PEACE AIRSHED ZONE ASSOCIATION

Air Quality Monitoring Network

February 2004

Prepared by

FOCUS
AMBIENT AIR MONITORING

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PASZA
Peace AirShed Zone Association

4/20/2004

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

Re: Peace Airshed Zone Association – February PASZA Ambient Air Report

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

Continuous Monitoring – Henry Pirker Station (Grande Prairie)

A new continuous monitoring station was located at Muskoseepi Park under the Peace Airshed Zone Association's directive effective February 1, 2004. This continuous station is equipped to monitor Sulphur Dioxide (SO_2), Nitrogen Dioxide (NO_2), Ozone (O_3), Carbon Monoxide (CO), Total Hydrocarbons (THC), Total Reduced Sulphur (TRS), and Particulate Matter ($PM_{2.5}$). In addition the meterological parameters of relative humidity, temperature, solar radiation, wind speed and wind direction are also collected.

Included in this report is a summary of the, monthly 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. Operational time of all instruments were below 90% and Alberta Environment was informed (reference# 147008). A letter was submitted within seven days of notification and is attached as a reference. There were no significant events leading to emergency response for the month of February.

Passive Monitoring – 43 Stations throughout the PASZA zone:

The second passive station in Grande Prairie (#49) was moved to the Henry Pirker station to coincide with the continous samplers there. There were no damaged or missing samples for the month and no exceedances of the Provincial Air Quality guidelines.

- Monthly average concentrations for SO_2 passives ranged from 0.2 ppb to 1.4 ppb.
- Monthly average concentrations for NO_2 passives ranged from 0.8 ppb to 14.4 ppb.
- Monthly average concentrations for O_3 passives ranged from 25.7 ppb to 49.5 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

Kevin Warren
PASZA Technical Program Manager

Kevin McCullum, M.Sc., P.Eng.
AQM Environmental Engineer

April 20, 2004

Standards & Approvals Division
Alberta Environment
4th Floor, Oxbridge Place
9820 – 106 Street
Edmonton, Alberta T5K 2J6

ATTENTION: Director

RE: Air Monitoring Directive Contravention Report Ref # 147008

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 February for all monitored parameters 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 147008.

The cause of the contravention was missing data from the Data Acquisition System (DAS) as caused by initial start-up problems relating mainly to internet connectivity issues and computer viruses. Daily data remote inspection was not available until March 9th hindering the ability to review station data collection. As a result of these issues and proactive improvement of data collection procedures the following actions have and will be taken:

1. A firewall and virus protection has been installed on the site PC to protect from internet intrusions.
2. An uninterruptible power supply (UPS) system will be installed to insure the DAS and station computer (PC) are less affected by power modulations or loss.
3. A back-up digital chart recorder will be installed to act as a secondary data collection source and all collected data will be archived regularly onsite.
4. Data remote queries are now available to ensure routine central archived data collection is occurring without irregularities.

The listed action items are to ensure that data will not be lost in the future for reasons related to computer or power problems

Sincerely,

THE FOCUS CORPORATION

Gary Cross C.E.T.
AQM Technical Manager

PASZA
Peace AirShed Zone Association

April 20, 2004

February 2004 Monthly Overall Summary Report

Ambient Air Quality Data

Feb-2004	PASZA - AMBIENT AIR QUALITY DATA						Maximum Recorded Values						
							1-hr				24-hr		
Pollutant	**Guidelines**		**Station**	**Monthly**	**Exceedence**		Conc	Day	WSPD	WDIR	Conc	Day	**Operational**
(units)	1-hr	24-hr		**Average**	1-hr	24-hr			(km/hr)	(Sector)			**Time (%)**
SO_2 (**ppb**)	172	57	Henry Pirker	1.0	0	0	9.1	Feb-19	24.6	SW	3.3	Feb-12	81.3%
NO (**ppb**)			Henry Pirker	31.7	0	0	439.5	Feb-12	2.4	ESE	100.8	Feb-12	81.5%
NO_2 (**ppb**)	212	106	Henry Pirker	23.9	0	0	71.1	Feb-12	2.4	ESE	42.5	Feb-06	81.5%
NO_X (**ppb**)			Henry Pirker	55.4	0	0	468.5	Feb-12	2.4	ESE	140.2	Feb-04	81.5%
O_3 (**ppb**)	82		Henry Pirker	18.4	0	0	44.4	Feb-09	40.8	WSW	37.0	Feb-19	81.9%
CO (**ppm**)	13		Henry Pirker	0.64	0	0	7.01	Feb-12	2.4	ESE	1.37	Feb-12	66.7%
THC (**ppm**)			Henry Pirker	2.54	0	0	5.59	Feb-12	2.4	ESE	3.89	Feb-02	81.8%
TRS (**ppb**)			Henry Pirker	0.2	0	0	2.1	Feb-04	4.7	W	0.8	Feb-04	80.9%
$PM_{2.5}$ (**µg/m^3**)		30 [a]	Henry Pirker	7.3	0	0	54.8	Feb-25	5.4	ENE	14.0	Feb-09	79.3%
RH (**%**)			Henry Pirker	71.8									83.5%
SR (**W/m^2**)			Henry Pirker	72.7									83.5%
Temp (**^{o}C**)			Henry Pirker	-8.1									83.3%
WSPD v (km/hr)			Henry Pirker	10.1									82.6%
WSPD s (km/hr)			Henry Pirker	7.8									82.6%
WDIR (Deg)			Henry Pirker	WNW*									82.6%

Note: [a] the 24-hr Canada Wide Standard level is considered as an absolute value

* Wind Direction is the predominate direction for the Month

PASZA
Peace AirShed Zone Association

April 20, 2004

Continuous Monitoring

Ambient Air Monitoring Network

Henry Pirker Station

General Station Issues

Missing data resulting from problems with communications to the central data archive amounted to less than90% uptime. As data can now be viewed by the technicians on a daily basis, data retrieval problems can be identified and addressed immediately. Alarms will be established to alert the on call personnel if this happens in the future.

Parameter	Make	Model	Notes
SO_2	TECO	43	- Analyzer noise is higher than it should be. This issue will be addressed on March 9 during the multipoint calibration.
$NOx/NO/NO_2$	TECO	42	- No operation problems observed
O_3	API	400	- No operation problems observed
CO	TECO	48	- An intermittent sensor connection casued excessive noise in the early part of the month. This problem was rectified on February 24.
THC	TEI	51-CLT	- No operation problems observed
TRS	TEI	42C	- No operation problems observed
$PM_{2.5}$	R&P	1400AB	- No operation problems observed
RH	Met One	083D	- No operation problems observed
AT	Met One	083D	- No operation problems observed
SR	Met One	096-1	- No operation problems observed
WS	Met One	010C	- No operation problems observed
WD	Met One	020C	- No operation problems observed

Station: Henry Pirker

Station Owner: PASZA

Parameter : Air Quality Index (AQI)

Sampling Dates: February 1, 2004 to March 1, 2004

Summary

Number of 1-hr Good Readings:	529
Number of 1-hr Fair Readings:	5
Number of 1-hr Poor Readings:	0
Number of 1-hr Very Poor Readings:	0

Percentile	99	95	75	50	25	5	1
	25.6	20.3	15.9	11.5	8.9	6.9	6.0

Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

Alberta's Air Quality Index

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

Day **Mountain Standard Time**

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

Station: Henry Pirker

Station Owner: PASZA

Parameter : **Sulphur Dioxide (SO_2)**

Guideline Limit:	Alberta Environment:	1-hr 0.172 ppm	24-hr 0.057 ppm
		1-hr 172 ppb	24-hr 57 ppb

Sampling Dates: **February 1, 2004** **to** **March 1, 2004**

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	9.1	ppb	19-Feb	10:00 11:00
Maximum 24-hr Average:	3.3	ppb	12-Feb	

AIC Time:	31 hrs	Operational Time:	535 hrs
Calibration Time:	7 hrs	AMD Operational Uptime:	81.3%

Percentile	99	95	75	50	25	5	1	Average	Geomean
	6.1	3.6	1.5	0.4	0.0	0.0	0.0	1.0 ppb	- ppb

Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

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-Feb-04	1	1	A	A	0	0	0	0	1	3	3	3	3	3	3	0	1	1	0	0	0	0	0	0	1.1	3.2
2-Feb-04	0	0	A	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	1	0.2	1.0
3-Feb-04	0	0	A	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0.1	1.1
4-Feb-04	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	0	0	0.2	3.4
5-Feb-04	0	0	A	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0.1	1.1
6-Feb-04	0	A	A	0	0	0	0	0	F	F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.1
7-Feb-04	0	A	A	0	0	0	0	0	0	0	0	0	0	1	2	2	1	0	1	1	0	0	1	0	0.4	2.3
8-Feb-04	0	A	1	0	F	0	0	0	0	0	0	0	0	1	1	2	2	3	3	3	3	2	1	0	1.0	3.4
9-Feb-04	0	A	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
10-Feb-04	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	0	0	0.3	1.3
11-Feb-04	0	A	0	3	1	1	2	4	5	4	F	F	F	F	F	F	F	F	F	F	F	F	1	1	*	4.7
12-Feb-04	A	A	0	1	0	2	2	2	5	5	2	2	3	3	2	5	7	6	7	5	4	3	4	4	3.3	6.7
13-Feb-04	A	A	1	1	2	1	1	1	1	1	1	1	1	1	1	2	3	1	1	2	2	2	4	4	1.7	4.2
14-Feb-04	A	2	3	5	2	3	4	2	2	2	2	0	1	2	2	1	1	1	1	1	0	0	0	0	1.6	5.1
15-Feb-04	A	0	1	2	1	1	0	0	0	1	0	1	1	1	1	2	2	1	3	2	2	3	4	4	1.5	4.4
16-Feb-04	A	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	1	1	1	1	0	0.6	3.0
17-Feb-04	A	0	0	0	0	0	0	0	1	0	0	0	0	1	1	2	2	2	2	1	1	1	0	A	0.6	2.0
18-Feb-04	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	A	0.1	1.0
19-Feb-04	A	0	0	0	0	0	0	0	0	0	9	7	1	2	0	1	1	1	2	2	2	2	2	A	1.4	9.1
20-Feb-04	1	1	1	2	3	3	3	3	3	2	2	3	2	2	1	1	1	F	F	F	F	F	F	F	*	3.1
21-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.0
22-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.0
23-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	1	1	1	1	2	2	2	1	1	F	F	*	1.9
24-Feb-04	2	0	0	0	0	0	0	0	0	F	3	2	1	1	1	1	1	1	A	M	M	M	M	M	*	2.7
25-Feb-04	M	M	M	M	M	M	M	M	M	M	0	0	0	1	1	C	C	C	C	C	C	C	2	0	*	2.2
26-Feb-04	0	0	A	1	2	1	0	1	2	1	0	1	1	0	0	0	1	F	F	F	F	F	F	F	*	1.6
27-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	1	3	1	2	2	1	4	4	1	*	4.3
28-Feb-04	1	0	A	0	0	0	0	0	1	1	0	0	2	1	2	2	3	2	1	2	1	2	2	2	1.1	2.8
29-Feb-04	2	1	A	1	1	2	2	2	1	2	2	2	3	4	6	8	5	3	3	3	3	3	2	4	2.8	8.2
																									*	0.0
																									*	0.0
Hourly Avg	*	*	*	0.8	0.5	0.6	0.6	0.7	1.0	1.0	1.0	0.9	0.8	1.0	1.0	1.3	1.5	1.5	1.4	1.2	1.1	1.2	1.4	*		
Hourly Max	2.2	2.0	2.6	5.1	2.8	3.1	3.7	4.3	4.9	4.8	9.1	6.8	3.2	3.9	5.8	8.2	6.6	6.2	6.7	5.0	4.0	4.3	4.4	4.4		

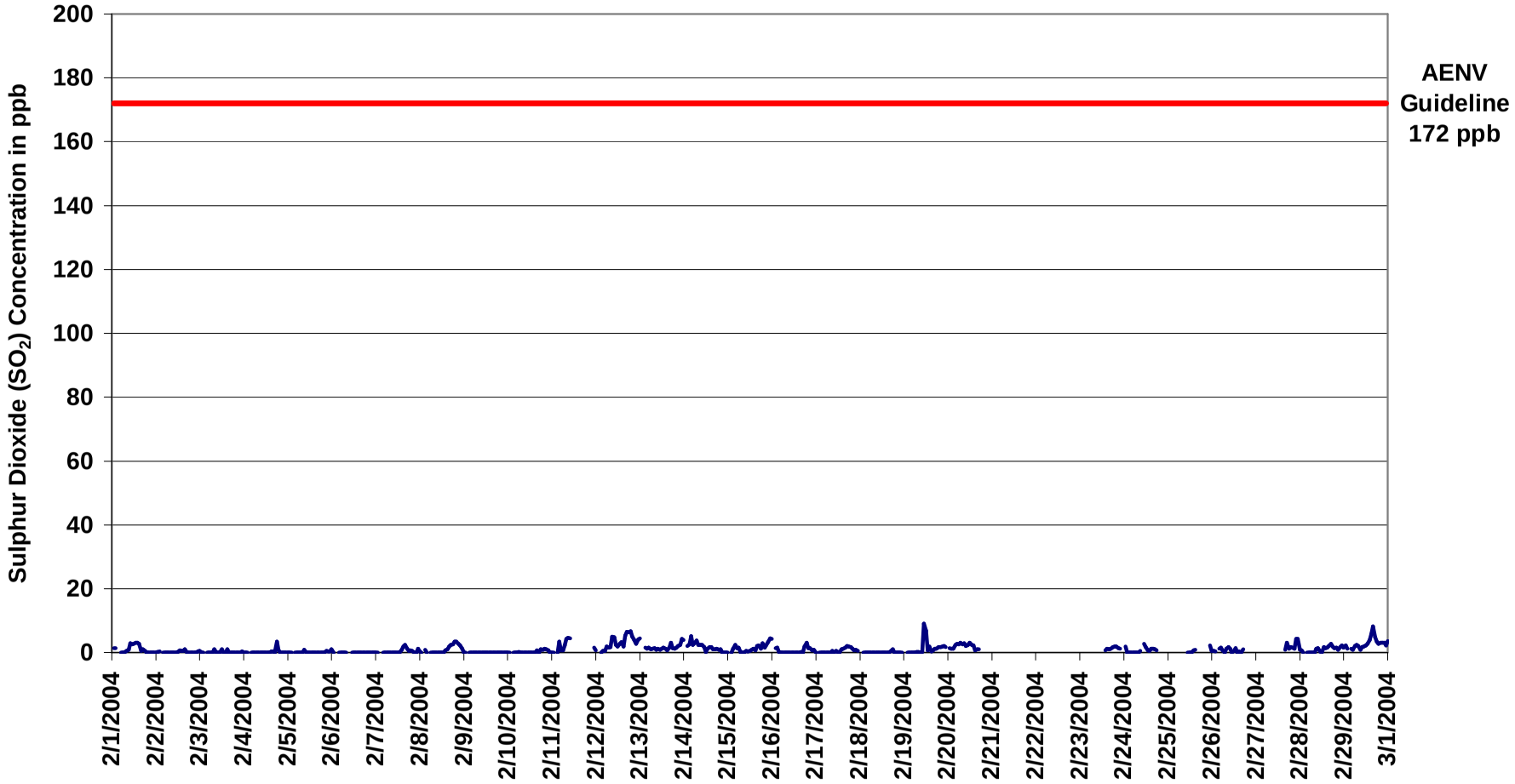


Figure 1. PASZA – Henry Pirker SO_2 Monthly Trend

Station: Henry Pirker

Station Owner: PASZA

Parameter : **Nitrogen Dioxide (NO_2)**

Guideline Limit:	Alberta Environment:	1-hr 0.212 ppm	24-hr 0.106 ppm
		1-hr 212 ppb	24-hr 106 ppb

Sampling Dates: **February 1, 2004** **to** **March 1, 2004**

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	71	ppb	12-Feb	8:00 9:00
Maximum 24-hr Average:	42	ppb	6-Feb	

AIC Time:	31 hrs	Operational Time:	536 hrs
Calibration Time:	5 hrs	AMD Operational Uptime:	81.5%

Percentile	99	95	75	50	25	5	1	Average	Geomean
	58	49	34	23	12	6	3	24 ppb	- ppb

Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

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-Feb-04	23	23	A	A	22	27	30	34	29	24	16	13	8	11	14	18	22	27	26	25	26	25	24	24	22.3	34.0
2-Feb-04	24	25	A	28	30	29	27	27	30	27	23	15	15	14	21	24	27	33	35	34	34	33	33	33	27.0	34.7
3-Feb-04	34	32	A	34	24	28	41	38	43	40	37	27	27	29	17	22	35	36	38	39	39	39	37	36	33.5	42.6
4-Feb-04	37	35	A	38	24	11	49	41	57	54	38	37	26	28	29	39	49	57	59	50	47	45	43	37	40.4	59.0
5-Feb-04	40	38	A	33	32	30	32	36	35	28	25	22	22	23	35	36	34	43	46	49	54	51	48	49	36.5	53.9
6-Feb-04	50	A	A	40	33	39	33	41	F	F	42	49	37	37	30	40	39	49	52	47	48	56	47	39	42.5	56.4
7-Feb-04	38	A	A	22	13	8	13	7	6	6	3	5	4	8	8	8	16	18	20	35	12	8	14	18	13.2	37.6
8-Feb-04	8	A	6	2	F	5	12	27	24	20	12	10	16	12	13	12	21	24	22	21	26	28	34	51	18.6	50.6
9-Feb-04	57	A	52	49	50	47	54	63	59	71	14	11	9	3	2	4	9	14	13	10	10	7	9	2	26.9	70.7
10-Feb-04	3	A	2	2	2	4	7	12	14	5	6	8	5	5	6	13	22	40	44	30	31	22	24	16	13.9	44.1
11-Feb-04	11	A	24	21	17	25	35	37	39	34	F	F	F	F	F	F	F	F	F	F	F	F	23	31	*	38.8
12-Feb-04	A	A	29	38	38	35	40	51	71	66	33	27	25	29	33	34	38	40	38	40	37	38	35	31	38.5	71.1
13-Feb-04	A	A	33	19	6	6	9	10	8	6	6	6	5	6	6	8	8	10	11	10	10	9	8	8	9.5	32.7
14-Feb-04	A	6	6	5	5	6	7	9	7	8	11	11	7	7	12	12	15	22	25	21	22	17	14	19	11.9	25.0
15-Feb-04	A	21	14	13	9	11	14	19	33	23	20	12	12	14	13	15	22	26	35	39	41	42	41	37	22.8	42.2
16-Feb-04	A	33	36	33	26	27	35	40	37	26	31	29	28	17	12	18	20	15	13	12	11	11	11	13	23.3	40.4
17-Feb-04	A	13	20	25	29	14	18	32	34	22	13	17	15	19	25	35	40	41	39	39	38	37	31	A	27.1	40.5
18-Feb-04	A	32	35	33	33	34	35	34	31	22	25	33	23	21	22	35	46	40	18	24	28	22	14	A	29.0	45.8
19-Feb-04	A	5	9	7	7	10	15	14	16	11	7	8	7	6	8	6	10	11	11	12	9	16	12	A	9.7	16.0
20-Feb-04	11	9	4	5	5	7	21	24	19	10	26	14	8	8	6	8	11	F	F	F	F	F	F	F	*	25.7
21-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.0
22-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.0
23-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	17	20	21	26	41	47	44	39	39	F	F	*	46.7
24-Feb-04	37	28	19	31	31	26	34	40	36	F	27	23	32	21	25	23	19	17	A	M	M	M	M	M	*	39.8
25-Feb-04	M	M	M	M	M	M	M	M	M	M	M	16	12	13	14	C	C	C	C	C	21	28	26	25	*	27.8
26-Feb-04	26	20	A	13	10	14	19	29	29	27	11	8	9	10	11	14	10	F	F	F	F	F	F	F	*	29.4
27-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	7	8	23	24	24	25	32	34	34	*	34.2
28-Feb-04	32	27	A	16	16	14	23	20	24	17	11	14	14	16	23	24	21	34	38	26	25	34	32	27	23.1	38.3
29-Feb-04	32	21	A	19	15	16	22	26	14	12	9	8	8	8	8	11	11	16	25	32	30	37	35	14	18.6	36.9
																									*	0.0
																									*	0.0
Hourly Avg	*	*	*	22.8	20.7	19.6	26.0	29.6	30.2	25.4	19.4	17.5	15.7	15.4	16.5	19.4	23.1	29.5	30.9	30.2	28.9	29.4	27.4	*		
Hourly Max	56.5	38.2	51.8	48.8	50.5	46.9	53.9	63.3	71.1	70.7	42.3	48.9	37.4	37.3	35.2	40.1	48.9	57.0	59.0	49.8	53.9	56.4	47.6	50.6		

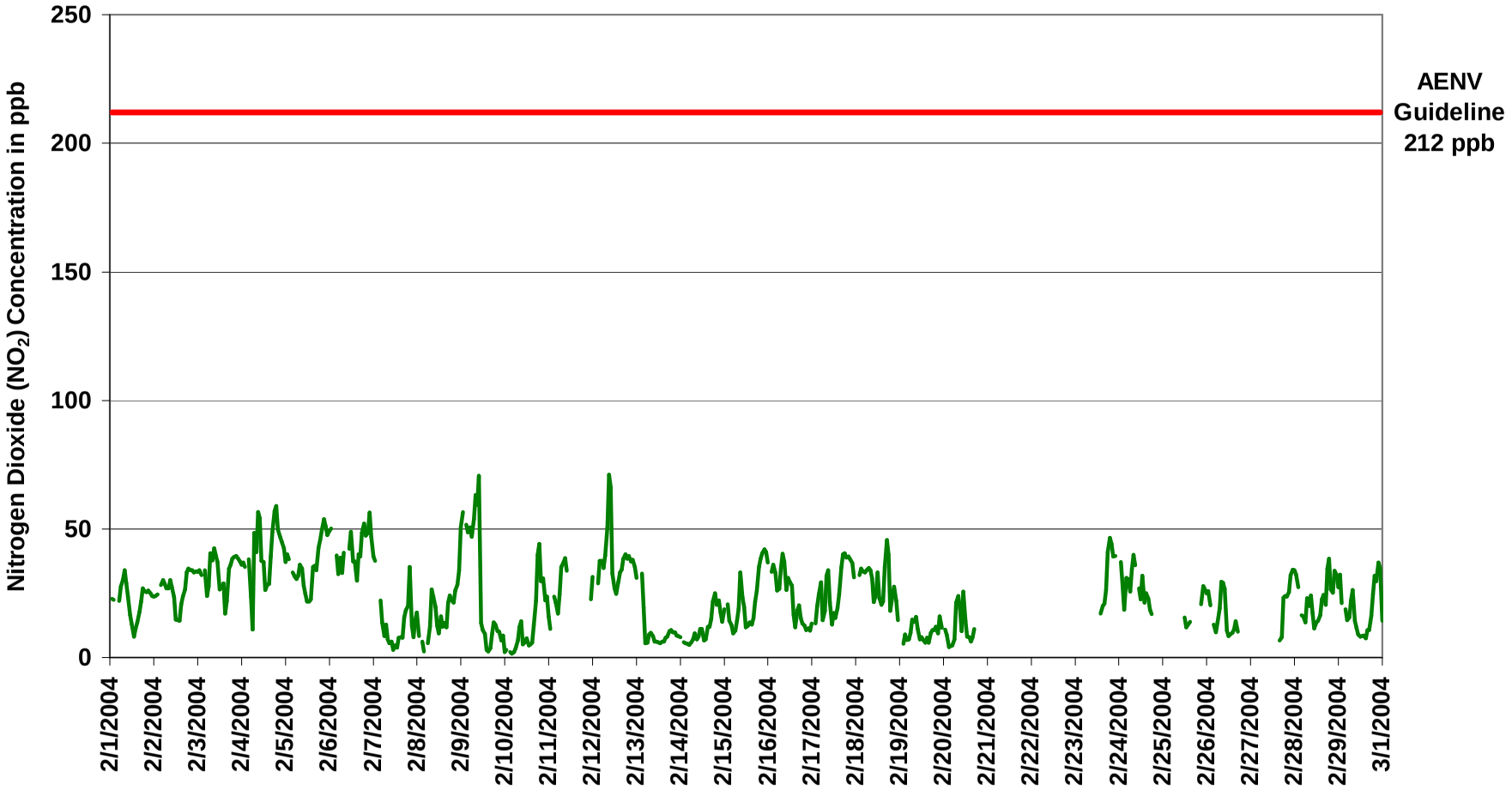


Figure 2. PASZA – Henry Pirker NO_2 Monthly Trends

Station: Henry Pirker

Station Owner: PASZA

Parameter : **Nitrogen Oxide (NO)**

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

Sampling Dates: **February 1, 2004** to **March 1, 2004**

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	440	ppb	12-Feb	8:00 9:00
Maximum 24-hr Average:	101	ppb	12-Feb	

AIC Time:	31 hrs	Operational Time:	536 hrs
Calibration Time:	5 hrs	AMD Operational Uptime:	81.5%

Percentile	99	95	75	50	25	5	1	Average	Geomean
	270	126	42	10	2	0	0	32 ppb	- ppb

Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

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-Feb-04	9	8	A	A	4	17	50	99	76	61	32	30	21	29	33	40	31	44	60	45	47	42	37	22	38.1	99.4
2-Feb-04	19	14	A	42	53	50	73	73	118	104	56	35	35	33	47	42	41	49	61	45	54	35	37	51	50.8	118.0
3-Feb-04	44	19	A	25	5	8	58	59	70	78	89	48	54	58	14	17	50	48	74	73	65	27	23	32	45.1	89.2
4-Feb-04	60	59	A	25	6	2	59	64	223	200	97	92	53	55	49	67	79	221	276	150	153	179	80	42	99.6	276.2
5-Feb-04	53	35	A	17	9	19	54	63	63	43	38	44	46	40	74	58	32	34	41	84	192	218	155	151	67.9	217.5
6-Feb-04	183	A	A	28	3	17	8	25	F	F	94	110	60	61	36	59	39	58	127	95	165	258	88	12	76.2	257.8
7-Feb-04	9	A	A	3	3	2	2	2	1	2	2	5	6	10	10	9	9	7	8	15	4	3	3	2	5.2	15.0
8-Feb-04	1	A	0	0	F	0	0	0	0	3	6	7	16	15	17	14	17	14	13	12	11	10	13	32	9.1	32.4
9-Feb-04	127	A	81	55	80	29	116	280	352	323	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62.7	352.0
10-Feb-04	0	A	2	2	3	4	4	5	7	0	0	0	0	0	0	4	6	31	40	0	2	0	1	0	4.9	40.3
11-Feb-04	1	A	3	2	1	1	25	33	28	54	F	F	F	F	F	F	F	F	F	F	F	F	4	12	*	53.8
12-Feb-04	A	A	6	21	23	29	81	211	440	384	73	48	43	63	54	55	118	135	176	128	99	17	8	4	100.8	439.5
13-Feb-04	A	A	7	4	1	1	2	2	3	3	4	4	5	5	5	5	4	4	4	4	4	3	3	3	3.7	6.7
14-Feb-04	A	2	2	1	2	1	0	0	0	2	4	6	3	3	5	4	4	3	1	1	0	0	0	1	2.0	6.1
15-Feb-04	A	1	0	0	0	1	0	1	53	31	33	18	19	19	13	13	15	8	22	70	93	191	232	41	38.1	232.5
16-Feb-04	A	17	23	12	3	4	14	55	53	30	61	59	49	17	9	13	8	3	1	2	1	1	1	1	19.0	61.3
17-Feb-04	A	1	1	2	3	1	3	28	82	24	13	30	27	35	43	69	88	83	126	96	105	57	9	A	42.1	125.6
18-Feb-04	A	8	23	10	21	20	25	58	50	12	35	61	32	30	25	58	61	35	1	1	2	1	1	A	25.9	61.2
19-Feb-04	A	0	0	0	0	0	1	1	2	3	3	3	3	3	3	2	3	1	0	0	0	0	1	A	1.4	3.5
20-Feb-04	0	0	0	0	0	0	1	2	2	2	13	7	4	5	4	4	3	F	F	F	F	F	F	F	*	13.2
21-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.0
22-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.0
23-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	21	20	17	17	38	64	53	13	11	F	F	*	63.5
24-Feb-04	7	1	1	2	3	3	4	60	40	F	39	31	48	15	18	21	8	3	A	M	M	M	M	M	*	60.2
25-Feb-04	M	M	M	M	M	M	M	M	M	M	M	14	9	12	12	C	C	C	C	C	2	7	7	2	*	13.9
26-Feb-04	3	2	A	2	1	1	5	12	23	31	5	4	4	5	5	8	4	F	F	F	F	F	F	F	*	30.9
27-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	3	2	8	3	1	0	2	31	83	*	83.1
28-Feb-04	54	18	A	1	0	0	9	3	24	17	13	24	24	24	32	22	11	17	14	3	1	7	7	4	14.3	53.7
29-Feb-04	8	0	A	1	0	0	1	3	3	7	6	6	7	7	4	5	3	5	2	3	3	11	9	1	4.1	10.7
																									*	0.0
																									*	0.0
Hourly Avg	*	*	*	11.0	9.7	8.8	24.8	47.5	74.6	64.3	31.2	28.5	23.8	22.6	21.3	24.3	26.1	36.9	50.6	40.0	44.2	46.9	32.5	*		
Hourly Max	183.1	58.8	80.9	54.6	80.2	50.1	116.2	279.6	439.5	384.0	96.5	110.3	60.0	62.6	73.6	68.9	118.5	220.8	276.2	150.5	192.4	257.8	232.5	150.7		

Station: Henry Pirker

Station Owner: PASZA

Parameter : **Oxides of Nitrogen (NO_x)**

Guideline Limit: Alberta Environment:

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

Sampling Dates: **February 1, 2004** to **March 1, 2004**

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	469	ppb	12-Feb	8:00 9:00
Maximum 24-hr Average:	140	ppb	4-Feb	

AIC Time:	31 hrs	Operational Time:	536 hrs
Calibration Time:	5 hrs	AMD Operational Uptime:	81.5%

Percentile	99	95	75	50	25	5	1	Average	Geomean
	328	168	75	35	15	5	1	55 ppb	- ppb

Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

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-Feb-04	32	31	A	A	26	45	80	133	105	85	49	43	30	40	47	58	53	71	85	71	73	67	61	45	60.5	133.5
2-Feb-04	43	39	A	70	84	79	100	100	147	131	80	48	50	48	68	66	68	82	96	80	88	69	70	85	77.9	147.2
3-Feb-04	78	52	A	59	29	36	99	97	113	118	127	75	82	87	31	39	84	85	112	113	104	66	60	68	78.9	126.5
4-Feb-04	97	94	A	64	30	13	108	105	276	254	134	129	80	83	78	106	129	277	336	201	201	225	123	79	140.2	335.8
5-Feb-04	94	74	A	51	40	49	86	99	98	71	63	66	68	63	109	94	66	77	87	134	246	269	203	200	104.7	268.8
6-Feb-04	234	A	A	68	36	57	41	66	F	F	137	159	98	98	66	99	78	107	179	143	214	314	135	52	118.9	314.5
7-Feb-04	46	A	A	25	16	10	15	9	7	8	5	9	10	18	18	17	25	26	28	50	16	11	17	19	18.5	50.5
8-Feb-04	9	A	7	2	F	4	11	26	23	23	18	17	33	27	31	26	39	38	35	33	37	38	47	83	27.7	83.3
9-Feb-04	183	A	133	104	131	76	170	343	396	382	8	1	0	0	0	0	0	4	3	2	3	2	5	0	84.7	395.9
10-Feb-04	2	A	4	4	5	8	11	17	21	3	5	7	1	2	4	16	28	71	84	30	33	22	25	16	18.2	84.2
11-Feb-04	12	A	26	23	18	26	60	70	67	88	F	F	F	F	F	F	F	F	F	F	F	F	27	44	*	87.7
12-Feb-04	A	A	35	59	60	64	121	262	469	422	106	75	68	92	87	90	157	176	215	167	136	55	43	35	136.1	468.5
13-Feb-04	A	A	39	23	7	7	11	12	12	10	11	10	10	11	11	13	13	15	15	14	14	12	12	11	13.3	39.5
14-Feb-04	A	8	8	6	7	7	8	10	8	10	15	18	10	10	18	16	19	25	26	21	22	18	14	20	14.1	26.1
15-Feb-04	A	21	14	13	9	11	15	20	87	54	53	30	32	33	26	29	37	34	58	108	134	233	274	78	61.1	273.9
16-Feb-04	A	51	60	45	30	31	49	96	91	57	93	89	78	35	21	31	29	19	15	14	12	13	11	14	42.7	96.0
17-Feb-04	A	14	21	27	33	16	21	60	116	46	26	47	43	55	68	104	128	124	165	135	144	94	41	A	69.4	164.8
18-Feb-04	A	40	58	44	54	54	60	92	81	34	59	94	56	51	47	93	107	75	20	25	30	23	16	A	55.2	107.3
19-Feb-04	A	5	9	7	7	10	15	15	18	14	10	11	10	9	11	8	13	12	11	12	10	16	12	A	11.3	17.6
20-Feb-04	11	9	4	5	5	7	22	26	22	13	39	21	12	13	10	12	14	F	F	F	F	F	F	F	*	39.2
21-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.0
22-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.0
23-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	39	40	38	43	79	111	97	52	50	F	F	*	110.7
24-Feb-04	45	30	19	33	34	29	39	100	76	F	66	54	80	37	44	45	27	20	A	M	M	M	M	M	*	100.4
25-Feb-04	M	M	M	M	M	M	M	M	M	M	M	30	21	25	26	C	C	C	C	C	23	35	34	27	*	35.0
26-Feb-04	29	22	A	14	11	15	24	42	52	58	16	13	13	14	16	22	14	F	F	F	F	F	F	F	*	57.6
27-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	9	10	31	27	25	26	34	65	117	*	117.1
28-Feb-04	86	45	A	17	16	14	32	23	48	35	25	37	39	41	54	46	32	52	52	30	27	40	39	31	37.4	86.1
29-Feb-04	40	22	A	19	15	16	23	29	18	19	15	14	15	15	11	16	14	21	27	35	33	48	43	15	22.7	47.7
																									*	0.0
																									*	0.0
Hourly Avg	*	*	*	34.0	30.5	28.5	50.9	77.2	102.2	87.9	50.5	45.8	39.1	37.9	37.8	43.8	49.0	66.1	81.2	70.0	72.9	76.3	59.9	*		
Hourly Max	233.6	94.2	133.0	103.6	131.0	78.8	170.3	343.2	468.5	422.1	136.6	159.5	97.6	98.0	109.1	106.3	157.0	277.3	335.8	200.9	246.4	314.5	273.9	200.4		

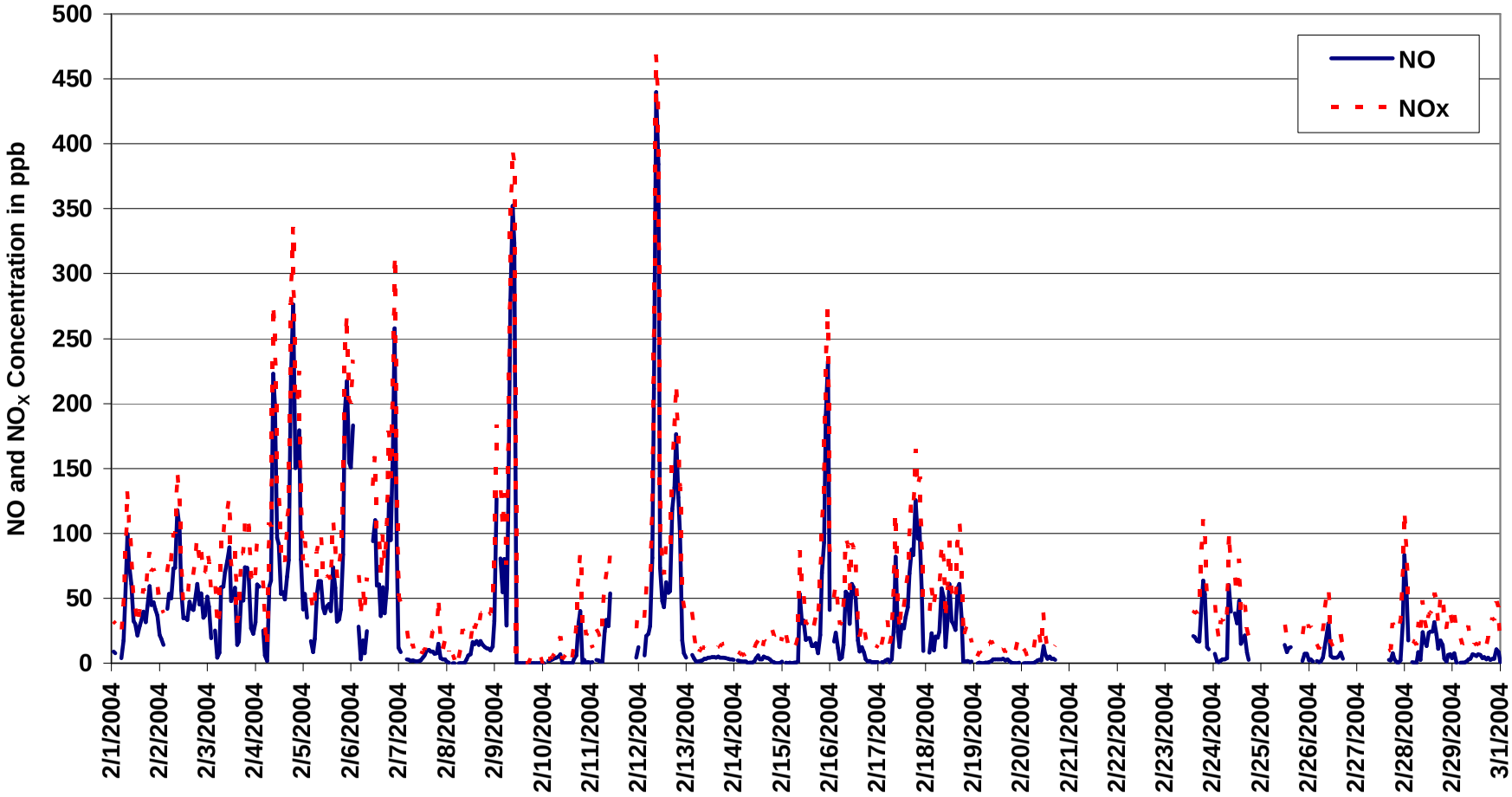


Figure 3. PASZA – Henry Pirker NO and NO_X Monthly Trends

Station: Henry Pirker

Station Owner: PASZA

Parameter : **Ozone (O_3)**

Guideline Limit:	Alberta Environment:	1-hr 0.082 ppm	24-hr na ppm
		1-hr 82 ppb	24-hr na ppb

