



# PEACE AIRSHED ZONE ASSOCIATION

Air Quality Monitoring Network

## November 2004

Prepared by



## TABLE OF CONTENTS

<b>Airshed Zone Association – November PASZA Ambient Air Report.....</b>	<b>2</b>
<b>PASZA Monthly Continuous Data Summary .....</b>	<b>4</b>
PASZA - Henry Pirker AQI Monthly Summary .....	6
PASZA - Henry Pirker Sulphur Dioxide Monthly Summary.....	7
PASZA - Henry Pirker Oxides of Nitrogen Monthly Summary .....	12
PASZA - Henry Pirker Ozone Monthly Summary.....	23
PASZA - Henry Pirker Carbon Monoxide Monthly Summary .....	29
PASZA - Henry Pirker Total Hydrocarbon Monthly Summary .....	35
PASZA - Henry Pirker Total Reduced Sulphur Monthly Summary .....	39
PASZA - Henry Pirker Particulate Matter (less than 2.5 microns) Monthly Summary.....	43
PASZA - Henry Pirker Meteorological Parameters Monthly Summary.....	48
<b>PASZA Monthly Passive Data Summary.....</b>	<b>58</b>
<b>November 2004 Calibration Reports.....</b>	<b>69</b>



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

**Re: Peace Airshed Zone Association – November PASZA Ambient Air Report**

Enclosed is PASZA Ambient Monitoring Report for the month of **November 2004**.

**Continuous Monitoring – Henry Pirker Station (Grande Prairie)**

Included in this report is a summary of the, monthly continuous sampling, detailed hourly average reports and multipoint calibration reports of all instruments. The measured ambient air quality was within the Provincial and Federal guidelines with no exceedences recorded. There were no significant events leading to emergency response for the month of November.

The Henry Pirker Station's wind head froze resulting in a contravention to the AMD. The cause of the contravention was due to freezing rain which "froze" the wind speed cups for three periods during the month. This problem occurs from time to time during fall and spring seasons when conditions are right for freezing rain. Attempts were made to free the cups, but an increase in temperature is what was required to free the cups.

There was a follow-up audit performed on the NO<sub>x</sub> analyzer and Ozone analyzer during the month. The results of the audit indicated that all parameters were within specifications.

**Passive Monitoring – 43 Stations throughout the PASZA zone:**

There was one missing passive recorded at station #34 (Puskwaskau) just for the SO<sub>2</sub> passive, all others were reported fine.

- Monthly average concentrations for SO<sub>2</sub> passives ranged from <0.1 ppb to 0.8 ppb.
- Monthly average concentrations for NO<sub>2</sub> passives ranged from 0.6 ppb to 13.8 ppb.
- Monthly average concentrations for O<sub>3</sub> passives ranged from 18.5 ppb to 38.0 ppb.

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

On Behalf of the,  
Peace Airshed Zone Association

A handwritten signature in black ink, appearing to read "Kevin Warren".

Kevin Warren  
PASZA Technical Program Manager

A handwritten signature in black ink, appearing to read "Kevin McCullum".

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

November 23, 2004

Standards & Approvals Division  
Alberta Environment  
111 – Twin Atria  
4999 – 98 Avenue  
Edmonton, Alberta T6B 2X3

**ATTENTION: Director**

**RE: Air Monitoring Directive Contravention Report Ref # 149677**

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A contravention of the Alberta Air Monitoring Directive was recently reported by Focus to Alberta Environment (AENV) on behalf of the Peace Airshed Zone Association (PASZA). The contravention was less than ninety (90%) percent data collection for the month of November for the WS sensor at the Henry Pirker Air Monitoring Station located in Grande Prairie, Alberta. The station is owned by PASZA and operated on their behalf by Focus. The contravention has been assigned AENV reference number 146102.

The cause of the contravention was due to freezing rain which “froze” the wind speed cups for three periods during the month. This problem occurs from time to time during fall and spring seasons when conditions are right for freezing rain. Attempts were made to free the cups, but an increase in temperature is what was required to free the cups.

As this problem is caused by natural conditions, and any attempt to interfere with the sensors via modifications results in compromised data quality, no action items were taken to prevent this in the future.

If there are any questions or concerns please call me at your convenience.

Sincerely,

**THE FOCUS CORPORATION**



Gary Cross,  
AQM Technical Manager

# PASZA Monthly Continuous Data Summary

## November 2004 Monthly Overall Summary Report Ambient Air Quality Data

Nov-2004 Peace Airshed Zone Association							Maximum Recorded Values						Operational Time (%)
Pollutant (units)	Guidelines		Station	Monthly Average	Exceedence		1-hr				24-hr		
	1-hr	24-hr			1-hr	24-hr	Conc	Day	WSPD (km/hr)	WDIR (Sector)	Conc	Day	
SO <sub>2</sub> (ppb)	172	57	Henry Pirker	0.5	0	0	5.8	Nov-08	9.1	S	1.0	Nov-13	100.0%
NO (ppb)			Henry Pirker	17.8	0	0	225.8	Nov-09	N	N	64.0	Nov-11	100.0%
NO <sub>2</sub> (ppb)	212	106	Henry Pirker	15.4	0	0	47.6	Nov-12	2.6	SW	27.9	Nov-11	100.0%
NO <sub>x</sub> (ppb)			Henry Pirker	33.4	0	0	269.4	Nov-09	N	N	91.8	Nov-11	100.0%
O <sub>3</sub> (ppb)	82		Henry Pirker	14.5	0	0	36.0	Nov-04	22.2	SW	31.5	Nov-04	100.0%
CO (ppm)	13		Henry Pirker	0.36	0	0	2.44	Nov-09	N	N	0.88	Nov-13	100.0%
THC (ppm)			Henry Pirker	2.20	0	0	3.76	Nov-13	3.3	S	3.08	Nov-12	100.0%
TRS (ppb)			Henry Pirker	0.4	0	0	2.6	Nov-11	5.1	NNW	0.8	Nov-11	100.0%
PM <sub>2.5</sub> (µg/m <sup>3</sup> )		30 <sup>a</sup>	Henry Pirker	4.2	0	0	32.7	Nov-11	N	N	18.2	Nov-11	100.0%
RH (%)			Henry Pirker	72.8									100.0%
SR (W/m <sup>2</sup> )			Henry Pirker	33.2									100.0%
Temp (°C)			Henry Pirker	-0.8									100.0%
WSPD v (km/hr)			Henry Pirker	7.8									86.0%
WSPD s (km/hr)			Henry Pirker	10.6									86.0%
WDIR (Deg)			Henry Pirker	WSW*									86.0%

Note: <sup>a</sup> the 24-hr Canada Wide Standard level is considered as an absolute value

\* Wind Direction is the predominate direction for the Month

# Continuous Monitoring

## Ambient Air Monitoring Network

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### Henry Pirker Station

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#### General Station Issues

Alberta Environment audited the NO<sub>x</sub> and O<sub>3</sub> analyzer in the month of November

Parameter	Make	Model	Notes
SO <sub>2</sub>	TECO	43	No operational problems observed
NO <sub>x</sub> /NO/NO <sub>2</sub>	TECO	42	7 hours of calibration was due to AENV audit (on Nov 8, 2004)
O <sub>3</sub>	API	400	7 hours of calibration was due to AENV audit (on Nov 8, 2004)
CO	TECO	48	No operational problems observed
THC	TEI	51-CLT	No operational problems observed
TRS	TEI	42C	No operational problems observed
PM <sub>2.5</sub>	R&P	1400AB	No operational problems observed
RH	Met One	083D	No operational problems observed
AT	Met One	083D	No operational problems observed
SR	Met One	096-1	No operational problems observed
WS	Met One	010C	101 hours were lost due to a frozen wind head (Nov 9 at 19:00 to Nov 11 at 12:00; Nov 11 at 17:00 to Nov 12 at 11:00; Nov 21 at 21:00 to Nov 23 at 12:00)
WD	Met One	020C	101 hours were lost due to a frozen wind head (Nov 9 at 19:00 to Nov 11 at 12:00; Nov 11 at 17:00 to Nov 12 at 11:00; Nov 21 at 21:00 to Nov 23 at 12:00)

### PASZA - Henry Pirker AQI Monthly Summary

Station: Henry Pirker

Station Owner: PASZA

## Air Quality Index (AQI)

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

**Summary**

Number of 1-hr Good Readings:	677
Number of 1-hr Fair Readings:	1
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

Percentile	99	95	75	50	25	5	1
	21.5	16.7	12.9	9.4	6.2	4.3	3.6

**Alberta's Air Quality Index**

<b>Good</b>	<b>1</b>	<b>to</b>	<b>25</b>
<b>Fair</b>	<b>26</b>	<b>to</b>	<b>50</b>
<b>Poor</b>	<b>51</b>	<b>to</b>	<b>100</b>
<b>Very Poor</b>	<b>&gt;</b>	<b>100</b>	

**Day Mountain Standard Time**

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	23:00
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00	
1-Nov-04	12	11	8	7	10	11	10	7	5	6	6	6	8	8	10	A	6	11	14	14	10	7	6	7	
2-Nov-04	6	6	6	7	5	5	7	9	9	7	10	11	13	15	A	16	15	13	13	13	12	12	13	13	
3-Nov-04	14	14	13	14	14	15	14	13	12	13	14	15	16	A	14	12	9	11	14	14	14	15	16	17	
4-Nov-04	17	18	18	17	18	18	17	16	16	16	16	16	A	15	15	12	9	13	16	15	16	15	17	18	
5-Nov-04	18	18	18	18	17	16	14	7	7	7	6	A	6	6	7	10	10	8	13	14	12	11	12	12	
6-Nov-04	11	9	6	9	11	12	13	12	13	12	A	16	16	15	16	16	12	6	11	9	6	6	5	5	
7-Nov-04	5	5	6	5	5	5	5	6	5	A	5	9	11	12	11	10	11	11	9	10	9	9	9	10	
8-Nov-04	10	9	8	4	5	6	6	7	A	5	5	4	N	N	N	N	N	N	N	12	12	8	8	9	
9-Nov-04	9	7	4	4	4	5	6	A	N	N	N	N	7	7	6	5	4	7	9	13	21	15	7	5	
10-Nov-04	4	4	3	4	4	5	6	A	7	6	6	11	15	7	5	6	12	20	8	10	5	5	5	4	
11-Nov-04	5	6	4	6	6	6	A	10	13	17	19	25	23	22	16	14	17	21	26	24	22	16	17	15	
12-Nov-04	11	7	7	7	5	A	7	9	9	9	8	11	25	13	14	11	10	20	21	14	11	10	11	11	
13-Nov-04	7	7	7	6	A	6	7	10	13	15	15	10	11	7	6	6	9	9	10	15	16	13	14	16	
14-Nov-04	9	15	11	A	7	4	5	5	11	9	7	7	8	5	5	6	5	5	6	6	5	6	6	4	
15-Nov-04	4	3	A	3	4	4	4	9	7	9	5	6	3	7	11	13	12	10	11	10	9	9	9	12	
16-Nov-04	14	A	11	12	12	9	11	8	7	7	6	6	7	8	8	6	6	6	5	6	7	9	10	6	
17-Nov-04	A	11	9	10	13	14	13	12	14	13	14	15	15	15	15	12	10	5	6	7	8	8	8	A	
18-Nov-04	7	5	8	11	11	10	6	6	7	5	11	12	7	11	11	10	5	6	5	7	7	6	A	9	
19-Nov-04	5	12	7	5	5	4	6	6	6	7	5	6	7	11	12	10	8	7	6	10	11	11	A	10	9
20-Nov-04	9	10	11	10	7	7	7	6	8	7	7	7	7	7	7	11	10	9	12	10	A	13	15	15	
21-Nov-04	15	15	14	13	15	13	9	12	14	8	13	12	13	14	14	13	14	17	14	A	17	13	14	15	
22-Nov-04	16	15	11	6	8	5	6	7	9	15	8	9	7	8	9	7	6	6	A	5	4	4	4	4	
23-Nov-04	4	6	6	6	6	6	7	7	7	7	6	5	5	6	4	4	4	A	5	5	4	5	5	5	
24-Nov-04	5	5	4	6	6	5	4	4	5	5	6	6	4	4	9	4	A	8	11	10	9	9	8	11	
25-Nov-04	14	13	14	11	7	6	7	6	6	6	11	12	13	12	14	A	14	12	12	12	13	12	12	14	
26-Nov-04	14	13	13	13	12	12	10	7	6	7	7	7	9	12	A	11	9	8	5	6	7	7	8	7	
27-Nov-04	6	6	6	5	4	4	5	9	8	7	4	5	7	A	10	9	6	5	8	9	8	11	12	11	
28-Nov-04	11	10	10	13	13	12	11	12	10	11	11	13	A	14	14	14	13	9	9	10	15	15	16	17	
29-Nov-04	17	16	16	15	12	15	14	6	9	7	17	A	16	13	14	12	12	14	14	13	15	17	15	15	
30-Nov-04	13	14	13	15	13	10	8	7	5	6	A	13	12	14	12	12	10	9	9	9	10	7	5	6	

### PASZA - Henry Pirker Sulphur Dioxide Monthly Summary

Station: Henry Pirker

#### HOURLY AVERAGE TABLE

Sulphur Dioxide (SO<sub>2</sub>)

Station Owner: PASZA

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

**Summary**

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	5.8	ppb	8-Nov	9:00 10:00
Maximum 24-hr Average:	1.0	ppb	13-Nov	

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

AIC Time:	30 hrs		Operational Time:	685 hrs				
Calibration Time:	5 hrs		AMD Operational Uptime:	100.0%				
Percentile	99	95	75	50	25	5	1	Average
	2.0	1.3	0.6	0.3	0.2	0.1	0.0	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**

Day	Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum
	Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
1-Nov-04		0	0	0	0	0	1	0	0	1	1	1	1	1	1	A	1	1	2	1	1	1	0	0	0.7	1.6	
2-Nov-04		0	0	0	0	0	0	0	1	1	1	1	0	0	A	0	0	0	0	0	0	0	0	0	0.4	0.9	
3-Nov-04		0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.3	
4-Nov-04		0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4	
5-Nov-04		0	0	0	0	0	0	0	0	1	0	0	A	0	0	0	0	3	0	0	0	0	0	1	0.3	3.1	
6-Nov-04		2	0	0	0	0	1	1	0	0	A	0	0	0	0	0	0	0	1	1	2	0	0	0	0.5	2.1	
7-Nov-04		1	1	1	2	1	1	1	1	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.7	
8-Nov-04		1	1	1	0	0	0	0	0	A	6	1	1	1	1	1	0	1	0	0	1	1	1	0	0.8	5.8	
9-Nov-04		0	0	0	0	0	0	0	C	C	C	C	C	1	1	1	1	1	1	2	2	2	1	1	0.8	2.3	
10-Nov-04		1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	2	1	1	1	1	0	0	0.8	1.7	
11-Nov-04		0	0	0	1	1	1	A	1	1	1	1	2	2	2	1	1	1	1	1	0	0	0	1	1	1.0	2.1
12-Nov-04		0	0	0	0	0	A	0	1	1	0	1	1	2	2	2	1	2	2	1	1	1	1	1	0.9	2.0	
13-Nov-04		0	0	0	0	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.5
14-Nov-04		1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0.8	1.4	
15-Nov-04		0	0	A	0	0	0	0	1	1	1	1	1	0	0	1	1	1	0	0	0	0	0	0	0.4	1.1	
16-Nov-04		0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	1	0.4	1.0	
17-Nov-04		A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.3	1.1	
18-Nov-04		0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	1	0	0	A	1	0.4	0.9
19-Nov-04		0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	A	0	0	0.4	0.8
20-Nov-04		0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	A	0	0	0	0.4	0.9
21-Nov-04		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0.1	0.2
22-Nov-04		0	0	0	0	0	0	0	1	1	1	0	0	1	1	1	1	0	0	A	0	0	0	0	0	0.4	0.9
23-Nov-04		0	0	0	1	0	0	1	1	1	1	1	1	0	0	0	0	A	0	0	0	0	0	0	0	0.4	0.7
24-Nov-04		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.5
25-Nov-04		0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.2	0.5
26-Nov-04		0	0	0	0	0	0	0	0	0	1	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.6
27-Nov-04		0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.2	0.5
28-Nov-04		0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
29-Nov-04		0	0	0	0	0	0	0	0	1	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.7
30-Nov-04		0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
																										N	0.0
Hourly Avg		0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.8	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.5	0.5	0.5	0.4	0.4	0.4		
Hourly Max		2.1	1.0	1.1	1.7	0.9	1.4	0.8	1.2	1.3	5.8	1.4	1.9	2.0	2.1	2.0	1.4	1.6	3.1	1.6	1.8	2.3	2.1	1.4	1.3		

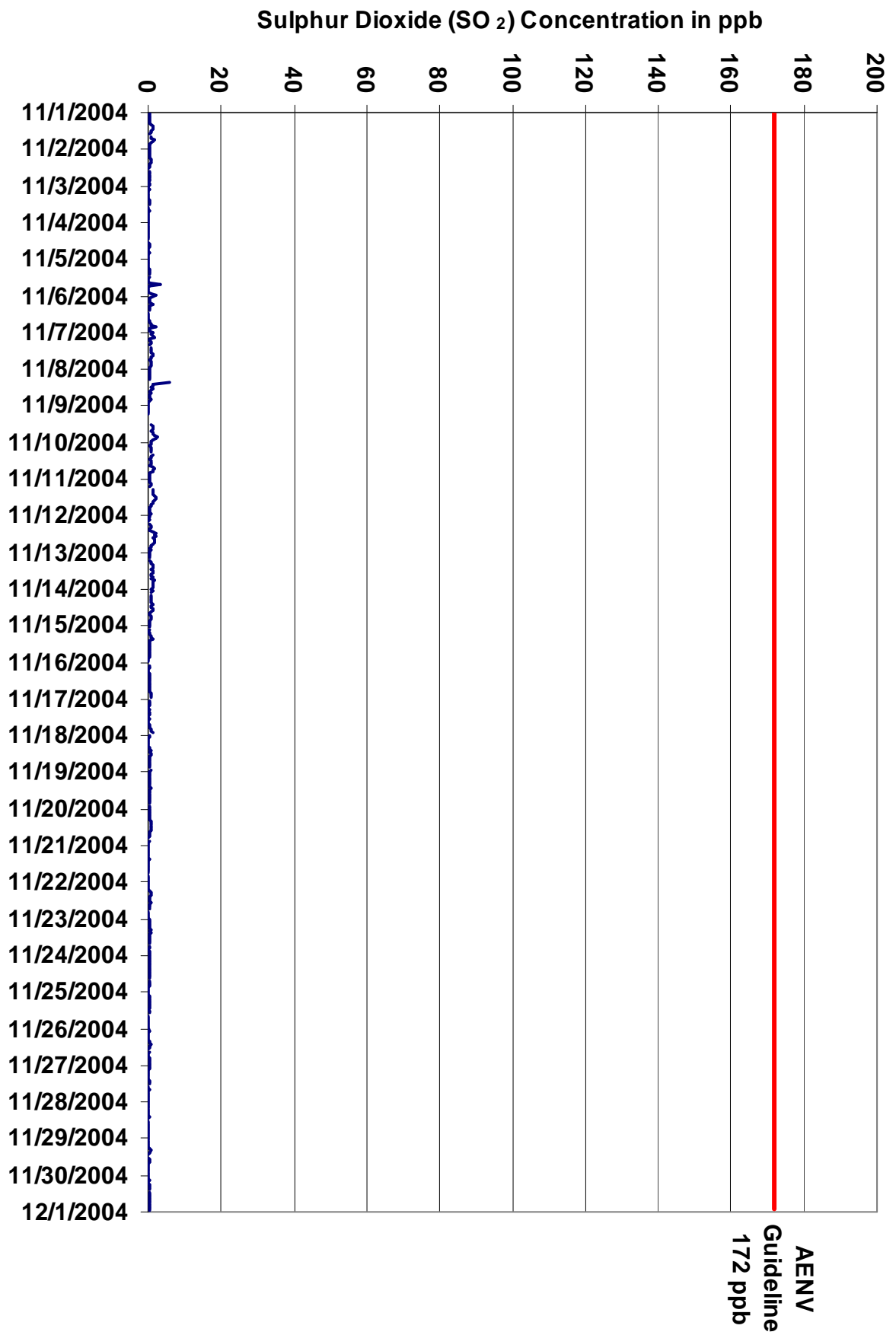


Figure 1. PASZA - Henry Pirkker Sulphur Dioxide 1-hr Average Monthly Trend



Station: Henry Pirker

### HOURLY MAXIMUM TABLE

**Sulphur Dioxide (SO<sub>2</sub>)**

Station Owner: PASZA

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

**Summary**

Maximum 1-hr Value:	10.4	ppb	8-Nov	9:00 10:00
Maximum 24-hr Value:	1.8	ppb	8-Nov	

AIC Time:	30 hrs	Operational Time:	685 hrs					
Calibration Time:	5 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	3.5	2.2	1.3	0.9	0.7	0.6	0.5	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-04	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	A	1	2	2	2	1	1	1	1	1.3	2.5
2-Nov-04	1	1	1	1	1	1	1	2	2	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1.0	1.6
3-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.7	1.0
4-Nov-04	1	1	1	0	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
5-Nov-04	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	5	1	1	1	0	1	6	1.2	5.8
6-Nov-04	7	1	1	1	1	4	1	1	1	1	A	1	1	1	1	1	1	1	1	2	4	1	1	1	1.5	7.3
7-Nov-04	3	2	2	4	1	1	1	1	1	A	2	2	1	1	2	2	1	1	1	1	1	1	1	1	1.6	4.1
8-Nov-04	1	1	1	1	1	1	1	1	A	10	2	3	2	2	1	1	4	2	1	1	2	1	1	1	1.8	10.4
9-Nov-04	0	1	1	1	0	0	1	C	C	C	C	C	1	2	2	2	2	2	2	3	3	3	3	1	1.5	3.0
10-Nov-04	1	1	1	1	2	1	2	A	2	1	2	1	2	1	1	1	2	3	2	3	1	1	1	1	1.5	2.7
11-Nov-04	1	1	1	1	1	1	A	2	2	2	2	2	3	3	2	2	2	1	1	1	1	1	1	1	1.6	3.2
12-Nov-04	1	1	1	1	1	A	1	1	1	1	1	2	2	2	3	3	3	3	2	1	1	1	1	1	1.6	2.8
13-Nov-04	1	1	1	1	A	1	1	2	2	2	2	2	2	2	2	2	2	1	2	2	2	2	2	2	1.7	2.3
14-Nov-04	1	2	1	A	2	1	1	1	2	1	2	2	2	2	2	1	1	1	1	1	2	2	1	1	1.5	2.3
15-Nov-04	1	1	A	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.9
16-Nov-04	1	A	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	1.0	1.8
17-Nov-04	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	A	0.9	1.9
18-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	A	1	1.0	2.0
19-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1.0	1.3
20-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	A	1	1	1	1.0	1.7
21-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	0	1	1	1	0.6	1.1
22-Nov-04	1	1	0	1	1	1	1	2	2	2	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1.0	1.9
23-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1.0	1.4
24-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.0
25-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.8	1.2
26-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.9	1.4
27-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	0	1	1	0	0	0.7	1.0
28-Nov-04	0	1	1	0	0	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0	1	1	1	0.6	0.8
29-Nov-04	1	1	0	1	1	1	1	1	2	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.7
30-Nov-04	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
Hourly Avg	1.1	0.9	0.8	0.9	0.8	0.9	0.9	1.1	1.2	1.6	1.2	1.2	1.2	1.2	1.2	1.1	1.2	1.3	1.1	1.1	1.2	1.1	1.0	1.1		
Hourly Max	7.3	1.8	2.2	4.1	1.6	3.6	1.5	1.9	1.9	10.4	2.2	2.6	2.7	3.2	2.8	2.6	3.5	5.2	2.5	2.6	3.5	3.0	2.7	5.8		

N 0.0

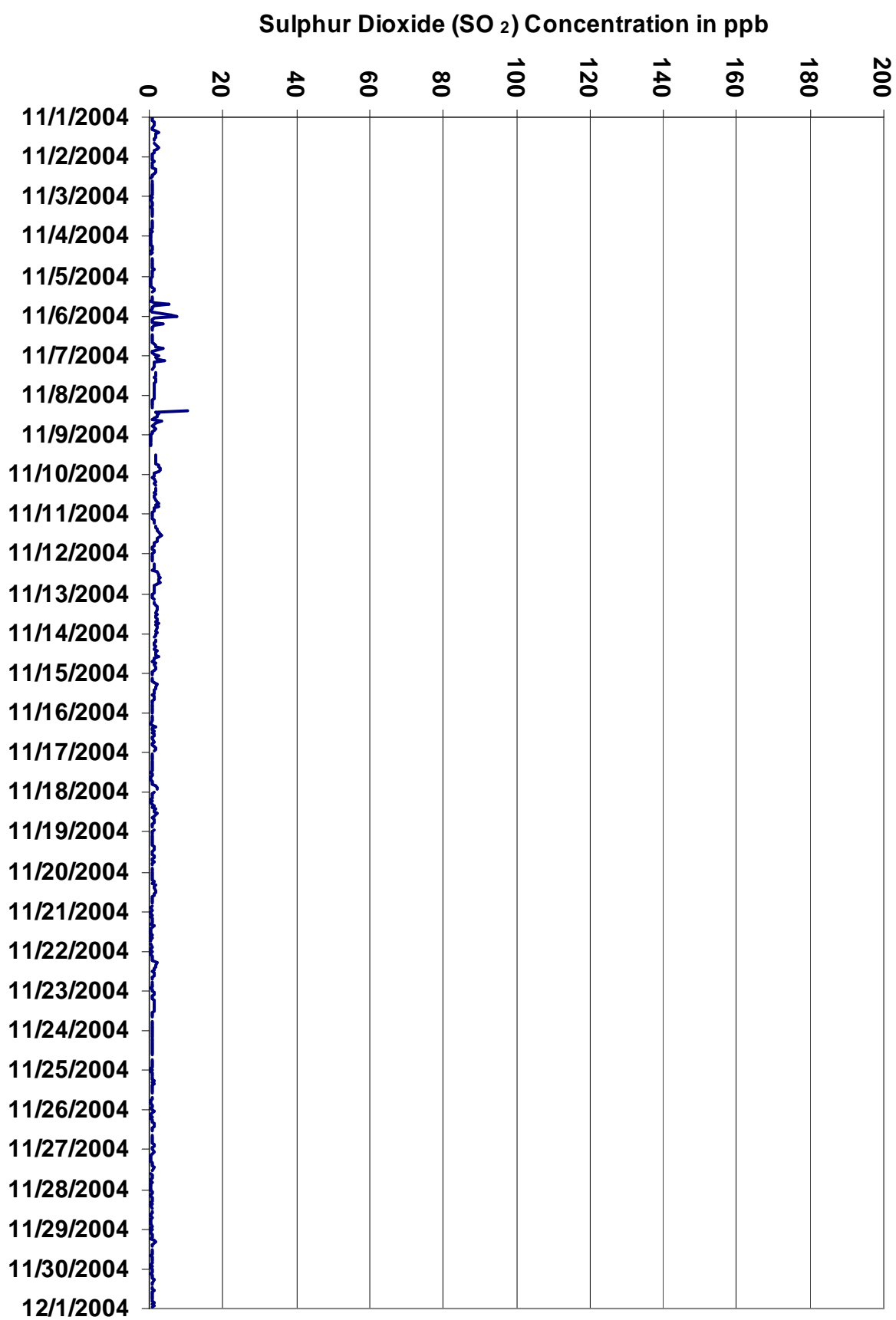
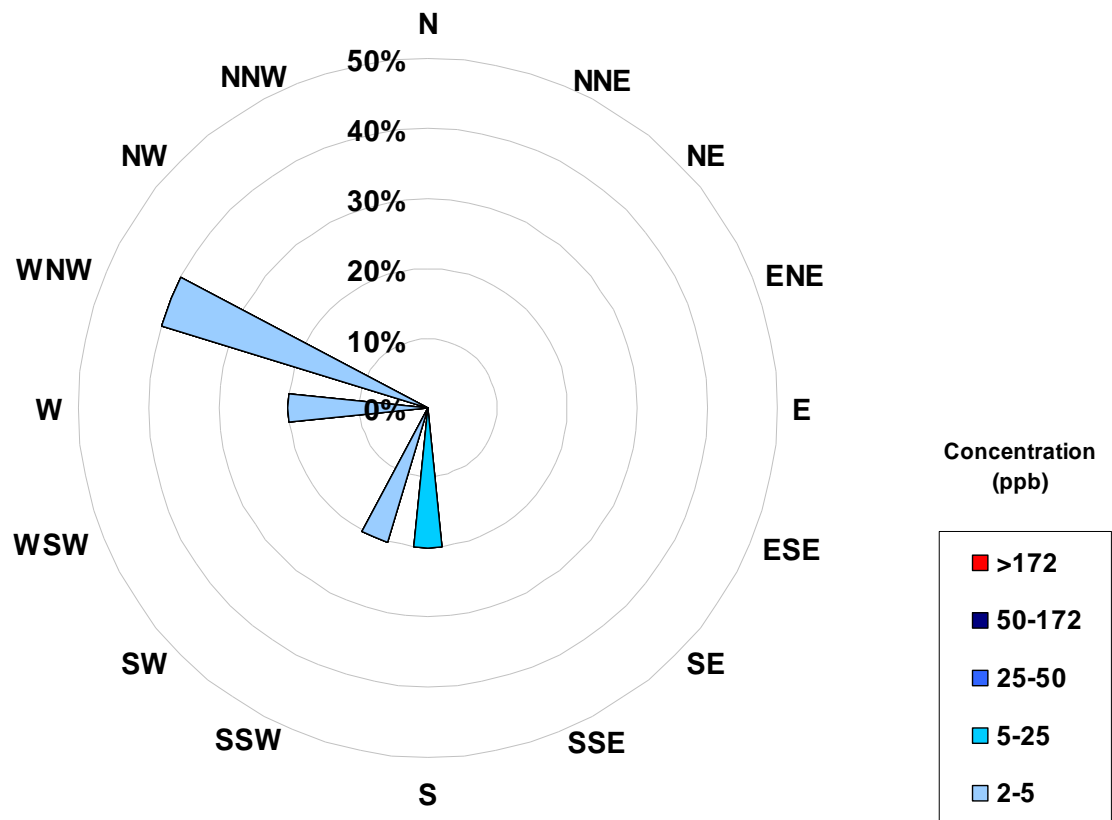


Figure 2. PASZA - Henry Pitker Sulphur Dioxide 1-hr Maximum Value Monthly Trend

### Concentration Rose for the 1-hr SO<sub>2</sub> Average Concentration Occurrences at the Henry Pirker Site for November 2004



Frequency Distribution of SO <sub>2</sub> in ppb			
Range		Frequency (hrs)	
0	< 2	677	
2	to 5	7	
5	to 25	1	
25	to 50	0	
50	to 172	0	
	> 172	0	
Total Non-Zero Values		685	

Calms	
Range	
ppb	
2-5	0.0%
5-25	0.0%
25-50	0.0%
50-172	0.0%
>172	0.0%

### PASZA - Henry Pirker Oxides of Nitrogen Monthly Summary

Station: Henry Pirker

#### HOURLY AVERAGE TABLE

Nitrogen Dioxide (NO<sub>2</sub>)

Station Owner: PASZA

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

**Summary**

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	47.6 ppb 12-Nov 12:00 13:00
Maximum 24-hr Average:	27.9 ppb 11-Nov

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

AIC Time:	30 hrs	Operational Time:	677 hrs
Calibration Time:	13 hrs	AMD Operational Uptime:	100.0%
Percentile	99	95	75
	39	34	23
	50	25	5
	1	7	3
	1	1	1
Average	15.4 ppb		

**Status Flag Characters**

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

**Day Mountain Standard Time**

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum	
1-Nov-04	10	11	15	18	11	8	10	16	21	24	24	20	18	19	14	A	26	34	37	36	34	30	23	18	20.8	37.2	
2-Nov-04	23	26	26	28	19	22	31	38	37	28	14	11	8	5	A	4	5	7	6	6	7	7	6	5	16.0	38.3	
3-Nov-04	5	4	5	4	4	5	6	6	9	8	5	5	3	A	6	9	16	13	9	7	7	6	4	3	6.5	15.9	
4-Nov-04	4	2	3	3	3	3	4	7	7	7	6	6	A	10	10	15	19	12	7	8	6	7	3	2	6.7	19.4	
5-Nov-04	1	2	1	1	1	2	4	17	31	28	17	A	16	15	12	8	9	10	5	4	5	3	2	2	8.6	30.7	
6-Nov-04	1	5	10	8	4	3	3	6	5	6	A	3	3	5	3	3	9	26	33	28	15	24	23	22	10.8	33.1	
7-Nov-04	21	19	23	23	21	20	21	25	22	A	10	8	6	6	6	6	6	8	6	7	7	7	6	5	12.5	24.5	
8-Nov-04	4	5	5	13	9	9	7	12	A	8	9	9	C	C	C	C	C	C	C	20	18	14	9	5	N	20.0	
9-Nov-04	4	8	14	15	15	14	16	C	C	C	C	C	C	7	11	16	17	28	36	39	45	41	29	20	20.9	44.8	
10-Nov-04	15	18	15	17	18	19	24	A	26	21	20	19	22	16	16	19	30	32	26	26	20	18	19	18	20.6	31.9	
11-Nov-04	17	16	16	21	19	18	A	28	29	29	30	38	38	39	30	30	33	34	36	31	28	27	27	27	27.9	38.9	
12-Nov-04	23	20	18	18	14	A	19	20	19	16	13	26	48	30	37	36	36	41	39	34	31	29	28	27	27.0	47.6	
13-Nov-04	21	19	19	19	A	22	27	30	33	31	30	20	23	18	23	23	36	36	39	38	36	34	33	34	27.9	38.5	
14-Nov-04	29	30	27	A	27	15	19	16	10	17	14	18	15	18	20	16	17	21	25	22	21	19	17	15	19.6	30.3	
15-Nov-04	16	13	A	11	7	9	16	27	25	25	17	17	15	9	6	7	9	11	8	10	12	11	12	6	13.0	26.9	
16-Nov-04	4	A	9	7	7	11	7	15	30	30	26	20	17	15	16	19	25	25	23	25	29	27	26	26	19.1	30.3	
17-Nov-04	A	9	10	9	4	4	6	9	7	10	8	6	6	5	6	10	14	22	25	28	34	34	35	A	13.7	34.7	
18-Nov-04	29	23	12	7	7	8	15	24	29	20	21	19	18	10	8	10	20	18	19	30	29	10	A	5	17.0	30.0	
19-Nov-04	17	8	14	15	12	18	26	16	16	21	26	18	8	6	12	16	19	20	12	9	9	A	9	11	14.7	25.9	
20-Nov-04	11	8	6	8	16	28	31	27	32	31	29	28	26	26	28	10	13	13	7	11	A	6	3	3	17.5	31.8	
21-Nov-04	3	3	3	4	3	5	13	8	7	17	8	8	5	3	3	4	4	1	3	A	1	3	4	3	5.0	17.4	
22-Nov-04	2	3	7	18	12	20	27	29	38	38	26	26	28	28	32	28	26	25	A	20	18	17	17	16	21.8	38.5	
23-Nov-04	17	23	24	27	25	25	29	30	30	30	27	21	15	12	15	17	18	A	21	16	19	20	21	14	21.5	30.4	
24-Nov-04	12	11	13	11	11	13	16	18	22	21	24	25	16	17	8	17	A	12	5	6	7	7	8	6	13.3	24.5	
25-Nov-04	2	4	1	7	14	17	31	25	26	24	8	10	7	12	7	A	7	11	10	8	6	7	6	2	11.0	30.5	
26-Nov-04	2	3	4	3	5	5	10	18	23	30	27	20	14	7	A	10	13	14	22	27	31	31	32	30	16.6	31.7	
27-Nov-04	26	26	23	21	13	16	20	7	9	12	19	23	14	A	9	12	26	19	15	10	13	8	5	5	15.2	26.3	
28-Nov-04	6	8	8	2	2	4	6	6	8	7	6	4	A	5	5	5	8	14	13	12	4	4	3	1	6.1	13.9	
29-Nov-04	1	1	3	6	10	7	8	27	39	27	3	A	6	11	9	11	12	9	9	10	5	2	4	4	9.9	39.3	
30-Nov-04	7	4	5	2	4	10	15	28	21	21	A	8	10	5	10	9	11	12	12	12	9	13	15	13	11.1	27.6	
																										N	0.0
Hourly Avg	11.6	11.5	11.7	11.9	11.0	12.4	16.2	19.1	21.9	21.0	17.3	16.1	15.6	13.3	13.4	13.7	17.3	18.8	18.1	18.7	17.4	16.0	14.8	11.9			
Hourly Max	28.8	30.3	27.3	27.7	27.2	27.9	31.0	38.3	39.3	37.7	30.0	38.1	47.6	38.9	37.0	35.6	36.3	41.4	38.7	38.8	44.8	41.3	34.7	34.2			

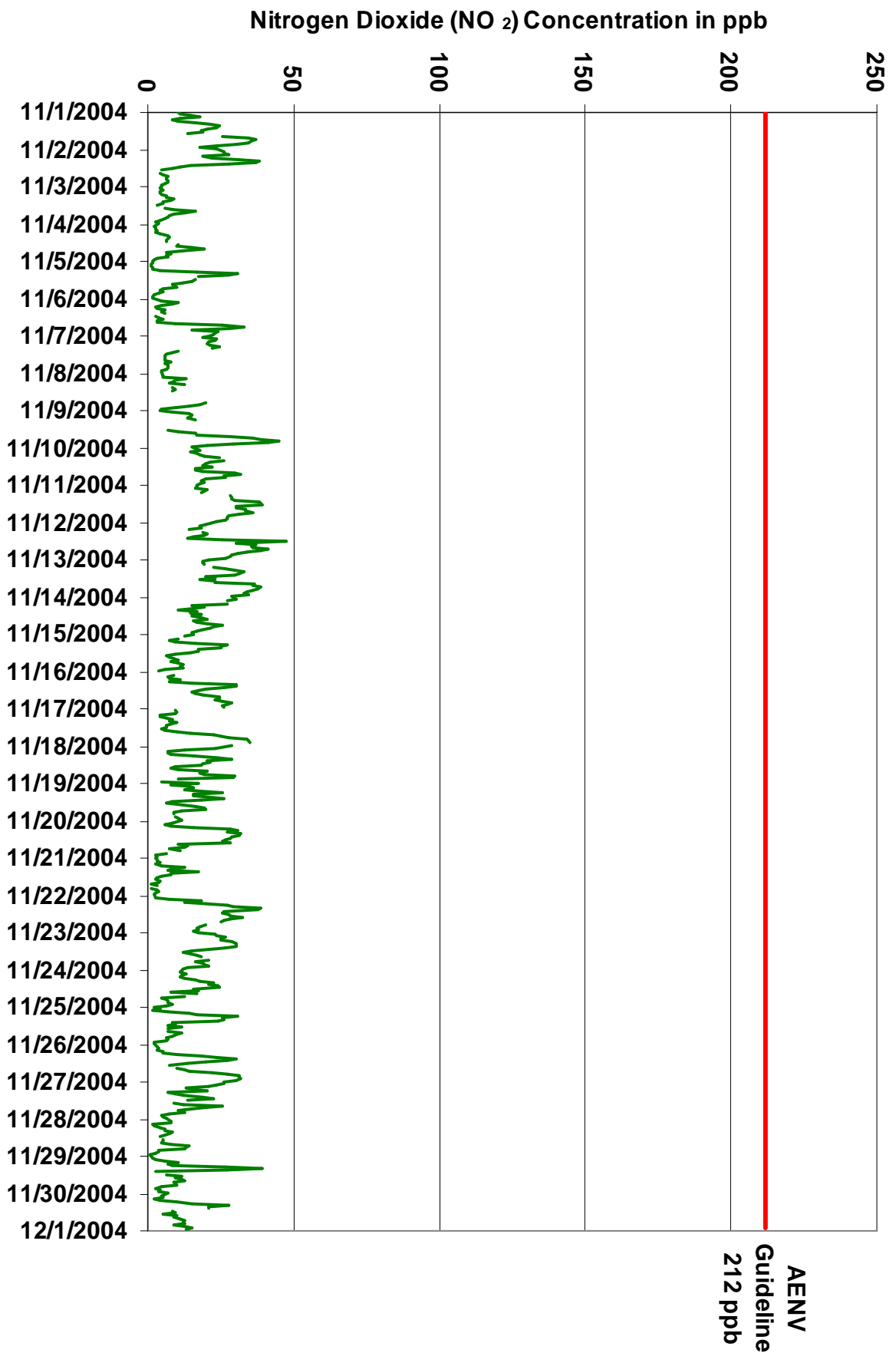


Figure 3. PASZA - Henry Pirkker Nitrogen Dioxide 1-hr Average Monthly Trend

Station: Henry Pirker

### HOURLY MAXIMUM TABLE

**Nitrogen Dioxide (NO<sub>2</sub>)**

Station Owner: PASZA

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

Maximum 1-hr Value:	54.8	ppb	22-Nov	9:00 10:00
Maximum 24-hr Value:	34.8	ppb	13-Nov	

AIC Time:	30 hrs	Operational Time:	677 hrs					
Calibration Time:	13 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	50	42	30	20	11	5	3	21.2 ppb

