Fox Creek

AIR QUALITY MONITORING
June 2016
Monthly Report

Prepared by:

West Central Airshed Society
Drayton Valley, Alberta

WCAS - Fox Creek
Summary of Hourly Averages

Wind Speed (WS) - kph
June 2016

Day	Hourly Period Ending At (MST) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Daily Average	Daily Maximum
23 Spd	4.9	6.0	6.2	5.3	6.2	4.7	4.3	3.0	2.0	4.6	3.9	3.7	2.4	3.2	2.8	6.7	12.9	16.0	14.8	10.3	4.3	3.7	2.4	2.1	2.80	16.00
Dir	SE	ESE	ESE	ESE	ESE	ESE	SE	SW	NNW	NNE	NE	NNW	NW	N	NW	SE	SE	SE	S	SSW	SW	N	SW	SW	SE	SE
24 Spd	4.8	1.8	2.2	1.8	6.8	2.9	4.8	4.5	6.6	5.4	6.4	9.0	12.0	13.3	9.6	8.1	10.2	9.3	7.5	7.7	2.2	0.6	1.7	1.0	5.08	13.34
Dir	WSW	S	SSW	WSW	WSW	SW	W	WSW	WSW	WSW	SW	SW	SW	WSW	W	W	WNW	WNW	WNW	WNW	W	SSE	SE	SE	WSW	WSW
25 Spd	0.3	2.7	3.8	2.8	2.2	4.6	2.8	7.6	10.1	12.1	12.3	12.1	11.8	12.7	11.1	11.6	9.7	11.0	11.8	12.4	7.4	9.0	1.0	1.9	5.78	12.72
Dir	W	SE	ESE	ESE	ESE	ESE	SE	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	W	WNW	WNW	NW	WNW	NW	NW	SE	SSE	WNW	WNW
26 Spd	2.6	2.2	2.2	0.8	2.5	3.6	2.0	7.2	7.8	8.3	8.4	5.6	6.0	7.5	5.2	6.8	5.4	7.6	4.5	3.8	4.2	0.9	2.5	3.6	2.80	8.37
Dir	E	ESE	SE	ESE	ESE	ESE	SSW	W	WNW	WNW	WNW	W	WNW	WNW	WNW	W	W	WNW	WNW	NW	NW	SSW	SE	SE	W	WNW
27 Spd	2.8	5.5	5.2	4.7	5.4	6.6	5.1	2.9	4.8	3.7	5.1	5.8	5.0	3.5	4.8	2.9	5.7	6.1	5.5	4.6	2.9	0.7	0.9	2.3	0.40	6.59
Dir	SE	ESE	SE	ESE	ESE	ESE	SE	S	W	WSW	W	WNW	SW	WSW	NNW	NNW	NNE	NW	NW	NW	WNW	SW	SSE	SE	WSW	ESE
28 Spd	1.7	3.1	2.9	3.7	1.7	2.6	1.8	3.2	2.7	0.7	1.9	6.5	1.8	5.0	3.6	5.3	6.1	7.2	11.9	3.1	2.9	0.6	1.4	4.0	1.29	11.89
Dir	SE	SE	SE	ESE	SE	ESE	ESE	SW	W	SW	WSW	SW	WSW	WNW	NW	NW	NW	W	W	WNW	SE	ENE	SSE	SE	WSW	W
29 Spd	3.8	2.5	4.4	3.8	5.5	2.7	3.6	1.0	3.6	10.0	10.7	12.1	12.5	14.2	14.7	14.0	14.1	13.6	15.5	12.5	10.3	8.6	2.8	2.1	7.86	15.47
Dir	SE	SE	SE	ESE	ESE	ESE	SE	NNE	NE	E	E	E	E	E	E	E	E	E	ENE	E	ESE	SE	SE	SE	E	ENE
30 Spd	3.8	1.7	2.0	4.9	7.6	8.9	12.1	13.0	5.5	8.1	11.1	9.9	8.7	12.4	11.0	8.8	11.2	10.6	7.8	4.7	0.9	1.9	4.2	5.4	2.22	13.00
Dir	SE	SSE	E	SE	ESE	ESE	ESE	ESE	S	SW	WSW	W	WNW	WSW	WSW	W	WNW	WNW	WNW	WNW	WSW	SE	SE	SE	SW	ESE
Spd	2.68	2.69	2.92	2.73	2.81	2.91	2.84	3.56	5.16	4.70	4.88	5.45	5.26	4.95	4.77	4.58	3.22	3.74	4.28	3.96	3.42	2.44	1.83	1.98	Diurnal Average	
Dir	SSW	S	SSE	SSE	SSE	SSE	S	SW	WSW	W	W	W	W	W	W	W	W	W	W	W	WSW	SW	SSW	S		
Spd	15.03	14.70	15.64	14.08	14.97	12.60	12.73	13.20	17.67	18.70	16.61	24.57	22.38	23.93	21.34	20.93	19.84	19.75	19.44	19.28	23.30	18.31	14.96	12.53	Diurnal Maximum	
Dir	229.73	222.17	240.74	233.16	233.32	220.96	261.59	208.04	214.03	205.78	194.52	217.58	204.84	196.53	193.57	196.69	206.78	248.36	215.56	230.97	232.41	220.80	244.34	246.55		

Maximum Speed Value: 24.6 kph on Jun 15 12:00
Maximum Daily Speed Average: 16.65 kph on Jun 15
Maximum Diurnal Speed Average: 5.45 kph at hour 12

Minimum Speed Value: 0.0 kph on Jun 7 07:00
Minimum Daily Speed Average: 0.40 kph on Jun 28
Minimum Diurnal Speed Average: 1.83 kph at hour 23

Monthly Average Velocity: 2.813 kph 240.92 deg

Speed Percentiles: $P_1 = 0.6$ $P_{10} = 2.0$ $Q_1 = 3.5$ Median = 5.8 $Q_3 = 10.6$ $P_{90} = 14.1$ $P_{99} = 20.5$

All monthly, daily, and diurnal averages have been calculated using vector methods

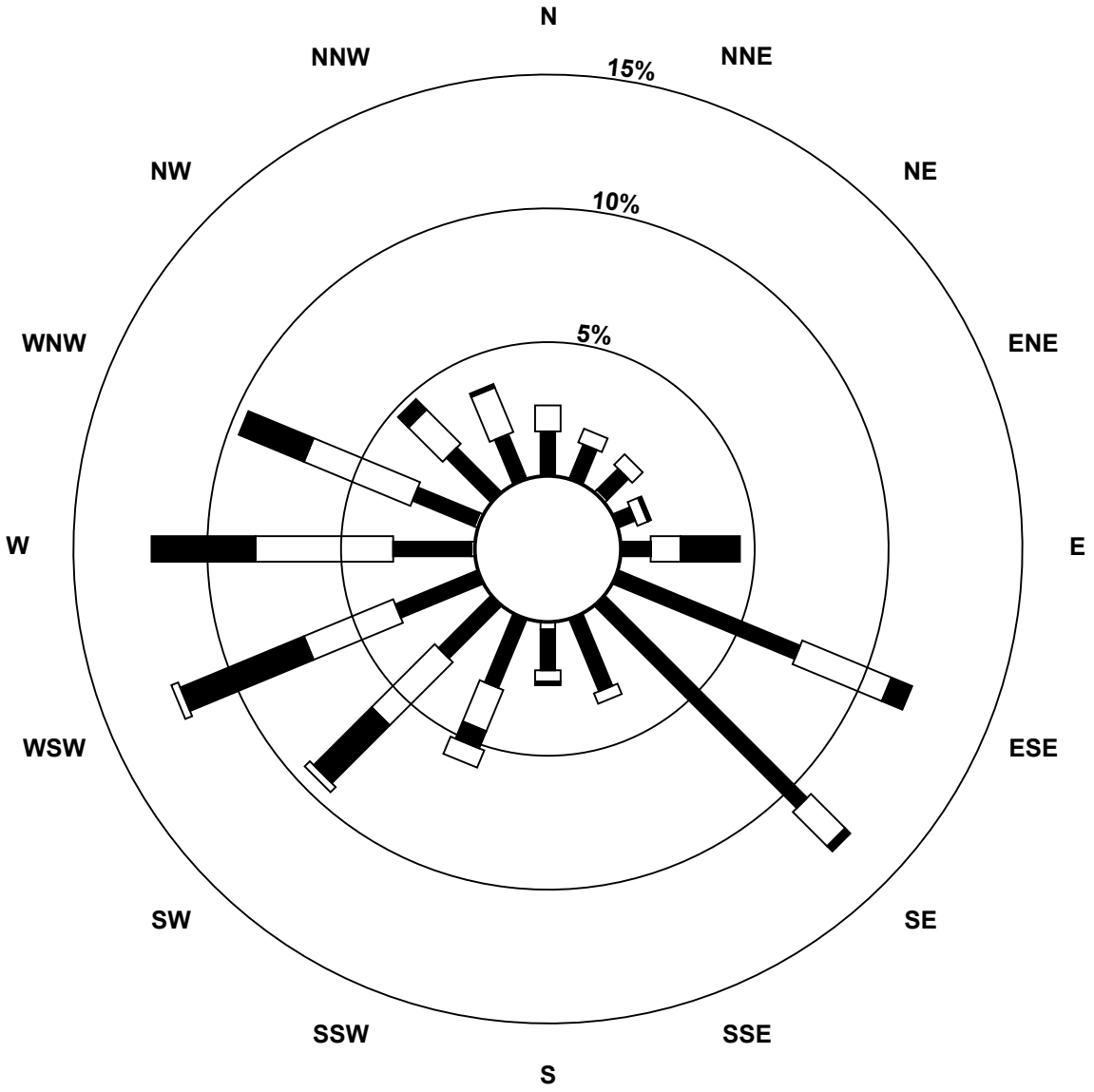
Hours in Service:	720
Hours of Data:	720
Hours of Missing Data:	0
Percent Operational Time:	100.0