Sampling Dates: **February 1, 2004** **to** **March 1, 2004**

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	44	ppb	9-Feb	13:00 14:00
Maximum 24-hr Average:	37	ppb	19-Feb	

AIC Time:	31 hrs	Operational Time:	539 hrs
Calibration Time:	3 hrs	AMD Operational Uptime:	81.9%

Percentile	99	95	75	50	25	5	1	Average	Geomean
	43	39	29	17	6	1	0	18 ppb	- ppb

Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

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-Feb-04	8	9	A	A	9	6	6	8	6	9	16	19	21	21	20	17	14	8	6	6	6	6	5	6	10.5	21.2
2-Feb-04	6	6	A	7	6	6	6	6	6	8	14	20	21	22	20	18	13	7	5	5	5	5	5	5	9.7	21.7
3-Feb-04	5	6	A	5	12	11	5	5	5	7	9	14	16	16	22	17	8	5	4	4	4	3	4	4	8.3	21.8
4-Feb-04	4	3	A	4	16	32	5	5	6	7	12	16	21	21	21	16	11	6	6	7	6	6	6	6	10.6	31.5
5-Feb-04	6	6	A	6	7	6	5	5	6	10	16	19	21	21	15	15	15	8	3	4	4	4	4	3	9.0	21.3
6-Feb-04	4	A	A	4	8	4	9	3	F	F	8	8	13	14	20	13	12	5	3	3	3	3	2	4	7.0	19.9
7-Feb-04	6	A	A	20	28	35	32	34	36	37	39	39	40	37	38	39	33	30	29	17	34	37	32	28	31.8	39.7
8-Feb-04	36	A	39	42	F	39	34	23	26	30	35	37	33	37	36	37	29	27	28	29	26	23	21	5	30.6	42.0
9-Feb-04	3	A	3	2	2	2	3	3	3	5	33	37	40	44	43	42	38	35	36	37	37	39	37	42	24.6	44.4
10-Feb-04	41	A	40	40	41	40	39	36	32	36	35	34	36	35	37	33	25	7	2	16	15	22	20	27	30.0	40.7
11-Feb-04	29	A	14	14	19	13	4	1	3	8	F	F	F	F	F	F	F	F	F	F	F	F	18	12	*	28.8
12-Feb-04	A	A	7	0	0	0	0	0	2	1	7	12	15	13	12	7	1	0	0	0	3	3	5	8	4.4	14.9
13-Feb-04	A	A	5	22	34	34	30	27	27	28	29	30	31	31	31	29	28	26	26	26	26	27	27	29	27.4	34.2
14-Feb-04	A	32	33	33	34	33	32	30	31	31	28	28	31	31	28	27	25	18	15	18	16	20	23	18	26.8	34.2
15-Feb-04	A	14	21	21	24	23	19	14	1	8	12	20	22	23	27	25	20	15	5	1	0	1	1	0	13.8	26.9
16-Feb-04	A	1	0	2	7	8	2	0	2	11	13	16	20	30	32	27	25	27	34	31	33	33	30	26	17.8	33.8
17-Feb-04	A	24	18	14	9	19	15	2	2	12	21	19	20	19	18	12	7	2	0	0	0	0	4	A	10.8	23.7
18-Feb-04	A	2	2	1	0	0	0	0	4	14	15	11	17	21	23	15	10	11	32	27	23	27	33	A	13.1	32.5
19-Feb-04	A	40	36	37	38	35	32	32	30	35	39	38	40	41	39	41	38	37	38	37	40	34	37	A	37.0	41.4
20-Feb-04	36	38	43	43	43	40	27	24	28	36	23	32	38	40	41	41	39	F	F	F	F	F	F	F	*	43.0
21-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.0
22-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.0
23-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	26	27	28	23	8	0	0	4	4	F	*	27.9
24-Feb-04	7	14	23	10	7	13	4	0	5	F	15	21	19	25	24	26	32	34	A	M	M	M	M	M	*	33.9
25-Feb-04	M	M	M	M	M	M	M	M	M	M	13	24	25	25	26	27	25	20	C	C	C	10	11	11	*	26.9
26-Feb-04	11	17	A	24	26	22	16	4	6	9	25	27	27	27	26	25	26	F	F	F	F	F	F	F	*	27.0
27-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	35	33	17	14	13	11	3	0	0	*	34.6
28-Feb-04	0	0	A	13	13	17	7	9	4	11	18	18	21	23	22	25	29	15	6	18	16	6	5	10	13.3	29.4
29-Feb-04	4	15	A	20	24	24	17	11	24	25	30	33	34	36	42	43	44	35	24	13	16	3	3	28	23.9	43.5
																									*	0.0
																									*	0.0
Hourly Avg	*	*	*	16.7	17.7	19.3	14.5	11.7	13.0	17.2	21.0	23.8	25.9	27.2	27.5	26.2	23.1	16.9	14.3	14.2	14.9	13.9	14.5	*		
Hourly Max	40.6	39.9	43.0	42.7	42.7	40.4	38.6	35.7	36.2	36.6	39.3	38.5	40.3	44.4	42.9	43.4	43.5	37.0	37.8	37.3	40.1	38.8	37.5	41.5		

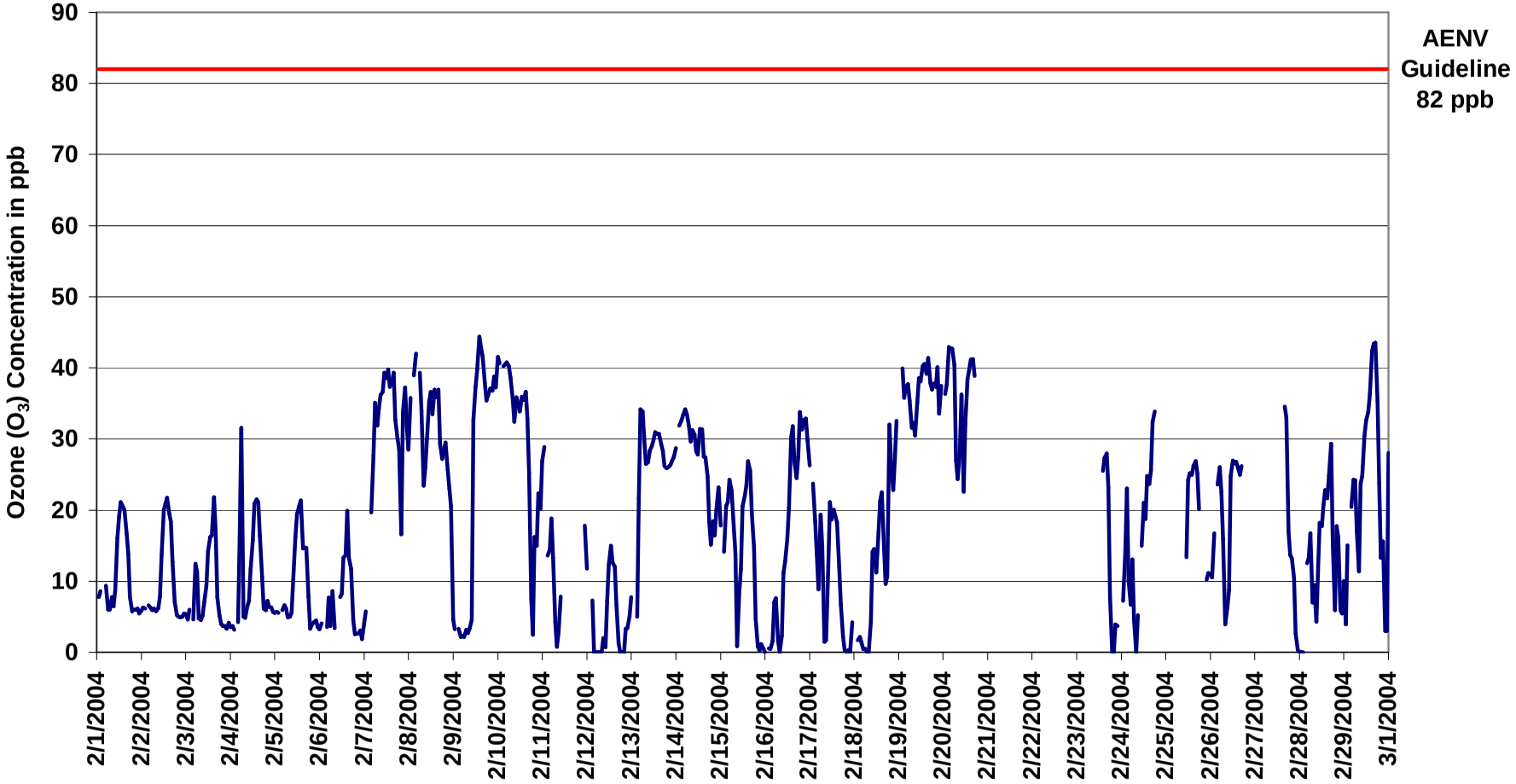


Figure 4. PASZA – Henry Pirker O_3 Monthly Trends

Station: Henry Pirker

Station Owner: PASZA

Parameter : **Ozone (O_3)**

Guideline Limit: Canada Wide Standard

8-hr	0.065	ppm
8-hr	65	ppb

8 HOUR RUNNING AVERAGE TABLE

Sampling Dates: **February 1, 2004** to **March 1, 2004**

Summary

Number of 8-hr Exceedances:	0			
Maximum 8-hr Average:	40.4	ppb	20-Feb	21:00 22:00

Percentile	99	95	75	50	25	5	1	Average	Geomean
	39.9	38.0	29.0	16.1	8.5	3.0	1.2	18.5 ppb	- ppb

Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

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-Feb-04								8	7	7	9	10	11	13	15	16	17	17	16	14	12	10	8	7	*	17.0
2-Feb-04	6	6	6	6	6	6	6	6	6	6	7	9	11	13	14	16	17	17	16	14	12	10	8	6	9.6	16.8
3-Feb-04	5	5	5	5	6	7	7	7	7	7	7	9	9	10	12	13	14	14	13	12	10	8	6	4	8.4	13.7
4-Feb-04	4	4	4	4	5	10	10	10	10	11	11	12	13	12	14	15	16	16	15	14	12	10	8	7	10.1	15.6
5-Feb-04	6	6	6	6	6	6	6	6	6	6	8	9	11	13	14	15	16	16	15	13	11	8	7	6	9.2	16.5
6-Feb-04	4	4	4	4	4	4	5	5	5	5	6	7	8	9	11	13	13	12	11	10	9	8	5	4	7.1	12.7
7-Feb-04	3	3	3	6	10	16	21	26	31	32	33	35	36	37	37	38	38	37	36	33	32	32	31	30	26.5	38.1
8-Feb-04	30	30	32	35	36	36	36	36	34	33	33	32	32	32	32	34	34	34	33	32	31	29	28	24	32.5	36.4
9-Feb-04	20	19	16	12	8	5	3	3	3	3	7	11	16	21	26	31	35	39	39	39	39	38	38	38	21.2	39.4
10-Feb-04	38	38	39	39	40	40	40	40	38	38	37	37	36	35	35	35	34	30	26	24	21	20	18	17	33.2	40.3
11-Feb-04	17	19	20	20	21	19	17	13	10	9	9	8	6	4	4	5	8						18	15	12.8	20.7
12-Feb-04	15	15	12	9	7	6	3	1	1	1	1	3	5	6	8	9	8	8	7	6	4	3	2	3	6.1	14.8
13-Feb-04	3	3	4	8	13	18	22	25	25	26	29	30	29	29	29	29	30	29	29	29	28	27	27	27	22.9	29.8
14-Feb-04	27	28	29	30	31	32	32	32	32	32	32	31	31	30	30	29	29	27	25	24	22	21	20	19	28.1	32.4
15-Feb-04	18	18	19	19	20	21	20	19	17	16	15	15	15	15	16	17	20	21	20	17	14	12	8	5	16.6	20.6
16-Feb-04	3	1	1	1	2	3	3	3	3	4	6	7	9	12	16	19	22	24	26	28	30	30	30	30	12.9	30.1
17-Feb-04	31	30	28	25	22	20	18	14	13	11	12	12	14	14	14	15	16	15	12	10	7	5	3	2	15.1	30.6
18-Feb-04	1	1	1	2	2	2	1	1	1	3	4	6	8	10	13	15	16	15	17	19	20	21	22	23	9.3	23.1
19-Feb-04	25	30	31	33	35	36	36	36	35	34	35	35	35	36	37	38	39	39	39	39	39	38	38	37	35.6	39.1
20-Feb-04	37	37	38	39	39	40	39	37	36	36	33	32	31	31	33	35	36	36	39	40	40	40	40	39	36.8	40.4
21-Feb-04																									*	0.0
22-Feb-04																									*	0.0
23-Feb-04														26	26	27	26	22	19	16	14	12	10	6	*	26.9
24-Feb-04	4	5	9	10	11	12	11	10	10	9	8	9	11	13	15	19	23	24	26	27	28	29	31	33	16.1	33.2
25-Feb-04	34										13	19	21	22	23	23	24	23	25	25	25	22	19	16	*	33.9
26-Feb-04	13	12	12	14	16	17	18	17	16	15	16	17	17	18	19	21	24	26	26	26	26	26	26	26	19.3	26.2
27-Feb-04																35	34	28	25	22	20	18	16	11	*	34.6
28-Feb-04	7	5	4	4	4	6	7	8	9	11	12	12	13	14	16	18	21	21	20	20	19	17	15	13	12.3	21.3
29-Feb-04	10	10	11	11	12	15	16	17	19	21	22	24	25	26	29	33	36	37	36	34	32	28	23	21	22.8	37.2
																									*	0.0
																									*	0.0
Hourly Avg	15.1	14.3	14.4	14.8	15.5	16.4	16.4	15.8	15.6	15.8	16.1	17.2	18.1	19.2	20.7	22.8	23.8	24.1	23.5	22.5	21.5	20.1	18.7	17.4		
Hourly Max	38.0	38.3	38.9	39.4	39.9	40.2	40.3	39.5	38.4	38.0	37.4	36.6	36.5	36.7	37.5	38.1	38.9	39.1	39.4	39.9	40.3	40.4	40.1	38.9		

Station: Henry Pirker

Station Owner: PASZA

Parameter : **Carbon Monoxide (CO)**

Guideline Limit:	Alberta Environment:	1-hr 13 ppm	8-hr 5 ppm
		1-hr 13000 ppb	8-hr 5000 ppb

Sampling Dates: **February 1, 2004** **to** **March 1, 2004**

Summary

Number of 1-hr Exceedances:	0		
Maximum 1-hr Average:	7.0 ppm	12-Feb	8:00 9:00

AIC Time:	3 hrs	Operational Time:	461 hrs
Calibration Time:	8 hrs	AMD Operational Uptime:	66.7%

Percentile	99	95	75	50	25	5	1	Average	Geomean
	2.3	1.4	0.7	0.5	0.4	0.3	0.3	0.6 ppm	- ppm

Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

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-Feb-04	0.6	0.7	0.9	0.7	0.6	0.6	0.7	1.1	0.9	0.8	0.7	0.7	0.6	N	N	N	N	N	N	N	0.9	N	N	N	*	1.13
2-Feb-04	N	N	N	N	0.7	0.7	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	*	0.71
3-Feb-04	N	N	0.4	0.6	0.5	0.5	0.7	1.0	1.0	0.8	N	N	N	N	N	N	N	1.2	N	N	N	N	N	N	*	1.21
4-Feb-04	N	N	N	N	N	N	N	N	N	N	N	N	1.1	N	N	N	N	N	N	N	N	N	N	N	*	1.11
5-Feb-04	N	N	N	0.7	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	*	0.75
6-Feb-04	N	N	N	N	N	N	N	N	N	N	1.4	1.5	1.2	1.3	1.3	1.5	1.3	1.4	2.0	1.7	2.1	2.2	1.4	0.8	*	2.21
7-Feb-04	1.1	0.9	0.7	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.5	0.5	0.6	0.8	0.59	1.11
8-Feb-04	0.8	0.8	0.8	0.8	F	0.6	0.5	0.8	0.6	0.8	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.7	1.4	0.67	1.39
9-Feb-04	1.8	1.8	1.4	1.0	0.9	1.1	F	F	F	F	0.4	0.5	0.5	0.6	0.6	0.6	0.5	0.7	0.7	0.6	0.6	0.6	0.7	0.9	0.83	1.82
10-Feb-04	1.0	0.6	0.3	0.4	0.4	0.3	0.4	0.5	F	0.5	0.4	0.4	0.2	0.3	0.3	0.5	0.5	1.0	1.1	0.5	0.5	0.5	0.5	0.4	0.49	1.06
11-Feb-04	0.4	0.3	0.4	0.5	0.6	0.9	0.6	0.7	0.8	0.8	F	F	F	F	F	F	F	F	F	F	F	F	0.4	0.4	*	0.88
12-Feb-04	0.4	0.5	0.5	0.5	0.5	0.7	1.5	2.9	7.0	5.0	0.8	0.7	0.6	0.8	0.8	0.9	1.4	1.4	1.7	1.3	1.2	0.7	0.6	0.5	1.37	7.01
13-Feb-04	0.4	0.5	0.6	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.46	0.63
14-Feb-04	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.46	0.53
15-Feb-04	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.6	1.0	0.7	0.6	0.5	0.5	0.5	0.6	0.5	0.6	0.6	0.7	1.2	1.4	2.5	2.4	0.9	0.80	2.48
16-Feb-04	0.8	0.7	0.8	0.7	0.7	0.7	0.7	0.9	0.9	0.8	1.0	1.0	1.0	0.8	0.5	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.69	0.99
17-Feb-04	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.9	1.5	0.6	0.6	0.6	0.6	0.7	0.7	0.9	1.1	1.1	1.3	1.0	1.1	0.8	0.6	0.7	0.76	1.50
18-Feb-04	0.6	0.6	0.7	0.6	0.6	0.7	0.7	0.8	0.8	0.7	0.7	0.9	0.7	0.7	0.6	0.9	1.0	0.8	0.5	0.5	0.5	0.5	0.5	0.4	0.66	0.99
19-Feb-04	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.44	0.48
20-Feb-04	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.7	0.5	0.4	0.4	F	F	F	F	F	F	F	*	0.65
21-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.00
22-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.00
23-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	0.4	0.5	0.5	0.5	0.8	0.9	0.7	0.5	0.6	0.5	0.5	*	0.90
24-Feb-04	0.4	0.3	0.4	0.4	0.3	0.4	0.6	0.9	0.6	F	0.5	0.5	0.6	0.5	0.5	0.4	0.4	0.3	C	C	C	C	M	M	*	0.94
25-Feb-04	M	M	M	M	M	M	M	M	M	M	0.1	0.6	0.3	0.5	0.5	0.4	0.4	0.5	C	C	C	C	0.4	0.4	*	0.56
26-Feb-04	0.3	0.3	A	0.3	0.3	0.3	0.5	0.5	0.6	0.6	0.3	0.3	0.3	0.3	0.3	0.4	0.3	F	F	F	F	F	F	F	*	0.62
27-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	0.3	0.3	0.4	0.5	0.4	0.5	0.5	0.7	1.1	*	1.08
28-Feb-04	0.7	0.4	A	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.3	0.4	0.5	0.5	0.6	0.5	0.6	0.7	0.6	0.4	0.4	0.5	0.5	0.4	0.45	0.72
29-Feb-04	0.4	0.3	A	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.6	0.6	0.5	0.5	0.3	0.38	0.59
																									*	0.00
																									*	0.00
Hourly Avg	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	
Hourly Max	1.82	1.80	1.38	1.02	0.86	1.05	1.54	2.86	7.01	5.05	1.44	1.52	1.24	1.29	1.27	1.49	1.35	1.41	2.04	1.70	2.05	2.48	2.45	1.39		

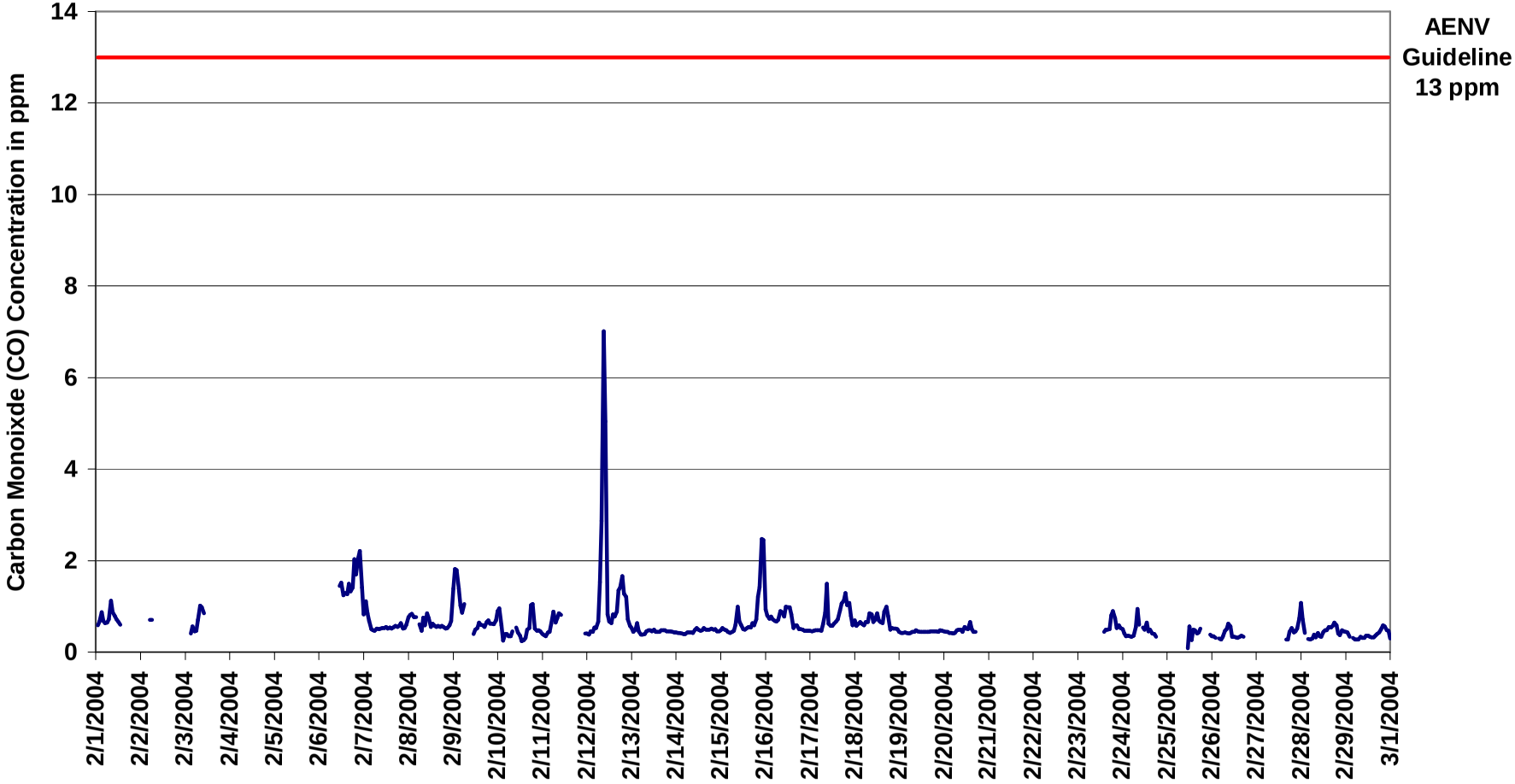


Figure 5. PASZA – Henry Pirker CO Monthly Trends

Station: Henry Pirker

Station Owner: PASZA

Parameter : **Carbon Monoxide (CO)**

8 HOUR RUNNING AVERAGE TABLE

Guideline Limit: Alberta Environment:

8-hr	5	ppm
8-hr	5000	ppb

Sampling Dates: **February 1, 2004** **to** **March 1, 2004**

Summary

Number of 8-hr Exceedances:	0			
Maximum 8-hr Average:	2.43	ppm	12-Feb	13:00 14:00

Percentile	99	95	75	50	25	5	1	Average	Geomean
	2.22	1.34	0.75	0.55	0.45	0.34	0.31	0.66 ppm	- ppm

Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

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-Feb-04								0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.6	0.6	0.9	0.9	0.9	0.9	*	0.89
2-Feb-04	0.9	0.9	0.9	0.9	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7												*	0.89
3-Feb-04			0.4	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.7	0.7	0.8	0.9	1.0	0.9	0.8	1.2	1.2	1.2	1.2	1.2	1.2	1.2	0.85	1.21
4-Feb-04	1.2												1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1					*	1.21
5-Feb-04				0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7														*	0.75
6-Feb-04											1.4	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.6	1.7	1.7	1.6	*	1.70
7-Feb-04	1.6	1.5	1.4	1.2	1.0	0.8	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.73	1.59
8-Feb-04	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.65	0.74
9-Feb-04	0.8	1.0	1.1	1.1	1.2	1.3	1.3	1.3	1.2	1.1	0.8	0.7	0.6	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.83	1.33
10-Feb-04	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.52	0.72
11-Feb-04	0.6	0.5	0.4	0.4	0.4	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8						0.4	0.4	0.61	0.83
12-Feb-04	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.9	1.8	2.3	2.4	2.4	2.4	2.4	2.3	2.1	1.4	0.9	1.0	1.1	1.2	1.2	1.1	1.1	1.30	2.43
13-Feb-04	1.0	0.9	0.7	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.52	0.98
14-Feb-04	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.46	0.50
15-Feb-04	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.8	1.0	1.3	1.3	0.63	1.30
16-Feb-04	1.3	1.3	1.3	1.3	1.2	1.0	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.5	0.85	1.35
17-Feb-04	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.7	0.8	0.9	0.9	1.0	1.0	1.0	1.0	0.70	1.00
18-Feb-04	0.9	0.8	0.8	0.7	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.71	0.90
19-Feb-04	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.45	0.52
20-Feb-04	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.47	0.52
21-Feb-04																									*	0.00
22-Feb-04																									*	0.00
23-Feb-04														0.4	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	*	0.63
24-Feb-04	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.48	0.62
25-Feb-04	0.3										0.1	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.4	*	0.46
26-Feb-04	0.4	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	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.37	0.44
27-Feb-04																0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.6	*	0.56
28-Feb-04	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.48	0.62
29-Feb-04	0.5	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	0.3	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.37	0.48
																									*	0.00
																									*	0.00
Hourly Avg	*	*	*	*	*	*	*	0.60	0.64	0.67	0.67	0.68	0.71	0.70	0.70	0.67	0.63	0.63	0.65	0.66	0.66	0.68	0.68	0.68		
Hourly Max	1.59	1.53	1.36	1.29	1.19	1.25	1.33	1.32	1.76	2.33	2.38	2.39	2.41	2.43	2.33	2.08	1.38	1.37	1.45	1.47	1.57	1.69	1.70	1.62		

Station: Henry Pirker

Station Owner: PASZA

Parameter : **Total Hydrocarbons (THC)**

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

Sampling Dates: **February 1, 2004** **to** **March 1, 2004**

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	5.6	ppm	12-Feb	8:00 9:00
Maximum 24-hr Average:	3.9	ppm	2-Feb	

AIC Time:	30 hrs			Operational Time:				539 hrs	
Calibration Time:	3 hrs			AMD Operational Uptime:				81.8%	
Percentile	99	95	75	50	25	5	1	Average	Geomean
	4.1	3.7	2.9	2.4	2.1	1.9	1.1	2.54 ppm	- ppm

Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

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-Feb-04	2.9	3.1	A	A	3.6	3.6	3.4	3.4	3.3	3.4	3.6	3.5	3.4	3.3	3.1	3.0	3.0	3.1	3.3	3.4	3.5	3.4	3.5	3.6	3.34	3.64
2-Feb-04	3.8	3.9	A	3.9	3.9	4.0	4.1	4.2	4.4	4.1	4.0	4.1	3.9	3.7	3.7	3.3	3.8	4.1	3.9	3.8	3.9	3.8	3.6	3.8	3.89	4.36
3-Feb-04	3.6	3.6	A	3.4	3.7	3.6	3.3	3.3	3.0	2.8	2.9	2.8	2.7	2.7	2.4	2.5	2.7	2.8	3.0	3.0	2.9	2.7	2.8	2.9	3.00	3.66
4-Feb-04	3.1	3.2	A	2.9	2.5	2.1	2.5	2.5	2.9	3.0	2.6	2.6	2.4	2.6	2.5	2.6	2.9	3.4	3.3	3.1	3.0	3.0	2.9	2.9	2.80	3.36
5-Feb-04	3.0	3.0	A	3.1	3.0	3.2	3.1	3.5	3.3	3.2	3.1	3.1	3.2	3.3	3.2	3.0	3.1	3.1	3.2	3.1	3.8	3.4	3.1	3.3	3.19	3.77
6-Feb-04	3.6	A	A	3.3	3.3	3.5	3.5	3.6	F	F	3.5	3.2	2.8	2.9	2.9	3.1	3.0	3.1	3.4	3.5	3.7	4.0	3.1	2.6	3.28	3.95
7-Feb-04	2.4	A	A	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.3	2.1	2.1	2.1	2.1	2.10	2.43
8-Feb-04	2.0	A	1.9	1.9	F	1.9	1.9	1.9	1.9	2.0	1.9	1.9	2.1	2.1	2.2	2.2	2.3	2.4	2.4	2.4	2.4	2.3	2.3	3.2	2.16	3.17
9-Feb-04	3.6	A	4.1	3.9	2.8	2.3	3.2	3.5	3.0	3.1	1.1	1.1	1.0	1.0	1.2	1.1	1.1	1.2	1.4	1.5	1.6	1.7	1.8	1.8	2.08	4.08
10-Feb-04	1.9	A	2.0	2.1	2.1	2.2	2.3	2.3	2.2	1.9	1.9	1.8	1.8	1.8	1.8	1.9	2.0	2.2	2.3	2.1	2.0	2.1	2.1	2.1	2.03	2.28
11-Feb-04	2.0	A	2.2	2.3	2.4	2.4	2.5	2.4	2.3	2.5	F	F	F	F	F	F	F	F	F	F	F	F	2.2	2.0	*	2.51
12-Feb-04	A	A	2.5	2.6	2.6	2.6	2.8	3.7	5.6	4.2	2.3	2.3	2.5	2.4	2.6	2.4	2.5	2.5	2.6	2.5	2.5	2.2	2.3	2.4	2.76	5.59
13-Feb-04	A	A	2.6	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.13	2.59
14-Feb-04	A	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.06	2.11
15-Feb-04	A	2.1	2.1	2.1	2.1	2.2	2.2	2.3	2.6	2.3	2.4	2.9	2.8	2.7	2.6	2.5	2.5	2.6	2.8	3.1	3.2	3.7	3.7	2.8	2.62	3.66
16-Feb-04	A	2.8	2.9	2.9	3.0	3.2	3.2	3.3	3.2	3.3	3.3	3.2	3.1	2.4	2.2	2.3	2.2	2.2	2.2	2.1	2.0	2.0	2.1	2.1	2.67	3.33
17-Feb-04	A	2.3	2.3	2.2	2.4	2.3	2.3	2.4	2.6	2.4	2.4	2.4	2.4	2.4	2.5	2.6	2.7	2.8	2.7	2.7	2.7	2.6	2.5	A	2.48	2.79
18-Feb-04	A	2.6	2.7	2.7	2.7	2.7	2.8	3.0	3.0	2.8	2.9	3.2	2.8	2.5	2.4	2.6	2.8	2.4	2.0	2.0	2.0	2.0	2.0	A	2.57	3.17
19-Feb-04	A	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.0	2.0	2.0	2.0	2.0	2.0	A	2.00	2.12
20-Feb-04	2.0	2.0	1.9	1.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	2.0	F	F	F	F	F	F	F	*	2.03
21-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.00
22-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.00
23-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	2.5	2.4	2.5	2.6	2.8	2.8	2.8	2.8	2.8	F	F	*	2.83
24-Feb-04	2.6	2.6	2.7	2.8	2.8	2.9	3.1	3.4	3.0	F	3.0	3.0	2.9	2.4	2.3	2.5	2.2	C	C	C	M	M	M	M	*	3.36
25-Feb-04	M	M	M	M	M	M	M	M	M	M	2.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	M	M	1.9	2.0	2.0	2.0	*	2.46
26-Feb-04	2.0	2.1	A	1.9	1.8	1.9	2.0	2.2	2.2	2.3	1.9	1.9	1.9	2.0	2.0	2.0	2.0	F	F	F	F	F	F	F	*	2.35
27-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	2.0	2.0	2.1	2.2	2.2	2.2	2.3	2.4	2.6	*	2.61
28-Feb-04	2.5	2.4	A	2.5	2.5	2.6	2.7	2.8	2.9	2.9	2.8	2.8	2.6	2.5	2.4	2.2	2.1	2.2	2.4	2.4	2.5	2.5	2.6	2.6	2.53	2.88
29-Feb-04	2.6	2.5	A	2.7	2.6	2.5	2.5	2.6	2.6	2.6	2.3	2.2	2.2	2.1	2.1	2.0	2.1	2.2	2.2	2.3	2.3	2.2	2.3	2.3	2.35	2.68
																									*	0.00
																									*	0.00
Hourly Avg	*	*	*	2.59	2.60	2.58	2.65	2.76	2.79	2.69	2.52	2.51	2.45	2.38	2.34	2.33	2.39	2.50	2.57	2.56	2.57	2.56	2.49	*		
Hourly Max	3.77	3.86	4.08	3.92	3.92	3.97	4.05	4.23	5.59	4.25	3.99	4.08	3.92	3.69	3.67	3.34	3.84	4.08	3.89	3.81	3.85	3.95	3.65	3.75		

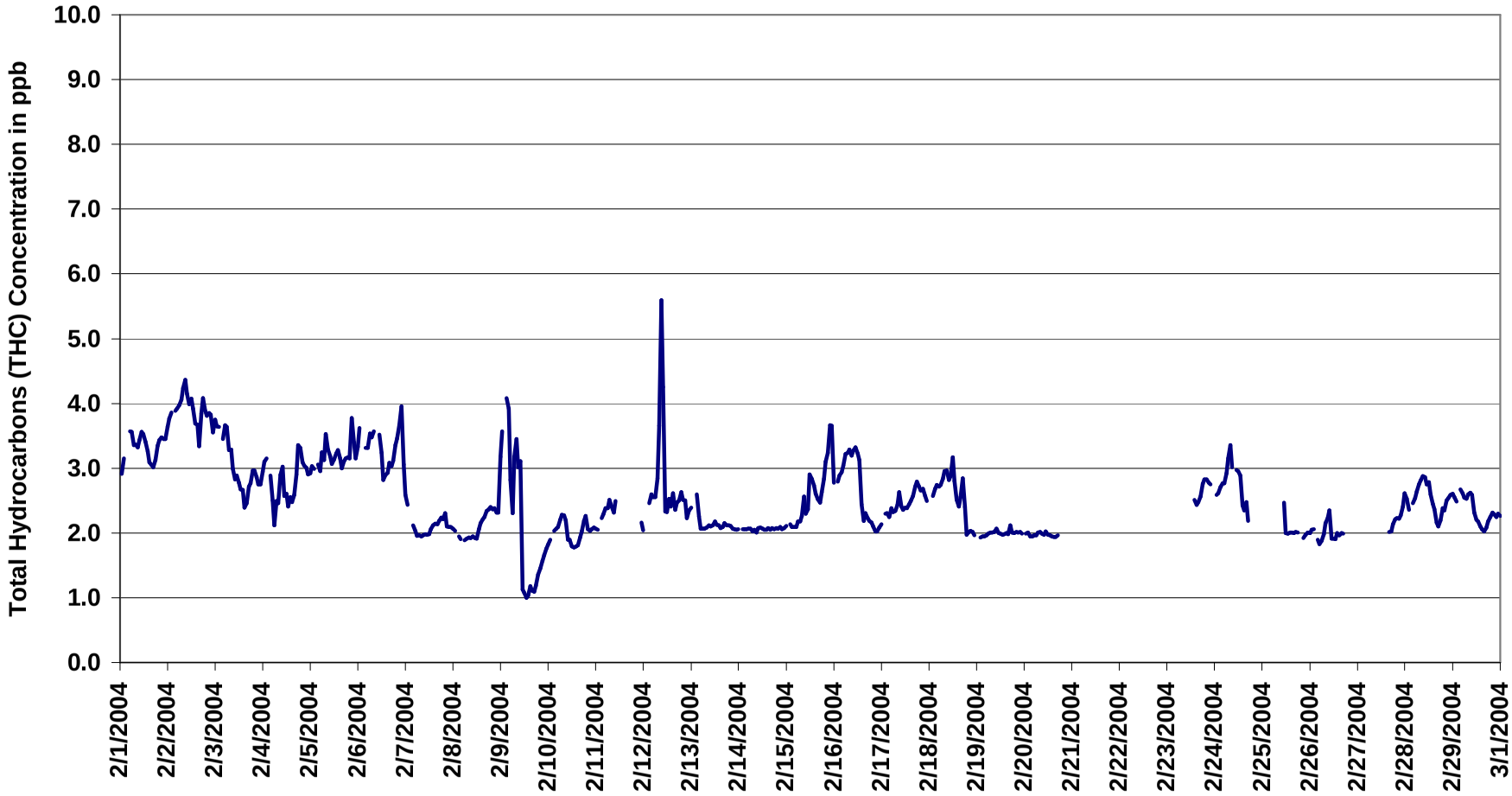


Figure 6. PASZA – Henry Pirker THC Monthly Trends

Station: Henry Pirker

Station Owner: PASZA

Parameter : **Total Reduced Sulphur (TRS)**

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

Sampling Dates: **February 1, 2004** **to** **March 1, 2004**

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	2.1	ppb	4-Feb	18:00 19:00
Maximum 24-hr Average:	0.8	ppb	4-Feb	

AIC Time:	31 hrs				Operational Time:															532 hrs					
Calibration Time:	8 hrs				AMD Operational Uptime:															80.9%					
Percentile	99	95	75	50	25	5	1	Average	Geomean																
	1.4	0.7	0.4	0.1	0.0	0.0	0.0	0.22 ppb	- ppb																

Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

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-Feb-04	0	0	A	A	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.3	0.5
2-Feb-04	0	0	A	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.6
3-Feb-04	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0.3	0.5
4-Feb-04	1	1	A	0	0	0	0	1	1	1	0	1	0	0	1	1	1	2	2	2	1	2	1	1	0.8	2.1
5-Feb-04	1	1	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.4	1.0
6-Feb-04	1	A	A	0	0	0	0	0	F	F	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0.5	1.1
7-Feb-04	0	A	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.2
8-Feb-04	0	A	0	0	F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.3
9-Feb-04	0	A	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.1
10-Feb-04	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.5
11-Feb-04	0	A	0	0	0	0	0	0	0	0	F	F	F	F	F	F	F	F	F	F	F	F	0	0	*	0.1
12-Feb-04	A	A	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	1.7
13-Feb-04	A	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0.3
14-Feb-04	A	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	0.1
15-Feb-04	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.4
16-Feb-04	A	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	0.2
17-Feb-04	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.1
18-Feb-04	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.1	0.2
19-Feb-04	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	A	0.0	0.0
20-Feb-04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	F	F	F	F	F	F	F	*	0.0
21-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.0
22-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.0
23-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	0	0	0	0	0	F	F	*	0.0
24-Feb-04	0	0	0	0	0	0	0	0	0	F	0	0	0	0	0	0	0	0	A	M	M	M	M	M	*	0.0
25-Feb-04	M	M	M	M	M	M	M	M	M	M	C	C	C	C	C	C	C	C	M	M	1	1	1	1	*	0.8
26-Feb-04	1	1	A	0	0	0	0	1	0	0	0	0	0	0	0	0	0	F	F	F	F	F	F	F	*	0.7
27-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	0	0	0	0	0	0	0	0	1	*	0.5
28-Feb-04	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.4	0.5
29-Feb-04	0	0	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.4	0.6
																									*	0.0
																									*	0.0
Hourly Avg	*	*	*	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.3	*		
Hourly Max	0.9	0.6	0.3	0.5	0.5	0.4	0.5	0.8	1.7	1.3	0.5	0.6	0.4	0.5	0.5	0.7	0.9	1.7	2.1	1.5	1.4	1.5	1.0	0.8		

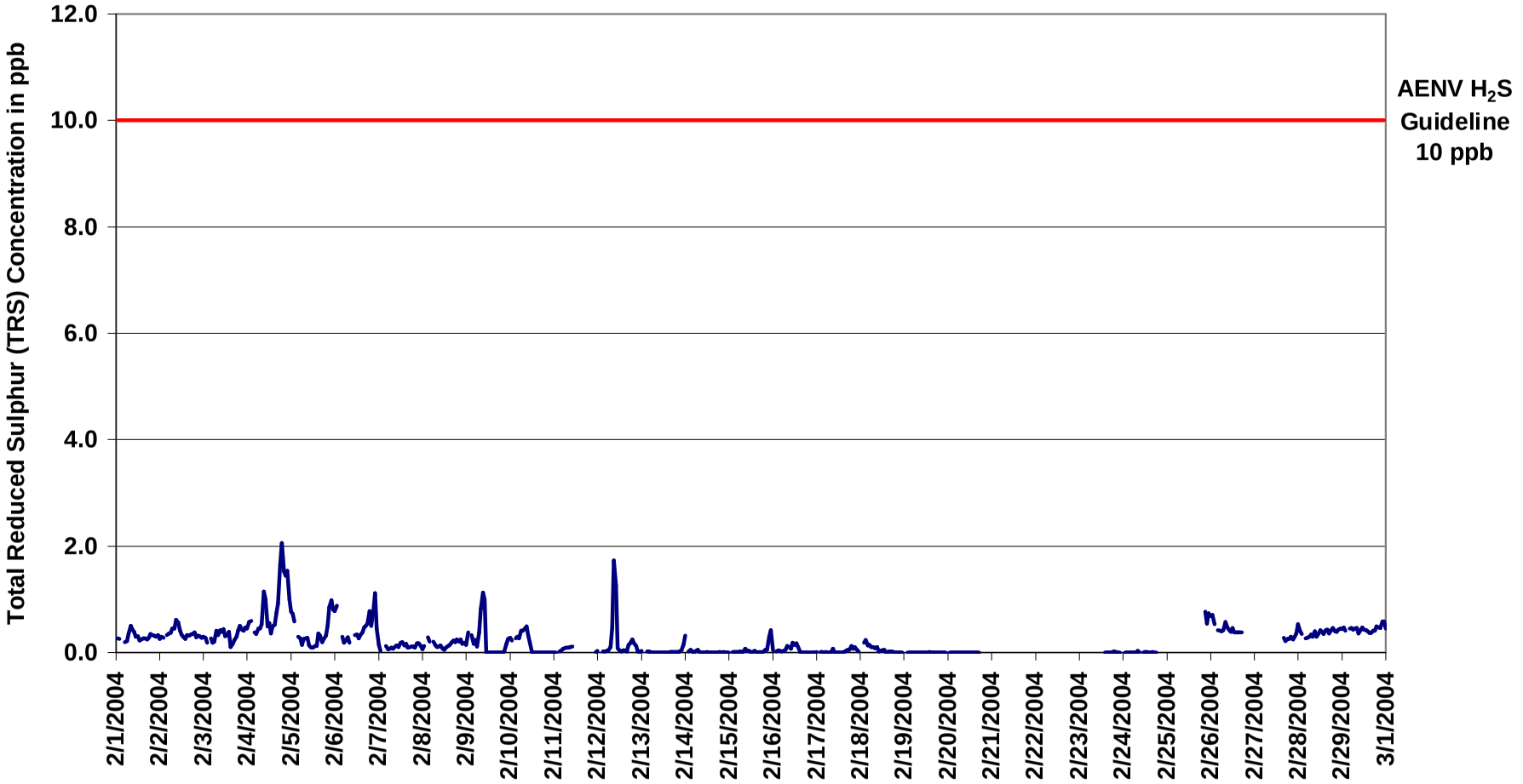


Figure 7. PASZA – Henry Pirker TRS Monthly Trends

Station: Henry Pirker

Station Owner: PASZA

Parameter : **Particulate Matter ($PM_{2.5}$)**

Guideline Limit: Canada Wide Standard (considered as an absolute value) — 1-hr - µg/m³ | 24-hr 30 µg/m³

Sampling Dates: **February 1, 2004** **to** **March 1, 2004**

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	54.8	µg/m³	25-Feb	20:00 21:00
Maximum 24-hr Average:	14.0	µg/m³	9-Feb	

AIC Time:	0 hrs	Operational Time:	552 hrs
Calibration Time:	0 hrs	AMD Operational Uptime:	79.3%

Percentile	99	95	75	50	25	5	1	Average	Geomean
	33.2	19.2	10.3	6.5	1.6	0.0	0.0	7.3 µg/m³	- µg/m³

Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

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-Feb-04	4	5	6	10	5	7	12	24	14	13	10	8	8	12	12	11	11	14	13	13	15	15	13	12	11.1	23.7
2-Feb-04	12	8	11	11	11	10	14	8	18	17	10	6	7	4	9	6	6	7	8	9	7	5	5	7	9.0	18.2
3-Feb-04	5	1	4	5	2	3	14	15	16	20	22	13	12	10	5	5	10	8	12	12	12	9	9	10	9.7	21.8
4-Feb-04	11	9	8	6	2	0	6	5	19	22	13	9	6	6	5	6	10	15	18	38	24	31	21	17	12.8	38.3
5-Feb-04	13	10	14	4	2	3	10	10	11	7	7	4	5	4	11	9	7	4	3	7	15	15	8	10	8.1	15.3
6-Feb-04	15	11	3	3	2	4	3	2	2	15	16	20	11	14	9	12	9	9	12	12	17	23	14	7	10.3	23.3
7-Feb-04	5	0	N	N	N	N	0	0	0	0	1	0	N	N	N	N	N	N	0	2	0	2	4	4	*	5.1
8-Feb-04	4	4	3	2	3	1	0	0	0	0	0	0	N	N	N	N	N	N	N	N	2	11	21	25	*	25.1
9-Feb-04	35	34	20	18	16	12	20	26	30	31	35	17	N	N	0	0	0	0	1	1	0	0	0	N	14.0	35.0
10-Feb-04	N	N	N	N	N	N	0	1	2	40	9	0	0	0	0	0	0	5	5	0	6	1	0	0	3.8	40.0
11-Feb-04	0	0	0	0	0	1	4	2	1	6	1	F	F	F	F	F	F	F	F	F	F	F	0	0	*	6.1
12-Feb-04	0	0	1	2	3	2	5	13	31	33	3	1	3	5	6	6	10	8	8	5	7	1	2	0	6.5	32.8
13-Feb-04	1	2	3	4	0	0	0	0	0	1	0	0	0	0	0	1	0	1	1	1	1	1	1	1	0.8	4.0
14-Feb-04	0	1	1	2	1	1	2	1	4	4	6	5	5	6	7	8	7	10	11	9	10	9	8	8	5.3	11.2
15-Feb-04	8	9	9	9	8	9	9	8	13	12	16	9	10	13	14	14	17	14	15	20	20	26	23	10	13.1	25.9
16-Feb-04	10	9	9	7	6	5	4	5	7	9	12	8	11	5	0	1	0	0	4	1	1	3	5	7	5.4	12.2
17-Feb-04	7	4	5	5	6	3	3	6	12	6	6	7	6	9	12	18	17	14	12	12	10	8	8	8	8.5	18.5
18-Feb-04	6	5	9	5	4	4	6	7	8	6	6	13	12	9	6	11	13	9	0	0	0	0	1	0	5.9	13.4
19-Feb-04	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.7
20-Feb-04	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	F	F	F	F	F	F	0.2	1.1
21-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.0
22-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.0
23-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	7	5	8	7	11	11	9	7	5	4	5	*	11.1
24-Feb-04	5	4	4	4	3	4	5	9	8	6	10	10	17	12	13	11	7	5	9	10	M	M	M	M	7.7	16.5
25-Feb-04	M	M	M	M	M	M	M	M	M	M	M	M	M	6	6	8	9	8	7	6	55	12	7	7	*	54.8
26-Feb-04	8	7	10	9	7	9	8	13	N	8	9	7	6	7	7	8	7	F	F	F	F	F	F	F	*	13.3
27-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	9	8	6	11	10	11	13	12	13	14	*	14.4
28-Feb-04	14	10	8	7	6	5	7	6	10	10	7	8	10	8	14	10	7	8	12	11	9	9	8	9	8.9	13.8
29-Feb-04	7	6	8	6	6	6	4	5	6	4	6	6	7	7	8	10	9	9	11	12	11	9	11	10	7.6	11.8
																									*	0.0
																									*	0.0
Hourly Avg	7.4	6.0	6.1	5.4	4.3	4.1	5.6	6.9	9.2	11.2	8.6	6.7	*	6.6	6.6	7.2	7.1	7.4	8.0	8.7	10.5	9.0	7.8	7.5		
Hourly Max	35.0	33.7	19.7	17.9	15.7	12.3	19.6	25.5	31.1	40.0	34.6	19.6	16.5	13.8	13.9	18.5	17.5	14.6	18.3	38.3	54.8	31.0	22.8	25.1		

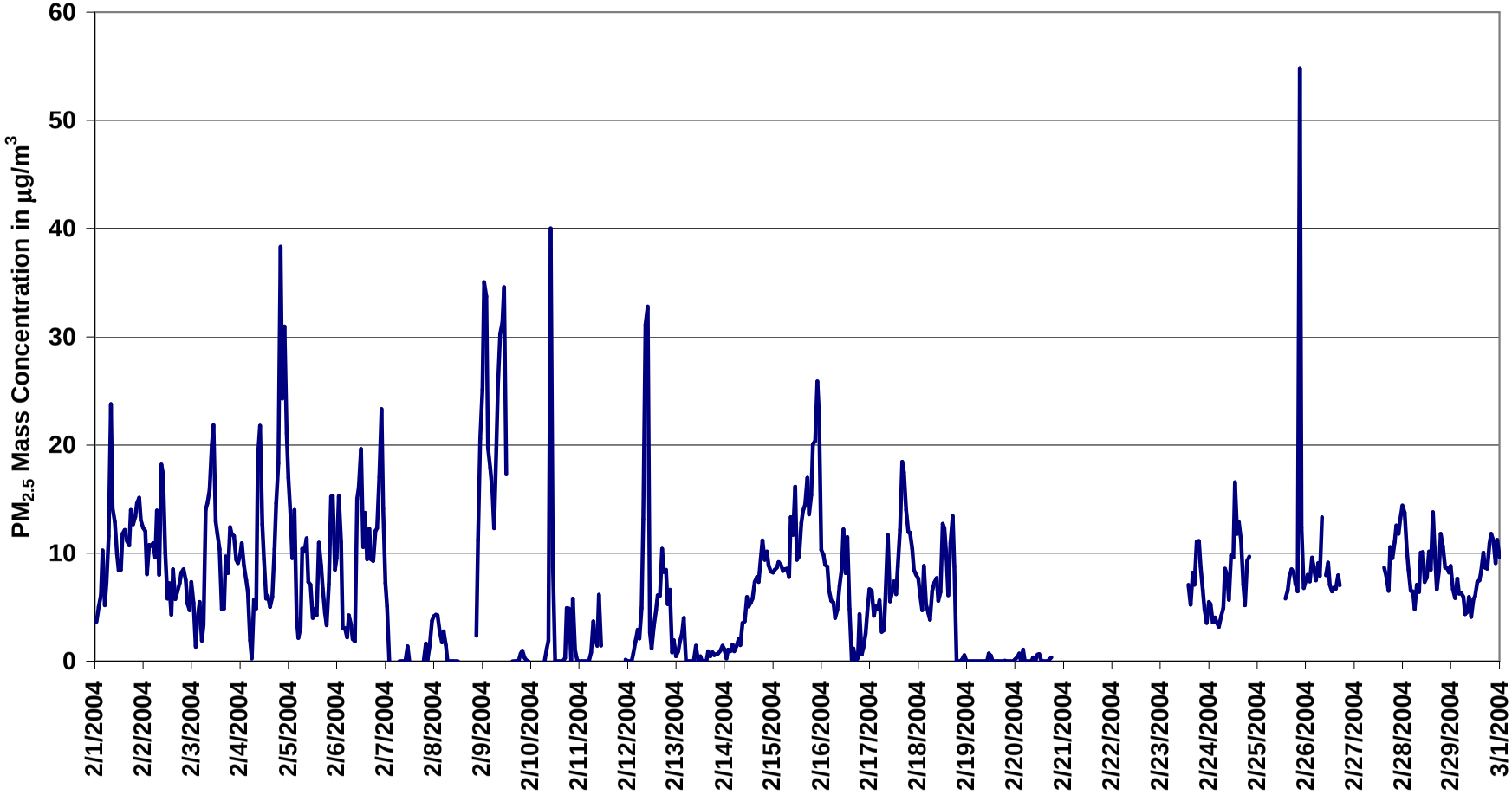


Figure 8. PASZA – Henry Pirker $PM_{2.5}$ Monthly Trends

Station: Henry Pirker

Station Owner: PASZA

Parameter : Relative Humidity (%)

Guideline Limit:

Sampling Dates: **February 1, 2004** **to** **March 1, 2004**

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	90.5	%	9-Feb	3:00 4:00
Maximum 24-hr Average:	83.4	%	14-Feb	

AIC Time:	0 hrs	Operational Time:	581 hrs
Calibration Time:	0 hrs	AMD Operational Uptime:	83.5%

Percentile	99	95	75	50	25	5	1	Average	Geomean
	89.4	86.4	81.0	72.0	64.1	54.7	49.1	71.8 %	- %

Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

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-Feb-04	65	66	65	65	65	65	65	66	64	65	64	57	55	45	49	56	66	70	72	69	69	68	67	68	64	72
2-Feb-04	68	68	68	68	69	68	67	66	68	68	68	67	62	56	53	62	61	70	73	72	73	72	72	71	67	73
3-Feb-04	69	69	69	69	69	69	70	71	72	73	74	76	80	78	78	79	80	81	81	81	81	81	81	80	75	81
4-Feb-04	80	78	77	80	80	80	80	77	78	78	72	55	51	49	54	51	61	74	80	79	78	75	74	73	71	80
5-Feb-04	74	73	72	71	72	71	71	72	71	72	73	63	50	55	64	69	71	77	79	80	80	81	82	83	72	83
6-Feb-04	83	82	83	80	81	81	80	82	84	79	74	73	69	69	65	68	73	82	86	89	89	89	89	85	80	89
7-Feb-04	84	82	81	82	74	69	69	71	69	63	60	59	56	54	55	54	57	57	59	64	65	67	69	71	66	84
8-Feb-04	69	72	71	74	72	72	71	72	72	69	60	55	54	54	53	57	59	61	66	67	69	75	77	82	67	82
9-Feb-04	84	87	89	91	87	85	85	86	85	82	66	61	56	53	56	58	58	61	63	67	69	67	67	69	72	91
10-Feb-04	68	71	73	74	74	74	71	73	76	76	75	72	71	66	60	59	55	57	64	63	66	68	71	72	69	76
11-Feb-04	71	73	78	80	80	82	81	82	81	73	68	F	F	F	F	F	F	F	F	F	F	F	69	67	*	82
12-Feb-04	68	76	85	85	86	87	88	89	89	71	57	51	51	46	47	55	62	68	75	76	77	76	79	78	72	89
13-Feb-04	80	83	84	81	80	76	75	73	71	68	66	63	64	64	64	68	70	73	75	76	77	78	78	78	73	84
14-Feb-04	79	81	85	86	86	86	86	86	86	85	84	83	82	82	80	80	81	83	85	84	84	82	83	84	83	86
15-Feb-04	85	85	84	85	85	84	84	87	85	75	72	55	55	55	59	56	59	70	78	80	83	85	84	83	76	87
16-Feb-04	83	81	82	81	80	79	80	80	80	71	63	57	57	56	57	56	59	61	61	63	65	65	72	76	69	83
17-Feb-04	87	89	88	86	88	86	82	86	84	75	65	57	57	55	56	57	59	66	76	80	79	81	84	83	75	89
18-Feb-04	83	83	83	84	83	82	82	81	81	78	68	66	63	51	49	44	48	58	57	59	59	62	66	66	68	84
19-Feb-04	64	68	70	68	67	65	66	65	63	61	57	57	55	54	53	54	55	56	59	61	60	65	65	62	61	70
20-Feb-04	65	69	66	67	68	70	71	71	66	67	64	62	60	56	56	56	60	58	F	F	F	F	F	F	64	71
21-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0
22-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0
23-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	57	54	57	58	63	72	75	79	80	79	79	*	80
24-Feb-04	79	80	82	82	82	82	82	81	77	67	56	54	55	62	59	60	57	61	68	71	M	M	M	M	70	82
25-Feb-04	M	M	M	M	M	M	M	M	M	M	M	M	M	60	53	59	60	66	71	71	73	75	77	80	*	80
26-Feb-04	82	82	83	82	81	83	83	84	83	79	84	83	81	81	80	79	79	82	F	F	F	F	F	F	82	84
27-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	65	69	70	72	76	78	82	83	86	90	*	90
28-Feb-04	90	88	90	89	89	90	90	88	86	85	79	69	64	63	62	62	56	64	75	77	77	78	81	84	78	90
29-Feb-04	86	86	86	85	85	85	86	87	82	71	71	69	55	59	58	56	56	61	71	75	79	82	83	83	75	87
																									*	0
																									*	0
Hourly Avg	77	78	79	79	78	78	78	78	77	73	68	64	61	59	59	61	63	67	72	73	74	75	76	77		
Hourly Max	90	89	90	91	89	90	90	89	89	85	84	83	82	82	80	80	81	83	86	89	89	89	89	90		

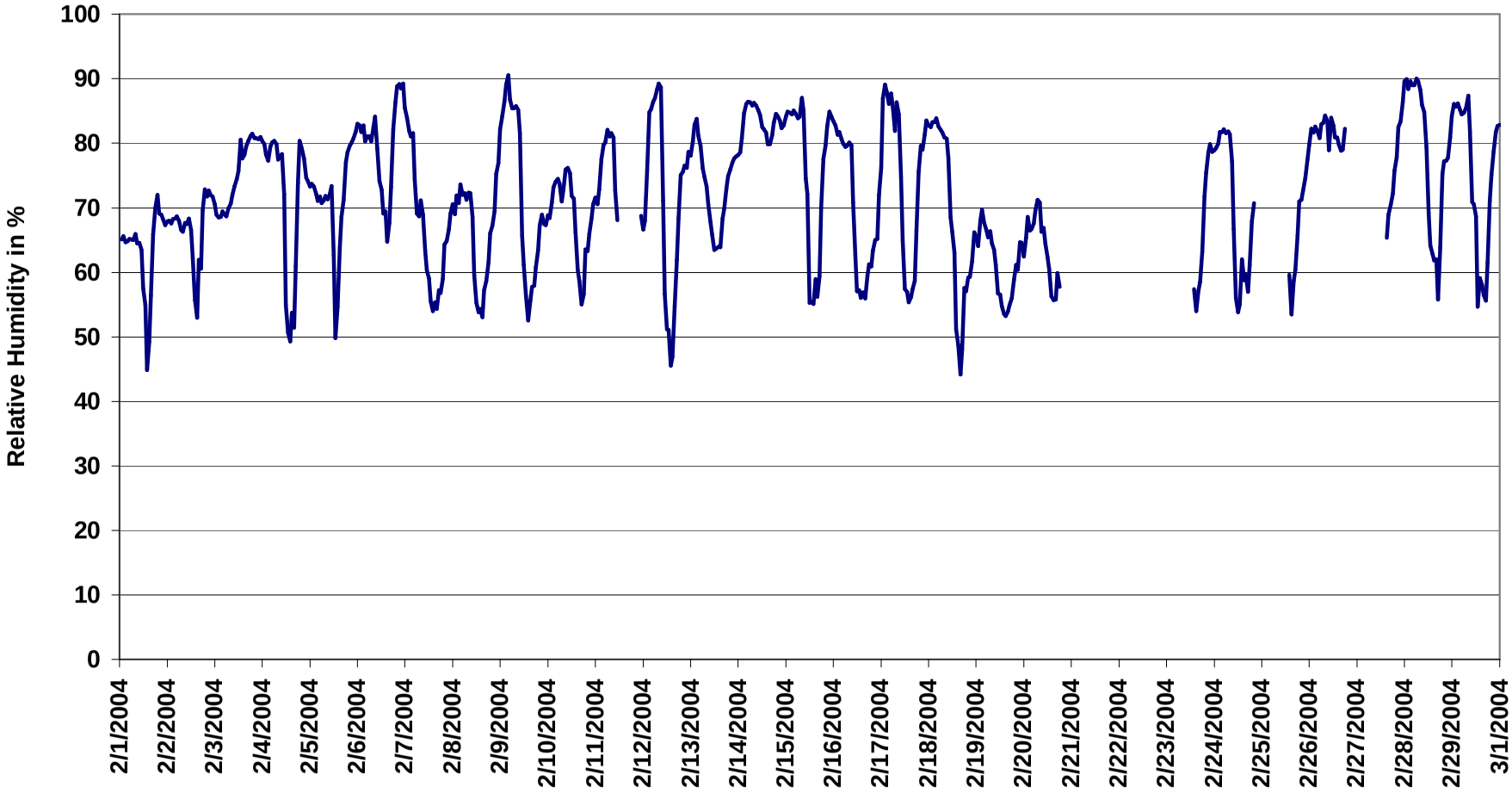


Figure 9. PASZA – Henry Pirker Relative Humidity Monthly Trends

Station: Henry Pirker

Station Owner: PASZA

Parameter : Temperature (°C)

Guideline Limit:

Sampling Dates: **February 1, 2004** **to** **March 1, 2004**

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	7.6	°C	12-Feb	14:00 15:00
Maximum 24-hr Average:	3.3	°C	20-Feb	

AIC Time:	0 hrs	Operational Time:	580 hrs
Calibration Time:	0 hrs	AMD Operational Uptime:	83.3%

Percentile	99	95	75	50	25	5	1	Average	Geomean
	6.3	4.2	-1.0	-7.4	-12.3	-27.8	-31.0	-8.1 °C	- °C

Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

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-Feb-04	-31	-31	-31	-31	-31	-31	-31	-31	-32	-30	-27	-23	-24	-18	-18	-19	-21	-23	-26	-28	-28	-29	-29	-29	-27.2	-18.2
2-Feb-04	-29	-29	-29	-29	-28	-29	-30	-30	-29	-29	-25	-23	-20	-19	-17	-18	-20	-23	-25	-26	-25	-26	-26	-27	-25.4	-16.5
3-Feb-04	-28	-29	-28	-28	-28	-28	-26	-25	-24	-22	-21	-20	-13	-14	-14	-13	-13	-12	-13	-13	-13	-14	-15	-17	-19.6	-12.4
4-Feb-04	-18	-20	-21	-19	-18	-16	-17	-19	-19	-17	-13	-9	-7	-6	-6	-4	-6	-10	-15	-18	-20	-22	-23	-24	-15.2	-4.4
5-Feb-04	-23	-24	-24	-25	-25	-25	-26	-25	-25	-23	-19	-14	-11	-11	-11	-11	-12	-13	-12	-12	-11	-11	-12	-13	-17.4	-10.8
6-Feb-04	-13	-14	-15	-15	-14	-13	-11	-10	-8	-7	-5	-4	-3	-3	0	0	-2	-4	-6	-8	-8	-7	-7	-5	-7.6	-0.2
7-Feb-04	-4	-2	-1	-2	-2	-2	-2	-2	-2	-2	-1	0	1	2	1	0	0	-1	-2	-4	-4	-4	-5	-5	-1.7	1.9
8-Feb-04	-4	-4	-2	-2	-1	-1	-1	-1	-1	-1	1	2	4	4	5	4	3	2	0	0	-1	-3	-3	-5	-0.2	5.0
9-Feb-04	-5	-6	-7	-8	-9	-10	-9	-8	-8	-4	4	6	6	7	6	6	6	5	4	3	2	2	3	2	-0.6	6.6
10-Feb-04	3	2	1	1	0	0	0	0	-1	-2	-2	-1	-1	0	0	1	0	-1	-4	-4	-5	-7	-7	-8	-1.5	2.7
11-Feb-04	-8	-10	-14	-16	-17	-16	-16	-16	-15	-14	-13	F	F	F	F	F	F	F	F	F	F	F	-1	1	*	0.5
12-Feb-04	0	-5	-9	-9	-10	-11	-11	-9	-9	-3	1	3	5	7	8	6	4	2	0	-2	-3	-3	-4	-5	-2.5	7.6
13-Feb-04	-7	-7	-7	-4	-5	-7	-9	-10	-11	-11	-11	-10	-10	-10	-9	-10	-10	-11	-11	-11	-12	-12	-12	-12	-9.5	-4.3
14-Feb-04	-12	-12	-12	-12	-12	-12	-12	-12	-12	-12	-11	-9	-9	-9	-8	-8	-9	-9	-10	-9	-9	-9	-9	-10	-10.4	-8.3
15-Feb-04	-10	-10	-10	-10	-10	-10	-10	-11	-13	-11	-11	-6	-5	-3	-3	-3	-3	-6	-9	-10	-11	-10	-12	-14	-8.8	-2.7
16-Feb-04	-15	-16	-16	-17	-18	-18	-19	-18	-19	-16	-11	-8	-6	0	1	1	0	-2	-1	-2	-2	-2	-4	-5	-8.9	0.8
17-Feb-04	-5	-5	-5	-5	-6	-8	-9	-11	-11	-8	-5	-4	-4	-3	-2	-1	-1	-4	-8	-10	-11	-12	-13	-13	-6.8	-1.0
18-Feb-04	-13	-14	-13	-13	-15	-15	-15	-14	-13	-11	-8	-6	-4	1	2	4	3	1	2	2	1	1	1	2	-5.5	4.4
19-Feb-04	3	2	2	2	2	2	1	2	2	3	4	5	5	5	6	5	5	4	4	2	2	1	0	2	2.9	5.5
20-Feb-04	1	1	2	2	2	1	1	1	2	2	4	5	5	7	7	7	5	5	F	F	F	F	F	F	3.3	6.8
21-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.0
22-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0.0
23-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	0	2	2	1	0	-4	-5	-6	-8	-8	-9	*	2.2
24-Feb-04	-10	-11	-11	-12	-13	-13	-12	-12	-12	-9	-5	-4	-2	-1	0	1	2	0	-2	-3	M	M	M	M	-6.5	1.9
25-Feb-04	M	M	M	M	M	M	M	M	M	M	M	M	M	0	3	2	1	-2	-4	-5	-5	-6	-8	-10	*	2.6
26-Feb-04	-10	-11	-12	-8	-7	-7	-8	-11	-11	-9	-6	-6	-6	-6	-5	-5	-5	F	F	F	F	F	F	F	*	-4.8
27-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	0	-1	-1	-1	-2	-2	-3	-3	-4	-5	*	-0.2
28-Feb-04	-6	-8	-7	-7	-8	-8	-8	-10	-11	-12	-10	-5	-2	-1	1	2	4	1	-3	-4	-4	-4	-6	-7	-5.1	3.7
29-Feb-04	-9	-11	-11	-11	-10	-9	-9	-10	-9	-7	-4	-2	1	1	2	3	3	1	-2	-4	-5	-10	-9	-9	-5.5	2.9
																									*	0.0
																									*	0.0
Hourly Avg	-10.6	-11.4	-11.7	-11.6	-11.8	-11.9	-12.0	-12.2	-12.1	-10.6	-8.1	-5.8	-4.4	-2.9	-2.0	-1.9	-2.5	-4.0	-6.2	-7.3	-7.9	-8.6	-8.9	-9.3		
Hourly Max	3.0	2.3	2.0	2.1	2.0	1.7	1.2	1.7	2.3	2.6	4.4	5.6	6.1	7.3	7.6	6.7	5.5	5.3	3.7	2.7	2.1	2.4	2.6	2.4		

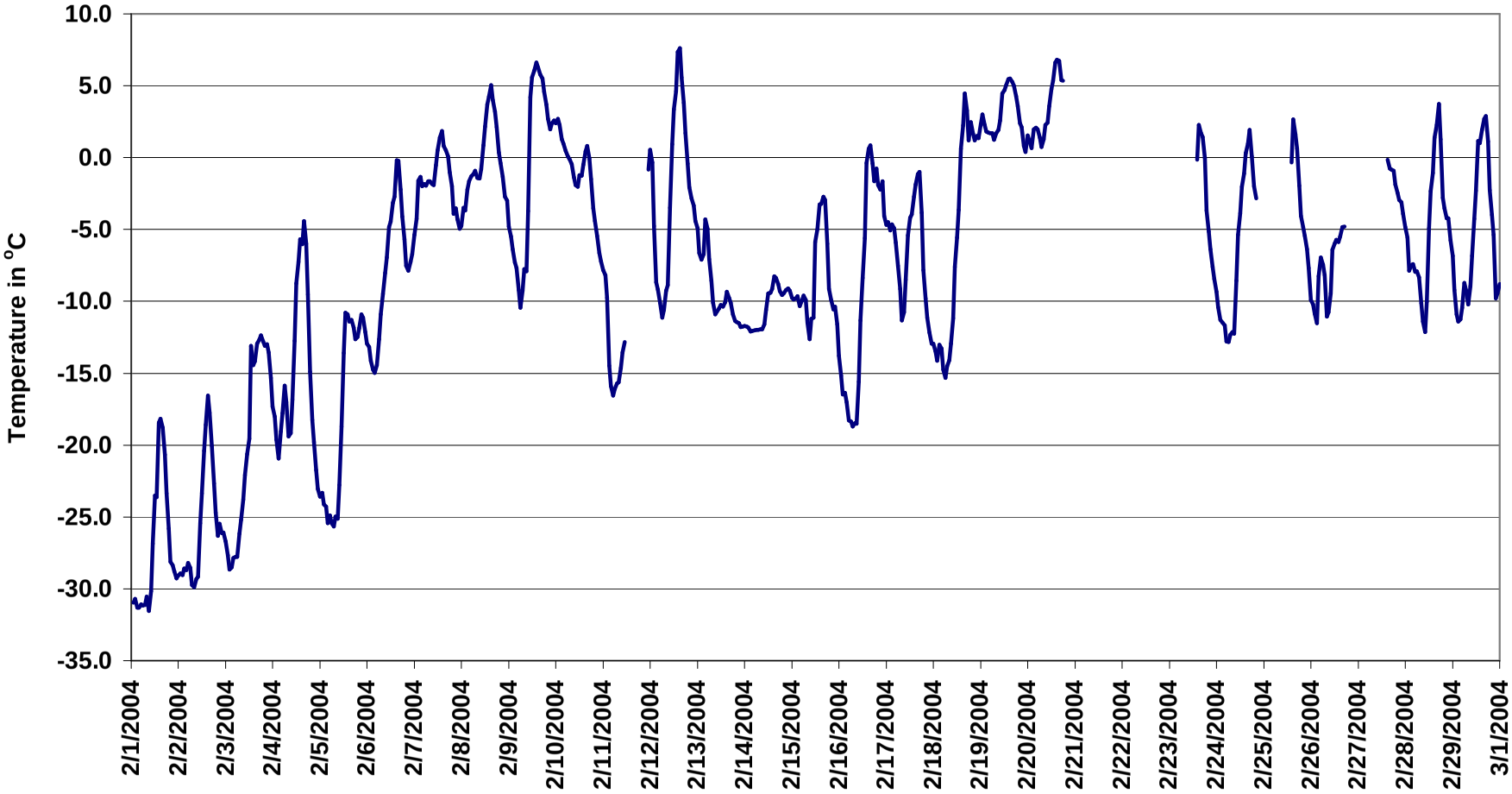


Figure 10. PASZA – Henry Pirker Temperature Monthly Trends

Station: Henry Pirker

Station Owner: PASZA

Parameter : Solar Radiation (W/m^2)

Guideline Limit:

Sampling Dates: **February 1, 2004** **to** **March 1, 2004**

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	487.8	W/m^2	29-Feb	13:00 14:00
Maximum 24-hr Average:	126.9	W/m^2	29-Feb	

AIC Time:	0 hrs	Operational Time:	581 hrs
Calibration Time:	0 hrs	AMD Operational Uptime:	83.5%

Percentile	99	95	75	50	25	5	1	Average	Geomean
	451.4	342.0	113.2	2.6	0.1	0.0	0.0	72.7 W/m^2	- W/m^2

Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

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-Feb-04	0	0	0	0	0	0	0	0	2	64	147	192	214	214	193	148	74	16	0	0	0	0	0	0	53	214
2-Feb-04	0	0	0	0	0	0	0	0	2	29	123	182	223	229	204	159	76	12	0	0	0	0	0	0	52	229
3-Feb-04	0	0	0	0	0	0	0	0	1	19	56	94	177	115	77	41	18	8	0	1	1	1	1	1	25	177
4-Feb-04	1	1	0	1	1	1	1	1	3	71	134	167	183	187	181	159	86	25	2	2	2	2	1	1	50	187
5-Feb-04	1	1	1	1	1	1	0	0	4	70	136	197	205	163	95	108	63	6	1	1	1	1	1	1	44	205
6-Feb-04	1	1	1	1	1	1	1	1	1	82	101	97	145	155	309	232	99	22	3	3	3	3	3	3	53	309
7-Feb-04	3	2	3	3	3	3	3	3	6	71	202	290	344	287	204	124	53	15	4	4	4	4	4	3	68	344
8-Feb-04	3	3	3	3	3	3	3	3	8	41	203	287	342	341	319	224	99	30	5	5	5	5	5	5	81	342
9-Feb-04	4	4	4	4	4	4	3	3	7	38	85	163	170	313	215	237	117	18	1	1	2	2	2	2	59	313
10-Feb-04	2	2	3	3	3	3	3	3	13	65	112	201	186	230	319	250	93	25	0	0	0	0	0	0	63	319
11-Feb-04	0	0	0	0	0	0	0	0	8	71	135	F	F	F	F	F	F	F	F	F	F	F	0	0	*	135
12-Feb-04	0	0	0	0	0	0	0	0	7	93	228	304	346	414	309	144	71	17	0	0	0	0	0	0	81	414
13-Feb-04	0	0	0	0	0	0	0	0	11	62	113	156	157	148	205	110	79	9	0	0	0	0	0	0	44	205
14-Feb-04	0	0	0	0	0	0	0	0	3	27	78	167	118	117	108	81	42	9	0	0	0	0	0	0	31	167
15-Feb-04	0	0	0	0	0	0	0	0	13	74	101	229	264	298	360	302	199	29	0	0	0	0	0	0	78	360
16-Feb-04	0	0	0	0	0	0	0	0	16	118	248	336	394	376	284	252	103	25	0	0	0	0	0	0	90	394
17-Feb-04	0	0	0	0	0	0	0	0	27	137	255	342	381	397	384	243	186	49	1	0	0	0	0	0	100	397
18-Feb-04	0	0	0	0	0	0	0	0	14	82	173	194	253	407	334	294	163	28	0	0	0	0	0	0	81	407
19-Feb-04	0	0	0	0	0	0	0	0	30	92	271	201	246	277	250	248	161	45	1	0	0	0	0	0	76	277
20-Feb-04	0	0	0	0	0	0	0	0	36	67	126	193	239	413	388	292	70	43	F	F	F	F	F	F	104	413
21-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0
22-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	0
23-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	452	417	335	217	59	1	0	0	0	0	0	*	452
24-Feb-04	0	0	0	0	0	0	0	1	39	161	255	360	422	228	256	400	223	69	2	0	M	M	M	M	121	422
25-Feb-04	M	M	M	M	M	M	M	M	M	M	M	M	M	408	455	332	213	66	2	0	0	0	0	0	*	455
26-Feb-04	0	0	0	0	0	0	0	0	18	105	113	127	136	124	116	130	85	29	F	F	F	F	F	F	55	136
27-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	454	315	159	59	2	0	0	0	0	0	*	454
28-Feb-04	0	0	0	0	0	0	0	1	14	54	228	358	447	471	443	358	236	67	3	0	0	0	0	0	112	471
29-Feb-04	0	0	0	0	0	0	0	1	51	193	338	326	486	488	451	365	242	100	5	0	0	0	0	0	127	488
																									*	0
																									*	0
Hourly Avg	1	1	1	1	1	1	1	1	14	79	165	224	264	290	282	226	124	34	1	1	1	1	1	1		
Hourly Max	4	4	4	4	4	4	3	3	51	193	338	360	486	488	455	400	242	100	5	5	5	5	5	5		