**Status Flag Characters**

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum	
Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00			
1-Nov-04	16	16	25	24	14	14	18	23	26	26	29	28	29	28	17	A	33	39	47	44	41	35	28	23	27.1	47.4	
2-Nov-04	32	31	31	34	29	32	36	54	46	39	21	17	17	7	A	6	8	9	9	8	11	9	8	11	21.9	53.6	
3-Nov-04	10	8	8	8	6	9	10	9	11	10	7	8	4	A	11	15	24	22	15	11	10	8	6	4	10.1	23.7	
4-Nov-04	6	4	5	4	5	4	7	10	9	10	9	9	A	16	18	25	33	18	10	12	11	13	5	5	10.8	32.8	
5-Nov-04	3	2	2	2	2	3	9	33	34	33	31	A	21	19	20	14	16	21	14	6	9	5	6	3	13.4	34.4	
6-Nov-04	3	23	13	13	10	4	6	8	8	9	A	6	9	9	9	7	24	34	38	35	20	28	26	30	16.2	37.9	
7-Nov-04	26	26	28	28	23	24	28	29	26	A	17	15	9	8	8	8	9	14	9	9	9	9	8	7	16.3	28.8	
8-Nov-04	6	7	8	20	15	17	11	18	A	12	13	12	C	C	C	C	C	C	C	23	26	18	13	8	N	25.9	
9-Nov-04	5	15	21	20	17	18	20	C	C	C	C	C	C	10	21	26	30	44	45	50	50	50	41	25	28.3	50.4	
10-Nov-04	19	20	17	20	22	26	29	A	30	24	26	25	33	20	21	25	38	43	30	43	23	21	22	22	26.0	43.4	
11-Nov-04	21	18	18	30	27	21	A	36	36	36	43	45	43	49	38	39	37	37	40	35	31	31	32	31	33.7	49.3	
12-Nov-04	27	23	20	20	19	A	20	28	23	19	17	45	50	42	46	43	45	51	44	53	37	40	33	31	33.7	53.3	
13-Nov-04	24	20	21	23	A	25	40	37	39	41	42	24	28	22	28	39	41	39	52	42	52	45	37	40	34.8	52.0	
14-Nov-04	33	38	32	A	29	22	27	21	19	27	21	26	25	23	25	22	24	26	31	27	26	26	25	19	25.8	37.8	
15-Nov-04	20	16	A	13	10	12	23	32	32	32	22	20	17	15	8	9	11	14	11	16	16	16	15	14	17.2	32.0	
16-Nov-04	7	A	13	12	12	19	22	26	49	39	31	32	32	24	29	25	29	32	30	30	33	33	32	31	26.9	48.8	
17-Nov-04	A	16	25	14	7	6	10	13	10	15	11	9	8	7	8	21	23	32	32	41	44	43	41	A	19.8	44.0	
18-Nov-04	33	28	22	9	10	16	23	30	37	31	25	26	22	21	14	17	24	22	28	32	33	25	A	7	23.4	37.5	
19-Nov-04	25	23	19	20	19	26	31	27	31	38	34	24	11	12	24	24	24	24	19	14	14	A	15	19	22.5	37.7	
20-Nov-04	25	16	11	14	30	35	40	34	38	35	32	33	31	32	33	16	20	18	18	20	A	13	5	4	24.0	40.1	
21-Nov-04	4	5	5	7	5	15	15	11	14	31	12	13	7	5	4	6	7	5	7	A	3	5	7	5	8.6	30.9	
22-Nov-04	5	6	19	27	29	47	30	37	46	55	34	31	34	32	35	33	29	27	A	24	20	18	20	19	28.5	54.8	
23-Nov-04	25	29	30	30	27	26	33	35	34	34	32	25	21	15	18	19	20	A	27	23	23	24	26	20	26.0	34.8	
24-Nov-04	21	16	14	13	12	16	22	24	26	29	27	29	19	22	14	21	A	26	6	9	10	12	19	12	18.2	29.4	
25-Nov-04	6	8	8	21	20	30	35	36	36	31	14	15	12	19	11	A	11	17	17	10	11	10	8	4	16.9	36.4	
26-Nov-04	3	6	6	5	6	8	14	24	34	36	33	35	20	17	A	15	19	25	32	37	34	39	41	35	22.7	40.6	
27-Nov-04	32	30	27	25	19	21	28	9	13	21	25	28	22	A	12	16	35	34	22	17	16	18	9	10	21.3	35.2	
28-Nov-04	11	11	11	3	4	11	12	13	15	20	10	8	A	7	6	7	13	22	22	20	11	10	12	3	11.5	22.1	
29-Nov-04	2	4	9	22	16	17	18	47	49	42	7	A	13	15	13	20	21	16	15	19	7	4	8	10	17.2	48.8	
30-Nov-04	13	11	12	8	11	16	30	31	32	30	A	11	13	7	17	13	15	18	15	15	14	19	27	27	17.6	31.7	
																									N	0.0	
Hourly Avg	15.9	16.4	16.6	16.8	15.8	18.6	22.4	26.2	28.6	28.7	23.1	22.2	21.1	18.7	18.8	19.8	23.5	26.1	24.5	25.0	22.3	21.6	19.7	16.4			
Hourly Max	33.5	37.8	32.4	33.9	30.1	46.7	40.4	53.6	48.8	54.8	42.6	45.2	50.5	49.3	46.3	43.4	45.0	50.8	52.0	53.3	51.8	50.3	41.3	39.5			

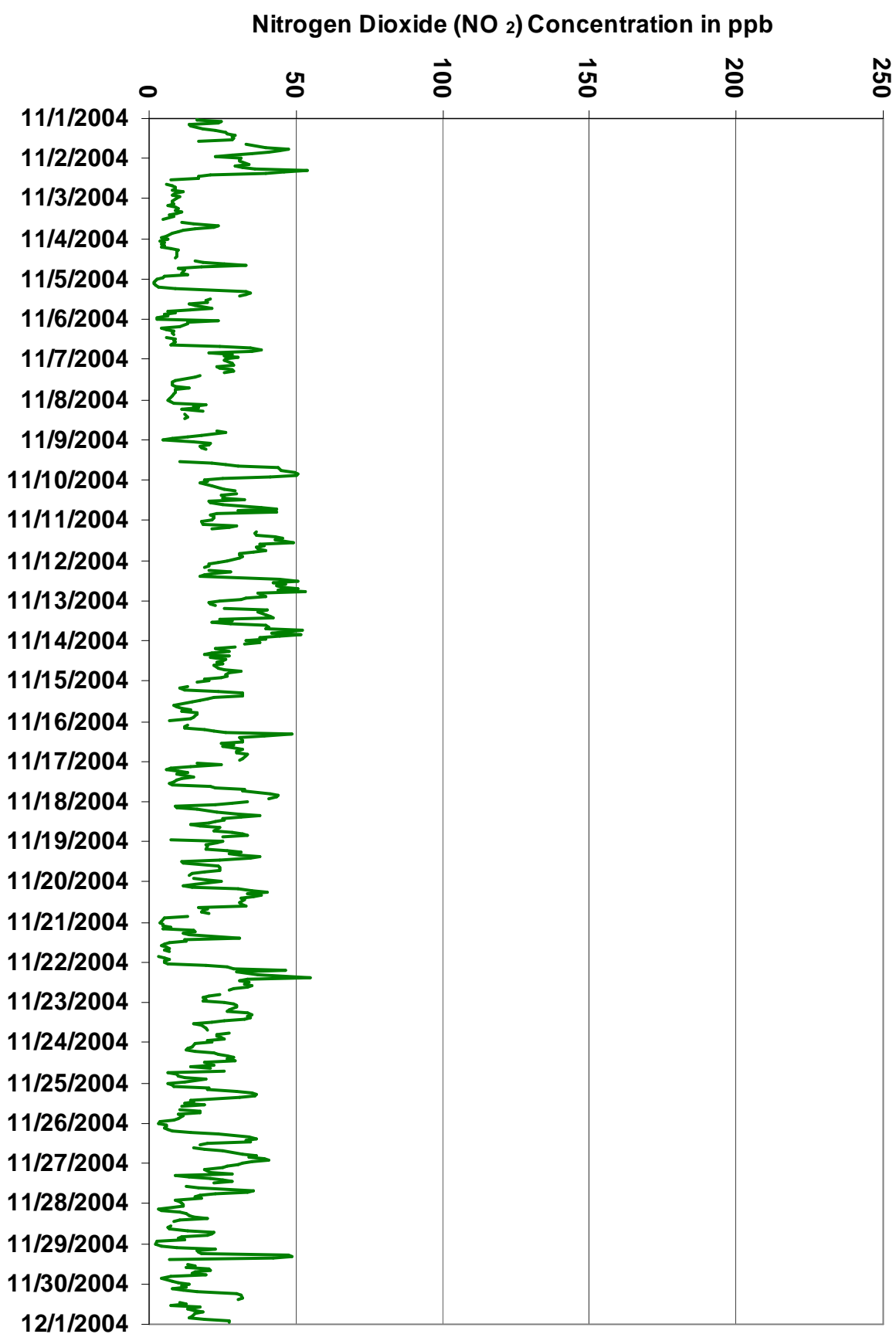
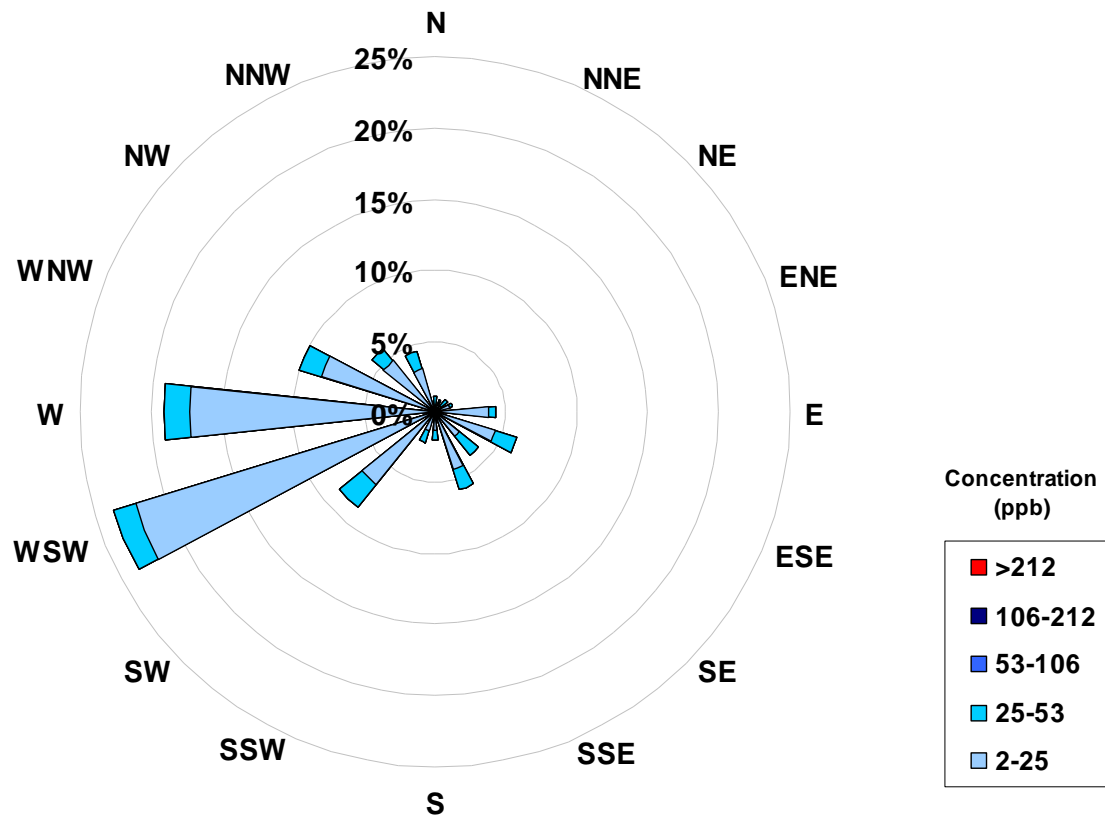


Figure 4. PASZA - Henry Pirkler Nitrogen Dioxide 1-hr Maximum Value Monthly Trend

**Concentration Rose for the 1-hr NO<sub>2</sub> Average Concentration Occurrences at the Henry Pirker Site for November 2004**



Frequency Distribution of NO <sub>2</sub> in ppb			
Range		Frequency (hrs)	
0	< 2	17	
2	to 25	516	
25	to 53	144	
53	to 106	0	
106	to 212	0	
	> 212	0	
Total Non-Zero Values		677	

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



Station: Henry Pirker

**HOURLY AVERAGE TABLE**

**Nitric Oxide (NO)**

Station Owner: PASZA

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

**Summary**

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	226	ppb	9-Nov	20:00 21:00
Maximum 24-hr Average:	64	ppb	11-Nov	

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

AIC Time:	30 hrs		Operational Time:	677 hrs				
Calibration Time:	13 hrs		AMD Operational Uptime:	100.0%				
Percentile	99	95	75	50	25	5	1	Average
	136	97	19	3	1	0	0	17.8 ppb

**Status Flag Characters**

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

**Day Mountain Standard Time**

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum	
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Nov-04	0	0	1	1	1	1	2	3	6	10	10	7	6	6	3	A	12	54	133	134	60	30	2	1	20.9	134.2	
2-Nov-04	3	4	7	10	4	4	16	65	58	35	10	8	5	3	A	1	1	1	1	0	1	1	0	0	10.4	65.1	
3-Nov-04	0	0	0	0	1	0	1	1	2	3	2	2	2	A	2	2	3	1	1	1	1	0	0	0	1.1	2.8	
4-Nov-04	0	0	0	0	0	0	1	1	2	2	2	2	A	3	3	4	6	2	1	1	0	0	0	0	1.3	5.6	
5-Nov-04	0	0	0	0	0	0	0	5	16	15	4	A	4	3	2	1	0	1	0	0	0	0	0	0	2.3	15.7	
6-Nov-04	0	0	0	0	0	0	0	0	1	1	A	2	3	3	2	2	3	11	41	24	4	14	9	13	5.7	40.8	
7-Nov-04	12	4	14	23	9	22	36	30	10	A	4	4	1	1	1	1	1	2	2	2	2	2	2	2	8.2	36.4	
8-Nov-04	2	2	2	4	1	1	1	4	A	3	8	9	C	C	C	C	C	C	C	71	32	6	3	2	N	71.3	
9-Nov-04	2	3	6	6	5	6	9	C	C	C	C	C	C	8	14	17	5	24	74	140	226	188	74	24	46.1	225.8	
10-Nov-04	2	7	2	5	10	9	28	A	107	84	54	41	53	32	29	31	101	165	86	103	39	32	28	23	46.7	165.0	
11-Nov-04	25	15	7	43	42	38	A	106	121	132	142	157	112	108	66	44	73	44	40	32	25	11	34	55	64.0	156.5	
12-Nov-04	15	11	5	17	5	A	29	57	56	27	24	55	102	57	64	50	115	171	131	56	49	47	46	46	53.7	171.5	
13-Nov-04	6	7	12	5	A	9	33	61	121	125	119	39	45	20	18	18	45	51	125	122	120	96	116	130	62.8	130.4	
14-Nov-04	78	116	35	A	42	2	4	1	1	3	5	12	9	13	16	6	3	3	33	54	75	63	44	15	27.5	115.9	
15-Nov-04	9	6	A	3	1	1	8	87	71	80	29	39	20	7	3	2	2	1	0	1	1	1	0	0	16.2	87.2	
16-Nov-04	0	A	0	0	0	0	1	1	23	27	18	12	12	11	13	8	11	9	7	8	72	111	75	51	20.4	111.3	
17-Nov-04	A	0	1	1	1	1	0	1	1	1	3	3	3	3	2	2	2	6	11	23	71	99	115	A	16.1	115.1	
18-Nov-04	29	8	1	1	1	1	1	5	27	8	11	10	11	5	3	2	3	2	3	20	22	2	A	1	7.7	29.3	
19-Nov-04	5	1	1	2	2	5	27	8	5	16	33	18	6	5	8	10	5	5	2	2	1	A	1	1	7.3	32.7	
20-Nov-04	2	1	1	1	2	10	17	14	54	59	41	41	36	27	30	3	2	2	1	1	A	1	0	0	15.0	58.9	
21-Nov-04	0	0	1	1	0	0	1	1	1	4	2	2	1	1	1	1	1	0	0	A	0	1	1	1	0.9	4.1	
22-Nov-04	0	0	1	2	1	7	15	93	116	113	52	59	67	70	80	53	33	29	A	9	6	5	7	4	35.8	115.8	
23-Nov-04	5	23	34	34	16	14	34	48	40	54	37	25	16	9	10	10	6	A	3	1	2	3	4	1	18.7	53.7	
24-Nov-04	2	1	1	1	1	1	2	2	5	13	28	36	17	19	3	10	A	5	1	1	1	1	2	1	6.7	35.7	
25-Nov-04	0	0	1	2	1	3	21	17	18	12	4	6	4	6	2	A	1	2	1	1	1	1	1	0	4.6	21.2	
26-Nov-04	0	0	0	0	0	1	1	4	14	33	27	16	8	4	A	3	3	2	9	20	30	39	38	39	12.7	38.7	
27-Nov-04	33	34	23	10	2	3	7	0	1	4	20	32	11	A	5	4	21	9	2	1	1	0	0	0	9.7	33.6	
28-Nov-04	0	1	1	0	0	0	0	0	1	1	2	2	A	1	1	1	1	1	1	1	0	0	0	0	0.7	2.3	
29-Nov-04	0	0	0	0	1	0	1	17	43	17	0	A	1	2	1	1	2	1	0	1	0	0	0	0	3.9	42.8	
30-Nov-04	1	1	1	0	0	1	1	8	5	7	A	4	5	3	3	2	2	2	2	2	1	2	3	4	2.6	8.3	
																										N	0.0
Hourly Avg	8.0	8.5	5.4	6.0	5.1	4.8	10.4	23.0	33.0	31.8	25.6	23.8	21.5	15.8	14.3	10.7	16.5	21.6	25.4	28.6	29.1	26.2	20.9	14.3			
Hourly Max	77.6	115.9	35.2	43.0	42.4	38.0	36.4	106.1	121.1	131.6	142.3	156.5	112	107.7	79.8	52.8	114.9	171.5	133.3	139.9	225.8	187.9	116.3	130.4			

Station: Henry Pirker

### HOURLY MAXIMUM TABLE

Nitric Oxide (NO)

Station Owner: PASZA

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

**Summary**

Maximum 1-hr Value:	291.8	ppb	9-Nov	20:00 21:00
Maximum 24-hr Value:	104.5	ppb	13-Nov	

AIC Time:	30 hrs	Operational Time:	677 hrs					
Calibration Time:	13 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	219	143	41	9	2	1	0	32.0 ppb

**Status Flag Characters**

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

**Day Mountain Standard Time**

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum	
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Nov-04	0	1	11	3	2	2	4	7	12	13	17	14	13	15	6	A	24	122	238	199	132	64	4	4	39.4	237.6	
2-Nov-04	11	8	17	24	13	14	45	151	116	87	20	32	10	5	A	2	2	2	2	1	2	2	1	1	24.7	151.1	
3-Nov-04	1	1	1	1	1	2	2	2	3	4	3	4	2	A	4	4	7	10	2	1	1	1	1	1	2.5	10.4	
4-Nov-04	0	0	1	1	1	1	1	3	6	4	3	3	A	6	6	8	16	3	1	1	1	1	1	1	2.9	16.2	
5-Nov-04	1	1	1	1	1	1	1	18	44	32	23	A	8	7	9	4	4	8	3	0	0	0	0	0	7.1	43.6	
6-Nov-04	0	12	0	0	0	0	1	1	2	2	A	3	5	4	4	9	41	69	55	9	31	13	32	32	12.9	69.4	
7-Nov-04	29	13	37	49	15	38	63	63	15	A	13	16	6	7	3	3	3	6	5	3	3	3	3	4	17.4	63.2	
8-Nov-04	3	6	5	10	4	5	2	11	A	8	15	18	C	C	C	C	C	C	C	121	87	11	7	3	N	121.0	
9-Nov-04	3	6	12	12	9	10	17	C	C	C	C	C	C	19	29	41	39	91	134	237	292	248	155	47	78.0	291.8	
10-Nov-04	6	15	9	15	18	34	44	A	171	122	100	61	98	54	53	50	142	250	130	223	68	60	79	39	80.0	249.9	
11-Nov-04	36	25	18	83	84	47	A	153	157	174	213	202	131	172	100	79	85	81	74	53	35	32	76	71	94.8	213.2	
12-Nov-04	37	21	19	26	13	A	49	76	82	38	37	101	115	97	115	72	213	232	178	113	100	72	92	91	86.4	232.4	
13-Nov-04	16	18	21	16	A	25	64	136	174	210	187	53	65	28	26	94	92	91	188	180	193	204	149	173	104.5	209.5	
14-Nov-04	100	179	62	A	59	11	25	4	3	8	14	29	24	21	34	17	14	11	95	86	113	100	82	32	48.8	178.5	
15-Nov-04	15	10	A	5	3	2	29	138	115	117	54	61	30	14	4	3	3	4	1	2	2	2	1	1	26.7	137.7	
16-Nov-04	1	A	3	1	1	1	7	7	105	68	31	35	43	23	40	20	23	31	20	47	131	161	124	81	43.6	160.7	
17-Nov-04	A	2	8	1	1	1	3	3	2	9	5	5	5	4	3	8	6	19	27	67	133	160	141	A	27.8	160.5	
18-Nov-04	75	38	5	2	2	2	5	10	82	42	18	24	21	14	17	3	6	4	10	32	38	8	A	1	20.0	82.0	
19-Nov-04	11	5	3	3	5	18	48	28	19	47	52	31	9	9	21	21	14	10	5	4	2	A	2	8	16.3	51.6	
20-Nov-04	16	2	1	2	7	28	39	40	109	96	51	50	44	46	48	7	4	4	6	5	A	2	1	1	26.4	108.6	
21-Nov-04	1	1	1	1	1	1	1	1	2	17	3	4	2	2	2	2	2	1	1	A	1	3	3	2	2.3	17.3	
22-Nov-04	1	5	8	26	6	50	34	157	198	218	71	94	84	84	97	88	47	39	A	21	18	11	16	11	60.2	218.5	
23-Nov-04	19	41	58	48	32	22	52	68	61	66	53	36	26	11	19	14	11	A	9	5	5	9	11	5	29.6	67.7	
24-Nov-04	5	1	2	1	1	2	7	10	11	38	36	49	27	27	6	19	A	18	2	2	3	4	9	2	12.3	49.4	
25-Nov-04	1	1	2	6	4	12	44	43	50	26	7	11	7	11	4	A	2	3	3	2	2	2	2	1	10.5	50.3	
26-Nov-04	1	1	0	0	1	1	3	8	54	64	44	31	15	12	A	7	7	12	23	61	53	84	94	60	27.7	94.0	
27-Nov-04	66	60	42	27	4	9	27	1	3	23	44	55	25	A	8	7	64	52	6	4	2	4	1	2	23.3	65.8	
28-Nov-04	2	1	2	1	1	1	1	1	2	5	5	4	A	3	2	1	2	4	4	3	1	2	3	2	2.2	5.5	
29-Nov-04	1	1	1	2	1	1	3	78	91	49	1	A	3	5	2	5	6	1	2	3	1	1	1	1	11.3	90.7	
30-Nov-04	3	1	2	1	1	2	6	19	16	27	A	5	6	4	7	4	3	4	3	3	2	7	12	14	6.6	26.5	
																										N	0.0
Hourly Avg	15.9	16.4	12.1	12.7	10.0	11.9	21.6	44.1	60.9	57.6	41.5	38.2	31.6	26.0	24.7	21.8	30.3	41.2	44.3	52.9	49.3	44.4	37.3	23.8			
Hourly Max	100.2	178.5	61.7	83.2	84.1	50.2	64.3	157.2	198.3	218.5	213.2	201.9	131	171.9	115.5	93.8	212.8	249.9	237.6	237.3	291.8	248.4	155.3	172.7			

Station: Henry Pirker

### HOURLY AVERAGE TABLE

Oxides of Nitrogen (NO<sub>x</sub>)

Station Owner: PASZA

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

**Summary**

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	269	ppb	9-Nov	20:00 21:00
Maximum 24-hr Average:	92	ppb	11-Nov	

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

AIC Time:	30 hrs							Operational Time:	677 hrs		
Calibration Time:	13 hrs							AMD Operational Uptime:	100.0%		
Percentile	99	95	75	50	25	5	1	Average			
	170	129	43	18	8	3	1	33.4 ppb			

**Status Flag Characters**

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

**Day Mountain Standard Time**

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum	
1-Nov-04	11	11	15	19	12	9	12	19	28	34	34	27	24	24	17	A	38	88	170	170	95	60	25	18	41.8	170.3	
2-Nov-04	26	30	33	38	23	26	47	103	95	63	24	19	13	7	A	5	6	8	7	6	8	6	5	5	26.4	103.4	
3-Nov-04	5	5	5	5	5	5	7	7	11	10	7	8	5	A	7	11	19	14	10	8	7	6	4	3	7.5	18.6	
4-Nov-04	4	2	3	3	3	3	5	9	9	9	9	9	A	14	13	19	25	13	7	9	7	7	4	3	8.1	25.0	
5-Nov-04	2	2	1	1	2	2	4	22	46	43	21	A	20	19	14	9	9	11	5	2	3	1	0	0	10.4	46.4	
6-Nov-04	0	4	9	7	4	2	3	6	5	7	A	5	6	8	5	5	12	37	74	52	20	38	32	35	16.5	74.3	
7-Nov-04	34	23	37	46	30	43	58	54	32	A	14	12	7	7	7	7	9	8	9	8	8	8	7	7	20.7	57.9	
8-Nov-04	6	7	7	17	11	10	8	16	A	12	18	18	C	C	C	C	C	C	C	92	51	21	13	7	N	91.6	
9-Nov-04	7	12	21	22	20	20	26	C	C	C	C	C	C	16	26	35	23	53	111	179	269	229	104	46	67.7	269.4	
10-Nov-04	19	26	18	24	30	30	54	A	132	104	73	60	75	48	46	50	130	195	112	128	59	51	48	42	67.6	195.1	
11-Nov-04	42	32	24	63	61	57	A	134	149	159	171	193	150	146	96	75	106	78	76	63	53	39	61	82	91.8	193.3	
12-Nov-04	39	32	24	35	19	A	48	77	75	42	37	80	150	87	101	86	150	211	169	89	80	76	74	73	80.7	211.4	
13-Nov-04	28	26	32	26	A	32	61	91	152	155	148	59	68	38	41	41	82	87	163	159	155	130	148	164	90.6	163.5	
14-Nov-04	106	145	63	A	70	18	24	17	11	20	19	31	24	31	37	22	21	24	58	76	95	81	61	31	47.1	145.1	
15-Nov-04	26	19	A	13	9	11	25	114	95	105	46	57	34	16	9	10	11	12	8	11	13	12	12	6	29.3	113.5	
16-Nov-04	4	A	9	7	8	11	8	17	53	58	45	33	29	27	29	27	36	34	30	34	100	138	100	77	39.7	137.8	
17-Nov-04	A	10	11	10	5	4	7	10	8	13	11	10	10	7	8	13	17	29	36	51	105	133	149	A	29.8	148.9	
18-Nov-04	59	31	14	7	8	9	17	30	56	29	33	30	29	15	11	12	24	20	22	51	51	13	A	5	25.1	58.5	
19-Nov-04	22	9	16	18	14	23	54	24	21	37	59	36	15	11	21	27	25	25	14	11	10	A	10	12	22.4	58.9	
20-Nov-04	14	9	7	9	18	39	48	42	86	90	70	70	63	53	59	13	16	14	8	12	A	8	3	3	32.7	90.4	
21-Nov-04	3	3	4	5	3	5	14	9	7	22	10	10	6	4	4	5	5	1	3	A	1	4	5	3	5.9	21.8	
22-Nov-04	3	3	8	20	14	28	43	122	154	150	78	85	94	98	112	81	59	54	A	30	24	22	25	20	57.7	153.6	
23-Nov-04	22	47	58	61	42	40	63	78	70	84	64	46	31	21	26	27	25	A	25	18	21	23	26	15	40.5	84.2	
24-Nov-04	14	12	14	12	12	14	19	20	28	35	52	61	33	36	11	27	A	18	6	8	8	9	11	8	20.3	60.6	
25-Nov-04	2	5	2	9	15	20	52	43	45	37	13	16	11	18	9	A	8	13	11	10	7	8	7	3	15.9	52.4	
26-Nov-04	2	3	4	3	6	6	11	23	38	64	54	36	22	11	A	13	16	17	31	48	62	70	71	69	29.6	70.6	
27-Nov-04	59	60	47	32	15	19	28	7	11	16	39	55	25	A	14	16	47	29	17	12	14	8	5	6	25.3	60.2	
28-Nov-04	7	9	9	2	3	5	7	6	9	9	9	7	A	7	6	6	9	15	14	14	4	4	3	1	7.1	15.5	
29-Nov-04	1	2	3	6	11	8	9	45	83	45	3	A	8	14	11	13	15	10	10	11	6	2	5	4	14.1	82.7	
30-Nov-04	8	5	6	3	5	11	16	37	27	29	A	12	14	8	14	11	13	15	14	14	10	15	18	17	14.0	36.6	
																										N	0.0
Hourly Avg	19.8	20.2	17.3	18.1	16.4	17.5	26.8	42.2	55.0	52.9	43.0	40.1	37.2	29.3	27.9	24.7	34.0	40.6	43.6	47.4	46.5	42.2	35.8	26.4			
Hourly Max	105.8	145.1	62.7	63.5	69.6	56.7	63.4	133.5	153.6	159.2	170.6	193.3	150	146.0	111.8	85.9	150.3	211.4	170.3	178.8	269.4	228.6	148.9	163.5			

Station: Henry Pirker

**HOURLY MAXIMUM TABLE**

**Oxides of Nitrogen (NO<sub>x</sub>)**

Station Owner: PASZA

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

**Summary**

Maximum 1-hr Value:	336.5	ppb	9-Nov	20:00 21:00
Maximum 24-hr Value:	136.0	ppb	13-Nov	

AIC Time:	30 hrs	Operational Time:	677 hrs					
Calibration Time:	13 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	262	179	69	29	14	6	3	52.1 ppb

**Status Flag Characters**

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

**Day Mountain Standard Time**

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum	
1-Nov-04	17	17	27	26	16	16	22	30	38	39	46	42	42	43	22	A	56	158	276	237	159	95	30	26	64.3	276.2	
2-Nov-04	41	39	42	53	40	46	80	191	160	124	41	38	26	12	A	8	9	11	11	9	13	10	9	12	44.6	191.2	
3-Nov-04	11	9	8	9	7	10	11	10	14	13	10	12	6	A	15	18	30	26	16	12	11	8	6	5	12.0	30.5	
4-Nov-04	6	4	5	5	5	5	8	12	15	13	12	12	A	22	24	33	49	21	11	13	11	13	6	5	13.5	48.7	
5-Nov-04	3	3	2	2	2	3	9	49	62	64	53	A	25	26	29	18	20	30	17	4	8	4	6	1	19.2	63.6	
6-Nov-04	1	35	14	12	10	4	6	10	10	11	A	9	14	13	13	12	33	75	107	88	29	55	38	63	28.7	107.4	
7-Nov-04	49	37	63	72	36	58	88	89	41	A	27	29	15	14	10	10	13	20	14	11	12	11	11	9	32.1	88.6	
8-Nov-04	9	12	11	30	18	21	13	29	A	19	27	30	C	C	C	C	C	C	C	138	113	28	21	11	N	137.9	
9-Nov-04	8	22	33	32	26	28	37	C	C	C	C	C	C	31	48	69	69	135	179	285	336	294	194	71	105.5	336.5	
10-Nov-04	26	34	26	33	39	60	68	A	198	144	125	86	129	74	73	75	173	283	156	259	90	79	98	60	103.9	283.5	
11-Nov-04	55	40	35	109	110	67	A	188	191	206	253	244	171	218	135	117	121	114	110	88	64	59	103	99	126.0	253.3	
12-Nov-04	63	42	38	45	29	A	68	104	100	53	53	145	164	137	162	115	248	277	220	167	135	109	121	119	118.0	276.8	
13-Nov-04	41	38	40	33	A	51	104	172	207	242	228	76	93	49	53	132	132	127	227	216	244	240	179	204	136.0	243.6	
14-Nov-04	125	210	87	A	86	34	52	25	22	36	35	56	49	43	55	39	38	36	120	111	137	120	102	48	72.4	210.0	
15-Nov-04	34	26	A	18	13	14	53	166	145	146	75	81	46	28	12	13	13	18	12	18	18	17	15	15	43.4	165.8	
16-Nov-04	7	A	15	13	12	20	30	34	153	107	62	67	68	48	69	46	47	62	50	76	157	184	150	110	69.0	184.3	
17-Nov-04	A	18	33	15	8	7	11	16	12	20	16	15	13	11	10	30	29	51	57	103	171	193	176	A	46.1	192.7	
18-Nov-04	108	61	28	10	12	18	26	40	118	74	41	46	39	33	19	21	30	27	37	64	71	33	A	8	41.9	117.7	
19-Nov-04	36	28	22	23	24	41	75	56	50	80	86	55	20	20	45	45	39	34	24	18	17	A	17	23	38.2	86.0	
20-Nov-04	41	18	13	16	38	60	74	74	143	129	82	83	74	78	80	24	24	22	24	26	A	16	6	5	49.9	142.9	
21-Nov-04	4	6	6	9	5	17	17	12	15	48	15	16	9	7	5	8	8	6	8	A	3	7	8	7	10.7	48.4	
22-Nov-04	6	11	26	51	35	94	59	189	242	270	102	123	113	112	131	120	74	64	A	45	38	29	35	30	86.8	269.6	
23-Nov-04	45	69	85	78	57	46	85	101	94	99	81	61	48	27	37	33	30	A	37	28	28	33	36	25	54.8	100.9	
24-Nov-04	27	17	16	14	13	18	29	34	38	63	62	77	45	48	20	36	A	44	8	12	12	16	29	14	30.2	77.4	
25-Nov-04	8	9	10	27	24	42	73	78	86	57	22	26	18	30	15	A	12	21	20	11	13	12	10	4	27.3	85.8	
26-Nov-04	3	7	6	6	7	9	16	31	85	99	77	64	35	29	A	23	26	38	56	96	86	117	127	85	49.0	126.8	
27-Nov-04	92	87	66	48	24	29	56	10	17	44	68	83	48	A	21	23	96	85	28	21	18	22	10	12	43.7	96.4	
28-Nov-04	14	13	13	3	5	12	14	15	17	26	16	13	A	10	8	8	15	26	26	23	13	12	15	4	13.9	26.5	
29-Nov-04	4	4	11	25	18	18	21	125	140	91	8	A	16	19	15	26	27	17	17	22	9	5	9	12	28.6	139.6	
30-Nov-04	16	12	14	9	13	19	37	50	49	57	A	16	19	11	25	16	17	22	19	17	16	25	39	41	24.3	57.3	
																										N	0.0
Hourly Avg	30.9	32.0	27.5	28.5	25.3	29.8	42.9	69.2	87.9	84.8	63.8	59.4	51.8	44.2	42.7	41.3	52.8	66.1	67.4	76.5	70.0	63.6	55.4	38.9			
Hourly Max	124.8	210.0	87.0	109.0	110.5	93.6	104.4	191.2	241.8	269.6	253.3	243.9	171	217.7	161.6	131.5	248.5	283.5	276.2	285.0	336.5	294.1	193.9	204.3			

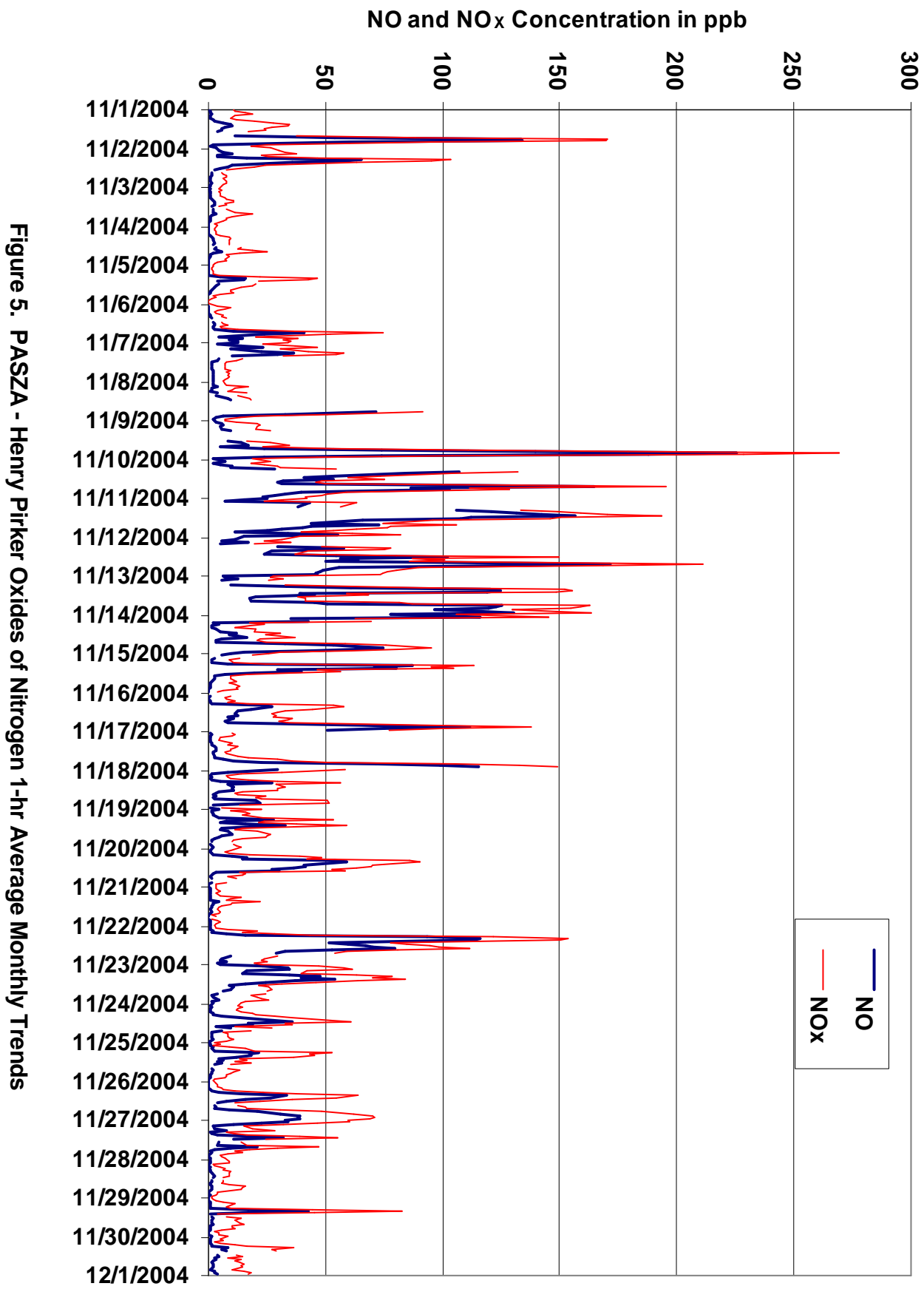
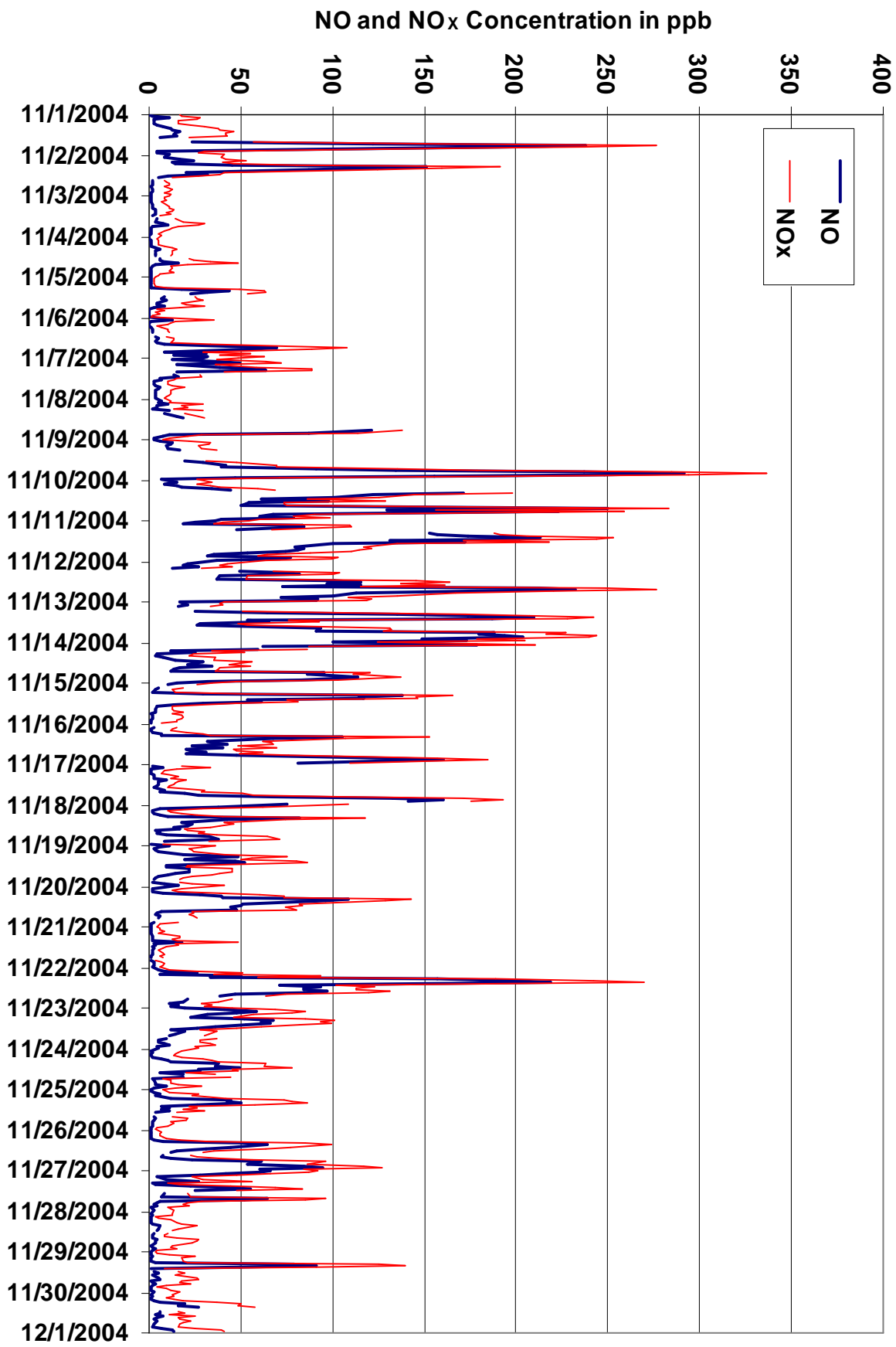


