

Hinton Pulp
A division of West Fraser Mills Limited
Hinton, Alberta

AIR QUALITY MONITORING
January 2016
Monthly Report

Prepared by:

West Central Airshed Society
Drayton Valley, Alberta





February 10th, 2016

Hinton Pulp
A Division of West Fraser Mills Ltd.
Mr. Phil Whitney
760 Switzer Drive
Hinton, Alberta
T7V 1V7

Dear Mr. Whitney:

**Monthly Ambient Air Quality Monitoring Report for January 2016
For Hinton Pulp – A Division of West Fraser Mills Ltd.**

Enclosed are the reports for the continuous ambient air quality monitoring station of the West Central Airshed Society network.

Network Station is AMS 906 Hinton
Identified as:

The person responsible for this reporting is Robert Scotten Executive Director of West Central Airshed Society.

The following operational notes are included as required by the Air Monitoring Directive:

1. Concentrations in excess of the Clean Air (Maximum Levels) Regulation:

There were 23 readings occurring in January 2016 in excess of the one – hour average guidelines as indicated in Air Monitoring Directive Section III.A.3. (a) for H₂S. The maximum one-hour average reading was 34.66 ppb, occurring January 9th. There were 5 readings in January 2016 in excess of the twenty–four hour average guidelines as indicated in Air Monitoring Directive Section III.A.3. (a) for H₂S. The maximum 24-hour average reading was 7.07 ppb.

2. Operational times less than 90 percent:

There were no operational times less than 90 percent in the month of January.

3. Monitoring Notes:

AMS 906 (Hinton)

All analyzers and meteorological equipment returned uptimes of 100 percent for the month of January.

If additional information is required please contact Patrick Andersen at (780) 514-3533 or (403) 505-1041.

Sincerely,



Robert Scotten
Executive Director



Patrick Andersen
Environmental Specialist

Forest Products Industry Monthly Report Summary

Hinton
Plant Name/Location

Hinton Pulp - A Division of West Fraser Mills Ltd.
Company

License Number	Report Date	
	Year	Month
	2016	JANUARY

TOTAL EMISSIONS FOR MONTH (IN TONNES)

POLLUTANT	INCINERATOR STACK	FLARE	MISCELLANEOUS
SO ₂			

"HOURS" OF EXCEEDED STACK LICENSED LIMITS (CEM)

POLLUTANT	STACK TYPE	1-HR AVG CONCENTRATION	1-HR AVG MASS EMISSION	24-HR AVG MASS EMISSION	STACK TOP TEMP.	% TIME STACK MONITOR OPERATIONAL
SO ₂						

STATIC AMBIENT MONITORING

PARAMETER	NO. OF STATIONS	PEAK READING	AVG. OF NETWORK	NO. OF STATIONS OVER GUIDELINES
T.S.				
H ₂ S				

CONTINUOUS AMBIENT MONITORING

PARAMETER	STATION NUMBER	% TIME OPERATIONAL	1-HR AVERAGE		24-HR AVERAGE	
			MAXIMUM CONCENTRATION (ppm)	NO. READINGS > REGULATIONS	MAXIMUM CONCENTRATION (ppm)	NO. READINGS > REGULATIONS
Wind	906	100.0	n/a	n/a	n/a	n/a
TRS	906	100.0	0.035	23	0.007	5
PM _{2.5}	906	100.0	35.1 µg/m ³	0	18.39 µg/m ³	0

SIGNATURE OF COMPANY REPRESENTATIVE

FOR ALBERTA ENVIRONMENT USE ONLY

WEST CENTRAL AIRSHED SOCIETY

**CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT
CONTINUOUS AIR QUALITY**

**AMS 906
HINTON
JANUARY 2016**

Operations and Data Collection by:
West Central Airshed Society
Drayton Valley, Alberta

QA/QC, Data Validation and Reporting by:
West Central Airshed Society
Drayton Valley, Alberta

Summary Report

Continuous air quality/meteorological monitoring measurements

West Central Airshed Society

Hinton Pulp / Hinton Station 906													January 2016		24 Hour Average Max (ppm)
Parameter	Calibration Hours	Number of Data	Percent Uptime	Mean	Min	Max	Percentile					Exceedences			
							P10	Q1	Median	Q3	P90	1-hour	24-hour		
TRS (ppb)	38	706	100.0	1.8	0.0	35.0	0.2	0.3	0.7	1.7	3.9	23	5	0.007	
SO ₂ (ppb)	38	706	100.0	0.4	0.0	9.5	0.0	0.1	0.2	0.4	0.7	0	-	0.003	
O ₃ (ppb)	36	708	100.0	16.1	0.0	45.5	0.6	2.7	11.7	29.6	37.6	0	0	0.041	
NO (ppb)	36	708	100.0	12.4	0.0	164.2	0.2	0.7	3.8	15.6	36.9	-	-	-	
NO ₂ (ppb)	36	708	100.0	13.4	0.5	43.6	3.5	6.9	12.2	18.5	24.5	0	0	0.022	
NO _x (ppb)	36	708	100.0	25.8	0.6	186.9	3.9	7.7	16.6	34.9	60.4	-	-	-	
Particulate Matter 2.5 microns (µm ³)	5	739	100.0	7.9	0.0	35.1	2.9	4.3	6.7	10.0	13.8	0	0	18.39 ug/m3	
Wind Speed (kph)	0	744	100.0	3.5	0.0	18.9	0.4	0.9	2.1	5.0	9.1	-	-	-	
Temperature (°C)	0	744	100.0	-6.6	-26.8	9.7	-17.4	-13.3	-6.0	-0.2	4.0	-	-	-	
Relative Humidity (%)	0	744	100.0	67.8	25.8	89.7	43.8	54.1	74.9	80.5	84.5	-	-	-	
Std Dev Wind Direction (deg)	0	744	100.0	47.7	15.5	107.4	22.5	29.6	42.3	61.0	82.8	-	-	-	
Std Dev Wind Speed (kph)	0	744	100.0	2.3	0.1	9.3	0.9	1.1	1.6	2.7	5.2	-	-	-	



WCAS - Hinton
Summary of Hourly Averages

Total Reduced Sulphur (TRS) - ppb
January 2016

Maximum Value: 34.66 ppb on Jan 9 12:00 Minimum Value: 0 ppb on Jan 27 18:00 Maximum Diurnal Average: 3.39 ppb at hour 12 Monthly Average: 1.754 ppb		Maximum Daily Average: 7.07 ppb on Jan 3 Minimum Daily Average: 0.20 ppb on Jan 10 Minimum Diurnal Average: 0.82 ppb at hour 16 Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.7 Q ₃ = 1.7 P ₉₀ = 3.9 P ₉₉ = 16.5		Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 38 Percent Operational Time: 100.0																																													
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Jan	5	2	1	Z	1	0	1	3	2	2	2	4	2	3	5	2	9	6	15	12	17	20	15	12	6.05	19.81																							
2-Jan	10	9	8	Z	12	5	5	9	7	6	7	10	5	2	1	1	1	2	3	3	4	11	7	4	5.59	11.77																							
3-Jan	6	9	10	Z	5	7	3	3	7	6	4	10	3	3	3	3	1	4	5	8	8	21	17	17	7.07	20.57																							
4-Jan	15	6	10	Z	9	6	6	14	11	11	11	3	1	2	2	1	2	2	2	2	1	1	1	1	5.10	15.27																							
5-Jan	1	1	1	Z	0	0	0	0	1	1	1	2	5	3	1	0	0	0	1	1	1	0	0	0	0.95	5.13																							
6-Jan	0	1	0	Z	1	0	0	1	1	1	1	3	3	3	2	1	0	0	0	0	0	0	0	0	0.82	3.32																							
7-Jan	0	0	0	Z	0	1	1	1	2	1	4	4	1	0	0	0	0	1	1	1	5	2	3	5	1.53	5.33																							
8-Jan	2	2	3	Z	1	1	1	3	2	3	3	3	4	3	2	1	1	2	1	1	1	1	1	1	1.87	3.92																							
9-Jan	1	0	0	Z	4	3	5	5	12	13	24	35	12	1	0	0	0	0	2	1	1	1	1	0	5.30	34.66																							
10-Jan	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.20	0.29																							
11-Jan	0	0	0	Z	0	0	0	0	0	0	0	0	0	1	1	1	1	1	2	1	1	1	1	1	0.56	1.63																							
12-Jan	1	1	0	Z	0	0	2	1	2	1	0	0	0	0	1	2	2	2	0	0	0	0	0	0	0.75	2.20																							
13-Jan	0	0	0	Z	1	1	2	2	C	C	C	C	C	C	C	1	1	0	0	0	1	1	3	3	--	2.72																							
14-Jan	0	3	2	Z	0	1	2	1	1	1	0	1	2	1	1	1	0	0	0	0	0	0	0	0	0.80	2.77																							
15-Jan	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.34	0.40																							
16-Jan	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.31	0.41																							
17-Jan	0	0	0	Z	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.36	0.62																							
18-Jan	0	0	0	Z	1	1	2	2	3	4	11	13	8	3	2	2	2	1	1	1	1	1	1	1	2.78	13.40																							
19-Jan	1	0	0	Z	0	0	1	1	1	2	2	3	4	4	2	3	2	1	2	2	2	1	0	0	1.56	4.22																							
20-Jan	0	0	0	Z	0	0	0	0	0	1	1	0	0	1	2	2	3	3	2	2	3	1	1	1	1.12	3.36																							
21-Jan	1	1	1	Z	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0	1	0.46	1.10																							
22-Jan	1	1	1	Z	0	1	1	2	1	0	0	0	1	0	0	0	0	0	1	1	0	0	0	0	0.61	1.62																							
23-Jan	0	0	1	Z	1	2	2	1	1	1	0	0	1	0	0	0	0	0	1	0	1	1	1	1	0.67	2.45																							
24-Jan	1	1	1	Z	2	2	2	2	2	3	2	2	2	1	0	0	0	1	1	1	1	1	1	1	1.37	3.17																							
25-Jan	1	1	1	Z	1	0	1	1	1	1	1	1	1	0	1	0	0	1	0	0	0	0	0	0	0.59	1.26																							
26-Jan	1	1	1	Z	2	0	1	1	0	0	0	0	2	1	0	3	4	3	1	0	0	2	3	3	1.22	3.61																							
27-Jan	1	6	6	Z	3	7	1	0	0	0	0	2	0	0	0	0	1	0	1	1	1	0	1	2	1.48	7.33																							
28-Jan	1	0	4	Z	1	1	2	0	2	0	3	3	2	2	1	0	0	1	0	1	1	1	0	1	1.32	3.60																							
29-Jan	1	0	0	Z	1	1	1	1	3	1	1	1	1	0	0	1	2	0	0	0	1	1	1	1	0.94	3.16																							
30-Jan	1	1	1	Z	1	1	1	1	1	1	1	0	0	1	1	0	0	0	0	1	2	1	1	1	0.75	1.55																							
31-Jan	1	2	1	Z	1	1	1	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0.62	2.48																							
																								1.70	1.60	1.73	--	1.66	1.54	1.50	1.89	2.21	2.10	2.76	3.39	2.07	1.35	1.04	0.82	1.10	1.13	1.48	1.48	1.72	2.27	1.99	1.89	Diurnal Average	
																								15.27	9.44	9.64	--	11.77	7.33	5.82	13.73	12.43	12.70	23.58	34.66	11.66	4.22	4.90	2.72	8.66	5.98	15.08	12.40	16.54	20.57	17.21	16.57	Diurnal Maximum	
Z - zerospan C - Calibration																																																	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																																																	



WCAS - Hinton
Summary of Hourly Averages

Sulphur Dioxide (SO₂) - ppb
January 2016

Maximum Value: 9.51 ppb on Jan 12 17:00 Maximum Daily Average: 2.69 ppb on Jan 28																				Hours in Service: 744 Hours of Data: 706 Hours of Missing Data: 38 Hours of Calibration: 38 Percent Operational Time: 100.0						
Minimum Value: 0.0 ppb on Jan 3 01:00 Minimum Daily Average: 0.02 ppb on Jan 3 Maximum Diurnal Average: 0.82 ppb at hour 17 Minimum Diurnal Average: 0.20 ppb at hour 22 Monthly Average: 0.427 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 0.7 P ₉₉ = 5.6																										
Day	Hourly Period Ending At																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	0.5	0.4	0.5	Z	0.3	0.3	0.2	0.4	0.5	0.4	0.8	1.2	0.6	0.6	0.3	0.5	0.4	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.40	1.17
2-Jan	0.1	0.1	0.1	Z	0.0	0.1	0.1	0.2	0.1	0.0	0.1	0.3	0.2	0.2	0.2	0.1	0.1	0.4	0.6	0.4	0.2	0.1	0.2	0.1	0.17	0.62
3-Jan	0.0	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.13
4-Jan	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.3	0.6	0.5	0.5	0.2	0.1	0.0	0.1	0.1	0.14	0.57
5-Jan	0.0	0.1	0.1	Z	0.0	0.1	0.1	0.1	0.3	0.2	0.3	0.4	0.2	0.4	0.4	0.5	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.21	0.52
6-Jan	0.0	0.1	0.1	Z	0.0	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.3	0.4	0.3	0.3	0.3	0.2	0.3	0.4	0.2	0.2	0.2	0.2	0.20	0.40
7-Jan	0.2	0.2	0.2	Z	0.3	0.3	0.4	0.5	0.7	0.5	0.2	0.3	0.4	0.4	0.4	0.2	0.2	0.5	0.4	0.3	0.1	0.2	0.3	0.3	0.32	0.73
8-Jan	0.3	0.2	0.2	Z	0.1	0.2	0.1	0.3	0.2	0.1	0.3	0.3	0.4	0.3	0.2	0.2	0.4	0.7	0.5	0.4	0.2	0.2	0.2	0.2	0.27	0.67
9-Jan	0.1	0.1	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.15
10-Jan	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.02	0.13
11-Jan	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.5	0.7	0.2	0.2	0.1	0.1	0.0	0.12	0.68
12-Jan	0.0	0.1	0.0	Z	0.0	0.1	2.9	0.5	1.4	0.4	0.5	0.2	0.1	0.1	2.7	5.7	9.5	5.2	0.5	0.4	0.2	0.1	0.1	0.0	1.34	9.51
13-Jan	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	C	C	C	C	C	C	C	0.5	0.6	0.4	0.4	0.3	0.3	0.3	0.2	0.2	--	0.62
14-Jan	0.2	0.1	0.1	Z	0.1	0.1	0.1	0.3	0.3	0.3	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.13	0.32
15-Jan	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.08	0.17
16-Jan	0.1	0.1	0.1	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.4	0.7	0.8	0.7	0.20	0.77
17-Jan	0.6	0.7	0.6	Z	0.4	0.3	0.1	0.1	0.2	0.1	0.2	0.3	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.26	0.66
18-Jan	0.1	0.1	0.2	Z	0.1	0.2	0.5	0.3	0.3	0.3	0.4	0.9	0.9	0.6	0.9	0.9	0.6	0.4	0.5	0.5	0.5	0.5	0.4	0.48	0.94	
19-Jan	0.4	0.3	0.3	Z	0.1	0.2	0.3	0.5	0.5	0.4	0.5	0.5	0.7	0.6	0.3	0.4	0.2	0.2	0.6	0.9	0.5	0.2	0.2	0.1	0.38	0.86
20-Jan	0.1	0.1	0.2	Z	0.1	0.2	0.2	0.1	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.9	1.3	0.8	0.8	1.0	0.5	0.3	0.1	0.38	1.25
21-Jan	0.1	0.2	0.1	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.6	2.6	0.1	0.1	0.0	0.0	0.0	0.4	0.5	0.23	2.60
22-Jan	0.3	0.1	0.1	Z	0.0	0.1	0.5	0.7	0.4	0.1	0.1	0.2	0.3	0.2	0.2	0.3	0.6	0.4	0.4	0.3	0.3	0.4	1.2	1.4	0.37	1.38
23-Jan	1.2	1.0	0.6	Z	0.3	0.4	0.4	0.3	0.2	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.3	0.2	0.2	0.31	1.20
24-Jan	0.1	0.2	0.2	Z	0.1	0.1	0.1	0.3	0.3	0.6	0.2	0.4	0.2	0.2	0.1	0.0	0.0	0.3	0.3	0.4	0.4	0.4	0.5	0.3	0.24	0.59
25-Jan	0.3	0.3	0.3	Z	0.2	0.1	0.2	0.3	0.4	0.5	0.5	0.2	0.3	0.4	1.9	0.3	0.6	1.2	0.1	0.2	0.1	0.0	0.1	1.8	0.45	1.88
26-Jan	8.1	4.9	1.1	Z	0.9	0.6	1.3	3.8	0.2	0.3	0.1	0.2	1.2	1.0	1.0	0.5	0.4	0.3	0.2	0.1	0.1	0.2	0.2	0.2	1.18	8.08
27-Jan	0.4	0.5	0.4	Z	0.5	0.5	1.5	2.7	1.8	0.2	0.5	3.7	0.4	2.0	1.4	1.9	3.2	0.3	1.0	0.4	0.3	0.2	2.5	5.0	1.36	4.96
28-Jan	4.7	1.9	8.8	Z	5.1	4.0	5.2	0.7	5.9	1.5	5.6	7.1	3.5	4.5	1.1	0.4	0.3	0.4	0.3	0.2	0.1	0.3	0.2	0.2	2.69	8.84
29-Jan	0.1	0.1	0.0	Z	0.0	0.1	0.2	0.1	0.5	0.2	2.3	2.7	3.7	0.9	0.7	1.0	2.5	0.5	0.1	0.0	0.0	0.1	0.1	0.1	0.70	3.72
30-Jan	0.1	0.0	0.0	Z	0.0	0.2	0.2	0.0	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.12	0.29
31-Jan	0.1	0.2	0.1	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.8	1.1	0.6	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.19	1.14
																								Diurnal Average		
																								Diurnal Maximum		
0.60 0.39 0.47 -- 0.28 0.27 0.48 0.42 0.51 0.26 0.47 0.67 0.52 0.51 0.47 0.52 0.82 0.48 0.32 0.26 0.20 0.20 0.29 0.41 8.08 4.88 8.84 -- 5.05 4.03 5.16 3.84 5.94 1.49 5.65 7.06 3.72 4.50 2.74 5.65 9.51 5.23 0.98 0.86 0.96 0.69 2.54 4.96																										
Z - zerospan C - Calibration Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 172 ppb 24-hr 48 ppb																										