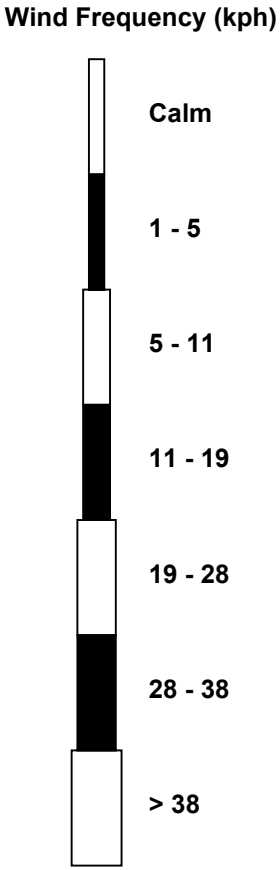
Frequency Distribution

Direction	Speed Range (kph) 0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total
North	22	16	1	0	0	0	39
NorthEast	13	8	0	0	0	0	21
East	24	17	23	0	0	0	64
SouthEast	109	50	5	0	0	0	164
South	29	12	3	3	0	0	47
SouthWest	41	44	42	6	0	0	133
West	36	64	70	3	0	0	173
NorthWest	30	37	12	0	0	0	79
Total	304	248	156	12	0	0	720

WCAS - Fox Creek
Wind Speed Rose

Wind Speed (WS) - kph
June 2016





WEST CENTRAL AIRSHED SOCIETY

CONTINUOUS AMBIENT AIR QUALITY MONITORING PROGRAM MONTHLY REPORT CALIBRATIONS

FOX CREEK
JUNE 2016

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

Station Information

Calibration Date	June 13, 2016	Previous Calibration	May 25, 2016
Station Number	Paml2	Station Location	Fox Creek

Reason: Routine | Installation | Removal | Other:

Start Time (MST)	11:00	End Time (MST)	18:00
Barometric Pressure	27.04 inches Hg	Station Temperature	21.0 Deg C
Calibrator	Sabio 2010	Serial Number	42C 60475 327
NO Cal Gas Conc	25 ppm	Cal Gas Verif. Date	1-Apr-16
NOx Cal Gas Conc	25 ppm	Cal Gas Serial #	SX17611

DACS Information

DACS make	ESC	DACS serial No.	

Parameter		NO	NO2	NOx
Before	Data Slope	0.984250	1.000329	0.98425
	Data Offset	-0.087326	-0.008378	-0.087326
After	Data Slope	0.999177	0.999632	1.000025
	Data Offset	0.201308	0.135642	0.268062
Channel #				
Voltage Range				

Analyzer Information

Analyzer make/model	42C	Analyzer serial #	60475327

Test Point	before		after	
Concentration range	1000	ppb	1000	ppb
NO background	1.2	mV	1.3	mV
NOx background	3	mV	1.6	mV
NO coefficient	1.190		1.133	
NO2 coefficient	0.978		0.978	
NOx coefficient	1.001		1.004	
Internal Temp		Deg C		Deg C
Chamber Temp		Deg C		Deg C
Cooler Temp				
Perm Temp		Deg C		Deg C
Pressure		inches Hg		inches Hg
Sample Flow		ccm		ccm

Notes:

Calibration Report

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

Air Monitoring Network **Fox Creek**

West Central Airshed Society

Station Information

Calibration Date: June 13, 2016 Station Location: Fox Creek

Aogust 30,2010

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Calculated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	Indicated NOx conc (ppb)	NO Correction factor	NOx Correction factor
zero	**5000**	**0.00**	0.0	0.0	0.0	**0.00**	**0.00**	**0.00**	N/A	N/A
P1	**5398**	**83.70**	381.7	0.0	381.7	**382.00**	**0.00**	**382.00**	0.999	0.999
P2	**5403**	**54.60**	250.1	0.0	250.1	**250.00**	**-1.00**	**249.00**	1.000	1.004
P3	**5403**	**24.98**	115.0	0.0	115.0	**114.70**	**0.10**	**114.80**	1.003	1.002
AFZ	**5000**	**0.00**	0.0	0.0	0.0	**0.00**	**-1.50**	**-1.50**	#DIV/0!	0.000
AFS	**5381**	**83.59**	382.4	0.0	382.4	**385.00**	**0.00**	**385.00**	0.993	0.993
							Average Correction Factor		1.001	1.002

As Found Concentrations	NO= 378.8 ppb	NO_X= 380.3 ppb
As Found Percent Change	NO= -0.9%	NO_X= -0.5%

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NOx ref (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Calculated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	Indicated NOx conc (ppb)	NO2 Correction factor	Converter Efficiency
0	382.0	382.0	0.0	382.0	**389.00**	**0.00**	**389.00**	N/A	N/A
1.0 v	385.0	80.0	305.0	385.0	**80.00**	**305.00**	**385.00**	1.0000	100.0%
0.7 v	384.0	188.0	196.0	384.0	**188.00**	**196.00**	**384.00**	1.0000	100.0%
0.4	442.0	303.0	88.3	391.3	**303.00**	**88.00**	**391.00**	1.0037	99.6%
						Average Correction Factor		1.001	0.999

AIC Data

	Previous calibration				Current calibration			
Parameter	NO	NO2	NOx		NO	NO2	NOx	
Auto zero	**0.00**	**-0.70**	**-0.60**	ppb	**-0.10**	**0.00**	**-0.10**	ppb
Auto span	**397.00**	**1.00**	**398.00**	ppb	**387.00**	**1.00**	**388.00**	ppb