Figure 5. PASZA - Henry Pirkler Oxides of Nitrogen 1-hr Average Monthly Trends

Figure 6. PASZA - Henry Pirkler Oxides of Nitrogen 1-hr Maximum Value Monthly Trends



### PASZA - Henry Pirker Ozone Monthly Summary

Station: Henry Pirker

#### HOURLY AVERAGE TABLE

**Ozone (O<sub>3</sub>)**

Station Owner: PASZA

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

**Summary**

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	36.0 ppb 4-Nov 1:00 2:00
Maximum 24-hr Average:	31.5 ppb 4-Nov

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

AIC Time:	31 hrs							Operational Time:	678 hrs						
Calibration Time:	11 hrs							AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average							
	35	31	24	13	4	1	0	14.5 ppb							

**Status Flag Characters**

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

**Day Mountain Standard Time**

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum	
1-Nov-04	2	22	16	15	21	22	21	14	10	9	10	13	16	15	19	A	8	0	1	1	0	1	7	13	11.2	22.4	
2-Nov-04	8	5	3	1	9	7	2	1	2	9	19	22	25	30	A	32	29	27	27	26	25	25	25	27	16.7	31.7	
3-Nov-04	28	28	26	28	29	29	28	27	24	25	29	29	31	A	28	25	18	22	27	29	29	31	32	35	27.7	34.9	
4-Nov-04	34	36	36	35	35	35	34	31	31	31	32	32	A	30	29	24	18	27	31	30	32	31	35	36	31.5	36.0	
5-Nov-04	36	35	36	35	34	31	27	14	2	5	12	A	11	11	13	20	20	15	25	28	23	21	23	23	21.8	35.5	
6-Nov-04	21	19	12	18	22	25	26	23	26	25	A	33	31	29	32	32	24	7	1	4	13	3	3	3	18.8	32.9	
7-Nov-04	4	7	1	1	1	1	1	1	2	A	18	22	23	22	21	22	22	18	19	19	19	19	19	20	13.1	23.0	
8-Nov-04	19	18	16	7	8	10	12	6	A	9	6	7	C	C	C	C	C	C	C	1	1	3	9	17	N	19.1	
9-Nov-04	18	13	8	7	5	5	3	A	2	8	12	13	13	14	12	9	C	C	C	C	3	2	1	1	7.9	18.3	
10-Nov-04	3	2	4	1	1	1	1	A	2	3	6	9	9	8	7	5	2	3	1	1	1	1	1	1	3.2	8.9	
11-Nov-04	1	1	1	1	1	1	A	2	3	3	3	5	7	7	7	2	1	2	1	1	1	1	2	1	2.7	7.1	
12-Nov-04	2	2	3	1	3	A	2	2	2	6	10	11	9	10	9	6	3	2	1	1	1	1	2	2	3.9	11.0	
13-Nov-04	2	2	1	2	A	2	1	1	2	2	2	6	9	13	12	12	2	1	2	2	2	1	2	1	3.5	13.5	
14-Nov-04	1	1	1	A	1	9	6	10	22	18	14	13	16	11	8	11	10	6	1	0	1	0	0	0	7.0	21.7	
15-Nov-04	0	1	A	3	8	7	3	0	0	1	2	1	5	13	22	26	25	20	23	21	19	19	17	25	11.3	25.8	
16-Nov-04	28	A	23	25	24	19	22	16	4	4	8	13	13	16	16	12	6	5	7	4	1	1	1	0	11.6	27.6	
17-Nov-04	A	22	19	20	27	28	26	24	27	26	28	29	30	31	29	24	20	11	7	6	1	2	1	A	19.9	30.9	
18-Nov-04	2	5	16	21	22	20	12	5	2	9	9	12	14	22	22	20	9	11	10	0	0	13	A	18	11.9	22.4	
19-Nov-04	10	23	15	9	10	4	1	12	15	11	9	14	22	25	20	16	13	13	20	22	23	A	21	19	15.0	24.8	
20-Nov-04	18	21	22	21	14	3	2	2	0	2	5	8	10	10	6	23	19	19	24	20	A	26	29	29	14.4	29.4	
21-Nov-04	30	29	29	27	29	27	18	25	27	16	25	24	27	29	28	26	28	34	28	A	33	27	27	29	27.1	34.1	
22-Nov-04	32	29	23	12	16	10	1	1	2	3	6	7	7	7	5	4	2	1	A	3	2	2	3	4	7.9	31.6	
23-Nov-04	4	1	1	0	0	0	1	1	1	2	3	7	10	12	9	6	3	A	7	11	8	7	5	10	4.8	11.5	
24-Nov-04	10	10	8	11	11	10	7	7	4	7	5	4	7	8	19	9	A	16	23	20	19	18	17	21	11.7	22.8	
25-Nov-04	28	25	28	21	14	12	1	4	6	10	22	23	27	24	28	A	28	23	24	25	26	25	25	28	20.7	28.5	
26-Nov-04	27	26	25	26	24	24	20	13	7	3	8	13	19	25	A	22	19	15	8	4	0	1	1	1	14.4	27.5	
27-Nov-04	2	1	1	2	8	6	4	19	16	14	7	5	14	A	20	17	4	10	15	18	17	21	24	22	11.7	23.8	
28-Nov-04	21	21	20	26	26	25	23	23	19	22	22	25	A	28	29	29	25	17	18	20	29	30	32	34	24.5	33.6	
29-Nov-04	33	33	32	29	25	30	28	12	3	11	35	A	32	27	29	25	24	28	27	25	31	33	30	29	26.5	34.7	
30-Nov-04	25	28	27	30	26	21	16	3	11	11	A	26	24	29	24	23	20	17	18	18	19	14	11	13	19.7	29.8	
																										N	0.0
Hourly Avg	15.5	16.0	15.6	15.1	15.6	14.6	12.0	10.7	9.5	10.4	13.1	15.4	17.1	18.6	18.6	18.0	15.0	13.7	14.7	12.8	13.1	13.0	13.9	15.9			
Hourly Max	35.5	36.0	35.9	35.1	35.0	35.4	34.5	31.0	31.0	31.2	34.7	32.9	32.0	30.9	32.0	32.0	29.3	34.1	31.5	30.5	33.5	33.1	34.6	35.6			

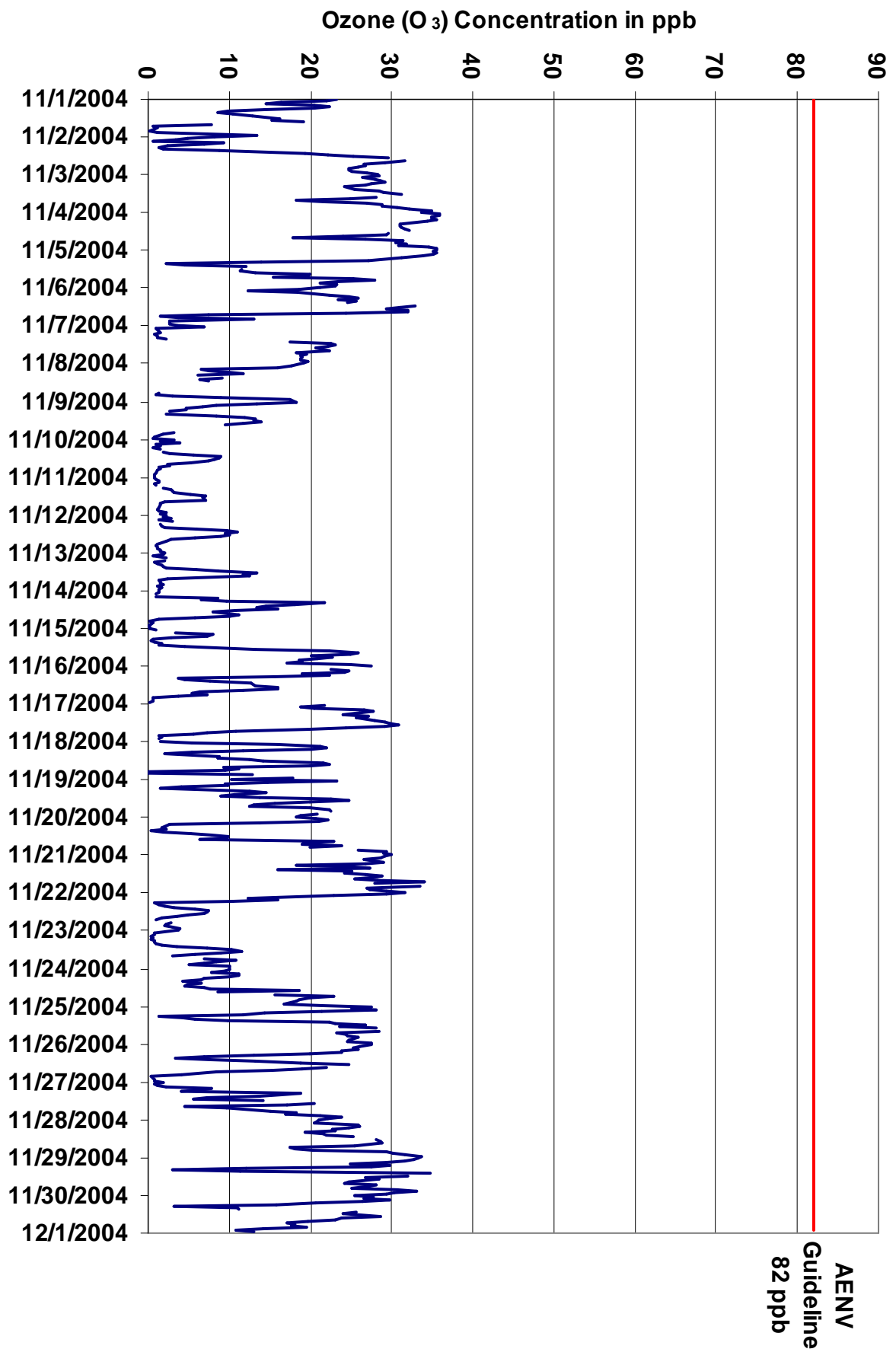


Figure 7. PASZA - Henry Pitker Ozone 1-hr Average Monthly Trend



Station: Henry Pirker

**HOURLY MAXIMUM TABLE**

**Ozone (O<sub>3</sub>)**

Station Owner: PASZA

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

**Summary**

Maximum 1-hr Value:	37.6	ppb	4-Nov	2:00 3:00
Maximum 24-hr Value:	34.9	ppb	4-Nov	

AIC Time:	31 hrs	Operational Time:	678 hrs					
Calibration Time:	11 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	37	34	28	20	8	2	2	18.3 ppb

**Status Flag Characters**

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

**Day Mountain Standard Time**

Day	Hour Start	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum	
1-Nov-04	0:00	26	28	24	21	24	26	26	19	13	10	16	20	24	23	A	15	2	3	2	1	5	10	19	16.5	27.7	
2-Nov-04	1:00	18	15	8	5	18	22	16	5	4	20	24	25	31	32	A	33	32	29	29	28	27	27	28	31	22.1	33.4
3-Nov-04	2:00	32	31	30	30	30	33	30	29	26	28	31	31	33	A	32	28	27	29	31	32	31	33	34	37	30.8	37.1
4-Nov-04	3:00	36	37	38	37	37	37	37	34	33	33	34	35	A	33	35	33	31	31	34	33	35	35	37	38	34.9	37.6
5-Nov-04	4:00	37	37	37	37	35	34	30	26	6	12	16	A	16	17	18	24	24	22	31	34	27	24	25	24	25.8	37.0
6-Nov-04	5:00	23	22	16	24	26	26	28	27	30	29	A	36	34	34	37	36	34	19	3	13	20	7	5	7	23.3	36.9
7-Nov-04	6:00	11	14	2	3	3	2	2	3	6	A	21	26	25	24	23	24	26	23	21	21	25	21	20	21	16.0	26.4
8-Nov-04	7:00	21	19	18	14	12	15	15	11	A	12	8	9	C	C	C	C	C	C	C	2	2	7	14	20	N	21.5
9-Nov-04	8:00	20	17	14	11	8	8	6	A	7	11	13	15	15	17	14	14	C	C	C	C	5	4	2	2	10.7	19.9
10-Nov-04	9:00	6	6	8	4	9	2	4	A	3	4	8	11	12	11	9	8	4	5	2	3	2	2	2	2	5.5	12.1
11-Nov-04	10:00	2	2	3	2	2	2	A	4	5	4	5	8	8	8	9	11	4	3	4	2	2	2	7	2	4.4	10.7
12-Nov-04	11:00	5	5	5	2	7	A	3	4	5	9	13	14	10	11	12	9	5	4	2	2	2	2	3	3	6.0	13.9
13-Nov-04	12:00	4	7	2	5	A	10	2	3	3	4	8	13	18	18	21	5	3	3	3	5	3	7	6	6.8	21.0	
14-Nov-04	13:00	3	3	4	A	2	16	12	24	26	25	18	16	20	13	11	18	15	14	5	6	5	2	2	2	11.5	26.2
15-Nov-04	14:00	1	2	A	8	10	9	6	1	3	2	4	4	9	22	24	29	29	24	24	24	22	23	21	28	14.3	28.9
16-Nov-04	15:00	30	A	25	29	28	23	27	24	10	11	11	18	20	27	25	17	10	11	17	8	2	2	5	2	16.6	29.9
17-Nov-04	16:00	A	28	24	26	28	29	29	28	28	29	31	31	33	33	32	27	26	21	23	21	2	3	2	A	24.3	32.8
18-Nov-04	17:00	4	13	21	23	24	24	16	9	6	14	13	17	18	25	26	24	14	16	15	2	1	19	A	20	15.8	26.0
19-Nov-04	18:00	21	29	24	14	17	10	7	20	21	18	13	25	27	28	26	23	18	16	25	28	25	A	26	23	20.9	28.6
20-Nov-04	19:00	28	27	25	27	23	8	8	9	2	3	10	11	13	13	17	27	25	24	28	29	A	29	31	31	19.4	31.5
21-Nov-04	20:00	31	30	30	29	31	31	22	31	32	25	28	27	30	31	30	27	36	36	31	A	35	34	30	33	30.4	36.4
22-Nov-04	21:00	34	32	29	19	22	19	2	4	4	6	8	10	8	8	7	6	3	2	A	6	4	5	5	9	10.9	33.7
23-Nov-04	22:00	9	2	2	2	2	1	2	2	2	3	6	10	14	14	11	9	5	A	14	16	13	12	8	13	7.4	15.6
24-Nov-04	23:00	12	12	10	13	13	14	12	9	10	14	8	8	9	18	24	12	A	24	24	21	21	22	23	26	15.6	25.9
25-Nov-04	0:00	29	29	31	28	23	18	7	10	14	19	26	28	30	30	A	31	27	27	27	26	29	28	28	29	25.0	31.2
26-Nov-04	1:00	29	28	28	27	25	25	22	18	18	7	11	18	24	30	A	27	23	20	18	14	2	3	3	2	18.3	30.1
27-Nov-04	2:00	6	3	6	6	11	13	16	21	21	20	16	8	21	A	25	21	13	19	20	22	22	26	26	26	16.9	26.5
28-Nov-04	3:00	24	23	26	28	28	27	25	26	23	27	27	27	A	29	30	32	30	25	27	28	32	32	34	35	28.1	35.1
29-Nov-04	4:00	34	34	35	35	30	36	35	27	13	32	37	A	35	30	32	29	30	33	30	30	33	34	33	32	31.8	36.7
30-Nov-04	5:00	30	32	31	32	30	25	24	8	17	21	A	29	27	31	30	28	22	21	21	19	22	20	16	20	24.2	31.7
																										N	0.0
Hourly Avg		19.5	19.5	19.2	18.6	19.2	18.8	16.2	15.5	13.5	15.6	16.3	18.8	20.7	22.6	22.6	22.1	19.9	18.7	19.0	17.0	15.7	16.1	16.8	18.7		
Hourly Max		37.0	37.3	37.6	36.9	36.9	37.2	37.4	33.6	32.7	33.3	36.7	35.8	35.3	33.5	36.9	36.4	35.7	36.4	33.9	33.9	35.2	35.3	36.8	37.5		

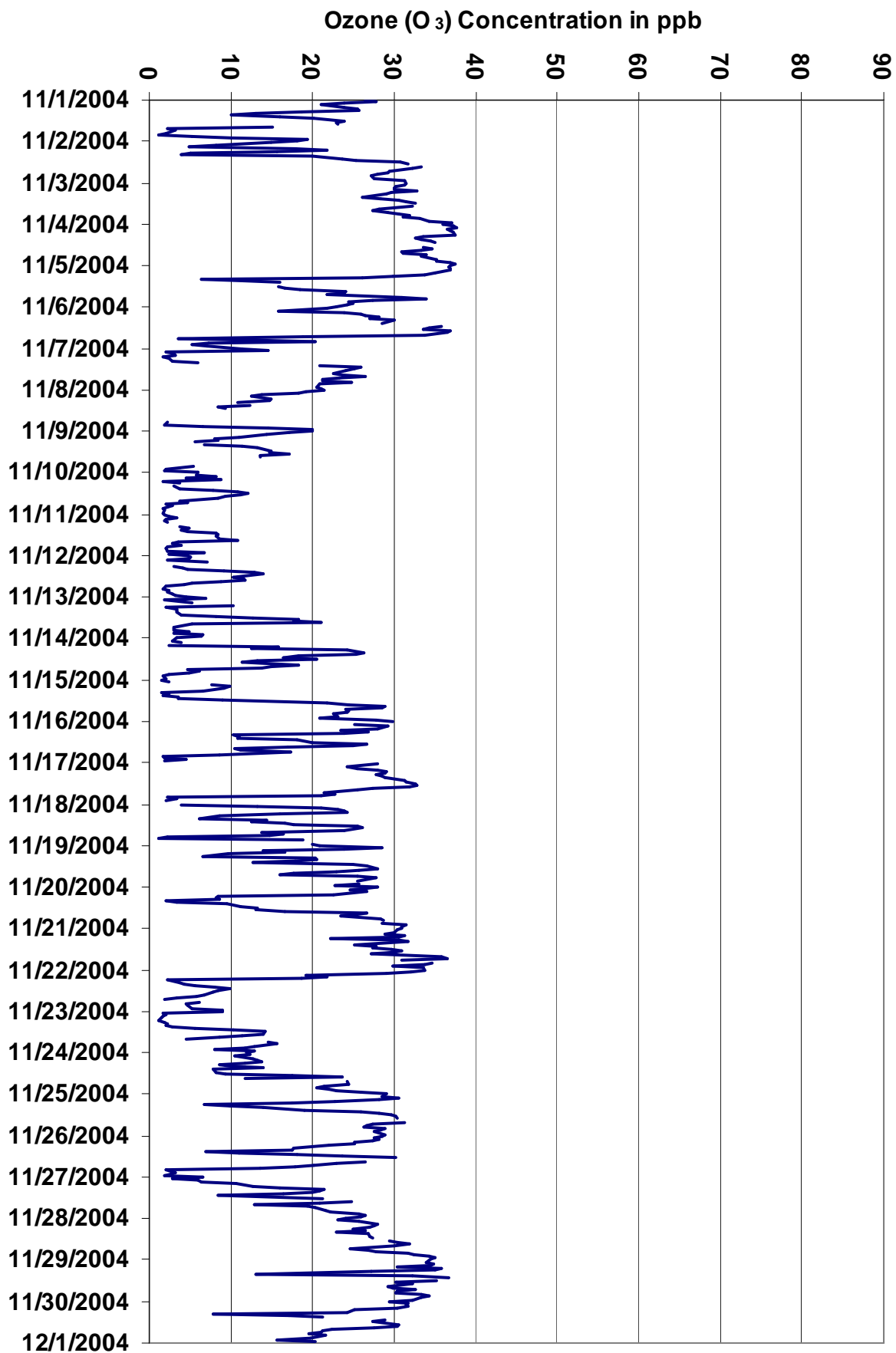


Figure 8. PASZA - Henry Pirker Ozone 1-hr Maximum Value Monthly Trend

Station: Henry Pirker

**EIGHT HOUR RUNNING AVERAGE TABLE**

**Ozone (O<sub>3</sub>)**

Station Owner: PASZA

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

**Summary**

Number of 8-hr Exceedances:	0						
Maximum 8-hr Average:	35.0	ppb	4-Nov	6:00 7:00			

Guideline Limit: Canada Wide Standard 8-hr 65 ppb

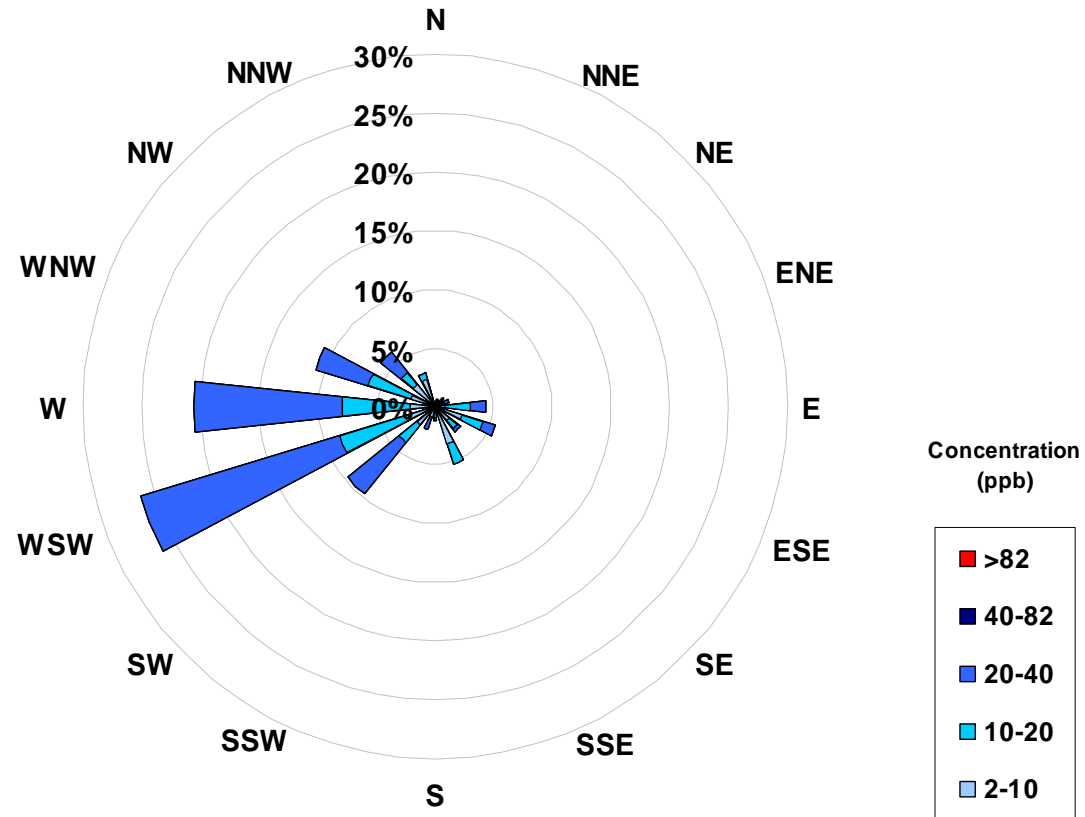
Percentile	99	95	75	50	25	5	1
	34.1	29.1	22.9	13.2	5.0	1.1	0.0

**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																								24-hour Average	Daily Maximum	
	Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00			23:00 0:00
1-Nov-04	23	25	24	22	21	21	20	19	18	16	15	15	14	13	13	13	13	12	10	9	6	4	3	4	14.8	24.7	
2-Nov-04	4	5	5	5	6	7	6	5	4	4	6	9	11	14	15	20	24	26	27	28	28	27	27	26	14.1	27.9	
3-Nov-04	26	26	26	27	27	28	28	28	27	27	27	27	28	28	28	27	26	26	26	26	25	26	27	28	26.8	27.9	
4-Nov-04	30	32	33	33	34	35	35	35	34	34	33	33	32	32	31	30	28	27	27	27	28	28	29	30	31.2	35.0	
5-Nov-04	32	33	34	34	35	35	34	31	27	23	20	18	15	12	10	11	13	15	17	18	19	21	22	22	22.8	34.6	
6-Nov-04	23	23	21	20	20	20	21	21	21	22	24	26	27	28	28	30	29	27	24	20	18	15	11	7	21.9	29.7	
7-Nov-04	5	5	4	4	3	2	2	2	2	1	4	7	10	13	16	19	21	21	21	21	20	20	19	10.9	21.4		
8-Nov-04	19	19	18	17	16	14	14	12	11	10	8	8	N	N	N	N	N	N	N	N	N	N	N	N	N	19.0	
9-Nov-04	N	9	9	10	10	10	10	8	6	5	6	7	8	9	11	11	12	N	N	N	N	N	N	N	N	11.7	
10-Nov-04	N	N	2	2	2	2	2	2	2	2	3	4	5	6	6	6	6	6	5	4	3	2	1	3.4	6.2		
11-Nov-04	1	1	1	1	1	1	1	1	1	1	2	2	3	3	4	5	5	5	5	4	3	3	2	2	2.6	5.2	
12-Nov-04	2	2	2	2	2	2	2	2	2	2	3	4	5	6	6	7	8	8	7	6	5	4	3	2	2	3.9	7.9
13-Nov-04	1	1	1	2	2	2	2	2	1	1	2	2	3	4	6	7	7	7	7	7	6	4	3	2	3.4	7.3	
14-Nov-04	1	1	1	1	1	2	3	4	7	9	11	12	14	14	14	14	13	11	10	8	6	5	4	2	7.1	14.2	
15-Nov-04	1	0	0	1	2	3	3	3	3	3	3	3	2	3	6	9	12	14	17	19	21	22	21	21	8.1	21.8	
16-Nov-04	21	22	22	22	23	23	24	22	19	17	15	14	12	12	11	11	11	11	11	10	8	6	5	3	14.8	23.6	
17-Nov-04	3	5	7	9	13	17	20	24	24	25	26	27	27	28	28	28	27	25	23	20	16	12	9	7	18.6	28.0	
18-Nov-04	4	3	5	7	10	12	14	13	13	13	12	11	10	11	12	14	15	15	15	13	12	11	9	9	11.0	15.0	
19-Nov-04	9	11	11	13	14	13	11	11	11	10	9	9	11	14	16	16	16	16	18	19	19	18	18	19	13.8	18.8	
20-Nov-04	19	20	21	21	19	17	15	13	11	8	6	4	4	5	5	8	10	12	15	16	17	20	23	24	13.9	23.7	
21-Nov-04	25	27	27	28	28	29	27	27	26	25	24	24	24	24	25	25	25	28	28	28	29	29	29	30	26.8	29.6	
22-Nov-04	30	29	29	27	24	22	19	16	12	9	6	6	5	4	5	5	5	5	5	4	3	3	2	2	11.5	30.1	
23-Nov-04	3	3	2	2	2	2	1	1	1	1	1	2	3	5	6	6	6	7	8	8	8	7	7	7	4.1	8.2	
24-Nov-04	8	8	9	9	9	9	10	9	8	8	8	7	6	6	7	8	8	10	12	14	16	17	17	19	10.1	19.1	
25-Nov-04	20	21	22	22	22	21	19	17	14	12	11	12	13	15	18	20	23	25	25	26	25	26	25	25	19.9	25.6	
26-Nov-04	25	26	26	26	26	26	25	23	21	18	16	14	13	13	13	14	16	17	17	16	13	10	9	6	17.8	25.9	
27-Nov-04	4	2	1	1	2	3	3	5	7	9	10	10	11	11	14	13	12	11	12	14	15	15	16	16	9.1	16.4	
28-Nov-04	19	20	21	22	23	23	23	23	23	23	23	23	23	23	24	25	26	25	25	24	25	25	25	26	23.3	25.7	
29-Nov-04	27	29	30	31	31	31	30	28	24	21	22	20	21	21	21	23	26	28	27	27	27	28	28	29	26.3	31.5	
30-Nov-04	29	29	29	29	27	25	22	20	18	17	16	16	17	18	21	22	23	23	22	21	19	18	16	16	21.9	29.1	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	
Hourly Avg	14.3	14.5	14.3	14.5	14.7	14.8	14.5	13.8	12.9	12.2	12.0	12.1	12.6	13.1	13.9	14.9	15.5	16.0	16.1	15.8	15.3	14.7	14.1	13.9			
Hourly Max	32.2	33.2	33.7	34.3	34.5	34.8	35.0	34.6	34.2	33.6	33.1	32.8	32.4	31.6	30.9	29.9	29.5	28.4	27.9	28.5	29.4	29.1	29.1	30.0			

**Concentration Rose for the 1-hr O<sub>3</sub> Average Concentration Occurrences at the Henry Pirker Site for November 2004**



Frequency Distribution of O <sub>3</sub> in ppb			
Range		Frequency (hrs)	
0	< 2	122	
2	to 10	167	
10	to 20	145	
20	to 40	244	
40	to 82	0	
	> 82	0	
Total Non-Zero Values			678

Calms	
Range	
ppb	
2-10	0.0%
10-20	0.0%
20-40	0.0%
40-82	0.0%
>82	0.0%

### PASZA - Henry Pirker Carbon Monoxide Monthly Summary

Station: Henry Pirker

#### HOURLY AVERAGE TABLE

Carbon Monoxide (CO)

Station Owner: PASZA

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

**Summary**

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	2.44 ppm 9-Nov 20:00 21:00
Maximum 24-hr Average:	0.88 ppm 13-Nov

Guideline Limit: Alberta Environment: 1-hr 13 ppm 24-hr na ppm

AIC Time:	33 hrs	Operational Time:	683 hrs
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%
Percentile	99	95	75
	1.7	1.0	0.4
	50	25	5
	0.2	0.2	0.1
	1	0.1	0.1
Average	0.4 ppm		

**Status Flag Characters**

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

**Day Mountain Standard Time**

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum	
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Nov-04	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.3	0.3	0.3	0.3	A	0.5	1.2	2.1	2.1	1.1	0.6	0.3	0.3	0.54	2.09	
2-Nov-04	0.5	0.4	0.4	0.4	0.3	0.4	0.6	1.8	1.3	0.6	0.3	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.40	1.80	
3-Nov-04	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.30	
4-Nov-04	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.17	0.32	
5-Nov-04	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.4	0.3	A	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.21	0.45	
6-Nov-04	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	A	0.2	0.1	0.2	0.1	0.1	0.2	0.3	0.6	0.5	0.2	0.4	0.4	0.5	0.23	0.60	
7-Nov-04	0.4	0.2	0.4	0.5	0.3	0.4	0.8	0.9	0.3	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.31	0.85	
8-Nov-04	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	A	0.2	0.3	0.3	0.3	0.4	0.4	0.2	0.3	0.4	0.5	0.6	0.4	0.2	0.2	0.2	0.28	0.60	
9-Nov-04	0.2	0.2	0.2	0.2	0.2	0.2	0.2	A	0.5	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.5	1.1	1.9	2.4	1.5	0.6	0.3	0.52	2.44	
10-Nov-04	0.2	0.2	0.2	0.2	0.2	0.2	A	0.8	0.8	0.4	0.4	0.5	0.7	0.5	C	C	C	C	A	A	0.4	0.4	0.4	0.4	N	0.79	
11-Nov-04	0.3	0.3	0.2	0.4	0.3	0.3	0.6	A	1.6	1.3	1.2	1.2	1.0	1.0	0.6	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.7	0.9	0.69	1.58	
12-Nov-04	0.4	0.4	0.3	0.4	0.3	0.4	A	0.5	0.4	0.4	0.3	0.7	1.0	0.5	0.7	0.7	1.3	1.6	1.0	0.7	0.6	0.6	0.7	0.6	0.63	1.62	
13-Nov-04	0.3	0.3	0.3	0.3	0.3	A	0.5	0.9	1.3	1.4	1.2	0.5	0.6	0.5	0.4	0.5	0.7	0.8	1.6	1.7	1.7	1.5	1.4	1.4	0.88	1.69	
14-Nov-04	0.9	1.3	0.7	0.8	A	0.3	0.3	0.3	0.3	0.4	0.3	0.4	0.5	0.5	0.6	0.4	0.4	0.5	0.7	0.6	0.8	0.7	0.6	0.4	0.54	1.34	
15-Nov-04	0.3	0.3	0.2	A	0.2	0.2	0.3	0.9	0.8	0.6	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.30	0.86	
16-Nov-04	0.1	0.1	A	0.1	0.1	0.1	0.1	0.2	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.5	1.0	1.2	0.9	0.5	0.40	1.18	
17-Nov-04	0.2	A	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.4	0.3	0.5	0.6	1.1	1.0	1.1	0.33	1.08	
18-Nov-04	A	0.4	0.2	0.2	0.3	0.2	0.3	0.5	0.7	0.3	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.2	A	0.31	0.72	
19-Nov-04	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.3	0.2	0.3	0.5	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	A	0.2	0.25	0.51	
20-Nov-04	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.3	1.1	0.9	0.8	0.7	0.6	0.5	0.5	0.2	0.3	0.3	0.2	0.2	0.2	A	0.2	0.2	0.37	1.10	
21-Nov-04	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	A	0.2	0.2	0.2	0.17	0.25	
22-Nov-04	0.1	0.2	0.2	0.2	0.2	0.4	0.8	1.6	2.0	1.8	0.9	0.6	0.6	0.6	0.7	0.6	0.5	0.4	0.3	A	0.3	0.2	0.3	0.3	0.60	2.02	
23-Nov-04	0.3	0.4	0.4	0.3	0.2	0.3	0.4	0.7	0.6	0.6	0.4	0.4	0.3	0.2	0.3	0.4	0.3	0.3	A	0.3	0.3	0.3	0.4	0.3	0.36	0.65	
24-Nov-04	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.5	0.7	0.6	0.3	0.3	0.2	0.3	0.2	A	0.1	0.2	0.2	0.2	0.2	0.1	0.27	0.67	
25-Nov-04	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.5	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.21	0.48	
26-Nov-04	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.4	0.4	0.3	0.3	0.2	0.2	A	0.2	0.2	0.3	0.4	0.4	0.7	0.6	0.6	0.29	0.69	
27-Nov-04	0.6	0.6	0.7	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.5	0.4	0.3	0.2	A	0.3	0.4	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.29	0.67	
28-Nov-04	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	A	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.15	0.21	
29-Nov-04	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.4	0.3	0.1	0.2	A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.19	0.43	
30-Nov-04	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.4	0.3	0.3	0.2	A	0.3	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.22	0.36	
																									N	0.00	
Hourly Avg	0.25	0.26	0.24	0.23	0.19	0.22	0.30	0.47	0.57	0.47	0.40	0.37	0.37	0.32	0.30	0.29	0.35	0.40	0.46	0.48	0.47	0.44	0.38	0.34			
Hourly Max	0.86	1.34	0.69	0.76	0.34	0.43	0.79	1.80	2.02	1.77	1.22	1.22	1.05	0.99	0.74	0.66	1.32	1.62	2.09	2.07	2.44	1.49	1.40	1.42			

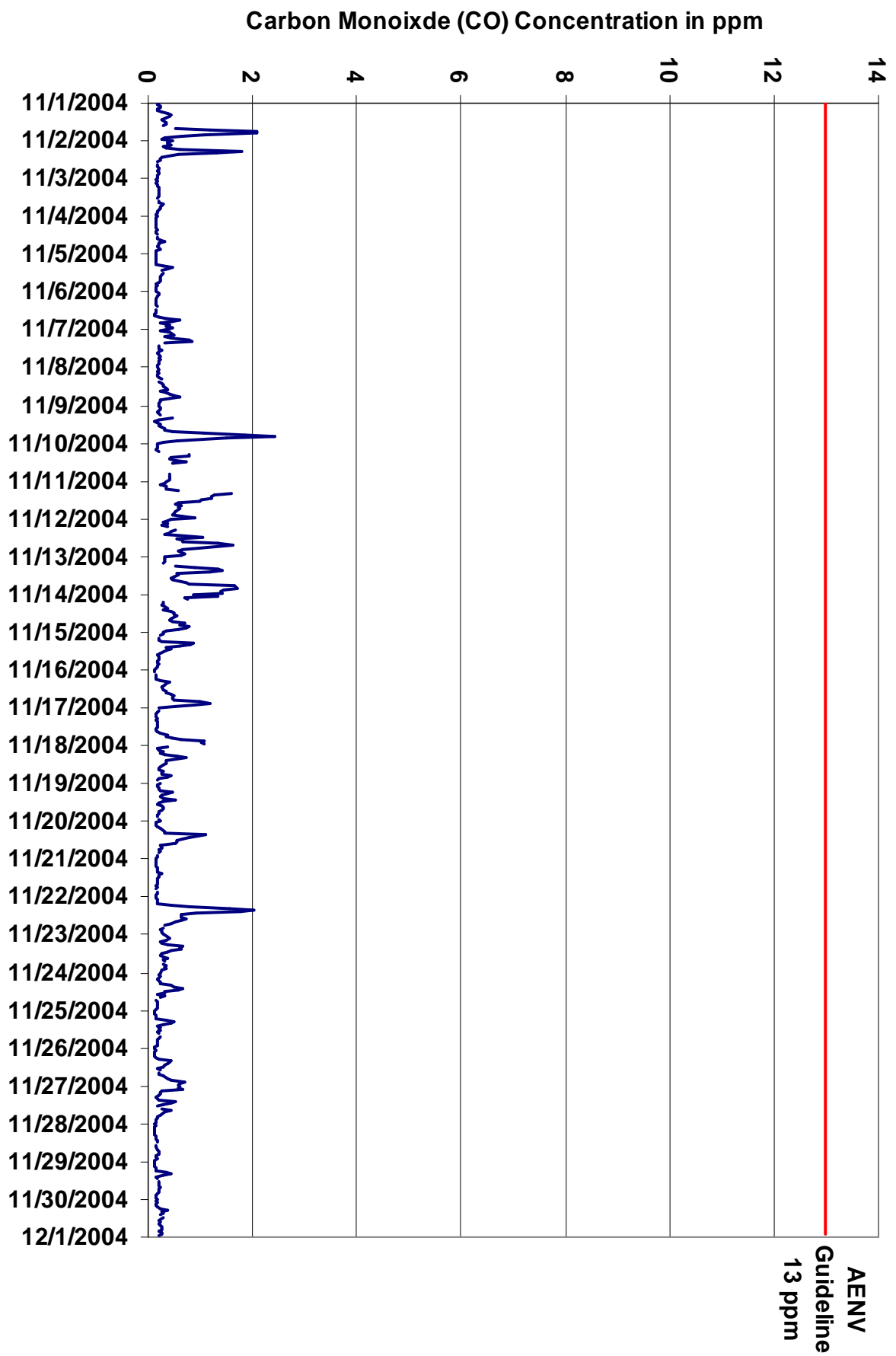


Figure 9. PASZA - Henry Pirkler Carbon Monoxide 1-hr Average Monthly Trend

Station: Henry Pirker

**HOURLY MAXIMUM TABLE**

**Carbon Monoxide (CO)**

Station Owner: PASZA

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

Maximum 1-hr Value:	7.9	ppm	11-Nov	8:00 9:00
Maximum 24-hr Value:	1.6	ppm	13-Nov	

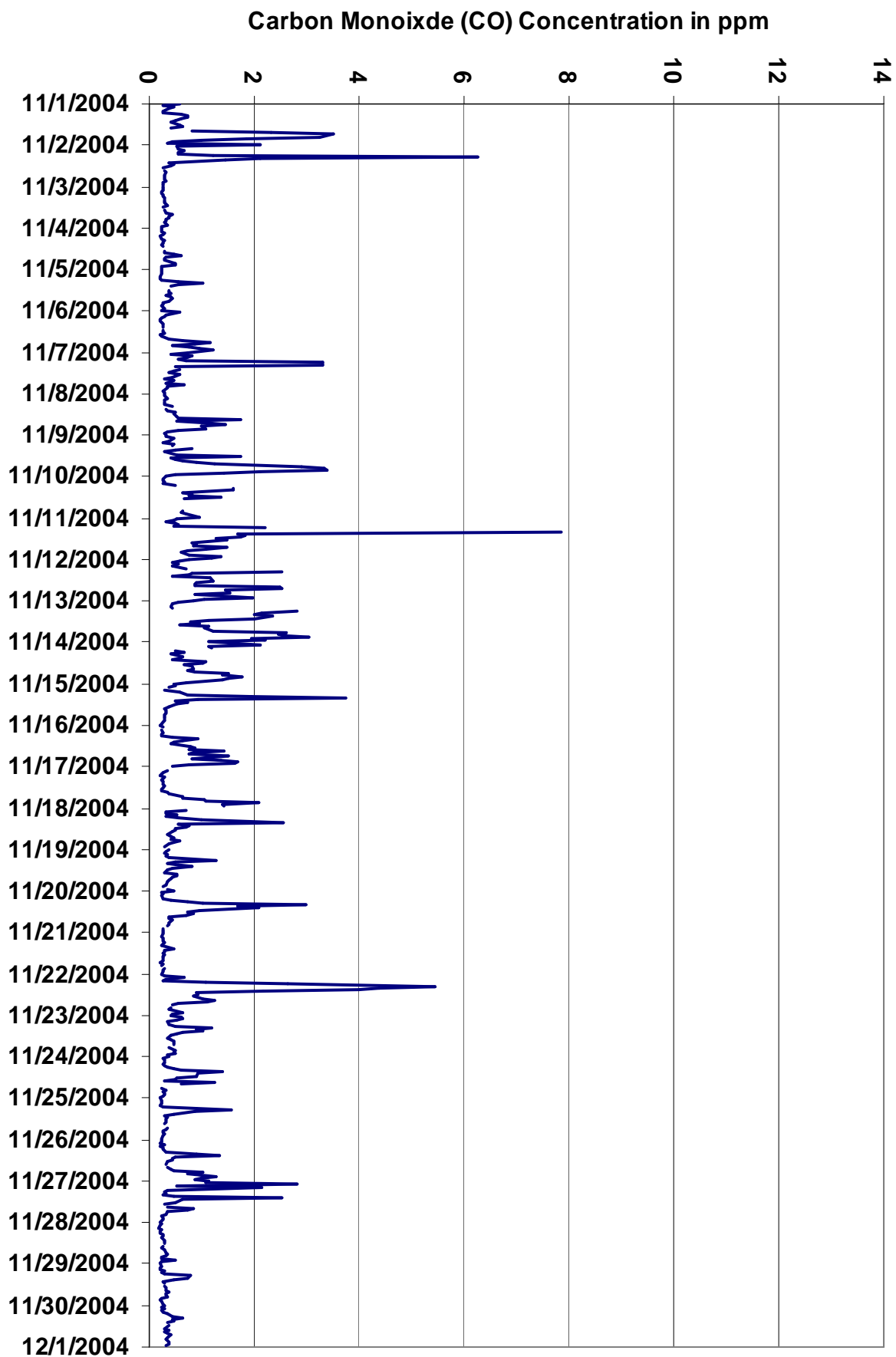
AIC Time:	33 hrs	Operational Time:	683 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	3.4	2.1	0.7	0.4	0.3	0.2	0.2	0.7 ppm