WCAS - Hinton
Summary of Hourly Averages

Ozone (O₃) - ppb
January 2016

Maximum Value: 45.52 ppb on Jan 27 13:00		Maximum Daily Average: 40.84 ppb on Jan 10		Hours in Service: 744																									
Minimum Value: 0.0 ppb on Jan 4 21:00		Minimum Daily Average: 1.64 ppb on Jan 19		Hours of Data: 708																									
Maximum Diurnal Average: 25.59 ppb at hour 15		Minimum Diurnal Average: 11.03 ppb at hour 9		Hours of Missing Data: 36																									
Monthly Average: 16.148 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.6 Q ₁ = 2.7 Median = 11.7 Q ₃ = 29.6 P ₉₀ = 37.6 P ₉₉ = 43.0		Hours of Calibration: 36																									
				Percent Operational Time: 100.0																									
Day	Hourly Period Ending At																								Daily Average	Daily Maximum			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
1-Jan	31.4	32.9	32.6	Z	33.3	33.6	34.5	34.4	34.2	34.7	36.2	35.7	37.7	37.6	37.6	36.4	34.3	31.7	26.8	20.7	18.7	14.5	18.0	15.7	30.57	37.68			
2-Jan	13.0	15.8	7.3	Z	6.7	9.2	6.4	1.9	2.8	10.9	13.5	17.2	24.9	25.3	25.2	26.1	19.9	2.3	0.6	0.4	4.3	9.5	5.2	10.7	11.26	26.09			
3-Jan	11.0	10.9	7.3	Z	12.7	10.1	7.2	6.8	11.3	8.2	7.9	14.0	24.7	28.1	27.9	29.5	20.9	16.9	20.4	16.1	6.3	8.4	17.6	22.0	15.06	29.54			
4-Jan	19.1	14.2	13.5	Z	22.3	23.0	21.3	25.0	26.9	24.3	24.3	18.5	20.9	23.1	22.4	13.6	2.6	1.0	0.5	0.0	0.0	1.7	3.9	9.0	14.39	26.92			
5-Jan	5.7	4.1	4.6	Z	10.3	4.0	3.6	0.7	0.2	0.6	2.6	5.7	13.7	17.1	17.6	19.7	17.9	15.5	3.1	1.0	0.3	2.8	2.0	1.4	6.71	19.72			
6-Jan	1.3	0.0	1.9	Z	0.4	0.7	3.1	0.7	0.0	1.2	5.5	4.1	4.1	4.6	6.2	7.9	9.3	8.0	9.7	8.9	5.7	9.5	11.3	8.4	4.89	11.32			
7-Jan	8.1	8.0	7.8	Z	4.8	0.9	0.5	1.8	0.8	0.7	4.9	5.8	10.8	16.0	20.3	16.4	13.3	3.2	1.0	0.8	0.6	0.8	0.6	1.0	5.60	20.26			
8-Jan	0.7	1.1	0.4	Z	0.6	0.5	0.5	0.7	1.1	3.4	4.8	7.3	8.3	9.6	13.9	15.0	5.8	1.0	0.9	1.8	2.0	1.9	1.5	1.3	3.65	15.04			
9-Jan	1.2	1.8	3.0	Z	2.6	2.1	1.1	0.6	0.7	2.9	5.8	11.4	30.7	40.6	43.0	43.0	41.9	42.2	35.0	29.4	32.6	39.7	39.5	42.3	21.44	43.05			
10-Jan	43.1	42.8	43.0	Z	42.8	42.8	42.5	42.5	41.6	41.6	40.8	41.7	41.7	41.2	40.9	40.6	40.3	38.9	40.0	38.6	37.8	38.1	37.8	38.2	40.84	43.12			
11-Jan	38.0	38.4	37.5	Z	36.6	35.4	31.3	30.4	30.0	28.8	30.7	34.2	33.2	34.2	36.2	25.4	14.2	1.2	0.5	0.5	0.3	0.6	0.2	0.2	22.53	38.43			
12-Jan	17.8	37.3	39.9	Z	38.6	38.5	30.7	33.3	32.5	34.9	36.9	37.7	38.2	40.3	39.4	37.9	33.2	35.4	38.5	38.1	37.9	37.8	35.5	34.1	35.85	40.34			
13-Jan	37.7	39.7	38.4	Z	30.5	30.7	25.3	22.5	C	C	C	C	C	26.0	24.4	19.8	21.0	23.6	28.6	17.3	16.5	17.3	19.2	13.5	25.12	39.67			
14-Jan	16.9	9.9	4.5	Z	11.0	2.5	3.3	0.8	0.7	0.8	1.8	2.7	7.8	13.5	20.9	20.3	21.7	16.9	16.0	12.5	12.3	12.0	11.8	13.0	10.15	21.69			
15-Jan	12.8	13.0	12.8	Z	11.1	10.4	7.2	8.0	7.2	8.8	8.7	9.5	10.2	10.2	11.2	9.7	7.6	6.6	6.3	7.3	5.8	8.0	7.2	7.4	9.00	13.03			
16-Jan	7.1	6.7	9.0	Z	9.2	9.9	11.4	13.1	12.8	14.8	17.1	17.1	17.3	16.3	14.6	12.8	11.4	13.0	14.1	16.1	15.4	12.3	10.6	9.4	12.67	17.26			
17-Jan	10.0	10.9	11.1	Z	10.9	6.8	5.5	3.9	0.9	3.7	8.6	13.3	15.0	14.5	12.9	11.4	9.6	8.6	8.2	8.2	8.7	7.9	6.8	7.1	8.89	14.97			
18-Jan	5.9	5.4	2.7	Z	0.1	0.1	0.2	0.0	0.1	0.9	2.3	3.9	6.5	22.7	30.1	30.8	20.7	2.5	0.5	2.0	1.1	0.7	0.2	0.6	6.09	30.78			
19-Jan	0.5	0.0	0.2	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.4	1.4	3.7	6.3	7.9	4.2	4.3	3.4	1.0	0.5	0.3	0.4	1.5	1.7	1.64	7.95			
20-Jan	0.8	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.3	1.2	3.2	4.6	5.6	7.4	9.6	7.3	3.0	1.6	1.1	0.9	0.8	0.6	0.5	0.6	2.15	9.57			
21-Jan	0.8	1.3	1.6	Z	1.7	1.4	2.1	3.0	1.4	3.2	7.7	9.5	9.1	12.8	20.7	28.8	29.1	34.6	33.9	29.9	31.9	35.1	32.5	22.8	15.43	35.10			
22-Jan	20.9	19.7	4.5	Z	1.7	0.0	0.2	0.0	1.0	2.2	6.1	8.7	9.8	16.9	19.6	18.9	19.2	11.4	6.1	1.2	2.9	4.4	2.4	1.7	7.80	20.85			
23-Jan	0.7	0.4	0.5	Z	0.1	0.4	0.6	0.2	0.6	1.6	4.6	7.3	10.0	14.2	19.8	21.8	17.8	8.9	6.3	6.3	3.4	1.5	2.0	1.9	5.70	21.85			
24-Jan	1.2	1.3	2.3	Z	1.1	0.8	0.9	1.7	1.3	4.1	4.9	8.5	17.1	24.5	28.8	31.6	30.7	7.2	2.0	1.3	2.6	1.6	0.8	0.5	7.68	31.57			
25-Jan	0.4	0.3	0.5	Z	1.1	2.6	0.5	0.5	0.6	0.8	2.4	6.7	9.6	35.0	38.8	33.3	33.6	30.7	28.9	29.0	31.6	31.2	37.1	35.7	16.99	38.81			
26-Jan	29.7	30.8	35.7	Z	29.4	35.6	33.4	32.2	31.5	34.0	35.6	34.5	33.2	33.1	31.7	30.8	26.9	29.7	19.6	24.3	19.8	14.2	18.9	28.8	29.28	35.69			
27-Jan	31.4	35.3	37.0	Z	38.0	38.5	37.0	39.6	40.0	38.6	39.1	40.1	45.5	43.8	43.7	42.0	36.4	38.8	35.9	37.7	36.8	38.0	34.7	28.9	38.13	45.52			
28-Jan	32.0	34.1	26.5	Z	30.1	27.2	25.8	27.1	26.1	29.2	25.8	24.7	26.2	26.8	27.1	30.4	33.6	30.8	33.1	17.1	5.7	12.4	29.5	29.9	26.58	34.10			
29-Jan	38.0	38.9	37.3	Z	36.6	25.7	2.1	0.8	1.6	11.9	34.9	35.3	36.5	39.5	40.3	38.1	33.4	34.2	32.3	34.8	30.4	28.7	28.6	26.0	28.95	40.26			
30-Jan	28.5	28.6	27.9	Z	22.7	6.1	3.1	7.8	3.9	2.2	7.9	19.1	20.5	21.3	25.3	33.0	33.0	27.0	25.0	7.9	3.6	8.1	6.8	4.7	16.27	33.02			
31-Jan	2.0	8.0	2.5	Z	3.9	3.2	17.6	30.8	19.0	11.0	14.7	20.8	32.5	35.0	35.1	36.2	36.0	29.4	24.6	25.5	25.7	28.9	24.9	21.6	21.25	36.17			
		15.10	15.87	14.64	--	14.54	12.99	11.58	11.97	11.03	12.05	14.66	16.68	20.16	23.78	25.59	24.93	22.02	17.94	16.15	14.07	12.96	13.83	14.50	14.20	Diurnal Average			
		43.12	42.83	43.03	--	42.79	42.80	42.49	42.50	41.56	41.57	40.82	41.65	45.52	43.76	43.69	43.01	41.90	42.16	40.00	38.62	37.89	39.66	39.47	42.30	Diurnal Maximum			
Z - zerospan		C - Calibration																											
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr 82.5 ppb		24-hr -- ppb																									