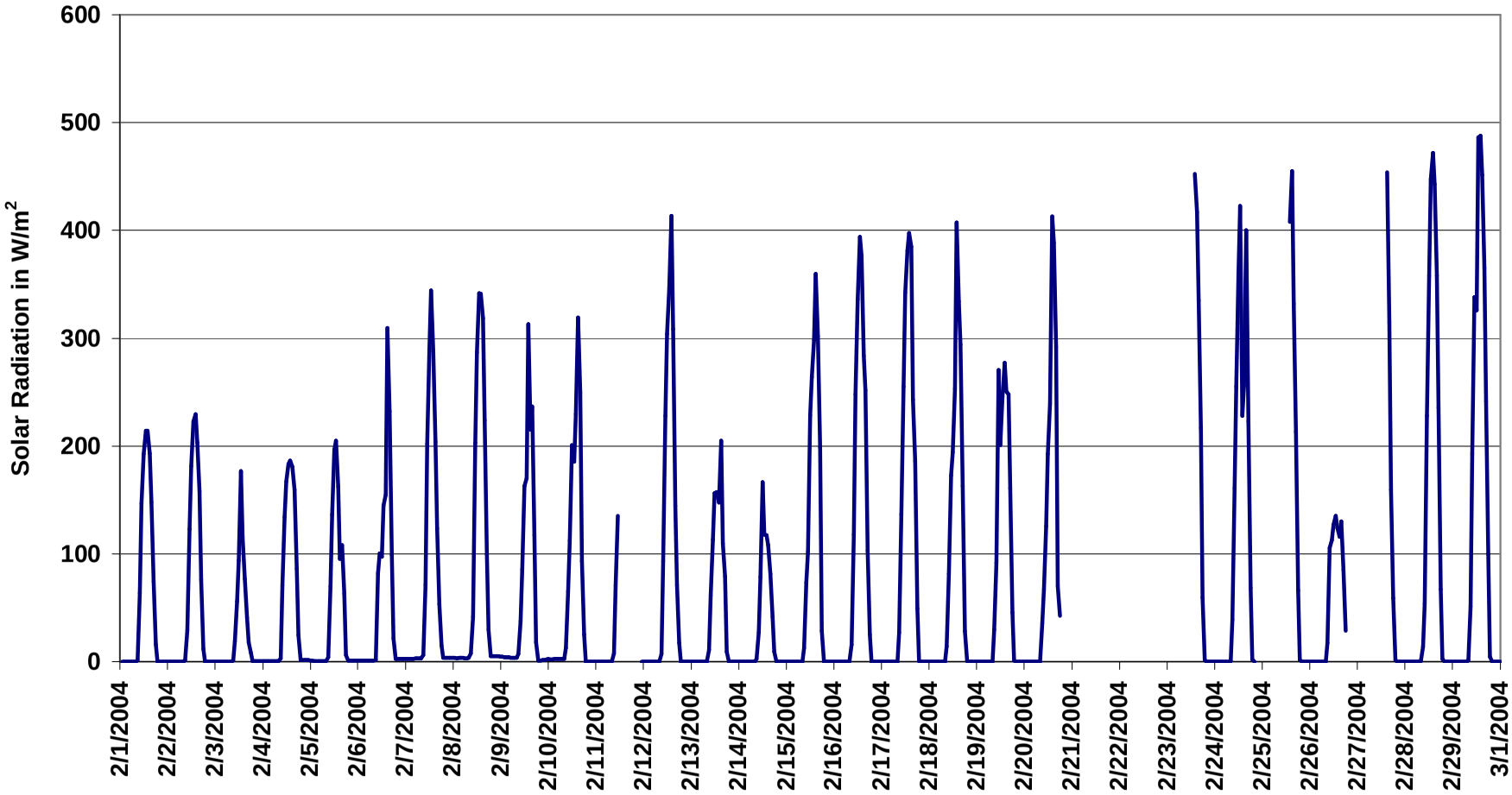


Figure 11. PASZA – Henry Pirker Solar Radiation Monthly Trends

Station: Henry Pirker

Station Owner: PASZA

Parameter : Wind Speed (km/hr)

Guideline Limit:

Sampling Dates: **February 1, 2004** to **March 1, 2004**

Summary

Number of 1-hr Exceedances:	0			
Number of 24-hr Exceedances:	0			
Maximum 1-hr Average:	40.8	km/hr	9-Feb	13:00 14:00
Maximum 24-hr Average:	21.0	km/hr	19-Feb	

Calm Time:	0 hrs	**0%** calms		Operational Time:				575 hrs	
Calibration Time:	0 hrs			AMD Operational Uptime:				82.6%	
Percentile	99	95	75	50	25	5	1	AverageS	AverageV
	27.6	22.8	8.9	5.1	4.0	2.8	2.1	7.8 km/hr	10.1 km/hr

Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

Day **Mountain Standard Time**

Hour Start / Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	24-hr Scalar Average	24-hr Vector Average	Daily Max
1-Feb-04	4	5	4	4	3	2	2	3	3	4	5	4	5	3	3	5	5	4	4	5	4	4	4	4	3.9	18.3	5.2
2-Feb-04	3	3	3	3	3	4	3	3	4	4	3	4	4	4	4	6	5	5	5	5	5	5	4	4	4.0	18.9	5.6
3-Feb-04	4	4	3	3	4	3	3	2	2	2	3	3	1	3	4	3	3	2	3	3	4	5	5	3	3.0	6.9	4.8
4-Feb-04	3	3	5	6	6	8	4	5	4	3	3	4	5	4	4	3	2	3	5	5	3	3	4	3	4.1	12.3	7.7
5-Feb-04	3	4	4	3	2	3	3	4	4	4	4	4	3	4	6	7	8	6	4	3	3	2	3	3	3.9	16.1	7.5
6-Feb-04	4	4	3	4	4	4	5	4	F	F	5	4	4	5	5	6	5	5	5	4	4	5	5	7	4.6	8.2	6.7
7-Feb-04	8	12	14	14	21	26	25	27	25	26	28	25	22	17	19	23	17	16	17	14	17	15	10	6	18.6	19.9	28.5
8-Feb-04	10	9	11	12	F	10	9	8	8	10	9	8	11	14	11	11	13	13	14	13	10	4	4	2	9.8	18.1	14.3
9-Feb-04	3	4	2	3	4	3	2	2	4	9	16	18	19	41	40	38	26	23	20	19	19	24	26	27	16.4	9.5	40.8
10-Feb-04	20	14	15	15	13	15	16	16	17	16	16	13	12	9	10	7	4	4	6	8	8	7	6	8	11.6	10.1	20.4
11-Feb-04	10	5	3	6	6	3	5	6	4	6	F	F	F	F	F	F	F	F	F	F	F	F	12	13	*	*	12.7
12-Feb-04	12	5	4	4	4	4	3	3	2	4	4	5	6	6	5	5	5	6	5	5	6	5	5	5	4.9	11.2	11.8
13-Feb-04	5	3	6	8	11	9	11	13	14	14	13	15	14	12	11	12	13	12	11	9	10	11	11	10	10.8	14.9	14.8
14-Feb-04	9	9	7	5	5	5	4	4	5	6	4	5	6	4	3	3	4	5	5	4	3	3	4	4	4.9	4.6	9.1
15-Feb-04	3	3	4	4	4	4	4	3	4	4	4	4	5	5	5	5	5	6	4	5	4	3	4	4	4.2	15.7	5.8
16-Feb-04	4	4	4	4	4	5	4	4	5	4	5	6	6	7	8	5	8	12	15	13	14	13	12	9	7.2	9.5	14.8
17-Feb-04	9	8	5	7	5	9	9	4	6	8	6	6	5	6	7	5	5	5	4	4	5	5	6	5	6.0	15.0	9.4
18-Feb-04	5	5	6	6	4	5	4	4	8	8	5	5	5	8	5	3	4	11	20	13	10	12	8	15	7.5	12.9	19.5
19-Feb-04	23	14	15	18	24	23	19	22	19	21	25	27	26	27	28	30	23	21	21	17	20	12	14	13	21.0	20.5	30.1
20-Feb-04	9	9	25	22	20	17	12	15	16	14	7	6	21	24	26	24	22	F	F	F	F	F	F	F	*	*	25.7
21-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	*	0.0
22-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	*	*	0.0
23-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	6	6	8	7	4	5	5	6	5	5	4	*	*	7.7
24-Feb-04	4	4	6	4	5	6	4	5	5	F	4	5	5	6	4	6	5	6	4	M	M	M	M	M	4.9	9.8	6.3
25-Feb-04	M	M	M	M	M	M	M	M	M	M	5	7	6	5	5	7	5	6	5	7	5	4	6	4	*	*	7.3
26-Feb-04	6	5	5	8	5	5	4	5	6	4	9	8	9	8	8	7	7	F	F	F	F	F	F	F	*	*	8.9
27-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	9	5	3	4	4	3	3	1	3	*	*	8.9
28-Feb-04	3	4	5	4	4	3	3	4	3	4	4	3	4	5	5	7	5	5	5	9	5	5	4	5	4.6	22.0	8.7
29-Feb-04	4	4	5	5	5	5	5	4	7	6	7	7	4	6	5	5	5	5	5	4	3	5	4	9	5.1	18.6	8.6
																									*	*	0.0
																									*	*	0.0
1-hr Scalar	7.0	6.1	6.8	7.2	7.3	7.6	6.8	7.1	7.7	8.3	8.0	8.1	8.6	9.6	9.6	9.6	8.3	7.9	8.2	7.7	7.5	7.0	7.0	7.1			
1-hr Vector	13.4	13.1	13.0	12.6	13.3	12.4	10.2	11.8	11.0	13.9	10.7	11.1	11.7	9.8	9.9	10.2	5.7	6.3	6.3	5.4	4.6	9.2	12.6	12.7			
Hourly Max	22.9	14.5	24.8	21.8	23.9	26.2	24.9	26.9	25.5	26.2	28.5	26.9	26.0	40.8	40.0	38.2	26.3	23.4	20.8	19.2	20.5	24.4	26.2	27.3			

Station: Henry Pirker

Station Owner: PASZA

Parameter : Wind Direction (degrees)

Guideline Limit:

Sampling Dates: **February 1, 2004** **to** **March 1, 2004**

Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	
Maximum 24-hr Average:	

Calm Time:	0 hrs	**0%** calms	
Calibration Time:	0 hrs		
Operational Time:			575 hrs
AMD Operational Uptime:			82.6%

Percentile	99	95	75	50	25	5	1	Average	Geomean
	342.2	321.5	300.5	269.3	224.3	65.9	52.6	282 deg	- deg

Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

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
1-Feb-04	301	300	302	290	301	281	201	292	268	283	301	274	255	252	265	295	319	302	298	306	305	303	290	298	290
2-Feb-04	301	269	309	309	323	294	306	309	311	286	286	263	279	270	284	294	284	305	310	313	317	305	285	328	297
3-Feb-04	300	293	297	302	289	276	301	264	186	265	178	149	235	158	156	150	133	130	20	329	314	283	274	289	257
4-Feb-04	291	305	268	288	300	271	279	260	247	257	224	200	208	199	181	181	127	271	277	306	300	305	286	296	261
5-Feb-04	308	304	311	309	302	295	312	310	291	288	303	264	258	284	289	302	308	316	304	274	315	316	304	175	297
6-Feb-04	330	319	229	283	316	298	274	294	F	F	337	223	277	267	271	265	254	285	260	311	168	208	171	211	267
7-Feb-04	217	231	221	221	227	231	230	231	231	230	233	232	241	238	258	252	237	246	246	225	235	237	284	288	238
8-Feb-04	260	273	263	278	F	251	260	251	237	246	263	266	244	248	261	267	247	232	226	226	234	260	287	68	254
9-Feb-04	71	92	84	65	295	352	47	345	179	207	239	240	233	249	243	233	241	238	241	242	249	238	238	238	241
10-Feb-04	273	295	300	287	287	299	295	306	302	295	297	301	292	284	308	327	355	73	71	75	75	90	77	71	321
11-Feb-04	77	112	191	318	307	335	295	303	283	287	F	F	F	F	F	F	F	F	F	F	F	F	270	264	
12-Feb-04	272	240	236	312	287	331	72	320	111	221	252	238	250	214	223	252	268	297	288	288	326	303	314	314	274
13-Feb-04	274	329	347	58	58	86	109	104	70	58	61	56	56	66	77	66	67	59	56	61	67	78	65	61	61
14-Feb-04	60	64	68	66	67	66	123	102	129	73	79	105	67	86	321	119	170	272	292	309	303	286	287	296	48
15-Feb-04	309	285	300	304	298	290	288	165	332	280	285	271	263	286	312	291	295	286	296	335	119	284	330	308	296
16-Feb-04	308	313	318	308	294	299	287	327	301	272	292	284	278	64	47	70	71	69	63	59	67	73	312	319	337
17-Feb-04	305	261	248	249	264	297	293	278	348	325	316	269	276	290	297	312	302	343	281	134	305	304	295	322	293
18-Feb-04	310	339	268	323	304	304	263	311	307	308	201	205	160	228	265	264	253	255	245	230	213	236	296	236	260
19-Feb-04	235	250	254	249	233	230	233	232	227	231	233	234	235	236	232	240	248	245	235	234	237	239	266	237	238
20-Feb-04	215	222	234	226	234	226	244	212	225	246	238	282	236	234	235	234	237	F	F	F	F	F	F	F	
21-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
22-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	
23-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	275	303	286	304	312	297	306	317	302	317	309	
24-Feb-04	285	291	290	286	294	300	269	319	276	F	247	263	261	75	104	270	84	68	98	M	M	M	M	M	288
25-Feb-04	M	M	M	M	M	M	M	M	M	M	50	88	98	90	149	125	158	72	75	78	68	11	324	294	
26-Feb-04	307	263	302	62	77	82	53	305	291	277	106	85	111	102	124	121	75	F	F	F	F	F	F	F	
27-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	258	261	333	72	108	148	146	137	331	
28-Feb-04	320	292	310	288	278	288	296	293	284	280	265	269	283	262	292	320	51	342	315	290	283	305	288	315	293
29-Feb-04	308	309	307	312	301	301	304	308	311	298	314	312	261	296	320	324	66	66	56	69	58	306	304	308	317
Hourly Avg	294	290	288	296	293	290	282	290	280	275	268	256	252	251	270	271	266	303	300	299	298	285	293	297	

Station: Henry Pirker

Station Owner: PASZA

Parameter : **Standard Deviation of Wind Direction (degrees)**
Determined by the Yamartino 15-min interval calculation

Sampling Dates: **February 1, 2004** **to** **March 1, 2004**

Summary

Number of 1-hr Exceedances:	0
Number of 24-hr Exceedances:	0
Maximum 1-hr Average:	
Maximum 24-hr Average:	

Calm Time:	0 hrs	**0%** calms	Operational Time: 575 hrs
Calibration Time:	0 hrs		AMD Operational Uptime: 82.6%

Percentile	99	95	75	50	25	5	1	Average	Geomean
	74.9	60.7	31.9	14.4	7.8	3.6	3.0	282 deg	- deg

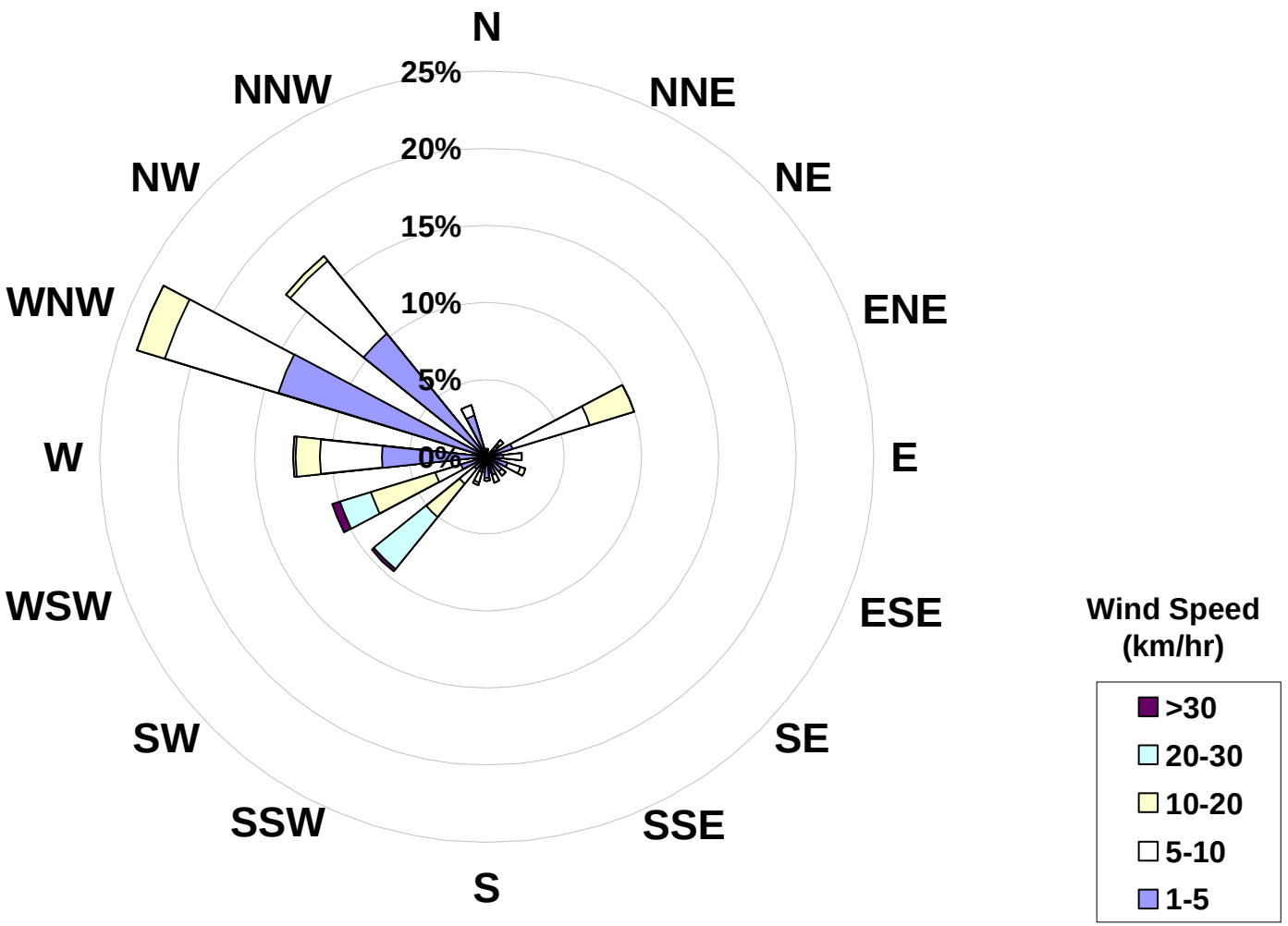
Status Characters

C	Calibration	A	AIC - Zero / Span Check
S	Instrument out of Service	R	Alarm
*	< 75% Data	X	Filter Exchange
N	Excessive Instrument Drift	M	Equipment Maintenance
F	DACS Off-Line	E	Exceedance

Day **Mountain Standard Time**

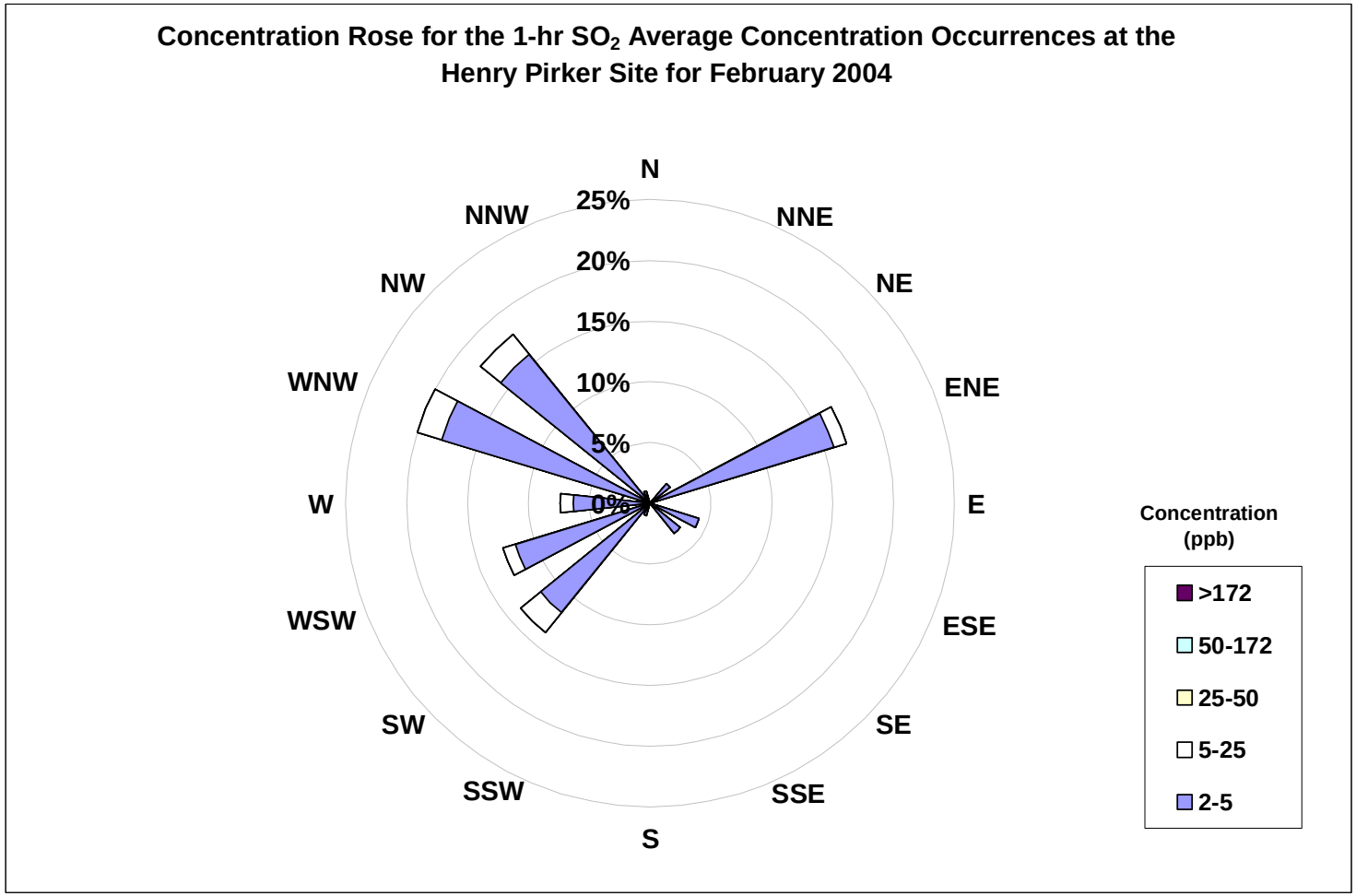
Hour Start / Hour End	0:00 1:00	1:00 2:00	2:00 3:00	3:00 4:00	4:00 5:00	5:00 6:00	6:00 7:00	7:00 8:00	8:00 9:00	9:00 10:00	10:00 11:00	11:00 12:00	12:00 13:00	13:00 14:00	14:00 15:00	15:00 16:00	16:00 17:00	17:00 18:00	18:00 19:00	19:00 20:00	20:00 21:00	21:00 22:00	22:00 23:00	23:00 0:00	Daily Maximum
1-Feb-04	8	9	9	9	12	20	54	8	18	8	9	14	6	12	13	17	8	16	12	7	8	14	8	9	54.2
2-Feb-04	23	9	14	10	26	9	8	10	14	8	11	6	11	6	9	7	11	7	7	7	10	9	13	19	25.7
3-Feb-04	8	9	9	10	7	12	21	66	75	38	13	12	61	14	9	11	20	35	77	67	40	21	16	34	76.6
4-Feb-04	27	13	10	12	5	11	26	10	46	30	22	11	13	10	13	17	32	23	37	30	51	14	16	14	51.5
5-Feb-04	13	13	8	14	15	9	13	25	16	12	22	15	22	41	16	7	10	9	49	43	51	52	63	49	62.9
6-Feb-04	47	36	30	42	49	44	26	61	F	F	41	31	58	22	61	74	50	80	59	53	59	41	21	13	80.4
7-Feb-04	8	4	5	6	4	3	3	2	3	3	4	3	4	5	3	3	5	4	7	5	3	4	10	11	11.3
8-Feb-04	7	14	10	9	F	11	13	5	5	4	4	5	7	5	6	5	5	7	5	6	24	37	18	38	37.8
9-Feb-04	33	16	19	30	23	45	42	42	55	12	10	4	10	4	4	3	6	3	4	4	5	5	5	8	54.6
10-Feb-04	11	6	4	3	4	6	4	4	5	4	5	6	6	8	6	18	62	13	6	5	6	5	8	6	62.3
11-Feb-04	6	35	61	43	8	46	14	12	31	10	F	F	F	F	F	F	F	F	F	F	F	F	4	4	60.8
12-Feb-04	7	38	44	36	38	41	46	30	44	25	27	21	20	13	14	25	30	18	31	40	33	22	29	8	45.9
13-Feb-04	12	24	55	24	18	41	48	37	29	11	15	9	18	30	39	32	34	26	18	31	34	44	27	28	54.5
14-Feb-04	27	29	37	52	38	25	24	13	15	18	70	84	25	31	59	43	23	6	8	9	17	14	7	8	84.5
15-Feb-04	19	23	17	17	12	18	23	44	39	26	23	17	13	15	15	21	13	15	24	38	34	48	27	29	47.6
16-Feb-04	19	14	16	14	15	10	19	28	12	20	10	10	11	37	30	68	9	6	6	9	5	14	44	21	68.4
17-Feb-04	8	11	16	9	12	8	6	30	27	17	54	10	13	14	13	28	33	58	36	54	41	15	37	24	58.5
18-Feb-04	36	54	55	52	62	28	18	19	11	14	25	28	27	9	16	20	35	13	5	6	8	8	15	6	61.6
19-Feb-04	4	6	4	4	3	4	4	3	4	3	3	3	3	4	4	4	4	5	3	4	4	8	9	9	9.0
20-Feb-04	12	61	4	5	6	5	5	8	13	9	11	35	12	4	3	3	4	F	F	F	F	F	F	F	60.6
21-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	0.0
22-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	0.0
23-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	10	38	44	20	39	22	13	18	48	12	21	47.6
24-Feb-04	34	18	9	13	12	8	33	9	8	F	35	9	37	57	73	21	65	38	68	M	M	M	M	M	72.7
25-Feb-04	M	M	M	M	M	M	M	M	M	M	37	18	15	39	65	68	76	61	62	53	35	31	9	23	75.6
26-Feb-04	25	18	22	40	55	54	51	13	26	51	55	52	66	66	73	73	51	F	F	F	F	F	F	F	72.9
27-Feb-04	F	F	F	F	F	F	F	F	F	F	F	F	F	F	F	5	16	86	45	17	12	9	32	22	85.8
28-Feb-04	23	10	7	14	9	31	19	9	8	6	6	9	13	5	16	20	53	42	39	30	43	33	21	15	53.0
29-Feb-04	9	5	5	6	8	11	10	13	6	10	7	12	15	14	16	46	77	35	26	52	38	14	48	62	76.7
																									0.0
																									0.0
Hourly Max	47	61	61	52	62	54	54	66	75	51	70	84	66	66	73	74	77	86	77	67	59	52	63	62	

Wind Rose for the 1-hr Average Meterological Data at the Henry Pirker Site for February 2004

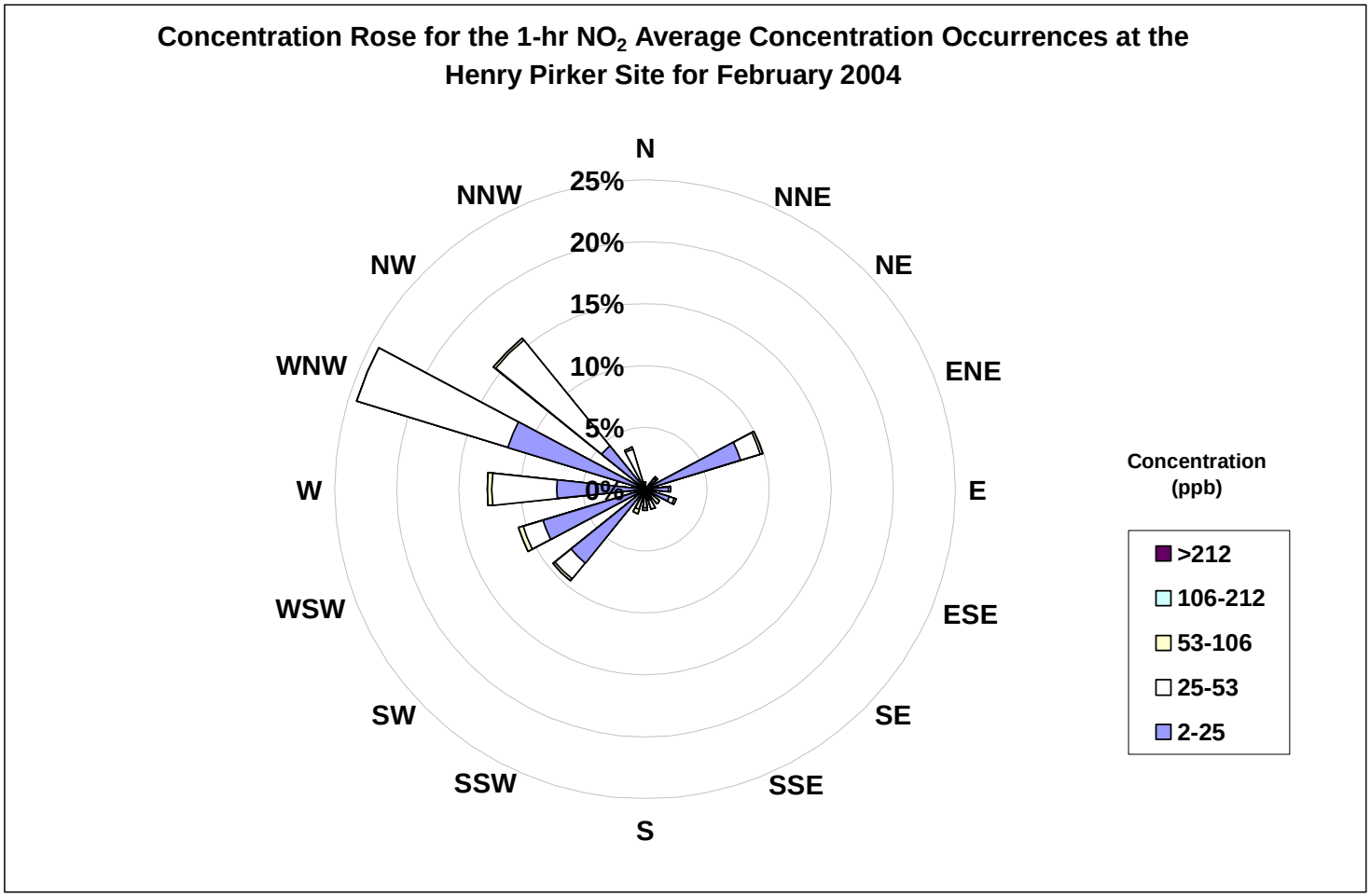


Monthly Summary Concentration Roses
February 2004

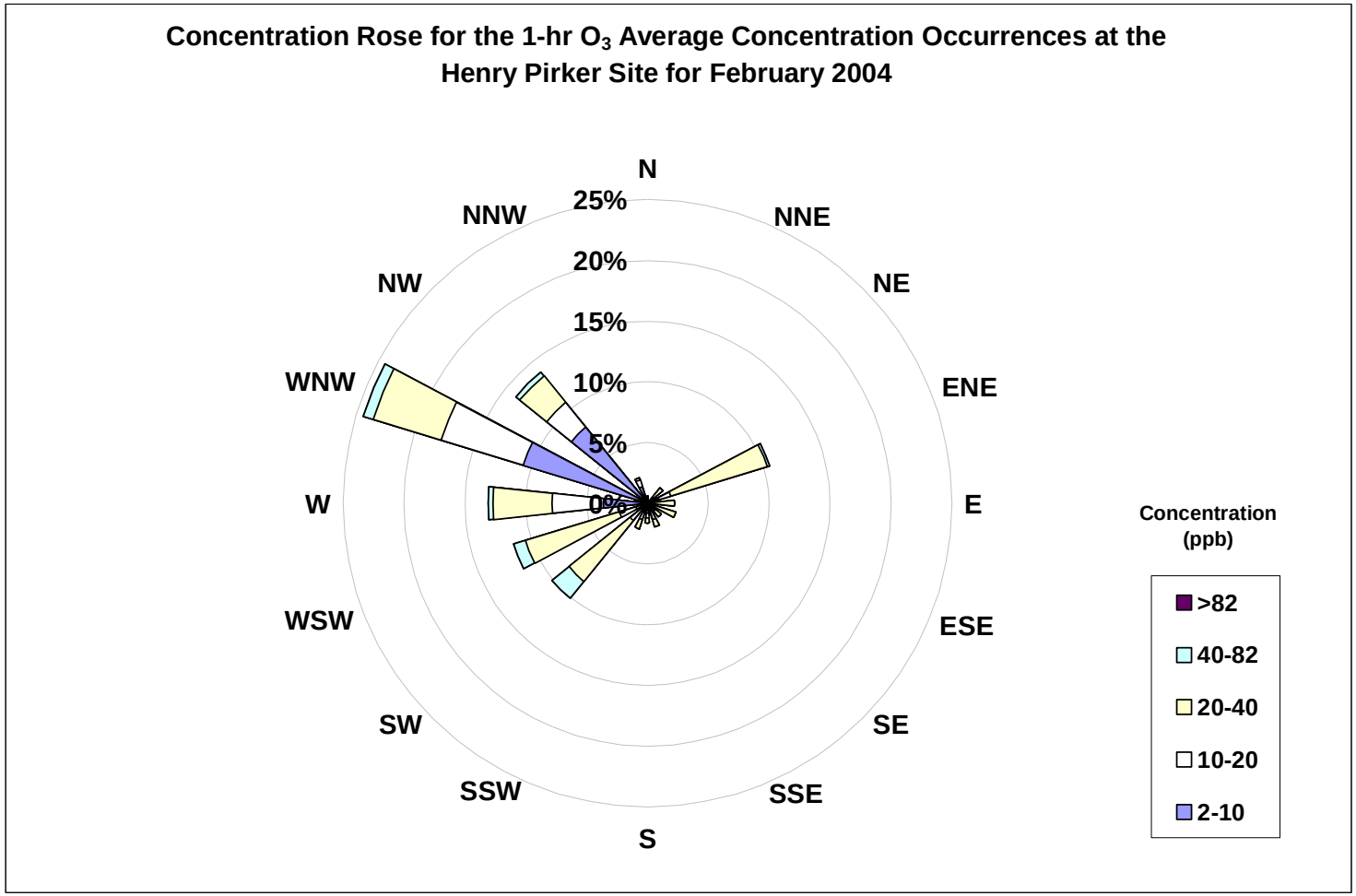
SO_2 Concentration Rose
NO_2 Concentration Rose
O_3 Concentration Rose
CO Concentration Rose
$PM_{2.5}$ Concentration Rose



Frequency Distribution of SO_2 in ppb			
Range			Frequency (hrs)
0	<	2	440
2	to	5	86
5	to	25	9
25	to	50	0
50	to	172	0
	>	172	0
Total Non-Zero Values			535

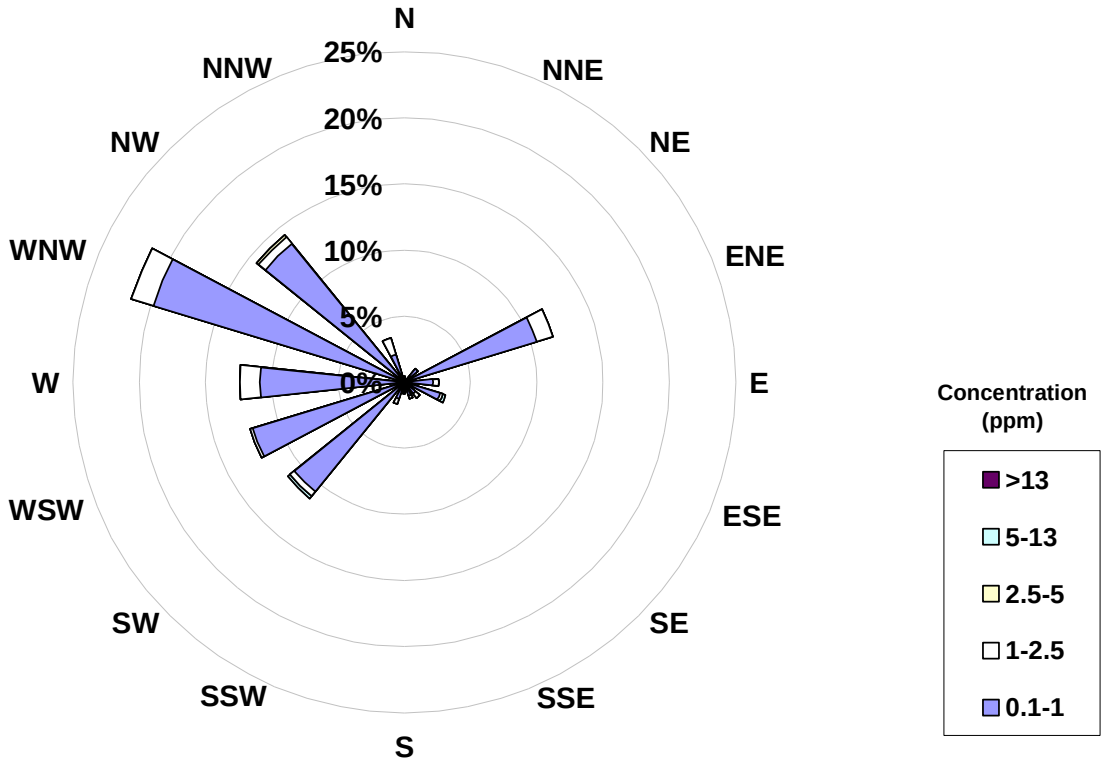


Frequency Distribution of NO_2 in ppb			
Range			Frequency (hrs)
0	<	2	1
2	to	25	296
25	to	53	226
53	to	106	13
106	to	212	0
	>	212	0
Total Non-Zero Values			536



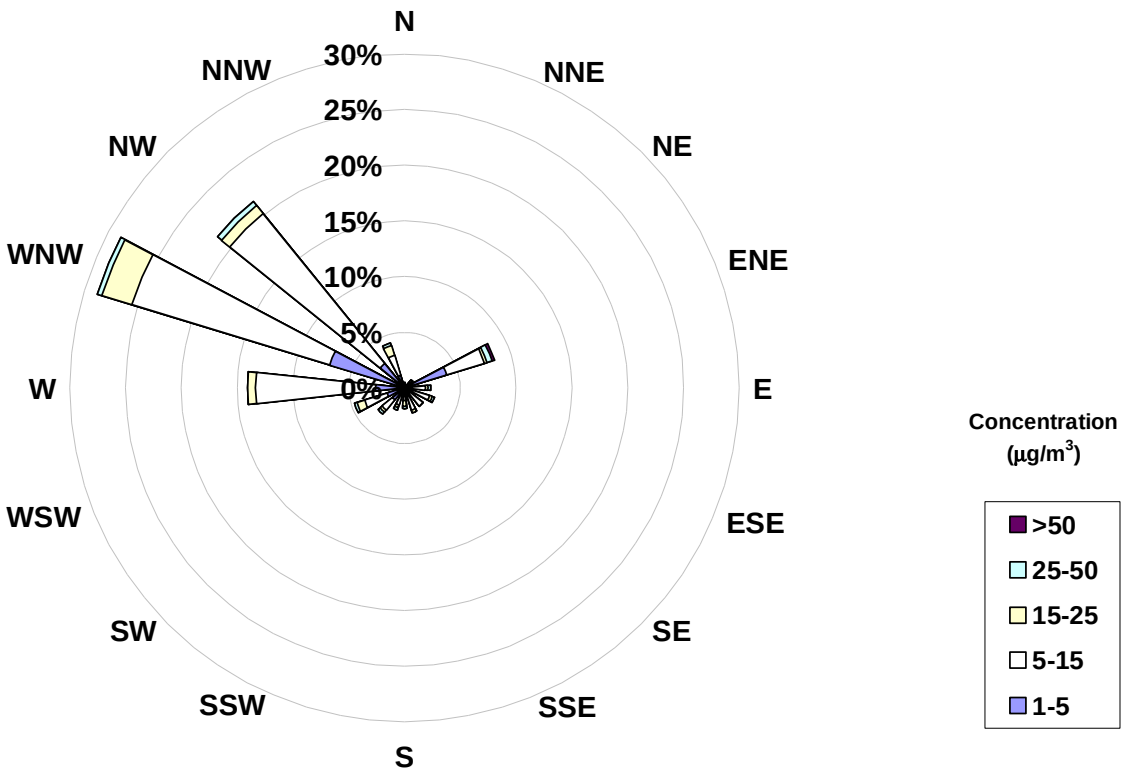
Frequency Distribution of O_3 in ppb			
Range			Frequency (hrs)
0	<	2	43
2	to	10	147
10	to	20	106
20	to	40	220
40	to	82	23
	>	82	0
Total Non-Zero Values			539

