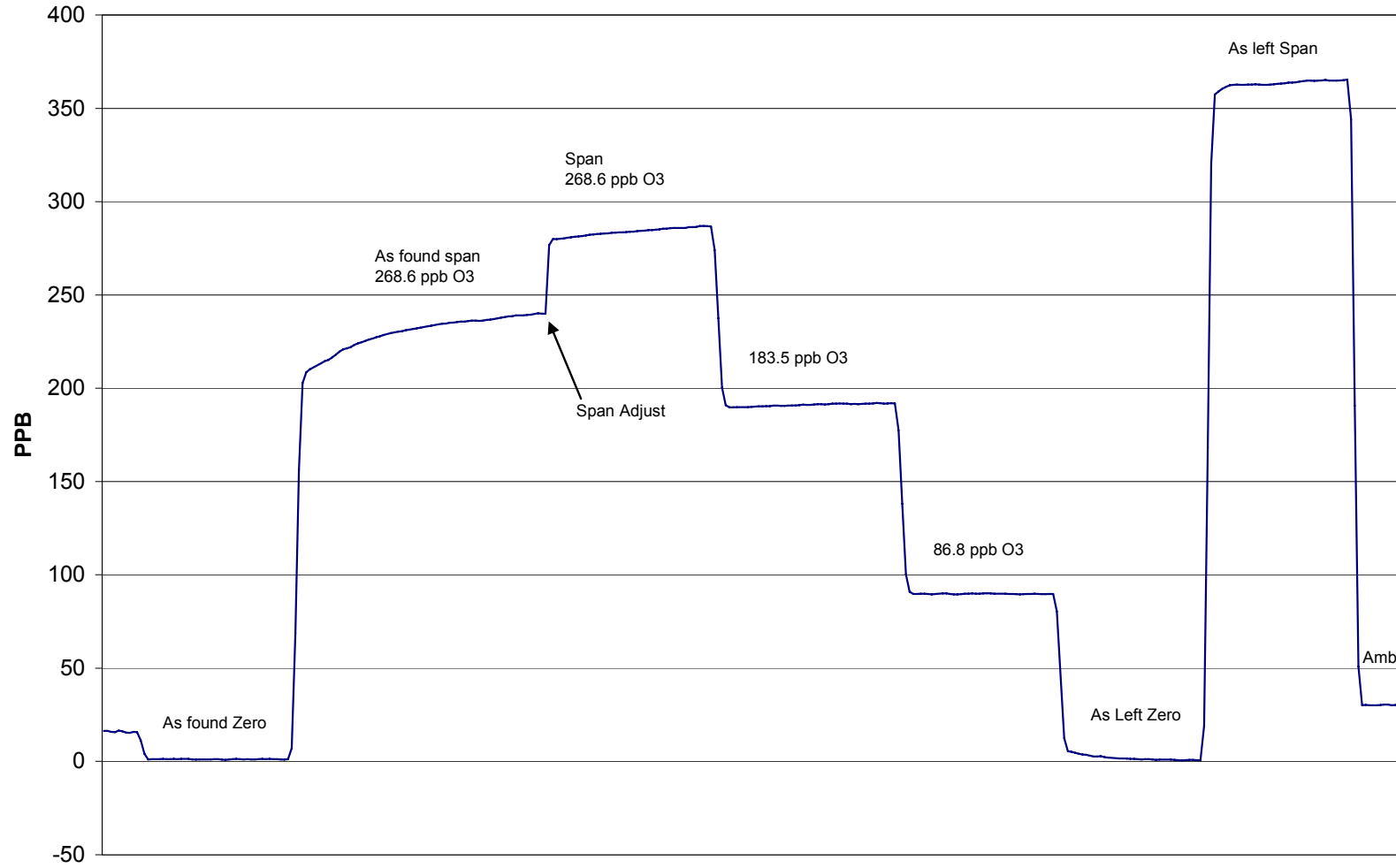
Calibration Date	November 20, 2007	Previous Calibration	October 30, 2007
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	17:00	End Time (MST)	20:00
Analyzer make/model	TEI 49i	Analyzer serial #	713021144

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
281.8	283.7	0.9933	Correlation Coefficient	0.999476
188.4	190.9	0.9868		
93.9	89.8	1.0453		
0.0	1.2	N/A		
			Slope	0.990293
			Intercept	0.988183



Crescent Heights O3 Calibration



November 20, 2007

Calibration Report

Parameter
Air Monitoring Network

NOx-NO-NO₂
Palliser Airshed



Station Information

Calibration Date November 20, 2007 Previous Calibration October 29, 2007
Station Number 1 Station Location Crescent Heights

Reason: **Routine** Installation Removal Other: _____

Start Time (MST)	<u>8:00</u>	End Time (MST)	<u>14:57</u>
Barometric Pressure	<u>27.8</u> inches Hg	Station Temperature	<u>21.5</u> Deg C
Calibrator	<u>EnviroNics 6103</u>	Serial Number	<u>2844</u>
NO Cal Gas Conc	<u>48.9</u> ppm	Cal Gas Expiry Date	<u>5-Dec-07</u>
NOx Cal Gas Conc	<u>48.9</u> ppm	Cal Gas Serial #	<u>LL-50114</u>

DACS Information

DACS make FOCUS AP1000 DACS serial No. 45270

Parameter		NO2	NOx	NO
Before	Data Slope	1.003328	1.002476	1.005770
	Data Offset	-0.398505	-0.404648	1.440454
After	Data Slope	1.014879	1.002864	1.001207
	Data Offset	0.514905	-0.233088	-1.034415
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 offset	-0.1	mV	-0.1	mV
NOx offset	0.8	mV	0.8	mV
NO slope	2.701		2.841	
NOx slope	2.786		2.852	
R Cell Temp	50.0	Deg C	50.0	Deg C
PMT Temp	7.0	Deg C	7.0	Deg C
Azero	41.8	mV	44.1	mV
Perm Temp	40.2	Deg C	40.2	Deg C
R Cell Press	3.8	in Hg	3.9	in Hg
Sample Press	27.4	in Hg	27.4	in Hg
O3 Flow	75.0	ccm	75.0	ccm
Sample Flow	457.0	ccm	457.0	ccm

Notes: _____

Calibration Report

Parameter

NO_x-NO-NO₂

Air Monitoring Network

Palliser Airshed



Station Information

Calibration Date: November 20, 2007

Station Location: Crescent Heights

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NO _x conc (ppb)	Calculated NO conc (ppb)	Calculated NO ₂ conc (ppb)	Indicated NO _x conc (ppb)	Indicated NO conc (ppb)	Indicated NO ₂ conc (ppb)	NO _x Correction factor	NO Correction factor
zero	4997	0.00	0.0	0.0	0.0	-2.0	-0.5	0.5	N/A	N/A
1	4997	39.95	387.8	387.8	0.0	385.2	386.9	-3.0	1.0067	1.0024
2	4997	19.96	194.6	194.6	0.0	197.0	198.2	-2.9	0.9878	0.9818
3	4997	9.95	97.2	97.2	0.0	98.4	98.3	-1.9	0.9877	0.9890
AFZ	4997	0.00	0.0	0.0	0.0	-2.0	-2.2	-1.5	0.0000	0.0000
AFS	4997	39.96	387.9	387.9	0.0	378.4	374.0	3.1	1.0251	1.0374
								Average Correction Factor	0.9941	0.9911

As Found Concentrations

NO_x= 380.1

NO= 377.6

As Found Percent Change

NO_x= -2.0%

NO= -2.7%

GPT Calibration Data

Dilution Flow 4997 ccm Source Gas Flow 39.96 ccm

O ₃ Setpoint (ppb)	Calculated NO _x conc (ppb)	Calculated NO conc (ppb)	Calculated NO ₂ conc (ppb)	Indicated NO _x conc (ppb)	Indicated NO conc (ppb)	Indicated NO ₂ conc (ppb)	NO _x Correction factor	NO Correction factor	NO ₂ Correction factor	Converter Efficiency	
0	384.1	381.4	2.8	383.2	381.9	0.5	N/A	N/A	N/A	N/A	
300	375.1	93.3	281.8	374.3	94.3	277.7	1.0022	0.9902	1.0147	98.6%	
200	375.4	186.9	188.4	374.5	187.7	185.0	1.0022	0.9957	1.0186	98.2%	
100	371.4	277.5	93.9	370.5	278.2	90.6	1.0022	0.9975	1.0364	96.5%	
							Average Correction Factor	1.0022	0.9945	1.0232	97.7%

AIC Data

Parameter	Previous calibration				Current calibration			
	NO _x	NO ₂	NO		NO _x	NO ₂	NO	
Auto zero	0.2	-2.4	-0.6	ppb	-1.9	-1.4	-3.1	ppb
Auto span	432.3	418.3	8.2	ppb	416.8	410.9	8.5	ppb