WCAS - Hinton
Summary of Hourly Averages

Nitrogen Oxide (NO) - ppb
January 2016

Maximum Value: 164.19 ppb on Jan 20 18:00		Maximum Daily Average: 43.55 ppb on Jan 20		Hours in Service: 744																																													
Minimum Value: 0.0 ppb on Jan 13 05:00		Minimum Daily Average: 0.31 ppb on Jan 10		Hours of Data: 708																																													
Maximum Diurnal Average: 22.07 ppb at hour 9		Minimum Diurnal Average: 4.47 ppb at hour 2		Hours of Missing Data: 36																																													
Monthly Average: 12.364 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.7 Median = 3.8 Q ₃ = 15.6 P ₉₀ = 36.9 P ₉₉ = 102.4		Hours of Calibration: 36																																													
Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.7 Median = 3.8 Q ₃ = 15.6 P ₉₀ = 36.9 P ₉₉ = 102.4		Percent Operational Time: 100.0																																															
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Jan	0.1	0.1	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.5	1.3	1.1	0.8	0.6	0.7	0.5	0.3	0.2	0.2	0.2	0.2	0.1	2.3	0.42	2.30																							
2-Jan	1.6	0.1	4.0	Z	4.1	4.3	6.2	15.0	16.7	3.0	7.4	14.4	6.9	6.7	5.5	2.6	2.5	37.0	59.4	44.7	17.5	5.7	8.9	1.3	11.98	59.39																							
3-Jan	0.4	0.7	1.5	Z	0.2	1.0	4.1	3.8	0.3	12.5	17.6	22.7	5.9	4.0	3.9	1.7	1.6	1.0	0.2	0.5	9.8	1.6	0.1	0.1	4.14	22.70																							
4-Jan	0.1	0.2	0.1	Z	0.2	0.1	0.7	0.1	0.1	0.4	2.2	12.9	13.5	13.9	10.4	25.0	74.5	60.9	71.0	61.1	27.6	12.1	2.5	1.1	16.99	74.55																							
5-Jan	1.2	1.5	3.2	Z	0.7	11.0	4.9	10.5	31.2	34.8	47.8	41.3	19.9	14.6	8.9	5.5	4.8	2.8	17.4	22.6	16.4	4.8	3.1	4.3	13.62	47.77																							
6-Jan	4.1	10.5	2.9	Z	7.5	7.1	4.5	17.7	16.4	13.5	6.1	19.9	30.1	22.3	14.1	8.6	4.0	5.2	2.2	2.7	0.7	0.3	0.6	0.6	8.76	30.06																							
7-Jan	0.6	0.9	1.6	Z	1.9	21.9	41.6	55.3	84.8	45.9	17.9	38.7	21.7	10.1	5.9	6.4	8.0	32.3	38.2	17.4	11.3	18.9	26.2	3.2	22.20	84.76																							
8-Jan	15.0	12.2	13.6	Z	19.1	24.3	19.6	25.1	17.3	6.5	27.5	36.9	52.6	39.5	18.9	10.0	36.9	64.8	54.1	28.5	15.0	12.4	10.1	10.0	24.77	64.78																							
9-Jan	11.2	6.4	6.2	Z	3.8	5.5	11.2	15.8	12.1	14.0	27.2	26.2	3.2	1.3	0.8	0.7	0.7	0.5	0.1	0.1	0.1	0.1	0.1	0.1	6.41	27.23																							
10-Jan	0.1	0.2	0.2	Z	0.1	0.2	0.3	0.3	0.5	0.3	0.6	0.6	0.6	0.9	0.8	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.31	0.90																							
11-Jan	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	1.0	0.4	0.6	0.4	0.7	1.4	0.9	7.3	7.4	50.9	73.8	31.0	24.9	15.1	13.8	7.8	10.35	73.78																							
12-Jan	1.5	0.1	0.2	Z	0.2	0.2	0.6	0.2	0.3	0.6	1.0	1.0	1.2	0.8	1.3	1.2	1.4	0.5	0.6	0.9	1.4	0.7	0.3	0.3	0.72	1.52																							
13-Jan	0.1	0.1	0.3	Z	0.0	0.1	0.0	1.0	C	C	C	C	C	2.9	3.9	5.8	11.2	7.5	2.0	4.8	0.3	0.8	0.3	0.3	2.29	11.19																							
14-Jan	0.7	0.2	0.8	Z	0.4	7.3	7.8	40.2	35.9	24.9	11.9	10.0	6.2	7.9	2.4	3.6	1.9	2.1	1.8	2.4	0.9	1.8	0.8	0.7	7.50	40.22																							
15-Jan	0.6	1.1	1.2	Z	0.8	2.0	4.0	2.7	4.2	3.7	6.0	6.7	8.9	7.7	5.5	6.1	6.3	5.2	6.4	2.5	2.5	0.7	2.8	1.5	3.87	8.90																							
16-Jan	0.9	0.9	0.6	Z	1.8	2.3	2.2	1.3	2.6	2.0	2.9	3.7	3.6	4.7	6.3	5.5	4.8	2.4	2.1	0.8	1.2	1.0	1.0	0.9	2.43	6.26																							
17-Jan	1.3	0.7	1.5	Z	0.5	3.2	2.7	4.3	23.4	14.7	13.0	9.7	9.5	9.6	8.0	5.5	3.3	3.8	4.9	2.3	1.0	1.4	0.6	0.8	5.47	23.37																							
18-Jan	1.1	0.6	2.8	Z	6.5	31.2	57.4	36.3	41.5	40.3	51.7	108.4	114.1	15.1	3.0	1.6	12.9	31.3	47.1	46.7	48.9	58.1	48.8	43.8	36.92	114.10																							
19-Jan	40.2	16.1	19.5	Z	11.5	17.3	25.2	55.3	62.1	57.9	64.1	57.6	81.7	69.8	25.4	52.0	23.3	17.1	76.4	103.9	53.3	12.8	6.2	3.0	41.38	103.93																							
20-Jan	1.8	2.2	4.7	Z	7.0	16.5	10.3	12.4	20.6	35.6	28.1	20.1	17.5	19.2	27.3	35.9	115.6	164.2	104.6	114.8	126.8	63.0	39.2	14.3	43.55	164.19																							
21-Jan	21.5	28.3	25.6	Z	14.1	10.2	10.8	7.5	18.8	15.6	9.3	6.7	9.9	12.2	16.7	4.4	2.7	1.2	2.6	0.2	0.6	0.2	0.7	1.7	9.63	28.26																							
22-Jan	0.3	0.3	8.0	Z	7.1	31.9	66.3	80.2	57.1	10.8	11.3	18.6	23.3	9.7	4.6	5.3	4.4	7.9	19.7	19.9	12.9	2.5	3.6	2.7	17.75	80.19																							
23-Jan	7.9	6.0	21.3	Z	25.1	40.2	42.0	29.6	31.0	30.0	18.1	22.1	24.8	13.7	6.5	4.3	6.3	12.1	21.1	8.4	31.6	36.9	26.3	29.2	21.49	41.98																							
24-Jan	21.2	26.1	30.6	Z	25.5	22.3	29.0	35.1	51.6	86.4	25.6	50.8	13.2	4.5	2.2	1.8	1.1	32.2	29.2	40.8	41.7	42.9	41.5	36.5	30.07	86.38																							
25-Jan	32.4	18.6	19.4	Z	8.5	5.3	23.0	44.1	45.1	57.1	63.3	30.8	35.1	1.7	1.0	1.4	0.8	0.5	5.9	14.3	6.0	2.1	0.1	0.0	18.12	63.30																							
26-Jan	0.8	0.4	0.2	Z	0.1	0.3	2.0	2.4	3.3	0.6	0.5	0.6	1.6	1.2	1.7	0.9	1.3	0.3	4.3	3.0	1.6	4.3	1.0	0.2	1.42	4.29																							
27-Jan	0.2	0.2	0.1	Z	0.1	0.1	0.3	0.2	0.1	1.8	2.6	1.7	0.3	0.7	0.7	0.5	0.6	0.7	0.5	0.4	0.5	1.0	0.3	1.0	0.63	2.65																							
28-Jan	0.1	0.1	0.3	Z	0.2	0.4	0.4	2.5	0.5	0.5	2.1	2.4	1.8	2.6	1.5	0.2	0.5	1.6	0.4	4.0	13.9	9.7	0.7	0.4	2.04	13.90																							
29-Jan	0.1	0.0	0.0	Z	0.1	4.9	23.1	24.8	67.2	17.6	1.5	2.1	2.4	1.3	0.8	0.9	1.0	0.3	1.5	0.2	0.1	0.1	0.1	0.1	6.52	67.21																							
30-Jan	0.1	0.0	0.0	Z	0.1	8.4	17.4	5.1	15.2	35.6	13.0	5.1	2.9	4.2	3.5	0.2	1.4	3.4	1.1	9.7	14.3	6.4	4.1	5.3	6.80	35.59																							
31-Jan	6.6	3.8	4.2	Z	4.2	4.1	3.6	0.2	1.0	10.7	4.6	6.5	2.3	1.4	0.8	0.2	0.0	0.6	0.2	1.3	1.1	0.2	0.3	0.3	2.54	10.75																							
																								5.61	4.47	5.64	--	4.89	9.15	13.59	17.07	22.07	19.27	16.20	19.33	17.22	9.88	6.25	6.65	11.03	17.76	20.94	19.04	15.63	10.25	7.88	5.61	Diurnal Average	
																								40.21	28.26	30.59	--	25.50	40.19	66.29	80.19	84.76	86.38	64.06	108.35	114.10	69.77	27.32	51.97	115.55	164.19	104.61	114.76	126.84	62.98	48.75	43.80	Diurnal Maximum	
Z - zerospan C - Calibration																																																	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr --- ppb 24-hr --- ppb																																																	



WCAS - Hinton
Summary of Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
January 2016

Maximum Value: 43.62 ppb on Jan 4 17:00 Maximum Daily Average: 22.33 ppb on Jan 8																						Hours in Service: 744																											
Minimum Value: 0.5 ppb on Jan 29 03:00 Minimum Daily Average: 2.65 ppb on Jan 10																						Hours of Data: 708																											
Maximum Diurnal Average: 18.07 ppb at hour 19 Minimum Diurnal Average: 9.49 ppb at hour 15																						Hours of Missing Data: 36																											
Monthly Average: 13.432 ppb Percentiles: P₁ = 1.4 P₁₀ = 3.5 Q₁ = 6.9 Median = 12.2 Q₃ = 18.5 P₉₀ = 24.5 P₉₉ = 38.4																						Hours of Calibration: 36																											
																						Percent Operational Time: 100.0																											
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Jan	3.8	3.4	3.2	Z	1.8	2.2	2.4	3.6	3.8	2.7	4.0	5.7	3.9	3.0	2.7	6.0	7.1	7.2	9.4	12.5	11.1	14.0	11.0	13.9	6.03	13.97																							
2-Jan	13.6	7.0	16.4	Z	15.1	12.3	15.3	21.4	19.6	12.2	11.1	15.5	14.3	14.2	14.8	13.6	19.7	38.9	38.8	35.8	22.1	15.2	19.4	9.7	18.09	38.89																							
3-Jan	9.6	10.9	13.6	Z	8.6	11.8	16.0	16.6	11.0	15.1	17.4	18.2	12.3	9.0	10.9	9.3	19.3	22.2	14.2	14.8	25.1	19.6	10.8	8.0	14.11	25.15																							
4-Jan	8.4	12.3	15.1	Z	10.9	7.1	12.3	6.1	5.7	7.3	8.2	21.5	20.8	19.9	20.0	30.5	43.6	38.9	40.3	35.1	27.7	25.5	22.8	17.1	19.87	43.62																							
5-Jan	18.2	18.4	17.9	Z	12.4	20.0	17.4	21.8	22.3	21.0	21.4	20.9	19.0	18.7	15.6	13.5	13.8	16.1	28.4	29.6	25.8	20.3	20.5	19.6	19.68	29.57																							
6-Jan	18.1	19.4	15.4	Z	17.7	17.4	15.4	19.3	19.6	17.5	12.4	18.3	21.5	20.3	18.3	17.2	15.2	16.5	14.8	16.6	18.2	12.9	11.2	13.3	16.81	21.55																							
7-Jan	13.1	12.9	13.2	Z	12.4	17.9	19.5	22.6	23.6	20.7	14.0	19.6	15.0	10.9	8.0	12.1	14.7	25.7	24.5	23.0	22.0	22.9	22.9	19.1	17.83	25.69																							
8-Jan	21.2	20.7	19.2	Z	20.1	20.1	19.9	22.0	21.0	15.8	18.1	18.4	25.2	24.0	20.1	19.9	33.0	34.7	32.4	25.9	22.5	21.1	19.0	19.3	22.33	34.71																							
9-Jan	19.4	18.5	16.2	Z	18.5	19.7	21.1	22.0	22.5	21.7	21.4	18.5	8.5	4.4	2.5	2.8	4.0	3.7	6.6	5.4	4.2	3.4	3.5	2.2	11.76	22.51																							
10-Jan	1.5	1.8	1.4	Z	1.4	1.6	2.0	2.0	3.0	2.8	3.4	2.3	2.3	2.7	3.1	2.9	2.9	3.9	2.5	3.4	4.1	3.5	3.6	2.8	2.65	4.08																							
11-Jan	2.7	2.3	3.0	Z	3.2	4.1	7.2	8.4	8.7	9.6	6.3	2.5	3.6	4.7	3.4	15.7	26.8	39.9	40.1	33.5	30.6	25.6	24.0	22.8	14.29	40.13																							
12-Jan	10.9	3.4	2.7	Z	3.9	4.1	11.3	9.1	9.1	6.5	4.2	4.3	3.5	2.6	6.2	9.6	13.1	9.5	4.7	4.6	4.3	4.2	4.4	5.0	6.13	13.11																							
13-Jan	2.9	1.8	2.3	Z	3.3	4.9	8.7	13.5	C	C	C	C	C	8.4	10.8	15.4	17.4	13.6	5.4	17.2	9.7	12.9	5.0	6.6	8.88	17.38																							
14-Jan	8.8	6.3	11.8	Z	8.1	9.7	11.2	16.7	13.9	10.7	7.7	8.1	9.0	13.3	7.2	10.1	8.5	6.7	7.2	8.1	5.6	6.1	5.9	4.7	8.94	16.74																							
15-Jan	5.0	4.3	4.9	Z	6.4	7.3	11.2	9.8	11.0	8.7	8.9	8.7	9.4	9.2	7.9	9.5	11.3	12.5	12.7	10.9	11.5	8.9	10.8	10.0	9.17	12.67																							
16-Jan	10.7	12.2	10.5	Z	12.2	10.8	10.0	8.3	9.7	9.0	6.9	6.7	6.6	7.2	9.3	11.4	14.2	12.6	12.1	10.5	11.2	14.1	16.1	17.0	10.85	17.03																							
17-Jan	16.3	15.4	15.1	Z	14.2	18.3	18.6	19.3	23.8	18.8	13.5	9.0	7.3	8.1	9.8	11.2	12.8	14.5	15.0	14.2	13.0	14.2	14.3	14.2	14.39	23.83																							
18-Jan	15.2	15.1	18.0	Z	19.5	20.9	21.9	17.0	16.2	15.9	17.8	29.9	36.7	14.6	8.1	6.0	20.4	36.1	35.3	32.9	28.1	25.4	24.4	20.2	21.56	36.71																							
19-Jan	18.0	13.8	12.4	Z	10.2	11.0	11.9	14.8	14.6	13.4	13.4	16.8	26.5	32.9	21.2	32.5	23.4	20.2	27.3	25.8	17.7	12.9	11.1	11.3	17.96	32.90																							
20-Jan	9.9	10.6	18.0	Z	18.2	21.2	18.2	18.4	18.2	18.3	13.9	12.0	12.0	12.6	18.0	24.3	36.4	39.7	33.8	32.4	30.3	24.5	20.9	16.5	20.80	39.69																							
21-Jan	18.2	18.4	15.1	Z	16.4	14.7	13.6	13.0	16.4	15.3	11.8	11.9	14.0	12.2	15.3	9.3	10.8	3.9	4.7	5.8	5.0	2.2	4.1	9.3	11.37	18.40																							
22-Jan	7.7	6.1	10.9	Z	9.4	12.1	17.6	15.6	12.9	9.1	7.9	11.8	13.6	11.0	9.0	10.5	11.6	19.5	23.9	24.9	21.0	19.4	27.5	29.0	14.86	28.99																							
23-Jan	29.7	29.9	27.6	Z	23.5	24.9	24.3	18.4	16.3	13.3	10.2	11.3	13.4	11.4	9.6	10.0	16.6	25.7	24.9	21.8	26.8	29.6	27.2	25.9	20.54	29.93																							
24-Jan	22.1	18.9	19.0	Z	18.4	12.6	16.6	18.3	22.6	27.8	12.3	26.7	12.4	8.2	4.9	4.2	5.4	32.2	35.9	34.2	29.9	27.0	24.2	23.3	19.87	35.91																							
25-Jan	22.9	19.6	17.0	Z	14.0	11.2	15.1	16.2	15.4	13.5	16.3	16.0	19.3	4.5	6.0	7.5	8.1	10.5	12.3	16.6	11.3	9.0	2.7	4.5	12.58	22.90																							
26-Jan	11.7	9.4	2.8	Z	8.5	4.2	7.3	8.0	7.9	4.5	2.2	3.0	4.7	3.7	5.8	6.8	9.4	5.0	16.7	12.0	17.4	21.9	15.8	8.8	8.59	21.91																							
27-Jan	8.5	4.7	3.4	Z	2.8	3.7	7.7	8.0	7.6	8.5	6.9	7.7	2.3	5.2	3.9	4.2	8.0	4.1	5.4	3.1	3.4	1.8	4.6	9.8	5.46	9.82																							
28-Jan	6.6	2.4	9.9	Z	6.7	8.1	8.9	7.5	10.6	5.3	9.3	8.2	5.6	6.9	4.7	0.9	2.3	9.3	7.4	17.2	27.1	21.4	9.4	8.3	8.86	27.11																							
29-Jan	0.6	0.5	0.5	Z	1.0	10.5	37.4	37.8	41.2	23.4	6.0	6.5	6.9	3.7	3.1	5.0	9.1	8.0	9.2	4.5	4.2	4.3	5.4	4.4	10.14	41.21																							
30-Jan	3.6	2.8	2.3	Z	3.4	18.7	25.2	15.0	16.9	25.7	18.9	11.4	10.7	11.9	10.7	2.1	3.3	10.1	8.2	20.7	20.8	14.5	17.8	18.0	12.73	25.72																							
31-Jan	17.1	12.3	16.3	Z	10.5	11.2	9.6	3.9	8.0	18.7	10.9	12.4	6.2	3.8	3.2	1.4	0.9	7.1	5.8	6.4	7.0	6.0	6.9	5.6	8.32	18.66																							
																								12.14	10.82	11.46	--	10.73	12.07	14.66	14.66	15.10	13.76	11.23	12.79	12.22	10.43	9.49	10.82	14.29	17.69	18.07	18.05	16.73	14.97	13.78	12.92	Diurnal Average	
																								29.71	29.93	27.58	--	23.51	24.90	37.44	37.82	41.21	27.77	21.42	29.95	36.71	32.90	21.19	32.54	43.62	39.91	40.32	35.80	30.58	29.64	27.52	28.99	Diurnal Maximum	
Z - zerospan C - Calibration																																																	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																																																	