Calibration Performed By: Greg Swain

Calibration Summary

Parameter **NO**

Air Monitoring Network **Fox Creek**

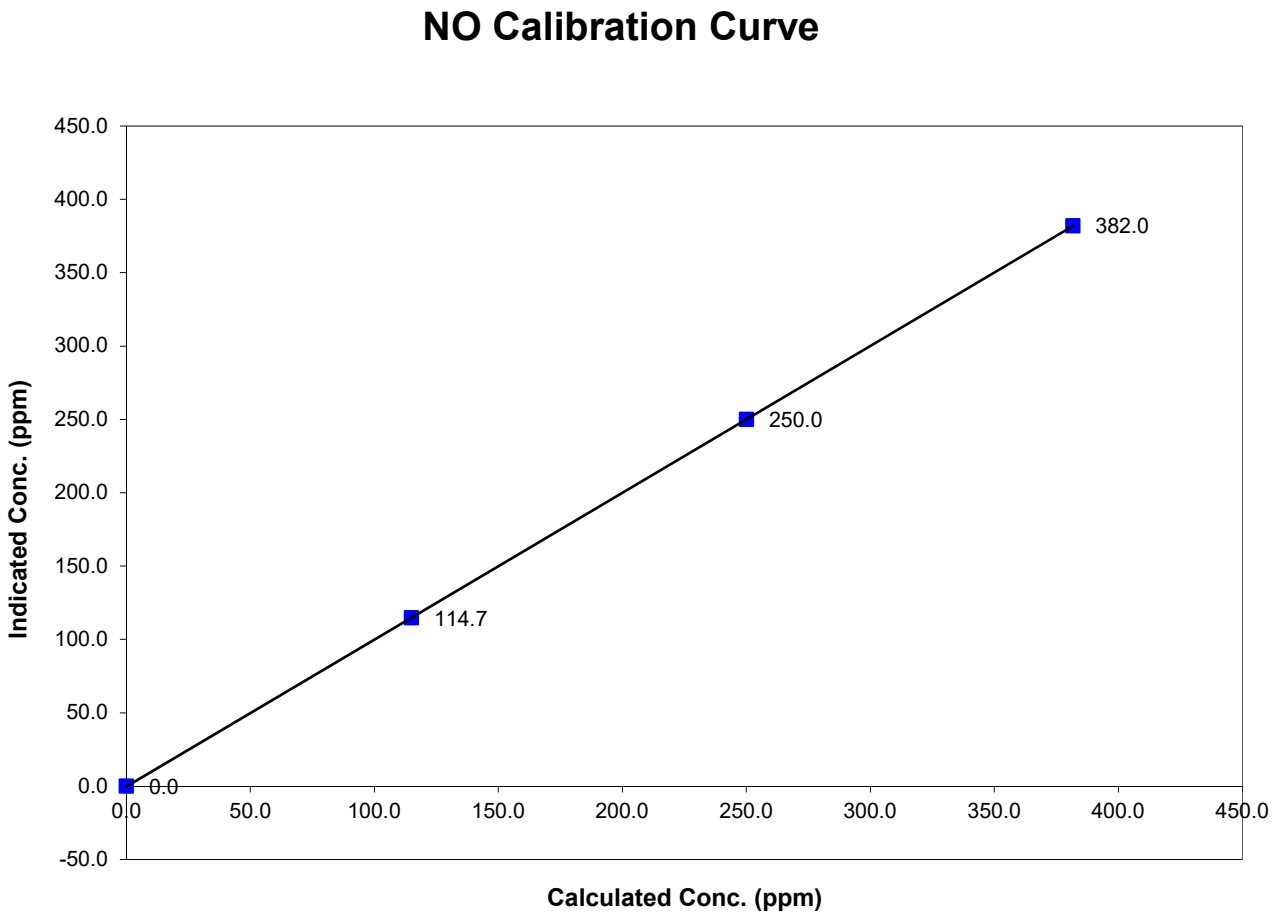
West Central Airshed Society

Station Information

Calibration Date	June 13, 2016	Previous Calibration	May 25, 2016
Station Number	Paml2	Station Location	Fox Creek
Start Time (MST)	11:00	End Time (MST)	15:05
Analyzer make	42C	Analyzer serial #	60475327

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
381.7	382.0	0.9993	Correlation Coefficient	0.999998
250.1	250.0	1.0005		
115.0	114.7	1.0029	Slope	0.999177
			Intercept	0.201308



Calibration Summary

Parameter **NO_2**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

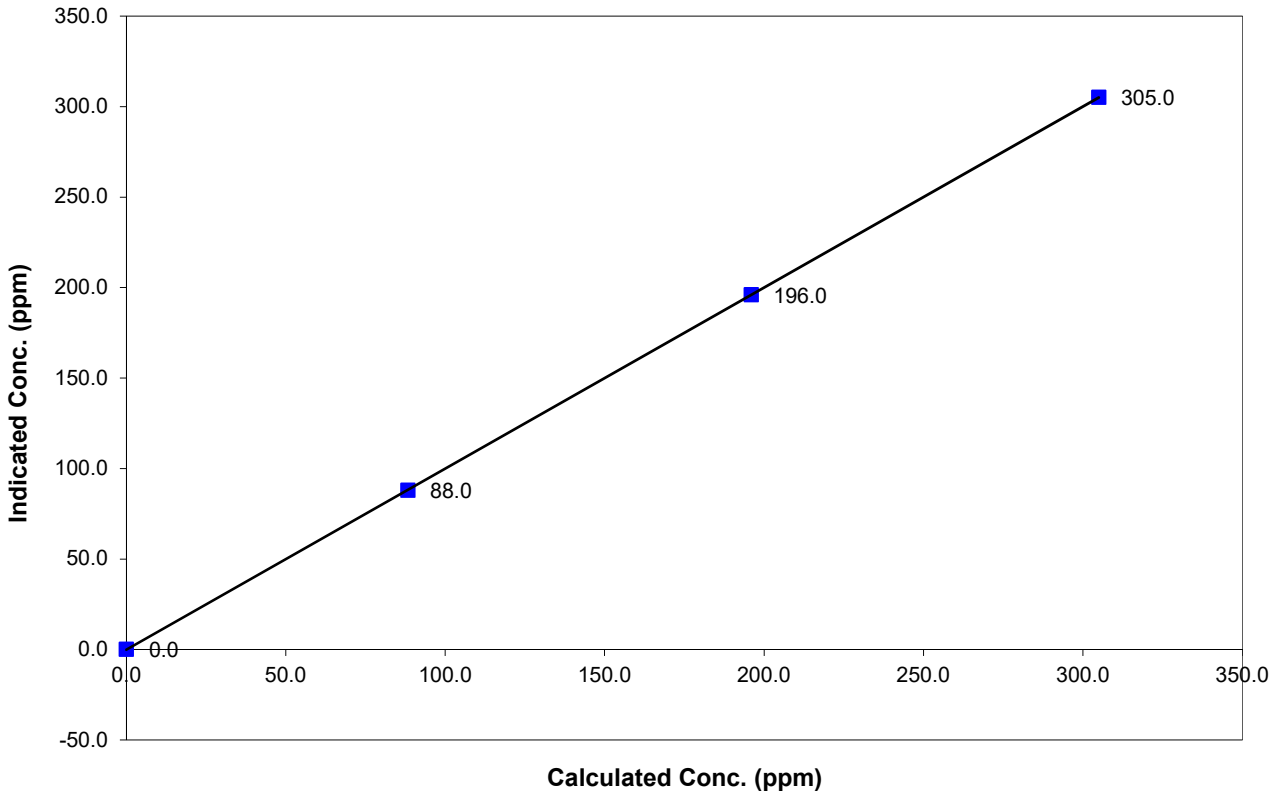
Station Information

Calibration Date	June 13, 2016	Previous Calibration	May 25, 2016
Station Number		Station Location	Fox Creek
Start Time (MST)	11:00	End Time (MST)	15:05
Analyzer make	42C	Analyzer serial #	60475327

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
305.0	305.0	1.0000	Correlation Coefficient	0.999999
196.0	196.0	1.0000		
88.3	88.0	1.0037	Slope	0.999632
			Intercept	0.135642

NO_2 Calibration Curve



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

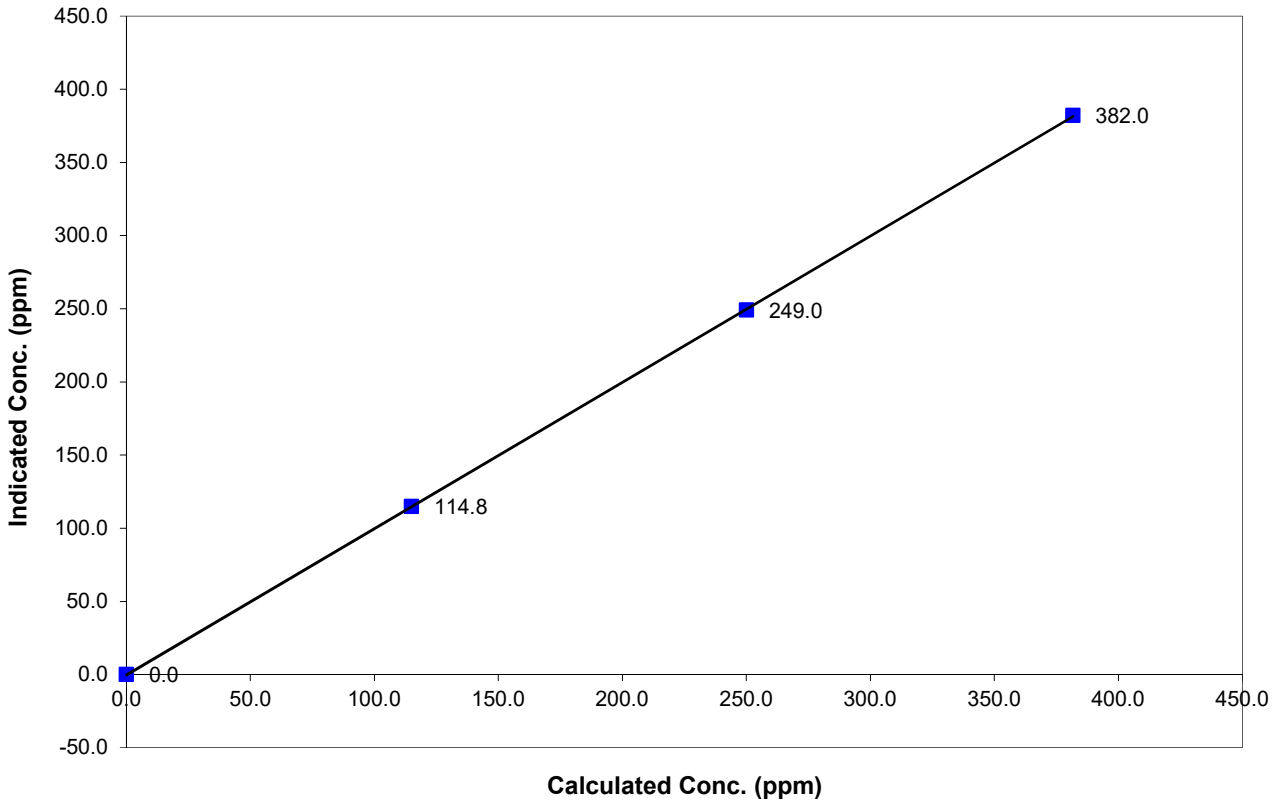
Station Information

Calibration Date	June 13, 2016	Previous Calibration	May 25, 2016
Station Number	Paml 2	Station Location	Fox Creek
Start Time (MST)	11:00	End Time (MST)	15:05
Analyzer make	42C	Analyzer serial #	60475327