Calibration Performed By: Lenin Flores

Calibration Summary

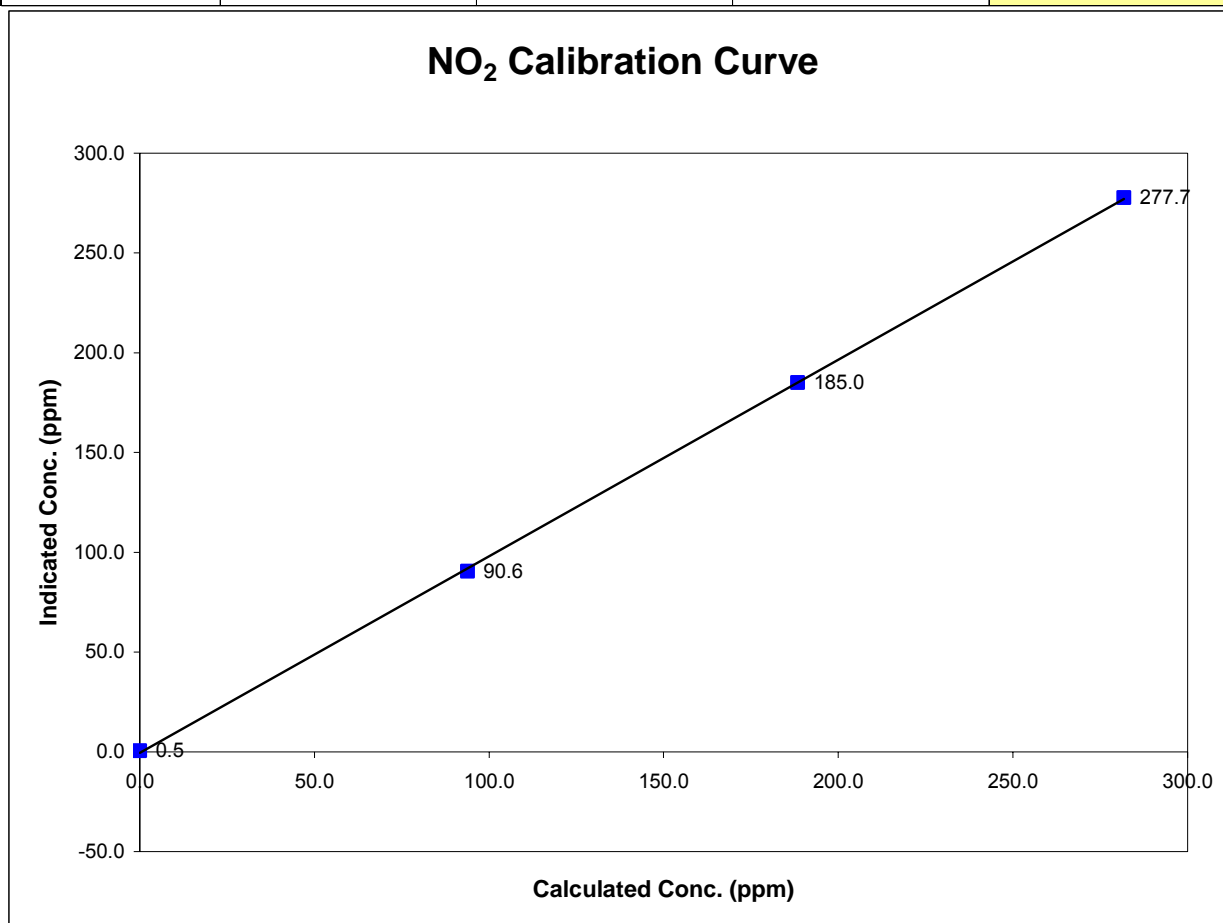
Parameter **NO₂**Air Monitoring Network **Palliser Airshed**

Station Information

Calibration Date	November 20, 2007	Previous Calibration	October 29, 2007
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	8:00	End Time (MST)	14:57
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	0.5	0.0000	Correlation Coefficient	0.999922
281.8	277.7	1.0147		
188.4	185.0	1.0186		
93.9	90.6	1.0364		
			Slope	1.014879
			Intercept	0.514905



Calibration Summary

Parameter

NO_x

Air Monitoring Network

Palliser Airshed

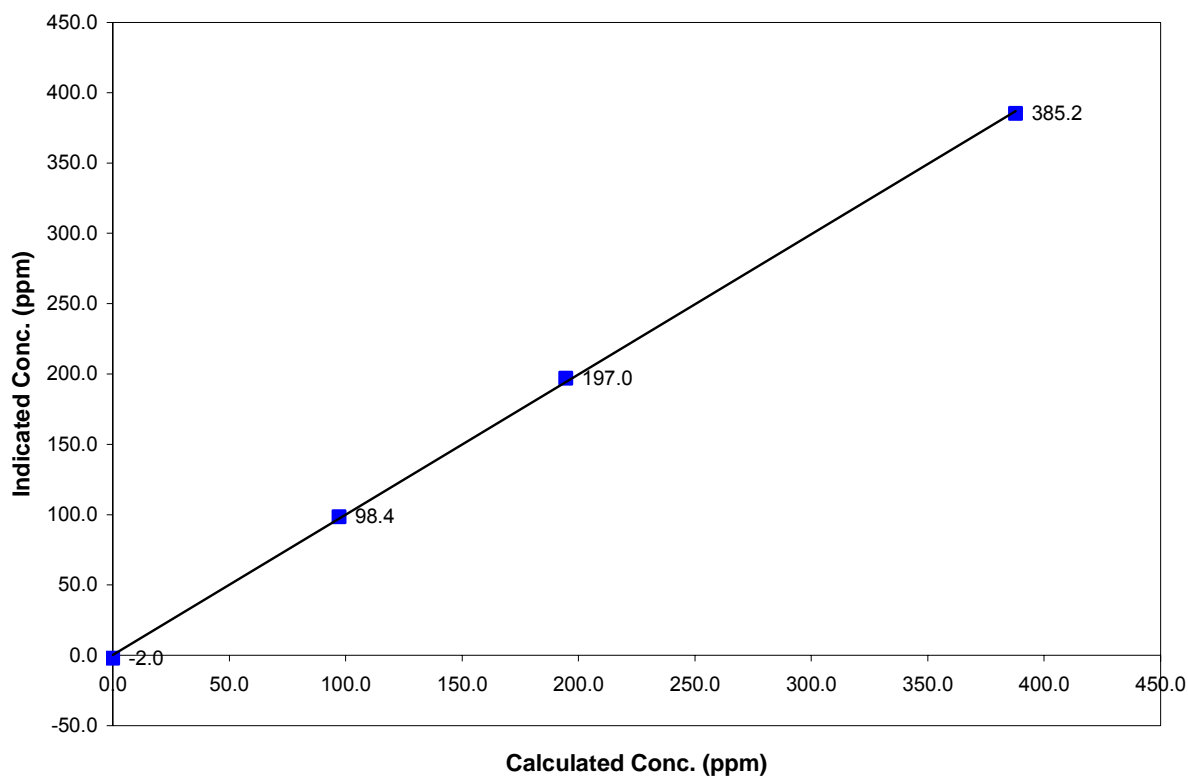
Station Information

Calibration Date	November 20, 2007	Previous Calibration	October 29, 2007
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	8:00	End Time (MST)	14:57
Analyzer make	API Model 200E	Analyzer serial #	219

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-2.0	0.0000	Correlation Coefficient	0.999793
387.8	385.2	1.0067		
194.6	197.0	0.9878	Slope	1.002864
97.2	98.4	0.9877		

NO_x Calibration Curve



Calibration Summary

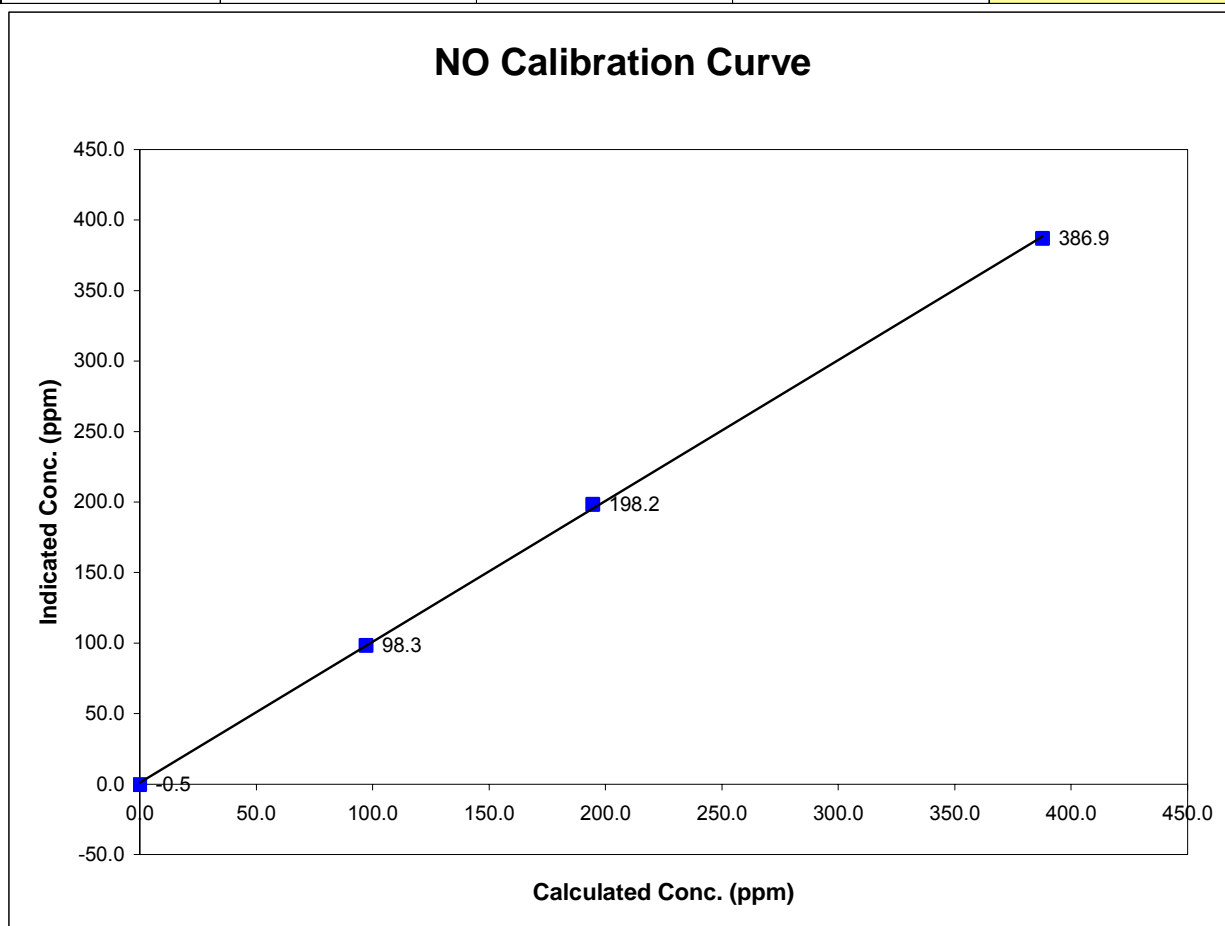
Parameter **NO**Air Monitoring Network **Palliser Airshed**