WCAS - Hinton
Summary of Hourly Averages

NOx (NO_x) - ppb
January 2016

Maximum Value: 186.93 ppb on Jan 20 18:00		Maximum Daily Average: 63.32 ppb on Jan 20		Hours in Service: 744																																													
Minimum Value: 0.6 ppb on Jan 29 03:00		Minimum Daily Average: 2.96 ppb on Jan 10		Hours of Data: 708																																													
Maximum Diurnal Average: 38.86 ppb at hour 19		Minimum Diurnal Average: 15.30 ppb at hour 2		Hours of Missing Data: 36																																													
Monthly Average: 25.753 ppb		Percentiles: P ₁ = 1.6 P ₁₀ = 3.9 Q ₁ = 7.7 Median = 16.6 Q ₃ = 34.9 P ₉₀ = 60.4 P ₉₉ = 137.4		Hours of Calibration: 36																																													
				Percent Operational Time: 100.0																																													
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Jan	3.9	3.5	3.3	Z	1.8	2.3	2.4	3.6	3.9	2.8	4.6	7.0	5.1	3.8	3.4	6.7	7.6	7.4	9.6	12.8	11.3	14.2	11.1	16.2	6.45	16.20																							
2-Jan	15.2	7.1	20.4	Z	19.2	16.6	21.5	36.4	36.3	15.2	18.5	29.8	21.2	20.9	20.4	16.3	22.3	75.7	97.8	80.3	39.6	20.9	28.3	10.9	30.03	97.81																							
3-Jan	10.1	11.6	15.0	Z	8.8	12.8	20.1	20.4	11.4	27.5	34.9	40.8	18.2	13.0	14.8	11.0	21.0	23.2	14.4	15.3	35.0	21.3	10.9	8.2	18.25	40.83																							
4-Jan	8.5	12.5	15.2	Z	11.1	7.2	13.0	6.1	5.8	7.7	10.5	34.4	34.3	33.8	30.4	55.4	116.2	99.4	109.8	95.9	55.2	37.6	25.4	18.2	36.68	116.19																							
5-Jan	19.4	19.9	21.1	Z	13.1	31.0	22.3	32.3	53.4	55.7	69.0	62.1	38.9	33.3	24.6	18.9	18.6	18.9	45.8	52.1	42.3	25.1	23.7	24.0	33.28	68.99																							
6-Jan	22.3	29.9	18.3	Z	25.3	24.5	19.9	37.0	36.0	30.9	18.6	38.1	51.5	42.6	32.3	25.8	19.2	21.7	17.0	19.3	18.9	13.2	11.8	13.9	25.57	51.54																							
7-Jan	13.7	13.8	14.8	Z	14.3	39.7	60.9	77.7	108.0	66.4	31.9	58.1	36.6	21.1	13.8	18.5	22.7	57.8	62.6	40.4	33.4	41.8	49.0	22.3	39.96	107.95																							
8-Jan	36.2	32.9	32.8	Z	39.2	44.4	39.5	47.1	38.2	22.3	45.5	55.2	77.5	63.3	38.9	30.0	69.8	99.1	86.2	54.3	37.5	33.5	29.1	29.3	47.03	99.14																							
9-Jan	30.6	24.9	22.5	Z	22.4	25.3	32.3	37.7	34.6	35.7	48.6	44.5	11.7	5.7	3.4	3.5	4.7	4.2	6.7	5.5	4.3	3.5	3.6	2.3	18.17	48.58																							
10-Jan	1.6	1.9	1.6	Z	1.5	1.7	2.2	2.3	3.5	3.1	4.0	2.9	2.9	3.7	4.0	3.3	3.1	4.0	2.7	3.5	4.2	3.6	3.8	2.9	2.96	4.19																							
11-Jan	2.8	2.4	3.2	Z	3.4	4.2	7.2	8.5	9.7	10.0	6.9	2.9	4.3	6.1	4.3	23.0	34.1	90.6	112.6	64.4	55.4	40.7	37.8	30.6	24.57	112.61																							
12-Jan	12.4	3.4	2.9	Z	4.1	4.3	11.9	9.2	9.5	7.1	5.2	5.3	4.7	3.4	7.5	10.8	14.5	9.9	5.3	5.4	5.8	4.8	4.7	5.3	6.85	14.48																							
13-Jan	3.0	1.8	2.6	Z	3.4	5.1	8.8	14.6	C	C	C	C	C	10.9	14.4	20.9	28.3	20.8	7.2	21.9	9.8	13.6	5.1	6.7	11.06	28.32																							
14-Jan	9.4	6.4	12.5	Z	8.5	17.0	19.0	57.0	49.9	35.6	19.6	18.1	15.3	21.2	9.6	13.8	10.4	8.8	9.0	10.6	6.5	7.9	6.8	5.4	16.46	57.00																							
15-Jan	5.7	5.4	6.2	Z	7.3	9.2	15.3	12.6	15.2	12.4	14.8	15.4	18.3	16.9	13.4	15.6	17.7	17.7	19.1	13.4	14.0	9.7	13.5	11.6	13.06	19.10																							
16-Jan	11.7	13.1	11.1	Z	14.0	13.1	12.2	9.7	12.3	11.1	9.9	10.5	10.3	12.0	15.6	16.9	19.0	15.0	14.3	11.2	12.4	15.2	17.1	18.0	13.30	19.04																							
17-Jan	17.6	16.2	16.6	Z	14.7	21.6	21.3	23.6	47.3	33.6	26.6	18.7	16.8	17.8	17.8	16.7	16.1	18.4	20.0	16.6	14.0	15.6	15.0	15.0	19.89	47.26																							
18-Jan	16.3	15.7	20.8	Z	26.1	52.2	79.3	53.4	57.8	56.2	69.6	137.6	149.5	29.7	11.1	7.6	33.3	67.4	82.5	79.7	77.0	83.5	73.2	64.0	58.41	149.52																							
19-Jan	58.3	29.9	31.9	Z	21.7	28.3	37.1	70.2	76.7	71.3	77.5	74.4	108.2	102.6	46.7	84.5	46.7	37.4	103.6	128.1	71.0	25.7	17.3	14.4	59.28	128.10																							
20-Jan	11.7	12.8	22.8	Z	25.3	37.8	28.5	30.9	38.9	54.0	42.0	32.1	29.5	31.8	45.4	60.2	145.9	186.9	137.5	146.4	157.3	87.5	60.1	30.9	63.32	186.93																							
21-Jan	39.8	46.7	40.7	Z	30.6	25.0	24.5	20.5	35.3	31.0	21.1	18.7	23.9	24.3	32.1	13.7	13.5	5.2	7.3	6.0	5.7	2.4	4.8	11.0	21.03	46.71																							
22-Jan	7.9	6.3	18.9	Z	16.5	44.0	83.9	95.8	70.1	19.9	19.2	30.4	37.0	20.7	13.6	15.9	16.1	27.4	43.7	44.8	34.0	22.0	31.1	31.7	32.65	95.78																							
23-Jan	37.7	36.0	48.9	Z	48.6	65.1	66.3	48.0	47.4	43.4	28.4	33.4	38.2	25.1	16.1	14.3	22.9	37.8	46.0	30.2	58.5	66.6	53.5	55.2	42.08	66.56																							
24-Jan	43.4	45.1	49.7	Z	43.9	34.9	45.7	53.5	74.2	114.1	37.9	77.4	25.6	12.7	7.1	6.0	6.5	64.4	65.2	75.0	71.6	69.9	65.8	59.9	49.97	114.14																							
25-Jan	55.4	38.3	36.5	Z	22.6	16.6	38.1	60.4	60.5	70.6	79.6	46.8	54.5	6.2	7.0	8.9	8.9	10.9	18.3	30.9	17.2	11.2	2.7	4.5	30.72	79.64																							
26-Jan	12.5	9.8	3.0	Z	8.6	4.5	9.4	10.3	11.2	5.1	2.8	3.6	6.3	5.0	7.4	7.7	10.7	5.3	21.0	15.1	19.0	26.2	16.8	9.1	10.02	26.22																							
27-Jan	8.7	4.9	3.5	Z	2.9	3.8	8.1	8.2	7.7	10.4	9.5	9.4	2.6	5.8	4.6	4.7	8.6	4.8	5.9	3.6	3.9	2.7	4.9	10.8	6.09	10.82																							
28-Jan	6.8	2.5	10.3	Z	6.9	8.6	9.3	10.0	11.1	5.8	11.4	10.6	7.4	9.5	6.2	1.1	2.8	10.9	7.8	21.3	41.0	31.1	10.2	8.8	10.92	41.04																							
29-Jan	0.7	0.6	0.6	Z	1.0	15.4	60.5	62.6	108.4	41.1	7.5	8.6	9.3	5.0	3.9	5.9	10.1	8.3	10.7	4.7	4.3	4.4	5.4	4.5	16.67	108.35																							
30-Jan	3.7	2.9	2.4	Z	3.5	27.1	42.6	20.2	32.2	61.3	32.0	16.5	13.7	16.2	14.1	2.3	4.7	13.6	9.3	30.5	35.1	20.9	21.9	23.4	19.57	61.35																							
31-Jan	23.8	16.1	20.6	Z	14.7	15.3	13.2	4.1	9.0	29.5	15.5	19.0	8.6	5.3	4.0	1.7	0.9	7.7	6.0	7.7	8.1	6.3	7.3	5.9	10.88	29.46																							
																								17.76	15.30	17.12	--	15.64	21.24	28.27	31.74	37.17	33.03	27.44	32.09	29.40	20.30	15.74	17.47	25.07	34.87	38.86	37.00	32.36	25.23	21.67	18.54	Diurnal Average	
																								58.26	46.71	49.69	--	48.63	65.13	83.92	95.78	108.35	114.14	79.64	137.63	149.52	102.59	46.65	84.50	145.90	186.93	137.48	146.44	157.29	87.49	73.16	64.05	Diurnal Maximum	
Z - zerospan C - Calibration																																																	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr --- ppb 24-hr --- ppb																																																	



WCAS - Hinton
Summary of Hourly Averages

PM2.5 (PM_{2.5}) - µg/m³
January 2016

Maximum Value: 35.06 µg/m ³ on Jan 6 14:00		Maximum Daily Average: 18.39 µg/m ³ on Jan 6		Hours in Service: 744																						
Minimum Value: 0.0 µg/m ³ on Jan 9 14:00		Minimum Daily Average: 3.53 µg/m ³ on Jan 10		Hours of Data: 739																						
Maximum Diurnal Average: 10.73 µg/m ³ at hour 12		Minimum Diurnal Average: 6.56 µg/m ³ at hour 6		Hours of Missing Data: 5																						
Monthly Average: 7.851 µg/m ³		Percentiles: P ₁ = 1.6 P ₁₀ = 2.9 Q ₁ = 4.3 Median = 6.7 O ₃ = 10.0 P ₉₀ = 13.8 P ₉₉ = 26.2		Hours of Calibration: 5																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	6.0	6.0	4.3	4.4	3.1	4.2	3.6	5.3	4.4	5.0	7.2	8.9	6.6	5.4	4.4	7.4	9.2	5.7	5.2	6.6	6.6	4.8	4.4	4.6	5.56	9.22
2-Jan	4.7	3.6	4.0	2.7	2.9	3.8	5.8	8.7	7.0	4.6	7.2	7.8	5.1	7.0	8.4	8.8	7.3	11.0	11.1	9.9	6.5	3.3	3.9	2.6	6.15	11.07
3-Jan	2.9	2.7	2.8	2.7	2.7	2.1	3.7	5.1	3.0	3.6	12.4	11.0	5.0	3.8	4.7	5.2	8.2	7.7	5.3	4.9	5.6	4.5	4.7	5.0	4.97	12.44
4-Jan	3.5	2.8	4.4	3.5	4.4	2.4	5.9	2.6	2.5	2.7	10.9	8.5	7.0	9.6	11.2	10.0	16.8	15.5	12.3	10.7	9.8	11.3	10.7	9.5	7.85	16.84
5-Jan	7.2	7.0	7.8	7.4	10.4	12.5	10.2	8.8	9.7	11.1	17.0	15.0	16.7	13.7	8.8	8.3	10.6	11.7	12.1	15.4	13.9	12.6	12.4	11.8	11.34	17.03
6-Jan	11.1	11.1	11.9	13.2	12.9	12.6	11.8	12.1	13.0	15.7	16.3	26.8	32.3	35.1	28.0	23.9	21.4	20.9	20.3	18.3	17.9	18.2	19.1	17.6	18.39	35.06
7-Jan	19.3	25.8	23.2	33.3	29.4	22.5	18.9	20.5	18.0	14.1	16.5	22.5	17.6	15.9	11.9	9.5	11.8	13.7	12.8	10.5	13.1	14.5	15.8	12.1	17.63	33.25
8-Jan	13.7	11.1	11.0	11.2	10.6	12.2	10.1	13.9	13.5	11.4	15.9	20.2	19.1	16.3	12.2	10.0	9.1	9.5	11.4	11.0	17.2	15.7	7.8	7.7	12.57	20.22
9-Jan	8.9	8.8	6.0	6.0	8.6	7.9	9.9	9.5	9.2	7.7	11.9	14.8	4.8	0.0	2.5	2.7	3.2	3.8	4.5	4.1	5.2	4.2	4.1	3.1	6.32	14.84
10-Jan	2.6	3.4	3.0	2.8	3.0	3.0	3.3	3.5	4.3	4.4	3.8	3.5	2.8	3.7	3.9	3.9	3.2	3.2	2.9	4.5	4.2	3.7	4.0	4.2	3.53	4.47
11-Jan	4.1	3.0	2.8	2.9	2.7	2.5	3.4	2.7	2.6	3.1	3.0	1.8	3.1	4.6	4.1	6.2	6.3	11.0	13.3	8.2	4.5	7.4	9.7	8.1	5.05	13.28
12-Jan	6.2	6.1	3.5	5.9	3.0	3.7	12.4	6.9	10.6	5.7	3.7	3.4	2.2	1.6	7.7	14.6	14.4	9.6	1.6	2.5	2.8	2.5	2.3	2.4	5.63	14.59
13-Jan	1.1	1.9	1.9	4.0	2.4	2.6	6.9	4.3	C	C	C	C	C	2.2	4.0	7.4	6.9	5.6	8.6	9.7	8.1	10.7	9.4	8.7	5.60	10.68
14-Jan	6.8	7.5	8.2	5.5	2.8	2.9	3.3	8.8	7.0	7.2	5.6	5.3	4.9	5.3	3.3	4.9	5.2	16.0	20.0	12.2	8.2	9.0	9.9	7.4	7.38	20.03
15-Jan	7.5	5.3	4.8	6.5	6.5	6.8	7.2	8.7	10.5	12.6	11.3	9.3	8.4	7.9	8.0	8.4	8.1	7.5	6.6	6.0	6.3	5.0	6.3	5.6	7.55	12.63
16-Jan	6.8	9.9	11.5	11.1	10.9	9.5	7.8	6.7	7.0	7.5	7.0	6.9	7.1	8.9	11.7	13.1	12.4	8.4	8.4	9.3	9.1	9.3	9.2	9.2	9.11	13.12
17-Jan	8.7	10.4	10.6	10.4	10.5	9.7	8.2	8.4	8.2	8.7	7.9	7.2	6.5	6.0	6.5	8.6	6.4	7.1	7.3	6.5	6.8	7.5	7.0	8.7	8.08	10.58
18-Jan	9.2	8.6	9.0	8.6	8.1	8.4	9.1	8.0	6.5	10.0	11.5	22.3	26.5	8.0	4.5	3.5	5.3	4.7	5.4	11.5	10.5	6.8	3.2	6.9	9.01	26.49
19-Jan	5.6	1.9	3.2	2.6	2.8	2.7	3.3	5.3	5.1	5.6	7.3	9.5	21.3	21.5	7.4	13.7	10.7	7.6	13.4	14.9	11.2	9.5	4.1	5.8	8.18	21.46
20-Jan	4.9	5.7	9.8	11.9	13.5	14.6	16.3	17.7	17.8	17.9	19.4	17.9	15.5	15.3	19.7	18.7	25.0	16.0	8.3	6.3	5.9	3.5	4.1	1.8	12.81	25.02
21-Jan	5.1	8.9	11.4	10.1	7.0	2.4	1.6	3.9	7.5	9.4	11.2	9.6	9.0	7.9	5.9	3.9	8.0	1.9	0.9	5.1	1.9	2.5	3.9	5.8	6.02	11.40
22-Jan	5.0	3.7	2.4	3.2	2.1	4.1	6.8	6.0	6.2	3.3	3.7	4.9	5.1	4.6	5.2	6.7	4.7	6.0	7.1	8.2	11.7	14.6	12.8	12.2	6.26	14.56
23-Jan	11.7	12.9	15.7	12.2	9.5	12.3	9.1	6.8	8.4	11.6	13.8	14.3	7.3	7.6	5.1	4.1	4.8	5.6	6.0	7.1	9.8	10.3	8.4	9.8	9.34	15.70
24-Jan	6.4	7.7	13.8	11.0	6.6	5.4	5.6	7.5	5.9	15.4	8.1	11.6	5.5	6.3	2.4	1.3	2.9	8.5	6.5	8.4	16.7	13.0	9.3	7.9	8.07	16.71
25-Jan	5.6	2.9	4.5	6.2	6.1	4.8	5.1	5.3	5.2	5.4	12.4	10.9	10.3	3.9	9.6	2.6	6.9	6.7	3.0	3.2	3.9	3.8	4.3	6.5	5.80	12.39
26-Jan	18.4	11.7	6.3	9.5	9.4	4.2	5.5	7.0	4.0	3.1	2.6	2.1	2.6	2.1	4.3	4.7	4.2	2.5	5.5	3.9	5.0	5.1	5.8	4.4	5.58	18.38
27-Jan	4.1	3.6	3.6	4.5	3.8	4.0	3.9	6.0	4.0	3.4	4.2	5.0	2.9	3.8	4.9	5.2	6.9	2.1	4.6	1.6	2.1	1.0	3.9	10.9	4.16	10.87
28-Jan	6.7	2.5	10.9	7.1	6.2	6.3	10.7	1.8	8.7	3.4	11.7	14.3	9.3	9.2	6.5	4.6	4.0	4.4	2.7	6.4	6.5	6.9	4.3	5.5	6.70	14.31
29-Jan	2.5	3.7	2.6	4.4	2.6	3.4	5.7	5.7	10.4	9.1	6.6	10.7	10.4	3.8	3.8	5.7	12.2	5.1	6.7	4.8	4.9	5.0	7.5	6.5	6.00	12.24
30-Jan	5.4	4.6	4.3	4.4	4.3	5.8	7.0	8.5	6.7	9.6	10.5	10.7	9.9	13.3	13.0	6.9	3.7	4.8	2.6	6.2	8.2	4.8	7.9	6.3	7.05	13.27
31-Jan	7.4	5.5	7.1	4.8	3.9	4.0	5.3	1.8	4.2	8.0	5.9	5.2	6.8	5.4	5.5	4.0	3.7	4.9	5.3	6.2	4.2	4.4	4.0	7.2	5.19	7.95
7.06 6.79 7.30 7.55 6.86 6.56 7.33 7.35 7.72 8.00 9.56 10.73 9.71 8.37 7.72 7.69 8.51 8.03 7.80 7.87 8.02 7.58 7.23 7.28																								Diurnal Average		
19.32 25.78 23.21 33.25 29.41 22.54 18.89 20.47 18.02 17.94 19.41 26.80 32.29 35.06 28.04 23.93 25.02 20.88 20.34 18.32 17.93 18.20 19.09 17.61																								Diurnal Maximum		
C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 80 ul/m ³ 24-hr 30 ul/m ³																										

Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: January 13, 2016

Parameter: O₃

Instrument: Teco 49i

Serial Number: 1150790050

Previous Calibration Date: Dec 12/15

Calibration: Routine

Calibration Equipment: 2B Technologies 306 sn#145 Barometric Pressure: 26.22" Hg

Calibration Method: Certified Ozone Generator

Temperature: 23.8° C

Technician: J. McClintock

Instrument Settings	Background	Coefficient	Monitoring Range
Previous	-0.4	1.043	500 ppb
Current	-0.3	0.992	500 ppb

Final Zero: 1.1 ppb

Final Span: 353.5 ppb

As Found Correction Factor: 0.947

Calibration System Flow Rate (LPM)	Calculated Concentration C _c (ppb)	Raw Count Output R _c	Indicated Concentration C _i (ppb)	Correction Factor C _c /C _i
3.000	397.0	23798.3	398.1	0.997
3.000	252.0	14954.5	250.6	1.006
3.000	101.0	5943.2	100.2	1.008
3.000	0.0	4.2	1.1	

Results of Linear Regression

R _c vs C _c	Slope	Intercept	R ²
Previous	60.097680	87.142160	0.999931
Current	59.934880	-62.740840	0.999943
C _i vs C _c			
Current	1.000000	-0.000032	0.999943

Average Correction Factor: 1.004

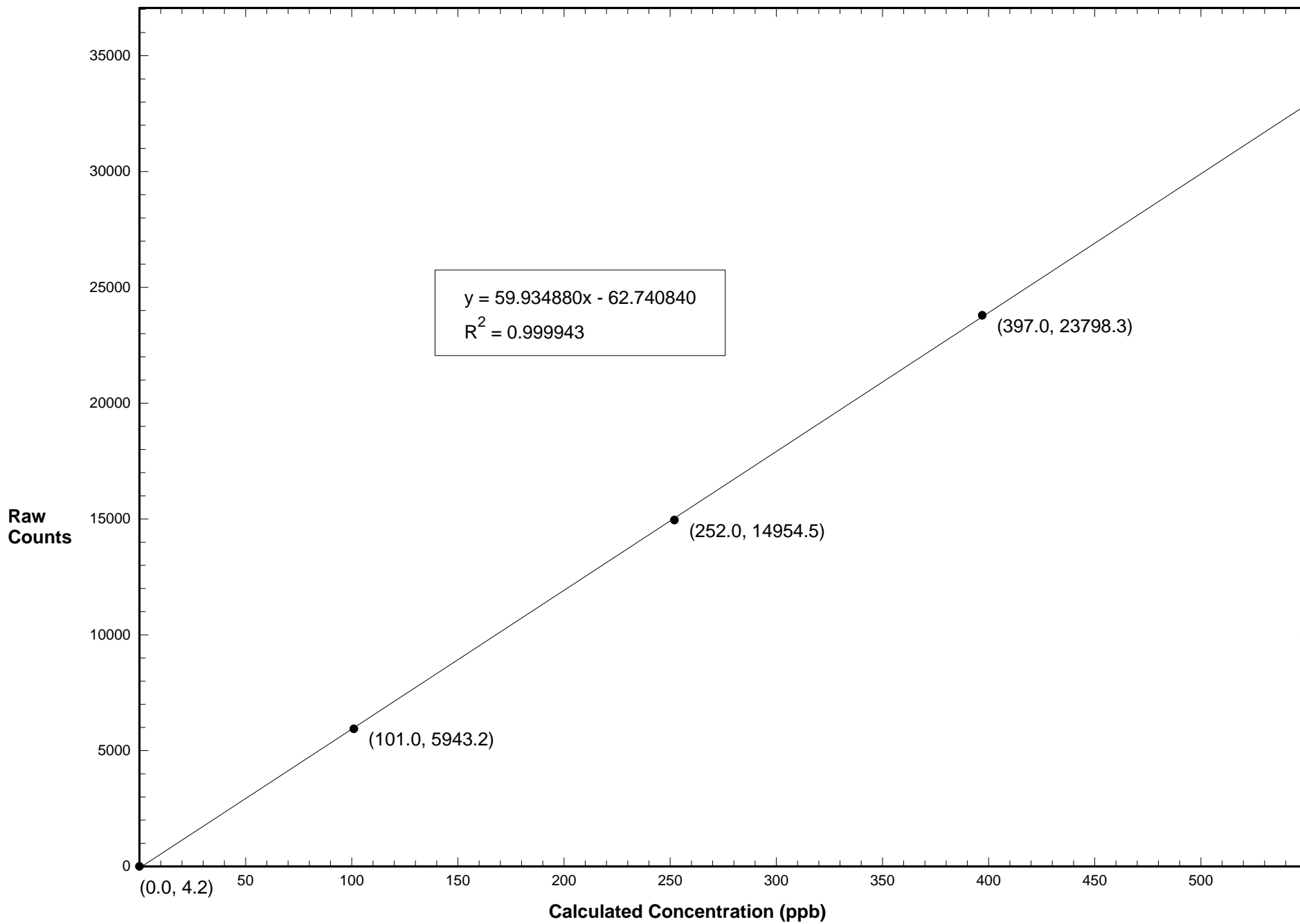
Previous Correction Factor: 0.995

Current Correction Factor: 0.997

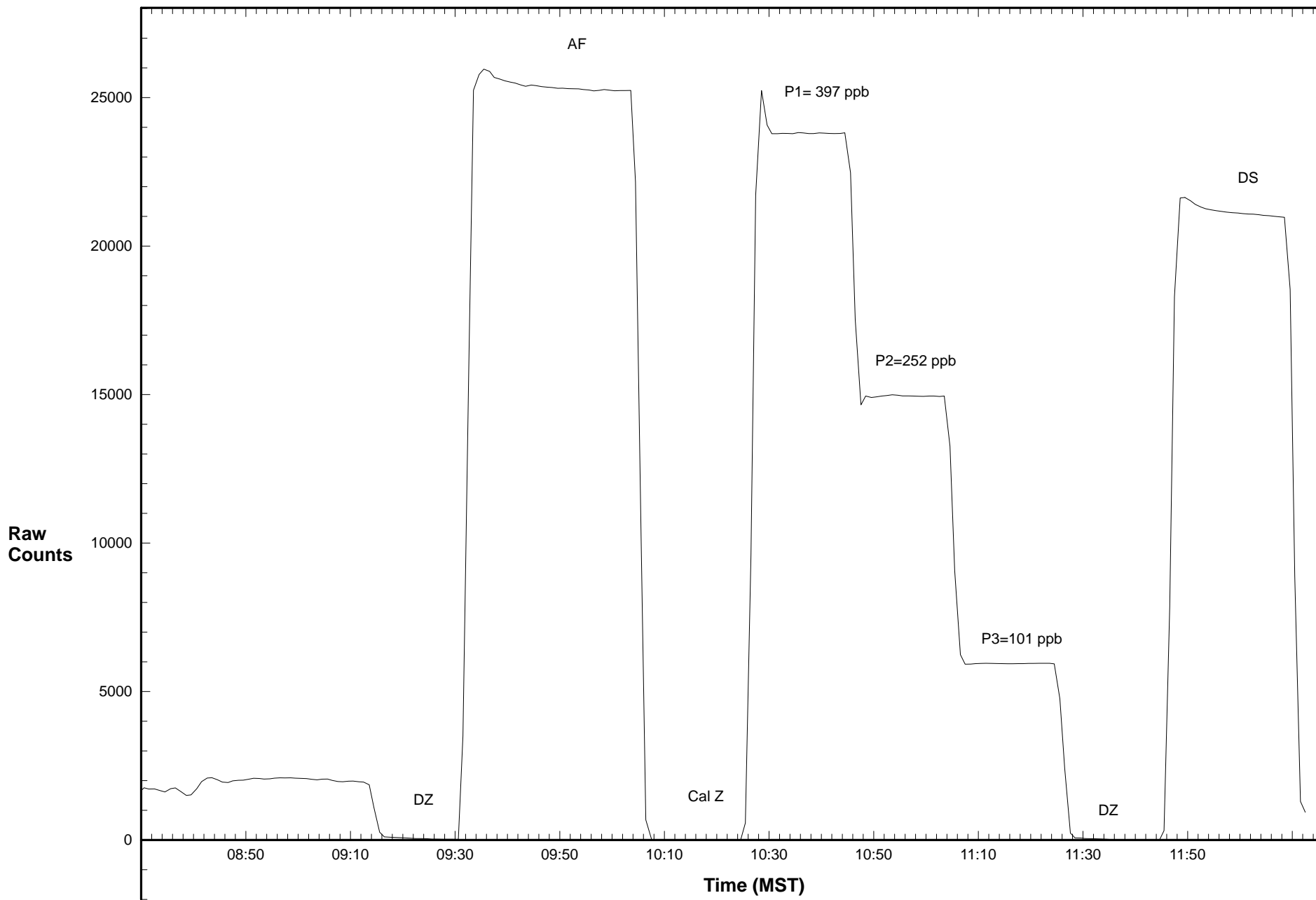
Percent Change of Correction Factor: 0.2

Comments:

Station 906 O3 January 13, 2016: Linear Regression



Station 906 O3 January 13, 2016: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: January 13, 2016

Parameter: NO/NO₂/NO_x

Instrument: Teco 42i

Serial Number: CM13040041

Previous Calibration Date: Dec 12/15

Calibration: Routine

Calibration Equipment: SABIO 2010 sn# 05200311

Barometric Pressure: 26.22" Hg

Calibration Method: Standard Gas Dilution/ GPT

Cylinder ID: FF 9469

Temperature: 23.8° C

Cylinder Concentration: 12.6 ppm NO / NO_x

In Service: Jan. 14,2015

Technician: J. McClintock

Instrument Settings	NO bkg ppb	NO _x bkg ppb	Pre-reactor bkg ppb	NO Coefficient	NO _x Coefficient	NO ₂ Coefficient	Monitoring Range
Previous	5.6	5.8	na	0.930	1.003	1.000	200 ppb
Current	5.8	6.3	na	0.925	1.002	1.000	200 ppb

NO	Final Zero: 0.3 ppb	Final Span: 155.6 ppb	As Found Correction Factor: 0.984
NO ₂	Final Zero: -0.1 ppb	Final Span: 0.1 ppb	As Found Correction Factor: 1.002
NO _x	Final Zero: 0.1 ppb	Final Span: 155.9 ppb	As Found Correction Factor: 0.987

Results of Linear Regression			Slope	Intercept	R ²
NO	R _c vs C _c	Previous	149.334000	83.354430	0.999954
		Current	149.858600	-32.621490	0.999970
	C _i vs C _c	Current	1.000000	0.000000	0.999970
NO ₂	R _c vs C _c	Previous	150.257100	82.102850	0.999954
		Current	150.084700	-18.871940	0.999991
	C _i vs C _c	Current	1.000000	0.000015	0.999991
NO _x	R _c vs C _c	Previous	150.127800	89.227000	0.999954
		Current	149.939700	-29.162900	0.999970
	C _i vs C _c	Current	1.000000	0.000000	0.999970

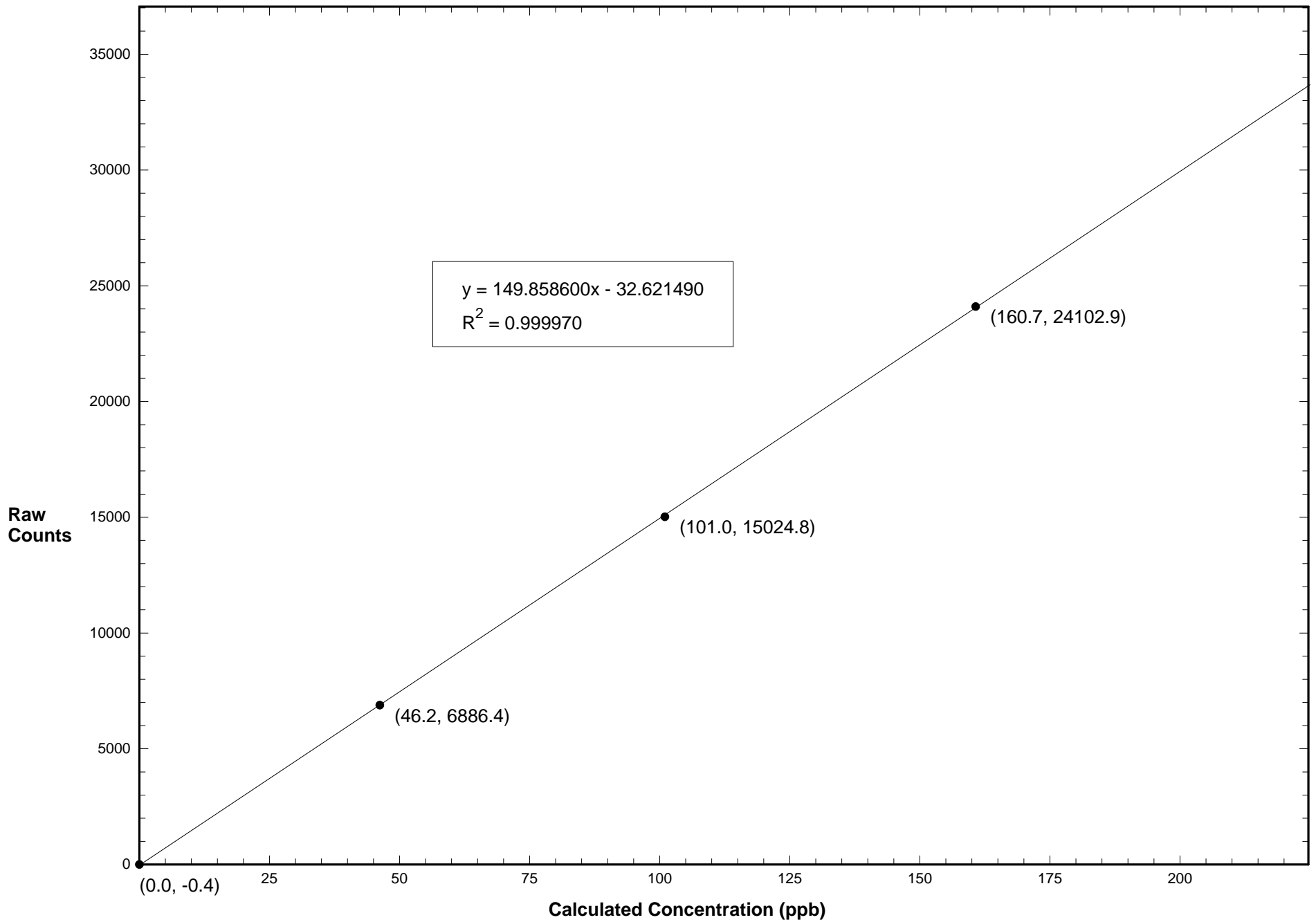
Comments:

Calibration Data Summary (Page 2)