**Status Flag Characters**

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum
Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00		
1-Nov-04	0.6	0.3	0.5	0.4	0.3	0.3	0.6	0.7	0.7	0.6	0.5	0.4	0.6	0.6	0.4	A	0.8	2.3	3.5	3.3	1.9	1.0	0.4	0.4	0.91	3.50
2-Nov-04	2.1	0.5	0.5	0.7	0.5	0.6	1.2	6.3	2.1	1.5	0.4	0.5	0.4	0.3	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.87	6.25
3-Nov-04	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3	A	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.30	0.45
4-Nov-04	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.2	0.3	A	0.3	0.3	0.5	0.6	0.3	0.3	0.3	0.5	0.5	0.2	0.2	0.30	0.60
5-Nov-04	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.6	1.0	0.5	0.4	A	0.4	0.4	0.3	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.35	1.01	
6-Nov-04	0.2	0.6	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.3	A	0.3	0.3	0.3	0.2	0.2	0.4	0.6	1.2	0.9	0.4	0.8	0.9	1.2	0.45	1.21
7-Nov-04	0.7	0.4	0.8	0.7	0.5	0.7	3.3	3.3	0.5	A	0.6	0.5	0.4	0.6	0.4	0.3	0.5	0.4	0.3	0.7	0.3	0.3	0.3	0.73	3.31	
8-Nov-04	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.4	A	0.3	0.4	0.5	0.5	0.5	0.6	1.7	0.5	1.1	1.5	1.0	1.1	0.6	0.4	0.58	1.74	
9-Nov-04	0.3	0.3	0.5	0.4	0.3	0.5	0.4	A	0.8	0.5	0.3	0.5	1.8	0.4	0.5	0.6	0.9	1.2	2.9	3.3	3.4	2.1	1.4	0.5	1.04	3.40
10-Nov-04	0.3	0.3	0.3	0.3	0.3	0.5	A	1.6	1.6	0.6	0.8	0.8	1.4	0.7	C	C	C	C	A	A	0.6	0.6	0.7	1.0	N	1.59
11-Nov-04	0.5	0.5	0.3	0.5	0.5	0.5	2.2	A	7.9	1.7	1.8	1.7	1.3	1.5	0.8	0.9	0.8	1.5	1.1	0.7	0.6	0.7	1.4	1.2	1.33	7.86
12-Nov-04	0.7	0.6	0.4	0.5	0.4	0.7	A	2.5	0.8	0.8	0.4	1.2	1.2	0.9	0.9	0.9	2.5	2.5	1.4	1.5	0.9	1.4	2.0	1.0	1.14	2.53
13-Nov-04	0.9	0.6	0.4	0.4	0.4	A	2.8	2.1	2.0	2.3	2.0	1.1	0.8	1.0	0.6	1.1	1.1	1.2	2.6	2.5	2.6	3.0	2.0	2.2	1.55	3.04
14-Nov-04	1.1	2.1	1.1	1.2	A	0.5	0.7	0.4	0.6	0.6	0.4	1.1	1.0	0.7	0.8	0.9	0.7	0.9	1.5	1.4	1.8	1.5	1.4	0.7	1.00	2.11
15-Nov-04	0.5	0.5	0.4	A	0.3	0.6	0.7	2.0	3.7	0.9	0.5	0.7	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.63	3.74
16-Nov-04	0.2	0.3	A	0.2	0.2	0.2	0.2	0.4	0.9	0.6	0.5	0.4	0.8	0.9	0.7	1.4	0.8	0.8	1.5	0.8	1.4	1.7	1.6	0.7	0.75	1.69
17-Nov-04	0.4	A	0.3	0.3	0.2	0.2	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.4	0.6	0.6	1.1	1.1	2.1	1.4	1.4	0.56	2.09
18-Nov-04	A	0.7	0.3	0.3	0.5	0.3	0.5	1.0	2.6	0.6	0.8	0.7	0.5	0.5	0.4	0.3	0.4	0.5	0.4	0.6	0.5	0.4	0.3	A	0.59	2.56
19-Nov-04	0.4	0.3	0.3	0.3	0.3	0.4	1.3	0.5	0.3	0.5	0.8	0.4	0.3	0.3	0.5	0.5	0.4	0.4	0.4	0.3	0.3	A	A	0.4	0.44	1.28
20-Nov-04	0.5	0.2	0.3	0.2	0.3	0.4	0.7	1.0	3.0	1.7	2.1	1.0	0.7	0.8	0.7	0.4	0.4	0.4	0.4	0.4	0.3	A	0.3	0.3	0.71	2.99
21-Nov-04	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.2	A	0.3	0.3	0.3	0.27	0.46
22-Nov-04	0.2	0.3	0.7	0.3	0.3	1.1	2.6	5.4	4.4	4.0	2.2	0.9	0.9	0.8	1.0	1.3	1.1	0.5	0.4	A	0.4	0.4	0.6	0.4	1.32	5.44
23-Nov-04	0.4	0.6	0.6	0.5	0.4	0.4	0.5	1.2	0.9	1.0	0.6	0.5	0.4	0.4	0.4	0.5	0.5	0.5	A	0.4	0.5	0.5	0.5	0.4	0.54	1.20
24-Nov-04	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.6	1.4	0.9	0.9	0.5	0.5	0.3	1.2	0.6	A	0.2	0.3	0.3	0.3	0.3	0.3	0.49	1.40
25-Nov-04	0.2	0.2	0.2	0.2	0.2	0.3	0.9	1.6	0.9	0.5	0.3	0.3	0.3	0.3	0.3	0.3	A	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.39	1.56
26-Nov-04	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	0.9	1.3	0.5	0.4	0.4	0.3	0.3	A	0.3	0.4	0.5	1.0	0.7	1.3	1.0	0.9	0.54	1.34
27-Nov-04	1.1	1.1	2.8	0.5	2.1	0.4	0.3	0.3	0.3	0.5	2.5	0.6	0.5	0.3	A	0.4	0.8	0.7	0.4	0.3	0.2	0.3	0.3	0.2	0.74	2.82
28-Nov-04	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	A	0.3	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.5	0.2	0.26	0.51
29-Nov-04	0.2	0.2	0.2	0.2	0.3	0.2	0.3	0.8	0.7	0.5	0.3	0.3	A	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.32	0.78
30-Nov-04	0.3	0.2	0.3	0.2	0.3	0.3	0.4	0.6	0.4	0.5	0.4	A	0.4	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.3	0.4	0.3	0.36	0.65
																									N	0.00
Hourly Avg	0.48	0.44	0.47	0.38	0.37	0.38	0.80	1.25	1.35	0.87	0.75	0.61	0.62	0.52	0.47	0.60	0.62	0.71	0.86	0.83	0.76	0.76	0.69	0.56		
Hourly Max	2.13	2.11	2.82	1.19	2.14	1.06	3.30	6.25	7.86	4.01	2.53	1.74	1.75	1.47	1.03	1.74	2.49	2.53	3.50	3.32	3.40	3.04	1.98	2.20		

Figure 10. PASZA - Henry Pirkler Carbon Monoxide 1-hr Maximum Value Monthly Trend





Station: Henry Pirker

### EIGHT HOUR RUNNING AVERAGE TABLE

**Carbon Monoxide (CO)**

Station Owner: PASZA

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

**Summary**

Number of 8-hr Exceedances:	0						
Maximum 8-hr Average:	1.43	ppm	14-Nov	1:00	2:00		

Guideline Limit: Alberta Environment: 8-hr 5 ppm

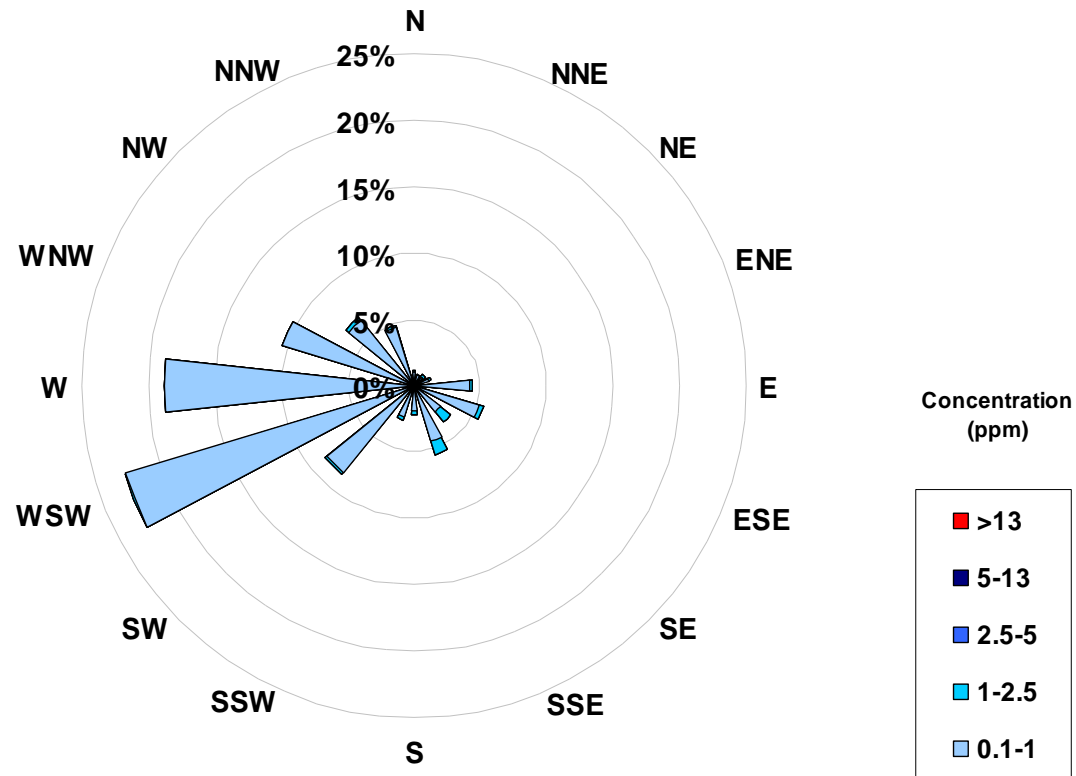
Percentile	99	95	75	50	25	5	1
	1.13	0.90	0.42	0.26	0.18	0.13	0.00

**Status Flag Characters**

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

Day	Mountain Standard Time																								24-hour Average	Daily Maximum	
	Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00			23:00 0:00
1-Nov-04	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	0.3	0.4	0.3	0.4	0.5	0.7	1.0	1.1	1.1	1.1	1.0	0.45	1.13
2-Nov-04	1.0	0.9	0.7	0.5	0.4	0.4	0.4	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.49	1.02
3-Nov-04	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.20	0.23
4-Nov-04	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.18	0.22
5-Nov-04	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	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	0.21	0.31
6-Nov-04	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	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.19	0.38
7-Nov-04	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.34	0.51
8-Nov-04	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	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.26	0.40
9-Nov-04	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.6	0.9	1.0	1.1	1.1	1.1	0.39	1.06
10-Nov-04	1.0	1.0	0.9	0.7	0.4	0.2	0.2	0.3	0.4	0.4	0.4	0.5	0.5	0.6	0.6	N	N	N	N	N	N	N	N	N	N	N	1.05
11-Nov-04	N	N	0.4	0.4	0.3	0.3	0.4	0.4	0.5	0.7	0.8	0.9	1.0	1.1	1.1	0.9	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.6	0.68	1.13	
12-Nov-04	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.7	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.61	0.94
13-Nov-04	0.8	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.6	0.7	0.8	0.9	0.9	0.9	0.9	0.8	0.7	0.6	0.7	0.9	1.0	1.1	1.2	1.3	0.75	1.35	
14-Nov-04	1.4	1.4	1.3	1.2	1.1	1.0	0.8	0.6	0.6	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.68	1.43	
15-Nov-04	0.6	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.37	0.56
16-Nov-04	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.7	0.7	0.31	0.69	
17-Nov-04	0.6	0.7	0.6	0.6	0.5	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	0.3	0.3	0.4	0.5	0.7	0.33	0.67	
18-Nov-04	0.7	0.7	0.7	0.6	0.6	0.5	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.40	0.71	
19-Nov-04	0.3	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	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.26	0.31	
20-Nov-04	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.5	0.6	0.6	0.7	0.7	0.6	0.5	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.37	0.68
21-Nov-04	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.17	0.20	
22-Nov-04	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.7	0.9	1.0	1.0	1.1	1.1	1.1	1.0	0.8	0.6	0.6	0.6	0.5	0.4	0.4	0.3	0.58	1.12	
23-Nov-04	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.35	0.45	
24-Nov-04	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.29	0.41	
25-Nov-04	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	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	0.21	0.29	
26-Nov-04	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.24	0.42	
27-Nov-04	0.5	0.5	0.6	0.6	0.5	0.5	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.34	0.56	
28-Nov-04	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.15	0.18	
29-Nov-04	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.19	0.26	
30-Nov-04	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	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.21	0.26	
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	
Hourly Avg	0.38	0.37	0.34	0.31	0.28	0.26	0.25	0.26	0.30	0.33	0.35	0.36	0.38	0.39	0.39	0.36	0.34	0.33	0.34	0.35	0.37	0.39	0.39	0.40			
Hourly Max	1.37	1.43	1.31	1.20	1.13	0.97	0.81	0.64	0.69	0.88	0.98	1.04	1.10	1.13	1.13	1.05	0.93	0.86	0.94	0.98	1.08	1.13	1.23	1.35			

**Concentration Rose for the 1-hr CO Average Concentration Occurrences at the Henry Pirker Site for November 2004**



Frequency Distribution of CO in ppm			
Range		Frequency (hrs)	
0	< 0.1	0	
0.1	to 1	647	
1	to 2.5	36	
2.5	to 5	0	
5	to 13	0	
	> 13	0	
Total Non-Zero Values			683

Calms	
Range	
ppm	
0.1-1	0.0%
1-2.5	0.0%
2.5-5	0.0%
5-13	0.0%
>13	0.0%

### PASZA - Henry Pirker Total Hydrocarbon Monthly Summary

Station: Henry Pirker

#### HOURLY AVERAGE TABLE

#### Total HydroCarbons (THC)

Station Owner: PASZA

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

**Summary**

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	3.8	ppm	13-Nov	9:00 10:00
Maximum 24-hr Average:	3.1	ppm	12-Nov	

Guideline Limit: Alberta Environment: 

1-hr	na	ppm	24-hr	na	ppm
------	----	-----	-------	----	-----

AIC Time:	31 hrs							Operational Time:	685 hrs			
Calibration Time:	4 hrs							AMD Operational Uptime:	100.0%			
Percentile	99	95	75	50	25	5	1	Average				
	3.4	3.1	2.3	2.0	1.9	1.9	1.8	2.2 ppb				

**Status Flag Characters**

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

**Day Mountain Standard Time**

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum	
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Nov-04	2.1	2.1	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	1.9	A	2.0	2.3	2.7	2.8	2.6	2.5	2.1	2.0	2.18	2.75	
2-Nov-04	2.1	2.2	2.3	2.4	2.1	2.1	2.2	2.5	2.3	2.1	1.9	1.9	1.9	1.9	A	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	1.9	2.06	2.50	
3-Nov-04	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	1.9	2.0	1.9	1.9	A	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.94	2.00	
4-Nov-04	1.9	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.89	1.97	
5-Nov-04	1.9	1.8	1.8	1.9	1.9	1.9	1.9	1.9	2.0	2.0	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	1.91	2.04	
6-Nov-04	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.9	A	1.9	1.9	2.0	2.0	2.0	2.0	2.1	2.3	2.2	2.1	2.2	2.2	2.2	2.01	2.26	
7-Nov-04	2.3	2.2	2.3	2.4	2.5	2.7	2.9	2.5	2.3	A	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	1.9	1.9	1.9	2.17	2.86
8-Nov-04	1.9	1.9	1.9	2.0	2.1	2.0	2.0	2.1	A	2.2	2.1	2.2	2.2	2.2	2.2	C	C	C	C	2.6	2.4	2.4	2.4	2.1	2.16	2.62	
9-Nov-04	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.3	A	2.2	2.3	2.3	2.4	2.4	2.4	2.4	2.2	2.3	2.5	2.9	3.2	3.0	2.6	2.4	2.42	3.25	
10-Nov-04	2.5	2.6	2.7	2.7	2.7	2.9	2.9	A	3.0	3.0	2.9	2.8	2.8	2.7	2.8	2.8	3.0	3.0	2.6	2.8	2.7	2.8	2.8	3.0	2.80	3.00	
11-Nov-04	3.0	3.1	3.1	3.1	2.9	2.9	A	3.2	3.4	3.5	3.4	3.3	3.0	3.0	2.7	2.7	2.7	2.9	3.0	3.0	3.0	3.1	3.3	3.3	3.06	3.46	
12-Nov-04	3.1	3.0	3.1	3.2	3.2	A	3.3	3.3	3.3	3.3	3.2	3.3	3.4	2.7	2.7	2.7	3.0	3.2	3.2	2.9	2.8	2.9	3.1	3.1	3.08	3.39	
13-Nov-04	3.0	3.0	3.1	3.2	A	3.2	3.3	3.6	3.7	3.8	3.4	2.8	2.6	2.4	2.2	2.1	2.4	2.6	2.9	3.0	3.0	2.9	3.0	3.2	2.97	3.76	
14-Nov-04	2.8	3.0	2.6	A	2.6	2.2	2.2	2.2	2.0	2.0	2.3	2.4	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.3	2.3	2.4	2.3	2.3	2.30	3.04	
15-Nov-04	2.3	2.3	A	2.4	2.5	2.6	2.8	2.9	2.6	2.6	2.3	2.3	2.1	1.9	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0	1.9	2.21	2.86	
16-Nov-04	1.9	A	2.1	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.4	2.5	2.3	2.12	2.46	
17-Nov-04	A	1.9	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.3	2.5	2.6	A	2.09	2.61	
18-Nov-04	2.3	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.2	2.1	A	2.0	2.03	2.26	
19-Nov-04	2.0	2.0	2.0	2.1	2.2	2.1	2.2	2.0	2.0	2.0	2.1	2.0	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.03	2.22	
20-Nov-04	2.0	2.0	2.0	2.0	2.1	2.2	2.2	2.1	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.0	2.0	2.0	1.9	1.9	A	1.9	1.9	1.9	2.08	2.37	
21-Nov-04	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	2.0	1.8	1.8	1.9	A	1.9	1.9	2.0	2.0	1.85	2.02	
22-Nov-04	2.0	2.0	2.1	2.2	2.2	2.2	2.4	2.5	2.7	2.7	2.4	2.3	2.4	2.4	2.4	2.3	2.2	2.2	A	2.2	2.3	2.4	2.5	2.5	2.33	2.71	
23-Nov-04	2.5	2.7	2.7	2.5	2.3	2.2	2.3	2.3	2.4	2.3	2.2	2.2	2.1	2.2	2.1	2.2	A	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.26	2.66	
24-Nov-04	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.3	2.2	2.2	2.3	2.0	2.1	A	2.0	1.9	1.9	1.9	1.9	1.9	1.9	2.08	2.30	
25-Nov-04	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	A	1.9	2.0	1.9	1.9	1.9	1.9	2.0	1.9	1.98	2.10	
26-Nov-04	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.2	2.0	2.0	1.9	A	1.9	2.0	2.0	2.0	2.1	2.1	2.3	2.2	2.2	2.04	2.29	
27-Nov-04	2.4	2.4	2.4	2.2	2.1	2.2	2.1	2.0	2.0	2.0	2.2	2.2	2.1	A	2.0	2.0	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.12	2.40	
28-Nov-04	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	1.9	2.0	2.0	1.9	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.97	2.04	
29-Nov-04	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.4	1.9	A	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.93	2.41	
30-Nov-04	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	A	1.9	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.96	2.03	
																									N	0.00	
Hourly Avg	2.20	2.22	2.21	2.21	2.18	2.19	2.23	2.25	2.29	2.30	2.26	2.22	2.18	2.13	2.11	2.10	2.11	2.15	2.17	2.22	2.24	2.24	2.22	2.20			
Hourly Max	3.09	3.05	3.10	3.22	3.17	3.19	3.34	3.60	3.69	3.76	3.44	3.32	3.39	3.04	2.78	2.80	3.00	3.21	3.17	3.00	3.25	3.03	3.11	3.30			

### Total Hydrocarbons (THC) Concentration in ppm

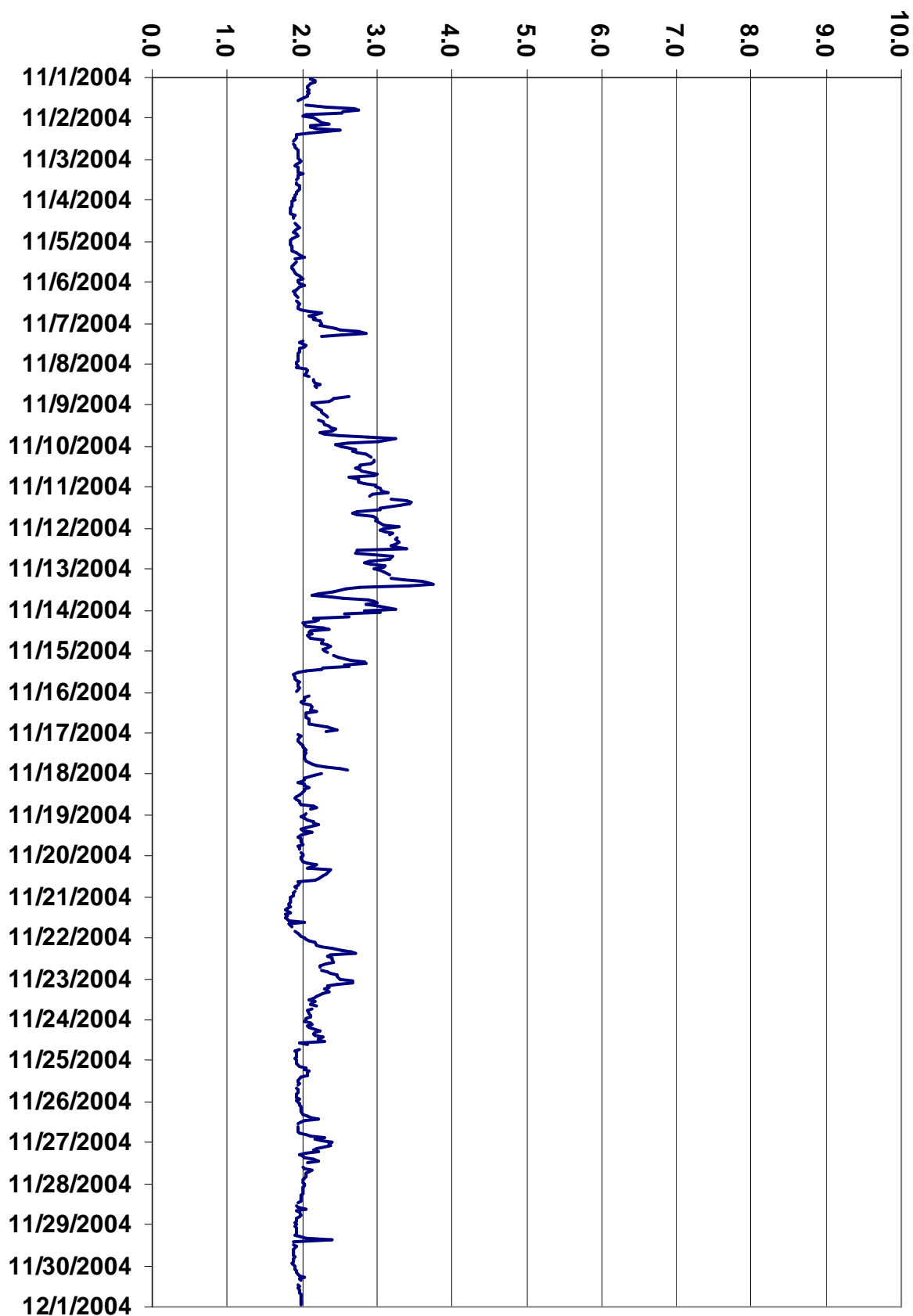


Figure 11. PASZA - Henry Pirker Total Hydrocarbons 1-hr Average Monthly Trend

Station: Henry Pirker

**HOURLY MAXIMUM TABLE**

**Total HydroCarbons (THC)**

Station Owner: PASZA

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

Maximum 1-hr Value:	5.2	ppm	13-Nov	23:00 0:00
Maximum 24-hr Value:	3.3	ppm	13-Nov	

AIC Time:	31 hrs	Operational Time:	685 hrs					
Calibration Time:	4 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	3.9	3.4	2.5	2.1	2.0	1.9	1.8	2.3 ppm

**Status Flag Characters**

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

**Day Mountain Standard Time**

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum	
1-Nov-04	2.2	2.2	2.3	2.3	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.2	2.4	2.1	2.0	A	2.1	2.7	3.2	3.2	2.8	2.8	2.1	2.1	2.34	3.24	
2-Nov-04	2.5	2.4	2.9	2.8	2.3	2.2	2.5	3.5	2.6	2.3	2.2	2.0	2.0	1.9	A	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.25	3.54	
3-Nov-04	2.0	2.4	2.0	2.0	1.9	2.0	2.0	2.0	2.2	2.0	2.0	2.0	A	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.00	2.40	
4-Nov-04	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.3	1.9	1.9	A	2.0	2.0	2.0	2.1	2.0	1.9	1.9	2.1	2.1	1.9	1.9	1.96	2.27	
5-Nov-04	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.1	2.2	2.1	A	2.0	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	2.0	1.96	2.17		
6-Nov-04	2.0	2.1	2.4	2.1	1.9	1.9	1.9	1.9	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.3	2.2	2.5	2.6	2.1	2.3	2.3	2.5	2.13	2.60	
7-Nov-04	2.4	2.4	2.7	2.7	2.8	2.9	3.4	3.2	2.4	A	2.1	2.0	2.1	2.2	2.1	2.0	2.1	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.32	3.37	
8-Nov-04	2.0	2.0	2.0	2.3	2.3	2.1	2.1	2.2	A	2.3	2.2	2.3	3.1	2.3	2.3	C	C	C	C	2.8	2.6	2.5	2.5	2.2	2.31	3.08	
9-Nov-04	2.2	2.2	2.3	2.3	2.4	2.3	2.4	2.7	A	2.3	2.4	2.4	2.6	2.5	2.5	2.5	2.4	2.6	3.1	3.4	3.6	3.4	2.9	2.5	2.60	3.64	
10-Nov-04	2.7	2.7	2.9	2.8	2.9	3.0	3.0	A	3.2	3.0	3.0	3.0	3.2	2.8	2.9	3.2	3.2	3.4	3.0	3.0	2.9	2.9	3.0	3.3	3.00	3.38	
11-Nov-04	3.1	3.2	3.1	3.3	3.4	3.1	A	3.6	4.1	3.7	3.7	3.6	3.2	3.3	2.9	3.1	2.9	3.2	3.1	3.1	3.1	3.2	3.5	3.6	3.29	4.15	
12-Nov-04	3.2	3.1	3.3	3.4	3.2	A	3.5	3.7	3.4	3.3	3.2	3.5	3.5	3.0	2.8	2.8	3.4	4.1	3.3	3.0	3.0	3.1	3.3	3.3	3.29	4.07	
13-Nov-04	3.1	3.1	3.2	3.3	A	3.3	3.6	4.1	3.9	4.1	3.8	2.9	2.7	2.7	2.4	2.4	2.7	2.8	3.5	3.4	3.5	3.3	3.7	5.2	3.34	5.20	
14-Nov-04	3.2	3.4	2.9	A	3.2	2.3	2.3	2.3	2.1	2.3	2.3	2.6	2.2	2.1	2.3	2.2	2.4	2.2	2.6	2.5	2.5	2.7	2.7	2.4	2.51	3.43	
15-Nov-04	2.4	2.4	A	2.5	2.6	2.8	3.1	3.2	3.2	3.0	2.5	2.4	2.1	2.0	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.36	3.21	
16-Nov-04	2.0	A	2.2	2.1	2.1	2.1	2.0	2.1	2.4	2.3	2.2	3.9	2.1	2.2	2.3	2.1	2.2	2.2	2.2	2.3	2.6	2.7	2.8	2.4	2.33	3.92	
17-Nov-04	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.4	2.6	2.9	2.9	A	2.18	2.87	
18-Nov-04	2.5	2.4	2.2	2.1	2.1	2.0	2.1	2.2	2.4	2.1	2.1	2.1	2.0	2.0	1.9	2.0	2.0	2.0	2.1	2.2	2.2	2.2	A	2.1	2.13	2.51	
19-Nov-04	2.1	2.0	2.1	2.2	2.3	2.2	2.6	2.2	2.0	2.1	2.3	2.1	2.0	2.0	2.1	2.1	2.0	2.1	2.0	2.0	2.0	A	2.0	2.1	2.12	2.57	
20-Nov-04	2.1	2.0	2.0	2.1	2.1	2.4	2.3	2.3	2.6	2.6	2.6	2.4	2.4	2.3	2.3	2.0	2.0	2.0	2.0	2.0	A	1.9	1.9	2.0	2.19	2.62	
21-Nov-04	1.9	1.9	1.9	1.9	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8	1.8	1.8	2.5	2.9	1.9	1.9	1.9	A	1.9	2.0	2.0	2.0	1.95	2.86	
22-Nov-04	2.1	2.1	2.3	2.3	2.3	2.4	2.8	3.4	3.2	3.5	2.5	2.4	2.6	2.5	2.5	2.5	2.3	2.3	A	2.3	2.4	2.4	2.5	2.5	2.52	3.50	
23-Nov-04	2.6	2.9	2.8	2.7	2.7	2.8	2.5	2.7	2.5	2.4	2.3	2.3	2.2	2.4	2.2	2.2	2.3	A	2.3	2.1	2.3	2.2	2.2	2.1	2.42	2.86	
24-Nov-04	2.1	2.1	2.2	2.2	2.1	2.1	2.6	2.5	2.4	2.6	2.4	2.3	2.5	2.6	2.0	2.3	A	2.1	2.0	2.0	2.0	2.0	2.0	1.9	2.22	2.60	
25-Nov-04	1.9	1.9	2.0	2.0	2.1	2.1	2.3	2.3	2.3	2.1	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.05	2.33	
26-Nov-04	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.2	3.1	2.1	2.1	2.0	A	2.0	2.0	2.0	2.0	2.2	2.3	2.5	2.4	2.5	2.17	3.08	
27-Nov-04	3.0	2.8	2.7	2.3	2.5	2.4	2.1	2.0	2.1	2.1	2.5	2.3	2.2	A	2.1	2.1	2.4	2.4	2.1	2.1	2.1	2.1	2.0	2.1	2.27	2.99	
28-Nov-04	2.1	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	A	2.0	2.0	2.5	2.0	2.0	2.0	2.0	2.0	1.9	2.0	1.9	2.03	2.49	
29-Nov-04	1.9	1.9	1.9	2.0	2.0	1.9	1.9	2.2	2.2	3.9	1.9	A	1.9	2.0	1.9	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.04	3.88	
30-Nov-04	2.0	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.0	2.1	A	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	2.01	2.08	
																									N	0.00	
Hourly Avg	2.31	2.33	2.34	2.32	2.31	2.28	2.37	2.50	2.48	2.52	2.41	2.38	2.32	2.24	2.21	2.24	2.23	2.29	2.32	2.36	2.36	2.38	2.36	2.36			
Hourly Max	3.20	3.43	3.28	3.43	3.36	3.27	3.62	4.07	4.15	4.13	3.84	3.92	3.54	3.32	2.91	3.20	3.44	4.07	3.47	3.42	3.64	3.36	3.69	5.20			

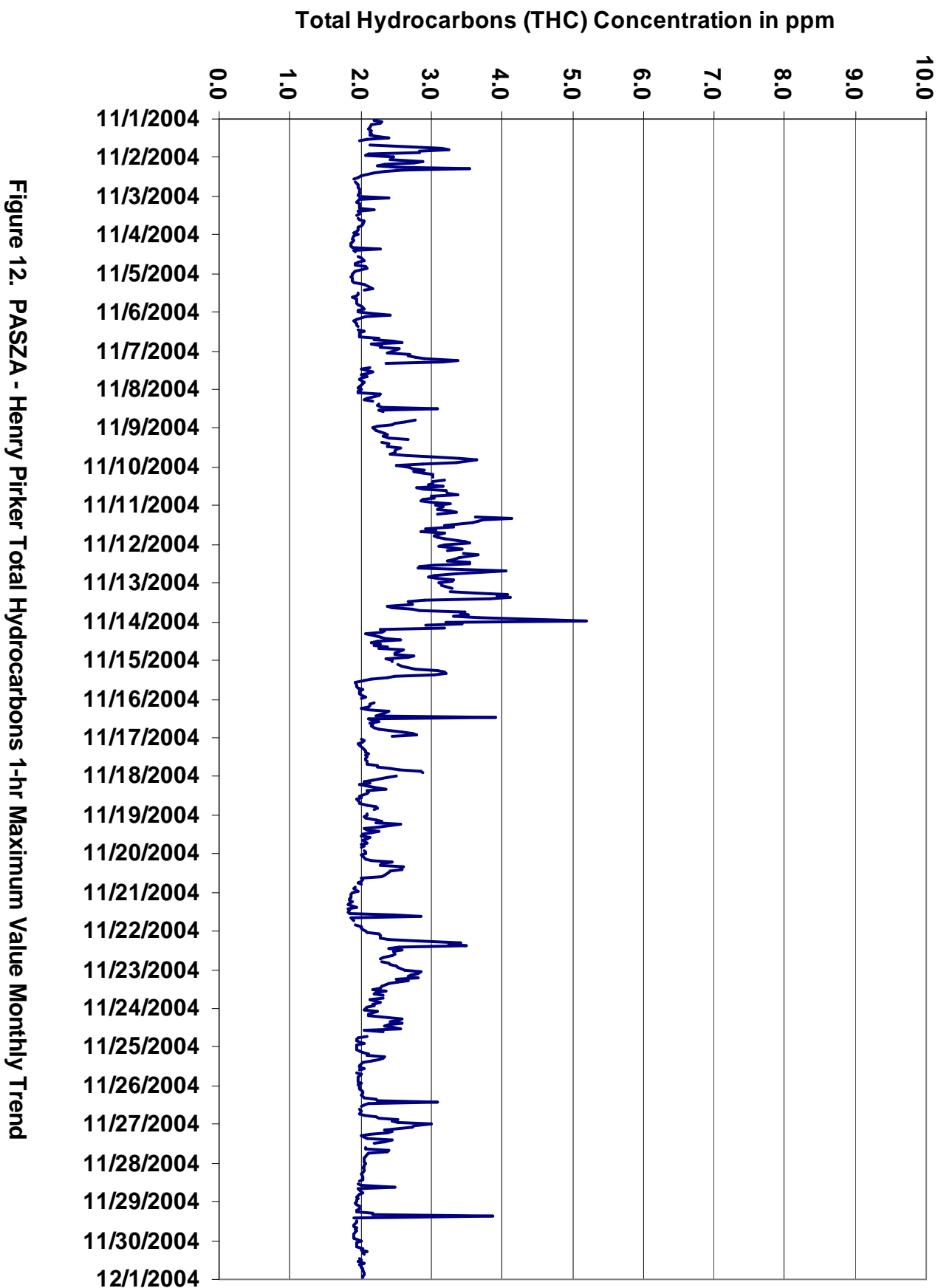


Figure 12. PASZA - Henry Pirkler Total Hydrocarbons 1-hr Maximum Value Monthly Trend

### PASZA - Henry Pirker Total Reduced Sulphur Monthly Summary

Station: Henry Pirker

#### HOURLY AVERAGE TABLE

Total Reduced Sulphur (TRS)

Station Owner: PASZA

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

**Summary**

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	2.6 ppb 11-Nov 15:00 16:00
Maximum 24-hr Average:	0.8 ppb 11-Nov

H<sub>2</sub>S Guideline Limit: Alberta Environment: 1-hr 10 ppb 24-hr 3 ppb

AIC Time:	30 hrs	Operational Time:	685 hrs
Calibration Time:	5 hrs	AMD Operational Uptime:	100.0%
Percentile	99	95	75
	1.3	1.0	0.5
	0.3	0.2	0.1
	0.0	0.0	0.0
Average	0.4 ppb		

**Status Flag Characters**

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

**Day Mountain Standard Time**

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum	
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Nov-04	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	A	0	1	1	1	1	1	0	0	0.5	1.2	
2-Nov-04	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.7
3-Nov-04	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
4-Nov-04	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
5-Nov-04	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.4
6-Nov-04	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	1	0	0	0	0	0	0.3	0.5
7-Nov-04	0	0	0	0	1	1	1	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.7
8-Nov-04	0	0	0	0	0	0	0	0	A	0	0	0	0	1	1	1	1	1	0	1	1	0	0	0	0	0.4	0.7
9-Nov-04	0	0	0	0	0	0	0	C	C	C	C	C	1	1	1	1	1	1	1	1	2	2	1	1	0.7	1.8	
10-Nov-04	0	1	1	1	1	1	1	A	1	1	1	1	1	0	0	0	1	2	1	1	1	1	1	1	0.7	2.3	
11-Nov-04	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	3	1	1	1	1	1	0	1	1	0.8	2.6	
12-Nov-04	0	0	0	0	0	A	0	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	0.6	1.3	
13-Nov-04	0	0	0	1	A	1	1	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	0.8	1.4	
14-Nov-04	1	1	1	A	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	1	1	1	0.5	1.2	
15-Nov-04	1	1	A	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.5	1.1	
16-Nov-04	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.3	0.8	
17-Nov-04	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	A	0.2	0.8	
18-Nov-04	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	1	1	1	A	1	0.4	0.9	
19-Nov-04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0.2	0.4	
20-Nov-04	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	A	0	0	0.3	0.6	
21-Nov-04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0.2	0.2	
22-Nov-04	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	A	0	0	0	0	0	0.5	1.0	
23-Nov-04	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0.3	0.5	
24-Nov-04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0.2	0.5	
25-Nov-04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0.3	0.4	
26-Nov-04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0.3	0.5	
27-Nov-04	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0.3	0.5	
28-Nov-04	0	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
29-Nov-04	0	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.2	
30-Nov-04	0	0	0	0	0	0	0	0	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2	
																									N	0.0	
Hourly Avg	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4		
Hourly Max	1.0	1.2	0.8	0.7	1.0	0.7	1.0	1.1	1.1	1.2	1.2	1.3	1.2	1.0	0.8	2.6	1.1	2.3	1.2	1.3	1.8	1.5	1.3	1.4			

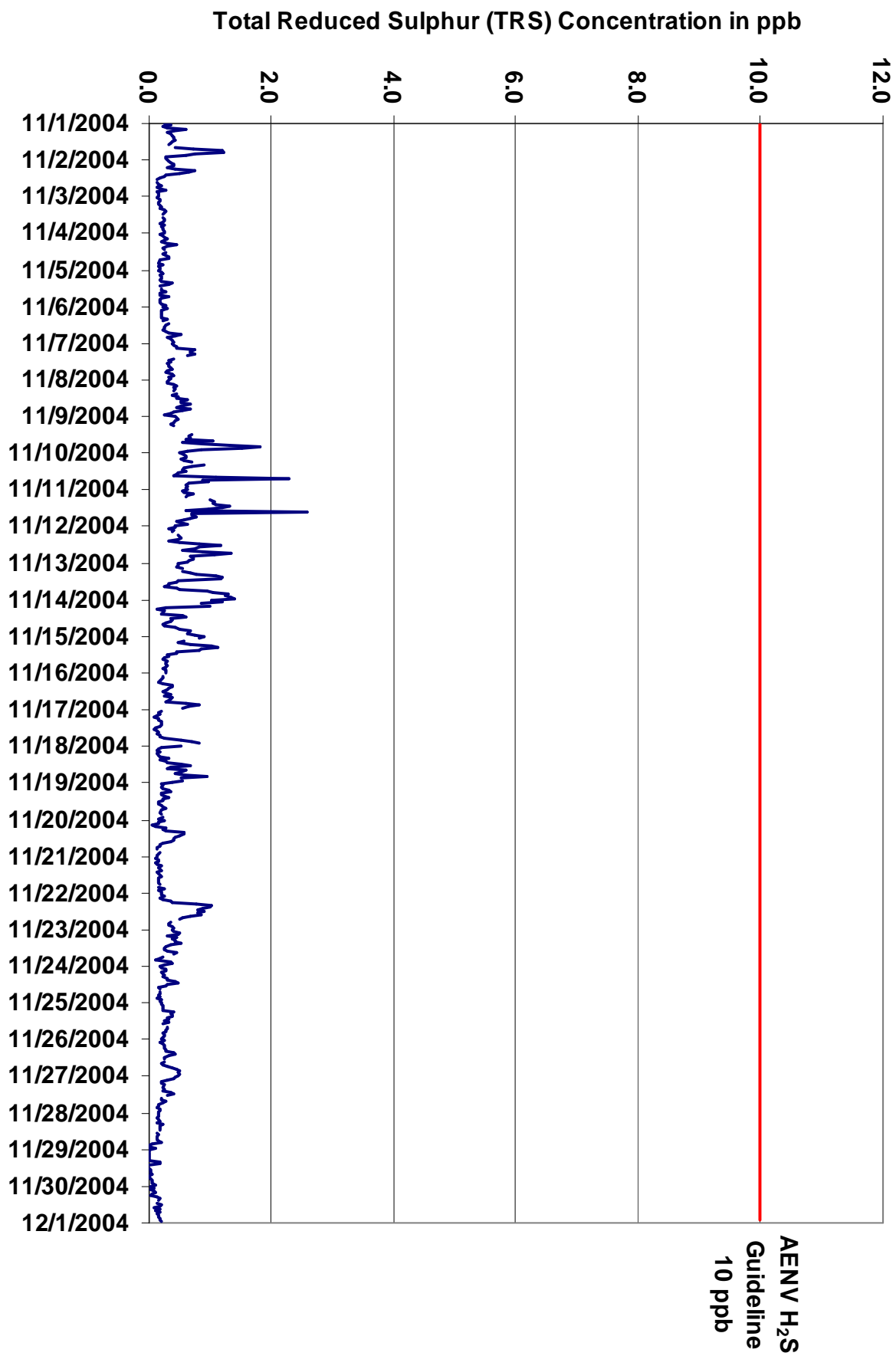


Figure 13. PASZA - Henry Pirker Total Reduced Sulphur 1-hr Average Monthly Trend



Station: Henry Pirker

**HOURLY MAXIMUM TABLE**

**Total Reduced Sulphur (TRS)**

Station Owner: PASZA

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

**Summary**

Maximum 1-hr Value:	12.9	ppb	11-Nov	15:00 16:00
Maximum 24-hr Value:	1.8	ppb	11-Nov	