Station Information

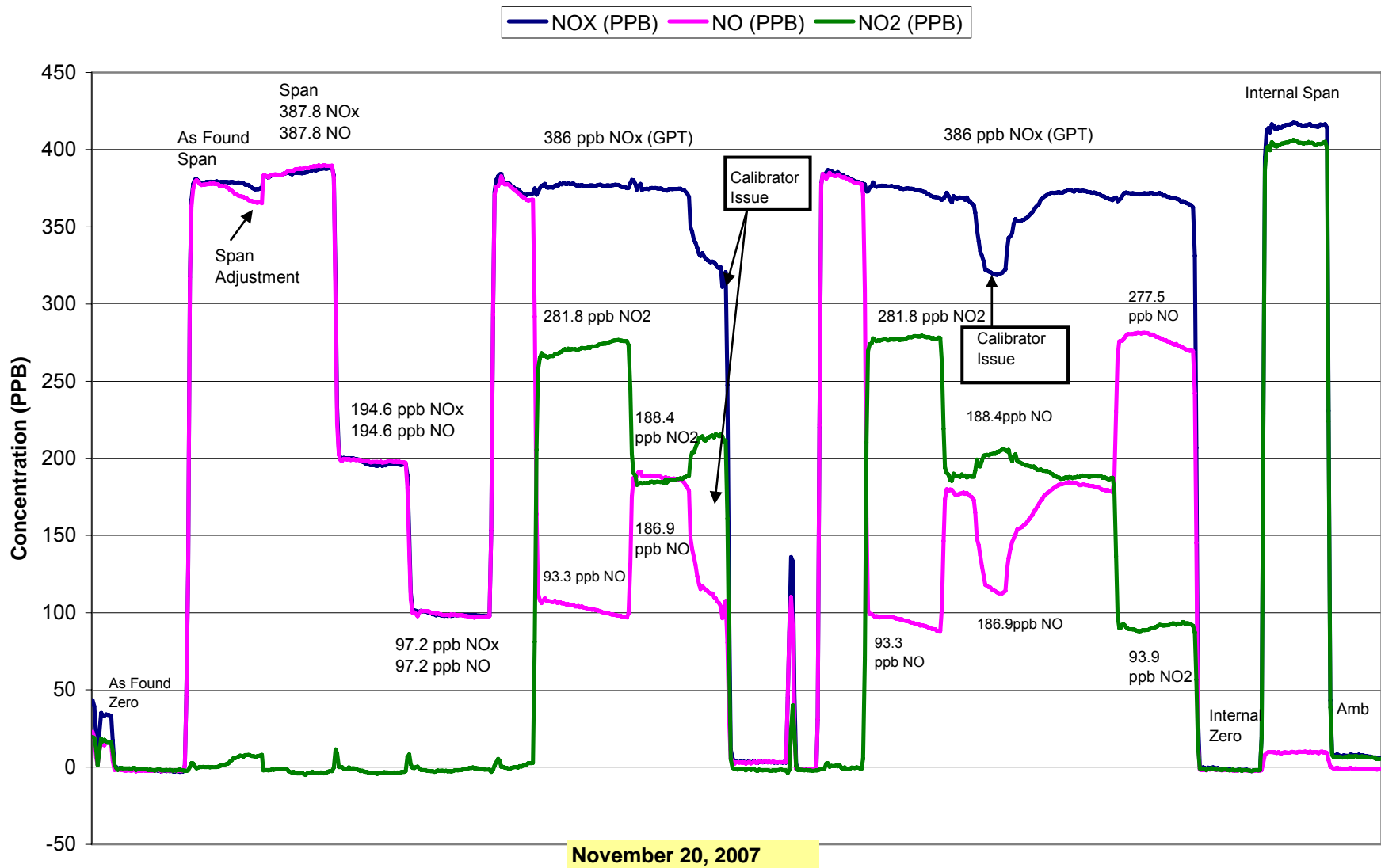
Calibration Date	November 20, 2007	Previous Calibration	October 29, 2007
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	8:00	End Time (MST)	14:57
Analyzer make	API Model 200E	Analyzer serial #	219

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.5	N/A	Correlation Coefficient	0.999850
387.8	386.9	1.0024		
194.6	198.2	0.9818	Slope	1.001207
97.2	98.3	0.9890		
			Intercept	-1.034415



Crescent Heights - NOX Calibration



Calibration Report

Parameter **THC**
Air Monitoring Network **Palliser Airshed**



Station Information

Calibration Date	November 20, 2007	Previous Calibration	October 29, 2007
Station Number	1	Station Location	Crescent Heights
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	13:30	End Time (MST)	16:15
Barometric Pressure	27.5 inches Hg	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	2844
Cal Gas Concentration	708 ppm CH ₄ / 299 ppm C ₃ H ₈	Cal Gas Expiry Date	1/25/2009
Cal Gas CH ₄ equiv	1530.25 ppm	Cal Gas Cylinder #	LL-41839
DACS make	Focus AP1000	DACS serial No.	45270
DACS voltage range	0 - 10 volt	DACS channel #	9
	Before		After
Calculated slope	0.988037	Calculated slope	0.994542
Calculated intercept	0.112221	Calculated intercept	-0.678299
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	5.71	PSI
THC span counts	12605	raw	12340	raw
THC zero counts	1370	raw	1471	raw
V Bias	-327	Volts	-326	Volts

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)
4996	0.00	0.00	0.80	N/A
4996	79.85	24.07	24.95	0.9649
4996	39.94	12.14	12.82	0.9467
4996	19.97	6.09	6.69	0.9106
4996	0.00	0.00	0.80	As Found Zero
4996	79.85	24.07	24.95	As Found Span
Average Correction Factor				0.9407

Calculated value of As Found Response: 23.968 ppm Percent Change of As Found: 0.4%

	before calibration		after calibration	
Auto zero	-0.06	ppm	-0.31	ppm
Auto span	18.57	ppm	20.85	ppm

Notes: No adjustments were made...