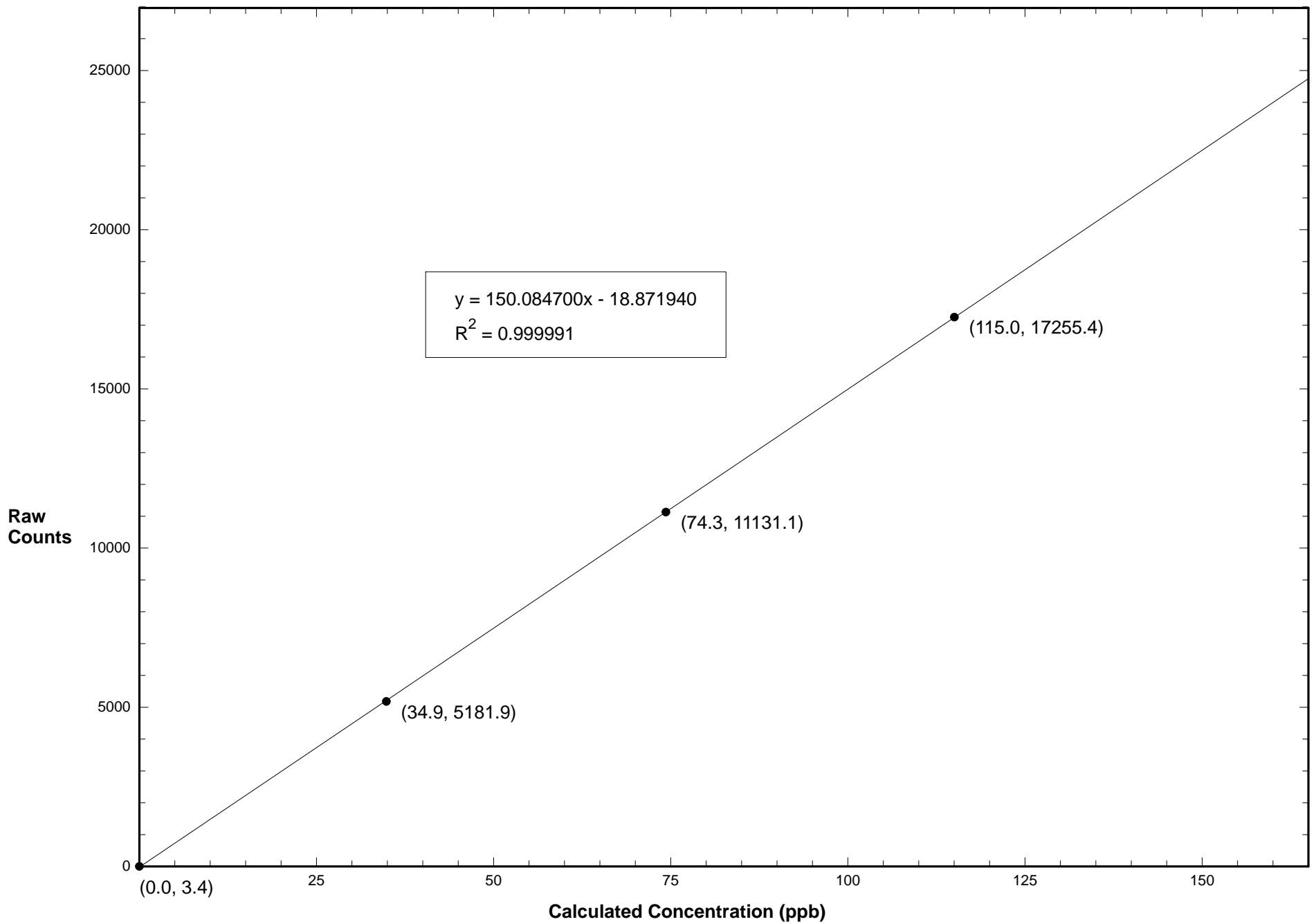
January 13, 2016 - Station 906

NO Flow Rate (LPM)	Dilution Flow Rate (LPM)	Calculated Concentration C_c (ppb)	Raw Count Output R_c	Indicated Concentration C_i (ppb)	Correction Factor C_c/C_i		
0.06570	5.085	160.7	24102.9	161.1	0.998		
0.04100	5.074	101.0	15024.8	100.5	1.005		
0.01860	5.054	46.2	6886.4	46.2	1.001		
0.00000	5.000	0.0	-0.4	0.2			
NO Calibration					Average Correction Factor:	1.001	
0.06570	5.085	160.7	24119.9	161.1	0.998		
0.04100	5.074	101.0	15037.1	100.5	1.005		
0.01860	5.054	46.2	6890.4	46.1	1.001		
0.00000	5.000	0.0	5.1	0.2			
NO _x Calibration					Average Correction Factor:	1.001	
Reference Concentration NO (ppb)	Raw Count Output NO	Calculated Concentration NO (ppb)	Calculated Concentration NO ₂ , C _c (ppb)	Raw Count Output R_c	Indicated Concentration C_i (ppb)	Correction Factor C_c/C_i	Converter Efficiency C_i/C_c
160.0	6700.6	44.9	115.0	17255.4	115.1	0.999	1.001
160.0	12801.4	85.6	74.3	11131.1	74.3	1.000	1.000
160.0	18714.4	125.1	34.9	5181.9	34.7	1.006	0.994
			0.0	3.4	0.1		
					Average Correction Factor:	1.002	
NO ₂ Gas Phase Titration					Average Converter Efficiency: 0.998		
Parameter	Correction Factor (Previous)	Correction Factor: (Current)	Percent Change of Correction Factor				
NO	0.997	0.998	0.1				
NO ₂	0.995	0.999	0.4				
NO _x	0.998	0.998	0.0				

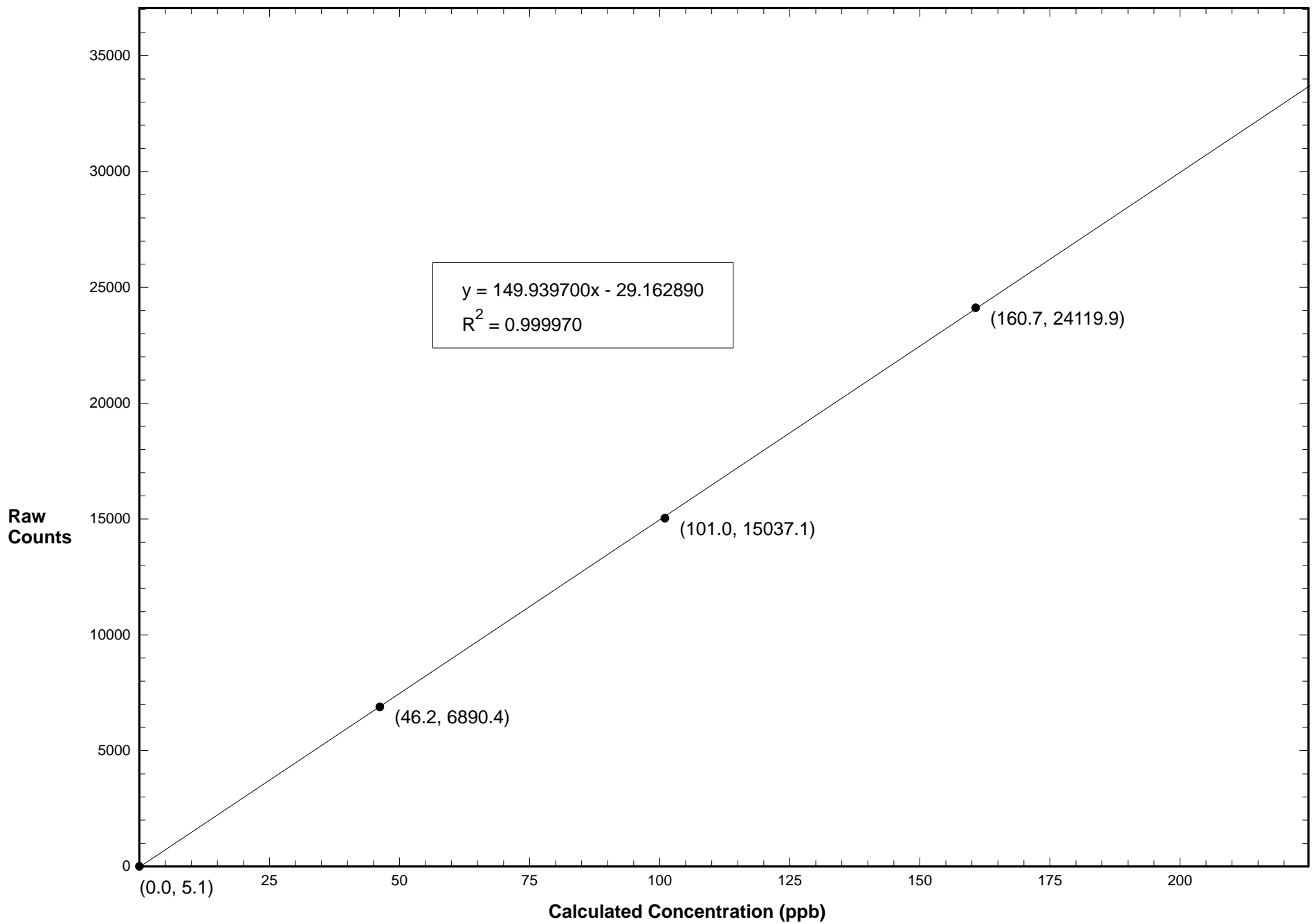
Station 906 NO January 13, 2016: Linear Regression



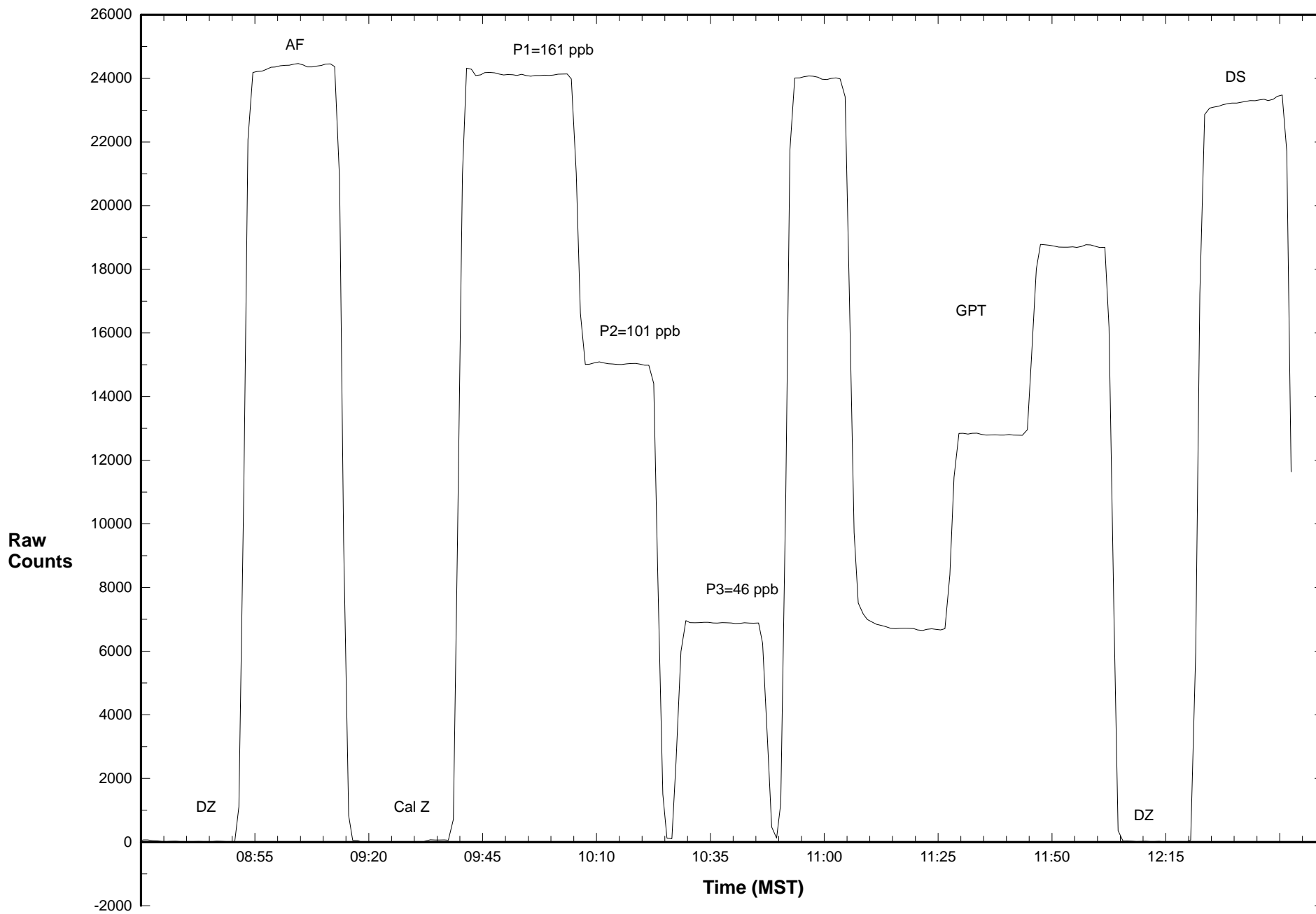
Station 906 NO2 January 13, 2016: Linear Regression



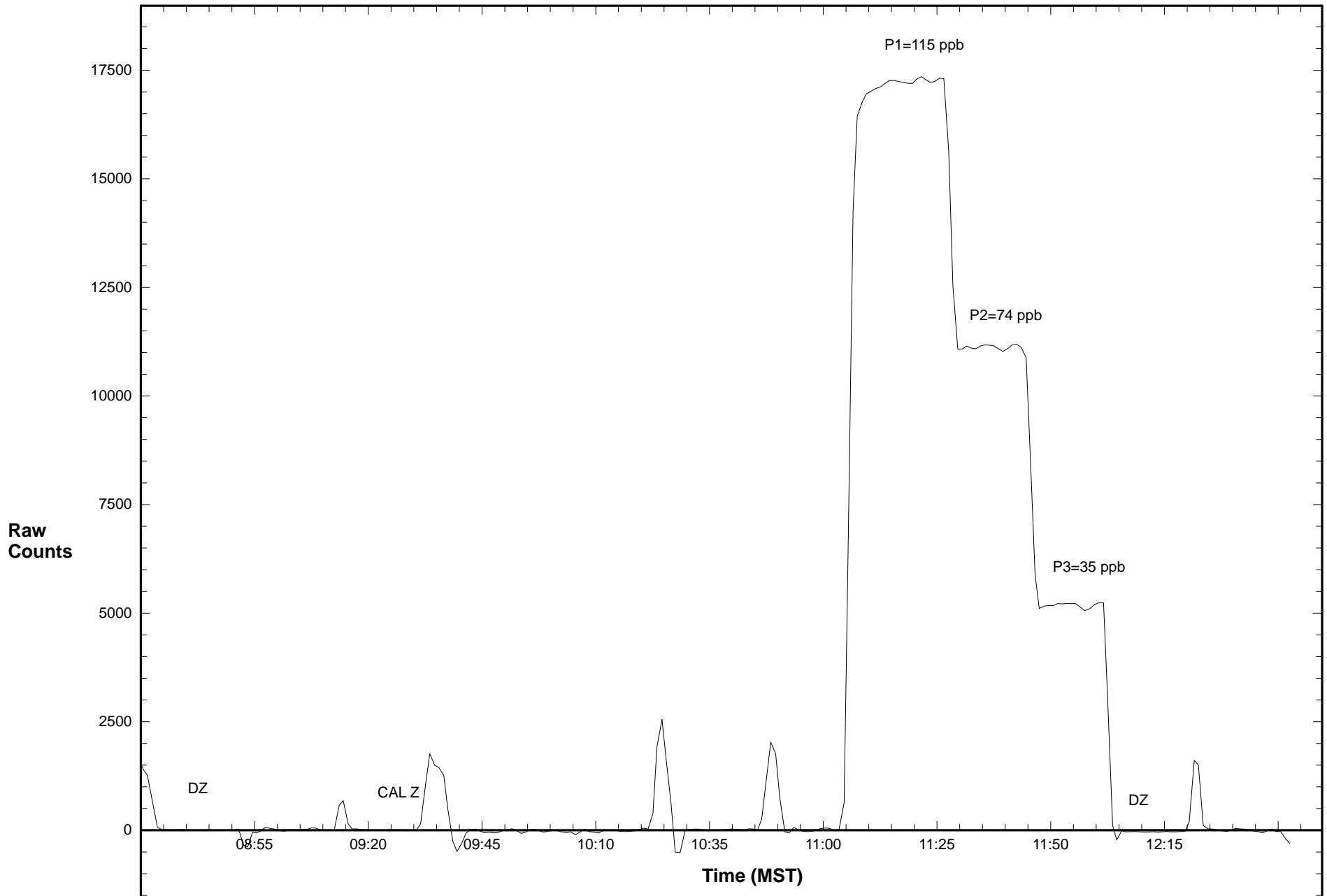
Station 906 NOX January 13, 2016: Linear Regression