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



Frequency Distribution of CO in ppm			
Range			Frequency (hrs)
0	<	0.1	1
0.1	to	1	414
1	to	2.5	43
2.5	to	5	1
5	to	13	2
	>	13	0
Total Non-Zero Values			461

Concentration Rose for the 1-hr $PM_{2.5}$ Average Concentration Occurrences at the Henry Pirker Site for February 2004



Frequency Distribution of $PM_{2.5}$ in µg/m^3			
Range			Frequency (hrs)
0	<	1	118
1	to	5	97
5	to	15	288
15	to	25	35
25	to	50	13
	>	50	1
Total Non-Zero Values			552

PEACE AIRSHED ZONE ASSOCIATION

Passive Data for the Month of February 2004

Table 1. PASZA Passive Stations for February 2004

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
Duplicates					
10a	Woking	**0.6**	**40.5**	**1.3**	
10b	Woking	**0.4**	**45.9**	**1.1**	
32a	Gold Creek	**0.5**	**34.1**	**3.5**	
32b	Gold Creek	**0.5**	**35.4**	**3.8**	
49a	Grande Prairie 2	**0.6**	**25.0**	**14.6**	
49b	Grande Prairie 2	**0.7**	**26.4**	**14.2**	
1	Silver Valley	**0.9**	**37.6**	**2.1**	08-27-081-11 W6M
2	Bay Tree	**0.4**	**39.7**	**2.1**	13-16-078-13 W6M
3	Forth Creek	**0.7**	**49.5**	**1.7**	04-13-082-07 W6M
4	Gordondale	**0.6**	**40.8**	**1.8**	04-34-078-10 W6M
5	Boone Creek	**0.6**	**39.0**	**2.1**	01-23-076-11 W6M
7	Steeprock Creek	**0.4**	**40.7**	**1.5**	09-35-072-13 W6M
9	Spirit River	**0.5**	**36.9**	**2.4**	08-12-079-07 W6M
10	Woking	**0.5**	**43.2**	**1.2**	01-13-076-07 W6M
11	Webber Creek	**0.7**	**39.6**	**1.9**	09-36-074-09 W6M
12	Hythe	**0.5**	**42.1**	**3.7**	14-36-072-11 W6M
14	Sylvester	**0.3**	**36.5**	**1.3**	08-06-069-12 W6M
16	Beaverlodge	**0.7**	**38.2**	**4.6**	15-36-071-10 W6M

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

Station Number	Station Name	SO2 ppb	O3 ppb	NO2 ppb	Site Legal
17	Poplar	**0.7**	**42.5**	**3.1**	13-06-073-08 W6M
18	Saddle Hills	**0.8**	**40.1**	**2.7**	04-25-074-07 W6M
19	Wanham	**0.8**	**43.4**	**1.5**	16-22-077-03 W6M
20	Shaftesbury	**0.3**	**34.5**	**2.4**	04-03-082-23 W5M
21	Eaglesham	**0.4**	**37.8**	**1.9**	16-21-079-25 W5M
23	Bear Lake	**0.9**	**44.2**	**2.9**	15-31-072-06 W6M
24	Wembley	**0.4**	**38.4**	**4.0**	12-31-070-08 W6M
25	Pinto Creek	**0.3**	**37.1**	**2.4**	04-24-069-11 W6M
26	Flyingshot	**0.4**	**32.6**	**6.2**	15-36-070-07 W6M
27	Grande Prairie 1	**0.8**	**27.6**	**13.8**	08-15-071-06 W6M
28	Clairmont Lake	**0.7**	**45.1**	**3.0**	09-06-073-04 W6M
29	Smoky Heights	**1.4**	**44.9**	**3.3**	04-06-075-02 W6M
30	Fitzsimmons	**0.5**	**33.8**	**3.7**	15-36-072-03 W6M
32	Gold Creek	**0.5**	**34.8**	**3.7**	06-33-067-05 W6M
33	Wapiti	**0.4**	**34.6**	**3.3**	02-25-071-03 W6M
34	Puskwaskau	**0.3**	**35.5**	**2.3**	15-35-074-25 W5M
35	Jean Cote	**0.4**	**46.6**	**1.8**	12-35-079-21 W5M
36	Guy	**0.4**	**35.8**	**4.2**	03-04-076-22 W5M
37	Crooked Creek	**0.6**	**39.6**	**3.7**	16-01-071-26 W5M
38	Karr Creek	**0.3**	**36.9**	**1.1**	10-16-065-02 W6M
39	Clouston Creek	**0.6**	**36.4**	**1.9**	12-01-073-22 W5M
40	McLennan	**0.5**	**47.0**	**2.2**	03-29-077-19 W5M
41	Valleyview	**1.4**	**46.1**	**2.4**	09-30-069-22 W5M
42	Sunset House	**0.9**	**43.2**	**1.3**	05-32-070-19 W5M
43	High Prairie	**0.4**	**41.2**	**3.7**	16-13-074-17 W5M
44	Peavine	**0.3**	**36.9**	**1.0**	03-05-079-15 W5M
45	Gift Lake	**0.4**	**33.0**	**2.8**	10-07-079-12 W5M
46	Little Smoky	**0.7**	**30.9**	**6.9**	12-01-065-21 W5M
47	Kinuso	**0.2**	**33.8**	**2.0**	12-10-073-10 W5M
48	Deer Mountain	**0.3**	**40.3**	**0.8**	15-22-068-09 W5M
49	Grande Prairie 2	**0.6**	**25.7**	**14.4**	17-26-071-06 W6M

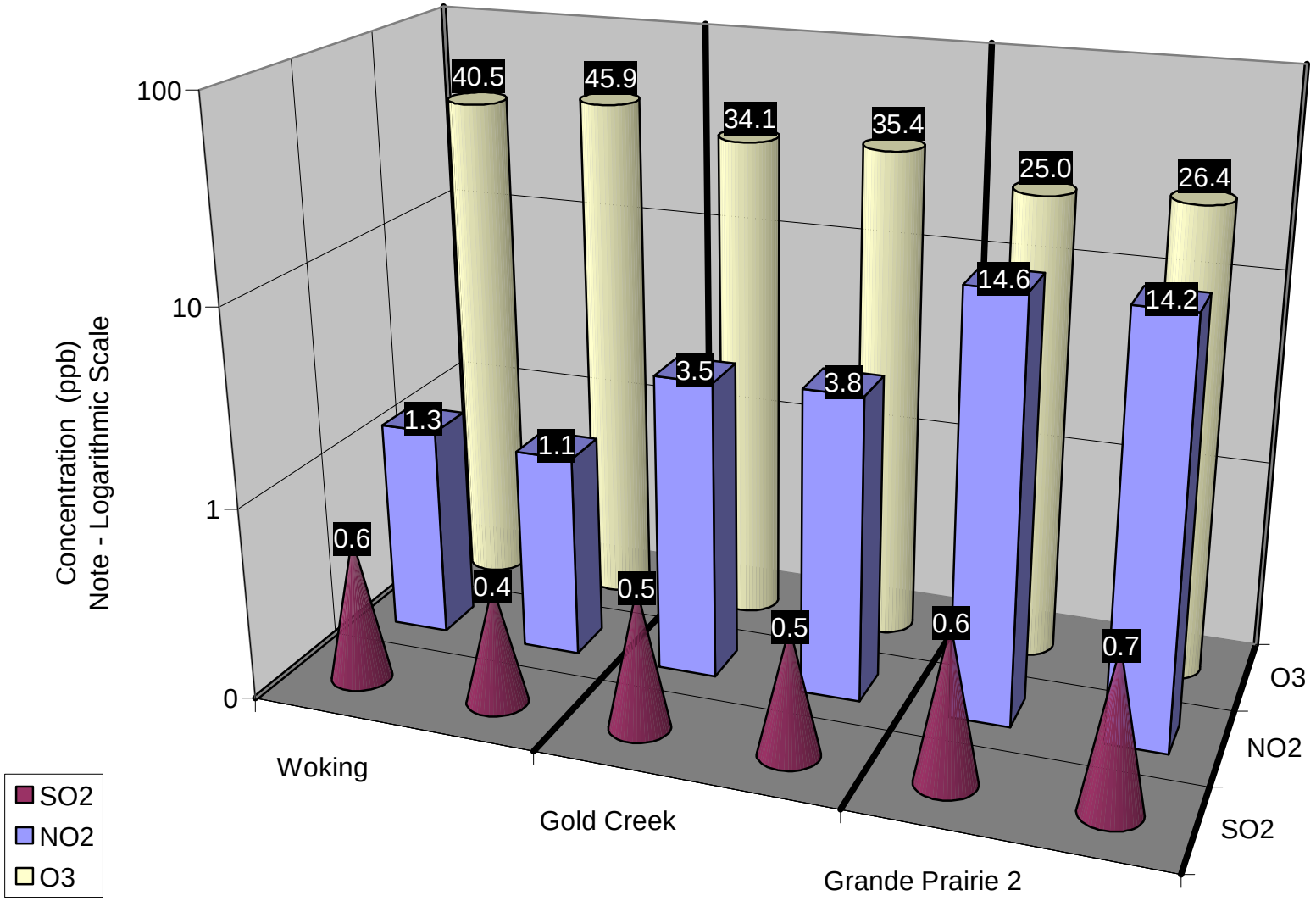


Figure 12. Duplicate Summary Chart

Table 2. Passive Summary Results for February 2004

Stats	Sulphur Dioxide SO_2	Ozone O_3	Nitrogen Dioxide NO_2
	ppb	ppb	ppb
	Passive Summary for February 2004 (PASZA Zone)		
Mean	**0.6**	**38.6**	**3.2**
Standard Deviation	**0.3**	**5.1**	**2.7**
Minimum	**0.2**	**25.7**	**0.8**
	Kinuso (#47)	**Grande Prairie 2 (#49)**	**Deer Mountain (#48)**
Maximum	**1.4**	**49.5**	**14.4**
	Smoky Heights (#29)	**Forth Creek (#3)**	**Grande Prairie 2 (#49)**

Comparison between Continuous and Passive monitoring at Beaverlodge (passive #16)

	SO_2	O_3	NO_2
AENV Beaverlodge station	**0.7**	**33.5**	**9.4**
PASZA Beaverlodge passive	**0.7**	**38.2**	**4.6**

Comparison between Continuous and Passive monitoring at Henry Pirker (passive #49)

	SO_2	O_3	NO_2
PASZA Henry Pirker station	**1.0**	**18.4**	**23.9**
PASZA Grande Prairie passive	**0.6**	**25.7**	**14.4**

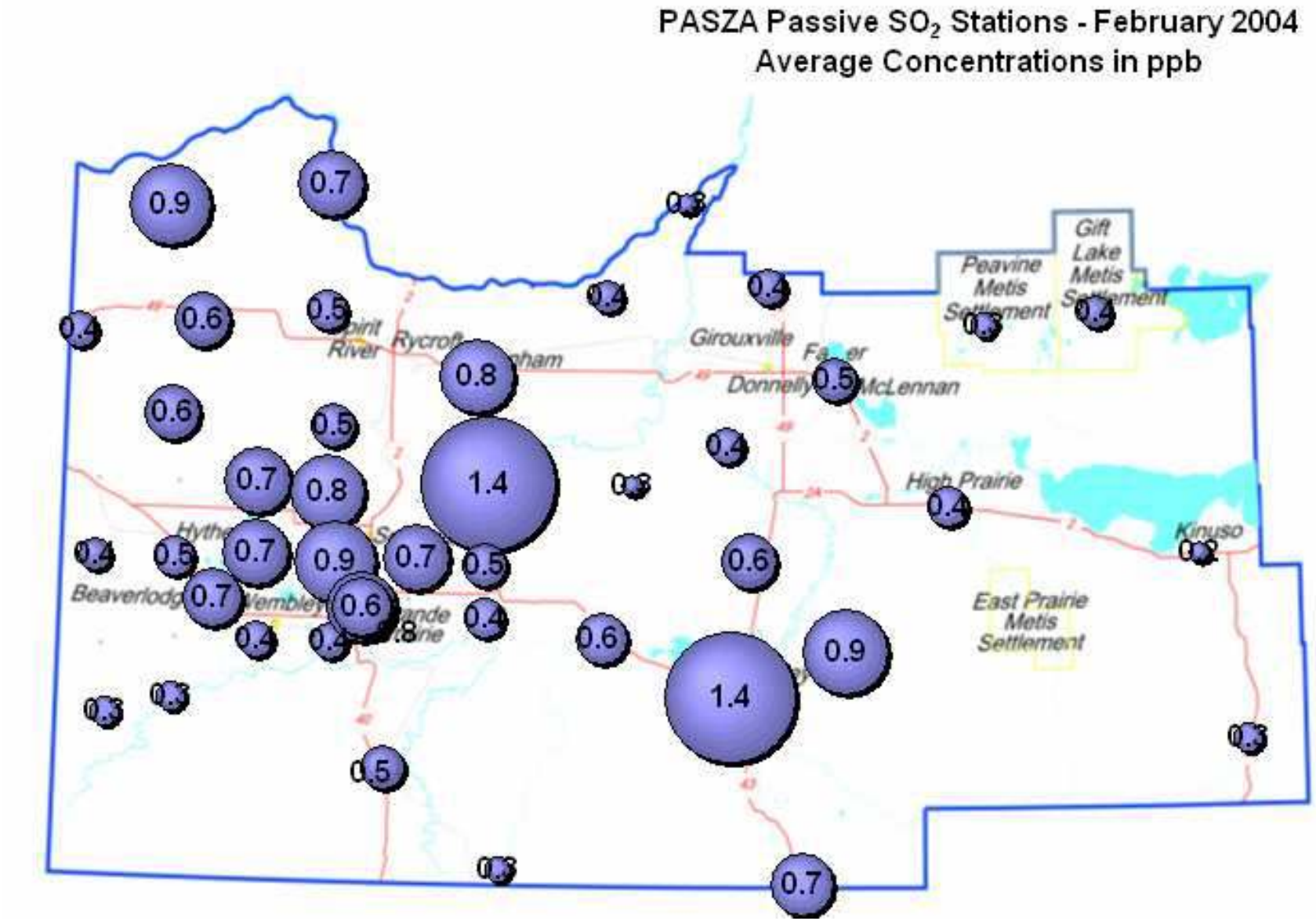


Figure 13. SO_2 Bubble Chart

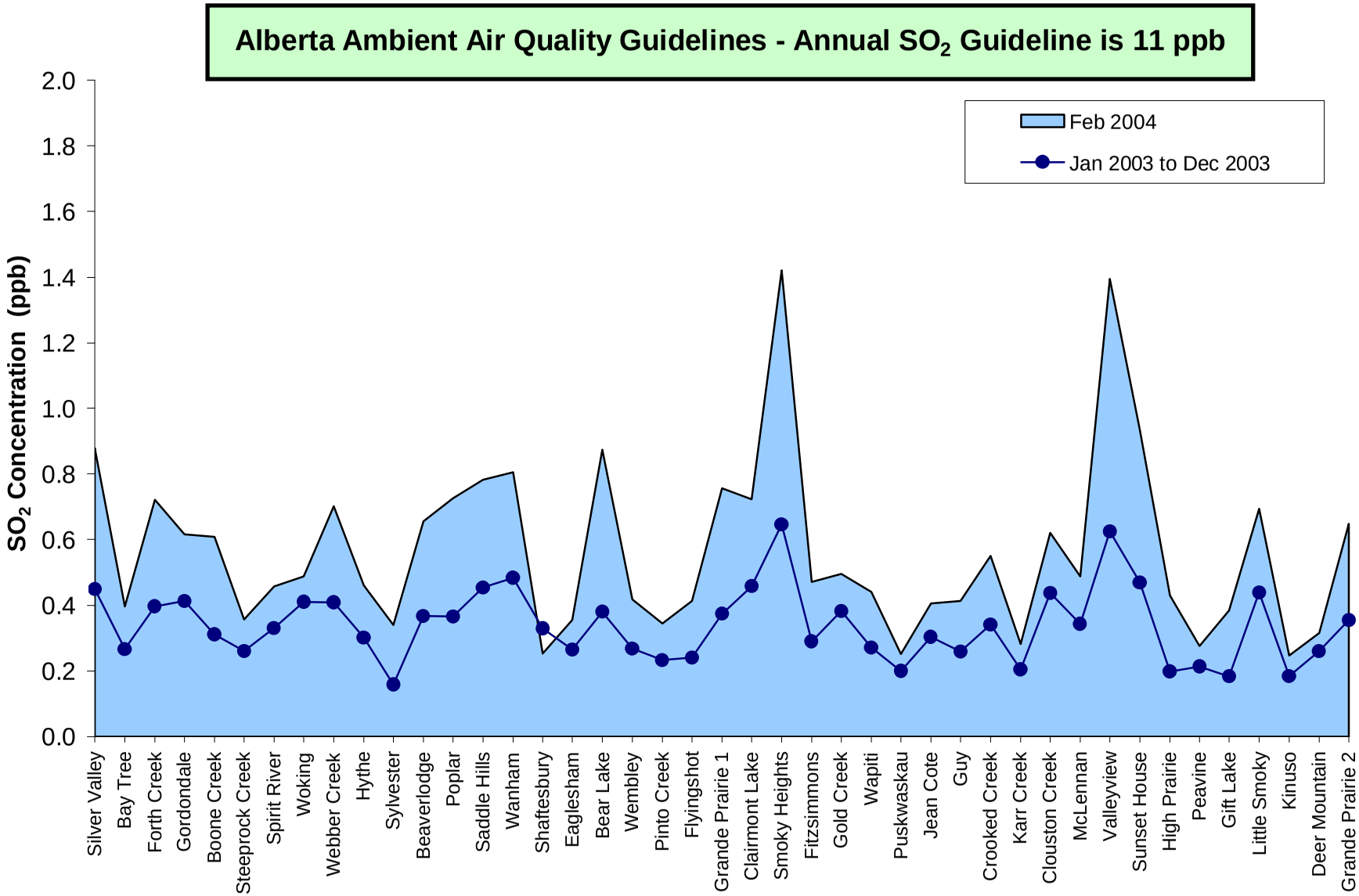


Figure 14. SO_2 Summary Chart

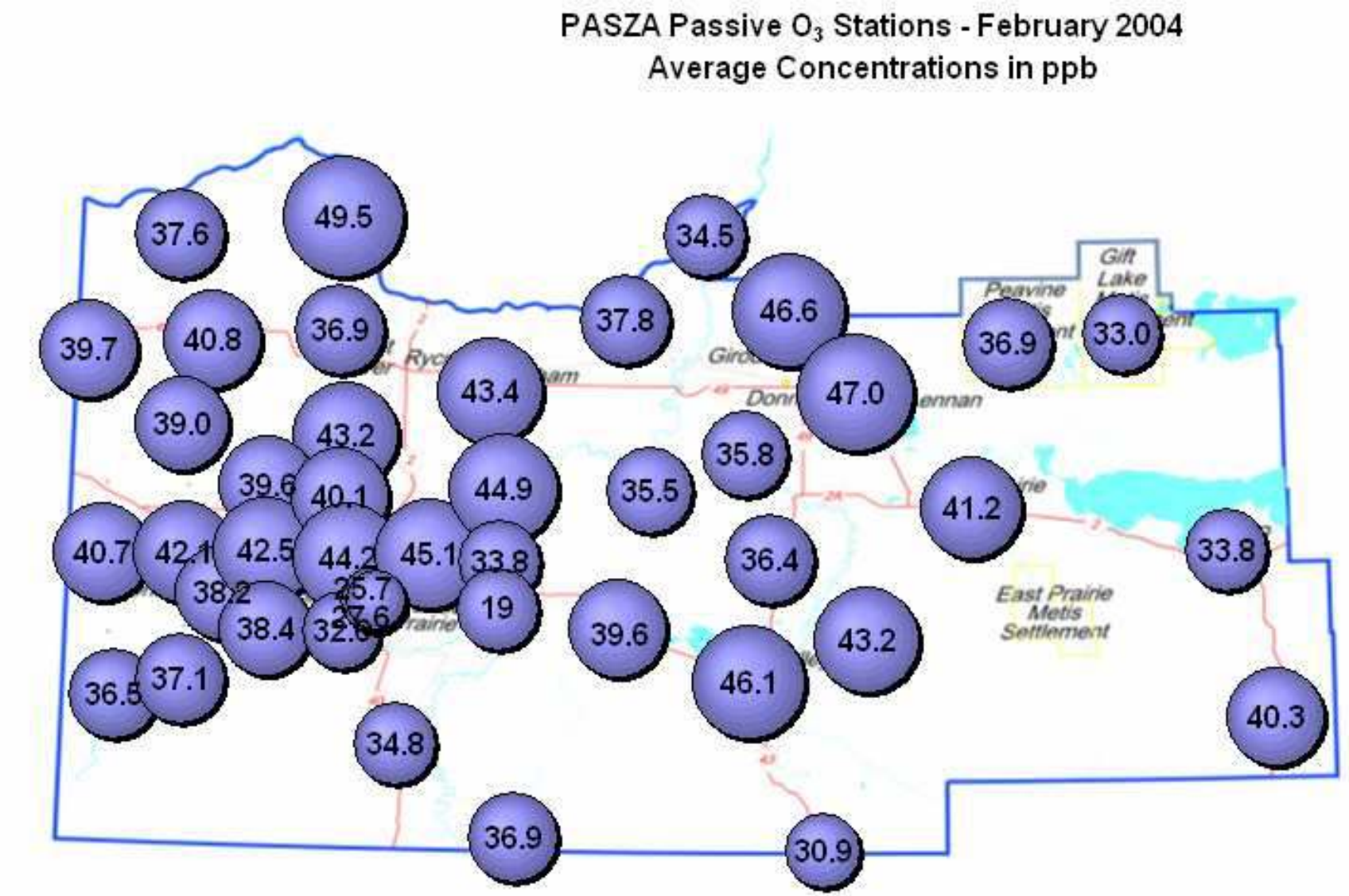


Figure 15. O_3 Bubble Chart

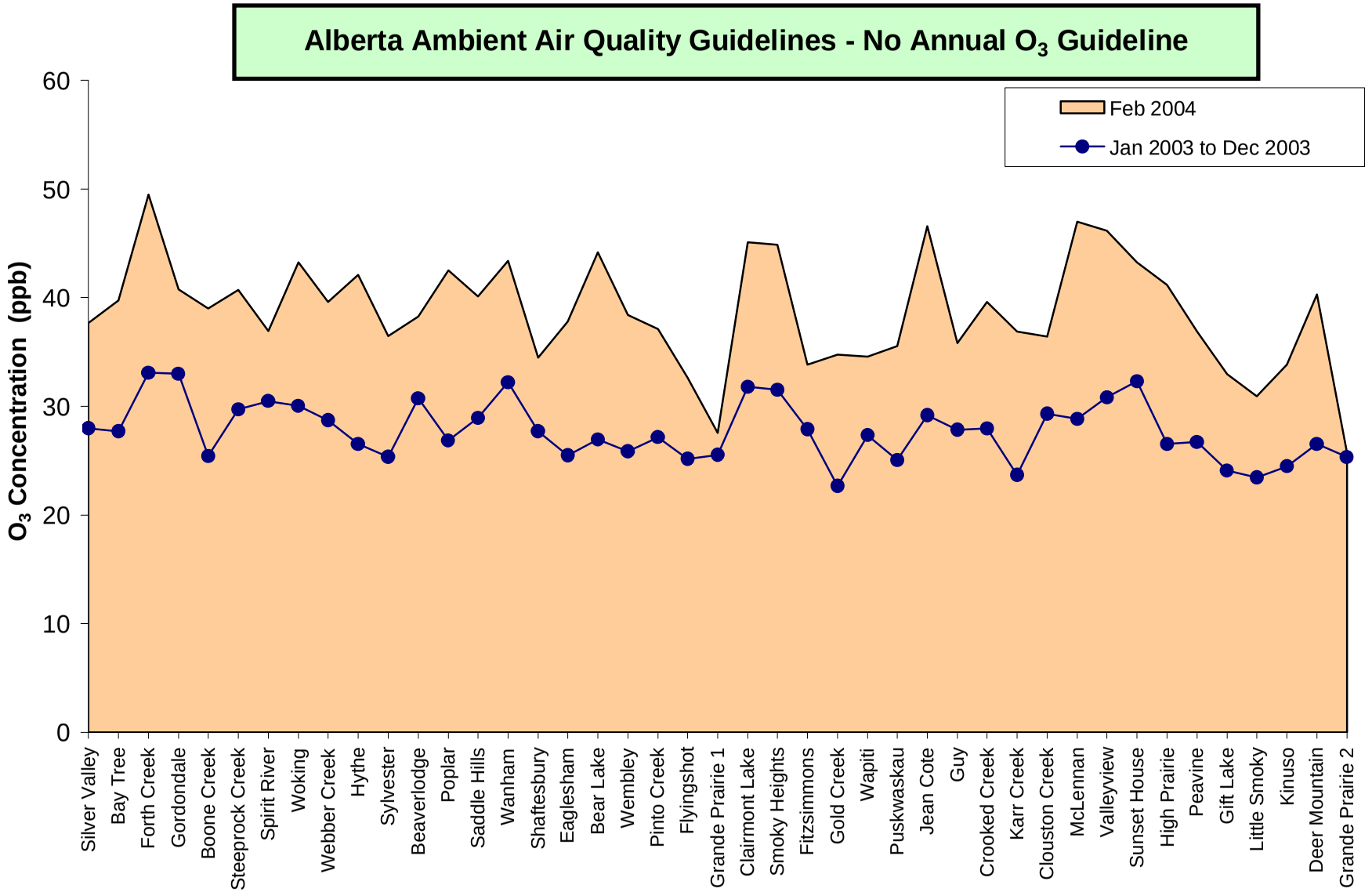


Figure 16. O_3 Summary Chart

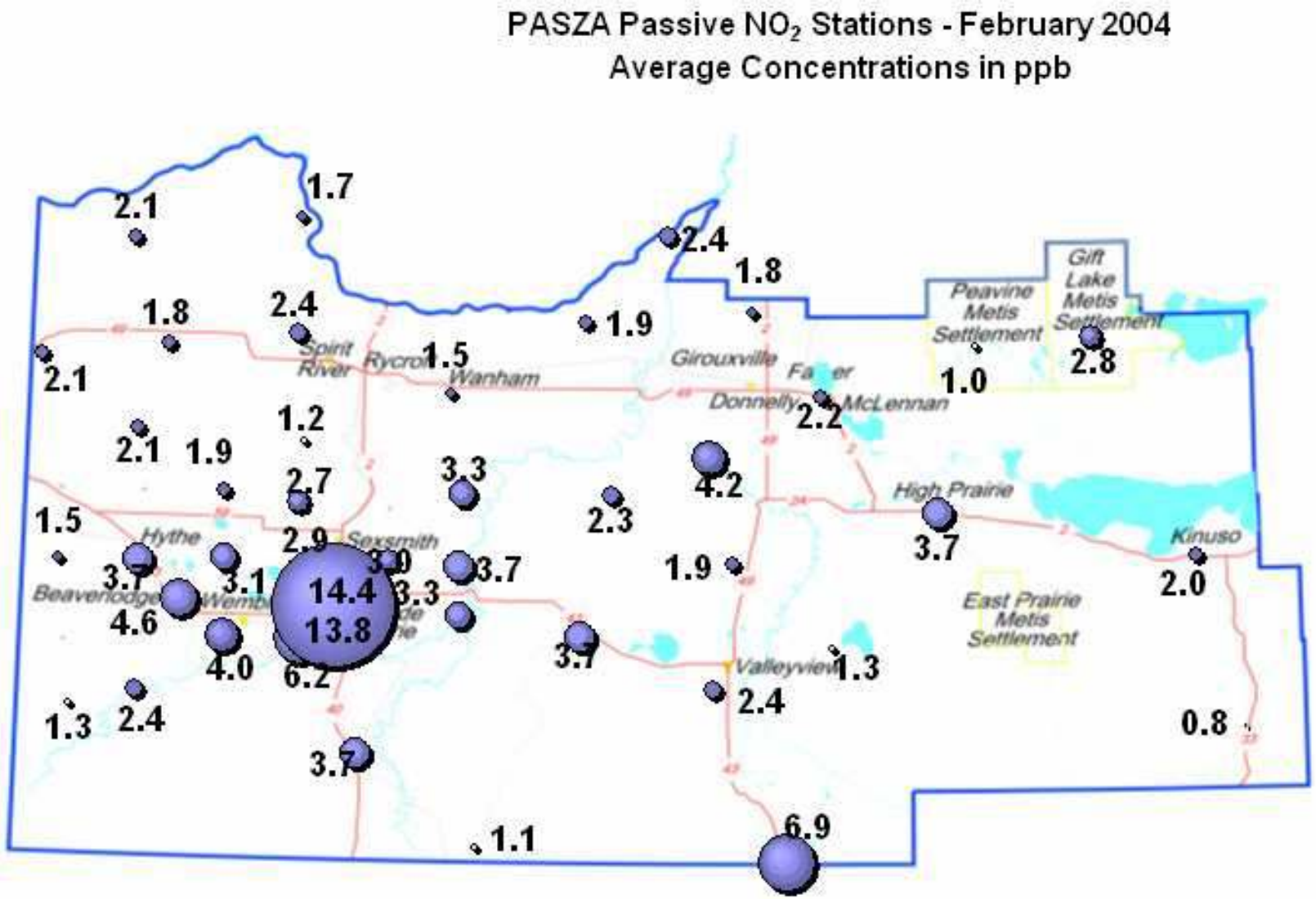


Figure 17. NO_2 Bubble Chart

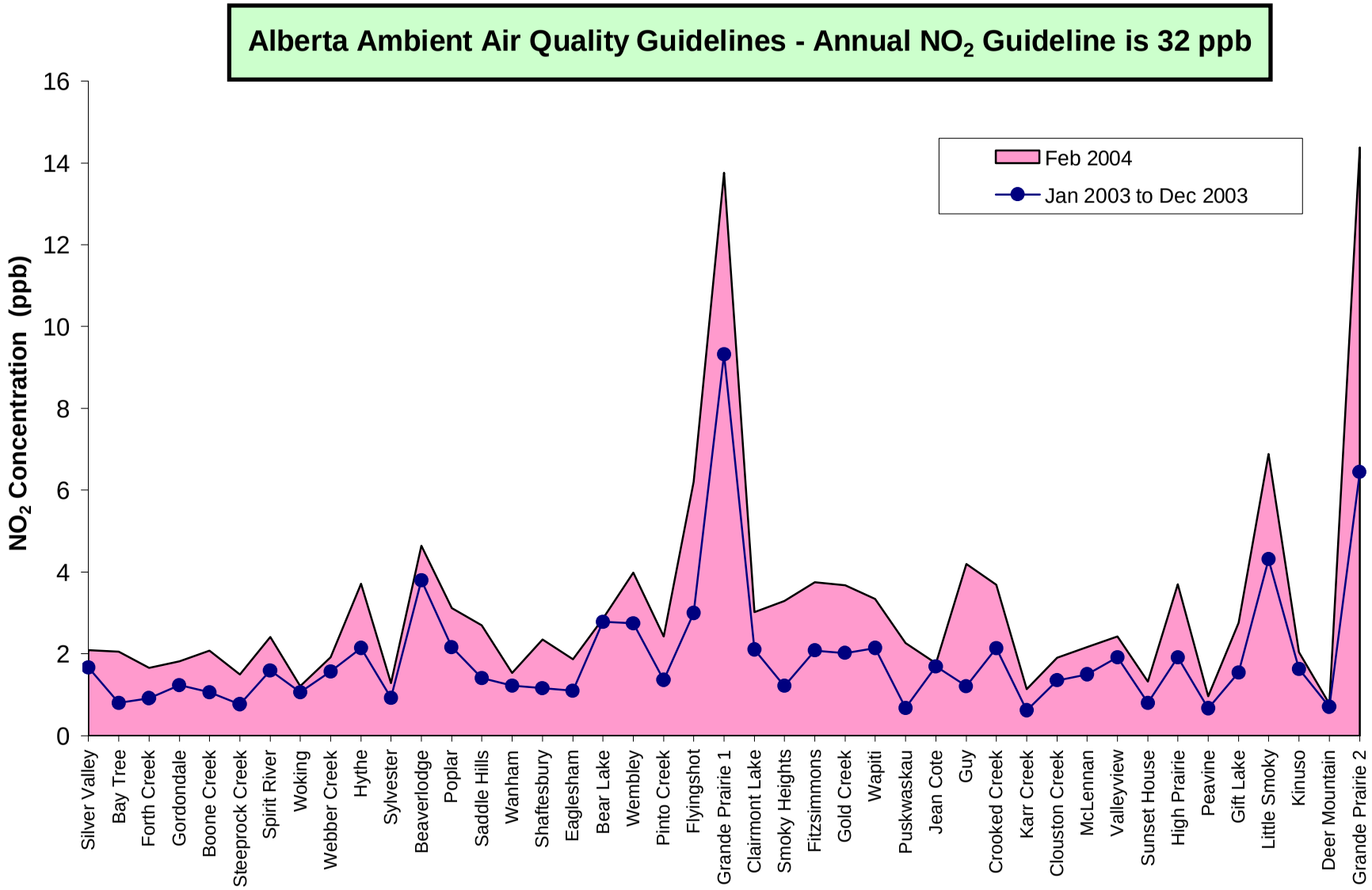


Figure 18. NO_2 Summary Chart

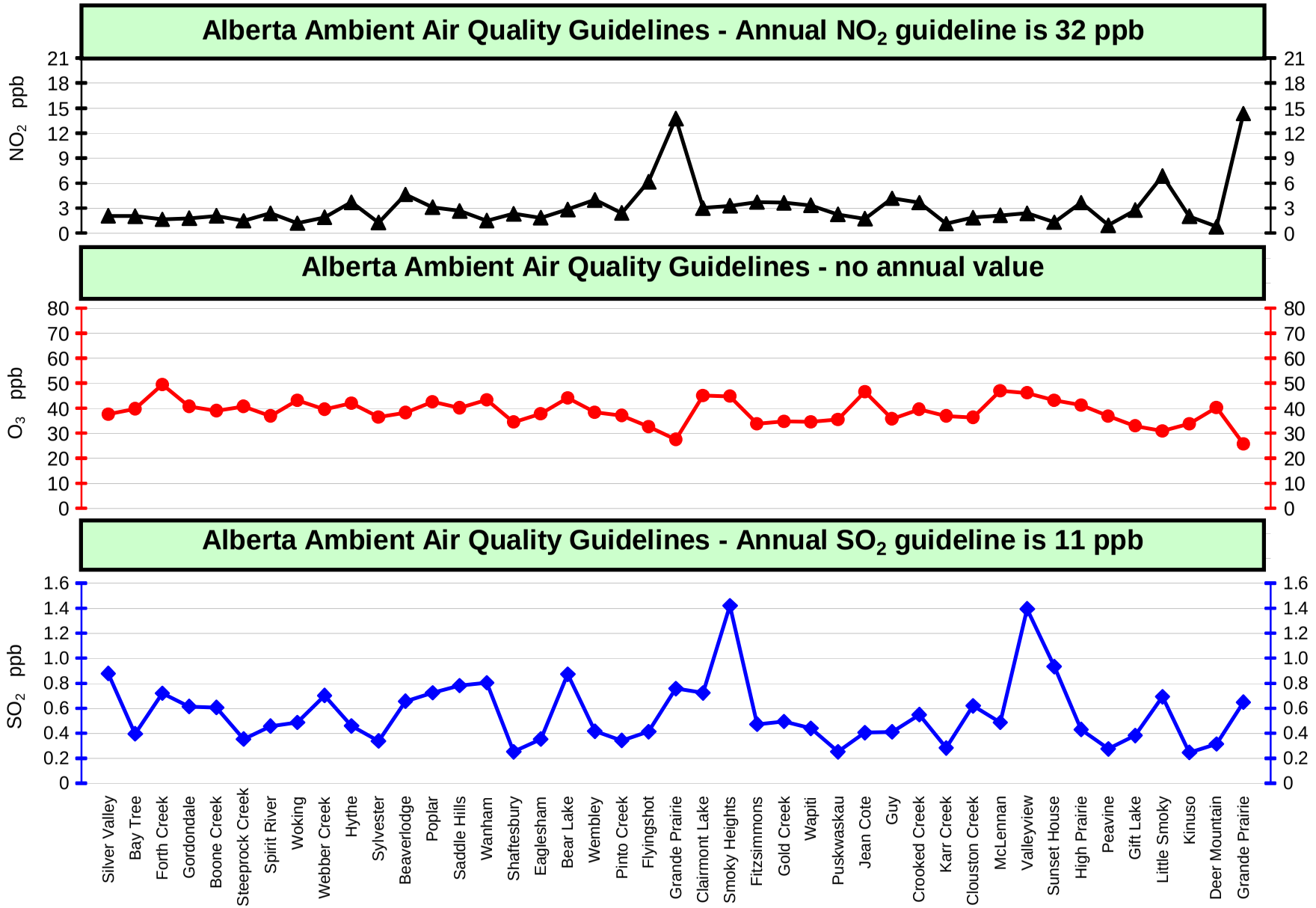


Figure 19. Overview Summary

January and February 2004
Calibration Reports

PASZA - Henry Pirker Station with the following calibrations:

SO_2, NO, NO_2, NO_x, O_3, CO, THC, TRS

Note: In January the multipoint calibrations were performed

Calibration Report

FOCUS INTEC
Air Quality Monitoring

Parameter **SO2**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	January 29, 2004	Previous Calibration	NA
Station Number	1	Station Location	Muskoseepi Park
Reason: Routine	Install	Removal	Other:
Start Time (MST)	17:15	End Time (MST)	21:45
Barometric Pressure	27.5 inches Hg	Station Temperature	21.0 Deg C
Calibrator	VICI Metronics	Serial Number	NA
Perm-tube Conc	2,995 ng/min	Perm-tube Expiry Date	12/10/2005
Correction factor	0.931623	Perm-tube Cert #	NA
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 10 volt	DACS channel #	8
	Before		After
DACS slope	NA	DACS slope	0.005000
DACS intercept	NA	DACS intercept	0.000000
Calculated slope	NA	Calculated slope	1.011295
Calculated intercept	NA	Calculated intercept	-2.070660
Analyzer make	TEI Model 43	Analyzer serial #	NA

	before		after	
Concentration range	NA	ppb	0 - 500	ppb
SO2 zero pot	NA		NA	
SO2 span pot	NA		NA	

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	3414.4	0.0	1.5	N/A
3665	3414.4	334.8	332.6	1.0067
6128	5709.0	200.2	200.7	0.9978
10390	9679.6	118.1	119.3	0.9903
zero				As Found Zero
				As Found Span
			Average Correction Factor	0.9983

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

	before calibration		after calibration	
Auto zero	NA	ppm	1.6	ppm
Auto span	NA	ppm	218.1	ppm

Notes: Analyzer was zero and span adjusted.