Calibration Performed By: Lenin Flores

Calibration Summary

Parameter **THC**
 Air Monitoring Network **Palliser Airshed**

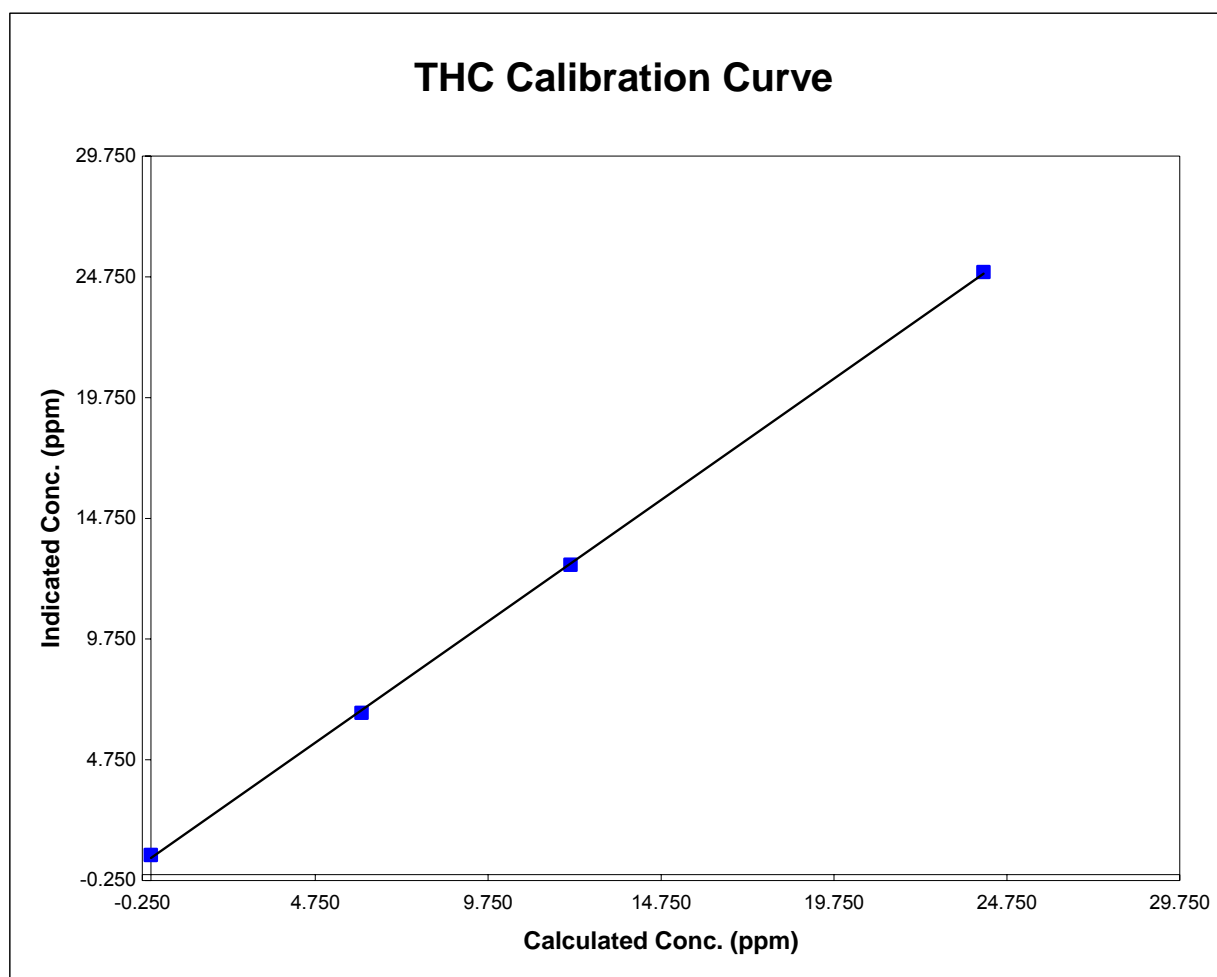


Station Information

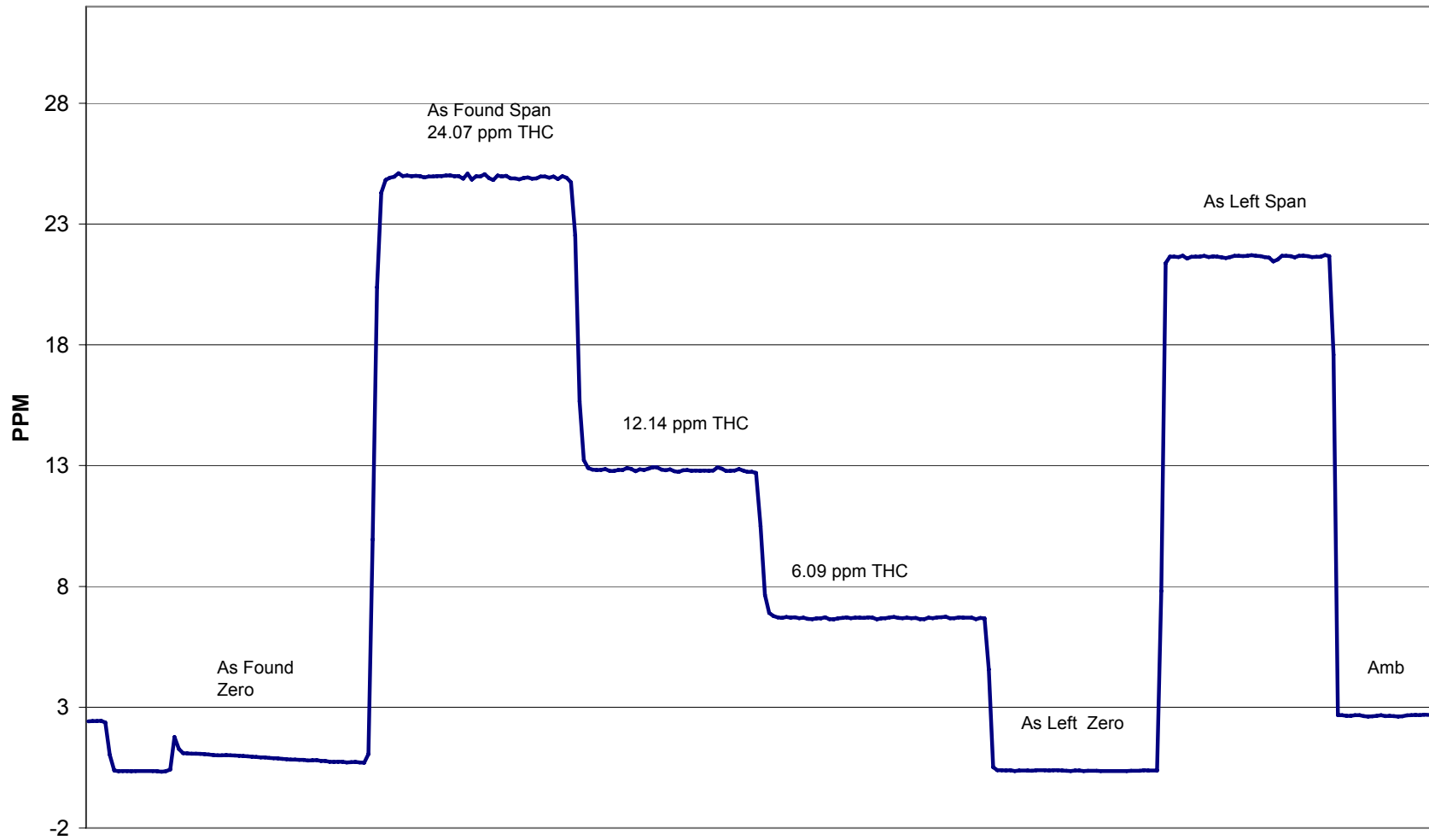
Calibration Date	November 20, 2007	Previous Calibration	October 29, 2007
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	13:30	End Time (MST)	16:15
Analyzer make/model	TEI model 51C-LT	Analyzer serial #	407505596

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.803	N/A		
24.073	24.948	0.9649	Correlation Coefficient	0.999887
12.136	12.820	0.9467		
6.092	6.691	0.9106	Slope	0.994542
			Intercept	-0.678299



Crescent Heights - THC Calibration



November 20, 2007

Calibration Report



Parameter **CO**
 Air Monitoring Network **Palliser**

Station Information

Calibration Date	November 20, 2007	Previous Calibration	October 29, 2007
Station Number	1	Station Location	Crescent Heights
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	15:20	End Time (MST)	17:50
Barometric Pressure	27.40 in Hg	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	2844
Cal Gas Conc	2998 ppm	Cal Gas Expiry Date	3/14/2008
		Cal Gas Cylinder #	BLM002248
DACS make	Focus AP1000	DACS serial No.	45270
DACS voltage range	0 - 1 volt	DACS channel #	11
	Before		After
Calculated slope	0.998623	Calculated slope	1.026021
Calculated intercept	-0.010323	Calculated intercept	-0.274124
Analyzer make	TEI Model 48C	Analyzer serial #	436609887

	before		after	
Concentration range	0 - 50	ppm	0 - 50	ppm
CO coefficient	1.080		1.080	
CO bkg setting	1.204		1.202	
Lamp ratio	1.142139		1.141572	
Lamp intensity	199157	Hz	199242	Hz
Sample Flow	1.011	LPM	1.011	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)
4996	0.00	0.00	0.06	N/A
4996	69.89	41.36	40.43	1.0229
4996	39.94	23.78	23.59	1.0081
4996	19.97	11.94	12.11	0.9859
4996	0.00	0.00	0.06	0.0000
4996	69.89	41.36	40.43	1.0229
Average Correction Factor				1.0056

Calculated value of As Found Response: 40.305 ppm Percent Change of As Found: 2.6%

	before calibration		after calibration	
Auto zero	-0.07	ppm	-0.11	ppm
Auto span	19.20	ppm	20.04	ppm

Notes: No adjustments made

Calibration Performed By: Lenin Flores

Calibration Summary



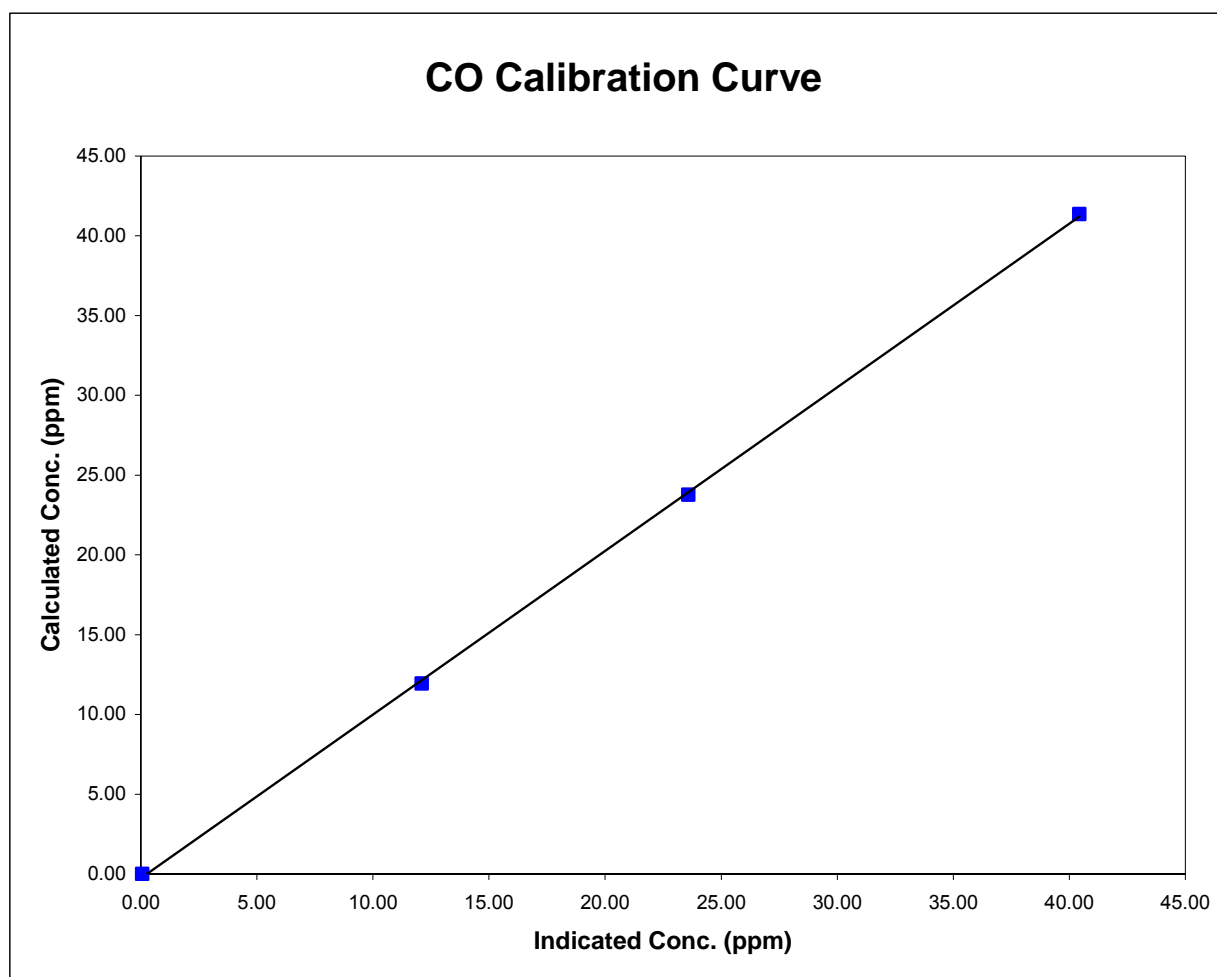
Parameter **CO**
 Air Monitoring Network **Palliser**