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
381.7	382.0	0.9993	Correlation Coefficient	0.999987
250.1	249.0	1.0045		
115.0	114.8	1.0020	Slope	1.000025
			Intercept	0.268062

NOx Calibration Curve



Calibration Report

Parameter **SO2**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

Station Information

Calibration Date	June 13, 2016	Previous Calibration	May 23, 2016
Station Number	Paml2	Station Location	Fox Creek
Reason: Routine	Calibration	Removal	Fox Creek
Start Time (MST)	11:00	End Time (MST)	18:00
Barometric Pressure	27.20 inches Hg	Station Temperature	22.0 Deg C
Calibrator	Sabio 2010	Serial Number	SX17611
Cal Gas Concentration	24600	Cal Gas Verified	Apr 1/ 16
DACS make		DACS serial No.	
DACS voltage range		DACS channel #	
	Before		After
Calculated slope	0.990853	Calculated slope	1.001015
Calculated intercept	0.916518	Calculated intercept	0.463967
Analyzer make	Teco 431	Analyzer serial #	0700419950

	before		after	
Concentration range	500	ppb	500	ppb
Background	14.1	ppb	12.4	ppb
Coefficient	0.883		0.782	
Intensity A		Hz		Hz
Intensity B		Hz		Hz
Pressure		mmHg		mmHg
Sample Flow A		Lpm		Lpm
Sample Flow B		Lpm		Lpm

Calibration Data

Dilution air flow rate (cc/min)		Source Gas Flow	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
zero	5000	0.0	0.0	0.00	N/A
P1	5398	83.7	376.0	376.00	1.0000
P2	5403	54.6	247.0	245.00	1.0082
P3	5403	25.0	113.0	112.40	1.0053
AFZ	5000	0.0	0.0	-0.20	0.0000
AFS	5381	83.6	376.0	387.00	0.9716
				Average Correction Factor	1.0045

Calculated value of As Found Response: 384.6 ppm Percent Change of As Found: 2.3%

	before calibration		after calibration	
Auto zero	0.20	ppb	0.00	ppb
Auto span	277.00	ppb	268.00	ppb

Notes:

Calibration Performed By: Greg Swain

Calibration Summary

Parameter **SO2**

Air Monitoring Network **Fox Creek**

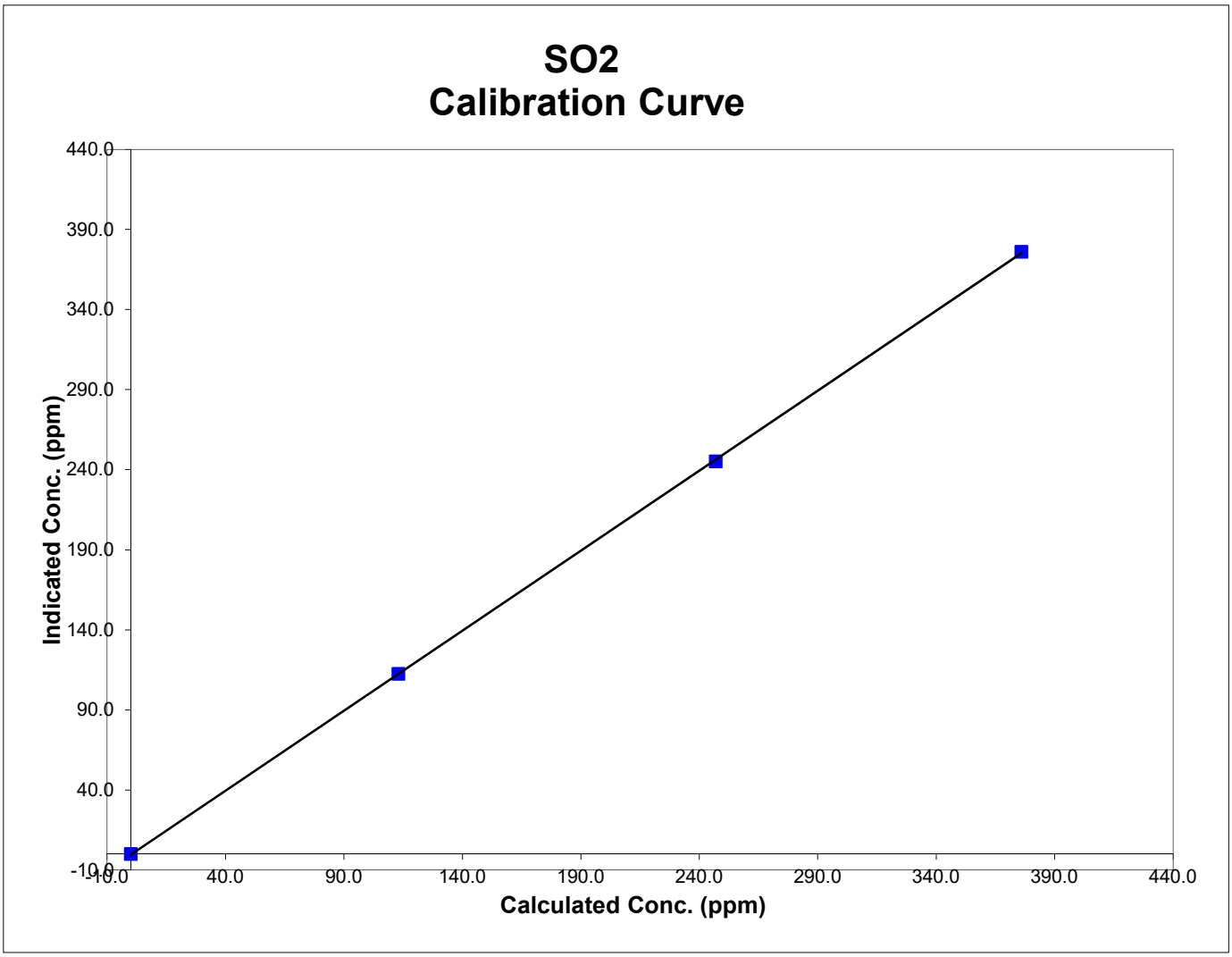
West Central Airshed Society

Station Information

Calibration Date	June 13, 2016	Previous Calibration	May 23, 2016
Station Number	Paml2	Station Location	Fox Creek
Start Time (MST)	11:00	End Time (MST)	14:00
Analyzer make/model	Teco 431	Analyzer serial #	0700419950

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
376.0	376.0	1.0000		
247.0	245.0	1.0082	Correlation Coefficient	0.999968
113.0	112.4	1.0053		
0.0	0.0	N/A	Slope	1.001015
			Intercept	0.463967



Calibration Report

Parameter **O3**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

Station Information

Calibration Date	June 13, 2016	Previous Calibration	May 25, 2016
Station Number	Paml 2	Station Location	Fox Creek
Reason: Routine	Calibration	Removal	

Start Time (MST)	11:00 14:00	End Time (MST)	17:00
Barometric Pressure	27.08 inches Hg	Station Temperature	22.0 Deg C
Calibrator	49i PS	Serial Number	142
Cal Gas Concentration		Cal Gas Expiry Date	
DACS make		DACS serial No.	
DACS voltage range		DACS channel #	1
	Before		After
Calculated slope	1.000028	Calculated slope	1.000028
Calculated intercept	0.020095	Calculated intercept	0.020095
Analyzer make	TECO 49i	Analyzer serial #	0630718533

	before		after	
Concentration range	500	ppb	500	ppb
Background	0	ppb	0	ppb
Coefficient	1.006		1.006	
Intensity A		Hz		Hz
Intensity B		Hz		Hz
Pressure		mmHg		mmHg
Sample Flow A		Lpm		Lpm
Sample Flow B		Lpm		Lpm