Calibration Performed By: Kelly Baragar

Calibration Summary

FOCUS INTEC
Air Quality Monitoring

Parameter **SO2**

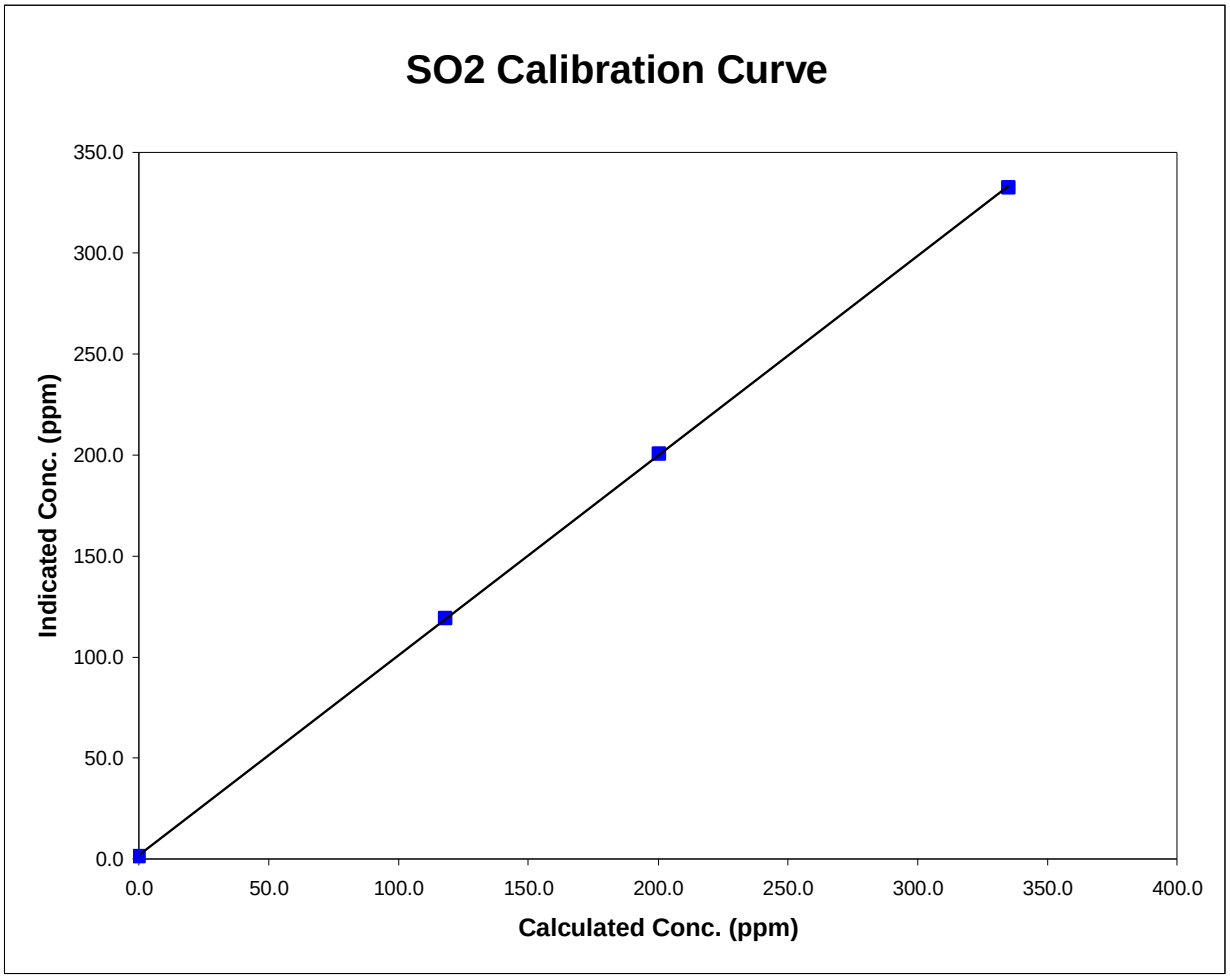
Air Monitoring Network **PASZA**

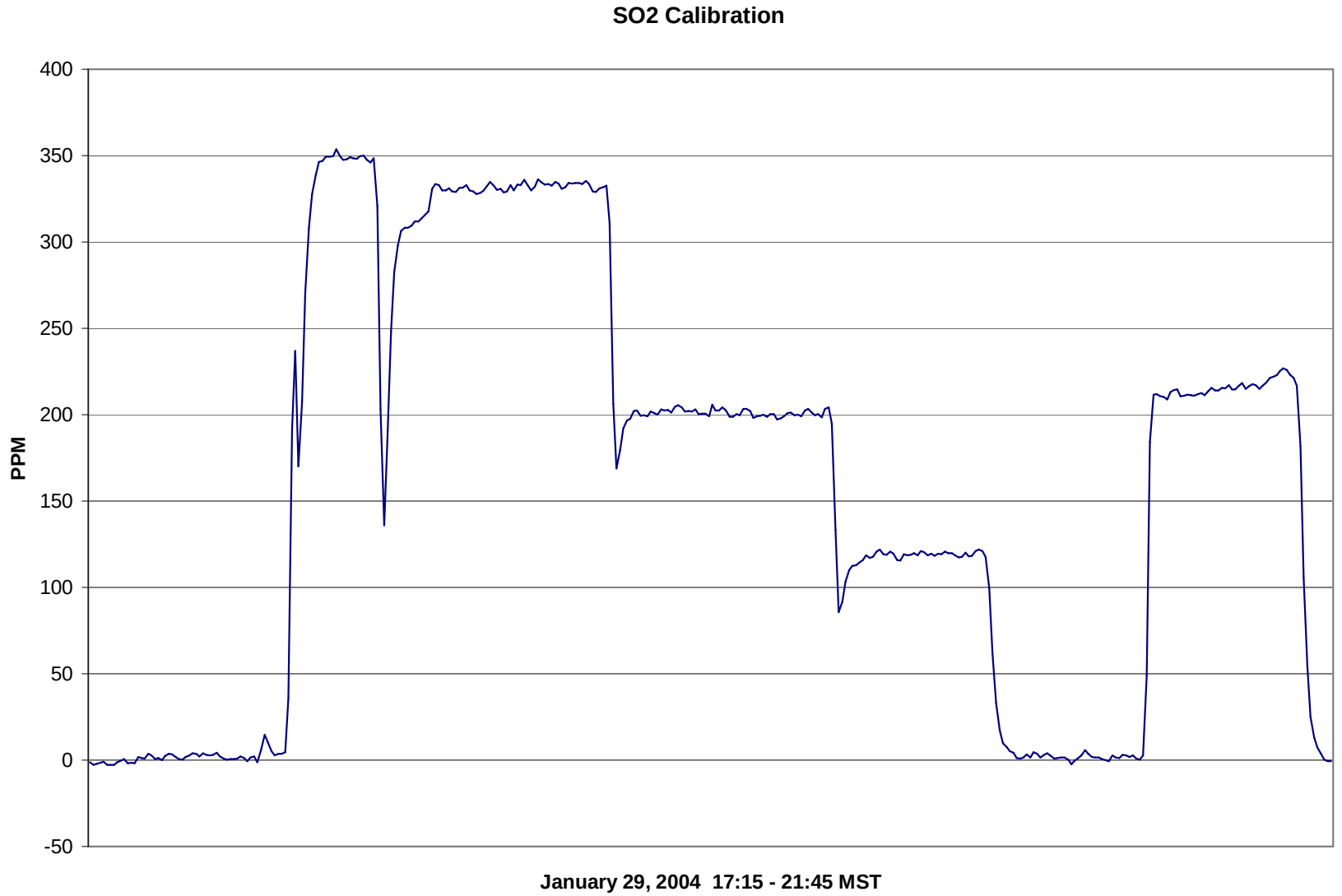
Station Information

Calibration Date	January 29, 2004	Previous Calibration	NA
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	17:15	End Time (MST)	21:45
Analyzer make/model	TEI Model 43	Analyzer serial #	NA

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	1.5	N/A		
118.1	119.3	0.9903	Correlation Coefficient	0.999980
200.2	200.7	0.9978		
334.8	332.6	1.0067	Slope	1.011295
			Intercept	-2.070660




SO2 Calibration
400
350
300
250
200
150
100
50
0
-50
PPM
January 29, 2004 17:15 - 21:45 MST

Calibration Report

FOCUS INTEC
Air Quality Monitoring

Parameter **SO2**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 25, 2004	Previous Calibration	January 29, 2004
Station Number	1	Station Location	Muskoseepi Park
Reason:	Routine ☐ Install ☐	Removal ☐	Other: ☐
Start Time (MST)	17:15	End Time (MST)	21:45
Barometric Pressure	27.5 inches Hg	Station Temperature	21.0 Deg C
Calibrator	VICI Metronics	Serial Number	NA
Perm-tube Conc	2,995 ng/min	Perm-tube Expiry Date	12/10/2005
Correction factor	0.931623	Perm-tube Cert #	NA
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 10 volt	DACS channel #	8
	Before		After
DACS slope	0.005000	DACS slope	0.005000
DACS intercept	0.000000	DACS intercept	0.000000
Calculated slope	1.011295	Calculated slope	1.046915
Calculated intercept	-2.070660	Calculated intercept	-3.077854
Analyzer make	TEI Model 43	Analyzer serial #	43-16099-159

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
SO2 zero pot	651		NA	
SO2 span pot	636		NA	
Vacuum	10.1	in Hg	10.1	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	3363.2	0.0	2.9	N/A
3610	3363.2	339.9	327.6	1.0375
zero	3363.2	0.0	2.7	As Found Zero
3610	3363.2	339.9	327.6	As Found Span
			Average Correction Factor	1.0375

Calculated value of As Found Response: 326.492 ppm Percent Change of As Found: 3.9%

	before calibration		after calibration	
Auto zero	1.6	ppm	1.0	ppm
Auto span	218.1	ppm	197.3	ppm

Notes: Analyzer calibration point recovered after DACS replacement. An as found internal span was performed on February 24. No adjustments or maintenance performed.

Calibration Performed By: Kelly Baragar

Calibration Summary

FOCUS INTEC
Air Quality Monitoring

Parameter **SO2**

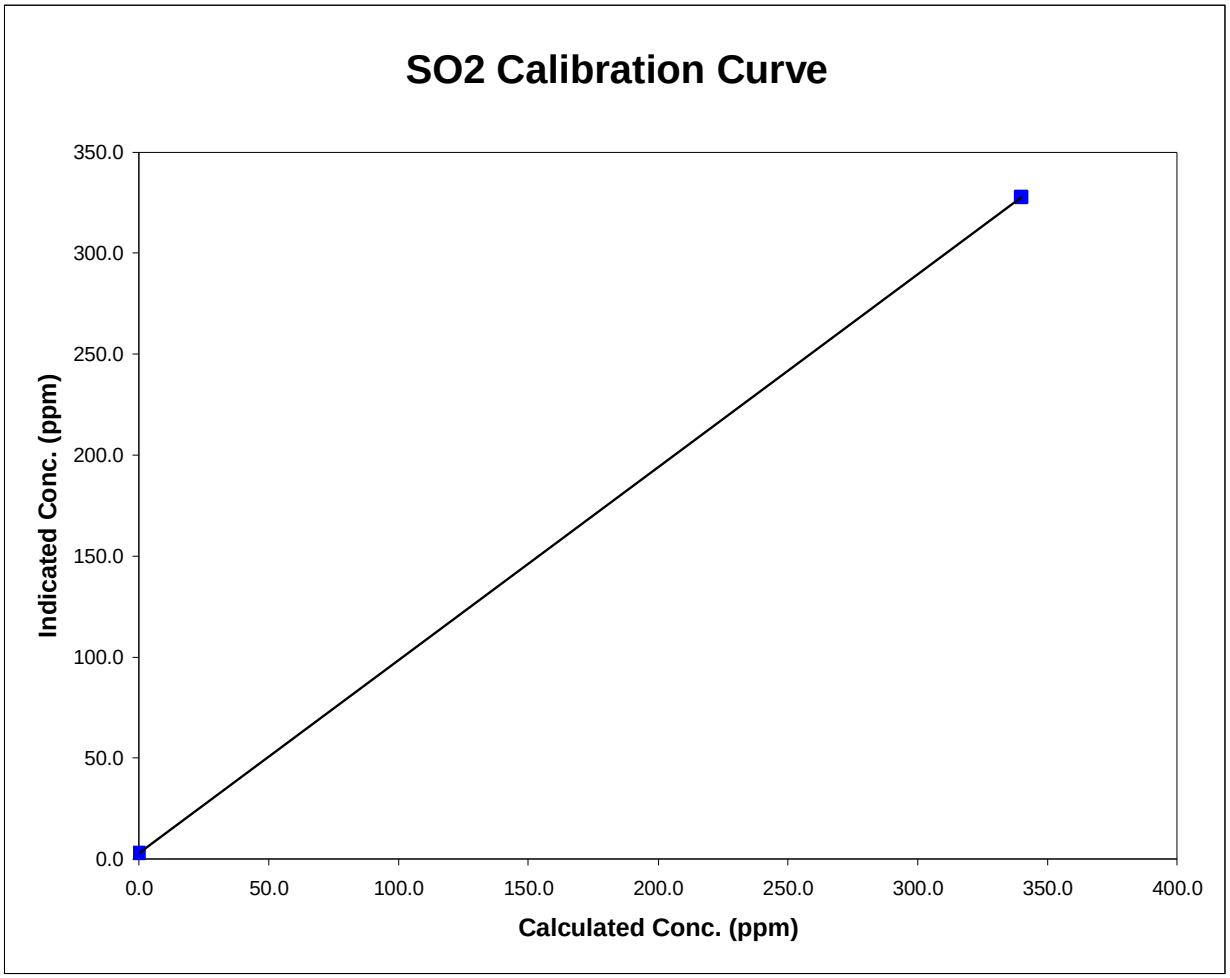
Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 25, 2004	Previous Calibration	January 29, 2004
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	17:15	End Time (MST)	21:45
Analyzer make/model	TEI Model 43	Analyzer serial #	43-16099-159

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	2.9	N/A		
339.9	327.6	1.0375	Correlation Coefficient	1.000000
			Slope	1.046915
			Intercept	-3.077854



Calibration Report

FOCUS INTEC
Air Quality Monitoring

Parameter **NOx-NO-NO_2**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	January 29, 2004	Previous Calibration	NA
Station Number	1	Station Location	Muskoseepi Park

Reason: Routine | **Installation** | Removal | Other:

Start Time (MST)	9:15		End Time (MST)	16:00	
Barometric Pressure	0.928	mmHg	Station Temperature	-28.0	Deg C
Calibrator	Environics 6100		Serial Number	3016	
NO Cal Gas Conc	49.8	ppm	Cal Gas Expiry Date	14-Dec-05	
NOx Cal Gas Conc	49.8	ppm	Cal Gas Serial #	ALM 011558	

DACS Information

DACS make	FOCUS AP1000	DACS serial No.	N/A

Parameter		NO2	NOx	NO
Before	DACS slope	NA	NA	NA
	DACS offset	NA	NA	NA
After	DACS slope	0.050000	0.050000	0.050000
	DACS offset	0.000000	0.000000	0.000000
Before	Data Slope	NA	NA	NA
	Data Offset	NA	NA	NA
After	Data Slope	0.985355	0.990925	0.991960
	Data Offset	-0.414604	-0.818062	1.251501
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 #	NA

Test Point	before		after	
Concentration range	NA	ppb	0 - 500	ppb
NO background	NA	ppb	NA	mV
NOx background	NA	ppb	NA	mV
NO coefficient	NA		NA	
NOx coefficient	NA		NA	
Chamber Temp	NA	Deg C	50.0	Deg C
Cooler Temp	NA	Deg C	-2.3	Deg C
Converter Temp	NA	Deg C	320.0	Deg C
Perm Temp	NA	Deg C	40.3	Deg C
Pressure	NA	mm Hg	165.0	mm Hg
Sample Flow	NA	ccm	455.0	ccm

Notes: Initial regulator contamination affected as found point. Purged all systems until a notable flat concentration response was received. Analyzer was D/A calibrated to match correct DACS input. Zero and span adjustments performed.

Calibration Report

FOCUS INTEC
Air Quality Monitoring

Parameter **NO_X-NO-NO_2**

Air Monitoring Network **PASZA**

Station Information

Calibration Date: January 29, 2004 Station Location: Muskoseepi Park

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4993	0.00	0.0	0.0	0.0	-0.4	-0.1	-0.3	N/A	N/A
1	4993	39.97	395.5	395.5	0.0	399.3	398.0	1.2	0.9904	0.9938
2	4993	19.97	198.4	198.4	0.0	201.6	198.3	3.3	0.9842	1.0005
3	4993	9.96	99.1	99.1	0.0	102.1	97.5	4.7	0.9706	1.0172
AFZ										
AFS										
							Average Correction Factor		0.9817	1.0039

As Found Concentrations NO_X= NA NO= NA As Found Percent Change NO_X= NA NO= NA

GPT Calibration Data

Dilution Flow 4993 ccm Source Gas Flow 39.97 ccm

O3 Setpoint (ppb)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	401.0	400.9	0.0	405.4	402.9	-0.3	N/A	N/A	N/A	N/A
100	399.8	103.9	295.8	404.3	103.5	300.0	0.9889	1.0040	0.9860	101.4%
200	399.4	201.2	198.2	403.9	201.6	202.0	0.9889	0.9982	0.9811	101.9%
300	400.9	300.5	100.4	405.4	301.7	103.2	0.9889	0.9961	0.9728	102.8%
					Average Correction Factor		0.9889	0.9994	0.9800	102.0%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	NA	NA	NA	ppb	2.7	0.6	1.9	ppb
Auto span	NA	NA	NA	ppb	434.8	421.1	13.0	ppb

Calibration Performed By: Kelly Baragar

Calibration Summary

FOCUS INTEC
Air Quality Monitoring

Parameter **NO_2**

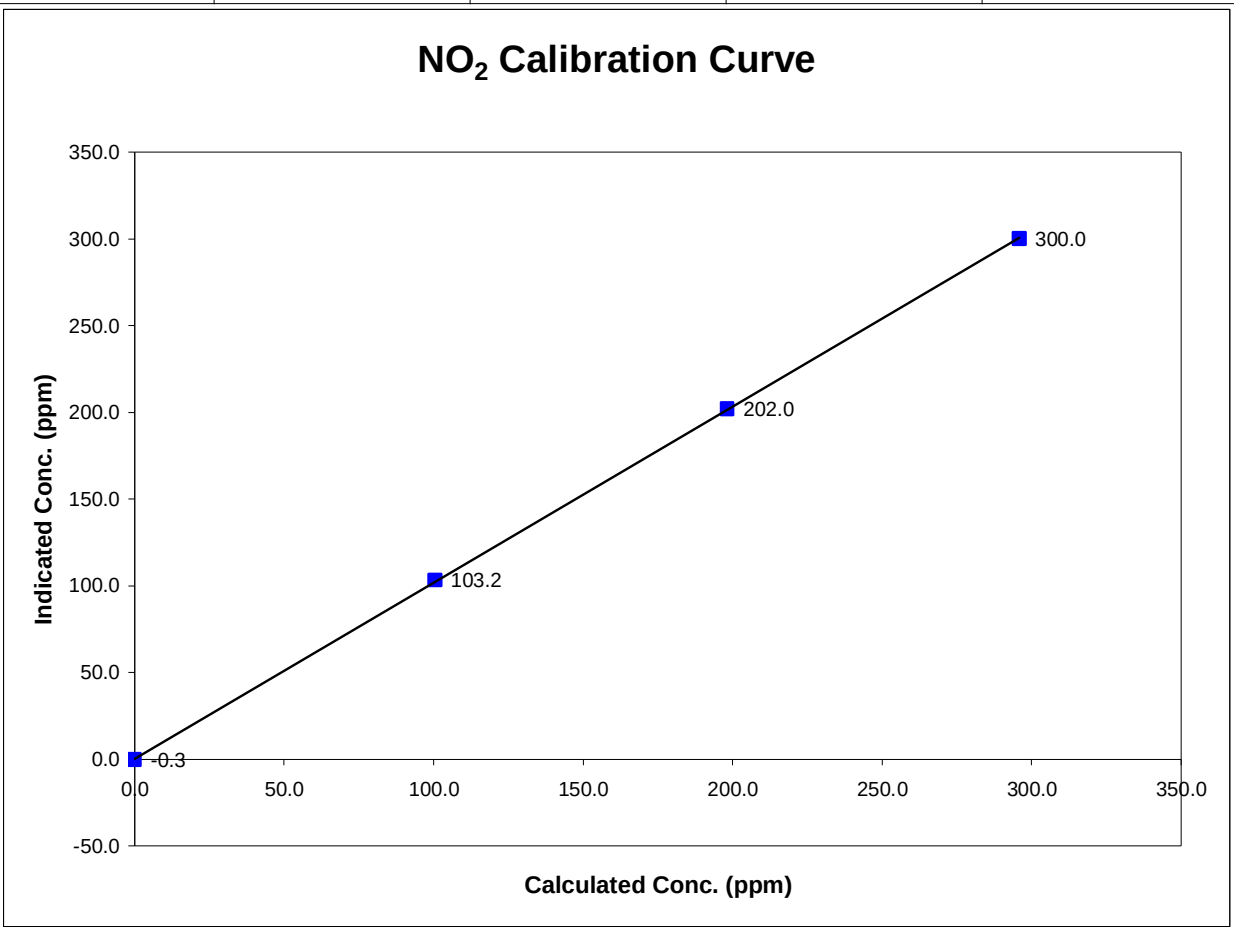
Air Monitoring Network **PASZA**

Station Information

Calibration Date	January 29, 2004	Previous Calibration	NA
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	9:15	End Time (MST)	16:00
Analyzer make	TEI Model 42	Analyzer serial #	NA

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.3	0.0000		
100.4	103.2	0.9728	Correlation Coefficient	0.999962
198.2	202.0	0.9811		
295.8	300.0	0.9860	Slope	0.985355
			Intercept	-0.414604



Calibration Summary

FOCUS INTEC
Air Quality Monitoring

Parameter **NO_x**

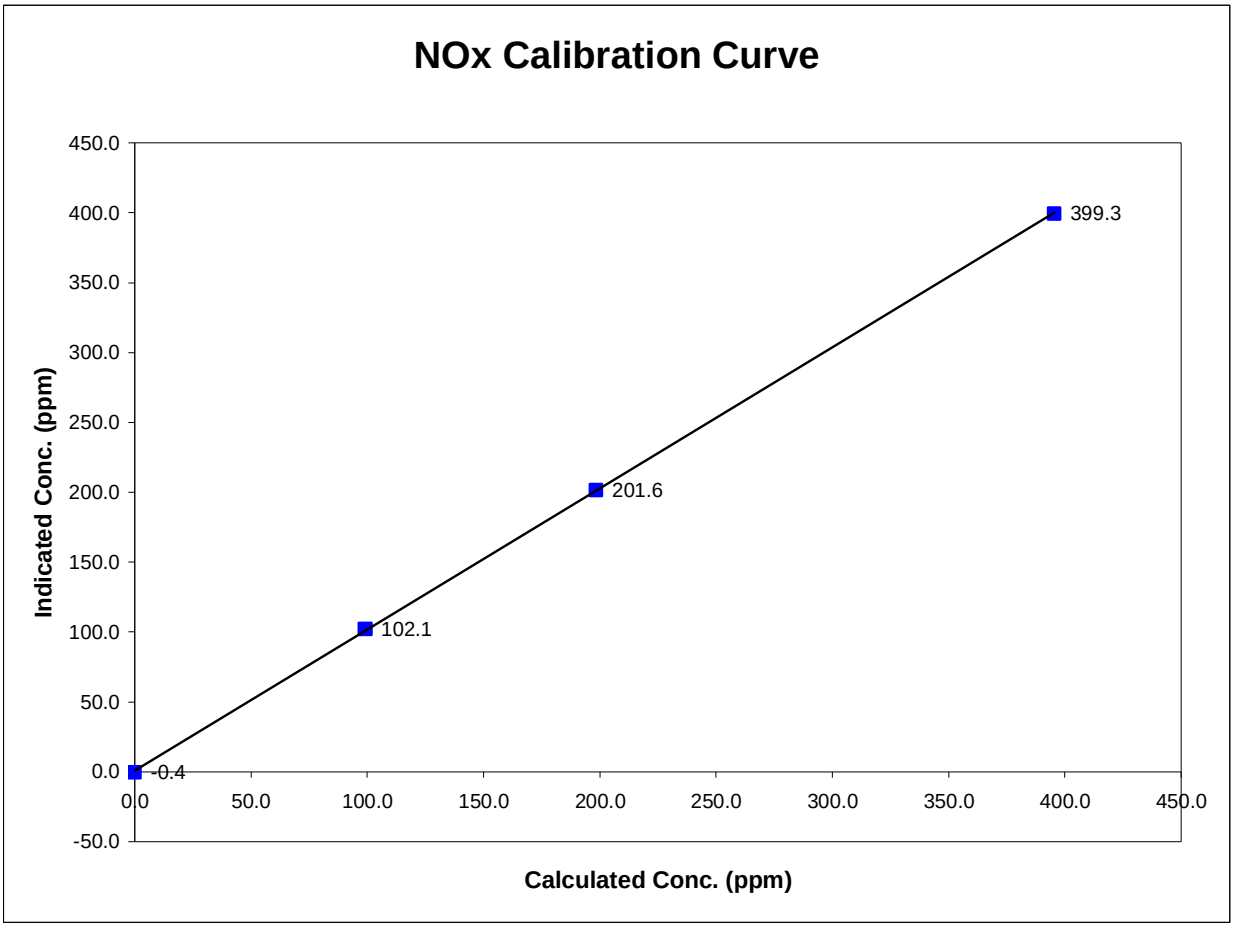
Air Monitoring Network **PASZA**

Station Information

Calibration Date	January 29, 2004	Previous Calibration	NA
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	9:15	End Time (MST)	16:00
Analyzer make	TEI Model 42	Analyzer serial #	NA

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.4	0.0000		
395.5	399.3	0.9904	Correlation Coefficient	0.999957
198.4	201.6	0.9842		
99.1	102.1	0.9706	Slope	0.990925
			Intercept	-0.818062



Calibration Summary

FOCUS INTEC
Air Quality Monitoring

Parameter **NO**

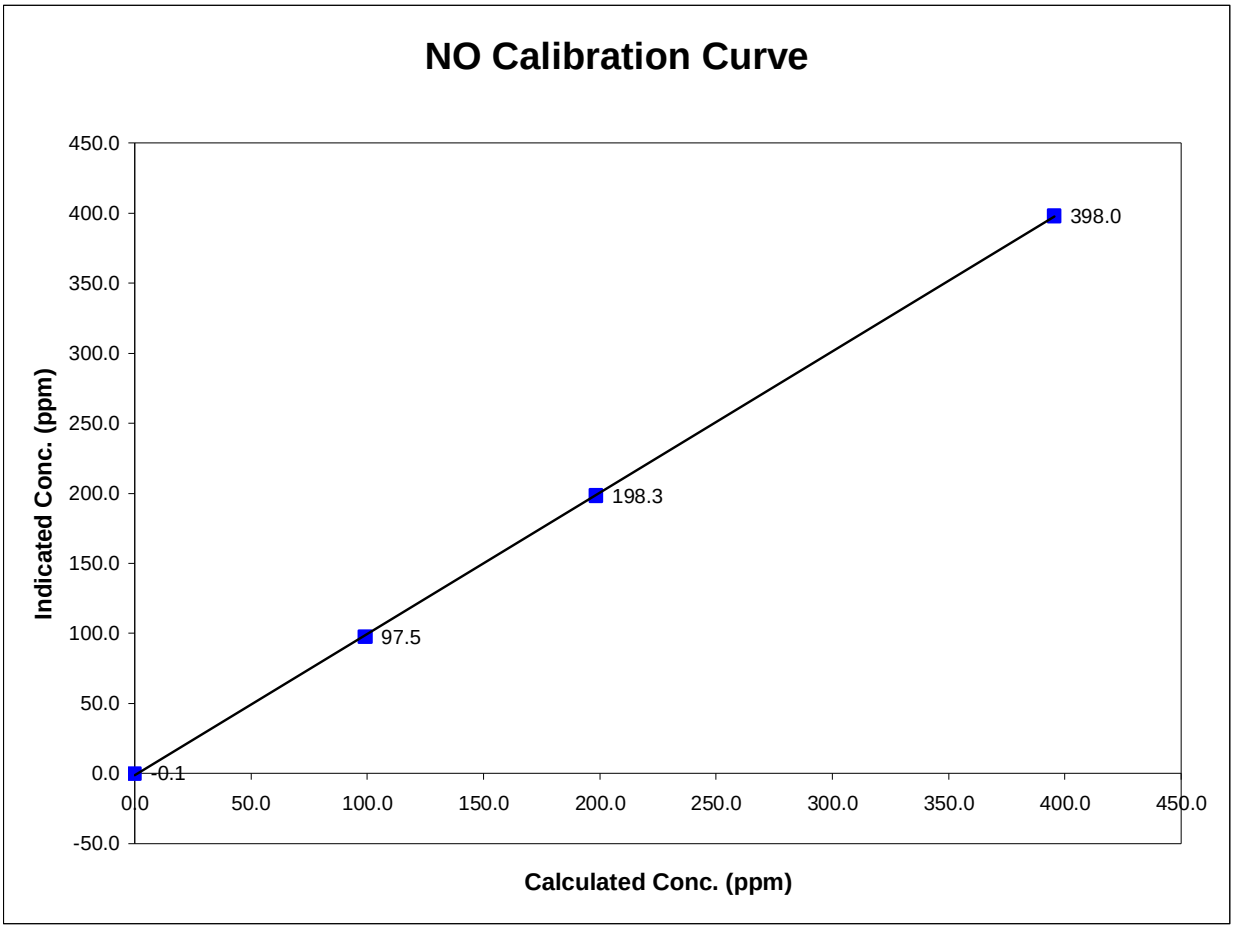
Air Monitoring Network **PASZA**

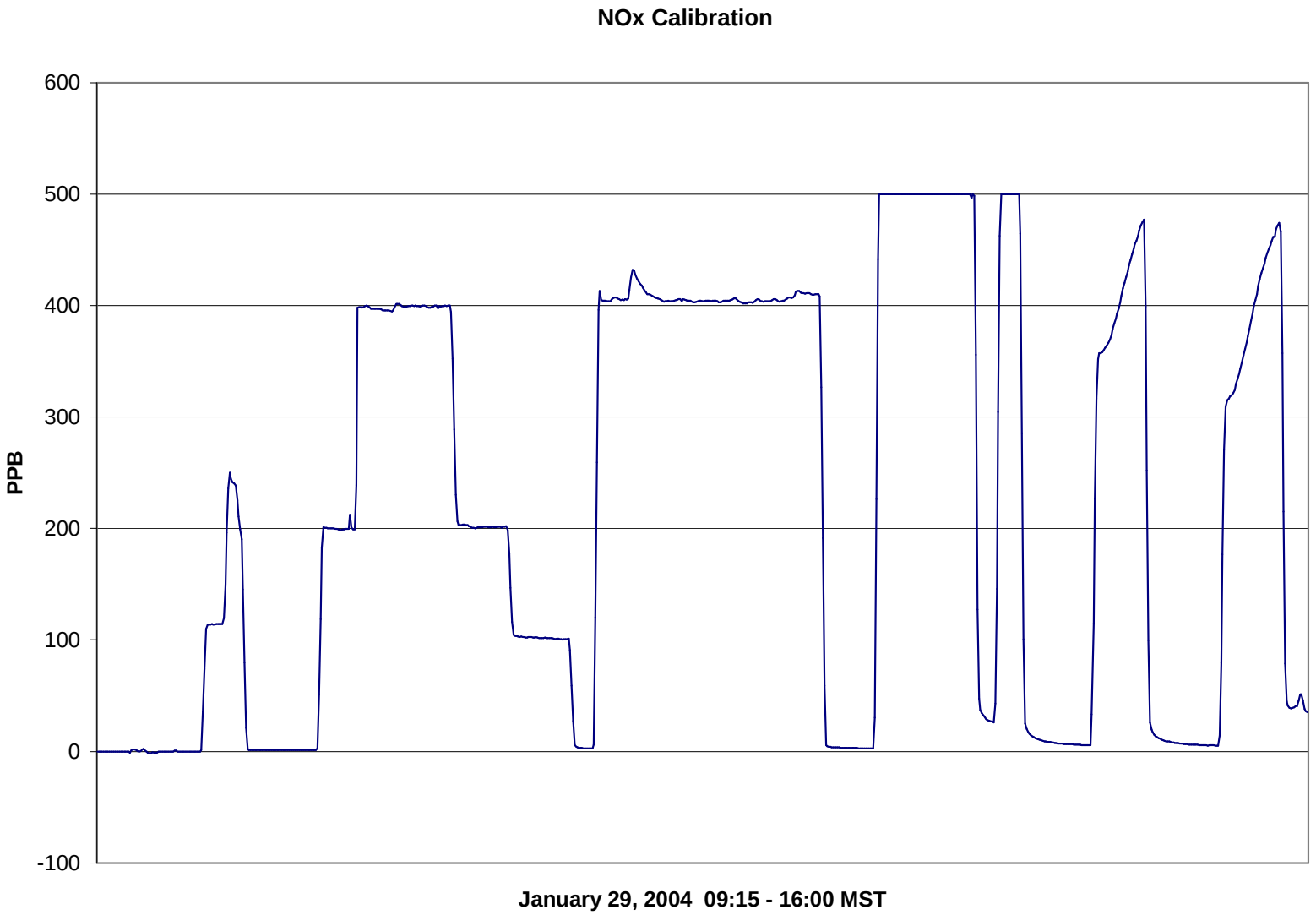
Station Information

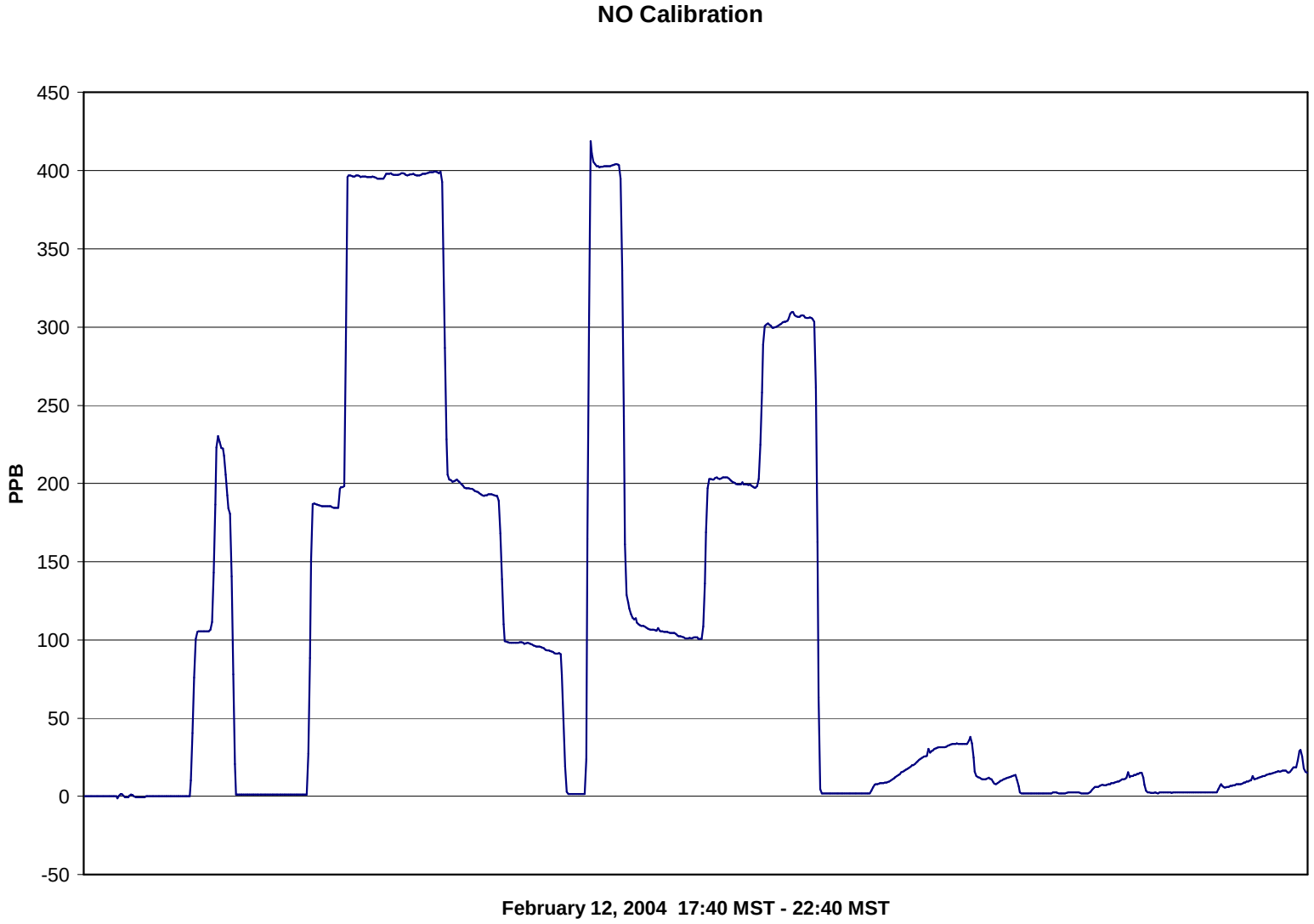
Calibration Date	January 29, 2004	Previous Calibration	NA
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	9:15	End Time (MST)	16:00
Analyzer make	TEI Model 42	Analyzer serial #	NA

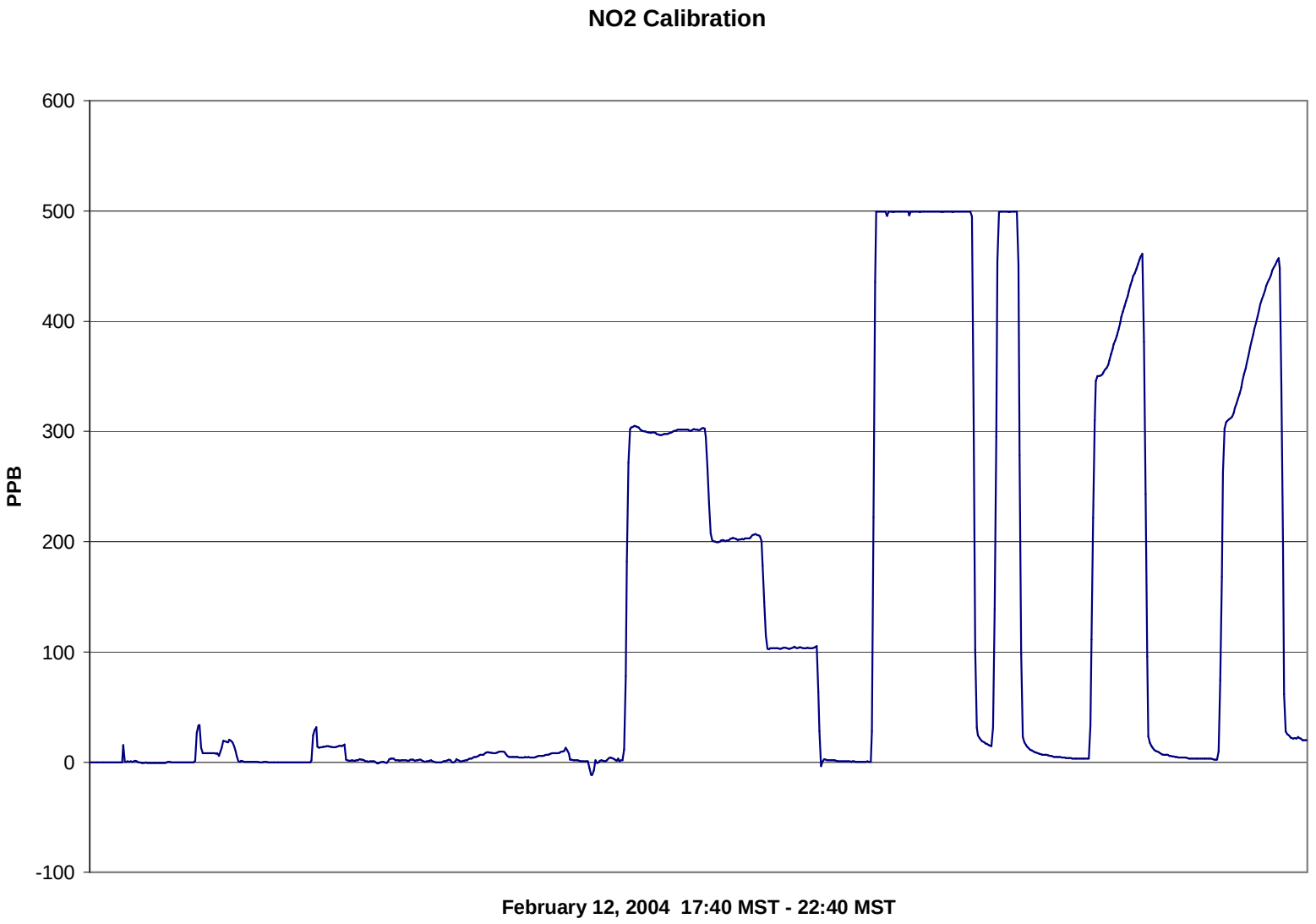
Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	-0.1	N/A		
395.5	398.0	0.9938	Correlation Coefficient	0.999962
198.4	198.3	1.0005		
99.1	97.5	1.0172	Slope	0.991960
			Intercept	1.251501




NOx Calibration
600
500
400
300
200
100
0
-100
PPB
January 29, 2004 09:15 - 16:00 MST


NO Calibration
450
400
350
300
250
200
150
100
50
0
-50
PPB
February 12, 2004 17:40 MST - 22:40 MST


NO2 Calibration
600
500
400
300
200
100
0
-100
PPB
February 12, 2004 17:40 MST - 22:40 MST

Calibration Report

FOCUS INTEC
Air Quality Monitoring

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

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 25, 2004	Previous Calibration	January 29, 2004
Station Number	1	Station Location	Muskoseepi Park

Reason: Routine | Installation | Removal | Other:

Start Time (MST)	15:20		End Time (MST)	20:00	
Barometric Pressure	0.918	mmHg	Station Temperature	-8.0	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.	N/A

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	1.000109	1.004854	1.001920
	Data Offset	0.050960	-0.829560	1.264067
After	Data Slope	1.074983	1.056940	0.998806
	Data Offset	-1.006401	-1.598541	-0.634697
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	5.8	ppb	5.8	mV
NOx background	4.9	ppb	4.9	mV
NO coefficient	1.490		1.490	
NOx coefficient	0.944		0.944	
Chamber Temp	50.0	Deg C	50.0	Deg C
Cooler Temp	-3.4	Deg C	-3.4	Deg C
Converter Temp	342.0	Deg C	342.0	Deg C
Perm Temp	NA	Deg C	NA	Deg C
Pressure	22.9	inches Hg	22.9	inches Hg
Sample Flow	NA	ccm	NA	ccm

Notes: As found span value captured Feb 24th before DACS replacement.
Single point NO and NO2 calibration points generated to capture new slope/intercepts for DACS.
No adjustments or maintenance performed.