Station Information

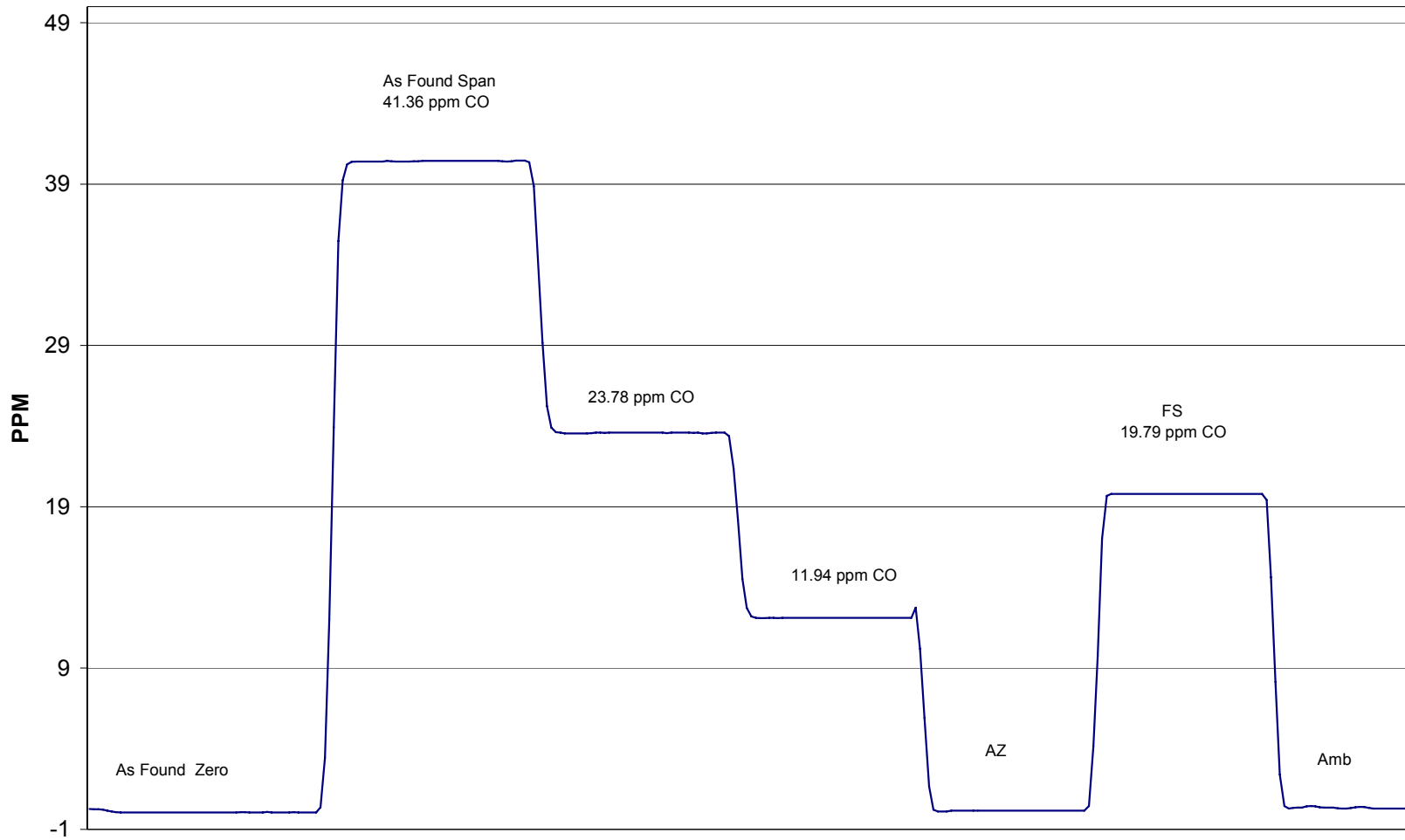
Calibration Date	November 20, 2007	Previous Calibration	October 29, 2007
Station Number	1	Station Location	Crescent Heights
Start Time (MST)	15:20	End Time (MST)	17:50
Analyzer make/model	TEI Model 48C	Analyzer serial #	436609887

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.00	0.06	N/A		
41.36	40.43	1.0229	Correlation Coefficient	0.999856
23.78	23.59	1.0081		
11.94	12.11	0.9859	Slope	1.026021
			Intercept	-0.274124



Crescent Heights - CO Calibration



November 20, 2007

Calibration Report



Parameter **PM2.5**
 Air Monitoring Network **Palliser Airshed**

Station Information

Calibration Date	November 20, 2007	Previous Calibration	October 30, 2007
Station Number	1	Station Location	Crescent Heights
Reason:	Routine	Install	Removal
			Other:
Start Time (MST)	13:15	End Time (MST)	15:20
Barometric Pressure	0.925 ATM	Station Temperature	20.0 Deg C
Flow Calibrator	BIOS Drycal Definer 220	Serial Number	111860
DACS make	AP 1000	DACS serial No.	45269
DACS voltage range	0 - 1 V	DACS channel #	15
	Before		After
DACS Scale High	450	DACS slope	450
DACS Scale Low	-50	DACS intercept	-50

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	13.67	SLPM	13.67	SLPM
Filter Load	32%	%	29%	%
Ko Factor	NA		NA	
Temperature	3.5	Deg C	3.7	Deg C
Pressure	0.925	ATM	0.925	ATM

Calibration Data

Parameter	Set Point	TEOM Reading (as found)	Tolerance	TEOM Reading (after adjustments)
zero flow - main	0.0	0.00	0.00	0.00
zero flow - auxillary	0.0	-0.02	0.01	-0.01
flow recovery - main	45 - 60 Seconds	42.0	45 - 60 Seconds	33.0
flow recovery - aux	46 - 60 Seconds	51.0	46 - 60 Seconds	41.0
Temperature	measured	2.3	+/- 1.0 Deg C	4.2
Pressure	measured	0.917	+/- 1.5% ΔATM	0.917
Total Flow	16.67 SLPM	17.20		16.68
Auxiliary flow	13.67 SLPM	14.10	+/- 1.0 SLPM	13.80
Main flow	3.0 SLPM	3.200	+/- 0.2 SLPM	3.020
Leak Check - main	0.0	0.01	<0.15 SLPM	0.01
Leak Check - aux	0.0	-0.01	<0.15 SLPM	-0.01
Ko Factor (w/o filter)	measured	NA	filter weight (g)	NA
Ko Factor (w/ filter)	measured	NA	% Ko difference	NA

Notes: Adjusted both flows... All else OK...

Calibration Performed By: Lenin Flores

Calibration Report



Parameter **O3**
 Air Monitoring Network **Palliser Airshed**

Station Information

Calibration Date	November 19, 2007	Previous Calibration	NA
Station Number	2	Station Location	Portable-Brooks
Reason:	<input type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	15:00	End Time (MST)	17:30
Barometric Pressure	27.5 inches Hg	Station Temperature	20.0 Deg C
Calibrator	Envionics 6103	Serial Number	2844
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45265
DACS voltage range	0 - 1 volt	DACS channel #	7
	Before		After
Calculated slope	NA	Calculated slope	0.980019
Calculated intercept	NA	Calculated intercept	2.803746
Analyzer make	API Model 400E	Analyzer serial #	331

	before		after	
Concentration range	NA	ppb	0 - 500	ppb
Offset	NA	ppb	-11	ppb
Slope	NA		1.038	
Lamp measure	NA	mV	4479.1	mV
Lamp Reference	NA	mV	4478.9	mV
Pressure	NA	inches Hg	26.1	inches Hg
Sample Flow	NA	ccm	670	ccm
Sample temp	NA	Deg C	34.8	Deg C

Calibration Data

Dilution air flow rate (cc/min)	Ozone Set Point	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4990	0.0	0.0	-2.0	N/A
4990	300.0	268.6	272.5	0.9856
4990	200.0	183.5	182.6	1.0047
4990	100.0	86.8	85.2	1.0182
Average Correction Factor				1.0028

Calculated value of As Found Response: NA Percent Change of As Found: NA

	before calibration		after calibration	
Auto zero	NA	ppb	2.6	ppb
Auto span	NA	ppb	388.0	ppb

Notes: _____

Calibration Performed By: Lenin Flores

Calibration Summary



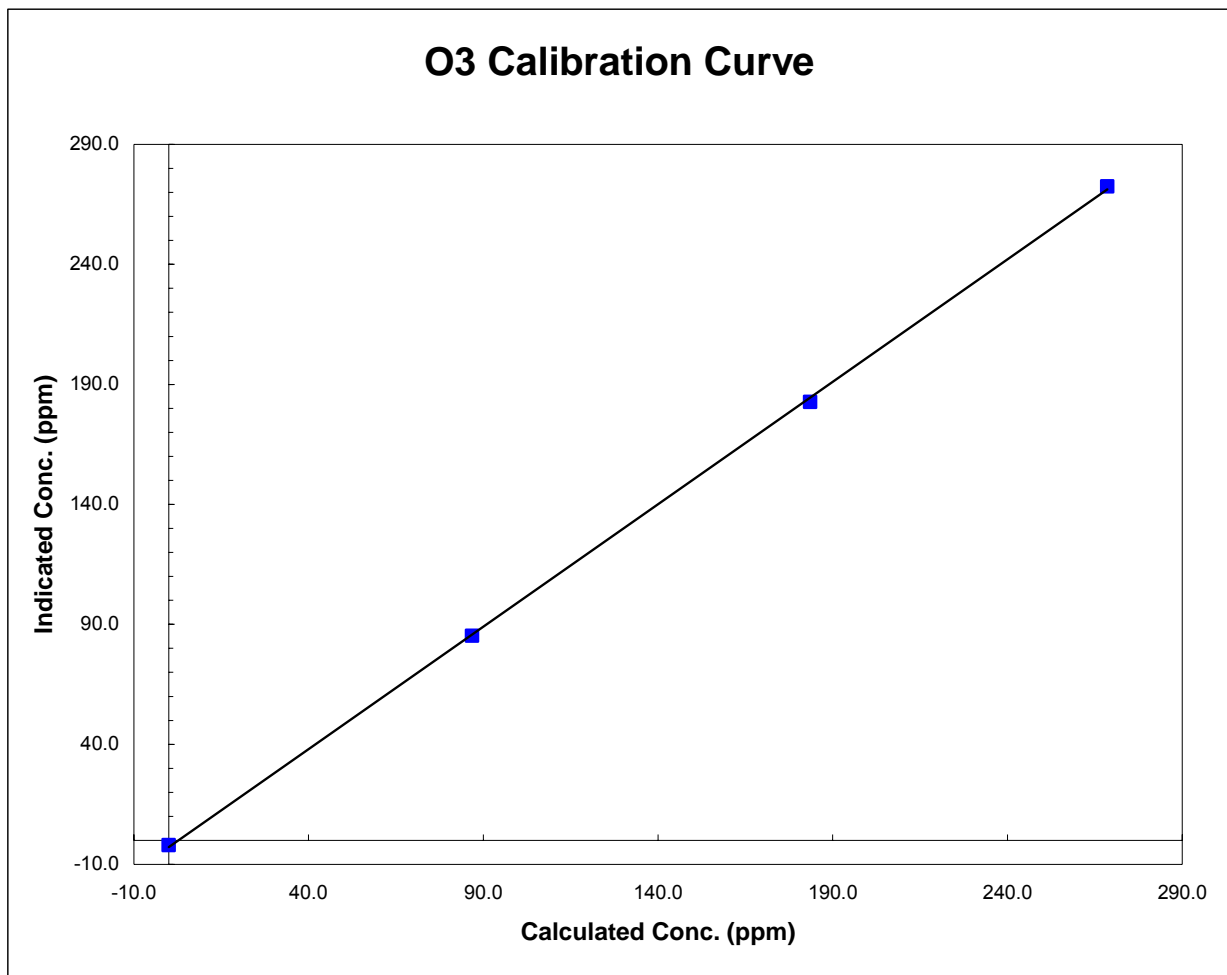
Parameter **O3**
 Air Monitoring Network **Palliser Airshed**