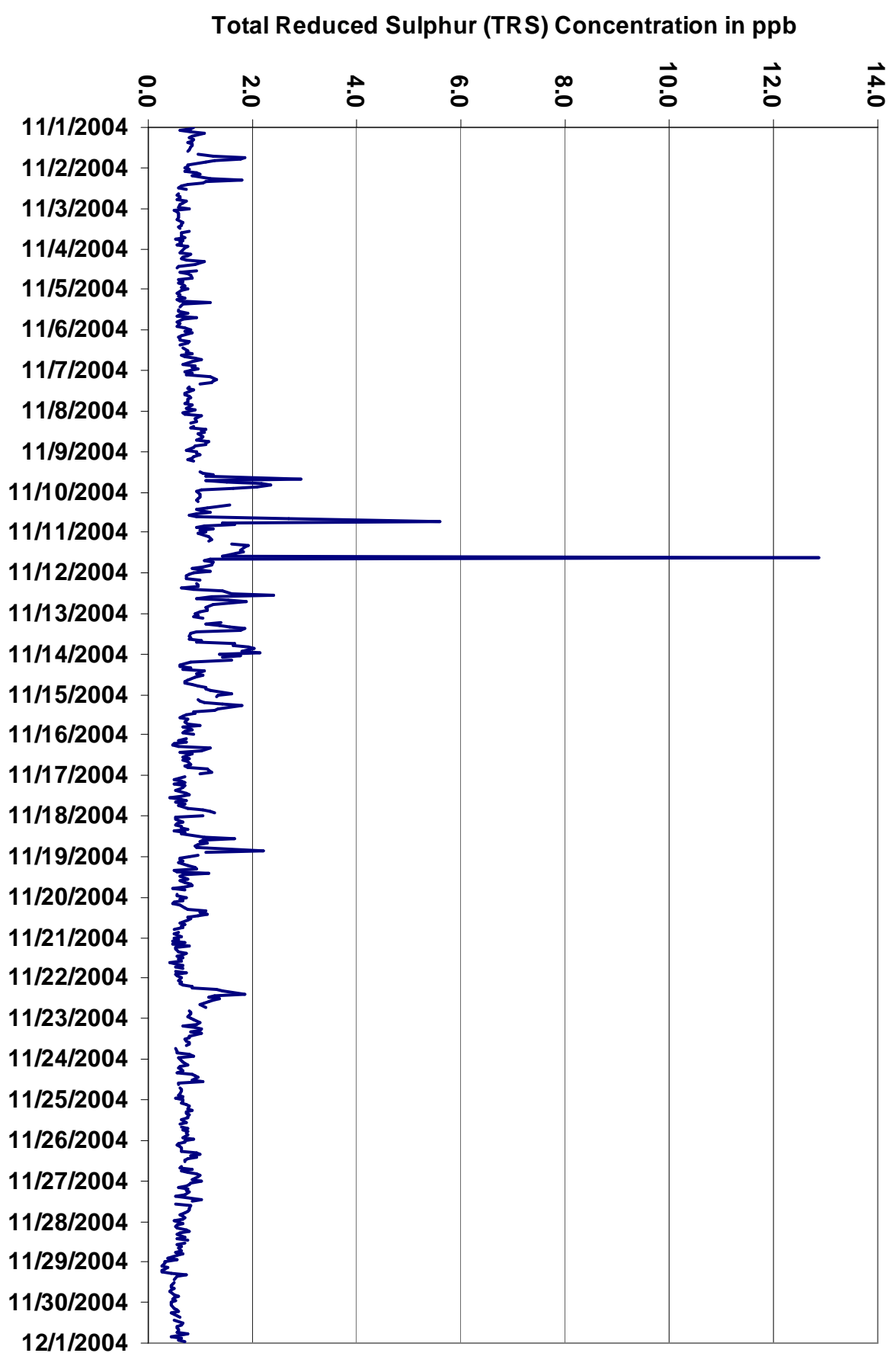
AIC Time:	30 hrs	Operational Time:	685 hrs					
Calibration Time:	5 hrs	AMD Operational Uptime:	100.0%					
Percentile	99	95	75	50	25	5	1	Average
	2.2	1.6	1.0	0.8	0.6	0.5	0.4	0.9 ppb

**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-04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	2	2	1	1	1	1	1	1.0	1.9
2-Nov-04	1	1	1	1	1	1	1	2	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.8
3-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.6	0.8
4-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.1
5-Nov-04	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	0.7	1.2
6-Nov-04	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.0
7-Nov-04	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.3
8-Nov-04	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.9	1.2
9-Nov-04	1	1	1	1	1	1	1	C	C	C	C	C	1	1	1	1	3	1	2	2	2	2	2	1	1	1.3	2.9
10-Nov-04	1	1	1	1	1	1	1	A	2	1	1	1	1	1	1	1	3	6	1	2	1	1	1	1	1	1.3	5.6
11-Nov-04	1	1	1	1	1	1	A	2	2	2	2	2	2	2	1	13	1	1	1	1	1	1	1	1	1	1.8	12.9
12-Nov-04	1	1	1	1	1	A	1	1	1	1	1	1	2	2	1	1	2	2	2	1	1	1	1	1	1	1.2	2.4
13-Nov-04	1	1	1	1	A	1	1	1	2	2	2	1	1	1	1	1	1	1	2	2	2	2	2	2	2	1.3	2.2
14-Nov-04	1	2	1	A	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.0	1.8
15-Nov-04	1	1	A	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1.0	1.8
16-Nov-04	1	A	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.8	1.2
17-Nov-04	A	1	0	1	1	0	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	A	0.7	1.3
18-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	2	1	A	1	0.9	2.2
19-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	A	1	1	1	0.7	1.2
20-Nov-04	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	A	1	1	1	1	0.7	1.1
21-Nov-04	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	0	1	1	1	A	1	1	1	1	1	0.6	0.8
22-Nov-04	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1.0	1.8
23-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	0.8	1.0
24-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0.7	1.0
25-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	0.7	0.9
26-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0.8	1.0
27-Nov-04	1	1	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	1	1	1	0.7	1.0
28-Nov-04	0	1	1	1	1	1	1	1	1	1	1	1	A	1	1	1	1	1	1	1	1	0	0	1	0.6	0.8	
29-Nov-04	0	0	0	0	0	0	0	0	1	1	0	A	0	0	0	0	0	0	0	0	0	1	0	0	1	0.4	0.7
30-Nov-04	0	0	0	0	1	1	0	1	1	1	A	1	1	1	1	1	1	1	1	1	1	0	1	1	1	0.6	0.7
																									N	0.0	
Hourly Avg	0.8	0.8	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	1.2	0.9	1.0	0.9	0.9	0.9	0.9	0.9	0.8	0.8		
Hourly Max	1.4	1.8	1.4	1.2	1.6	1.4	1.4	1.8	1.9	1.9	1.8	1.8	1.7	2.4	1.4	12.9	2.9	5.6	1.9	2.2	2.3	2.1	1.8	2.2			

Figure 14. PASZA - Henry Pirkker Total Reduced Sulphur 1-hr Maximum Value Monthly Trend



## PASZA - Henry Pirker Particulate Matter (less than 2.5 microns) Monthly Summary

Station: Henry Pirker

### HOURLY AVERAGE TABLE

Particulate Matter (PM<sub>2.5</sub>)

Station Owner: PASZA

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

**Summary**

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	32.7 $\mu\text{g}/\text{m}^3$ 11-Nov 18:00 19:00
Maximum 24-hr Average:	18.2 $\mu\text{g}/\text{m}^3$ 11-Nov

Guideline Limit	Canada Wide Standard	1-hr	-	$\mu\text{g}/\text{m}^3$	24-hr	30	$\mu\text{g}/\text{m}^3$
(considered as an absolute value)							

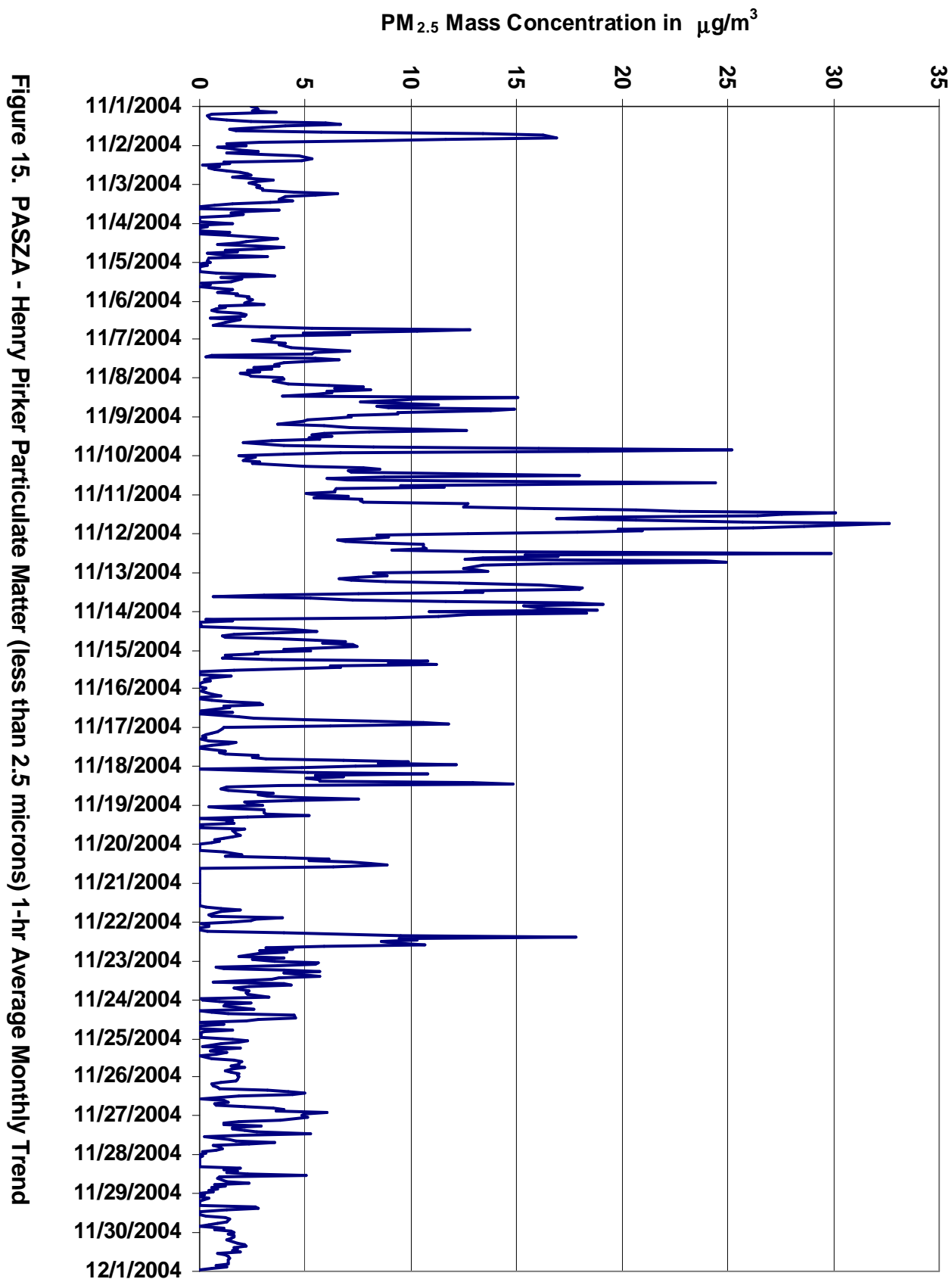
AIC Time:	0 hrs	Operational Time:	720 hrs
Calibration Time:	0 hrs	AMD Operational Uptime:	100.0%
Percentile	99	95	75
	25.6	15.8	5.5
	50	25	5
	2.2	0.8	0.0
	1	0.0	0.0
Average	4.2 $\mu\text{g}/\text{m}^3$		
Geomean	2.9 $\mu\text{g}/\text{m}^3$		

**Status Flag Characters**

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

**Day Mountain Standard Time**

Day	Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum
	Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
1-Nov-04	2	3	3	2	4	1	0	1	1	2	6	7	4	3	1	2	6	13	16	17	12	8	3	1	4.9	16.9	
2-Nov-04	2	1	1	2	3	1	3	5	5	5	1	1	0	1	0	1	1	2	2	2	2	3	3	2	2.1	5.3	
3-Nov-04	3	3	3	3	3	4	7	5	4	4	4	3	2	1	0	0	4	2	2	2	1	0	0	0	2.5	6.5	
4-Nov-04	2	0	0	0	0	0	1	0	1	2	4	2	2	1	3	4	3	1	2	0	1	3	0	0	1.4	4.0	
5-Nov-04	1	0	0	0	0	0	0	1	3	4	1	2	1	0	0	0	1	2	1	1	2	2	2	2	1.1	3.6	
6-Nov-04	3	2	3	1	1	1	1	1	2	2	2	1	2	1	1	1	3	5	13	10	5	7	3	4	3.1	12.8	
7-Nov-04	3	2	4	4	4	4	6	7	5	5	1	0	5	7	4	4	4	3	3	2	3	2	2	2	3.7	7.1	
8-Nov-04	4	4	3	4	6	8	6	8	6	6	6	6	4	15	10	9	8	11	8	9	15	14	9	9	7	8.0	15.1
9-Nov-04	7	6	5	5	4	6	7	10	13	8	6	5	6	5	6	3	2	4	8	16	25	18	7	4	7.8	25.2	
10-Nov-04	2	3	2	2	3	3	5	8	9	7	7	13	18	9	6	7	14	24	10	12	6	6	6	5	7.8	24.4	
11-Nov-04	6	7	5	8	8	8	13	12	16	21	23	30	28	26	19	17	21	26	33	29	26	20	21	18	18.2	32.7	
12-Nov-04	13	8	9	8	7	7	8	11	11	11	9	13	30	15	17	13	13	24	25	17	13	12	13	14	13.3	29.9	
13-Nov-04	8	9	9	8	7	7	9	12	16	18	18	13	13	8	3	1	5	7	12	18	19	15	16	19	11.2	19.1	
14-Nov-04	11	18	13	11	9	0	2	0	0	0	0	4	6	3	2	1	1	4	5	7	6	7	7	4	5.1	18.3	
15-Nov-04	5	3	3	1	1	1	3	11	9	11	6	7	2	0	0	0	1	1	0	1	0	0	0	0	2.8	11.2	
16-Nov-04	0	0	0	1	1	0	0	1	1	3	3	1	1	0	2	0	1	2	3	5	8	11	12	6	2.5	11.8	
17-Nov-04	1	1	1	1	0	0	0	0	0	2	1	1	0	0	1	1	1	3	2	3	7	10	8	12	2.4	12.2	
18-Nov-04	7	5	0	5	11	5	7	5	6	6	13	15	4	1	1	1	3	3	3	5	8	4	2	2	5.1	14.9	
19-Nov-04	3	0	1	3	3	3	5	2	0	2	1	2	0	0	0	2	2	2	2	2	1	1	1	1	1.6	5.2	
20-Nov-04	0	0	0	0	0	1	2	1	4	6	5	7	8	9	6	0	0	0	0	0	0	0	0	0	2.1	8.8	
21-Nov-04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	1	4	3	2	0.6	3.9	
22-Nov-04	1	0	0	0	0	0	0	4	10	18	9	10	9	9	11	6	3	4	3	4	3	2	4	2	4.7	17.8	
23-Nov-04	4	6	5	4	1	1	4	6	4	6	4	3	2	1	4	4	2	2	2	2	2	2	3	0	3.1	5.7	
24-Nov-04	0	1	2	1	1	2	3	0	1	1	4	5	3	2	2	0	1	0	0	0	2	0	0	0	1.2	4.6	
25-Nov-04	2	2	2	1	1	0	2	1	1	1	1	0	1	2	2	2	2	1	2	2	1	1	2	2	1.3	2.3	
26-Nov-04	2	2	2	1	1	1	1	1	3	4	5	4	2	0	1	1	1	1	2	3	4	4	6	5	2.3	6.0	
27-Nov-04	5	5	4	2	1	1	3	2	2	2	3	5	2	0	1	2	4	2	1	1	1	1	0	0	2.0	5.3	
28-Nov-04	0	0	0	0	0	0	0	0	2	1	2	1	2	5	1	1	1	2	1	1	1	1	0	1	1.0	5.0	
29-Nov-04	0	0	0	0	0	0	0	0	3	3	1	0	0	0	0	1	1	1	1	1	0	0	1	1	2	0.7	2.8
30-Nov-04	2	1	2	2	1	1	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	0	1.4	2.2	
																									N	0.0	
Hourly Avg		3.3	3.1	2.8	2.7	2.6	2.2	3.3	3.9	4.6	5.4	4.9	5.4	5.6	4.0	3.4	2.8	3.8	5.1	5.5	6.0	5.7	5.2	4.6	3.9		
Hourly Max		12.7	18.3	12.7	11.3	10.8	7.7	12.7	12.5	16.1	20.7	22.7	30.1	29.9	26.4	18.8	16.9	20.7	25.7	32.7	28.6	26.2	19.8	20.9	18.8		



**Figure 15. PASZA - Henry Pirkker Particulate Matter (less than 2.5 microns) 1-hr Average Monthly Trend**

Station: Henry Pirker

**HOURLY MAXIMUM TABLE**

**Particulate Matter (PM<sub>2.5</sub>)**

Station Owner: PASZA

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

Maximum 1-hr Value:	39.0	µg/m <sup>3</sup>	11-Nov	11:00 12:00
Maximum 24-hr Value:	23.2	µg/m <sup>3</sup>	11-Nov	

AIC Time:	0 hrs	Operational Time:	720 hrs						
Calibration Time:	0 hrs	AMD Operational Uptime:	100.0%						
Percentile	99	95	75	50	25	5	1	Average	Geomean
	31.8	21.4	8.9	4.9	3.2	1.4	0.2	7.3 µg/m <sup>3</sup>	6.2 µg/m <sup>3</sup>

**Status Flag Characters**

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

**Day Mountain Standard Time**

Hour Start Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hour Average	Daily Maximum
1-Nov-04	5	5	5	5	6	4	3	3	3	7	9	10	9	6	3	3	11	19	20	21	17	14	4	3	8.1	21.0
2-Nov-04	5	3	3	4	7	4	5	10	10	7	3	4	5	3	2	3	4	4	4	4	4	5	5	8	4.9	10.1
3-Nov-04	4	5	5	5	5	6	8	7	6	5	6	5	4	2	2	3	8	6	4	5	5	0	2	3	4.6	8.3
4-Nov-04	6	2	3	2	2	3	3	1	3	6	7	5	4	6	6	6	3	5	3	3	6	2	2	2	3.9	6.9
5-Nov-04	2	2	2	1	1	2	2	3	5	7	4	4	3	1	2	1	2	4	4	3	3	4	4	4	2.9	6.6
6-Nov-04	4	3	5	3	4	3	3	3	4	5	4	3	4	4	5	3	7	9	21	19	8	10	7	6	6.1	21.0
7-Nov-04	6	5	6	7	7	6	11	10	7	8	3	2	11	12	7	6	6	7	6	4	6	4	4	5	6.5	11.8
8-Nov-04	6	7	6	7	10	11	10	10	8	9	8	8	22	15	11	10	15	13	15	19	17	12	12	10	11.3	21.9
9-Nov-04	9	9	7	7	6	9	9	14	16	10	8	7	9	8	8	6	6	10	15	25	30	22	13	7	11.3	29.9
10-Nov-04	5	6	5	5	5	5	12	9	11	14	12	19	30	13	9	11	25	39	22	18	10	10	9	8	13.0	38.7
11-Nov-04	8	11	8	12	11	11	17	17	19	25	30	39	33	36	22	29	25	36	36	31	32	22	28	20	23.2	39.0
12-Nov-04	22	10	16	11	9	9	12	17	13	13	13	27	32	30	19	18	19	29	30	26	16	15	17	19	18.4	32.5
13-Nov-04	12	13	11	10	10	11	11	16	19	22	25	16	17	12	5	6	7	12	20	20	22	19	21	30	15.3	29.6
14-Nov-04	16	25	16	14	14	5	5	4	2	5	5	7	6	6	5	6	6	6	12	13	10	14	11	7	9.3	25.1
15-Nov-04	8	5	7	4	5	2	8	15	13	13	11	9	5	1	0	1	7	3	2	2	2	2	1	2	5.3	14.5
16-Nov-04	2	2	2	3	5	3	2	3	6	6	5	5	4	3	6	2	3	4	8	7	12	13	20	9	5.6	19.6
17-Nov-04	5	4	3	2	2	1	2	2	3	4	4	3	2	2	4	3	4	5	6	7	12	12	12	15	5.0	14.8
18-Nov-04	13	18	1	9	17	9	9	8	9	8	17	23	6	6	2	4	6	4	5	7	11	7	4	4	8.7	23.2
19-Nov-04	6	3	6	6	5	7	10	6	2	7	7	4	1	2	3	4	3	4	4	3	3	4	2	3	4.4	9.6
20-Nov-04	1	2	2	2	1	4	10	6	9	10	7	11	12	12	11	1	2	1	2	2	2	2	0	1	4.6	12.2
21-Nov-04	2	0	1	1	0	0	0	0	2	2	0	2	1	1	1	2	18	8	3	3	3	7	5	5	2.8	17.7
22-Nov-04	3	2	5	3	1	3	2	9	18	27	13	17	15	14	15	11	5	8	6	8	5	5	8	4	8.7	26.8
23-Nov-04	5	8	7	6	2	3	6	8	8	8	6	6	4	5	7	7	6	3	5	4	4	5	7	2	5.4	7.9
24-Nov-04	2	3	4	4	3	4	4	2	3	4	8	8	6	7	0	3	2	1	1	4	5	1	2	2	3.4	8.2
25-Nov-04	4	4	4	3	3	2	5	3	5	3	2	3	3	4	4	5	5	4	4	3	3	4	4	4	3.6	5.4
26-Nov-04	3	4	4	2	2	2	2	3	7	8	7	6	5	4	3	4	3	3	4	8	6	6	13	7	4.7	12.8
27-Nov-04	8	9	6	3	3	3	8	4	3	4	4	9	6	3	4	3	9	8	5	3	2	3	2	2	4.8	9.4
28-Nov-04	1	2	1	1	1	1	2	2	5	3	6	4	15	14	5	4	4	5	4	4	4	4	3	4	4.0	14.5
29-Nov-04	2	3	3	3	3	3	3	4	6	6	4	4	2	3	4	4	5	5	3	4	2	4	4	4	3.6	5.9
30-Nov-04	4	4	4	4	5	4	4	4	5	5	5	4	4	4	4	5	5	4	4	4	4	4	4	3	4.2	4.9
																									N	0.0
Hourly Avg	6.0	5.9	5.2	5.0	5.2	4.7	6.3	6.7	7.7	8.6	8.1	9.1	9.4	7.8	6.0	5.9	7.7	8.9	9.4	9.5	8.7	7.9	7.7	6.7		
Hourly Max	22.0	25.1	16.1	14.4	16.9	11.4	17.0	17.1	19.2	26.8	29.5	39.0	33.2	35.6	21.9	28.9	25.0	38.7	36.3	31.3	32.0	22.4	27.7	29.6		

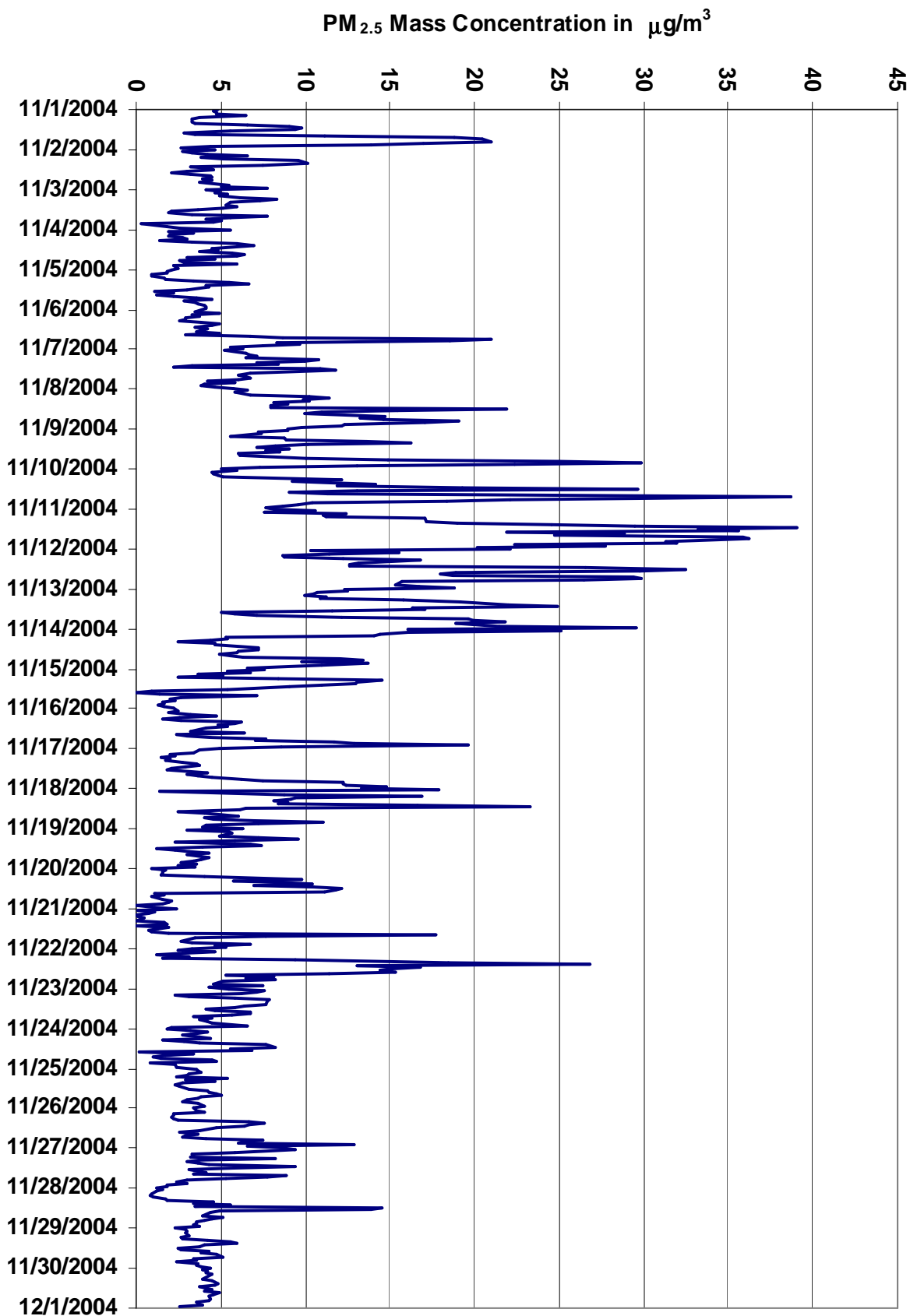
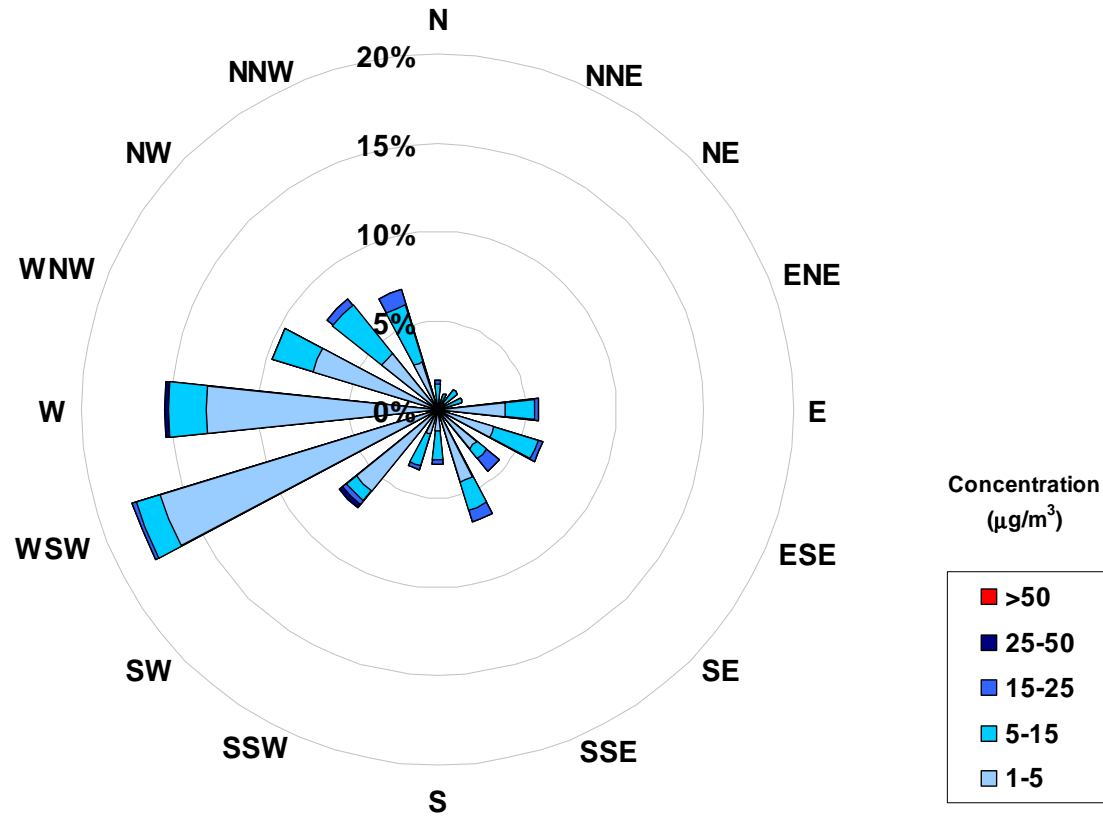


Figure 16. PASZA - Henry Pirkker Particulate Matter (less than 2.5 microns) 1-hr Maximum Value Monthly

**Concentration Rose for the 1-hr PM<sub>2.5</sub> Average Concentration Occurrences at the Henry Pirker Site for November 2004**



Frequency Distribution of PM <sub>2.5</sub> in µg/m <sup>3</sup>			
Range			Frequency (hrs)
0	<	1	202
1	to	5	314
5	to	15	164
15	to	25	31
25	to	50	9
	>	50	0
Total Non-Zero Values			720

Calms	
Range	
µg/m <sup>3</sup>	
1-5	0.0%
5-15	0.0%
15-25	0.0%
25-50	0.0%
>50	0.0%

### PASZA - Henry Pirker Meteorological Parameters Monthly Summary

Station: Henry Pirker

#### HOURLY AVERAGE TABLE

Relative Humidity (RH - %)

Station Owner: PASZA

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

**Summary**

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	94.4 % 21-Nov 21:00 22:00
Maximum 24-hr Average:	90.9 % 8-Nov

AIC Time:	0 hrs	Operational Time:	720 hrs
Calibration Time:	0 hrs	AMD Operational Uptime:	100.0%
Percentile	99	95	75
	93.1	91.2	84.1
	50	25	5
	72.8	64.0	50.5
	1	45.0	Average
	72.8 ppb		

**Status Flag Characters**

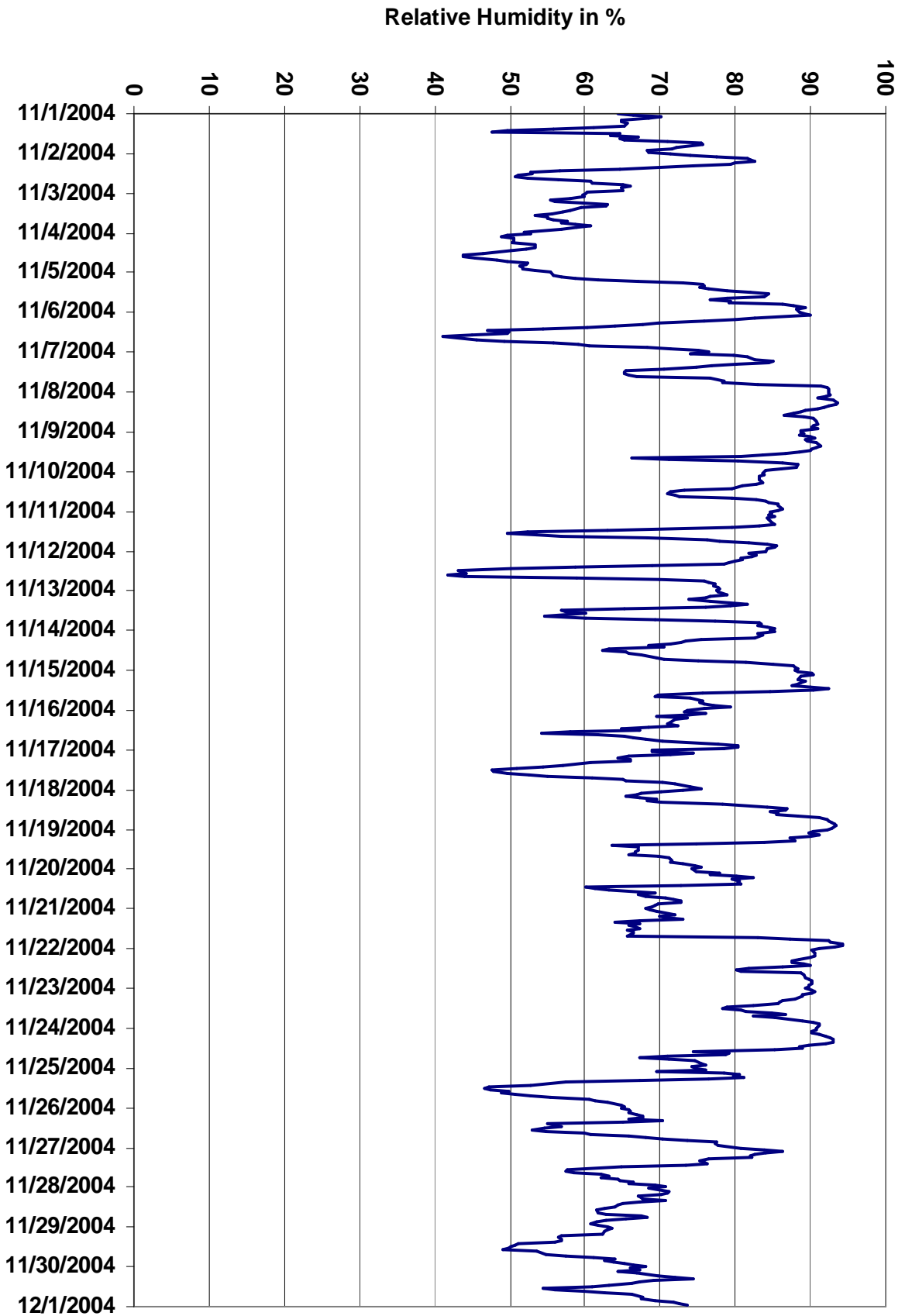
C Calibration	A AIC - Zero / Span Check
S Instrument out of Service	X Filter Exchange
N No Data	M Equipment Maintenance
D Excessive Instrument Drift	P Power Failure

**Day Mountain Standard Time**

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum	
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Nov-04	64	67	70	69	65	65	66	65	61	56	50	48	65	63	67	65	65	71	75	76	72	72	68	69	66	76	
2-Nov-04	71	74	77	82	82	83	80	79	74	65	57	53	53	51	51	52	57	61	61	65	66	65	65	60	66	83	
3-Nov-04	60	60	60	58	55	56	60	63	63	59	58	57	56	53	55	55	56	58	57	59	61	59	57	52	58	63	
4-Nov-04	53	50	49	50	51	50	50	53	53	53	52	50	46	44	44	45	48	50	52	52	51	52	52	53	50	53	
5-Nov-04	55	56	57	59	62	67	73	76	76	75	77	79	82	85	84	79	77	79	79	86	88	89	88	88	76	89	
6-Nov-04	89	89	90	83	80	76	70	68	64	60	54	47	50	50	45	41	46	49	56	59	61	68	71	75	64	90	
7-Nov-04	76	74	80	82	83	85	84	80	77	75	71	65	65	65	66	67	77	79	78	83	91	92	92	92	78	92	
8-Nov-04	92	93	93	92	91	93	94	93	92	92	91	89	89	88	87	89	90	91	91	91	90	90	91	89	91	94	
9-Nov-04	89	89	89	90	91	89	90	91	91	91	90	90	89	87	84	81	66	71	80	86	88	88	86	84	86	91	
10-Nov-04	84	84	84	83	83	83	83	84	83	81	79	73	71	71	72	73	80	83	84	85	86	86	86	86	81	86	
11-Nov-04	85	85	84	85	84	84	85	85	85	83	79	63	52	50	54	57	68	76	78	82	84	85	85	84	77	85	
12-Nov-04	84	82	83	82	81	81	80	79	79	69	59	50	43	44	42	44	59	70	76	76	77	77	78	78	70	84	
13-Nov-04	78	78	79	77	76	74	77	79	82	79	76	65	57	58	60	55	60	69	77	83	83	83	84	85	74	85	
14-Nov-04	85	85	83	84	83	75	73	73	71	68	71	63	62	66	66	68	69	71	75	81	85	88	88	88	76	88	
15-Nov-04	88	88	90	90	89	88	89	89	88	88	90	93	90	85	76	70	69	74	76	75	76	77	79	76	83	93	
16-Nov-04	74	73	76	74	70	74	72	71	71	72	68	65	67	58	54	62	65	66	68	70	78	80	80	79	70	80	
17-Nov-04	69	69	74	71	66	64	66	66	61	57	54	51	48	48	50	52	55	61	65	65	70	72	74	76	63	76	
18-Nov-04	73	70	68	67	65	67	70	68	70	78	84	87	87	85	86	85	88	91	92	92	93	93	93	93	81	93	
19-Nov-04	92	90	90	91	90	87	88	88	84	75	64	67	67	67	67	66	70	71	71	72	71	73	75	76	77	92	
20-Nov-04	74	75	78	77	80	82	80	81	80	81	73	60	61	63	69	67	68	71	72	73	73	70	69	69	73	82	
21-Nov-04	68	69	70	72	70	71	73	67	64	67	66	67	67	66	66	66	66	83	87	92	93	94	94	93	75	94	
22-Nov-04	91	90	90	91	91	90	88	88	88	89	90	86	82	80	81	89	89	89	90	90	90	90	90	90	88	91	
23-Nov-04	89	90	91	90	89	89	88	86	86	86	82	79	78	81	81	85	87	82	85	89	90	91	91	91	87	91	
24-Nov-04	91	91	90	90	91	92	93	93	93	92	90	89	89	85	74	79	79	71	67	71	75	76	76	74	84	93	
25-Nov-04	75	76	69	78	81	80	81	77	67	57	53	47	47	47	50	49	51	53	55	60	61	63	65	65	63	81	
26-Nov-04	65	66	66	66	67	68	68	66	70	65	55	57	55	53	55	60	61	66	68	70	74	78	77	78	65	78	
27-Nov-04	81	84	86	84	83	82	82	76	75	76	76	74	65	58	57	58	62	63	62	64	65	67	66	69	71	86	
28-Nov-04	71	69	71	71	70	67	67	68	71	67	65	64	64	63	61	62	63	68	68	65	63	62	61	62	66	71	
29-Nov-04	63	64	63	63	62	57	57	57	57	56	51	51	50	50	49	54	55	58	61	64	63	64	65	66	58	66	
30-Nov-04	68	66	67	64	67	70	72	74	69	67	66	63	61	54	56	60	63	66	68	67	69	72	73	74	67	74	
																										N	0
Hourly Avg	77	76	77	77	77	76	77	76	75	73	70	66	65	64	64	64	67	70	73	75	76	77	77	77			
Hourly Max	92	93	93	92	91	93	94	93	93	92	91	93	90	88	87	89	90	91	92	92	93	94	94	93			



Figure 17. PASZA - Henry Pirkker Relative Humidity 1-hr Average Monthly Trend



Station: Henry Pirker

### HOURLY AVERAGE TABLE

Ambient Temperature (AT - °C)

Station Owner: PASZA

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

**Summary**

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	11.6	°C	4-Nov	14:00 15:00
Maximum 24-hr Average:	8.7	°C	4-Nov	

AIC Time:	0 hrs		Operational Time:	720 hrs				
Calibration Time:	0 hrs		AMD Operational Uptime:	100.0%				
Percentile	99	95	75	50	25	5	1	Average
	9.1	6.8	2.3	-0.6	-3.4	-11.2	-14.0	-0.8 ppb