Calibration Data

Dilution air flow rate (cc/min)		Ozone Set Point	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
zero	3000	0.0	0.0	0.10	N/A
P1	3000	400.0	400.0	400.00	1.0000
P2	3000	200.0	200.0	200.00	1.0000
P3	3000	100.0	100.0	99.80	1.0020
AFZ	3000	0.0	0.0	0.40	0.0000
AF	3000	400.0	400.0	401.00	0.9975
				Average Correction Factor	1.0007

Calculated value of As Found Response: 400.6 ppm Percent Change of As Found: 0.2%

	before calibration		after calibration	
Auto zero	0.00	ppb	0.00	ppb
Auto span	377.00	ppb	369.00	ppb

Notes:

Calibration Performed By: Greg Swain

Calibration Summary

Parameter **O3**

Air Monitoring Network **Fox Creek**

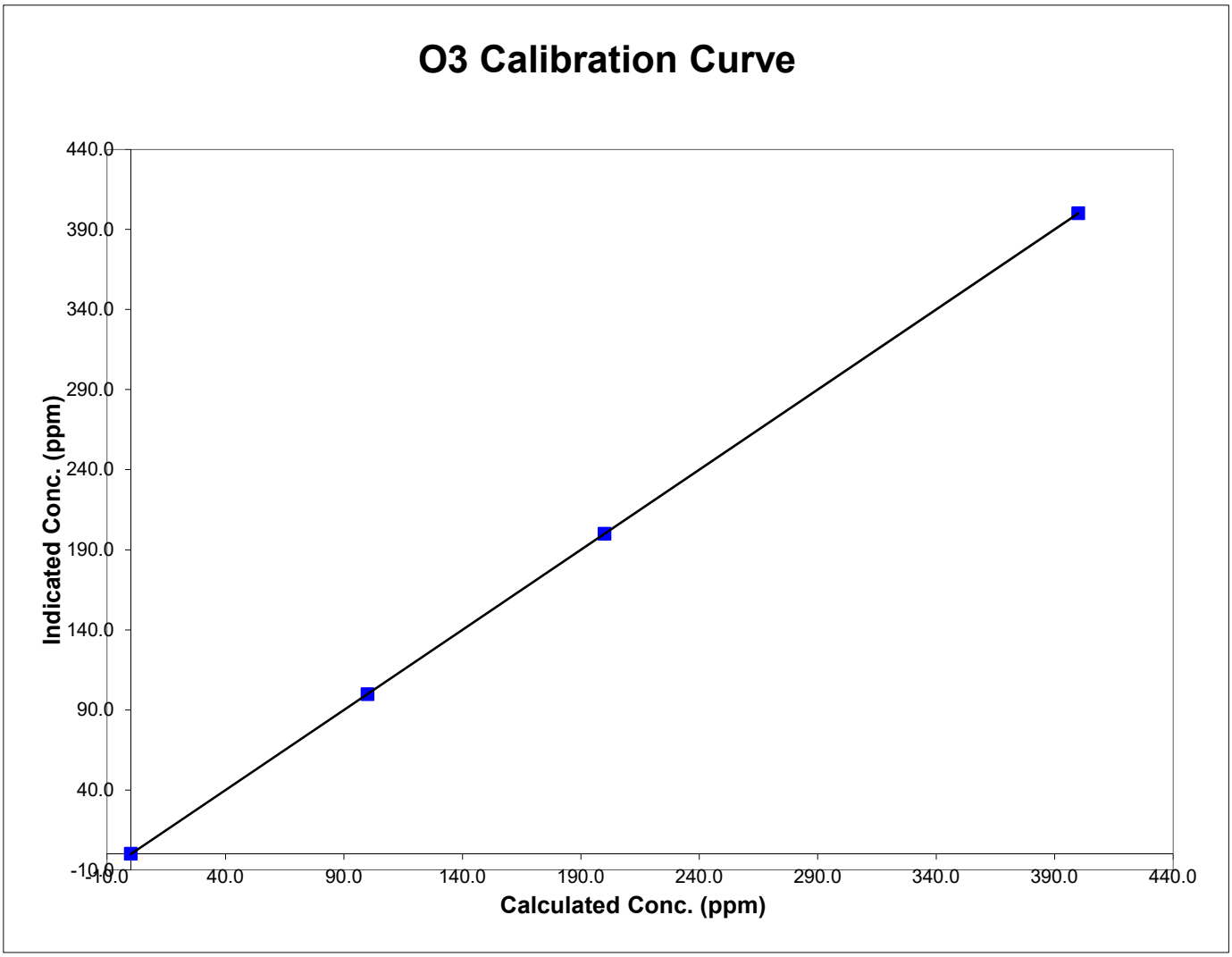
West Central Airshed Society

Station Information

Calibration Date	June 13, 2016	Previous Calibration	May 25, 2016
Station Number	Paml2	Station Location	Fox Creek
Start Time (MST)	7:00	End Time (MST)	9:50
Analyzer make/model	TECO 49i	Analyzer serial #	630718533

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
400.0	400.0	1.0000		
200.0	200.0	1.0000	Correlation Coefficient	0.999999
100.0	99.8	1.0020		
0.0	0.1	N/A	Slope	1.000028
			Intercept	0.020095



Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

Station Information

Calibration Date	June 17,2016	Previous Calibration	June 13,2016
Station Number	Paml2	Station Location	Fox Creek

Reason: Routine | Installation | Removal | Other:

Start Time (MST)	13:00	End Time (MST)	17:05
Barometric Pressure	27.24 inches Hg	Station Temperature	20.0 Deg C
Calibrator	Sabio 2010	Serial Number	42C 60475 327
NO Cal Gas Conc	25 ppm	Cal Gas Verif. Date	1-Apr-16
NOx Cal Gas Conc	25 ppm	Cal Gas Serial #	SX17611

DACS Information

DACS make	ESC	DACS serial No.	

Parameter		NO	NO2	NOx
Before	Data Slope	0.999177	0.999999	0.98425
	Data Offset	0.201308	0.135642	0.268062
After	Data Slope	1.000176	1.000000	1.000220
	Data Offset	0.367835	0.000000	0.733976
Channel #				
Voltage Range				

Analyzer Information

Analyzer make/model	42C	Analyzer serial #	60475327

Test Point	before		after	
Concentration range	1000	ppb	1000	ppb
NO background	1.3	mV	1.3	mV
NOx background	1.6	mV	1.6	mV
NO coefficient	1.133		1.239	
NO2 coefficient	0.978		0.978	
NOx coefficient	1.004		1.001	
Internal Temp		Deg C		Deg C
Chamber Temp		Deg C		Deg C
Cooler Temp				
Perm Temp		Deg C		Deg C
Pressure		inches Hg		inches Hg
Sample Flow		ccm		ccm

Notes:

Calibration Report

Parameter **NOx-NO-NO_2**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

Station Information

Calibration Date: June 17,2016 Station Location: Fox Creek

Aogust 30,2010

Calibration Data

	Dilution flow rate (ccm)	Source gas flow rate (ccm)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Calculated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	Indicated NOx conc (ppb)	NO Correction factor	NOx Correction factor
zero	**5000**	**0.00**	0.0	0.0	0.0	**0.00**	**0.00**	**0.00**	N/A	N/A
P1	**5108**	**91.30**	439.0	0.0	439.0	**439.00**	**0.00**	**439.00**	1.000	1.000
P2	**5066**	**51.00**	249.2	0.0	249.2	**248.00**	**0.00**	**247.00**	1.005	1.009
P3	**5048**	**25.60**	126.1	0.0	126.1	**125.70**	**-0.40**	**125.20**	1.004	1.008
AFZ	**5000**	**0.00**	0.0	0.0	0.0	**0.10**	**-0.10**	**0.00**	0.000	#DIV/0!
AFS	**5108**	**91.30**	439.0	0.0	439.0	**400.00**	**0.00**	**400.00**	1.098	1.098
							Average Correction Factor		1.003	1.005

As Found Concentrations	NO= 399.8 ppb	NO_X= 399.9 ppb
As Found Percent Change	NO= -8.9%	NO_X= -8.9%