Station Information

Calibration Date	November 19, 2007	Previous Calibration	NA
Station Number	2	Station Location	Portable-Brooks
Start Time (MST)	15:00	End Time (MST)	17:30
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	
268.6	272.5	0.9856		
183.5	182.6	1.0047	Correlation Coefficient	0.999864
86.8	85.2	1.0182		
0.0	-2.0	N/A	Slope	0.980019
			Intercept	2.803746



Calibration Summary



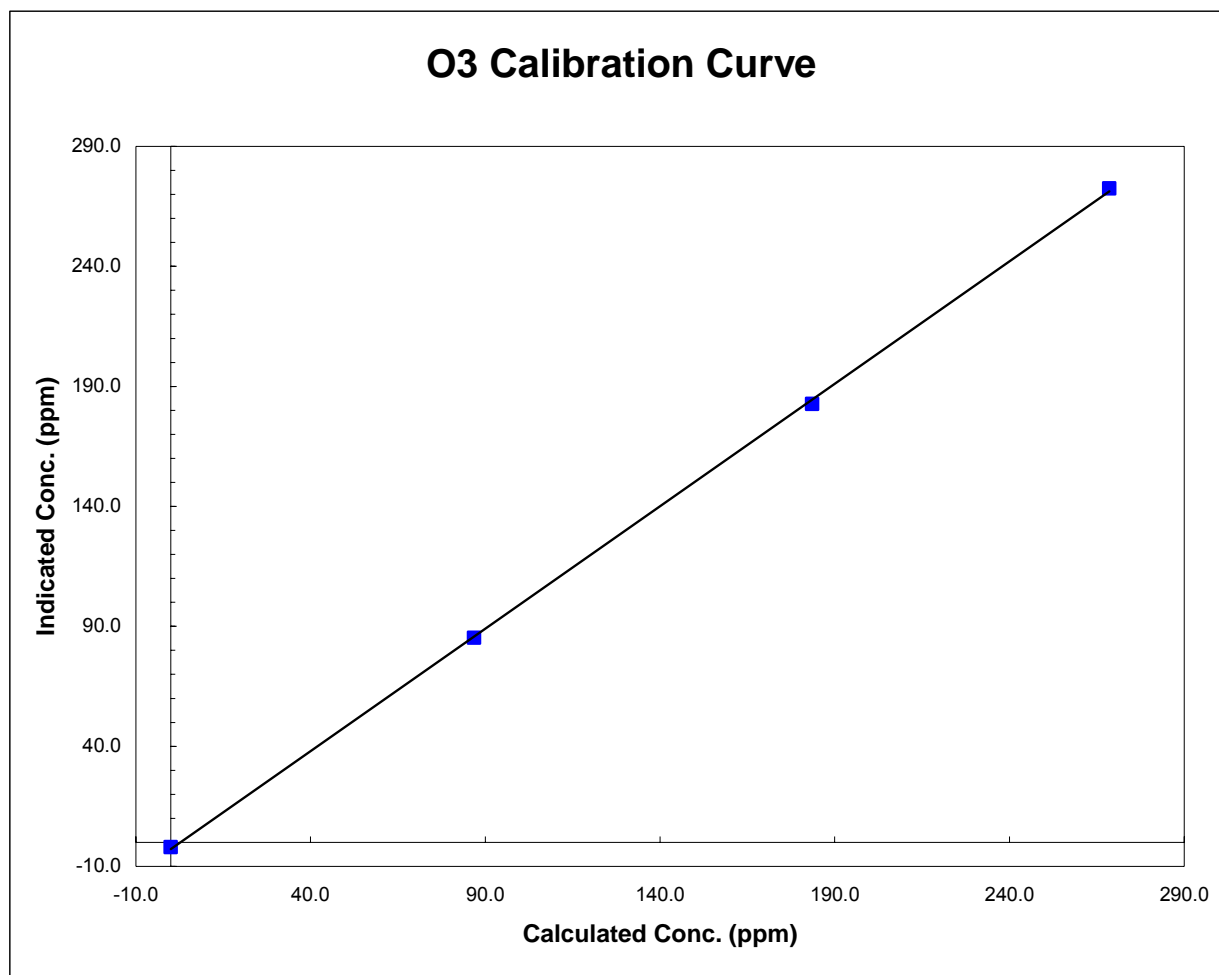
Parameter **O3**
 Air Monitoring Network **Palliser Airshed**

Station Information

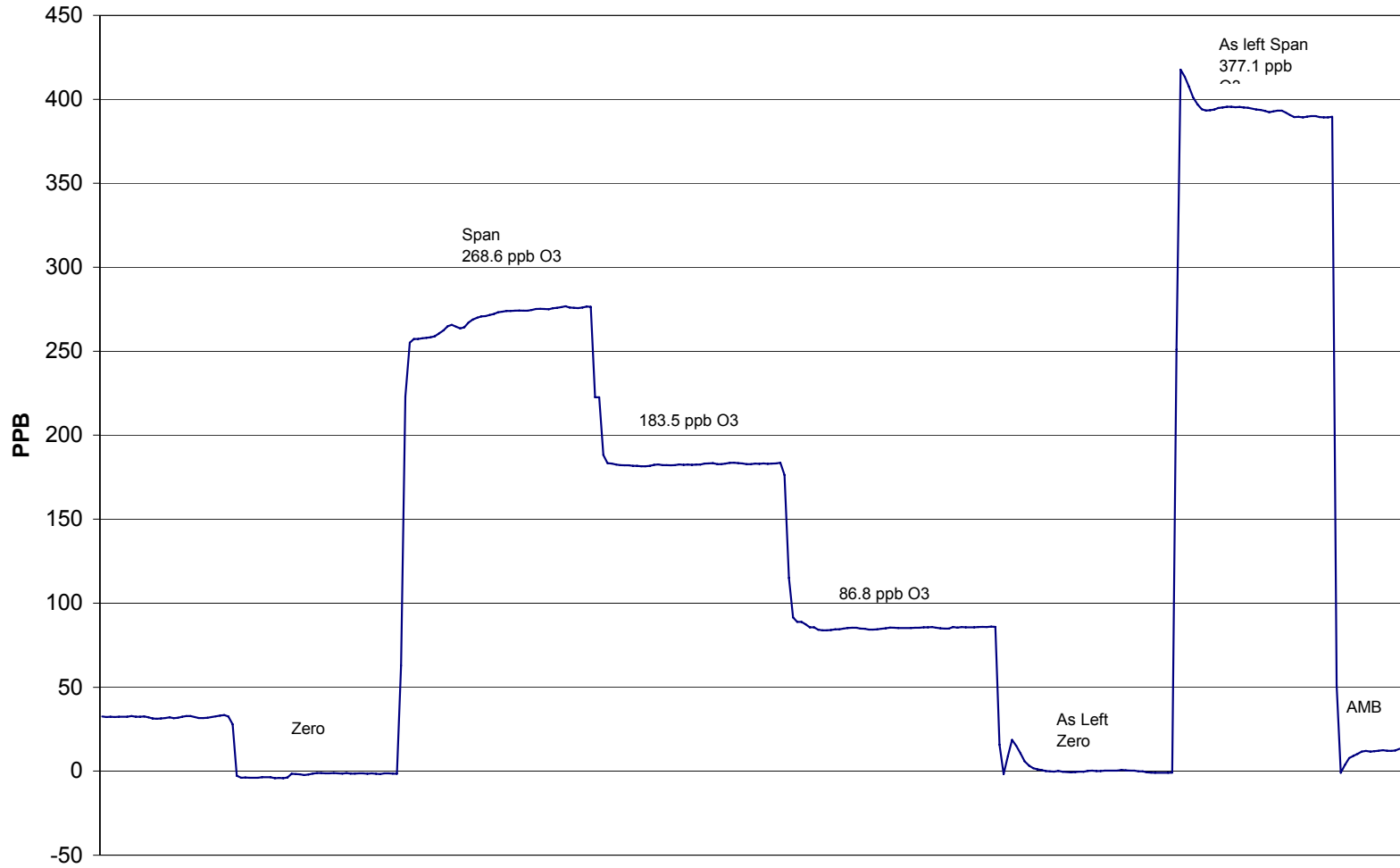
Calibration Date	November 19, 2007	Previous Calibration	NA
Station Number	2	Station Location	Rover - Brooks
Start Time (MST)	15:00	End Time (MST)	17:30
Analyzer make/model	API Model 400E	Analyzer serial #	331

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
268.6	272.5	0.9856		
183.5	182.6	1.0047	Correlation Coefficient	0.999864
86.8	85.2	1.0182		
0.0	-2.0	N/A	Slope	0.980019
			Intercept	2.803746