**Status Flag Characters**

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

**Day Mountain Standard Time**

Day	Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	Daily Maximum
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00			
1-Nov-04	-3	-3	-4	-4	-4	-4	-4	-4	-4	-3	-2	0	1	1	2	2	3	2	1	0	0	0	-1	0	0	-1.1	2.6
2-Nov-04	-1	-2	-3	-4	-4	-3	-2	-3	-1	2	5	6	5	6	5	5	4	3	3	2	1	1	0	0	0	1.1	6.2
3-Nov-04	0	1	0	1	1	1	1	1	1	1	2	3	4	4	5	5	5	4	4	4	4	4	4	5	6	2.8	6.1
4-Nov-04	6	6	7	7	7	8	8	8	8	8	9	9	10	11	12	12	11	10	9	8	9	9	8	9	9	8.7	11.6
5-Nov-04	9	9	9	9	8	7	6	6	6	6	6	6	6	6	6	7	7	6	5	2	1	0	0	-1	5.4	8.9	
6-Nov-04	-2	-2	-2	-1	-1	-1	-1	-1	-1	0	1	2	1	1	1	1	0	-2	-3	-4	-4	-4	-6	-6	-7	-1.6	1.7
7-Nov-04	-7	-7	-8	-9	-9	-10	-9	-8	-8	-6	-5	-4	-3	-3	-2	-2	-3	-3	-3	-3	-3	-3	-3	-3	-3	-5.1	-2.2
8-Nov-04	-2	-2	-3	-4	-6	-4	-2	-2	-2	-2	-2	-1	-1	0	0	-1	-1	-1	-1	-1	-1	-1	0	0	1	-1.6	0.6
9-Nov-04	-1	-2	-3	-5	-6	-8	-7	-6	-6	-5	-5	-4	-2	0	2	2	1	-2	-4	-6	-7	-9	-11	-14	-4.6	2.0	
10-Nov-04	-14	-14	-14	-14	-14	-14	-13	-13	-14	-13	-11	-8	-6	-5	-5	-5	-6	-7	-8	-10	-11	-12	-12	-12	-12	-10.6	-4.8
11-Nov-04	-13	-12	-12	-12	-12	-13	-12	-12	-12	-11	-10	-8	-3	1	3	1	1	-2	-6	-8	-10	-11	-11	-11	-11	-8.1	2.6
12-Nov-04	-12	-13	-14	-14	-14	-14	-14	-15	-15	-12	-7	-2	2	3	4	3	0	-4	-7	-8	-9	-8	-8	-8	-8	-7.8	4.0
13-Nov-04	-9	-9	-8	-6	-5	-4	-4	-4	-4	-4	-2	1	4	7	7	8	7	4	2	0	0	-1	-1	-2	-0.9	8.2	
14-Nov-04	-2	-2	-1	0	0	1	2	2	4	5	4	6	6	6	6	5	4	3	2	1	1	0	0	-1	2.1	5.9	
15-Nov-04	-1	-1	-2	-2	-2	-2	-2	-2	-1	0	1	2	2	3	4	5	6	5	4	3	3	2	2	1	2	1.4	5.6
16-Nov-04	3	3	2	2	2	1	2	2	2	2	2	3	4	4	7	8	6	4	3	2	2	0	0	0	1	2.8	8.0
17-Nov-04	3	3	1	1	3	3	2	1	1	2	3	4	4	5	5	5	4	3	1	0	-1	-1	-2	-2	-2	1.7	5.0
18-Nov-04	-2	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	-1	-1	-1	-2	-2	-1	-1	-1	-1	-1	-1.1	-0.3
19-Nov-04	-1	-2	-3	-5	-8	-10	-10	-8	-7	-5	-1	-2	-2	0	1	0	-1	-2	-1	-1	-1	-1	-2	-3	-4	-3.2	0.6
20-Nov-04	-4	-5	-6	-5	-6	-7	-6	-6	-6	-5	-3	0	1	2	3	4	4	4	4	3	3	4	5	5	6	-0.6	5.7
21-Nov-04	6	6	6	6	6	6	5	6	7	6	7	7	7	7	7	7	6	3	2	1	1	0	-1	-2	4.7	7.2	
22-Nov-04	-2	-3	-4	-5	-6	-7	-9	-10	-10	-7	-5	-4	-2	-2	-2	-5	-7	-7	-6	-6	-5	-5	-5	-4	-5.3	-1.7	
23-Nov-04	-4	-4	-4	-3	-3	-3	-3	-3	-3	-3	-2	-1	-1	-1	-1	-1	-1	-1	-1	-2	-2	-2	-2	-2	-2	-2.2	-0.7
24-Nov-04	-2	-2	-2	-2	-2	-2	-2	-2	-1	-1	0	1	1	1	2	4	3	3	5	5	4	4	3	2	2	0.9	5.2
25-Nov-04	2	2	2	0	-2	-2	-3	-3	-2	0	1	2	2	2	2	2	2	1	0	0	-1	-1	-1	-1	0.2	2.5	
26-Nov-04	-1	-1	-1	-1	-2	-2	-3	-3	-4	-3	0	0	2	2	2	1	0	-1	-2	-3	-3	-4	-5	-5	-1.5	2.5	
27-Nov-04	-6	-7	-8	-7	-6	-5	-4	-3	-3	-4	-4	-2	0	2	2	1	0	-1	-2	-3	-3	-4	-4	-4	-3.1	2.2	
28-Nov-04	-5	-4	-5	-5	-5	-4	-4	-3	-4	-2	-1	1	2	3	3	3	2	1	0	0	1	1	1	1	1	-0.9	2.9
29-Nov-04	1	1	1	1	0	1	2	2	2	2	3	3	4	4	4	4	4	4	3	2	2	2	2	1	2.2	4.1	
30-Nov-04	1	1	1	1	0	-1	-2	-2	-1	-1	1	2	3	5	4	4	3	2	2	2	1	0	0	0	1.0	4.6	
Hourly Avg	-2.1	-2.3	-2.6	-2.8	-2.9	-3.1	-3.0	-2.9	-2.5	-1.6	-0.3	1.0	2.0	2.7	3.0	2.7	1.8	0.6	-0.1	-0.8	-1.2	-1.5	-1.7	-1.9	N	0.0	
Hourly Max	8.8	8.8	8.9	8.6	8.2	7.8	8.2	7.9	8.3	8.5	9.2	10.0	11.3	11.6	11.6	10.8	9.9	9.1	8.5	8.6	8.7	8.1	8.7	8.7			

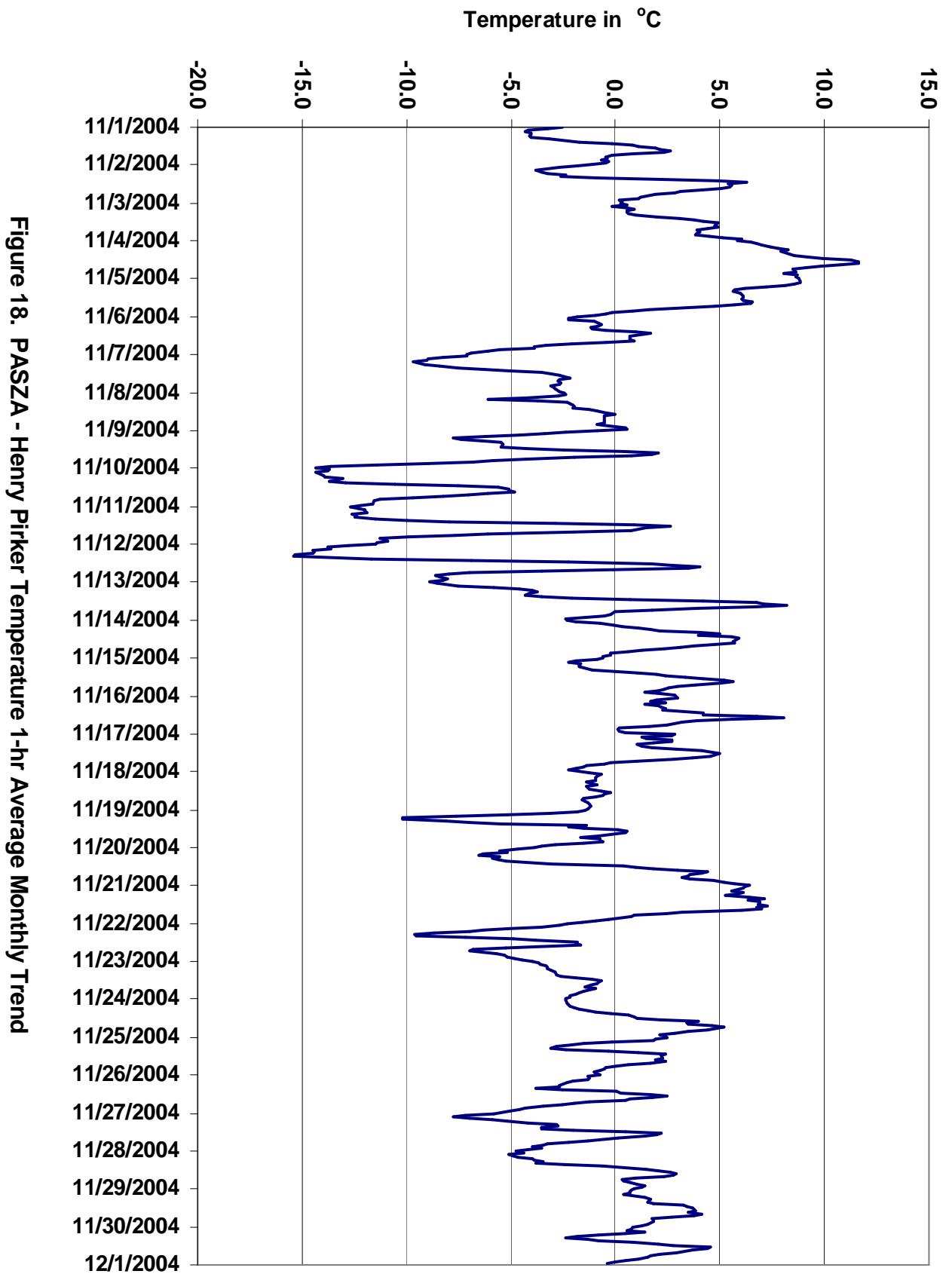
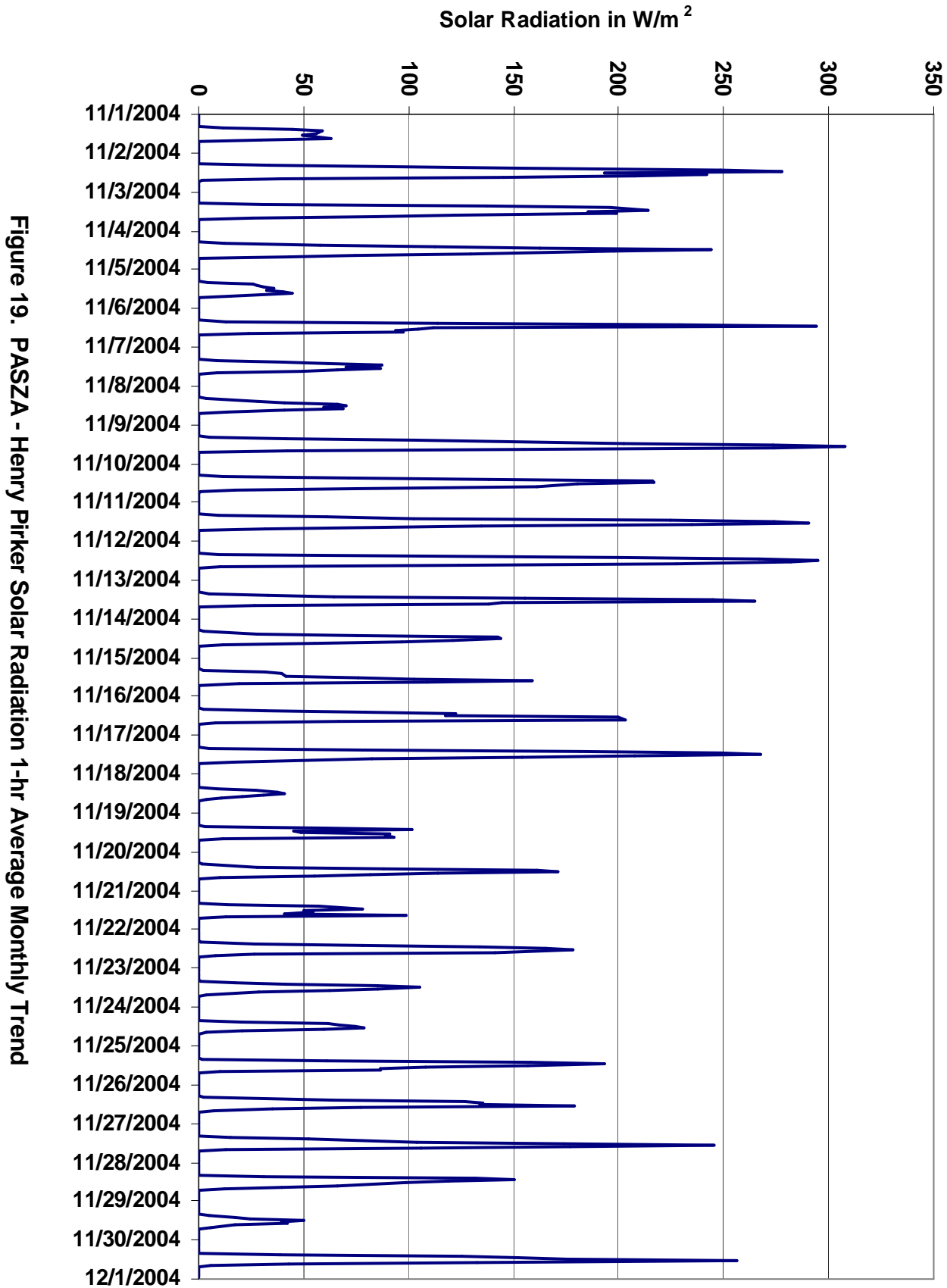


Figure 18. PASZA - Henry Pirkler Temperature 1-hr Average Monthly Trend





Station: Henry Pirker

**HOURLY AVERAGE TABLE**

**Wind Speed (WSv - Km/hr)**

Station Owner: PASZA

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

**Summary**

Maximum 1-hr Average:	32.5	km/hr	4-Nov	8:00 9:00
Maximum 24-hr Average:	20.6	km/hr	4-Nov	

Calm Time:	5 hrs	1% calms	Operational Time:	614 hrs					
Calibration Time:	0 hrs		AMD Operational Uptime:	86.0%					
Percentile	99	95	75	50	25	5	1	AverageS	AverageV
	29.2	25.0	15.8	8.7	4.5	2.1	1.2	10.6 km/hr	7.8 km/hr

**Status Flag Characters**

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

Day	Mountain Standard Time																							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	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-04	6	3	2	6	8	8	9	8	9	8	5	4	11	8	9	7	7	1	3	3	4	8	8	6	6.1	10.7	
2-Nov-04	5	4	3	3	3	4	2	1	5	9	10	12	22	27	28	32	29	26	29	18	18	20	13	17	12.4	31.7	
3-Nov-04	20	21	12	14	17	23	26	29	26	25	24	23	27	26	19	18	4	5	14	15	13	15	19	21	18.9	29.2	
4-Nov-04	16	22	20	19	19	23	26	29	33	29	29	28	20	17	16	13	14	22	20	16	13	12	18	21	20.6	32.5	
5-Nov-04	21	21	25	24	21	16	13	6	6	6	8	6	9	9	8	17	17	12	18	13	12	12	16	14	12.5	24.9	
6-Nov-04	11	6	2	8	13	15	17	17	16	16	18	21	18	18	16	12	8	6	2	6	7	3	3	3	10.6	21.1	
7-Nov-04	4	2	1	1	2	3	2	2	2	4	7	9	11	11	13	12	12	11	11	9	10	11	10	11	6.3	12.7	
8-Nov-04	10	7	6	3	6	5	5	7	2	9	9	3	4	3	1	7	7	4	4	3	7	10	11	15	1.1	15.0	
9-Nov-04	13	8	7	6	5	3	3	4	5	7	9	7	6	5	4	6	9	3	3	N	N	N	N	N	5.8	12.8	
10-Nov-04	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	0.0
11-Nov-04	N	N	N	N	N	N	N	N	N	N	N	N	N	N	3	4	5	5	N	N	N	N	N	N	N	N	4.8
12-Nov-04	N	N	N	N	N	N	N	N	N	N	N	N	N	2	3	2	3	2	3	5	4	4	5	3	4	N	5.2
13-Nov-04	4	3	3	3	2	2	1	1	3	2	3	3	3	6	6	7	6	7	2	4	4	4	3	3	1.8	6.9	
14-Nov-04	1	4	1	2	2	5	5	6	11	6	6	4	5	3	4	5	5	2	2	2	2	3	3	4	2.7	11.0	
15-Nov-04	3	3	3	5	9	7	2	2	4	3	7	10	13	21	21	25	25	18	17	12	9	9	4	11	9.2	25.1	
16-Nov-04	13	11	3	2	8	7	12	8	9	11	8	9	6	1	5	6	8	6	6	2	calm	calm	1	4	3.5	12.9	
17-Nov-04	11	11	10	13	27	32	23	22	24	21	22	21	22	25	15	14	12	4	3	4	2	1	5	14.1	31.8		
18-Nov-04	4	3	6	9	8	6	2	3	3	5	5	7	4	4	2	1	4	5	4	4	4	9	12	9	1.9	12.3	
19-Nov-04	8	9	8	5	4	2	5	10	10	4	calm	4	11	11	9	8	10	12	14	14	13	12	7	8	8.2	14.5	
20-Nov-04	9	6	7	7	5	4	2	4	3	4	2	3	4	4	6	15	15	10	10	10	12	15	17	25	7.0	25.2	
21-Nov-04	30	29	23	18	24	16	10	13	16	9	14	12	22	31	27	23	26	24	11	20	25	N	N	N	19.1	31.3	
22-Nov-04	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	0.0
23-Nov-04	N	N	N	N	N	N	N	N	N	N	N	N	N	N	5	4	5	5	7	6	6	5	5	5	5	N	6.7
24-Nov-04	5	5	5	5	5	5	6	6	6	2	calm	4	7	6	10	5	6	19	25	20	16	20	17	20	6.8	24.7	
25-Nov-04	21	20	22	11	5	7	2	6	5	11	11	15	20	19	19	20	22	18	21	21	22	19	17	18	15.4	21.8	
26-Nov-04	17	18	19	19	17	20	17	14	5	5	8	9	6	16	13	11	13	10	8	7	3	calm	3	3	10.8	19.5	
27-Nov-04	4	2	3	4	4	3	6	9	9	6	3	2	6	9	10	9	6	13	14	17	15	10	11	8	7.1	17.4	
28-Nov-04	9	10	8	9	8	10	8	7	7	12	10	16	21	22	26	22	17	10	10	11	14	14	19	17	12.9	25.6	
29-Nov-04	12	13	12	10	13	17	14	9	8	9	20	18	21	18	18	12	16	21	16	14	27	29	24	16	15.7	29.2	
30-Nov-04	15	12	11	16	12	8	4	5	8	4	16	21	18	17	14	18	15	17	17	16	15	8	6	7	12.6	21.5	
																										N	0.0
1-hr Vector	7.7	7.5	6.3	6.4	6.9	7.5	7.1	6.9	6.4	6.7	7.6	8.5	9.0	9.6	9.0	9.1	8.4	9.0	8.1	8.2	8.2	7.3	7.5	7.8			
Hourly Max	29.6	29.0	24.9	23.8	27.0	31.8	26.4	29.2	32.5	29.0	29.5	27.8	27.4	31.3	27.6	31.7	29.2	25.9	29.1	21.3	27.2	29.2	23.6	25.2			

Station: Henry Pirker

### HOURLY AVERAGE TABLE

Wind Direction (WD - Degrees)

Station Owner: PASZA

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

**Summary**


Calm Time: 0 hrs	0% calms	Operational Time: 619 hrs
Calibration Time: 0 hrs		AMD Operational Uptime: 86.0%
Percentile	99 95 75 50 25 5 1	Average
	343.7 327.1 276.4 254.7 196.5 92.7 27.9	257 deg

**Status Flag Characters**

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

**Day Mountain Standard Time**

Hour Start	0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	24-hour Average	
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
1-Nov-04	193	128	131	109	114	109	108	121	124	127	149	149	116	118	112	106	117	140	111	129	148	168	166	169	129	
2-Nov-04	142	122	103	124	109	167	216	150	183	221	216	230	255	257	259	264	259	257	255	257	255	252	265	255	248	
3-Nov-04	255	251	229	240	245	253	254	255	253	254	256	259	262	271	271	254	267	276	231	232	238	236	245	233	252	
4-Nov-04	205	217	214	233	225	228	236	233	230	236	235	234	239	224	234	235	245	240	233	230	217	205	223	222	229	
5-Nov-04	236	250	251	253	256	281	286	259	235	250	277	273	266	266	290	271	269	282	312	310	318	310	315	311	275	
6-Nov-04	302	336	214	240	255	260	267	273	272	269	260	276	279	274	293	302	302	291	280	226	267	295	267	257	274	
7-Nov-04	244	273	252	171	170	154	121	110	53	61	70	73	86	85	95	95	100	94	93	100	96	93	100	101	96	
8-Nov-04	98	89	85	330	321	306	271	273	298	180	182	149	93	83	197	170	179	206	3	315	331	329	323	329	298	
9-Nov-04	320	270	271	271	317	327	312	335	329	326	309	310	328	307	308	313	344	295	317	N	N	N	N	N	311	
10-Nov-04	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-04	N	N	N	N	N	N	N	N	N	N	N	N	N	N	279	305	342	323	N	N	N	N	N	N	N	N
12-Nov-04	N	N	N	N	N	N	N	N	N	N	N	N	N	215	223	208	131	83	336	334	339	304	334	353	314	N
13-Nov-04	290	345	343	360	266	303	92	125	146	176	153	180	195	219	223	262	210	204	107	153	140	167	248	9	206	
14-Nov-04	14	139	353	67	103	111	144	122	88	138	165	151	112	117	75	111	111	109	290	296	325	327	329	341	107	
15-Nov-04	323	326	331	333	334	327	260	286	277	204	247	236	240	253	258	255	255	261	259	241	234	230	224	224	258	
16-Nov-04	223	228	143	196	201	262	260	261	249	231	234	257	323	26	129	110	108	101	97	128	79	198	225	260	221	
17-Nov-04	232	251	239	240	252	252	246	246	252	241	243	252	250	254	264	267	256	251	314	232	22	48	64	160	251	
18-Nov-04	114	97	100	112	100	106	64	72	36	43	14	357	13	55	72	249	298	302	303	290	286	310	309	294	12	
19-Nov-04	282	276	247	268	326	259	285	269	264	280	41	249	258	286	282	285	267	271	277	282	270	260	276	295	274	
20-Nov-04	280	301	297	271	252	260	354	288	131	122	123	155	160	186	259	265	259	268	306	285	283	276	267	257	268	
21-Nov-04	253	253	252	247	255	257	247	244	247	246	233	258	267	273	265	263	278	313	309	295	296	N	N	N	266	
22-Nov-04	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
23-Nov-04	N	N	N	N	N	N	N	N	N	N	N	N	N	N	157	152	153	162	192	159	162	156	139	114	132	N
24-Nov-04	121	151	151	159	156	159	172	160	160	135	158	141	159	206	258	289	284	258	260	257	264	254	245	248	234	
25-Nov-04	257	255	291	287	227	235	266	319	273	245	265	257	257	244	260	265	262	249	255	255	255	253	253	257	259	
26-Nov-04	259	257	255	256	251	253	252	253	312	254	233	243	245	271	273	290	288	289	286	280	252	190	278	287	263	
27-Nov-04	334	337	306	302	312	327	292	298	298	292	331	200	244	236	253	261	252	255	255	256	254	264	266	296	271	
28-Nov-04	253	265	300	296	311	265	270	269	281	260	270	276	261	258	256	259	260	270	268	279	292	283	286	303	272	
29-Nov-04	309	298	267	251	248	259	262	258	232	261	295	272	262	252	257	277	268	260	259	269	256	257	258	272	265	
30-Nov-04	282	271	277	270	261	291	282	253	283	273	258	255	254	267	260	255	263	254	253	253	257	295	290	271	265	
Hourly Avg	257	255	255	253	251	255	253	252	251	241	249	252	254	255	259	262	262	261	267	260	264	260	265	264	N	

Station: Henry Pirker

**STANDARD DEVIATION TABLE**

**Wind Direction (WD - Degrees)**

Station Owner: PASZA

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

**Summary**


Determined by the Yamartino 15-min interval calculation

Calm Time:	0 hrs	0% calms	Operational Time:	619 hrs			
Calibration Time:	0 hrs		AMD Operational Uptime:	86.0%			
Percentile	99	95	75	50	25	5	1
	61.6	45.6	18.3	8.4	5.6	3.9	3.4

**Status Flag Characters**

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

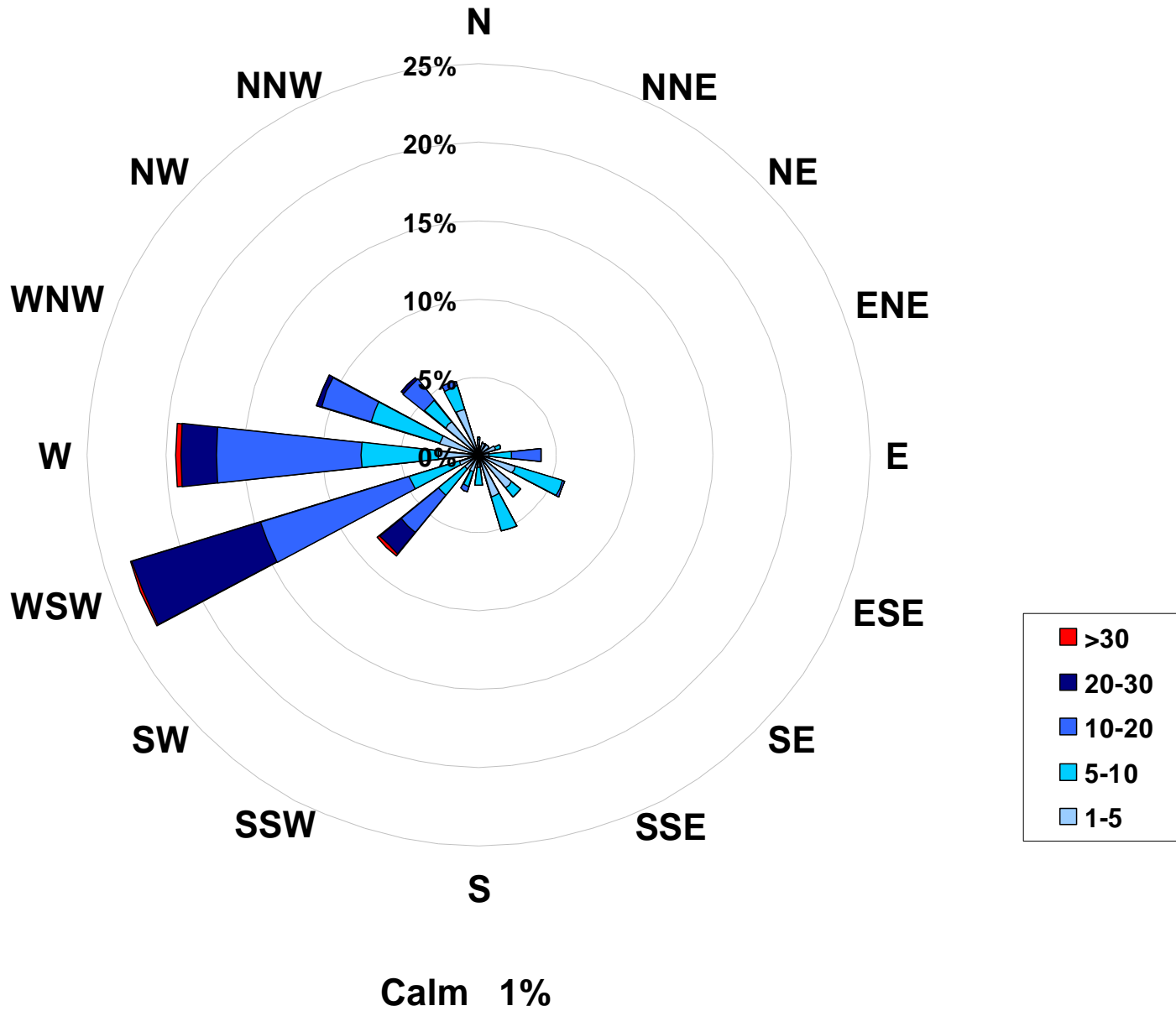
**Day Mountain Standard Time**

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	Daily Maximum
Hour End	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00	0:00		
1-Nov-04	10	34	48	7	7	7	5	7	5	6	13	36	7	8	7	10	7	57	22	36	17	4	5	26	57.1	
2-Nov-04	19	19	55	29	30	44	53	59	14	9	11	9	4	4	4	4	4	4	3	4	5	5	11	5	58.8	
3-Nov-04	4	7	8	7	5	4	3	4	4	4	4	5	5	6	6	7	36	34	9	7	7	7	6	8	35.8	
4-Nov-04	9	6	6	7	5	5	6	5	4	6	5	6	8	7	11	8	6	5	4	6	10	12	7	8	11.6	
5-Nov-04	6	5	5	4	4	5	5	14	13	8	7	8	8	7	8	5	5	4	9	5	5	4	4	4	14.1	
6-Nov-04	7	12	52	8	4	4	5	4	4	5	6	8	6	7	6	6	10	8	20	22	14	27	21	16	51.7	
7-Nov-04	14	22	44	64	44	15	22	18	38	21	11	10	8	8	8	9	8	7	6	8	8	6	7	6	64.3	
8-Nov-04	8	10	10	29	6	20	14	10	41	12	9	42	20	25	45	9	8	31	35	40	14	7	6	7	44.5	
9-Nov-04	9	17	11	20	9	29	23	18	14	11	13	11	10	13	14	11	21	42	26	N	N	N	N	N	41.8	
10-Nov-04	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
11-Nov-04	N	N	N	N	N	N	N	N	N	N	N	N	N	15	14	11	9	N	N	N	N	N	N	N	N	15.3
12-Nov-04	N	N	N	N	N	N	N	N	N	N	N	N	N	43	51	32	25	26	27	19	51	51	18	44	36	51.2
13-Nov-04	18	25	40	59	68	47	52	51	29	47	31	51	53	9	21	8	11	14	33	14	26	23	28	25	67.8	
14-Nov-04	60	22	45	67	59	38	60	29	6	19	31	22	6	44	18	16	23	63	15	15	44	34	24	22	66.8	
15-Nov-04	31	19	34	37	7	26	37	62	31	26	13	6	5	4	5	4	5	6	4	7	7	7	23	7	61.9	
16-Nov-04	7	8	18	47	13	13	9	8	9	4	8	18	17	32	50	7	5	10	26	29	67	73	33	27	73.4	
17-Nov-04	7	13	12	8	4	4	5	5	4	5	5	6	6	5	7	6	8	6	34	19	34	22	27	12	34.4	
18-Nov-04	15	23	15	5	8	15	33	25	22	14	17	7	25	44	32	35	12	6	7	7	6	6	5	4	43.8	
19-Nov-04	4	5	5	14	20	28	16	6	8	30	36	49	6	7	5	5	5	5	6	8	6	6	33	10	49.0	
20-Nov-04	9	9	8	16	8	18	42	19	36	12	42	31	7	25	11	6	4	11	10	5	5	4	5	4	42.2	
21-Nov-04	3	3	5	6	4	6	6	6	5	6	5	11	5	3	4	4	5	7	7	6	4	N	N	N	11.4	
22-Nov-04	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	0.0
23-Nov-04	N	N	N	N	N	N	N	N	N	N	N	N	N	8	12	10	9	9	9	7	9	10	9	10	12.1	
24-Nov-04	9	10	9	8	7	7	15	6	9	35	42	14	8	17	22	17	12	6	3	5	5	4	5	5	41.9	
25-Nov-04	4	5	4	8	22	6	45	13	28	6	8	9	7	7	5	6	4	6	4	3	3	4	4	4	45.4	
26-Nov-04	5	4	4	4	4	3	3	8	15	17	9	8	14	9	6	9	7	6	10	18	14	47	33	18	47.4	
27-Nov-04	16	21	13	19	29	25	10	5	4	9	50	28	13	10	7	6	7	7	5	4	6	10	7	9	49.8	
28-Nov-04	17	10	14	10	12	11	18	8	13	9	14	8	5	4	4	4	6	6	7	6	6	6	4	5	18.0	
29-Nov-04	7	6	12	6	4	7	4	14	8	15	4	5	6	6	5	10	6	6	6	6	5	5	4	4	15.1	
30-Nov-04	5	6	8	5	5	9	10	10	9	22	6	4	4	6	6	4	5	4	3	4	4	9	11	8	22.0	
																										0.0

Hourly Max	60	34	55	67	68	47	60	62	41	47	50	51	53	51	50	35	36	63	35	51	67	73	44	36
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## Wind Rose for the 1-hr Average Meterological Data at the Henry Pirker Site for November 2004



# PEACE AIRSHED ZONE ASSOCIATION

## PASZA Monthly Passive Data Summary

Table 1. PASZA Passive Stations for November 2004

		PASZA			Site
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Legal
<b>Duplicates</b>					
23a	Bear Lake	0.2	26.8	3.7	
23b	Bear Lake	0.2	29.9	3.2	
27a	Grande Prairie I	0.3	25.4	10.0	
27b	Grande Prairie I	0.3	24.3	9.5	
28a	Clairmont Lake	0.2	27.9	3.1	
28b	Clairmont Lake	0.3	33.2	2.8	
49a	Grande Prairie HP	0.2	17.5	13.2	
49b	Grande Prairie HP	0.3	19.4	14.4	
1	Silver Valley	0.5	36.0	1.8	08-27-081-11 W6M
2	Bay Tree	0.1	32.6	0.7	13-16-078-13 W6M
3	Forth Creek	0.5	33.7	1.6	04-13-082-07 W6M
4	Gordondale	0.3	38.0	1.4	04-34-078-10 W6M
5	Boone Creek	0.1	31.9	1.7	01-23-076-11 W6M
7	Steeprock Creek	0.1	37.4	1.0	09-35-072-13 W6M
9	Spirit River	0.3	33.5	1.9	08-12-079-07 W6M
10	Woking	0.4	31.5	1.4	01-13-076-07 W6M
11	Webber Creek	0.3	28.0	1.9	09-36-074-09 W6M
12	Hythe	0.2	30.3	2.4	14-36-072-11 W6M
14	Sylvester	0.3	29.9	2.8	08-06-069-12 W6M
16	Beaverlodge	0.3	31.6	3.7	15-36-071-10 W6M
17	Poplar	0.2	29.6	2.4	13-06-073-08 W6M

Table 1. PASZA Passive Stations for November 2004 (Continued)

PASZA					
Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
18	Saddle Hills	0.2	30.6	2.3	04-25-074-07 W6M
19	Wanham	0.6	32.3	2.1	16-22-077-03 W6M
20	Shaftesbury	0.2	26.5	1.3	04-03-082-23 W5M
21	Eaglesham	0.2	25.6	1.5	16-21-079-25 W5M
23	Bear Lake	0.2	28.4	3.4	15-31-072-06 W6M
24	Wembley	0.1	25.4	2.2	12-31-070-08 W6M
25	Pinto Creek	0.0	33.1	1.1	04-24-069-11 W6M
26	Flyingshot	0.1	27.1	3.2	15-36-070-07 W6M
27	Grande Prairie I	0.3	24.9	9.7	08-15-071-06 W6M
28	Clairmont Lake	0.2	30.5	2.9	09-06-073-04 W6M
29	Smoky Heights	0.8	36.6	2.0	04-06-075-02 W6M
30	Fitzsimmons	0.2	26.5	3.2	15-36-072-03 W6M
32	Gold Creek	0.2	23.1	2.9	06-33-067-05 W6M
33	Wapiti	0.2	29.5	2.8	02-25-071-03 W6M
34	Puskwaskau	na	29.9	1.6	15-35-074-25 W5M
35	Jean Cote	0.2	29.4	1.6	12-35-079-21 W5M
36	Guy	0.2	28.4	1.6	03-04-076-22 W5M
37	Crooked Creek	0.1	26.6	2.1	16-01-071-26 W5M
38	Karr Creek	0.1	25.9	1.0	10-16-065-02 W6M
39	Clouston Creek	0.4	29.0	2.1	12-01-073-22 W5M
40	McLennan	0.2	28.3	1.6	03-29-077-19 W5M
41	Valleyview	0.3	30.1	2.0	09-30-069-22 W5M
42	Sunset House	0.4	35.2	1.5	05-32-070-19 W5M
43	High Prairie	0.2	31.3	1.8	16-13-074-17 W5M
44	Peavine	0.1	31.8	1.2	03-05-079-15 W5M
45	Gift Lake	0.1	30.0	1.7	10-07-079-12 W5M
46	Little Smoky	0.2	24.3	4.0	12-01-065-21 W5M
47	Kinuso	0.2	27.8	1.0	12-10-073-10 W5M
48	Deer Mountain	0.2	29.4	0.6	15-22-068-09 W5M
49	Grande Prairie HP	0.2	18.5	13.8	17-26-071-06 W6M

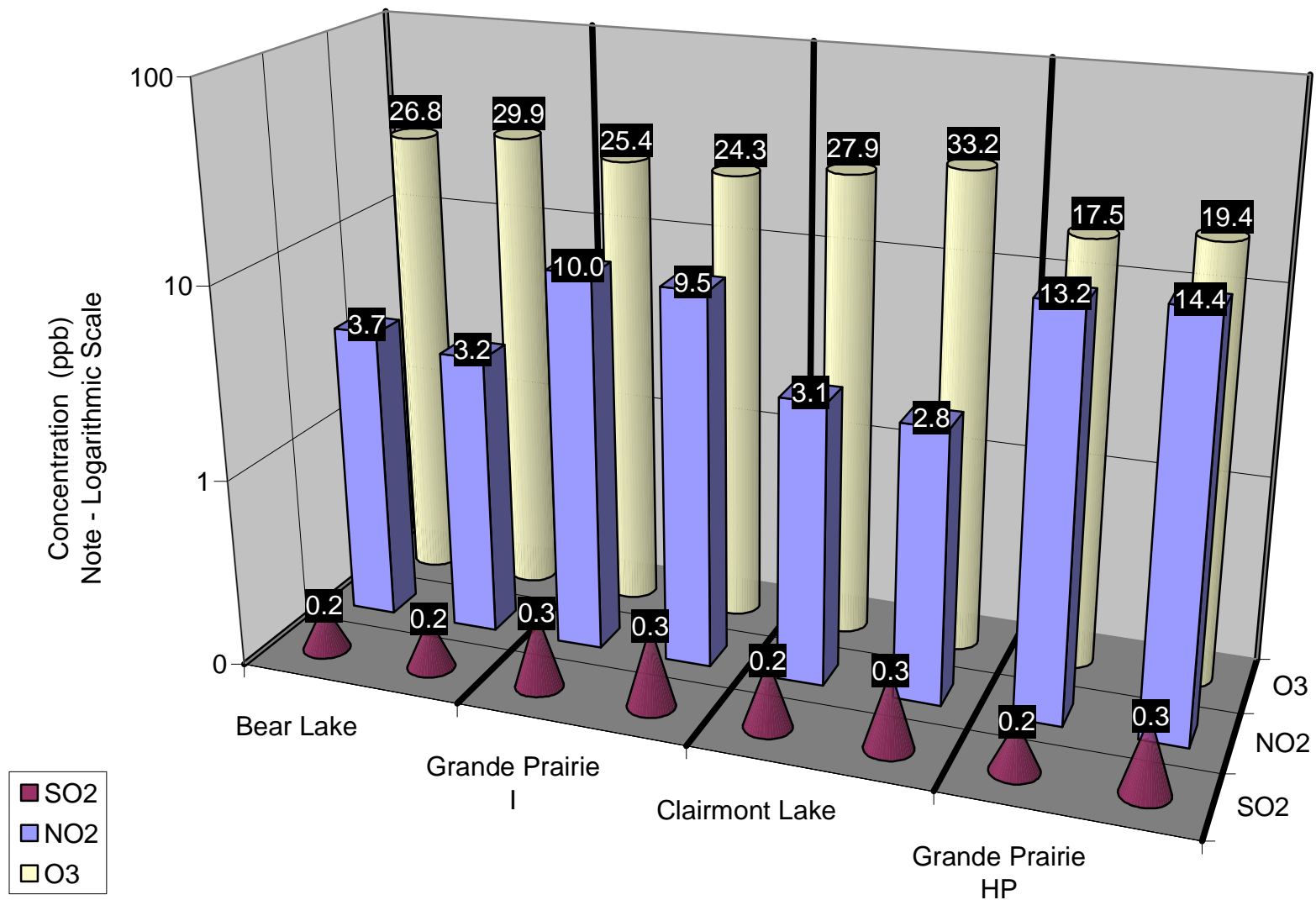


Figure 20. Duplicate Summary Chart

Table 2. Passive Summary Results for November 2004

Stats	Sulphur Dioxide SO <sub>2</sub>	Ozone O <sub>3</sub>	Nitrogen Dioxide NO <sub>2</sub>
	ppb	ppb	ppb
<b>Passive Summary for November 2004 (PASZA Zone)</b>			
Mean	0.3	29.8	2.4
Standard Deviation	0.2	3.9	2.3
Minimum	0.0	18.5	0.6
	Pinto Creek (#25)	Grande Prairie HP (#49)	Deer Mountain (#48)
Maximum	0.8	38.0	13.8
	Smoky Heights (#29)	Gordondale (#4)	Grande Prairie HP (#49)
<b>Comparison between Continuous and Passive monitoring at Beaverlodge (passive #16 Beaverlodge)</b>			
	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>
AENV Beaverlodge station	0.4	27.5	5.2
PASZA Beaverlodge passive	0.3	31.6	3.7
<b>Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49 Grande Prairie HP)</b>			
	SO <sub>2</sub>	O <sub>3</sub>	NO <sub>2</sub>
PASZA Henry Pirker station	0.5	14.5	15.4
PASZA Grande Prairie passive	0.2	18.5	13.8