GPT Calibration Data

O3 Setpoint (ppb)	Indicated NOx ref (ppb)	Calculated NO conc (ppb)	Calculated NO2 conc (ppb)	Calculated NOx conc (ppb)	Indicated NO conc (ppb)	Indicated NO2 conc (ppb)	Indicated NOx conc (ppb)	NO2 Correction factor	Converter Efficiency
0	0.0	0.0	0.0	0.0	**0.00**	**0.00**	**0.00**	N/A	N/A
1.2v	443.0	42.0	401.0	443.0	**42.00**	**401.00**	**443.00**	1.0000	100.0%
0.7v	443.0	227.0	215.0	442.0	**227.00**	**215.00**	**442.00**	1.0000	100.0%
0.4	443.0	342.0	100.0	441.0	**342.00**	**100.00**	**441.00**	1.0000	100.0%
						Average Correction Factor		1.000	1.000

AIC Data

	Previous calibration				Current calibration			
Parameter	NO	NO2	NOx		NO	NO2	NOx	
Auto zero	**-0.10**	**0.00**	**-0.10**	ppb	**-0.10**	**0.10**	**-0.10**	ppb
Auto span	**387.00**	**1.00**	**388.00**	ppb	**416.00**	**-2.00**	**414.00**	ppb

Calibration Performed By: Jeff McClintock

Calibration Summary

Parameter **NO**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

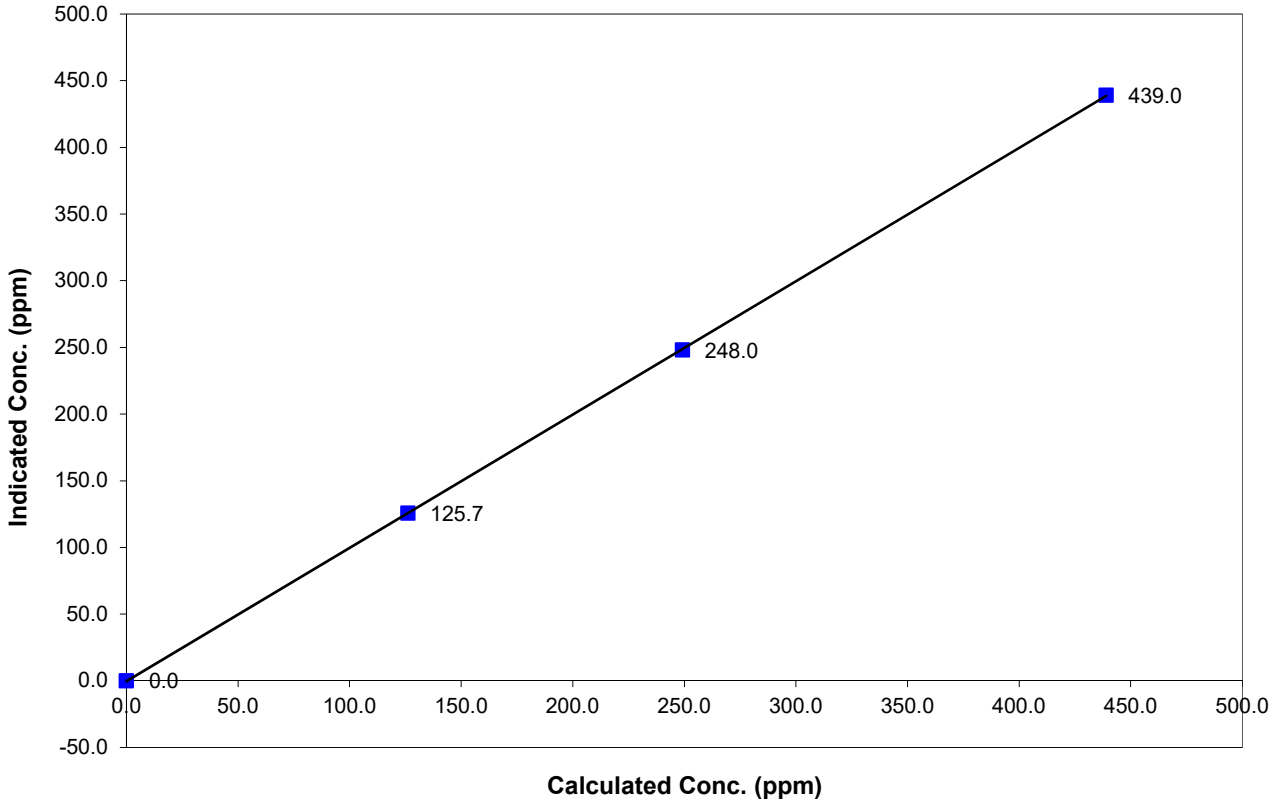
Station Information

Calibration Date	June 17,2016	Previous Calibration	June 13,2016
Station Number	Paml2	Station Location	Fox Creek
Start Time (MST)	13:00	End Time (MST)	17:05
Analyzer make	42C	Analyzer serial #	60475327

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
439.0	439.0	1.0000	Correlation Coefficient	0.999991
249.2	248.0	1.0047		
126.1	125.7	1.0035	Slope	1.000176
			Intercept	0.367835

NO Calibration Curve



Calibration Summary

Parameter **NO_2**

Air Monitoring Network **Fox Creek**

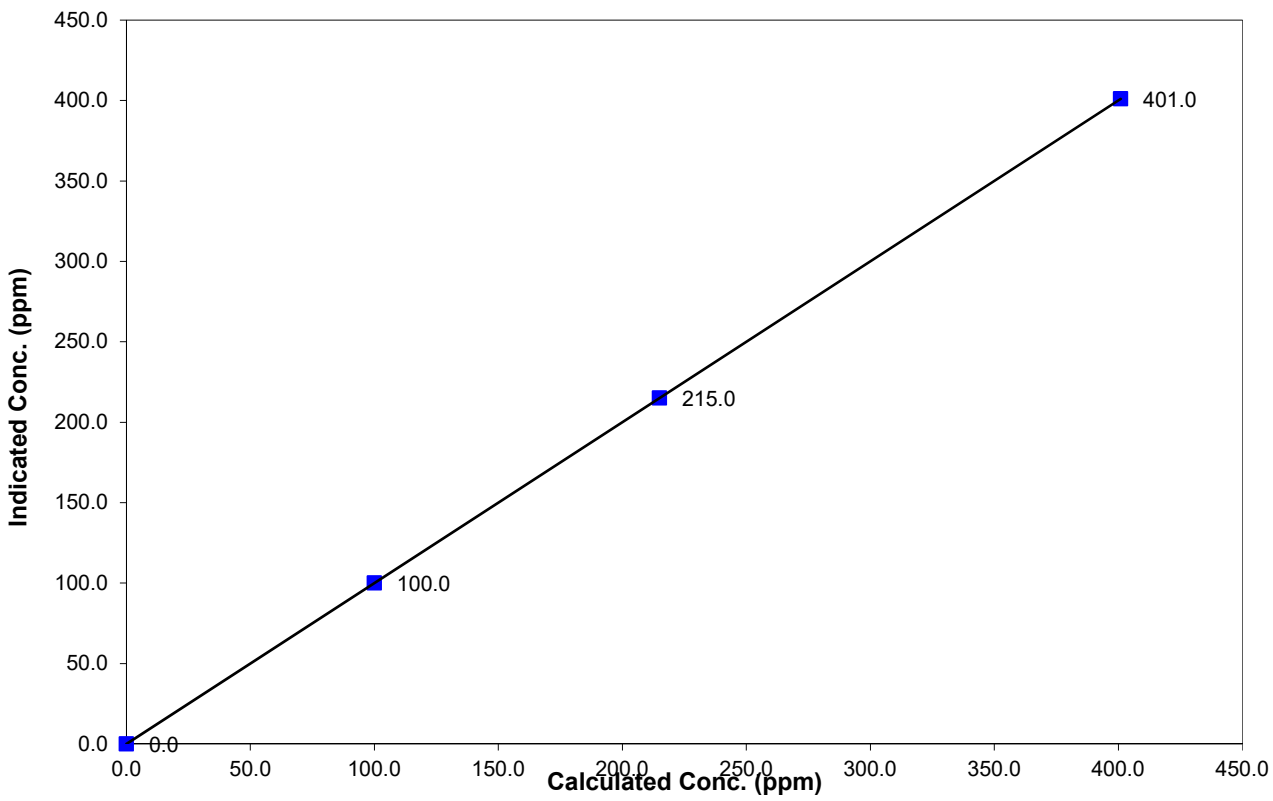
West Central Airshed Society

Station Information

Calibration Date	June 17,2016	Previous Calibration	June 13,2016
Station Number	Paml2	Station Location	Fox Creek
Start Time (MST)	13:00	End Time (MST)	17:05
Analyzer make	42C	Analyzer serial #	60475327

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
401.0	401.0	1.0000	Correlation Coefficient	1.000000
215.0	215.0	1.0000		
100.0	100.0	1.0000	Slope	1.000000
			Intercept	0.000000