Portable-Brooks - O3 Calibration



November 19, 2007

Calibration Report



Parameter **SO2**
 Air Monitoring Network **Palliser Airshed**

Station Information

Calibration Date	November 21, 2007	Previous Calibration	NA
Station Number	2	Station Location	Portable-Brooks
Reason:	<input type="checkbox"/> Routine	<input checked="" type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	12:20	End Time (MST)	15:20
Barometric Pressure	27.80 inches Hg	Station Temperature	20.0 Deg C
Calibrator	Envionics 6103	Serial Number	2844
Cal Gas Concentration	50.3 ppm	Cal Gas Expiry Date	27-Jul-09
Gas Cert Reference	LL-16136		
DACS make	Focus AP1000	DACS serial No.	45265
DACS voltage range	0 - 10 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
Calculated slope	NA	Calculated slope	0.977269
Calculated intercept	NA	Calculated intercept	3.612048
Analyzer make	TEI Model 43A	Analyzer serial #	NA

	before		after	
Concentration range	NA	ppb	0-500	ppb
SO2 zero pot	NA		1.5	
SO2 span pot	NA		4.65	
Analyzer flow	NA	LPM	4.75	LPM
UV Lamp voltage	NA	V	860	V
Vacuum	NA	in Hg	22	in Hg

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	-0.4	N/A
4995	39.94	399.0	405.8	0.9833
4995	19.96	200.2	200.6	0.9979
4995	9.96	100.0	94.7	1.0568
				As found zero
				As found span
Average Correction Factor				1.0126

Calculated value of As Found Response: NA Percent Change of As Found: NA

	before calibration		after calibration	
Auto zero	NA	ppm	-3.2	ppm
Auto span	NA	ppm	202.8	ppm

Notes: Adjusted Zero and Span

Calibration Performed By: Lenin Flores

Calibration Summary



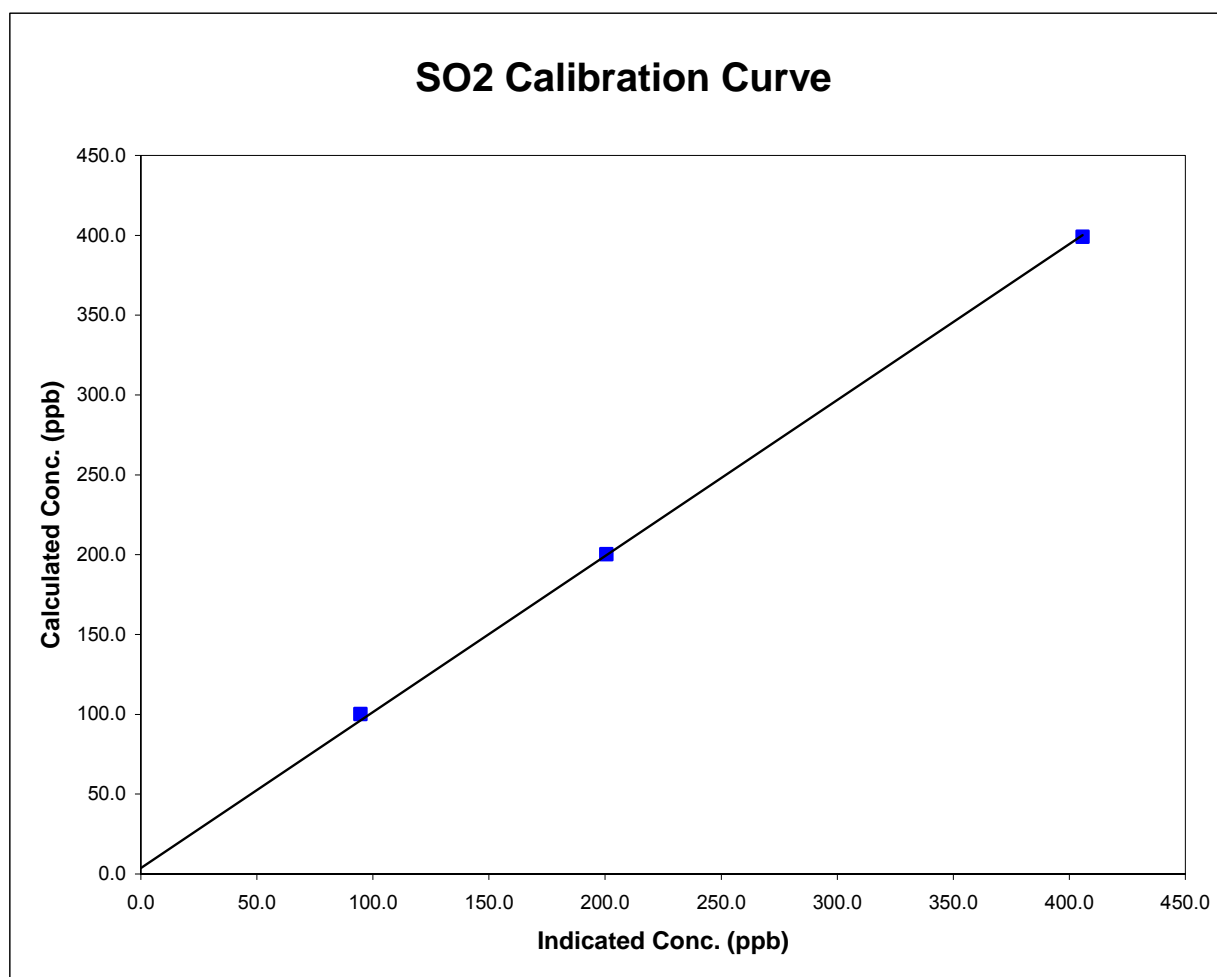
Parameter **SO2**
 Air Monitoring Network **Palliser Airshed**

Station Information

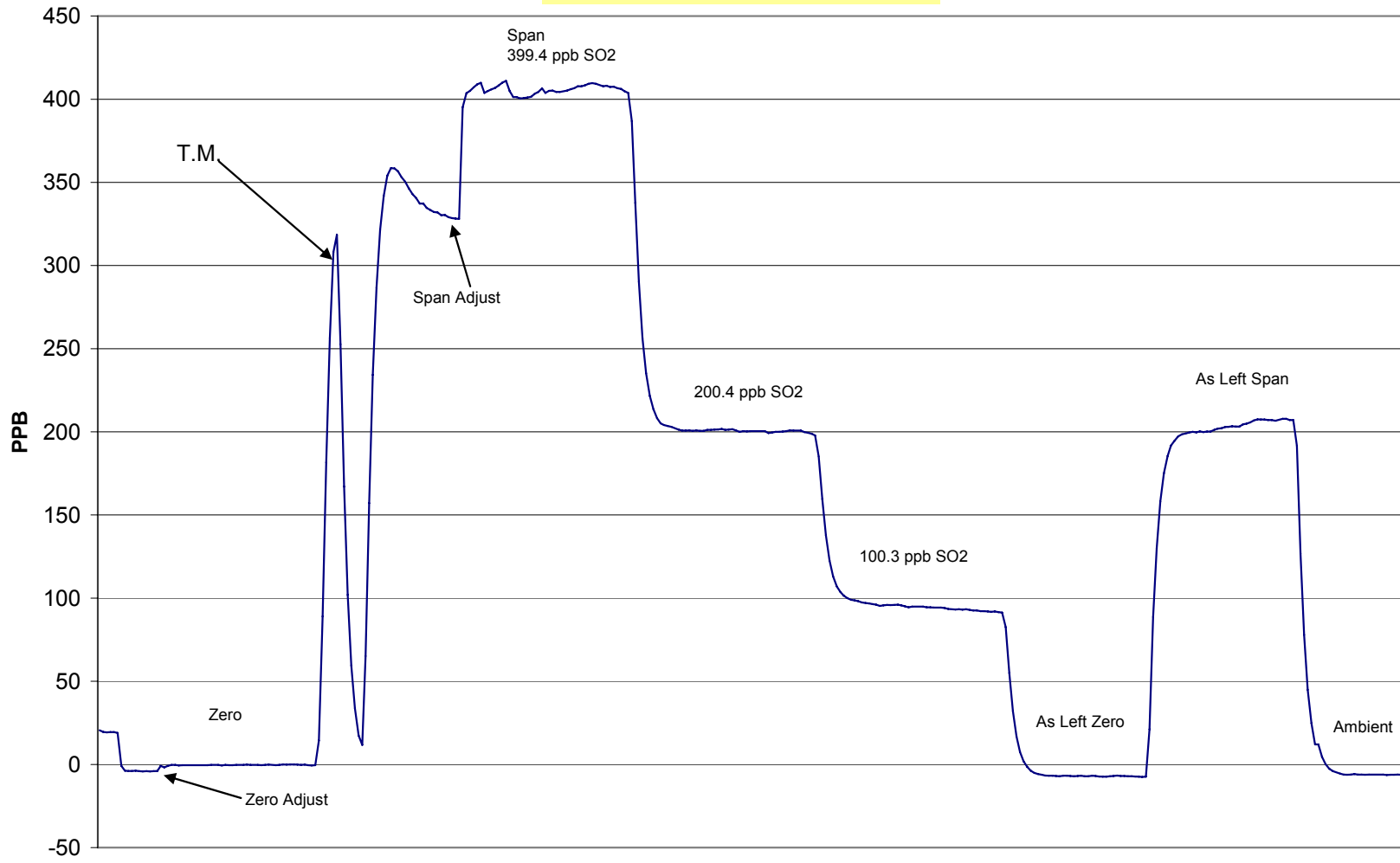
Calibration Date	November 21, 2007	Previous Calibration	NA
Station Number	2	Station Location	Portable-Brooks
Start Time (MST)	12:20	End Time (MST)	15:20
Analyzer make/model	TEI Model 43A	Analyzer serial #	NA

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	N/A		
399.0	405.8	0.9833	Correlation Coefficient	0.999682
200.2	200.6	0.9979		
100.0	94.7	1.0568	Slope	0.977269
			Intercept	3.612048