PASZA Passive SO<sub>2</sub> Stations - Nov 2004  
Average Concentrations in ppb

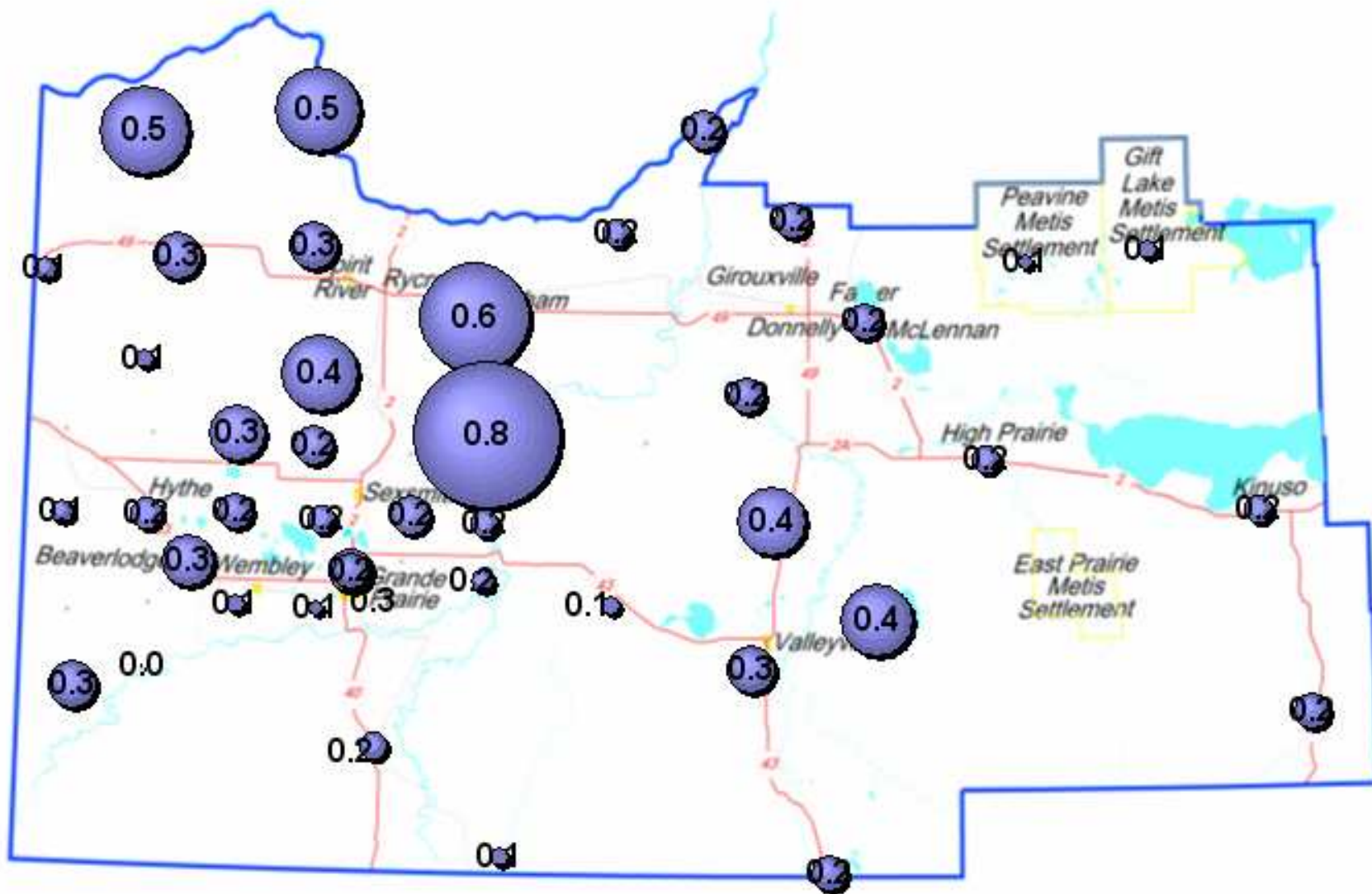
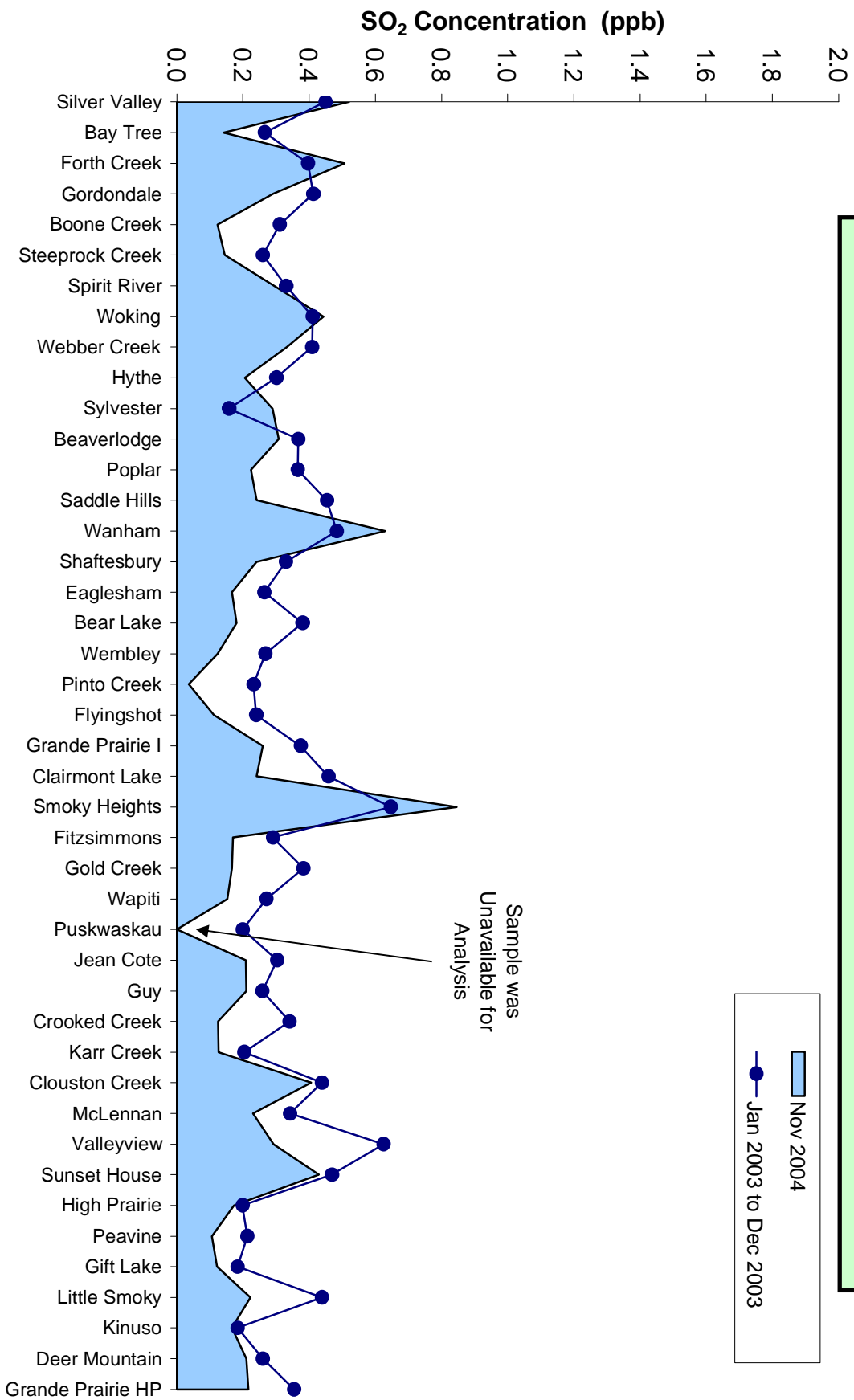


Figure 21. SO<sub>2</sub> Bubble Chart

**Alberta Ambient Air Quality Guidelines - Annual SO<sub>2</sub> Guideline is 11 ppb**



**Figure 22. SO<sub>2</sub> Summary Chart**



PASZA Passive O<sub>3</sub> Stations - Nov 2004  
Average Concentrations in ppb

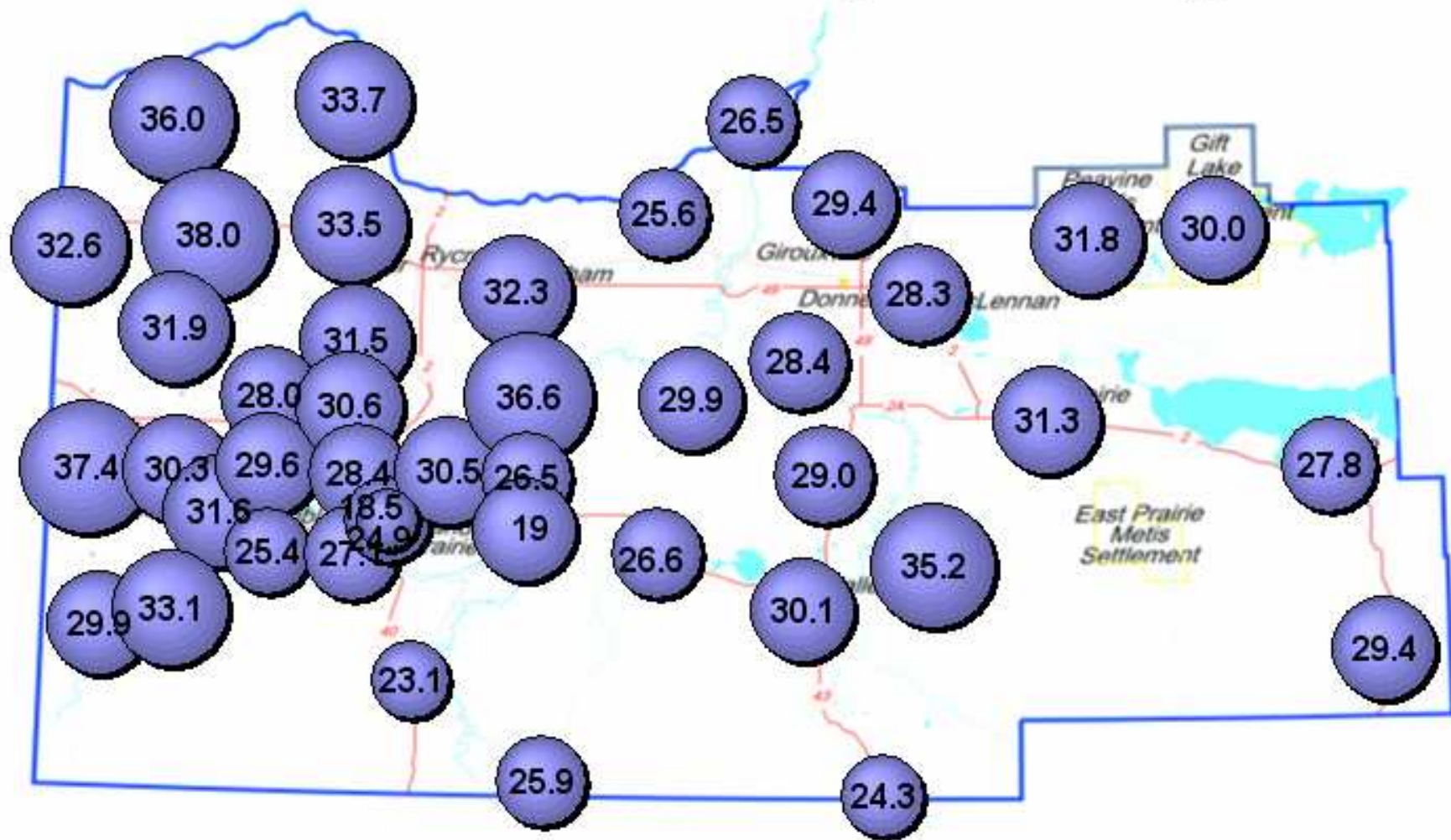
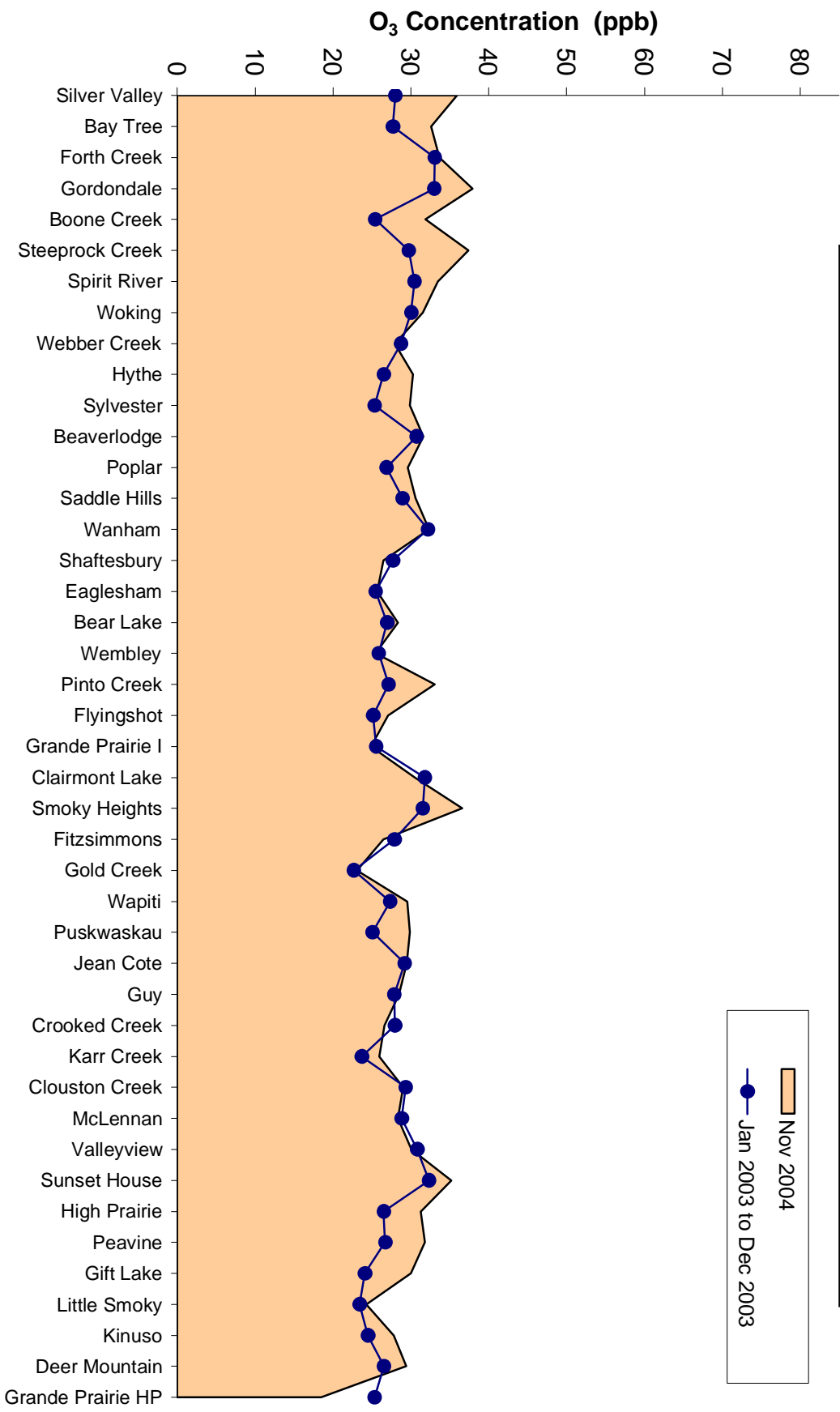


Figure 23. O<sub>3</sub> Bubble Chart





**Figure 24. O<sub>3</sub> Summary Chart**

PASZA Passive NO<sub>2</sub> Stations - Nov 2004  
Average Concentrations in ppb

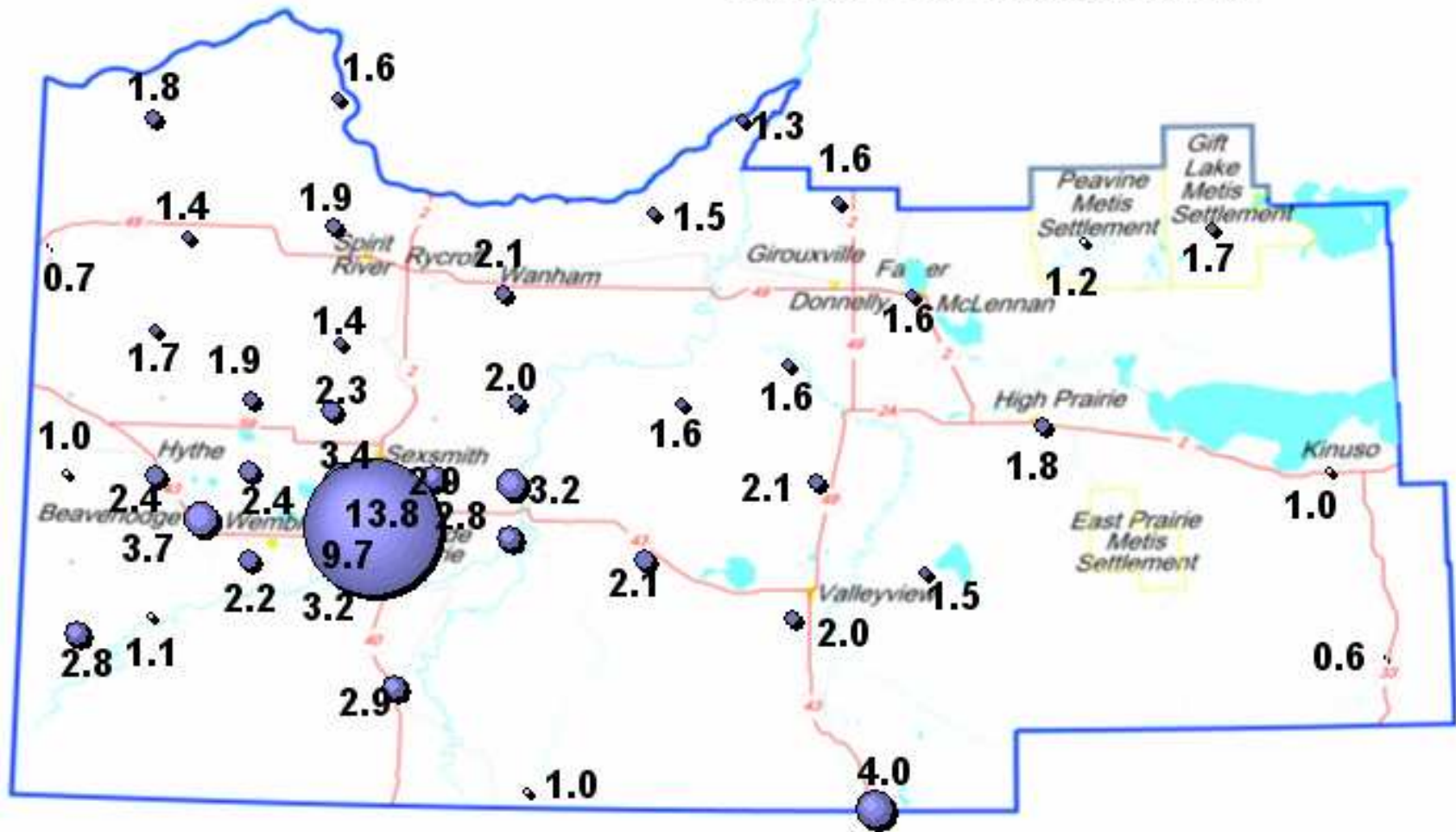
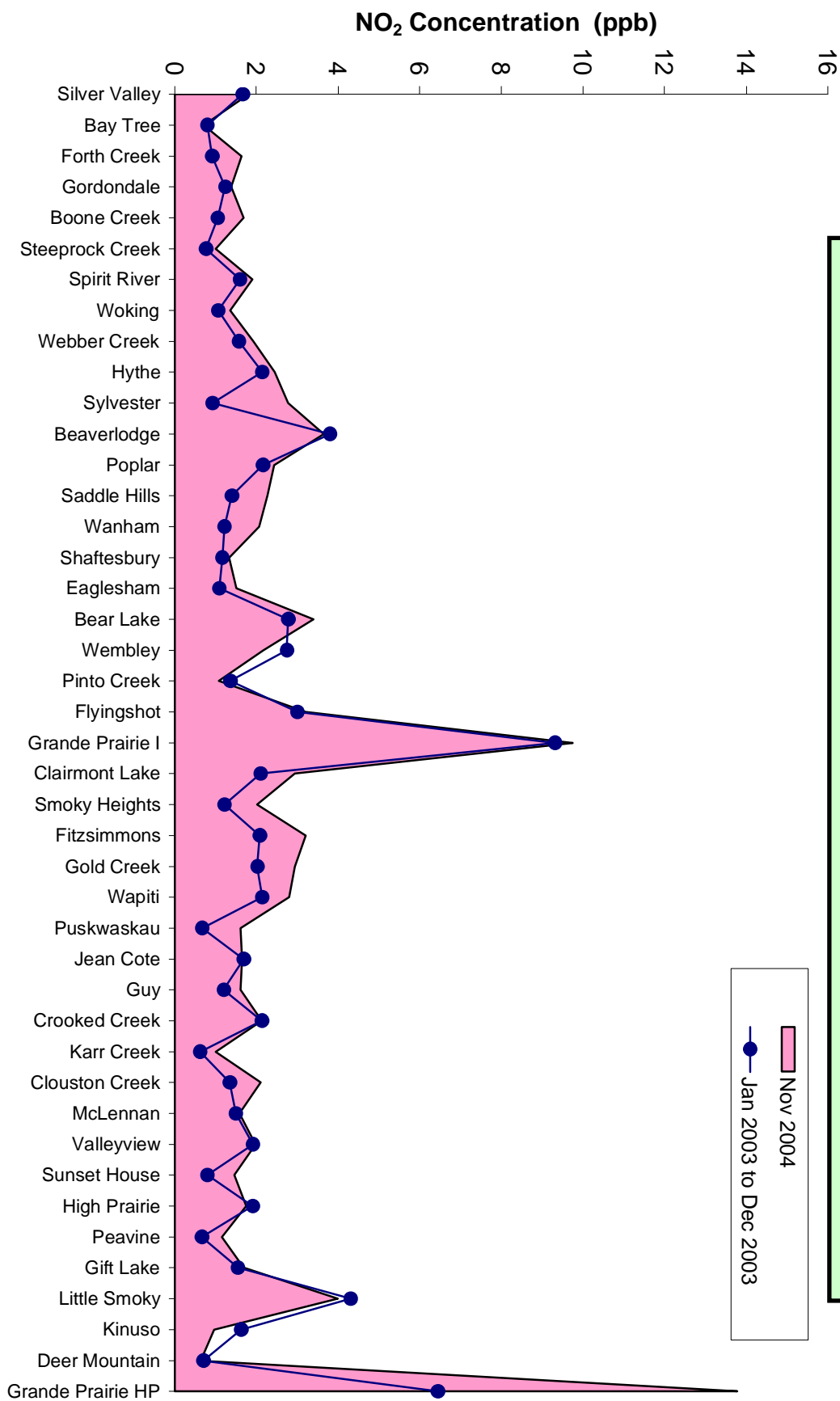


Figure 25. NO<sub>2</sub> Bubble Chart



**Figure 26. NO<sub>2</sub> Summary Chart**

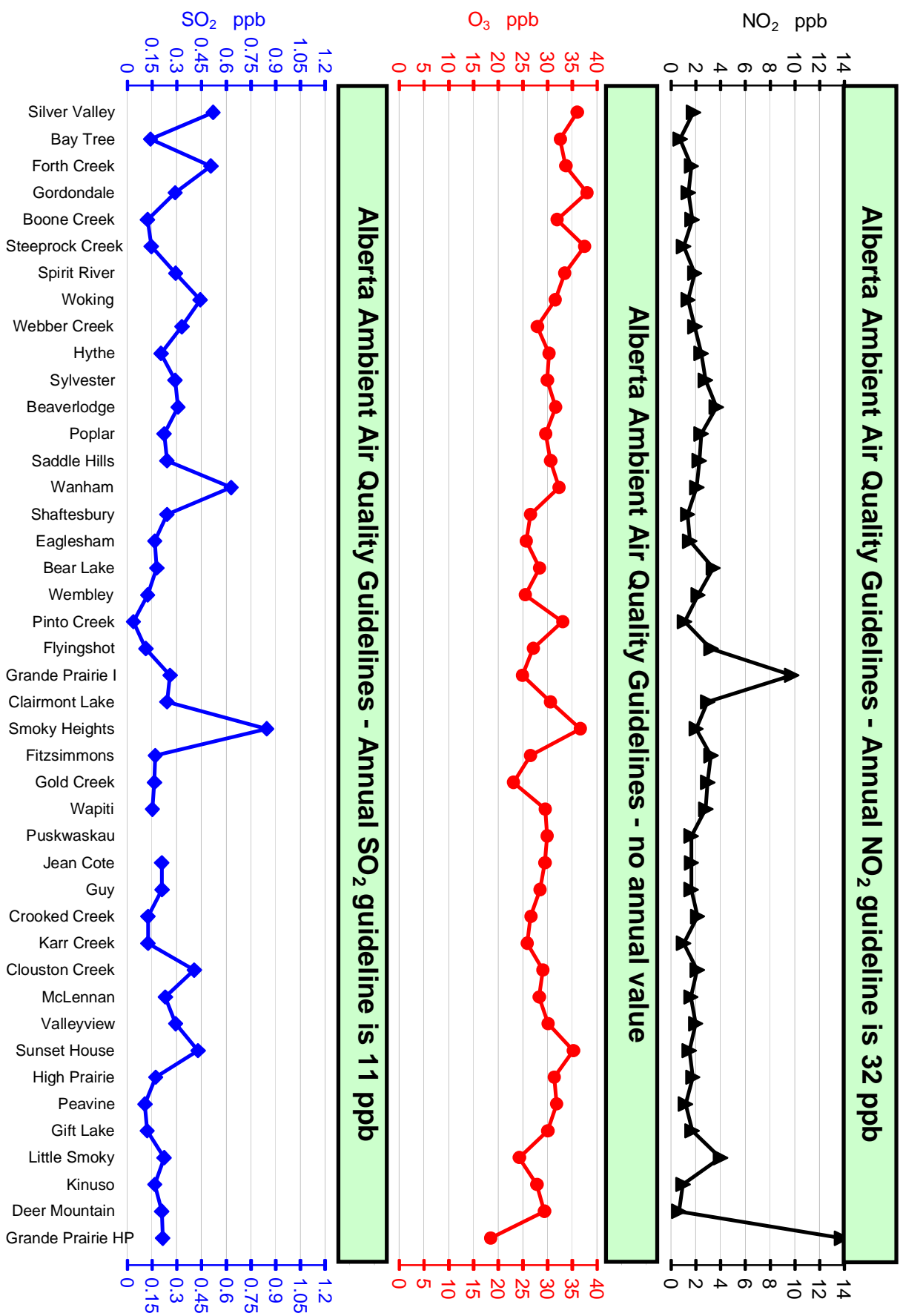


Figure 27. Overview Summary

## **November 2004 Calibration Reports**

**PASZA - Henry Pirker Station with the following calibrations:**

**SO<sub>2</sub>, NO, NO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, CO, THC, TRS, PM<sub>2.5</sub>**

**Calibration Report**Parameter SO2Air Monitoring Network PASZA**Station Information**

Calibration Date	November 9, 2004	Previous Calibration	October 19, 2004
Station Number	1	Station Location	Muskoseepi Park
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	8:00	End Time (MST)	12:00
Barometric Pressure	27.8 inches Hg	Station Temperature	23.0 Deg C
Calibrator	VICI Metronics	Serial Number	111-1695
Perm-tube Conc	2,452 ng/min	Perm-tube Expiry Date	
Correction factor	0.935422	Perm-tube Cert #	19-18743
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 10 volt	DACS channel #	8
	<u>Before</u>		<u>After</u>
DACS slope	0.005000	DACS slope	0.005000
DACS intercept	0.000000	DACS intercept	0.000000
Calculated slope	0.972065	Calculated slope	0.999910
Calculated intercept	-0.541576	Calculated intercept	1.065437
Analyzer make	TEI Model 43A	Analyzer serial #	43A-21120-195

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
SO2 zero pot	177		177	
SO2 span pot	199		089	
UV Lamp voltage	925	V	922	V
Vacuum	22.2	in Hg	22.2	in Hg

**Calibration Data**

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
zero	2377.8	0.0	-0.4	N/A
2542	2377.8	393.6	392.7	1.0024
6000	5612.5	166.8	165.8	1.0055
15040	14068.8	66.5	64.6	1.0298
zero	2377.8	0.0	-0.4	As Found Zero
2542	2377.8	393.6	415.7	As Found Span
Average Correction Factor				1.0126

Calculated value of As Found Response: 403.915 ppm Percent Change of As Found: -2.6%

	before calibration		after calibration	
Auto zero	-0.2	ppm	0.6	ppm
Auto span	332.6	ppm	330.3	ppm

Notes: \_\_\_\_\_

Calibration Performed By: Gary Cross

# Calibration Summary

Parameter SO2  
 Air Monitoring Network PASZA

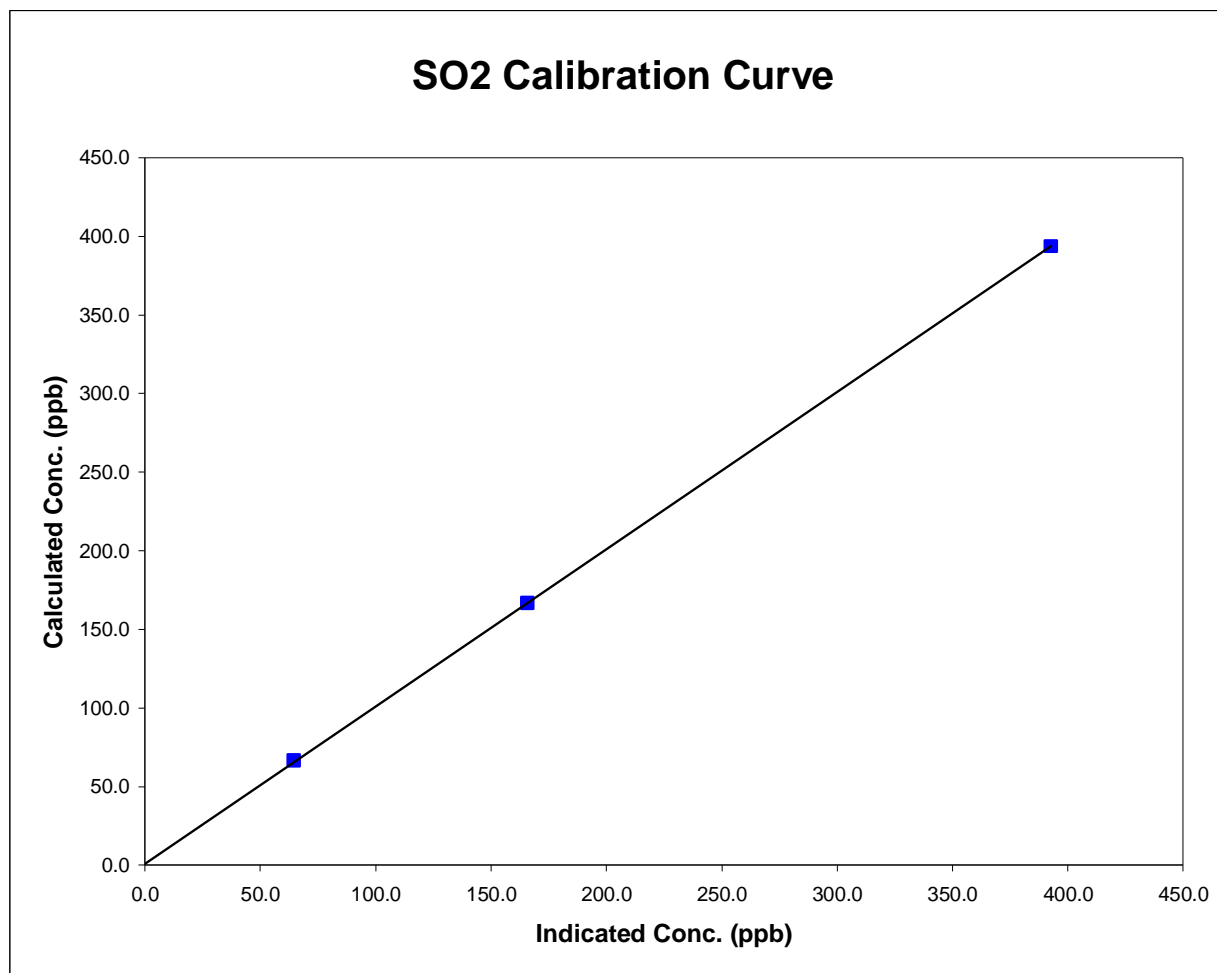


## Station Information

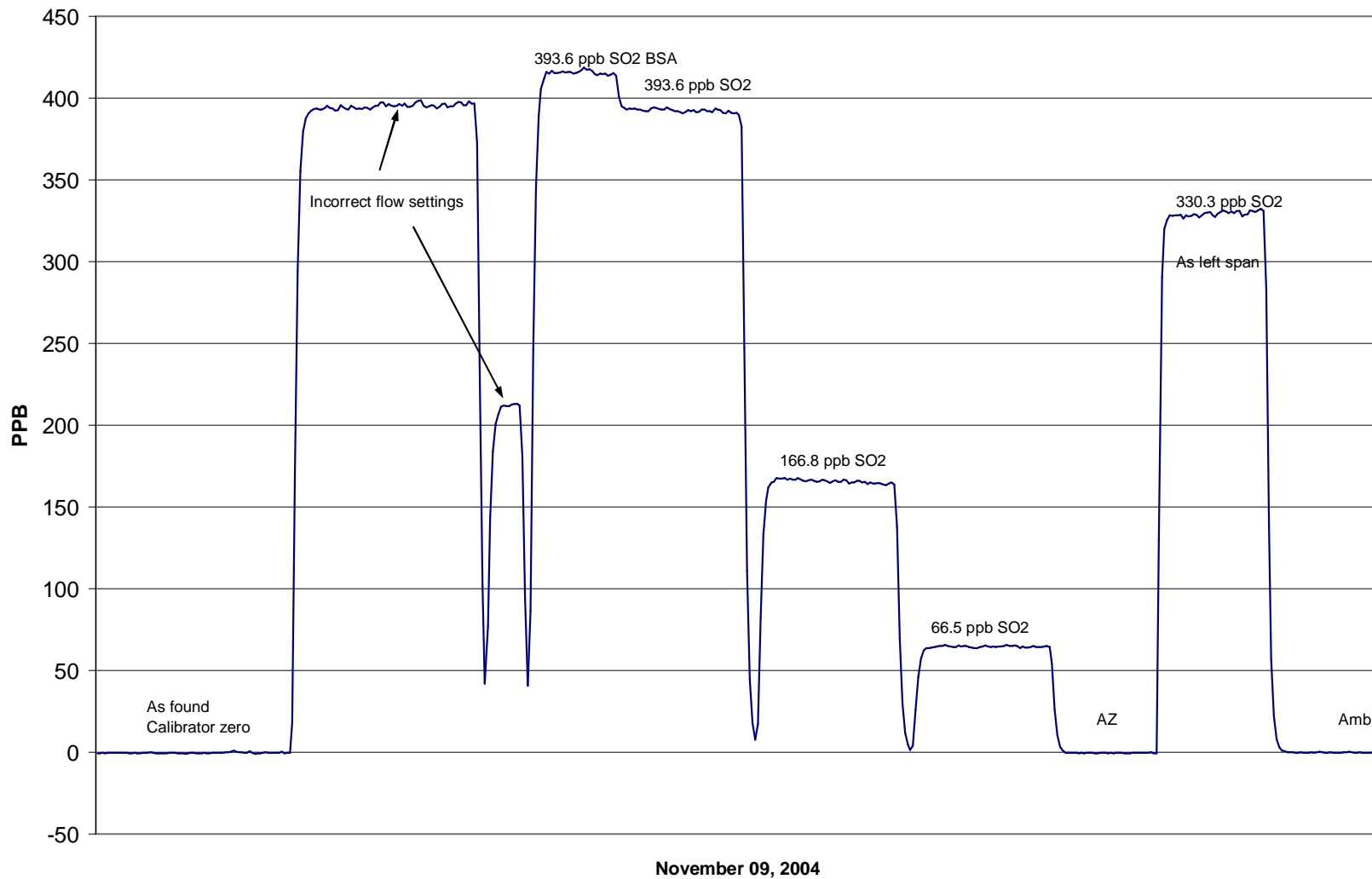
Calibration Date	November 9, 2004	Previous Calibration	October 19, 2004
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	8:00	End Time (MST)	12:00
Analyzer make/model	TEI Model 43A	Analyzer serial #	43A-21120-195

## Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	N/A		
393.6	392.7	1.0024	Correlation Coefficient	0.999987
166.8	165.8	1.0055		
66.5	64.6	1.0298	Slope	0.999910
			Intercept	1.065437



### SO<sub>2</sub> Calibration





**Calibration Report**

Parameter **NOx-NO-NO<sub>2</sub>**  
 Air Monitoring Network **PASZA**

**Station Information**

Calibration Date November 9, 2004 Previous Calibration October 19, 2004  
 Station Number 1 Station Location Muskoseepi Park

Reason:  Routine  Installation  Removal  Other: \_\_\_\_\_

Start Time (MST) 7:30 End Time (MST) 12:30  
 Barometric Pressure \_\_\_\_\_ Atm Station Temperature 21.0 Deg C  
 Calibrator EnviroNics 6100 Serial Number 3016  
 NO Cal Gas Conc 50.3 ppm Cal Gas Expiry Date 19-Jan-06  
 NOx Cal Gas Conc 50.5 ppm Cal Gas Serial # ALM025793

**DACS Information**

DACS make FOCUS AP1000 DACS serial No. 45269

Parameter		NO2	NOx	NO
Before	DACS slope	0.050000	0.050000	0.050000
	DACS offset	0.000000	0.000000	0.000000
After	DACS slope	0.050000	0.050000	0.050000
	DACS offset	0.000000	0.000000	0.000000
Before	Data Slope	1.006644	1.004048	1.005330
	Data Offset	-0.202691	-0.251840	-0.402057
After	Data Slope	1.011832	1.036385	1.053030
	Data Offset	-1.118532	-3.764964	-3.865877
Channel #		8	6	7
Voltage Range		0 - 10 VDC	0 - 10 VDC	0 - 10 VDC

**Analyzer Information**

Analyzer make/model TEI Model 42 Analyzer serial # 42-28486-231

Test Point	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
NO background	9.8	ppb	9.8	mV
NOx background	10.2	ppb	10.2	mV
NO coefficient	1.148		1.148	
NOx coefficient	1.003		1.003	
Chamber Temp	49.9	Deg C	49.9	Deg C
Cooler Temp	2.8	Deg C	2.9	Deg C
Converter Temp	323.0	Deg C	324.0	Deg C
Vacuum	22.2	inches Hg	22.4	inches Hg
Box temp	32.0	ccm	29.5	ccm

Notes: No adjustments or maintenance performed.