Calibration Report

FOCUS INTEC
Air Quality Monitoring

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

Air Monitoring Network **Palliser Airshed**

Station Information

Calibration Date: February 25, 2004 Station Location: Muskoseepi Park

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor
zero	4993	0.00	0.0	0.0	0.0	1.5	0.6	0.9	N/A	N/A
1	4993	39.97	401.1	399.5	1.6	381.0	400.6	-11.5	1.0527	0.9972
2										
3										
AFZ	4993	0.00	0.0	0.0	0.0	1.6	0.6	1.0	0.0000	0.0000
AFS	4993	39.97	399.5	399.5	0.0	381.0	400.6	-11.5	1.0485	0.9972
							Average Correction Factor		1.0527	0.9972

As Found Concentrations NO_X= 378.6 NO= 401.2 As Found Percent Change NO_X= -5.2% NO= 0.4%

GPT Calibration Data

Dilution Flow 4993 ccm Source Gas Flow 39.97 ccm

O3 Setpoint (ppb)	Calculated NOx conc (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Indicated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	NOx Correction factor	NO Correction factor	NO2 Correction factor	Converter Efficiency
0	401.0	399.3	1.6	380.9	400.5	0.9	N/A	N/A	N/A	N/A
300	401.4	80.9	320.5	381.3	81.6	299.1	1.0527	0.9910	1.0716	93.3%
					Average Correction Factor		1.0527	0.9910	1.0716	93.3%

AIC Data

	Previous calibration				Current calibration			
Parameter	NOx	NO2	NO		NOx	NO2	NO	
Auto zero	2.7	0.6	1.9	ppb	0.1	-0.4	0.6	ppb
Auto span	434.8	421.1	13.0	ppb	341.8	338.0	3.5	ppb

Calibration Performed By: Kelly Baragar

Calibration Summary

FOCUS INTEC
Air Quality Monitoring

Parameter **NO_2**

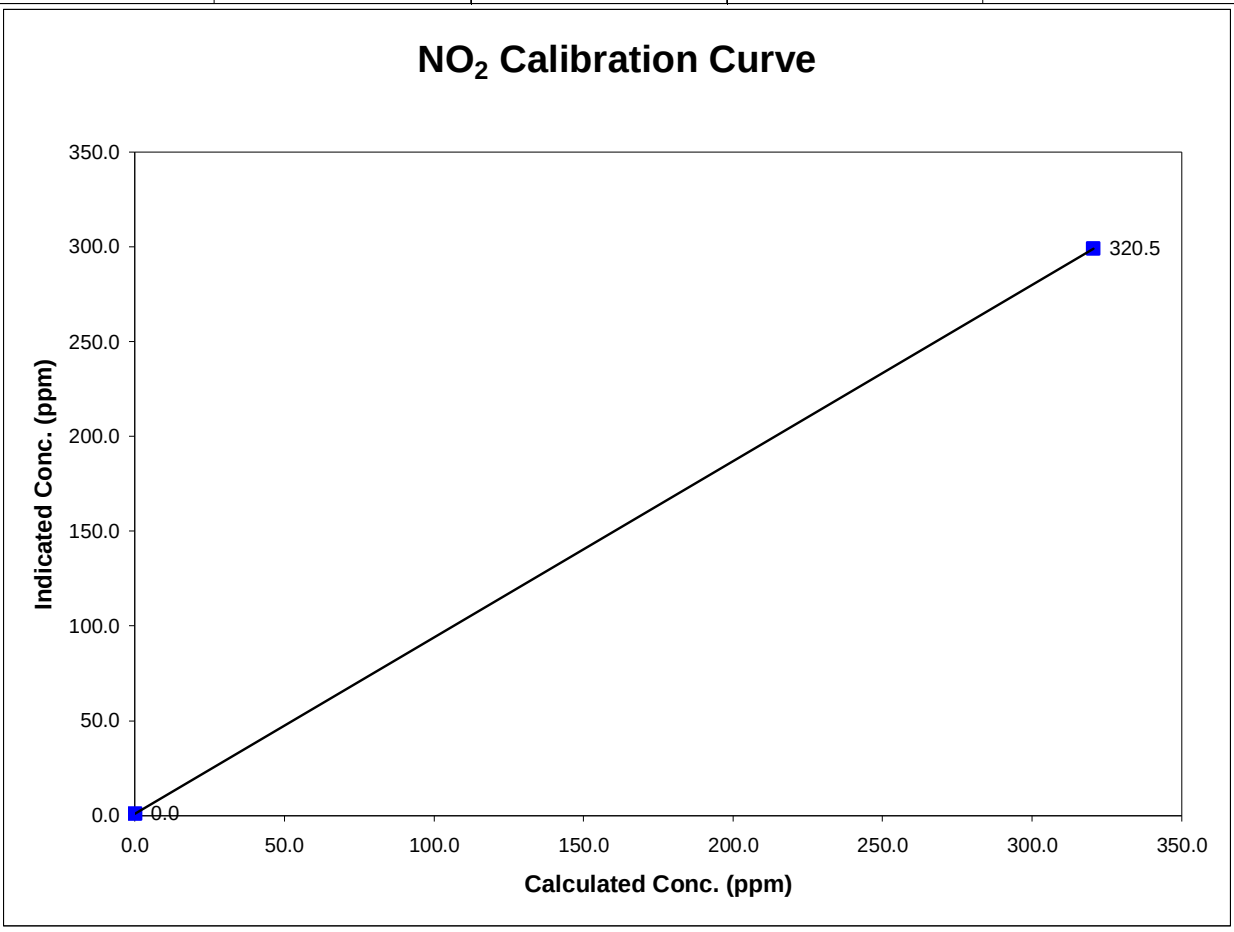
Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 25, 2004	Previous Calibration	January 29, 2004
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	15:20	End Time (MST)	20:00
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	0.9	0.0000		
320.5	299.1	1.0716	Correlation Coefficient	1.000000
			Slope	1.074983
			Intercept	-1.006401



Calibration Summary

FOCUS INTEC
Air Quality Monitoring

Parameter **NO_x**

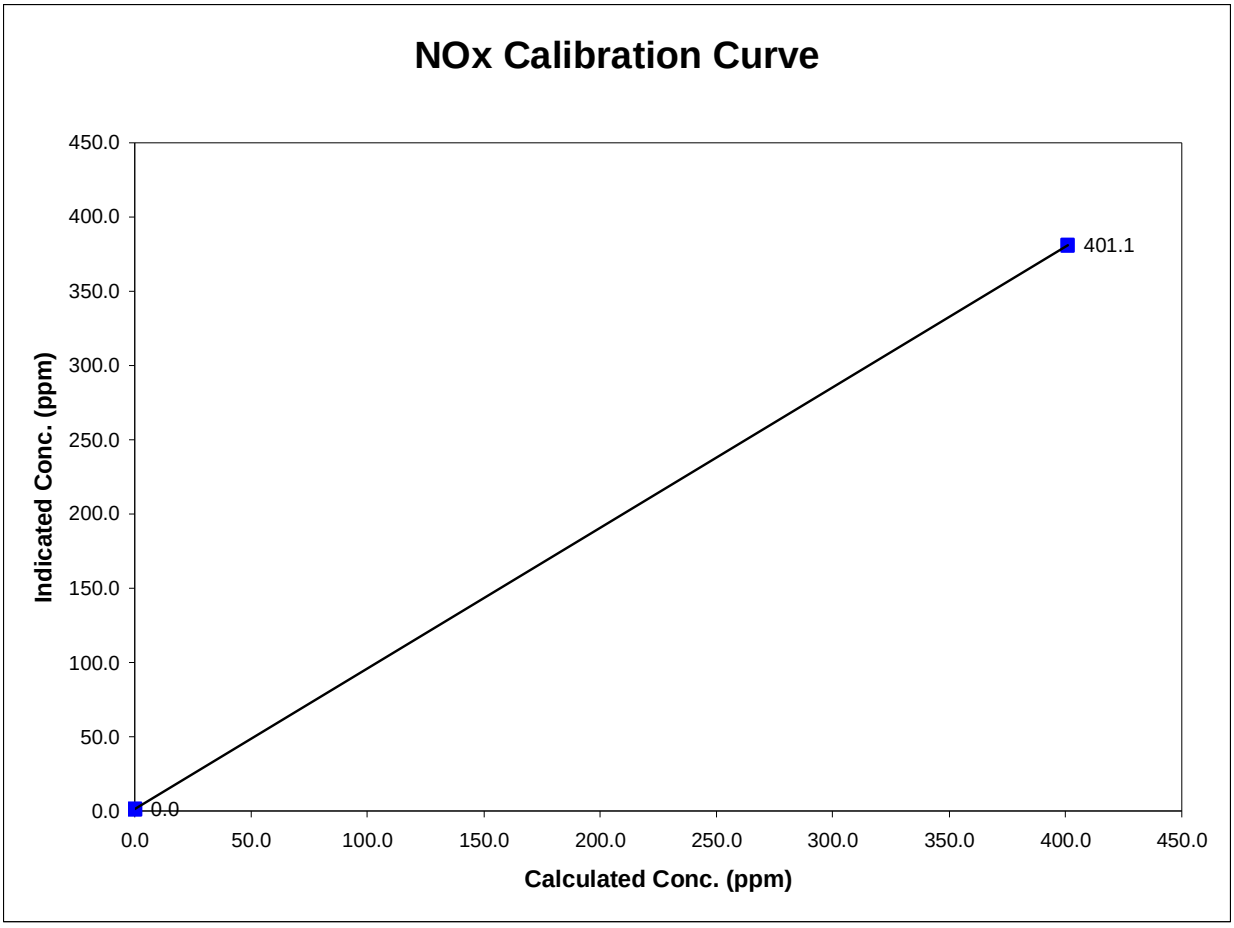
Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 25, 2004	Previous Calibration	January 29, 2004
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	15:20	End Time (MST)	20:00
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		
401.1	381.0	1.0527	Correlation Coefficient	1.000000
			Slope	1.056940
			Intercept	-1.598541



Calibration Summary

FOCUS INTEC
Air Quality Monitoring

Parameter **NO**

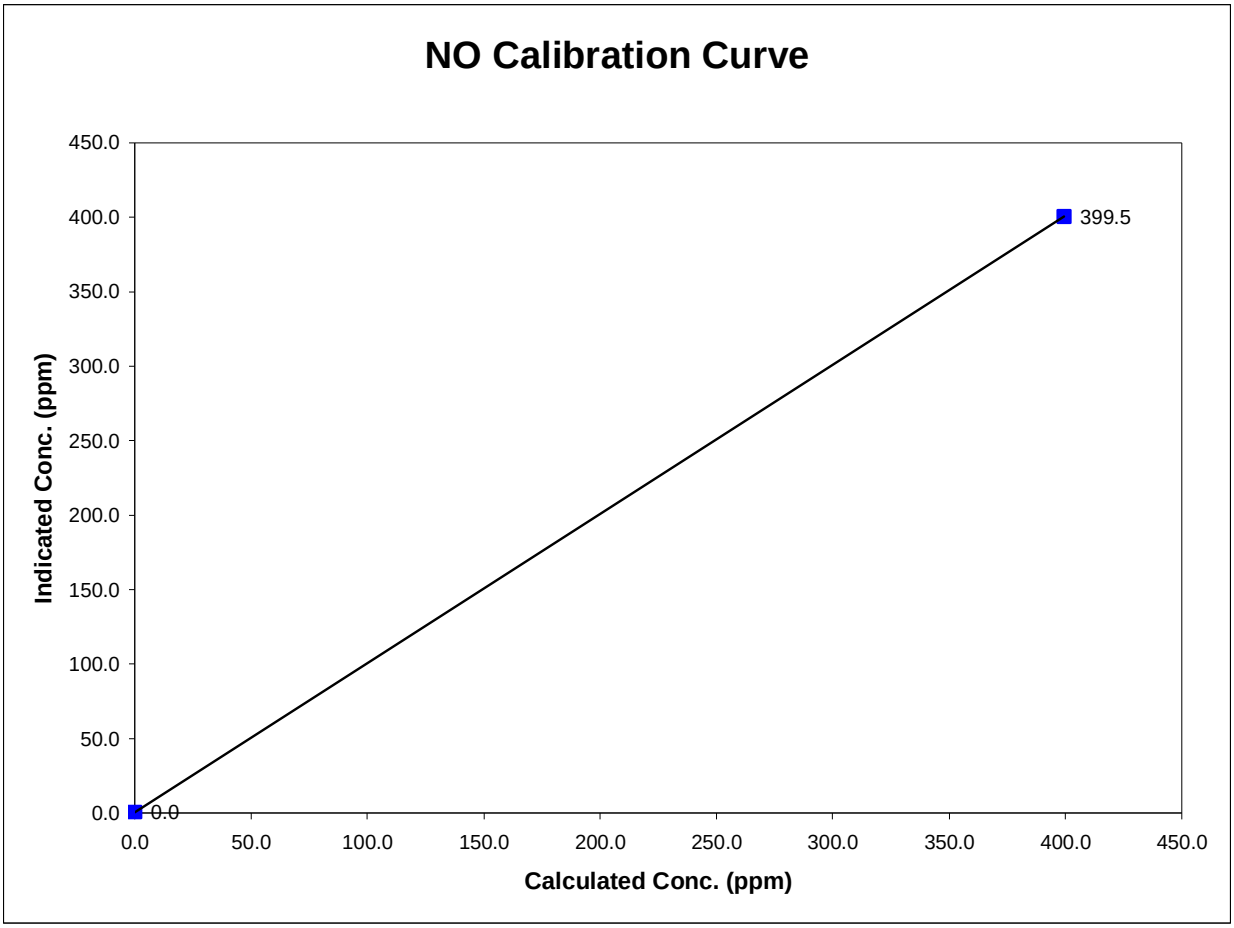
Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 25, 2004	Previous Calibration	January 29, 2004
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	15:20	End Time (MST)	20:00
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	0.6	N/A		
399.5	400.6	0.9972	Correlation Coefficient	1.000000
			Slope	0.998806
			Intercept	-0.634697



Calibration Report

FOCUS INTEC
Air Quality Monitoring

Parameter **O3**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	January 29, 2004	Previous Calibration	NA
Station Number	1	Station Location	Muskoseepi Park
Reason: Routine	Install	Removal	Other:
Start Time (MST)	19:35	End Time (MST)	22:05
Barometric Pressure	0.922 mb	Station Temperature	-28.6 Deg C
Calibrator	Environics 6100	Serial Number	3016
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	NA
DACS voltage range	0 - 1 volt	DACS channel #	5
	Before		After
DACS slope	NA	DACS slope	0.050000
DACS intercept	NA	DACS intercept	0.000000
Calculated slope	NA	Calculated slope	1.001172
Calculated intercept	NA	Calculated intercept	0.536864
Analyzer make	TEI Model 49	Analyzer serial #	NA

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
Background	NA	ppb	-0.6	ppb
coefficient	NA		1.117	
Lamp measure	NA	mV	3591	mV
Lamp Reference	NA	mV	3591	mV
Pressure	NA	inches Hg	27.2	inches Hg
Sample Flow	NA	ccm	670	ccm
Lamp temp	NA	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	400.0	399.4	1.0016
4995	0.00	200.0	198.6	1.0073
4995	0.00	100.0	99.1	1.0086
				As found zero
				As found span
			Average Correction Factor	1.0058

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

	before calibration		after calibration	
Auto zero	NA	ppb	-8.4	ppb
Auto span	NA	ppb	292.9	ppb

Notes: Analyzer was zero and span adjusted.

Calibration Performed By: Kelly Baragar

Calibration Summary

FOCUS INTEC
Air Quality Monitoring

Parameter **O3**

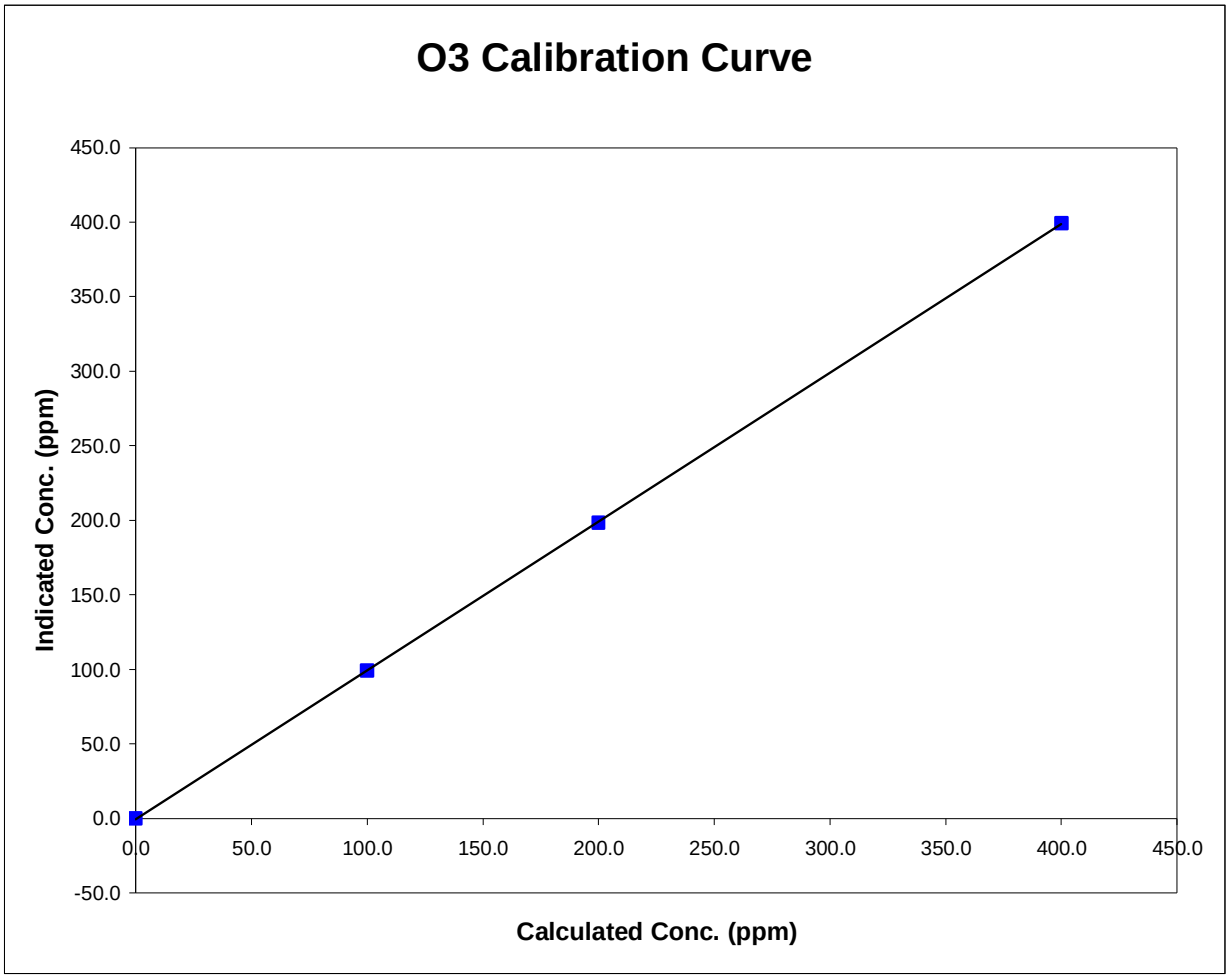
Air Monitoring Network **PASZA**

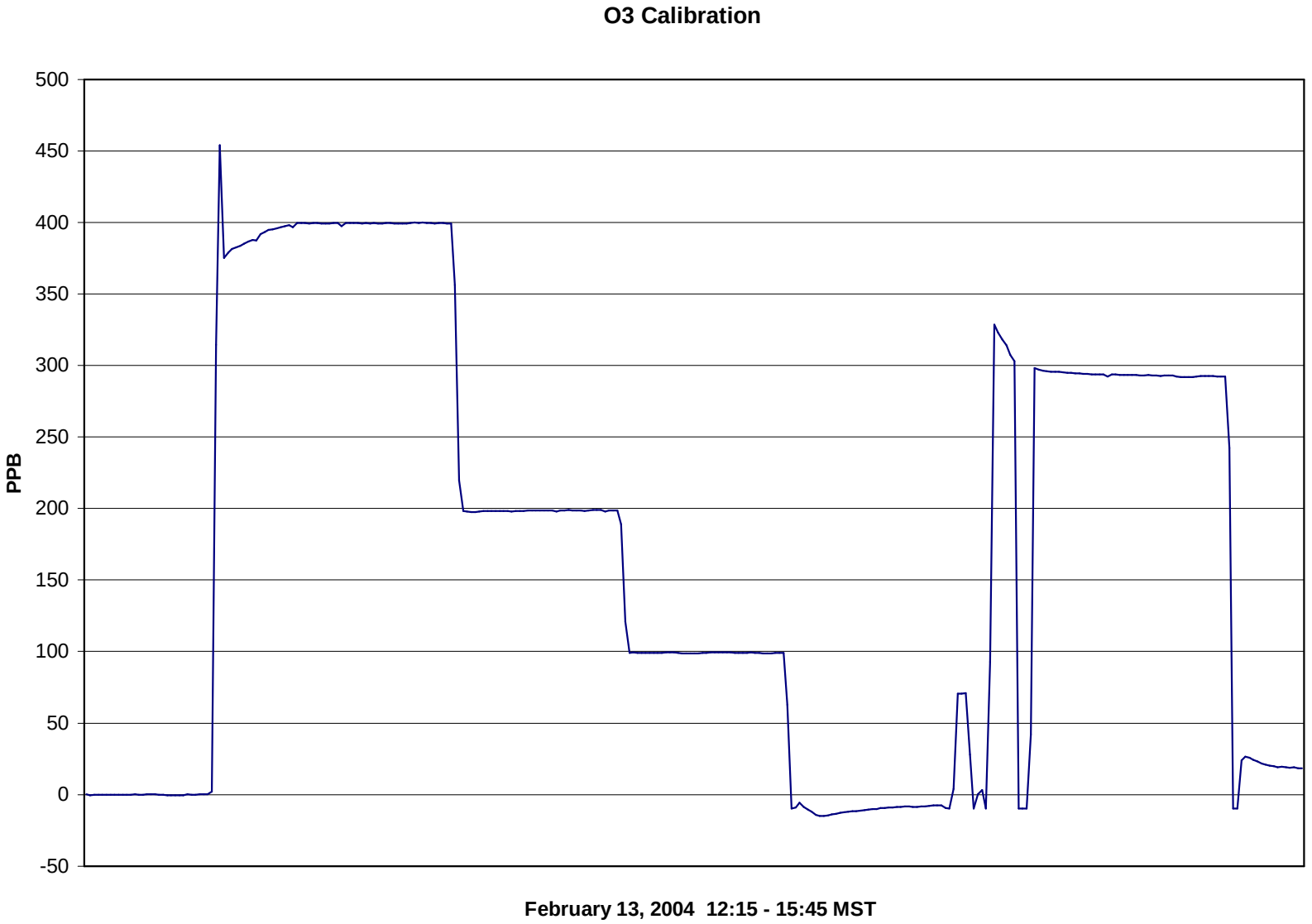
Station Information

Calibration Date	January 29, 2004	Previous Calibration	NA
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	19:35	End Time (MST)	22:05
Analyzer make/model	TEI Model 49	Analyzer serial #	NA

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
400.0	399.4	1.0016		
200.0	198.6	1.0073	Correlation Coefficient	0.999990
100.0	99.1	1.0086		
0.0	0.0	N/A	Slope	1.001172
			Intercept	0.536864




O3 Calibration
500
450
400
350
300
250
200
150
100
50
0
-50
PPB
February 13, 2004 12:15 - 15:45 MST

Calibration Report

FOCUS INTEC
Air Quality Monitoring

Parameter **O3**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 25, 2004	Previous Calibration	January 28, 2004
Station Number	1	Station Location	Muskoseepi Park
Reason:	Routine ■ Install ☐	Removal ☐	Other: ☐
Start Time (MST)	18:25	End Time (MST)	20:30
Barometric Pressure	0.918 mb	Station Temperature	-8.0 Deg C
Calibrator	Environics 6100	Serial Number	3016
Cal Gas Concentration	NA	Cal Gas Expiry Date	NA
DACS make	Focus AP1000	DACS serial No.	NA
DACS voltage range	0 - 1 volt	DACS channel #	5
	Before		After
DACS slope	0.050000	DACS slope	0.050000
DACS intercept	0.000000	DACS intercept	0.000000
Calculated slope	1.001172	Calculated slope	1.018222
Calculated intercept	0.536864	Calculated intercept	-0.167230
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	1.117		1.117	
Lamp measure	3475	mV	3591	mV
Lamp Reference	3476	mV	3475	mV
Pressure	NA	inches Hg	3476	inches Hg
Sample Flow	664	ccm	664	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	0.2	N/A
4995	0.00	400.0	393.0	1.0178
4995	0.00	0.0	0.2	As found zero
4995	0.00	400.0	393.0	As found span
			Average Correction Factor	1.0178

Calculated value of As Found Response: 393.8 ppm Percent Change of As Found: -1.6%

	before calibration		after calibration	
Auto zero	-8.4	ppb	1.2	ppb
Auto span	292.9	ppb	305.1	ppb

Notes: As found internal span captured February 24 before DACS change-out.
Calibration point captured; no adjustments or maintenance performed.

Calibration Performed By: Kelly Baragar

Calibration Summary

FOCUS INTEC
Air Quality Monitoring

Parameter **O3**

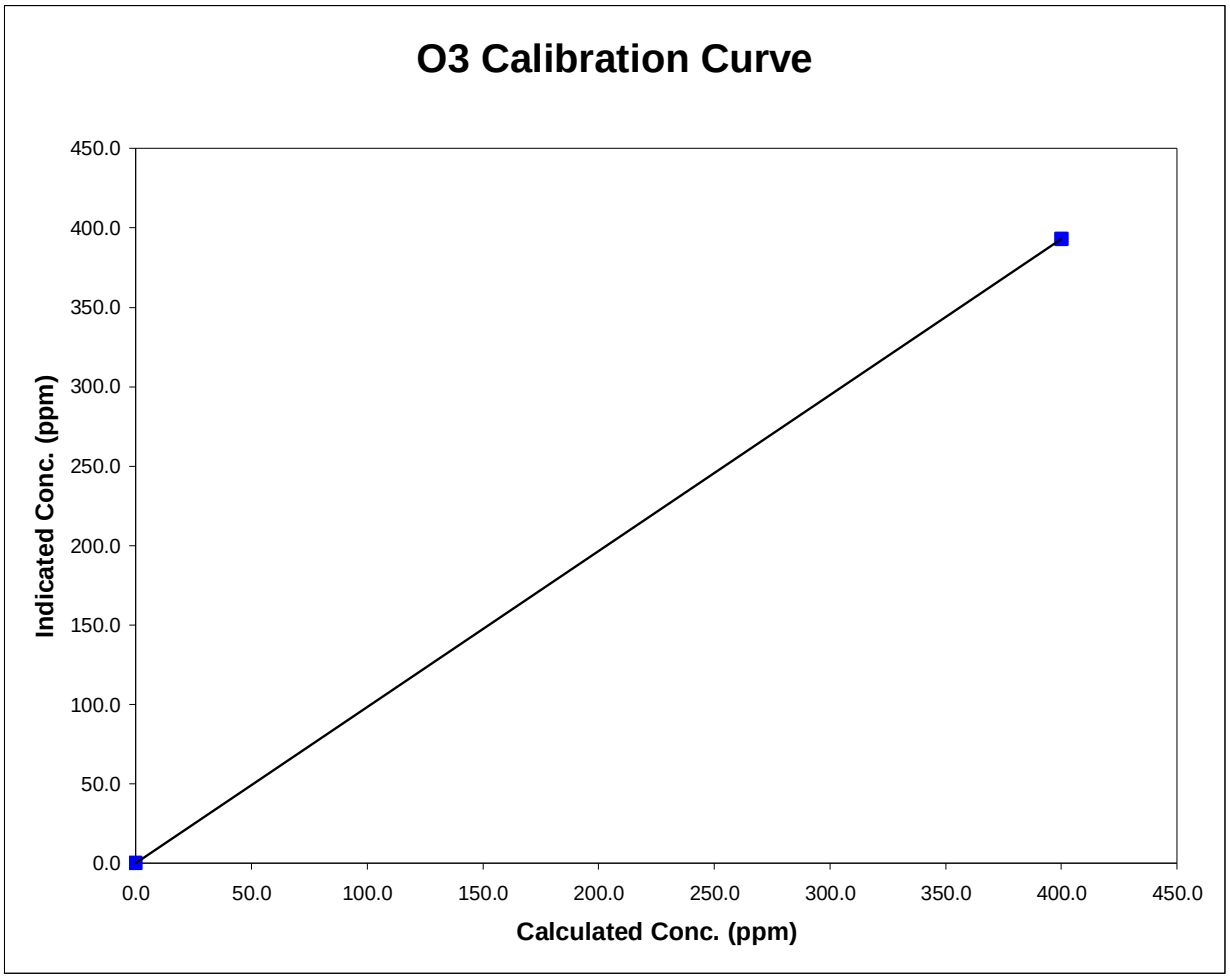
Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 25, 2004	Previous Calibration	January 28, 2004
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	18:25	End Time (MST)	20:30
Analyzer make/model	API Model 400	Analyzer serial #	383

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	0.0000		
400.0	393.0	1.0178	Correlation Coefficient	1.000000
			Slope	1.018222
			Intercept	-0.167230



Calibration Report

FOCUS INTEC
Air Quality Monitoring

Parameter **CO**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	January 29, 2004	Previous Calibration	NA
Station Number	1	Station Location	Muskoseepi Park
Reason:	Routine:	Install:	Removal:	Other:
Start Time (MST)	17:30	End Time (MST)	21:45
Barometric Pressure	0.928 mb	Station Temperature	-28.0 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
	Before		After
DACS slope	NA	DACS slope	0.005000
DACS intercept	NA	DACS intercept	0.000000
Calculated slope	NA	Calculated slope	1.012575
Calculated intercept	NA	Calculated intercept	-0.370464
Analyzer make	TEI Model 48	Analyzer serial #	NA

	before		after	
Concentration range	NA	ppm	0 - 25	ppm
CO slope	NA		NA	
CO bkg	NA		NA	

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	0.000	0.349	N/A
4993	29.94	17.882	18.007	0.9930
4993	19.96	11.945	12.183	0.9805
4993	9.99	5.990	6.297	0.9514
				As Found Zero
				As Found Span
			Average Correction Factor	0.9750

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

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

Notes: Analyzer was zero and span adjusted.
Span solenoid and zero cannister will be installed at a later date.