Portable-Brooks - SO2 Calibration



November 21, 2007

Calibration Report



Parameter **H2S**
 Air Monitoring Network **Palliser Airshed**

Station Information

Calibration Date	November 21, 2007	Previous Calibration	NA
Station Number	2	Station Location	Portable-Brooks
Reason:	<input type="checkbox"/> Routine	<input checked="" type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	14:00	End Time (MST)	17:15
Barometric Pressure	27.8 inches Hg	Station Temperature	20.0 Deg C
Calibrator	EnviroNics 6103	Serial Number	2844
Cal Gas Concentration	5.02 ppm	Cal Gas Expiry Date	15-Nov-05
Gas Cert Reference	BLM003489		
DACS make	Focus AP1000	DACS serial No.	45265
DACS voltage range	0 - 10 volt	DACS channel #	6
	Before		After
Calculated slope	NA	Calculated slope	0.961186
Calculated intercept	NA	Calculated intercept	-0.442996
Analyzer make	TEI Model 43A	Analyzer serial #	43A-25575-221

	before		after	
Concentration range	NA	ppb	0 - 100	ppb
H2S zero pot	NA		910	
H2S span pot	NA		540	
Analyzer flow	NA	LPM	0.900	LPM
UV Lamp voltage	NA	V	928	V
Vacuum	NA	in Hg	17.5	in Hg

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)
4996	0.00	0.0	0.2	N/A
4996	79.86	79.0	82.5	0.9574
4996	39.94	39.8	42.1	0.9454
4996	9.95	10.0	11.0	0.9079
				As found zero
				As found span
Average Correction Factor				0.9369

Calculated value of As Found Response: NA ppm Percent Change of As Found: NA

	before calibration		after calibration	
Auto zero	NA	ppm	0.8	ppm
Auto span	NA	ppm	34.3	ppm

Notes: _____

Calibration Performed By: Lenin Flores

Calibration Summary



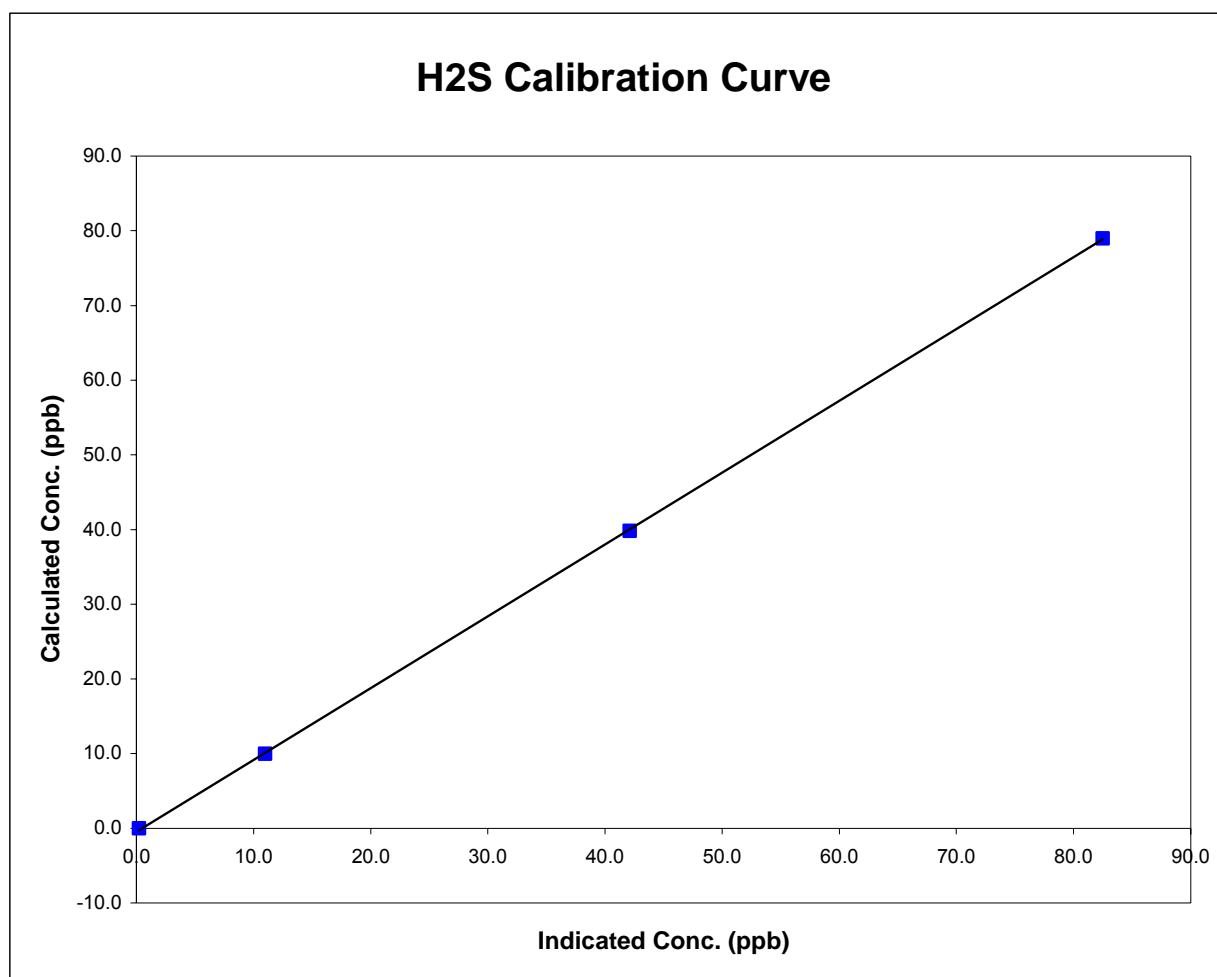
Parameter **H2S**
 Air Monitoring Network **Palliser Airshed**

Station Information

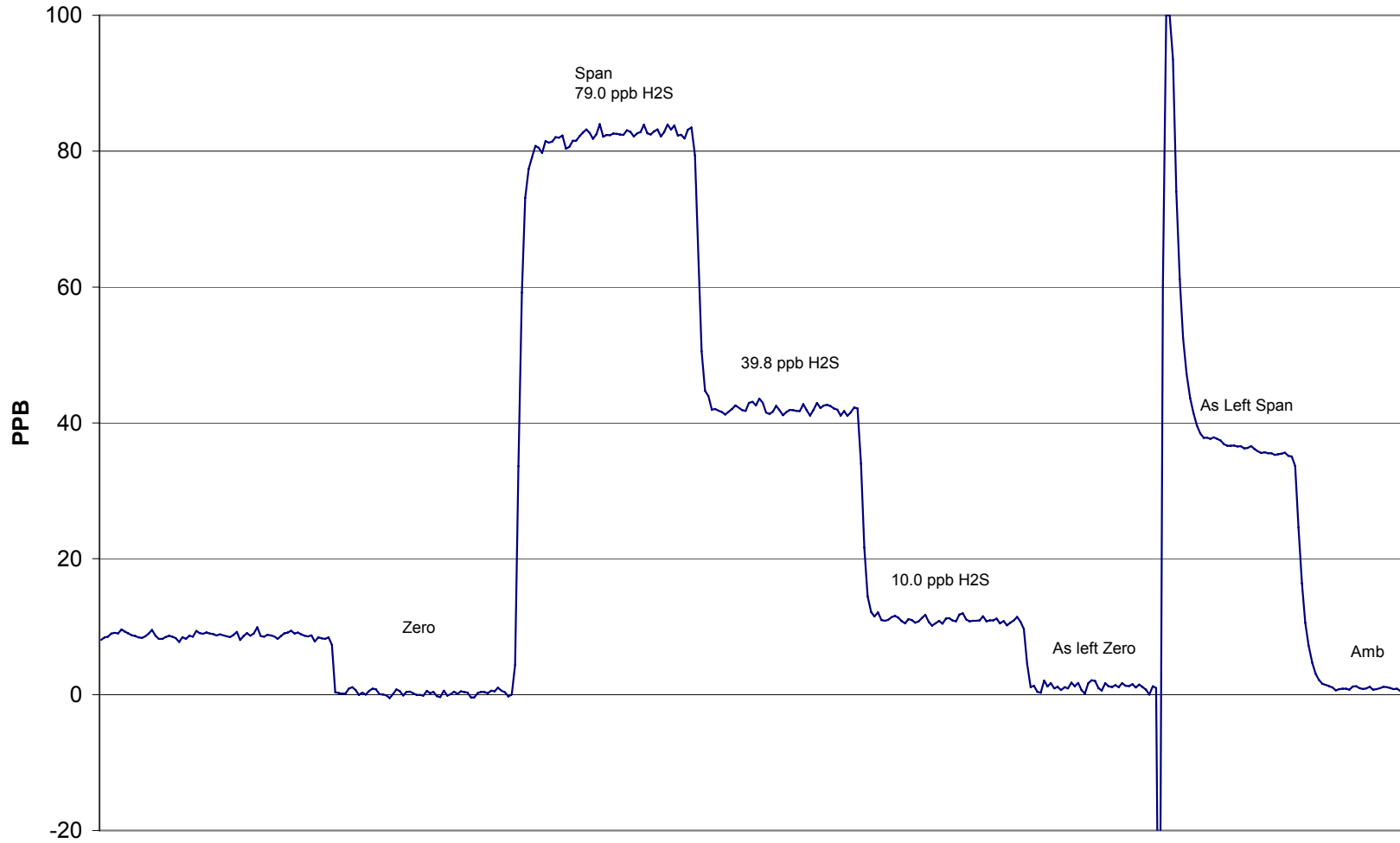
Calibration Date	November 21, 2007	Previous Calibration	NA
Station Number	2	Station Location	Portable-Brooks
Start Time (MST)	14:00	End Time (MST)	17:15
Analyzer make/model	TEI Model 43A	Analyzer serial #	43A-25575-221

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
79.0	82.5	0.9574	Correlation Coefficient	0.999963
39.8	42.1	0.9454		
10.0	11.0	0.9079	Slope	0.961186
			Intercept	-0.442996



Portable-Brooks - H2S Calibration



November 21, 2007