\_\_\_\_\_

\_\_\_\_\_

# Calibration Report

Parameter **NO<sub>x</sub>-NO-NO<sub>2</sub>**  
 Air Monitoring Network **PASZA**



## Station Information

Calibration Date: November 9, 2004 Station Location: Muskoseepi Park

### Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NO <sub>x</sub> conc (ppb)	Calculated NO conc (ppb)	Calculated NO <sub>2</sub> conc (ppb)	Indicated NO <sub>x</sub> conc (ppb)	Indicated NO conc (ppb)	Indicated NO <sub>2</sub> conc (ppb)	NO <sub>x</sub> Correction factor	NO Correction factor	
zero	4993	0.00	0.0	0.0	0.0	3.8	2.4	1.5	N/A	N/A	
1	4993	39.97	401.1	399.5	1.6	390.8	382.0	8.6	1.0263	1.0456	
2	4993	19.98	201.3	200.5	0.8	197.5	195.6	2.0	1.0191	1.0247	
3	4993	9.99	100.8	100.4	0.4	100.9	99.7	1.1	0.9996	1.0070	
AFZ	4993	0.00	0.0	0.0	0.0	3.8	2.4	1.5	0.0000	0.0000	
AFS	4993	39.97	401.1	399.5	1.6	390.8	382.0	8.6	1.0263	1.0456	
									Average Correction Factor	1.0150	1.0258

As Found Concentrations: NO<sub>x</sub>= 386.7 NO= 379.2 As Found Percent Change NO<sub>x</sub>= -3.6% NO= -5.1%

### GPT Calibration Data

Dilution Flow 4993 ccm Source Gas Flow 39.97 ccm

O <sub>3</sub> Setpoint (ppb)	Calculated NO <sub>x</sub> conc (ppb)	Calculated NO conc (ppb)	Calculated NO <sub>2</sub> conc (ppb)	Indicated NO <sub>x</sub> conc (ppb)	Indicated NO conc (ppb)	Indicated NO <sub>2</sub> conc (ppb)	NO <sub>x</sub> Correction factor	NO Correction factor	NO <sub>2</sub> Correction factor	Converter Efficiency	
0	0.0	0.0	0.0	0.0	0.0	0.0	N/A	N/A	N/A	N/A	
350	396.1	75.9	308.0	382.1	75.8	305.8	1.0367	1.0020	1.0071	99.3%	
200	396.1	219.6	176.5	387.4	212.2	175.1	1.0225	1.0348	1.0079	99.2%	
100	396.1	311.9	87.8	388.0	299.9	87.6	1.0209	1.0401	1.0020	99.8%	
							Average Correction Factor	1.0267	1.0257	1.0057	99.4%

### AIC Data

Parameter	Previous calibration				Current calibration			
	NO <sub>x</sub>	NO <sub>2</sub>	NO		NO <sub>x</sub>	NO <sub>2</sub>	NO	
Auto zero	0.1	-0.7	-0.4	ppb	0.3	1.2	-2.0	ppb
Auto span	313.8	309.1	5.3	ppb	425.7	411.7	1.9	ppb

Calibration Performed By: Gary Cross

## Calibration Summary

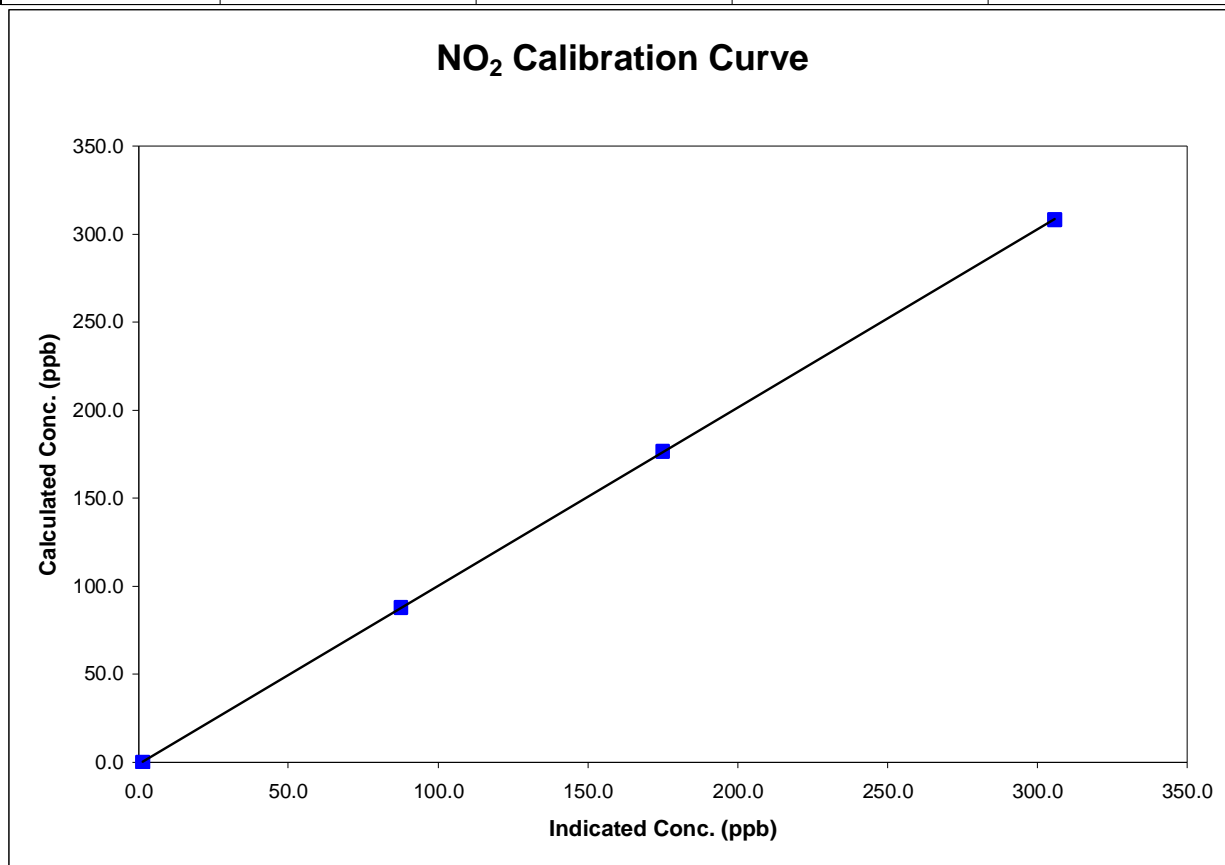
Parameter NO<sub>2</sub>Air Monitoring Network PASZA

### Station Information

Calibration Date	November 9, 2004	Previous Calibration	October 19, 2004
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	7:30	End Time (MST)	12:30
Analyzer make	TEI Model 42	Analyzer serial #	42-28486-231

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.5	0.0000	Correlation Coefficient	0.999990
308.0	305.8	1.0071		
176.5	175.1	1.0079		
87.8	87.6	1.0020		
			Slope	1.011832
			Intercept	-1.118532



## Calibration Summary

Parameter NO  
 Air Monitoring Network PASZA

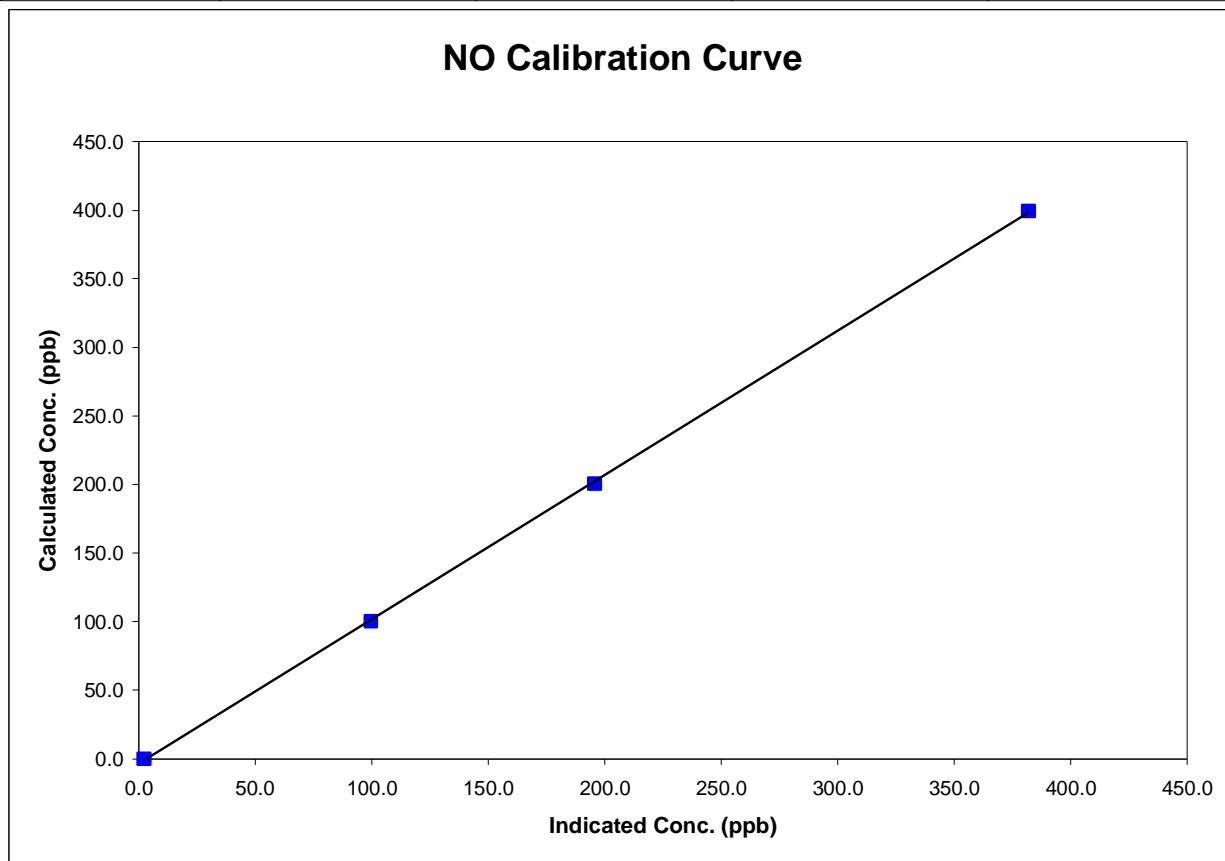


### Station Information

Calibration Date	November 9, 2004	Previous Calibration	October 19, 2004
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	7:30	End Time (MST)	12:30
Analyzer make	TEI Model 42	Analyzer serial #	42-28486-231

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	2.4	N/A	Correlation Coefficient	0.999928
399.5	382.0	1.0456		
200.5	195.6	1.0247		
100.4	99.7	1.0070	Slope	1.053030
			Intercept	-3.865877



## Calibration Summary

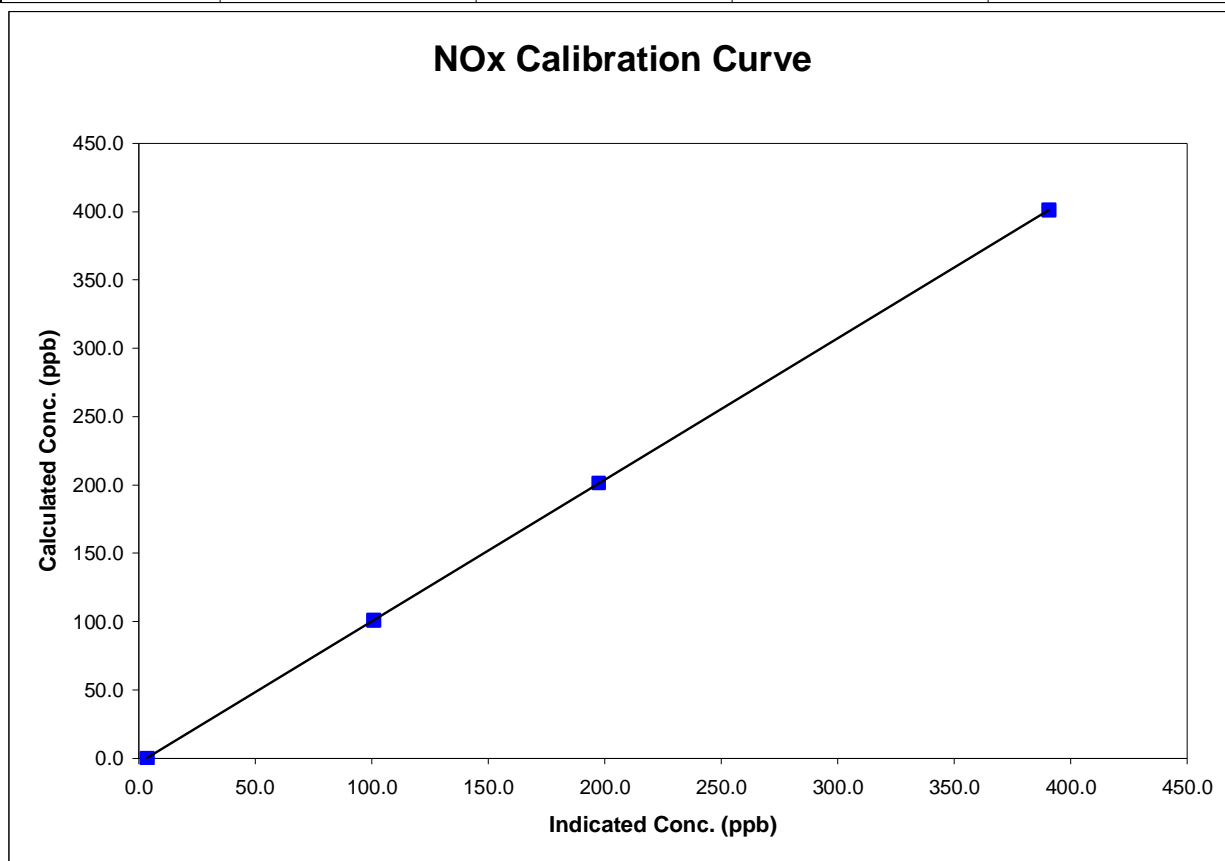
Parameter NO<sub>x</sub>Air Monitoring Network PASZA

### Station Information

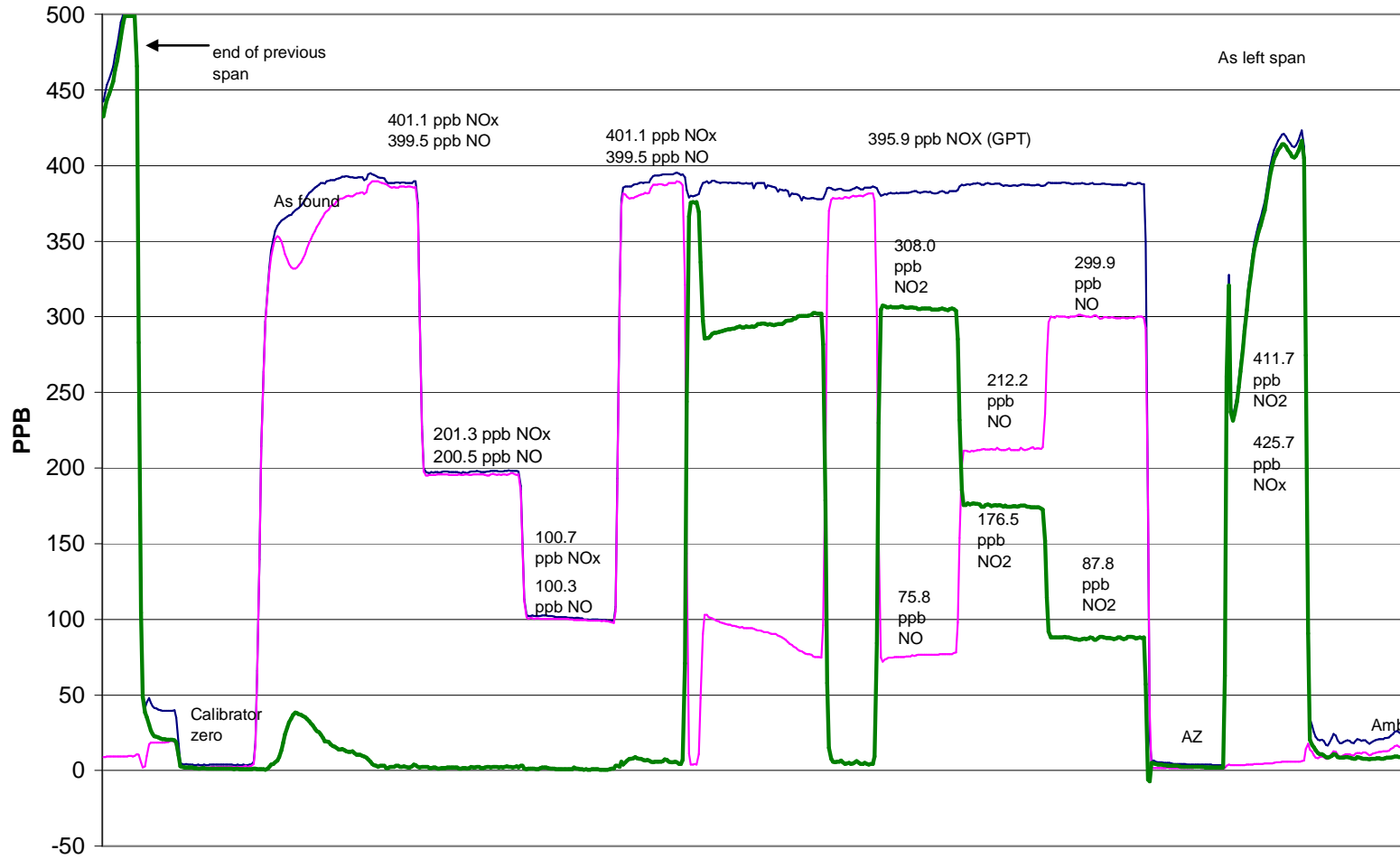
Calibration Date	November 9, 2004	Previous Calibration	October 19, 2004
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	7:30	End Time (MST)	12:30
Analyzer make	TEI Model 42	Analyzer serial #	42-28486-231

### Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	3.8	0.0000	Correlation Coefficient	0.999998
401.1	390.8	1.0263		
201.3	197.5	1.0191		
100.8	100.9	0.9996		
			Slope	1.036385
			Intercept	-3.764964



### NOx Calibration



October 19, 2004

**Calibration Report**Parameter 03Air Monitoring Network PASZA**Station Information**

Calibration Date	November 9, 2004	Previous Calibration	October 19, 2004
Station Number	1	Station Location	Muskoseepi Park
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	16:40	End Time (MST)	19:20
Barometric Pressure	0.933 atm	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas Concentrator	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	45269
DACS voltage range	0 - 1 volt	DACS channel #	5
	<u>Before</u>		<u>After</u>
DACS slope	0.050000	DACS slope	0.050000
DACS intercept	0.000000	DACS intercept	0.000000
Calculated slope	0.999081	Calculated slope	1.001808
Calculated intercept	0.485592	Calculated intercept	-0.278473
Analyzer make	API Model 400	Analyzer serial #	383

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
offset	-0.6	ppb	-0.6	ppb
slope	1.021		1.021	
Lamp measure	2860	mV	2853	mV
Lamp Reference	2860	mV	2853	mV
Pressure	27.6	inches Hg	27.3	inches Hg
Sample Flow	677	ccm	675	ccm
Lamp temp	52	Deg C	52	Deg C

**Calibration Data**

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4995	0.00	0.0	0.0	N/A
4995	0.00	308.0	307.7	1.0010
4995	0.00	177.5	177.3	1.0011
4995	0.00	87.8	88.3	0.9938
4995	0.00	0.0	0.0	As found zero
4995	0.00	308.0	307.7	As found span
Average Correction Factor				0.9987

Calculated value of As Found Response: 307.9 ppm Percent Change of As Found: 0.0%

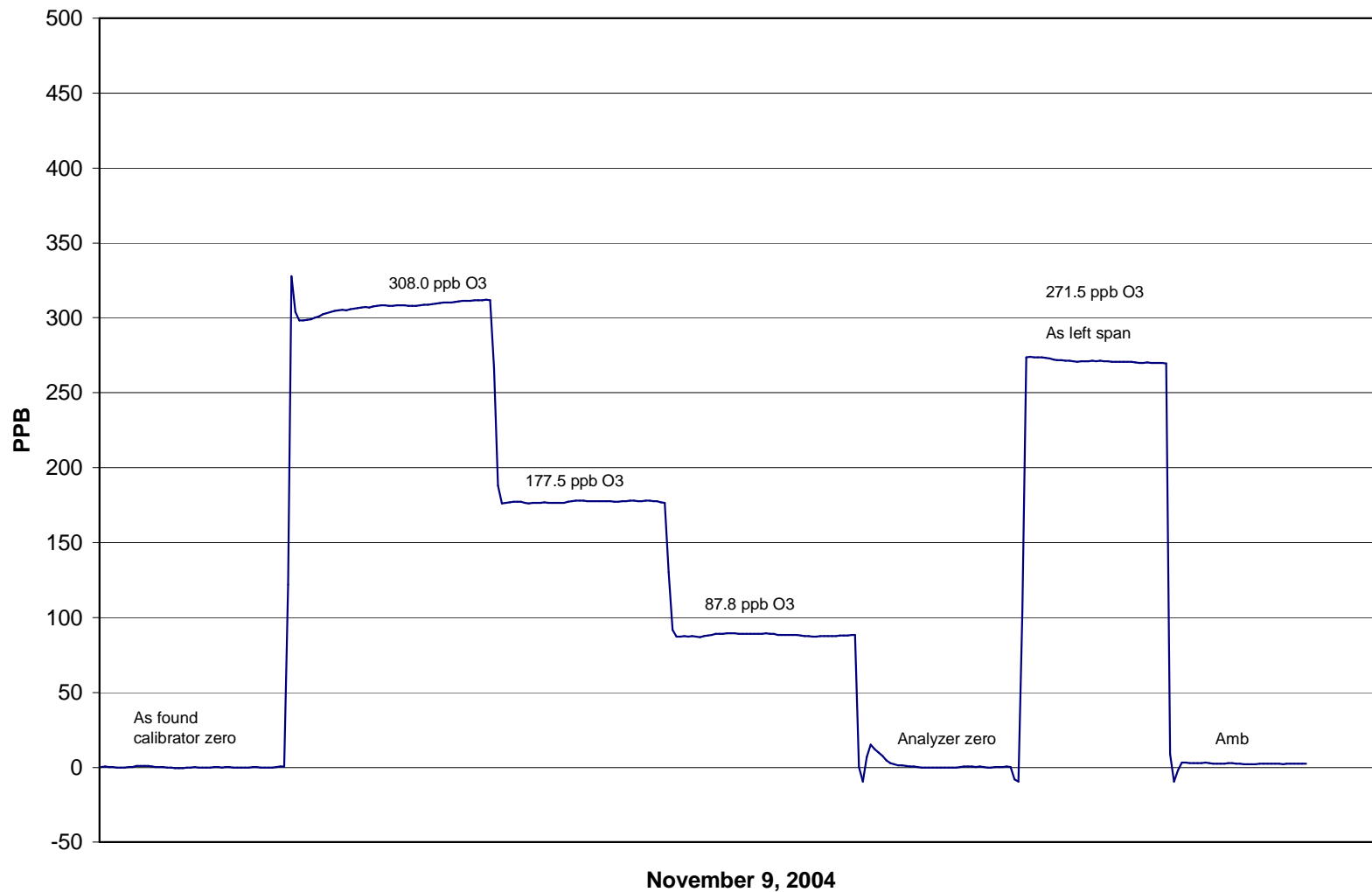
	before calibration		after calibration	
Auto zero	0.2	ppb	-0.1	ppb
Auto span	268.7	ppb	271.5	ppb

Notes: A span adjustment was performed. O3 concentrations based on GPT portion of the NOX calibration.Calibration Performed By: Gary Cross





### O3 Calibration



# Calibration Report

Parameter CO  
Air Monitoring Network PASZA



## Station Information

Calibration Date	November 10, 2004	Previous Calibration	October 20, 2004
Station Number	1	Station Location	Muskoseepi Park
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	14:15	End Time (MST)	17:45
Barometric Pressure	0.935 mb	Station Temperature	22.0 Deg C
Calibrator	EnviroNics 6100	Serial Number	3016
Cal Gas Conc	3000 ppm	Cal Gas Expiry Date	12/10/2005
		Cal Gas Cylinder #	ALM 005412
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
DACS slope	0.005000	DACS slope	0.005000
DACS intercept	0.000000	DACS intercept	0.000000
Calculated slope	1.008445	Calculated slope	0.998491
Calculated intercept	-0.276902	Calculated intercept	0.102617
Analyzer make	TEI Model 48	Analyzer serial #	ACM-13989-143

	before		after	
Concentration range	0 - 25	ppm	0 - 25	ppm
CO span setting	718		755	
CO zero setting	536		527	
Sample pressure	691	mm Hg	691	mm 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)
4993	0.00	0.00	-0.05	N/A
4993	39.97	23.82	23.80	1.0012
4993	19.96	11.95	11.80	1.0121
4993	9.97	5.98	5.85	1.0223
4993	0.00	0.00	0.43	As Found Zero
4993	39.97	23.82	24.35	As Found Span
Average Correction Factor				1.0119

Calculated value of As Found Response: 23.846 ppm      Percent Change of As Found: -0.1%

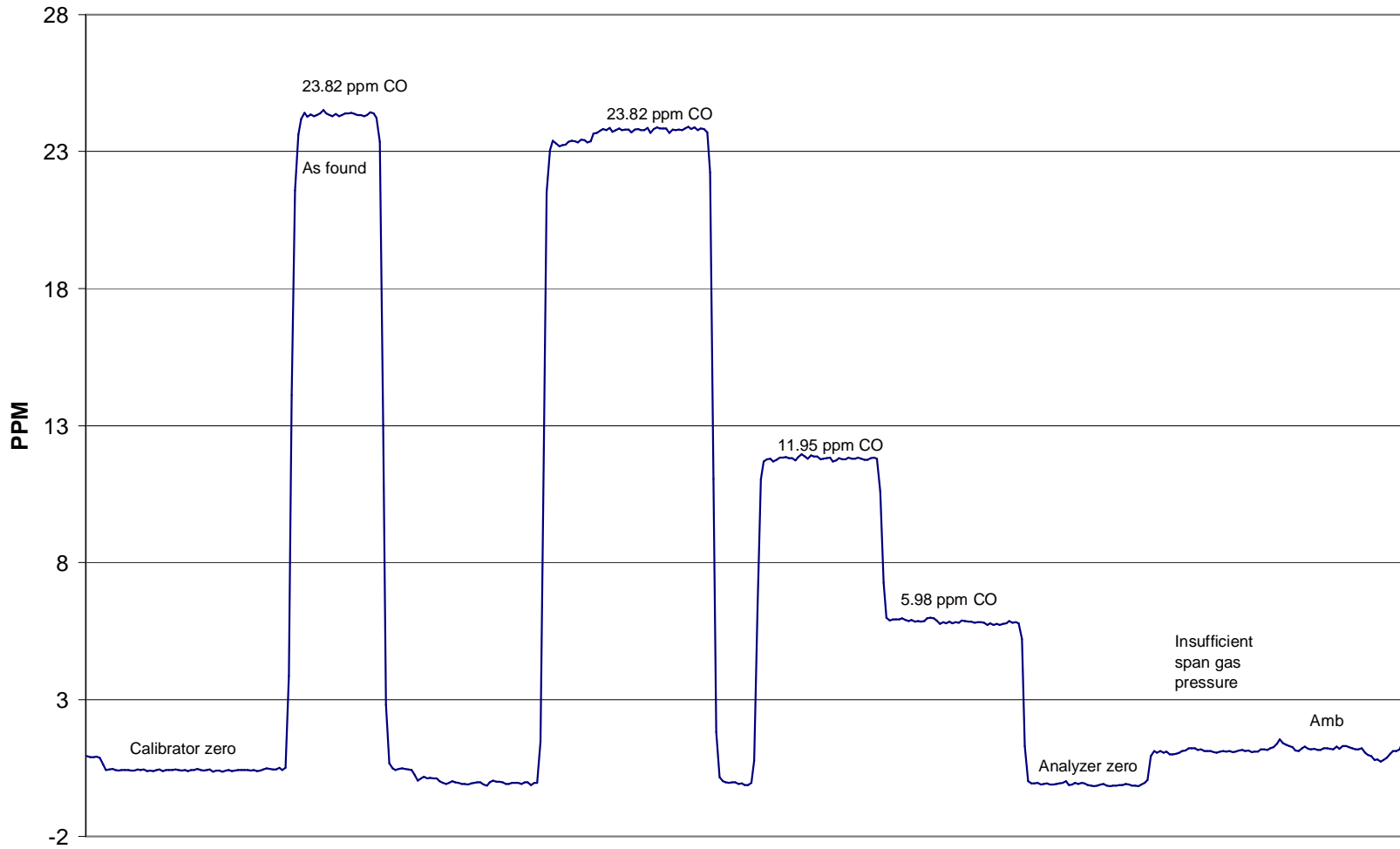
	before calibration		after calibration	
Auto zero	0.05	ppm	0.01	ppm
Auto span	29.47	ppm	5.94	ppm

Notes: small zero and span adjustments were made

Calibration Performed By: Gary Cross



### CO Calibration



November 10, 2004

# Calibration Report

Parameter THC  
Air Monitoring Network PASZA



## Station Information

Calibration Date	November 8, 2004	Previous Calibration	October 19, 2004
Station Number	1	Station Location	Muskoseepi Park
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	15:30	End Time (MST)	19:00
Barometric Pressure	inches Hg	Station Temperature	23.0 Deg C
Calibrator	Envionics 6100	Serial Number	3016
Cal Gas Concentration	700 ppm CH4/ 299 ppm C3H8	Cal Gas Expiry Date	12/10/2005
Cal Gas CH4 equiv	1522.25 ppm	Cal Gas Cylinder #	ALM 030358
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
DACS slope	0.005000	DACS slope	0.005000
DACS intercept	0.000000	DACS intercept	0.000000
Calculated slope	0.995216	Calculated slope	1.004178
Calculated intercept	0.042264	Calculated intercept	0.043824
Analyzer make	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

	before		after	
Concentration range	0 - 25	ppm	0 - 25	ppm
THC sample pressure	6.10	psi	6.07	psi
THC span counts	6876	capture	6876	capture
THC zero counts	1259	capture	1259	capture

## Calibration Data

Dilution air flow rate (cc/min)	Source gas flow rate (cc/min)	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
4993	0.00	0.00	0.01	N/A
4993	64.97	19.55	19.47	1.0044
4993	34.98	10.59	10.44	1.0145
4993	9.97	3.03	2.95	1.0291
4993	0.00	0.00	0.01	As Found Zero
4993	64.97	19.55	19.40	As Found Span
Average Correction Factor				1.0160

Calculated value of As Found Response: 19.342 ppm      Percent Change of As Found: 1.1%

	before calibration		after calibration	
Auto zero	0.05	ppm	0.02	ppm
Auto span	20.84	ppm	20.40	ppm

Notes: Analyzer was zero adjusted. No other maintenance required.

Calibration Performed By: Gary Cross

## Calibration Summary

Parameter THC  
 Air Monitoring Network PASZA

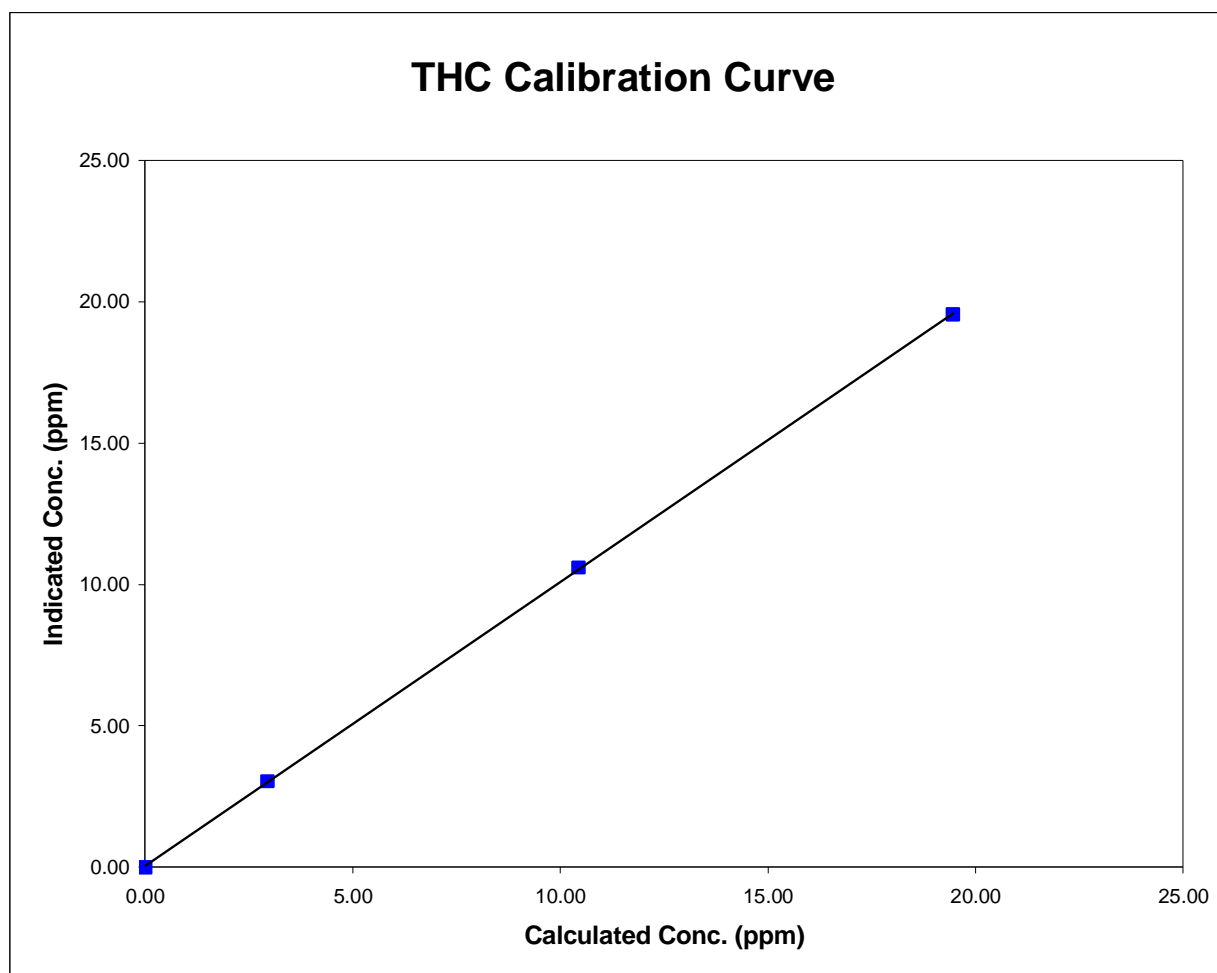


### Station Information

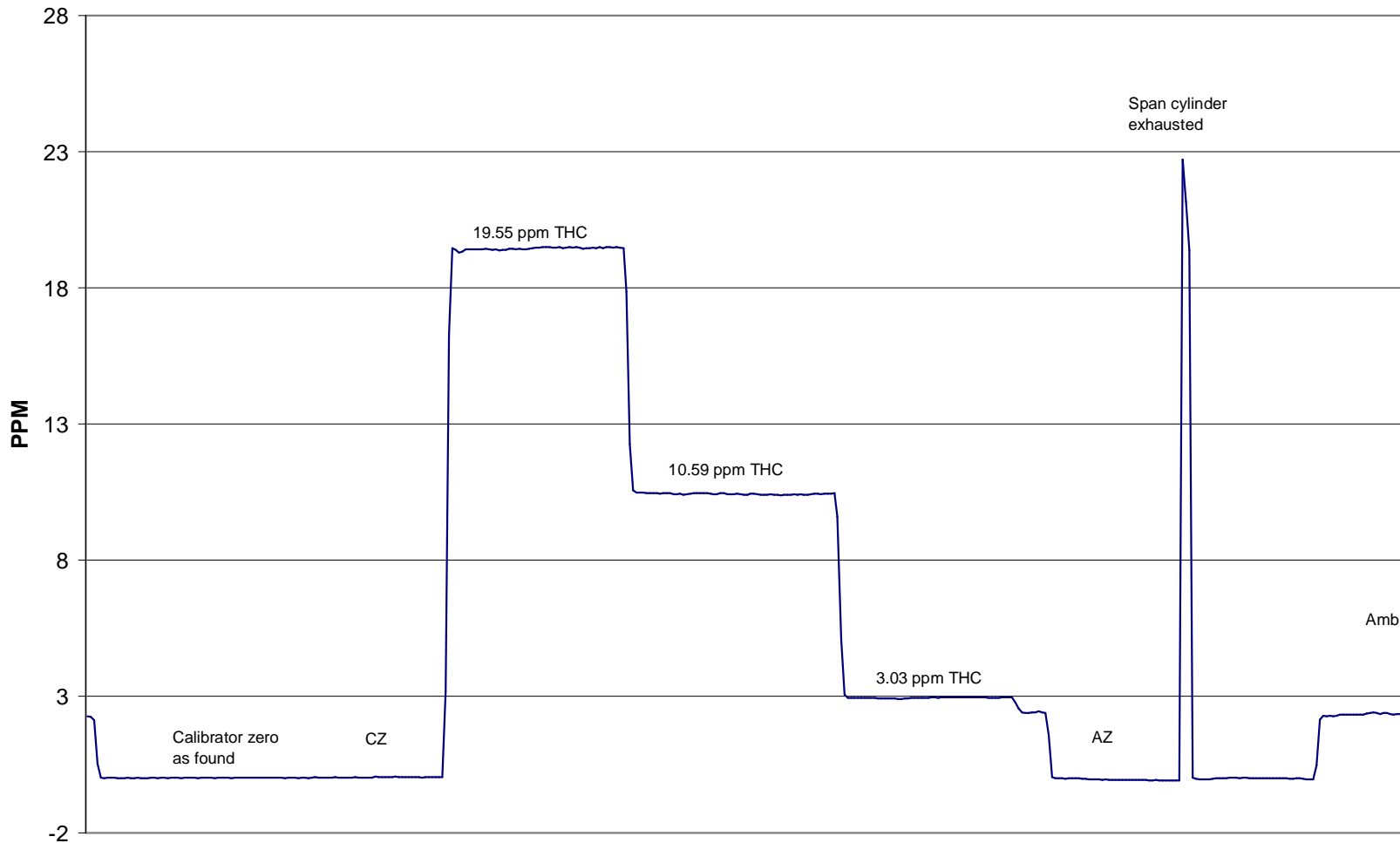
Calibration Date	November 8, 2004	Previous Calibration	October 19, 2004
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	15:30	End Time (MST)	19:00
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	51CLT-79009-390

### Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.011	N/A		
19.553	19.467	1.0044	Correlation Coefficient	0.999959
10.590	10.439	1.0145		
3.034	2.948	1.0291	Slope	1.004178
			Intercept	0.043824



### THC Calibration



October 19, 2004

# Calibration Report

Parameter                                                                 
 Air Monitoring Network                                                               

TRS

PASZA



## Station Information

Calibration Date	November 9, 2004	Previous Calibration	October 19, 2004
Station Number	1	Station Location	Muskoseepi Park
Reason:	<input checked="" type="checkbox"/> Routine	<input type="checkbox"/> Install	<input type="checkbox"/> Removal
			<input type="checkbox"/> Other:
Start Time (MST)	8:00	End Time (MST)	12:00
Barometric Pressure	27.8 inches Hg	Station Temperature	23.0 Deg C
Calibrator	VICI Metronics	Serial Number	111-1695
Perm-tube Conc	225 ng/min	Perm-tube Expiry Date	12/10/2005
Correction factor	0.935422	Perm-tube Cert #	03-13509
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 10 volt	DACS channel #	9
	<u>Before</u>		<u>After</u>
DACS slope	0.005000	DACS slope	0.005000
DACS intercept	0.000000	DACS intercept	0.000000
Calculated slope	0.999008	Calculated slope	1.003662
Calculated intercept	0.097185	Calculated intercept	0.468040
Analyzer make	TEI Model 43C	Analyzer serial #	3199000000491

	before		after	
Concentration range	0-100	ppb	0-100	ppb
TRS bkg	19		18.3	
TRS slope	1.368		1.320	
UV Lamp	816	V	816	V

## Calibration Data

Dilution air flow rate (cc/min)	Corrected gas flow rate (cc/min)	Calculated concentration (ppb) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
zero	2377.8	0.0	-0.3	N/A
2542	2377.8	68.0	67.3	1.0103
6000	5612.5	28.8	28.3	1.0185
15040	14068.8	11.5	10.7	1.0717
zero	2377.8	0.0	-0.3	As Found Zero
2542	2377.8	68.0	70.5	As Found Span
Average Correction Factor				1.0335

Calculated value of As Found Response: 70.85 ppm      Percent Change of As Found: -4.1%

	before calibration		after calibration	
Auto zero	-0.3	ppm	0.2	ppm
Auto span	98.8	ppm	67.2	ppm

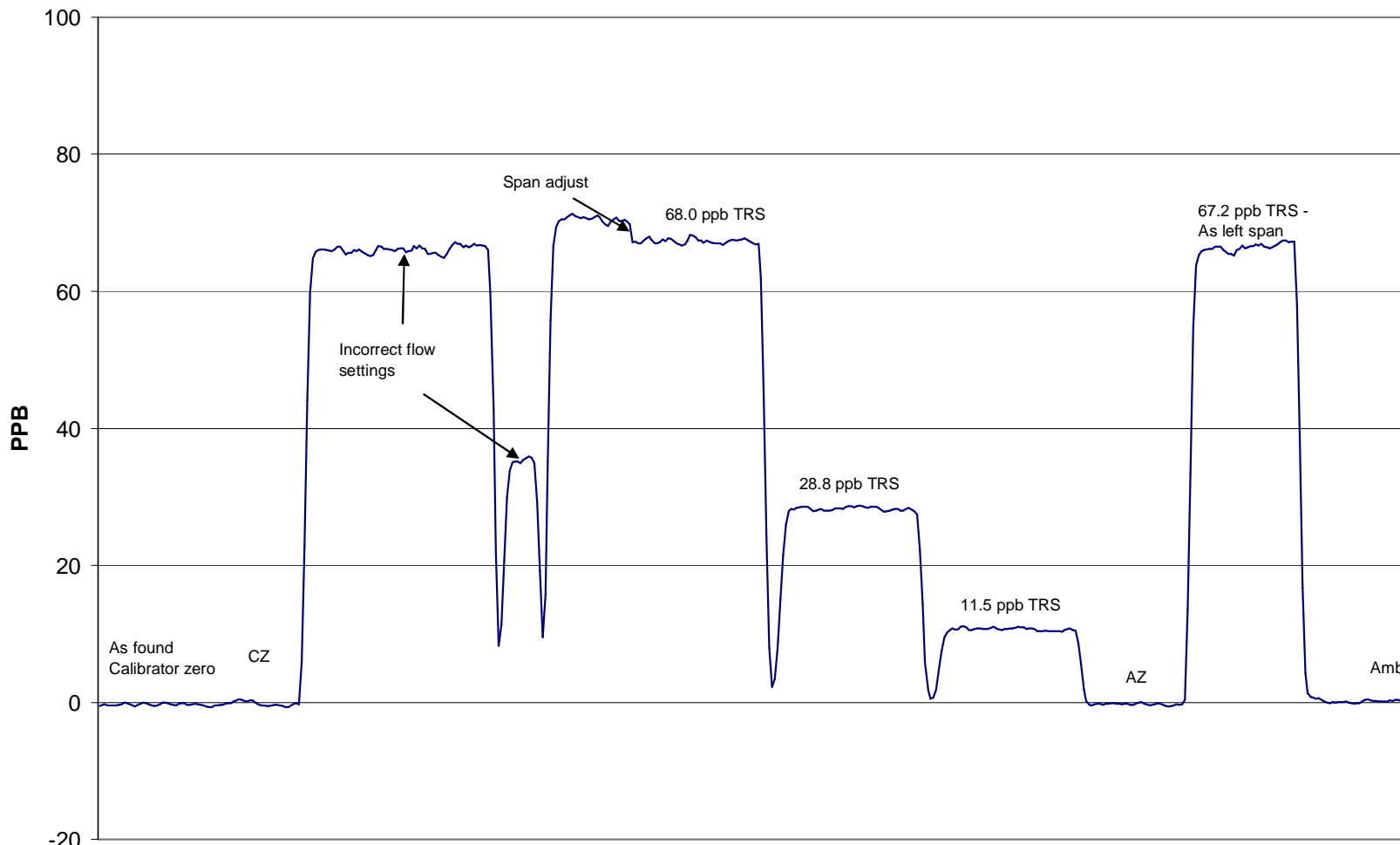
Notes: small span adjust made, no other problems  
station temp was fluctuating during calibration

Calibration Performed By: Gary Cross





### TRS Calibration



November 9, 2004