Calibration Summary

Parameter **NO_x**

Air Monitoring Network **Fox Creek**

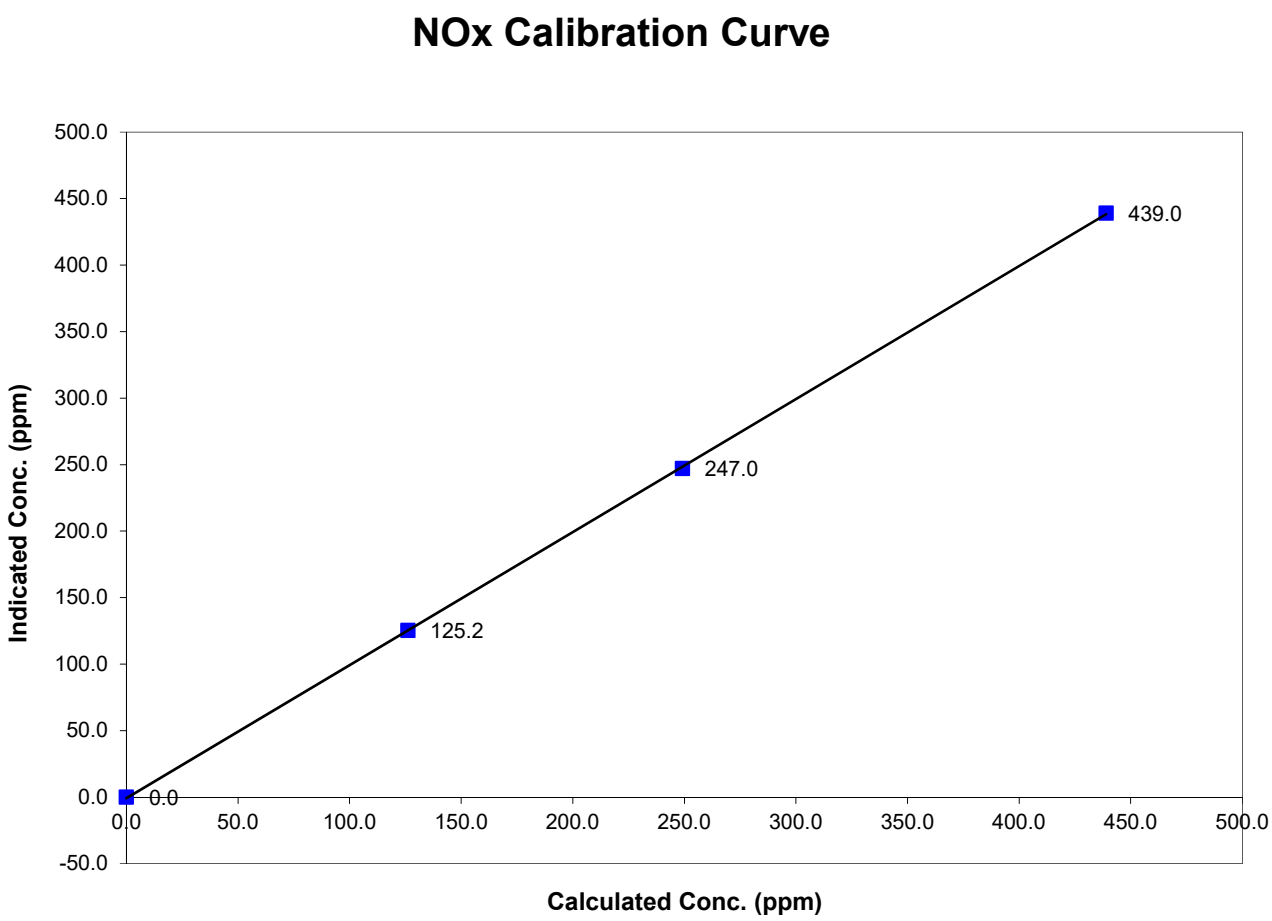
West Central Airshed Society

Station Information

Calibration Date	June 17,2016	Previous Calibration	June 13,2016
Station Number	Paml 2	Station Location	Fox Creek
Start Time (MST)	13:00	End Time (MST)	17:05
Analyzer make	42C	Analyzer serial #	60475327

Calibration Data

Calculated conc (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.0	0.0	N/A		
439.0	439.0	1.0000	Correlation Coefficient	0.999970
249.2	247.0	1.0088		
126.1	125.2	1.0075	Slope	1.000220
			Intercept	0.733976



Calibration Report

Parameter **SO2**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

Station Information

Calibration Date	June 17,2016	Previous Calibration	June 13,2016
Station Number	Paml2	Station Location	Fox Creek
Reason: Routine	Calibration	Removal	Fox Creek

Start Time (MST)	13:00	End Time (MST)	16:00
Barometric Pressure	27.24 inches Hg	Station Temperature	20.0 Deg C
Calibrator	Sabio 2010	Serial Number	SX17611
Cal Gas Concentration	24600 ppb	Cal Gas Verified	Apr 1/ 16
DACS make		DACS serial No.	
DACS voltage range		DACS channel #	
	Before		After
Calculated slope	1.001015	Calculated slope	1.000135
Calculated intercept	0.463967	Calculated intercept	1.098172
Analyzer make	Teco 431	Analyzer serial #	0700419950

	before		after	
Concentration range	500	ppb	500	ppb
Background	12.4	ppb	13.4	ppb
Coefficient	0.782		0.857	
Intensity A		Hz		Hz
Intensity B		Hz		Hz
Pressure		mmHg		mmHg
Sample Flow A		Lpm		Lpm
Sample Flow B		Lpm		Lpm

Calibration Data

Dilution air flow rate (cc/min)		Source Gas Flow	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
zero	5000	0.0	0.0	0.00	N/A
P1	5108	91.3	432.0	432.00	1.0000
P2	5066	51.0	245.0	242.00	1.0124
P3	5048	25.6	124.0	122.50	1.0122
AFZ	5000	0.0	0.0	0.20	0.0000
AFS	5108	91.3	432.0	394.00	1.0964
				Average Correction Factor	1.0082

Calculated value of As Found Response: 394.7 ppm Percent Change of As Found: -8.6%

	before calibration		after calibration	
Auto zero	0.00	ppb	0.00	ppb
Auto span	268.00	ppb	293.00	ppb

Notes:

Calibration Performed By: Jeff McClintock

Calibration Summary

Parameter **SO2**

Air Monitoring Network **Fox Creek**

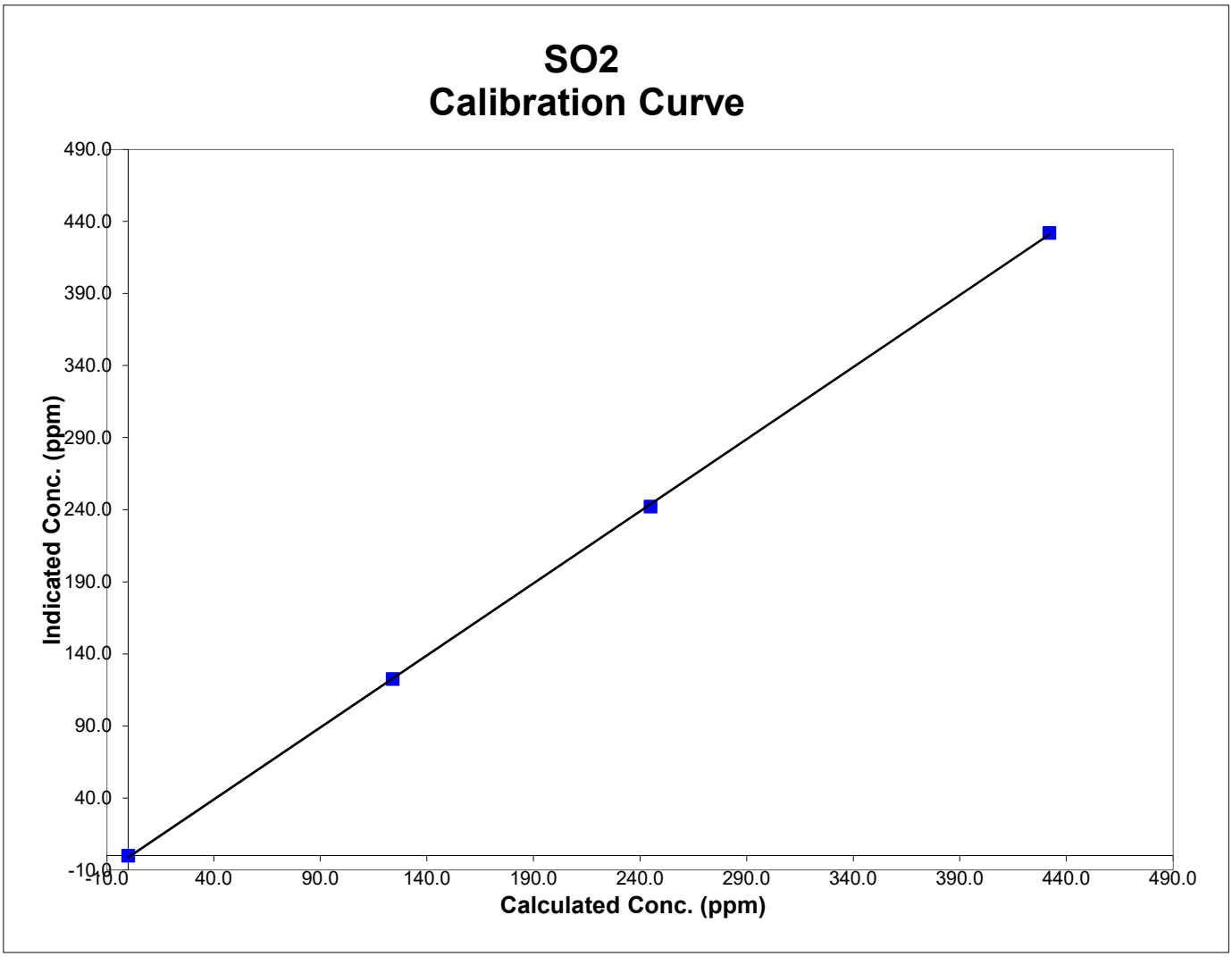
West Central Airshed Society

Station Information

Calibration Date	June 17,2016	Previous Calibration	June 13,2016
Station Number	Paml2	Station Location	Fox Creek
Start Time (MST)	11:00	End Time (MST)	14:00
Analyzer make/model	Teco 431	Analyzer serial #	0700419950

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
432.0	432.0	1.0000		
245.0	242.0	1.0124	Correlation Coefficient	0.999939
124.0	122.5	1.0122		
0.0	0.0	N/A	Slope	1.000135
			Intercept	1.098172



Calibration Report

Parameter **H2S**

Air Monitoring Network **Fox Creek**

West Central Airshed Society

Station Information

Calibration Date	June 17,2016	Previous Calibration	June 13,2016
Station Number	Paml2	Station Location	Fox Creek
Reason: Routine	Calibration	Removal	Fox Creek
Start Time (MST)	11:00	End Time (MST)	14:00
Barometric Pressure	27.24 inches Hg	Station Temperature	20.0 Deg C
Calibrator	Sabio 2010	Serial Number	5200311
Cal Gas Concentration	4.54 ppm SV15550	Cal Gas Verified	April 1, 2016
DACS make		DACS serial No.	
DACS voltage range		DACS channel #	1
	Before		After
Calculated slope	0.997304	Calculated slope	1.002686
Calculated intercept	-0.048195	Calculated intercept	-0.106051
Analyzer make	TecoTeco 45C	Analyzer serial #	0630718527

	before		after	
Concentration range	100	ppb	100	ppb
Background	15.9	ppb	15	ppb
Coefficient	0.919		1.002	
Intensity A	*	Hz	*	Hz
Intensity B	*	Hz	*	Hz
Pressure	*	mmHg	*	mmHg
Sample Flow A	*	Lpm	*	Lpm
Sample Flow B	*	Lpm	*	Lpm

Calibration Data

Dilution air flow rate (cc/min)		Source Gas Flow	Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)
zero	5000	0.0	0.0	0.00	N/A
P1	5062	76.1	67.2	67.00	1.0036
P2	5062	51.0	45.3	45.50	0.9956
P3	5043	25.7	23.0	23.10	0.9957
AFZ	5000	0.0	0.0	0.10	0.0000
AFS	5062	76.1	67.2	62.00	1.0845
				Average Correction Factor	0.9983

Calculated value of As Found Response: 61.7 ppm Percent Change of As Found: -8.3%

	before calibration		after calibration	
Auto zero	-0.20	ppb	0.20	ppb
Auto span	84.30	ppb	60.80	ppb

Notes: New H2S perm tube installed .

Calibration Performed By: Jeff McClintock

Calibration Summary

Parameter **H2S**

Air Monitoring Network **Fox Creek**

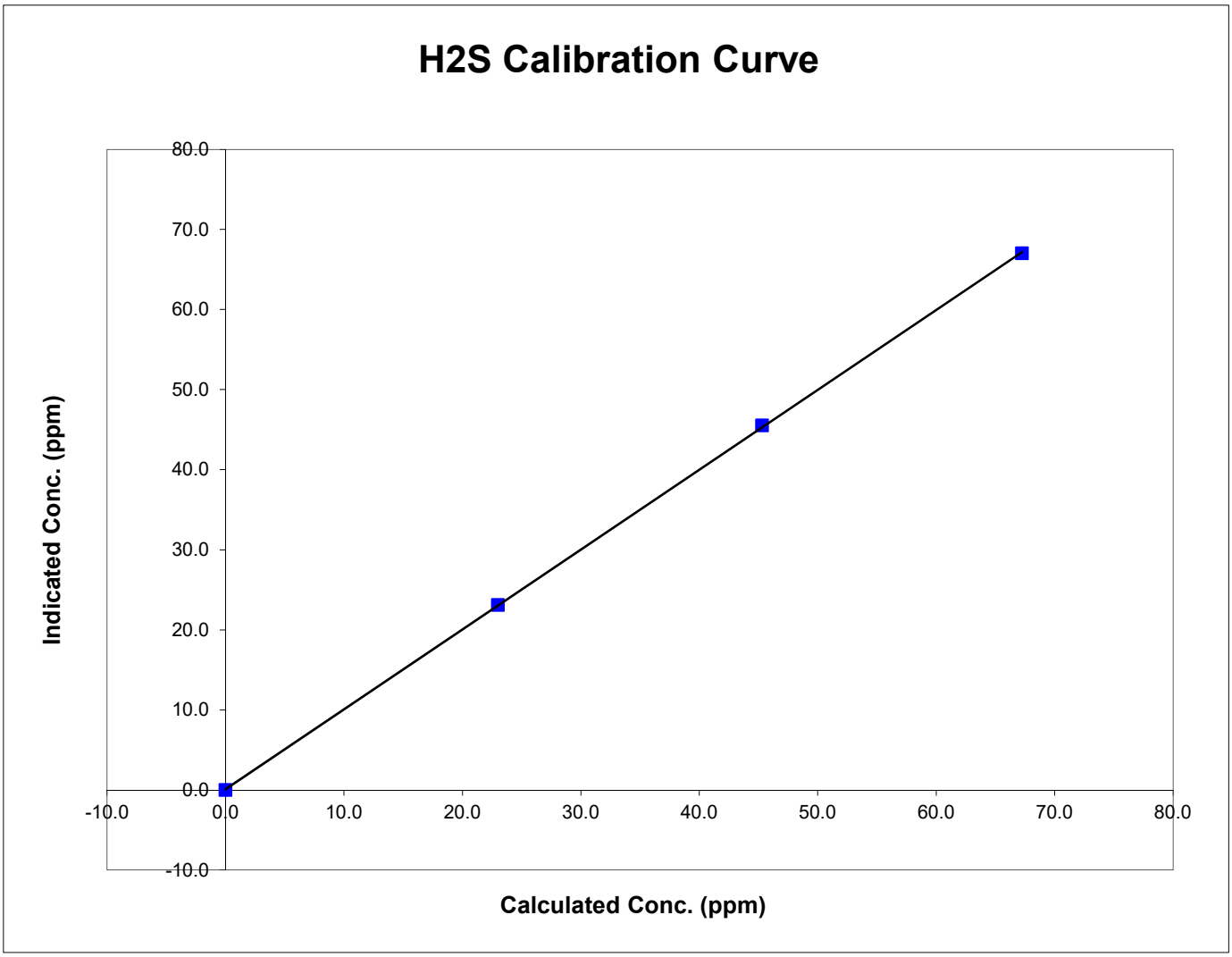
West Central Airshed Society

Station Information

Calibration Date	June 17,2016	Previous Calibration	June 13,2016
Station Number	Paml2	Station Location	Fox Creek
Start Time (MST)	11:00	End Time (MST)	14:00
Analyzer make/model	TecoTeco 45C	Analyzer serial #	0630718527

Calibration Data

Calculated concentration (ppm) (Cc)	Indicated concentration (ppm) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
67.2	67.0	1.0036		
45.3	45.5	0.9956	Correlation Coefficient	0.999965
23.0	23.1	0.9957		
0.0	0.0	N/A	Slope	1.002686
			Intercept	-0.106051



WEST CENTRAL AIRSHED SOCIETY

CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT

END OF REPORT
JUNE 2016