Calibration Performed By: Kelly Baragar

Calibration Summary

FOCUS INTEC
Air Quality Monitoring

Parameter **CO**

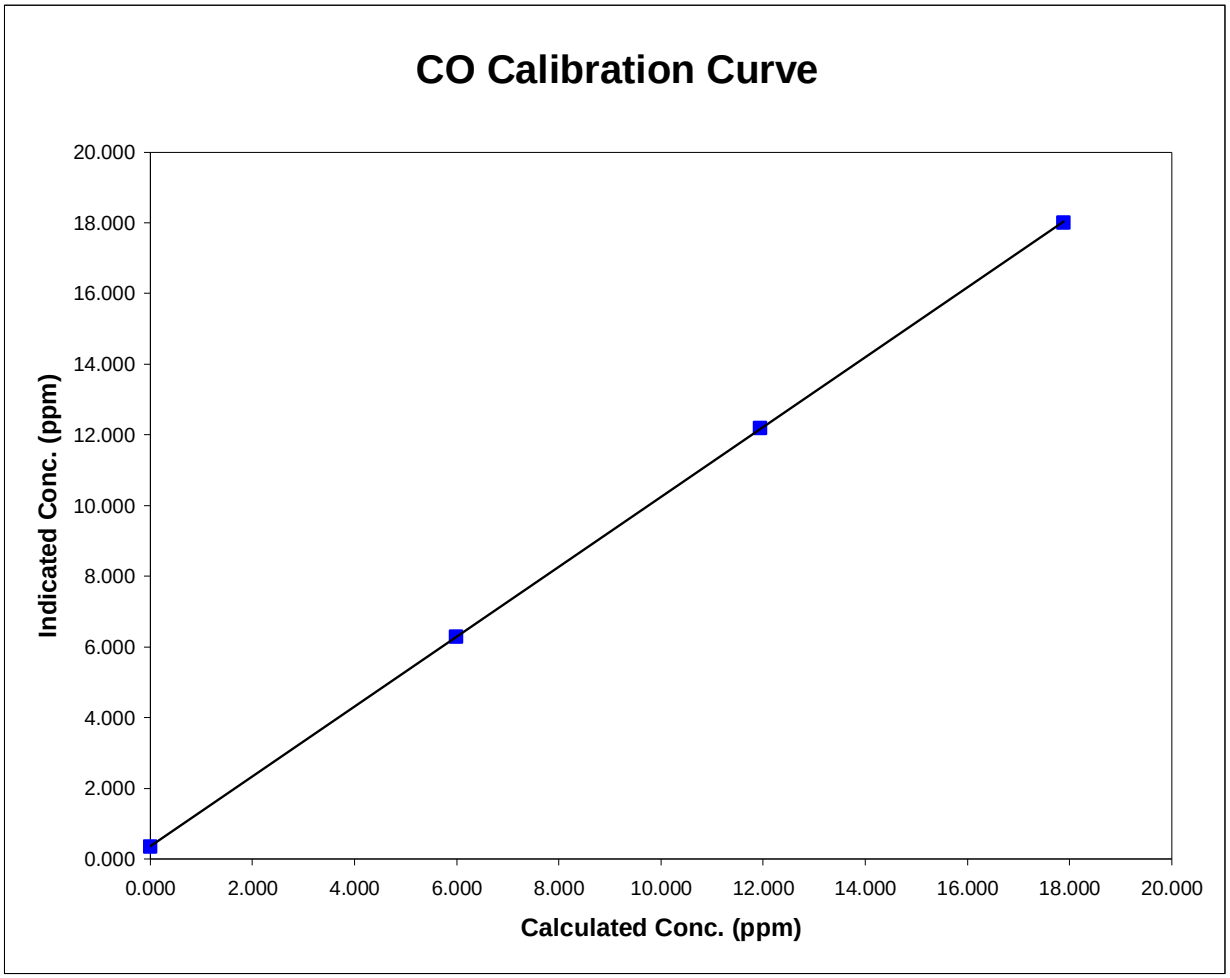
Air Monitoring Network **PASZA**

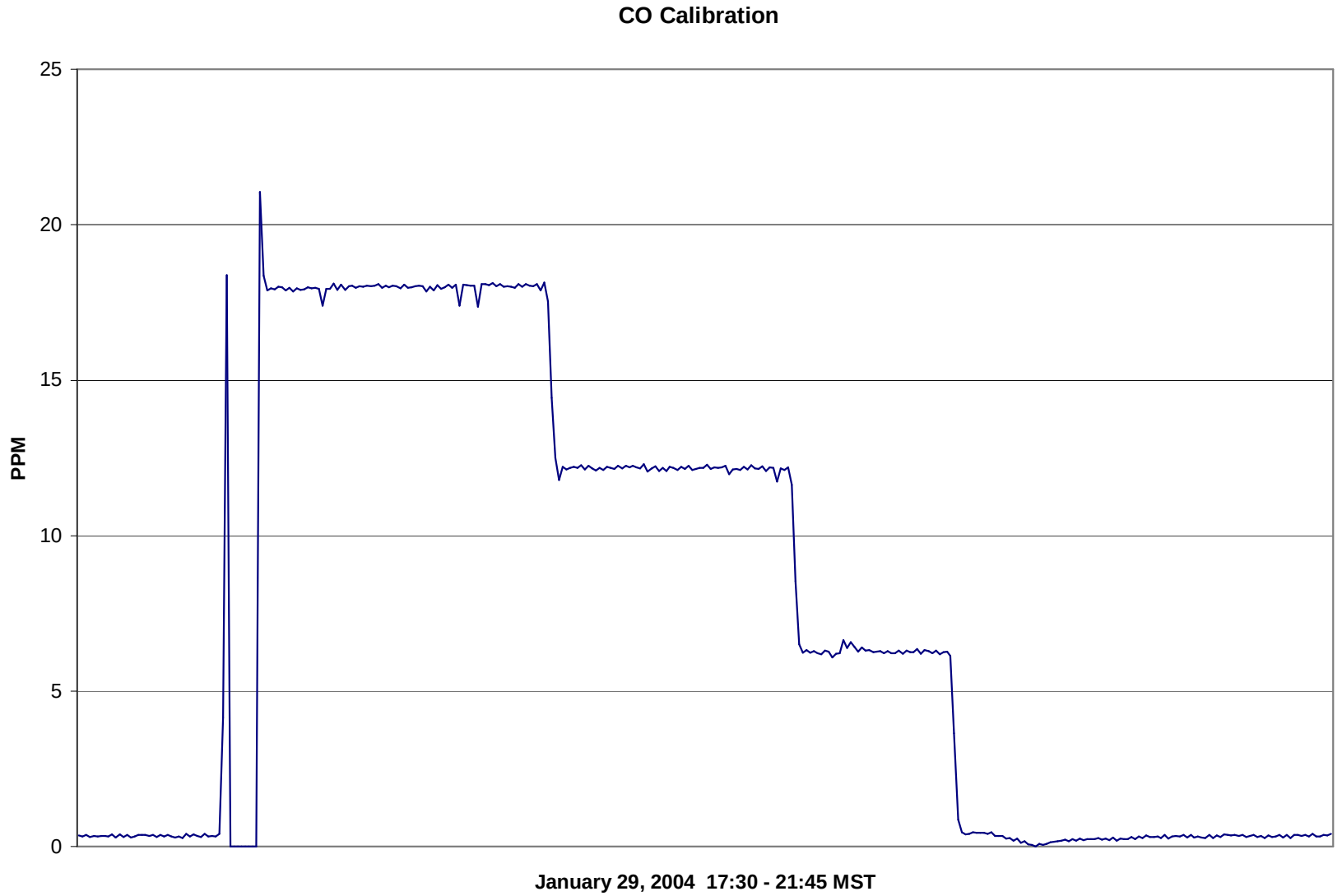
Station Information

Calibration Date	January 29, 2004	Previous Calibration	NA
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	17:30	End Time (MST)	21:45
Analyzer make/model	TEI Model 48	Analyzer serial #	NA

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.349	N/A		
5.990	6.297	0.9514	Correlation Coefficient	0.999993
11.945	12.183	0.9805		
17.882	18.007	0.9930	Slope	1.012575
			Intercept	-0.370464




CO Calibration
25
20
15
10
5
0
PPM
January 29, 2004 17:30 - 21:45 MST

Calibration Report

FOCUS INTEC
Air Quality Monitoring

Parameter **CO**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 24-25, 2004	Previous Calibration	January 29, 2004
Station Number	1	Station Location	Muskoseepi Park
Reason:	Routine	Install	Removal	Other:
Start Time (MST)	18:00 - 21:45	End Time (MST)	18:00 - 20:00
Barometric Pressure	0.918 mb	Station Temperature	-8.0 Deg C
Calibrator	Environics 6100	Serial Number	3016
Cal Gas Conc	3000 ppm	Cal Gas Expiry Date	12/10/05
		Cal Gas Cylinder #	ALM 005412
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
DACS slope	0.005000	DACS slope	0.005000
DACS intercept	0.000000	DACS intercept	0.000000
Calculated slope	1.012575	Calculated slope	1.038102
Calculated intercept	-0.370464	Calculated intercept	-0.246912
Analyzer make	TEI Model 48	Analyzer serial #	ACM-13989-143

	before		after	
Concentration range	0 - 25	ppm	0 - 25	ppm
CO span setting	598		598	
CO zero setting	611		611	
Sample pressure	667	mm Hg	667	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	0.000	0.238	N/A
4993	29.94	17.882	17.463	1.0240
4993	0.00	0.000	0.240	As Found Zero
4993	29.94	17.882	17.469	As Found Span
			Average Correction Factor	1.0240

Calculated value of As Found Response: 17.075 ppm Percent Change of As Found: 4.5%

	before calibration		after calibration	
Auto zero	NA	ppm	0.237	ppm
Auto span	NA	ppm	29.881	ppm

Notes: Span solenoid and zero cannister were installed and tested on February 25, 2004.
As found captured before DACS removal on February 24, 2004.
No adjustments or maintenance performed.

Calibration Performed By: Kelly Baragar

Calibration Summary

FOCUS INTEC
Air Quality Monitoring

Parameter **CO**

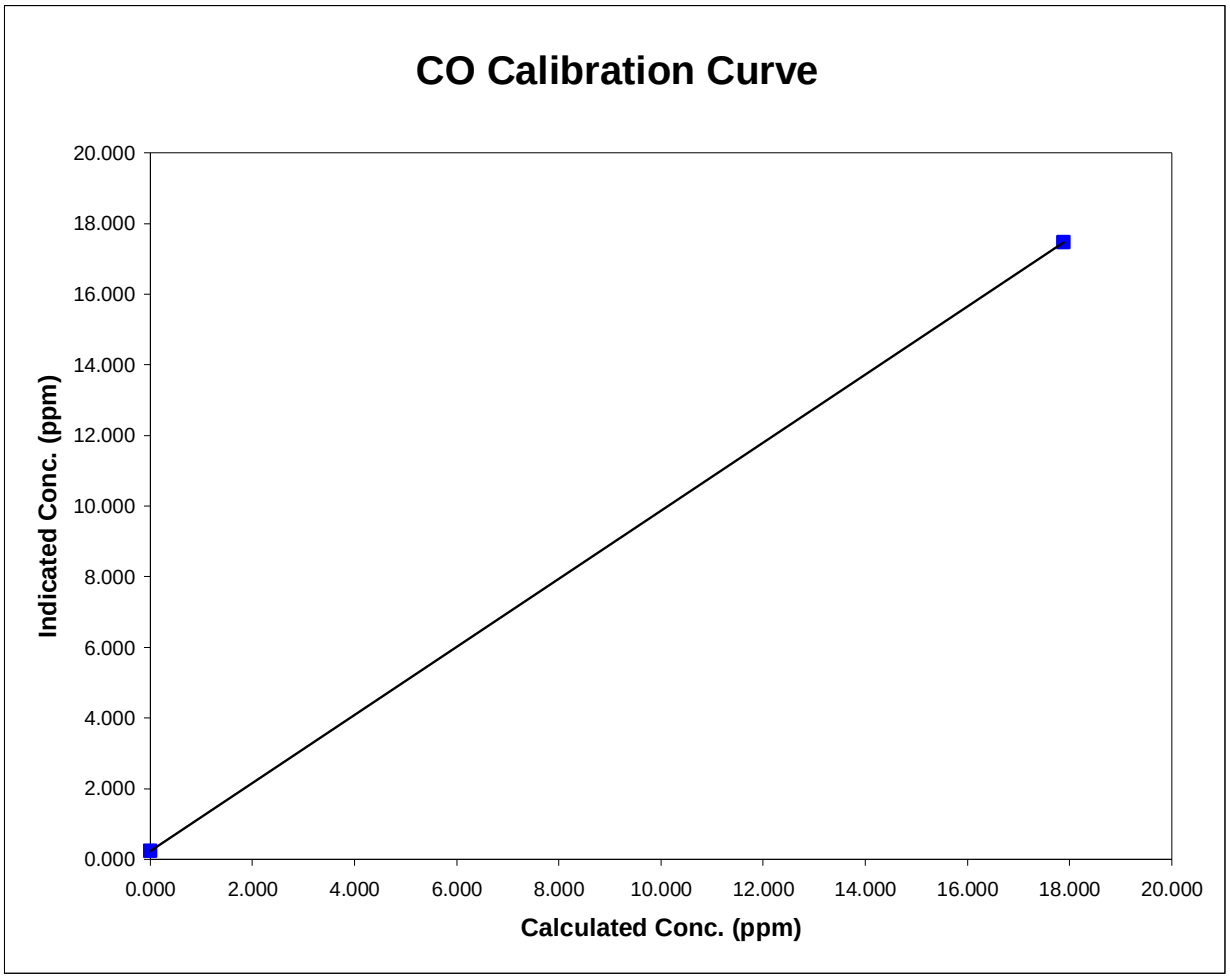
Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 24-25, 2004	Previous Calibration	January 29, 2004
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	18:00 - 21:45	End Time (MST)	18:00 - 20:00
Analyzer make/model	TEI Model 48	Analyzer serial #	ACM-13989-143

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.238	N/A		
17.882	17.463	1.0240	Correlation Coefficient	1.000000
			Slope	1.038102
			Intercept	-0.246912



Calibration Report

FOCUS INTEC
Air Quality Monitoring

Parameter **THC**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	January 29, 2004	Previous Calibration	NA
Station Number	1	Station Location	Muskoseepi Park
Reason:	Routine / Install / Removal / Other:		
Start Time (MST)	13:30	End Time (MST)	16:10
Barometric Pressure	0.928 mb	Station Temperature	-28.0 Deg C
Calibrator	Environics 6100	Serial Number	3016
Cal Gas Concentration	700 ppm CH4/ 299 ppm C3H8	Cal Gas Expiry Date	NA
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
	Before		After
DACS slope	NA	DACS slope	0.005000
DACS intercept	NA	DACS intercept	0.000000
Calculated slope	NA	Calculated slope	0.999304
Calculated intercept	NA	Calculated intercept	-0.027672
Analyzer make	TEI Model 51C-LT	Analyzer serial #	NA

	before		after	
Concentration range	NA	ppm	0 - 25	ppm
THC slope	NA		NA	
THC bkg	NA		NA	

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)
2997	0.00	0.000	0.021	N/A
2997	39.96	20.030	20.087	0.9971
2997	19.96	10.071	10.052	1.0019
2997	9.97	5.047	5.123	0.9852
				As Found Zero
				As Found Span
			Average Correction Factor	0.9948

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

	before calibration		after calibration	
Auto zero	NA	ppm	0.084	ppm
Auto span	NA	ppm	17.696	ppm

Notes: Analyzer was zero and span adjusted.
Analyzer processor was too slow during zero/span switching; as such the analyzer does not properly release the zero solenoid. Too be followed up with factory.

Calibration Performed By: Kelly Baragar

Calibration Summary

FOCUS INTEC
Air Quality Monitoring

Parameter **THC**

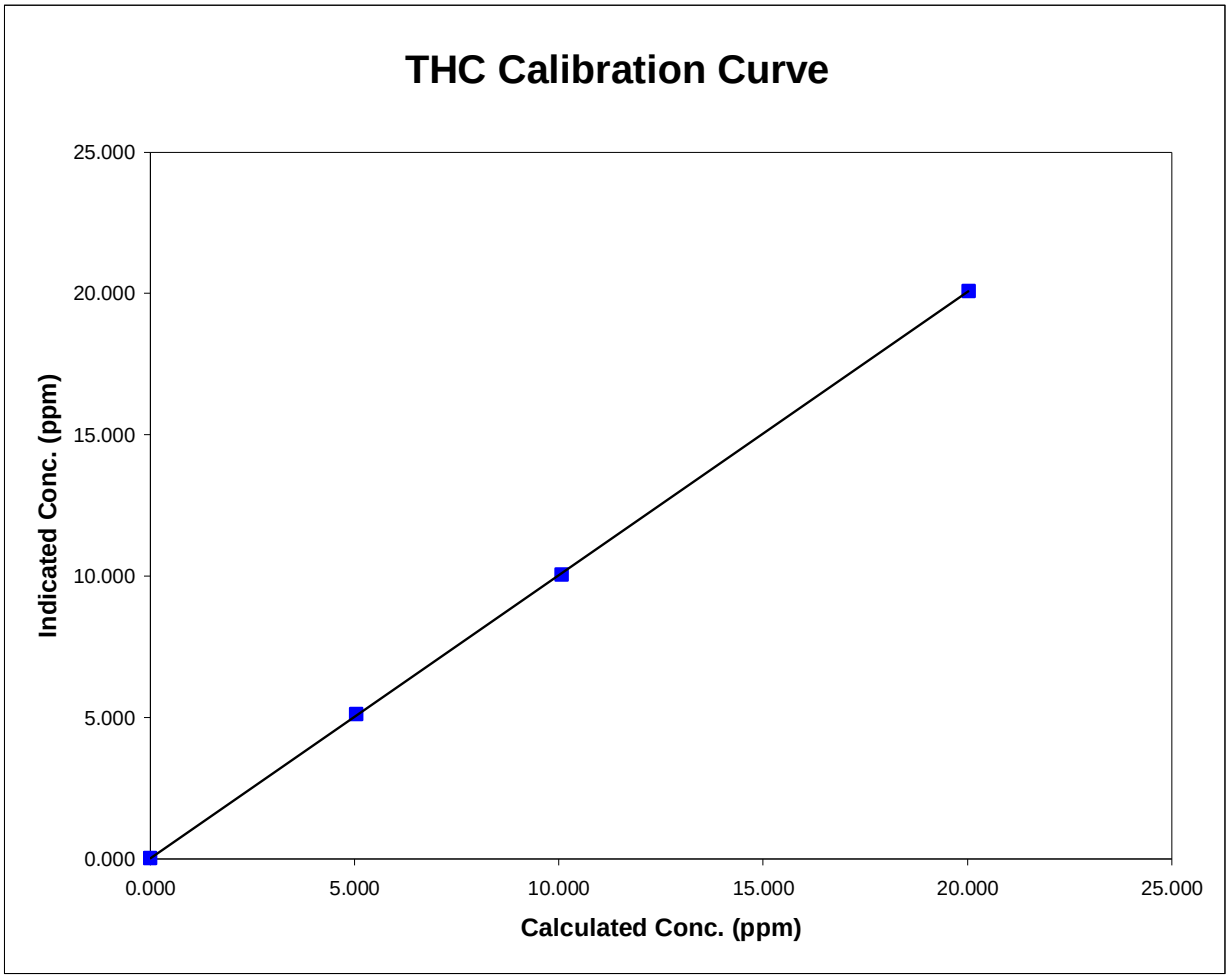
Air Monitoring Network **PASZA**

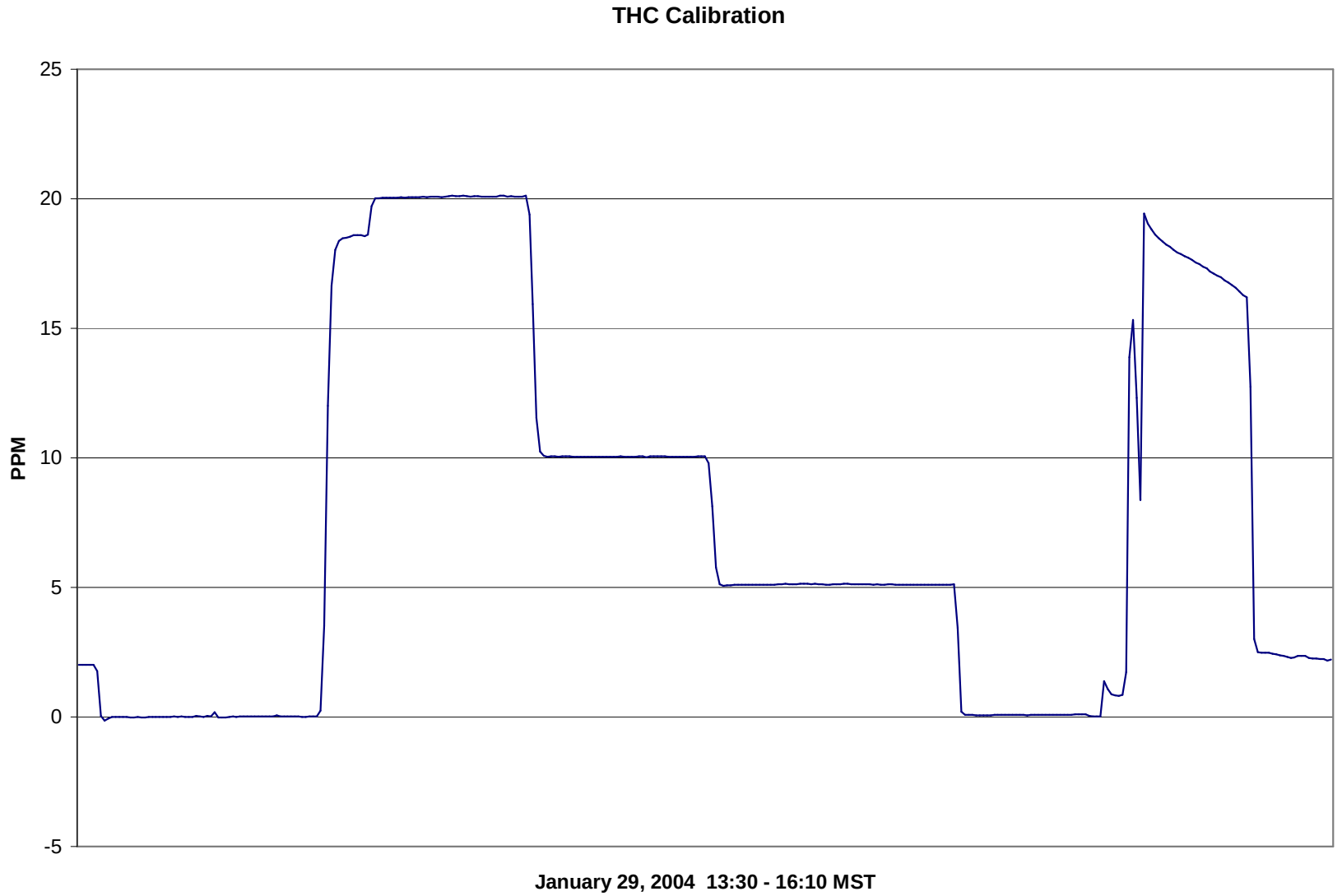
Station Information

Calibration Date	January 29, 2004	Previous Calibration	NA
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	13:30	End Time (MST)	16:10
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	NA

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	0.021	N/A		
5.047	5.123	0.9852	Correlation Coefficient	0.999976
10.071	10.052	1.0019		
20.030	20.087	0.9971	Slope	0.999304
			Intercept	-0.027672




THC Calibration
25
20
15
10
5
0
-5
PPM
January 29, 2004 13:30 - 16:10 MST

Calibration Report

FOCUS INTEC
Air Quality Monitoring

Parameter **THC**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 24, 2004	Previous Calibration	January 29, 2004
Station Number	1	Station Location	Muskoseepi Park

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

Start Time (MST)	17:49	End Time (MST)	19:12
Barometric Pressure	0.928 mb	Station Temperature	-8.0 Deg C
Calibrator	Station span cylinder	Serial Number	3016
Cal Gas Concentration	20.8 ppm CH4	Cal Gas Expiry Date	NA
Cal Gas CH4 equiv	ppm	Cal Gas Cylinder #	
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 1 volt	DACS channel #	9
	Before		After
DACS slope	NA	DACS slope	0.005000
DACS intercept	NA	DACS intercept	0.000000
Calculated slope	0.999304	Calculated slope	1.002818
Calculated intercept	-0.027672	Calculated intercept	0.276193

Analyzer make	TEI Model 51C-LT		Analyzer serial #	NA
	before		after	
Concentration range	NA	ppm	0 - 25	ppm
THC slope	NA		NA	
THC bkg	NA		NA	

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)
		0.000	-0.275	N/A
		20.800	20.466	1.0163
		0.000	-0.275	As Found Zero
		20.800	20.466	As Found Span
			Average Correction Factor	1.0163

Calculated value of As Found Response: 20.699 ppm Percent Change of As Found: 0.5%

	before calibration		after calibration	
Auto zero	0.084	ppm	-0.275	ppm
Auto span	17.696	ppm	20.466	ppm

Notes: Analyzer response tested with internal zero/span selection
No adjustments or maintenance performed.

Calibration Performed By: Kelly Baragar

Calibration Summary

FOCUS INTEC
Air Quality Monitoring

Parameter **THC**

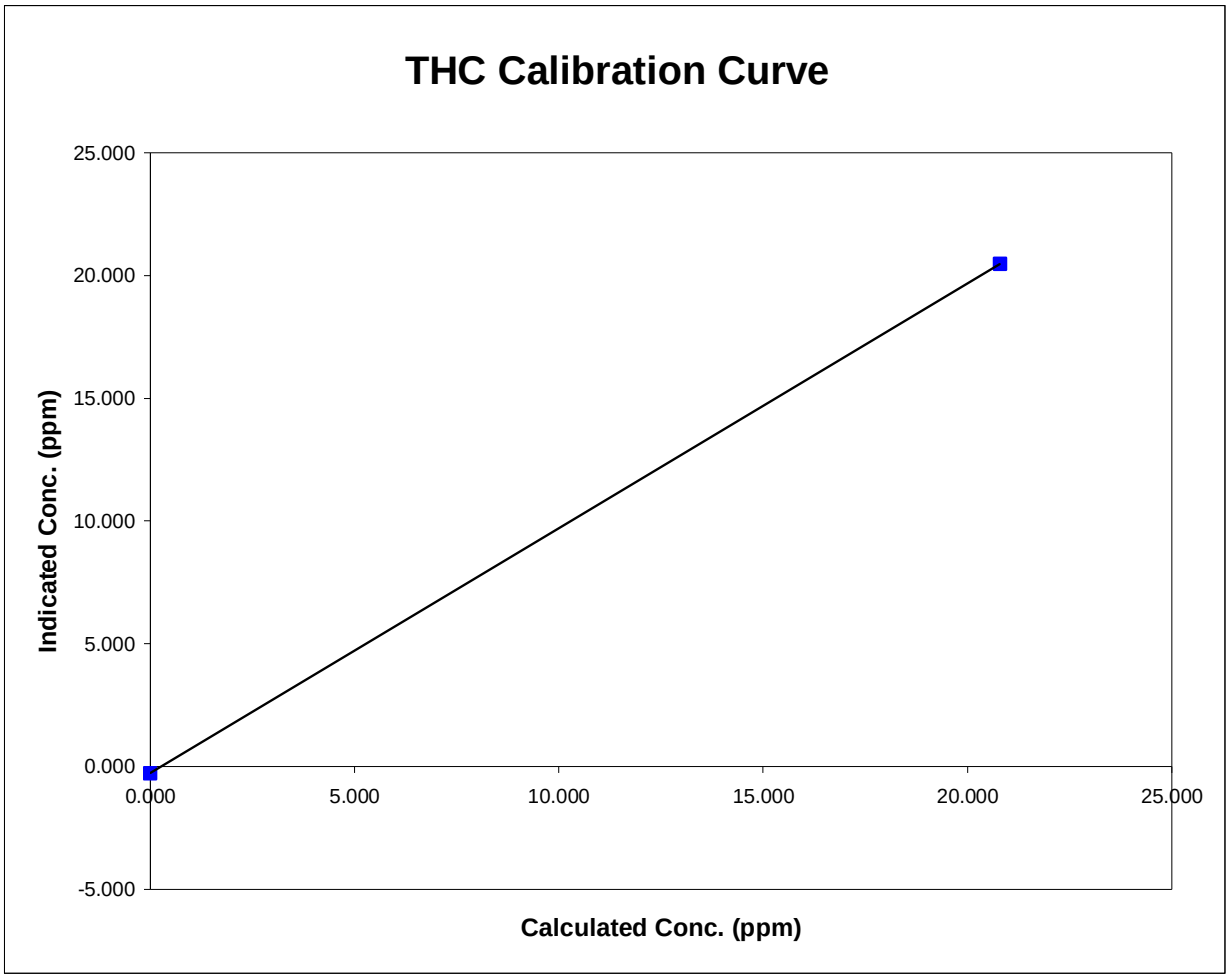
Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 24, 2004	Previous Calibration	January 29, 2004
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	17:49	End Time (MST)	19:12
Analyzer make/model	TEI Model 51C-LT	Analyzer serial #	NA

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.000	-0.275	N/A		
20.800	20.466	1.0163	Correlation Coefficient	1.000000
			Slope	1.002818
			Intercept	0.276193



Calibration Report

FOCUS INTEC
Air Quality Monitoring

Parameter **TRS**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	January 29, 2004	Previous Calibration	NA
Station Number	1	Station Location	Muskoseepi Park
Reason: Routine	Install	Removal	Other:
Start Time (MST)	17:15	End Time (MST)	21:45
Barometric Pressure	27.5 inches Hg	Station Temperature	21.0 Deg C
Calibrator	VICI Metronics	Serial Number	NA
Perm-tube Conc	225 ng/min	Perm-tube Expiry Date	12/10/2005
Correction factor	0.931623	Perm-tube Cert #	NA
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 10 volt	DACS channel #	9
	Before		After
DACS slope	NA	DACS slope	0.005000
DACS intercept	NA	DACS intercept	0.000000
Calculated slope	NA	Calculated slope	1.016184
Calculated intercept	NA	Calculated intercept	-0.277509
Analyzer make	TEI Model 43C	Analyzer serial #	NA

	before		after	
Concentration range	NA	ppb	0 - 500	ppb
TRS bkg	NA		NA	
TRS slope	NA		NA	

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	3414.4	0.0	0.2	N/A
3665	3414.4	47.4	46.8	1.0117
6128	5709.0	28.3	28.3	1.0027
10390	9679.6	16.7	16.7	0.9985
zero				As Found Zero
				As Found Span
			Average Correction Factor	1.0043

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

	before calibration		after calibration	
Auto zero	NA	ppm	0.3	ppm
Auto span	NA	ppm	1.6	ppm

Notes: Analyzer was zero and span adjusted.

Calibration Performed By: Kelly Baragar

Calibration Summary

FOCUS INTEC
Air Quality Monitoring

Parameter **TRS**

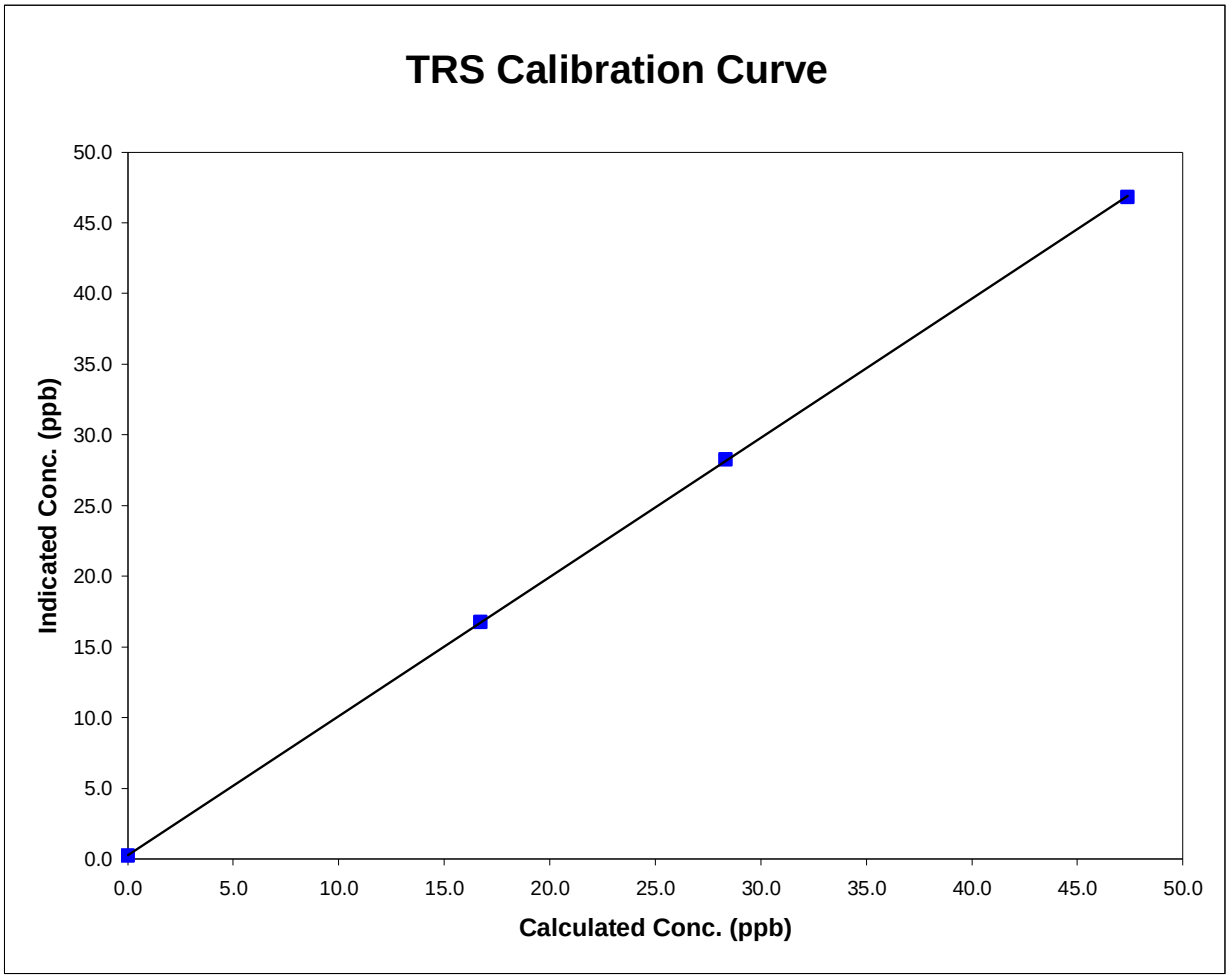
Air Monitoring Network **PASZA**

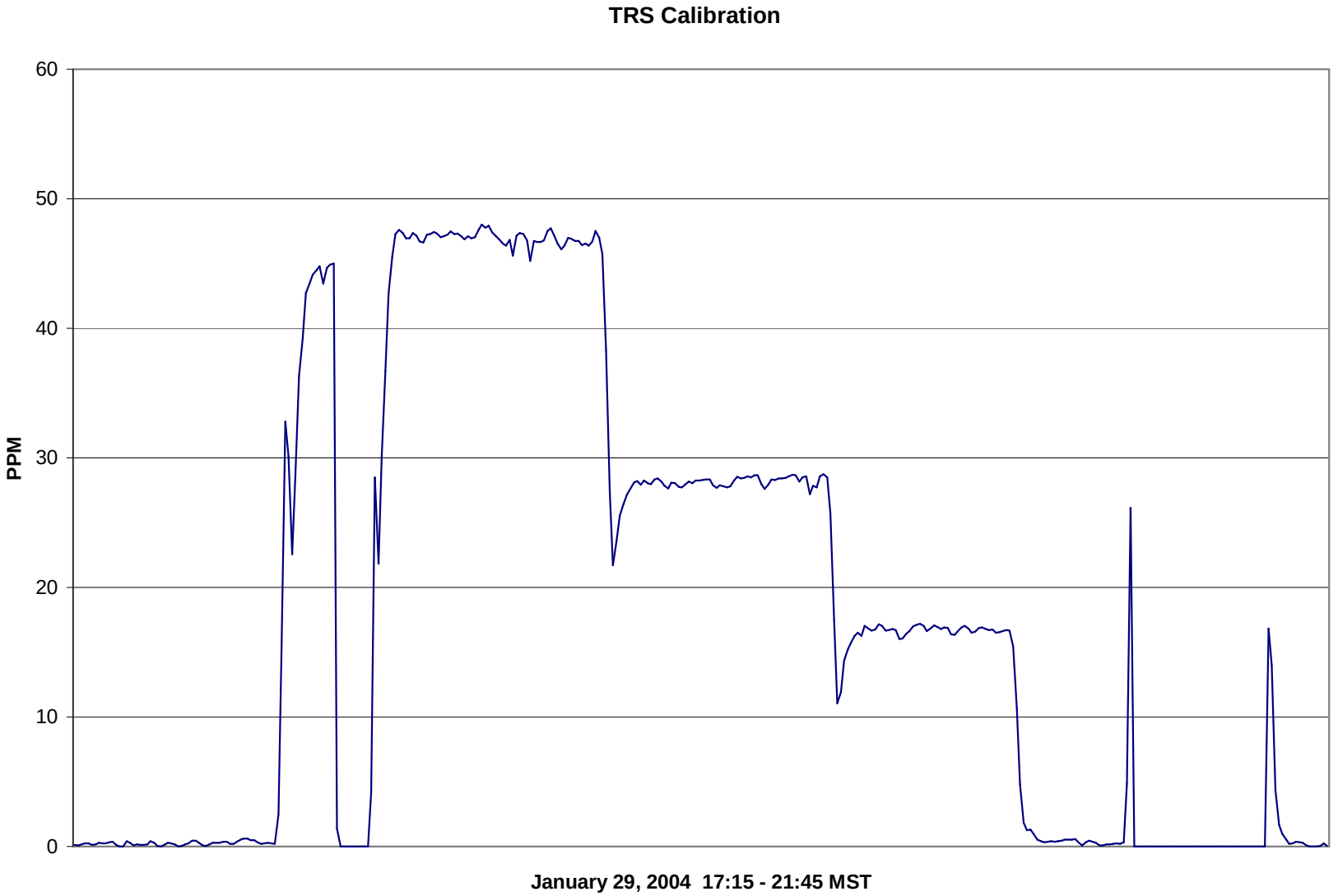
Station Information

Calibration Date	January 29, 2004	Previous Calibration	NA
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	17:15	End Time (MST)	21:45
Analyzer make/model	TEI Model 43C	Analyzer serial #	NA

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.2	N/A		
16.7	16.7	0.9985	Correlation Coefficient	0.999985
28.3	28.3	1.0027		
47.4	46.8	1.0117	Slope	1.016184
			Intercept	-0.277509




TRS Calibration
60
50
40
30
20
10
0
PPM
January 29, 2004 17:15 - 21:45 MST

Calibration Report

FOCUS INTEC
Air Quality Monitoring

Parameter **TRS**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 25, 2004	Previous Calibration	January 29, 2004
Station Number	1	Station Location	Muskoseepi Park
Reason:	Routine ☒ Install ☐	Removal ☐	Other: ☐
Start Time (MST)	11:00	End Time (MST)	17:20
Barometric Pressure	27.5 inches Hg	Station Temperature	21.0 Deg C
Calibrator	VICI Metronics	Serial Number	NA
Perm-tube Conc	225 ng/min	Perm-tube Expiry Date	12/10/05
Correction factor	0.931623	Perm-tube Cert #	NA
DACS make	Focus AP1000	DACS serial No.	1
DACS voltage range	0 - 10 volt	DACS channel #	9
	Before		After
DACS slope	0.005000	DACS slope	0.005000
DACS intercept	0.000000	DACS intercept	0.000000
Calculated slope	1.016184	Calculated slope	1.013350
Calculated intercept	-0.277509	Calculated intercept	-0.713170
Analyzer make	TEI Model 43C	Analyzer serial #	31990000000491

	before		after	
Concentration range	0 - 500	ppb	0 - 500	ppb
TRS bkg	21.2		18.8	
TRS slope	1.477		1.390	
UV Lamp	817	V	817	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	2808.8	0.0	0.6	N/A
3015	2808.8	57.6	57.4	1.0028
5170	4816.5	33.6	34.0	0.9886
10050	9362.8	17.3	17.9	0.9674
zero	2808.8	0.0	0.6	As Found Zero
3015	2808.8	57.6	58.9	As Found Span
			Average Correction Factor	0.9863

Calculated value of As Found Response: 58.983 ppm Percent Change of As Found: -2.4%

	before calibration		after calibration	
Auto zero	NA	ppm	0.6	ppm
Auto span	NA	ppm	83.1	ppm

Notes: As found captured after DACS was installed; analyzer was span adjusted.

Calibration Performed By: Kelly Baragar

Calibration Summary

FOCUS INTEC
Air Quality Monitoring

Parameter **TRS**

Air Monitoring Network **PASZA**

Station Information

Calibration Date	February 25, 2004	Previous Calibration	January 29, 2004
Station Number	1	Station Location	Muskoseepi Park
Start Time (MST)	11:00	End Time (MST)	17:20
Analyzer make/model	TEI Model 43C	Analyzer serial #	31990000000491

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.6	N/A		
17.3	17.9	0.9674	Correlation Coefficient	0.999969
33.6	34.0	0.9886		
57.6	57.4	1.0028	Slope	1.013350
			Intercept	-0.713170