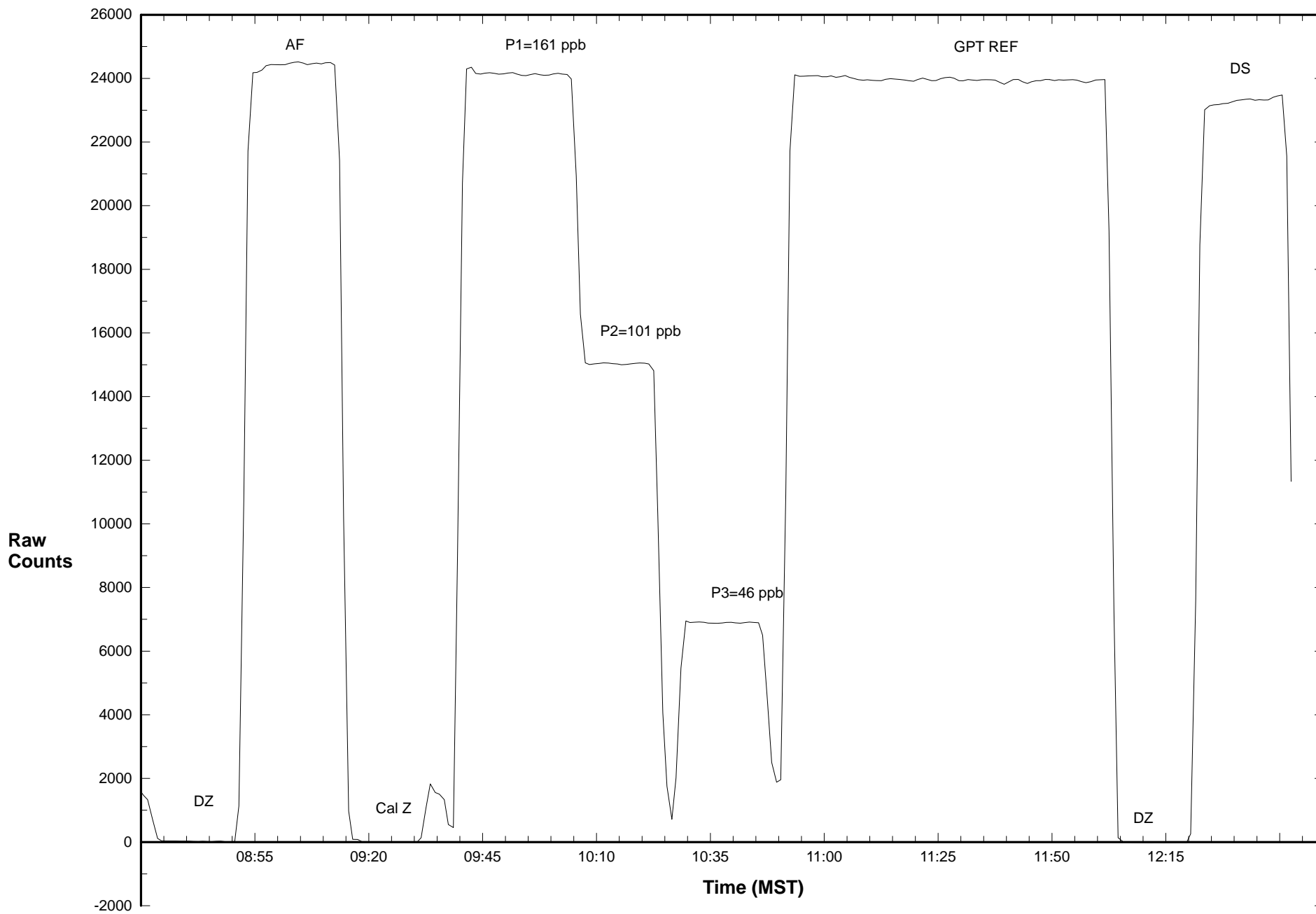
Station 906 NO January 13, 2016: Calibration Graph



Station 906 NO2 January 13, 2016: Calibration Graph



Station 906 NOX January 13, 2016: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: January 13, 2016

Parameter: SO₂

Instrument: Teco 43i

Serial Number: CM 12499009

Previous Calibration Date: Dec 12/15

Calibration: Routine

Calibration Equipment: SABIO 2010 sn# 05200311

Barometric Pressure: 26.22" Hg

Calibration Method: Standard Gas Dilution

Cylinder ID: FF 9469

Temperature: 23.8° C

Cylinder Concentration: 6.2 ppb SO₂

In Service: Jan. 14,2015

Technician: J. McClintock

Instrument Settings	SO ₂ bkg ppb	SO ₂ Coefficient	Monitoring Range
Previous	26.3	1.001	100 ppb
Current	25.3	0.972	100 ppb

Final Zero: 0.2 ppm

Final Span: 66.7 ppm

As Found Correction Factor: 0.979

SO ₂ Flow Rate (LPM)	Dilution Flow Rate (LPM)	Calculated Concentration C _c (ppm)	Raw Count Output R _c	Indicated Concentration C _i (ppm)	Correction Factor C _c /C _i
0.0657	5.085	79.1	23982.7	79.3	0.997
0.0410	5.074	49.7	14877.1	49.3	1.007
0.0186	5.054	22.7	6759.1	22.6	1.005
0.0000	5.000	0.0	-40.4	0.2	

Results of Linear Regression

R _c vs C _c	Slope	Intercept	R ²
Previous	300.424700	52.387810	0.999974
Current	303.621800	-106.210100	0.999929
C _i vs C _c			
Current	1.000000	0.000000	0.999929

Average Correction Factor: 1.003

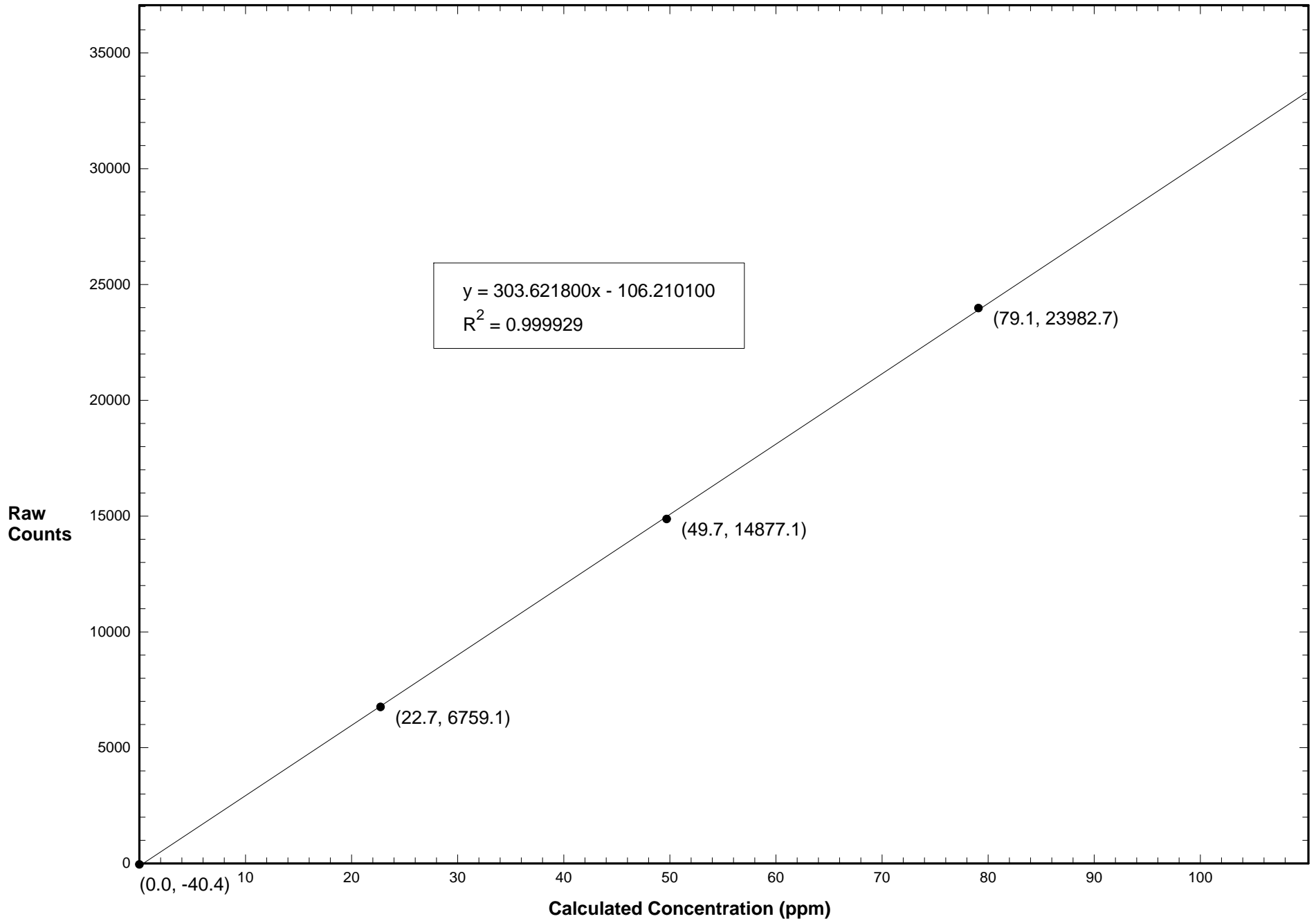
Previous Correction Factor: 1.002

Current Correction Factor: 0.997

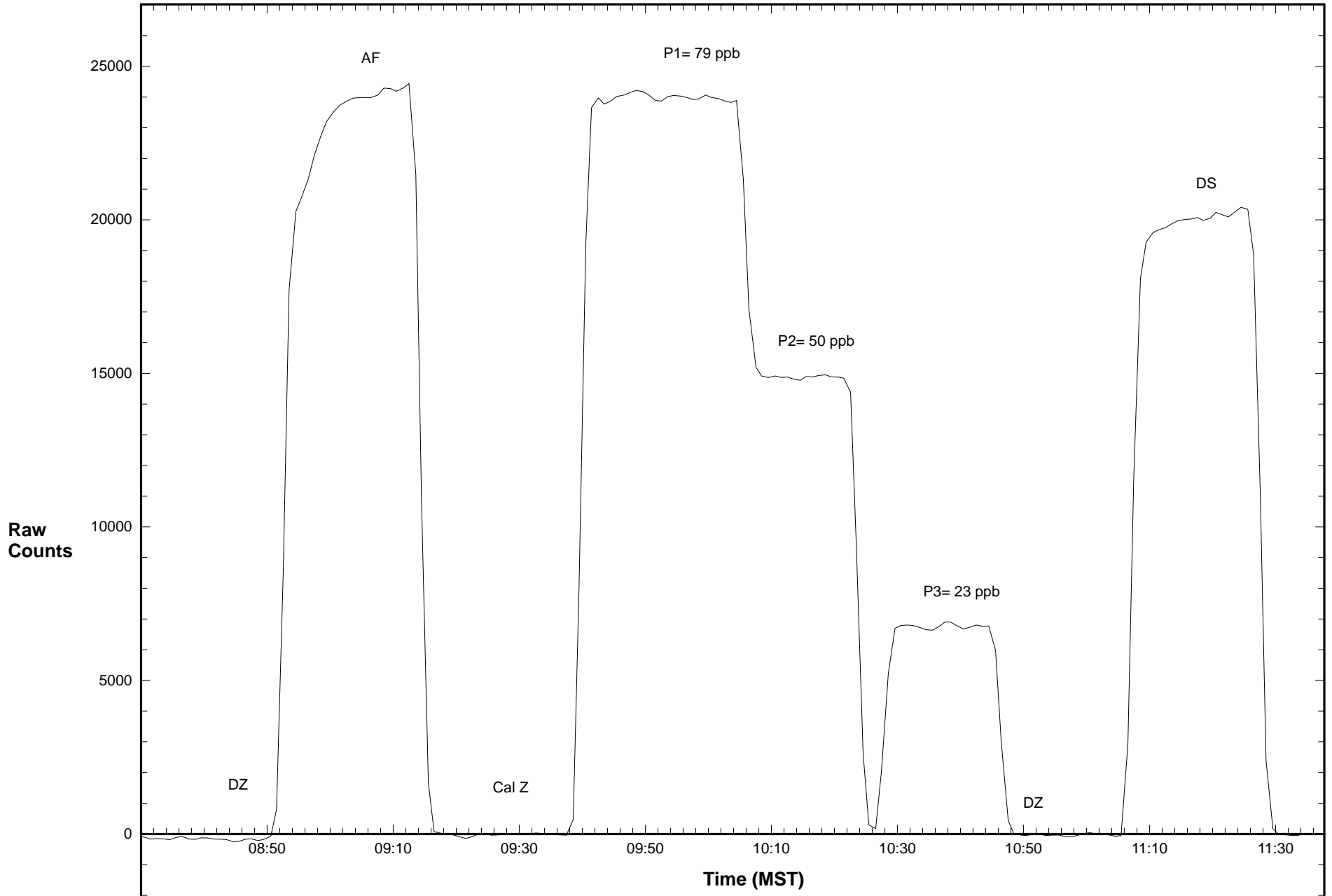
Percent Change of Correction Factor: -0.5

Comments:

Station 906 SO2 January 13, 2016: Linear Regression



Station 906 SO2 January 13, 2016: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: January 13, 2016

Parameter: TRS

Instrument: Teco 43C

Serial Number: 43CTL - 60324 - 326

Previous Calibration Date: Dec 12/15

Calibration: Routine

Calibration Equipment: SABIO 2010 sn# 05200311

Barometric Pressure: 26.22" Hg

Calibration Method: Standard Gas Dilution

Permeation Device ID: SV14360, 4.89 ppm H₂S

Temperature: 27.0° C

Permeation Rate: 0 ng/min

In Service: Feb 5,2013

Technician: J. McClintock

Instrument Settings

H₂S bkg ppb

H₂S Coefficient

Monitoring Range

Previous

1.89

0.795

100 ppb

Current

1.967

0.811

100 ppb

Final Zero: 0.3 ppb

Final Span: 71.9 ppb

As Found Correction Factor: 1.036

Calibration
System Flow
Rate (LPM)

Calculated
Concentration
C_c (ppb)

Raw Count
Output
R_c

Indicated
Concentration
C_i (ppb)

Correction
Factor
C_c/C_i

0.075

70.8

21221.2

71.0

0.996

0.051

48.5

14392.8

48.3

1.005

0.026

24.9

7276.7

24.6

1.014

0.000

0.0

3.0

0.3

Results of Linear Regression

R_c vs C_c

Slope

Intercept

R²

Previous

302.040600

-15.349540

0.999995

Current

299.988900

-90.224810

0.999869

C_i vs C_c

Current

0.999932

0.006690

0.999873

Average Correction Factor:

1.005

Previous Correction Factor:

1.001

Current Correction Factor:

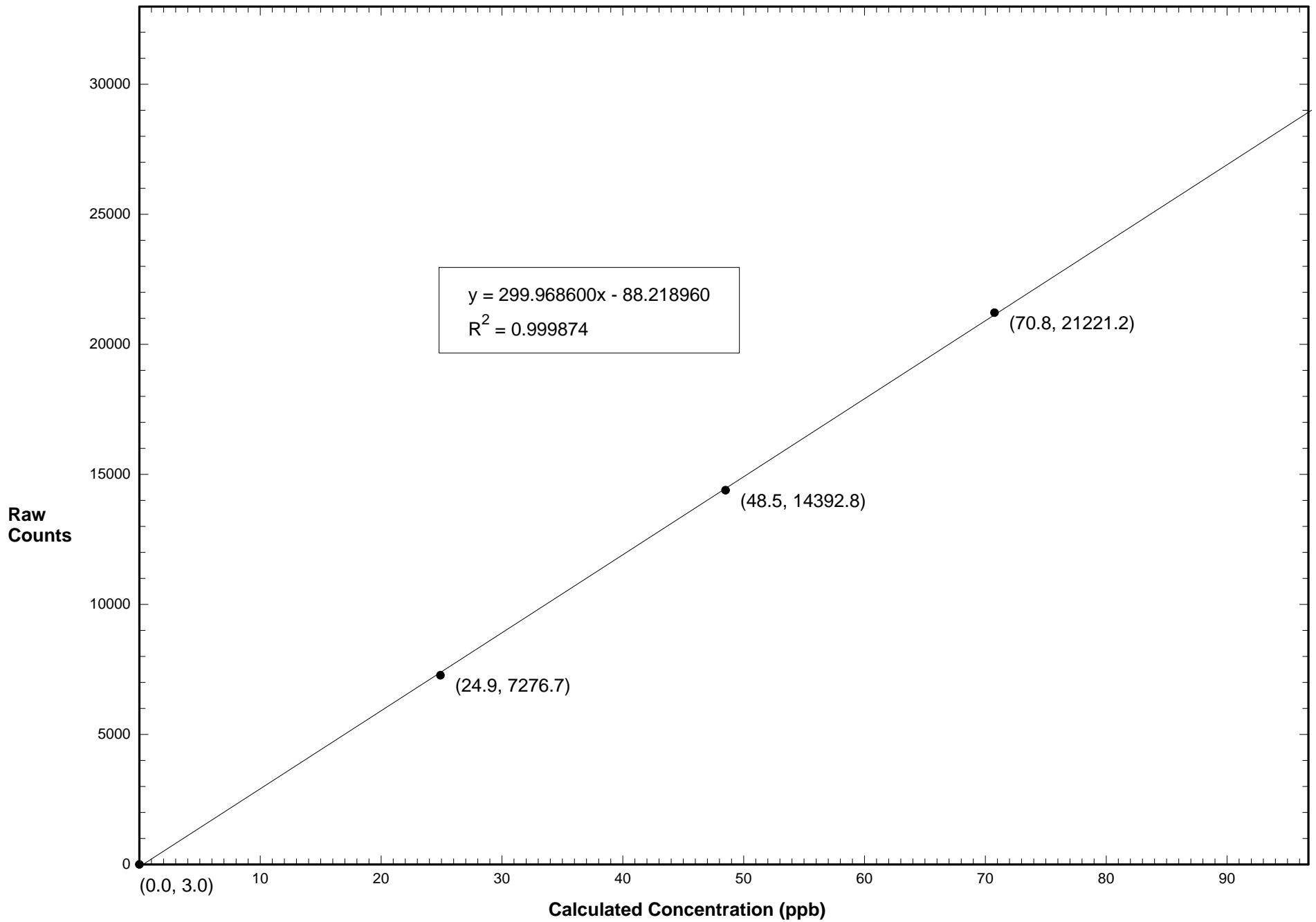
0.996

Percent Change of
Correction Factor:

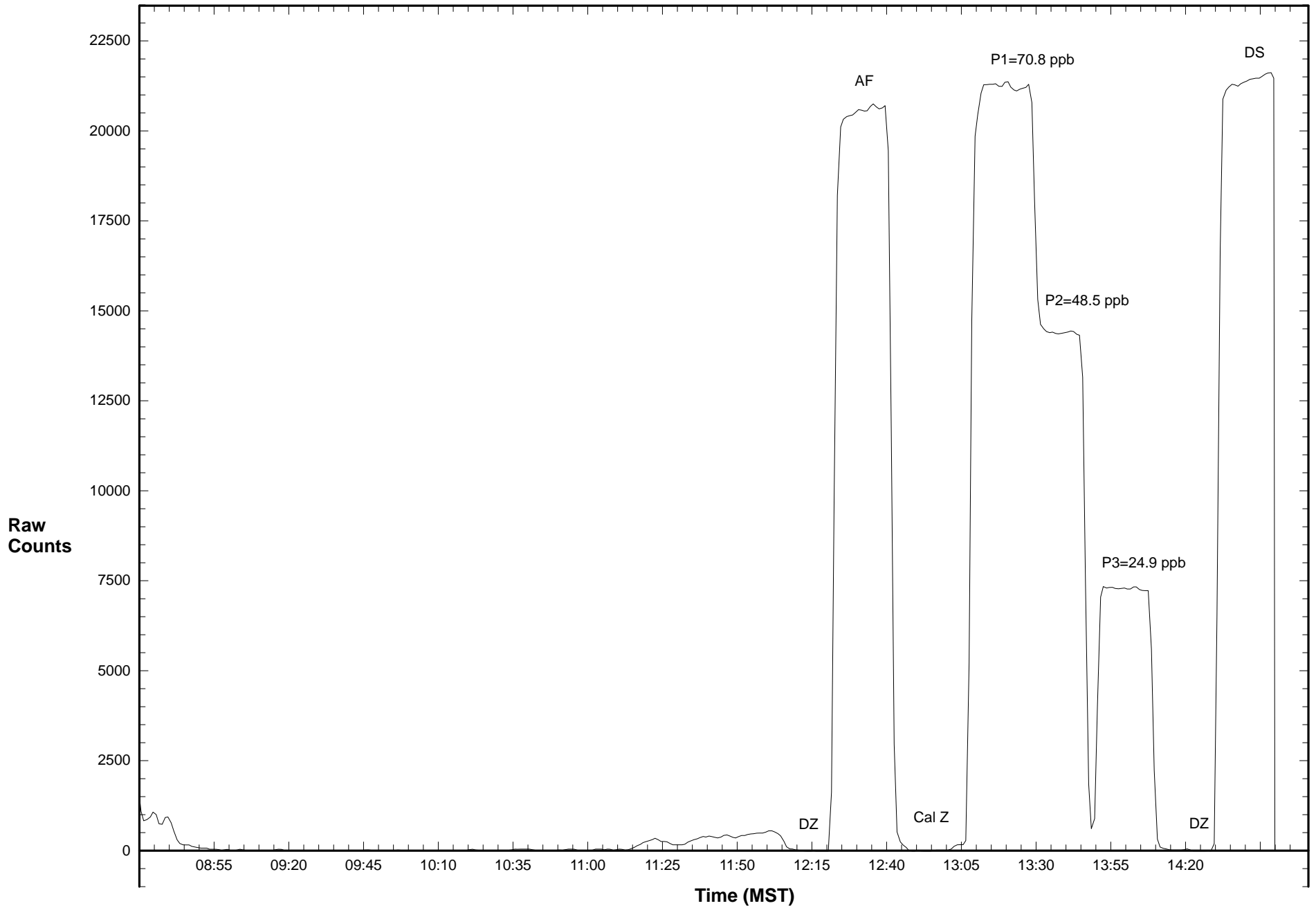
-0.5

Comments:

Station 906 TRS January 13, 2016: Linear Regression



Station 906 TRS January 13, 2016: Calibration Graph



WEST CENTRAL AIRSHED SOCIETY

**CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT
METEOROLOGICAL DATA**

**AMS 906
HINTON
JANUARY 2016**

Operations and Data Collection by:
West Central Airshed Society
Drayton Valley, Alberta

QA/QC, Data Validation and Reporting by:
West Central Airshed Society
Drayton Valley, Alberta



WCAS - Hinton
Summary of Hourly Averages

External Temperature (ET) - C
January 2016

Maximum Value: 9.74 C on Jan 27 15:00		Maximum Daily Average: 7.36 C on Jan 27		Hours in Service: 744																																													
Minimum Value: -26.8 C on Jan 9 08:00		Minimum Daily Average: -19.66 C on Jan 8		Hours of Data: 744																																													
Maximum Diurnal Average: -1.13 C at hour 15		Minimum Diurnal Average: -9.74 C at hour 9		Hours of Missing Data: 0																																													
Monthly Average: -6.647 C		Percentiles: P ₁ = -25.8 P ₁₀ = -17.4 Q ₁ = -13.3 Median = -6.0 Q ₃ = -0.2 P ₉₀ = 4.0 P ₉₉ = 9.2		Hours of Calibration: 0																																													
				Percent Operational Time: 100.0																																													
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Jan	-9.7	-10.3	-10.8	-11.2	-12.0	-11.9	-11.4	-10.6	-10.8	-10.7	-7.3	-4.9	-3.4	-1.9	-0.2	-1.2	-2.8	-5.1	-6.8	-8.1	-9.4	-11.4	-11.9	-12.0	-8.16	-0.15																							
2-Jan	-13.7	-15.0	-15.6	-16.4	-16.7	-17.6	-18.1	-18.1	-18.7	-18.7	-14.8	-9.8	-6.5	-3.8	-2.5	-2.9	-4.8	-8.2	-10.7	-12.9	-14.5	-15.1	-15.9	-16.8	-12.82	-2.47																							
3-Jan	-17.4	-17.0	-17.7	-18.2	-18.3	-18.4	-19.1	-19.3	-19.6	-19.6	-17.3	-12.5	-8.1	-5.6	-3.1	-3.9	-5.4	-7.6	-9.5	-11.8	-12.7	-13.9	-13.8	-12.5	-13.42	-3.13																							
4-Jan	-13.4	-14.4	-14.3	-14.7	-12.9	-14.5	-14.2	-14.7	-14.3	-15.3	-12.7	-9.0	-7.1	-5.6	-3.9	-4.4	-7.1	-11.0	-13.0	-14.1	-14.8	-15.0	-14.4	-14.9	-12.06	-3.85																							
5-Jan	-16.3	-16.5	-16.0	-15.7	-15.8	-16.3	-15.9	-15.6	-16.0	-17.0	-15.7	-12.4	-10.9	-9.5	-7.9	-8.5	-10.6	-11.8	-13.3	-14.6	-15.4	-16.0	-16.8	-17.5	-14.24	-7.92																							
6-Jan	-18.0	-18.4	-18.4	-18.2	-18.2	-18.2	-18.6	-19.2	-19.3	-18.3	-17.6	-16.5	-15.0	-13.9	-13.3	-12.5	-12.0	-11.9	-11.7	-11.5	-11.4	-11.4	-11.4	-11.6	-15.28	-11.40																							
7-Jan	-11.7	-11.7	-11.7	-12.2	-12.7	-13.7	-15.5	-17.4	-17.8	-16.8	-14.8	-12.3	-11.3	-10.0	-9.0	-8.9	-10.6	-13.3	-16.0	-16.1	-16.4	-17.4	-17.1	-17.5	-13.83	-8.93																							
8-Jan	-18.2	-19.1	-20.7	-22.0	-22.9	-22.7	-22.7	-22.7	-23.2	-23.6	-22.1	-19.8	-16.1	-12.6	-11.5	-10.5	-13.2	-16.4	-18.9	-20.3	-21.7	-22.8	-23.6	-24.5	-19.66	-10.51																							
9-Jan	-25.1	-25.8	-26.5	-26.3	-25.9	-25.9	-26.2	-26.8	-26.2	-25.8	-24.3	-17.6	-10.2	-5.5	-3.9	-3.4	-3.8	-4.3	-7.0	-10.8	-11.0	-7.2	-7.0	-5.8	-15.92	-3.45																							
10-Jan	-5.7	-5.5	-5.6	-5.3	-5.1	-4.8	-4.6	-4.3	-4.3	-4.2	-3.7	-3.1	-2.6	-1.7	-1.4	-1.1	-1.1	-1.2	-1.1	-1.2	-1.1	-1.2	-1.3	-1.3	-3.02	-1.07																							
11-Jan	-1.5	-1.7	-1.9	-2.5	-3.0	-4.0	-5.1	-5.1	-5.2	-5.5	-5.3	-5.0	-4.3	-2.7	-1.5	-1.7	-3.1	-5.2	-7.9	-9.1	-10.8	-12.3	-13.4	-14.0	-5.49	-1.46																							
12-Jan	-11.6	-4.0	-1.2	-0.4	-0.5	0.2	-0.5	-0.2	-0.2	0.6	1.0	2.2	3.4	4.9	4.6	4.4	4.4	4.6	4.0	3.8	3.6	3.3	2.1	1.5	1.25	4.87																							
13-Jan	2.6	3.4	2.6	0.5	-0.9	0.4	-0.3	0.2	0.4	1.4	1.9	2.5	2.8	4.6	4.1	4.1	3.9	3.7	2.8	2.2	1.2	1.5	1.1	0.6	1.96	4.59																							
14-Jan	0.8	-0.1	-0.3	-0.3	-0.3	-1.6	-1.8	-2.4	-2.3	-2.3	-2.0	-1.5	-0.2	0.5	0.9	1.0	0.3	-2.4	-3.4	-4.4	-6.6	-7.9	-8.2	-9.0	-2.24	1.00																							
15-Jan	-9.8	-10.3	-10.7	-10.8	-11.1	-11.3	-11.4	-11.4	-11.6	-11.6	-11.3	-11.1	-10.4	-10.0	-10.1	-10.1	-10.2	-10.5	-10.7	-10.9	-10.9	-11.1	-11.2	-11.4	-10.83	-9.75																							
16-Jan	-11.6	-11.9	-12.2	-12.4	-12.7	-13.0	-13.5	-14.1	-14.6	-15.1	-15.5	-15.5	-15.9	-15.9	-15.8	-15.6	-15.6	-16.2	-16.8	-17.3	-17.4	-17.7	-17.9	-17.9	-15.09	-11.63																							
17-Jan	-18.1	-18.6	-18.6	-18.7	-18.7	-18.8	-19.5	-20.2	-20.4	-20.7	-19.5	-18.3	-16.5	-14.9	-14.2	-13.9	-13.7	-13.7	-14.1	-14.4	-14.5	-14.5	-14.3	-14.3	-16.80	-13.65																							
18-Jan	-13.9	-13.4	-12.9	-12.8	-13.6	-14.0	-15.3	-15.7	-15.7	-15.1	-14.1	-9.2	-4.0	1.3	3.2	2.7	1.5	-2.8	-4.8	-6.5	-7.9	-9.0	-10.3	-11.5	-8.90	3.19																							
19-Jan	-12.7	-13.6	-12.8	-12.3	-11.8	-11.4	-11.0	-10.1	-9.6	-8.9	-8.0	-6.7	-4.0	-0.2	0.5	-0.6	-1.7	-2.5	-3.6	-4.4	-4.7	-4.8	-5.0	-5.2	-6.87	0.50																							
20-Jan	-5.5	-5.6	-6.0	-6.5	-7.0	-7.2	-7.4	-7.8	-8.0	-8.4	-8.2	-6.9	-6.1	-3.9	-2.6	-1.0	-2.9	-5.8	-8.3	-10.2	-11.6	-13.1	-14.2	-15.5	-7.49	-0.98																							
21-Jan	-16.0	-16.1	-16.2	-15.5	-14.8	-14.2	-14.0	-13.6	-13.6	-12.8	-11.7	-10.3	-9.0	-5.9	1.2	4.7	4.5	4.6	4.3	2.8	3.5	4.4	3.9	2.1	-6.16	4.71																							
22-Jan	0.9	0.6	-2.3	-3.2	-4.4	-5.1	-5.0	-4.6	-4.4	-4.1	-2.3	2.1	3.0	4.5	4.2	4.1	2.4	1.0	-0.1	-1.7	-2.2	-2.1	-2.3	-2.8	-0.99	4.46																							
23-Jan	-3.5	-4.2	-5.7	-6.8	-7.5	-8.1	-8.3	-9.3	-10.6	-10.9	-9.1	-5.0	-0.6	1.2	3.7	4.8	1.9	0.0	-0.9	-1.9	-3.1	-4.6	-6.1	-6.4	-4.20	4.78																							
24-Jan	-6.5	-7.3	-8.5	-8.8	-9.2	-8.3	-7.5	-8.0	-8.9	-9.9	-5.8	-2.0	0.6	2.8	3.8	3.6	2.6	-1.1	-3.1	-5.5	-7.2	-8.8	-10.1	-11.0	-5.17	3.82																							
25-Jan	-11.7	-12.3	-12.5	-12.0	-11.8	-11.5	-12.4	-13.5	-14.0	-14.2	-11.4	-7.2	-2.7	3.4	3.8	3.8	3.4	3.2	2.2	2.2	1.8	2.1	3.2	3.5	-4.78	3.78																							
26-Jan	4.0	3.9	3.8	3.9	3.6	5.0	5.4	5.1	4.3	5.9	6.4	7.0	8.3	7.9	8.1	6.4	5.5	4.7	3.4	3.2	2.5	0.9	0.5	2.4	4.67	8.29																							
27-Jan	3.8	4.2	4.2	5.1	5.3	5.4	5.5	6.7	6.4	5.7	6.4	8.5	9.0	9.2	9.7	9.4	9.0	9.1	8.2	8.7	8.9	9.7	9.5	9.0	7.36	9.74																							
28-Jan	8.9	8.6	7.5	8.2	8.8	7.9	7.8	8.2	8.8	8.4	9.1	9.0	8.9	9.5	9.2	7.7	4.5	3.4	3.3	0.7	-1.0	-0.9	0.3	0.3	6.13	9.50																							
29-Jan	0.8	1.3	0.6	1.0	0.1	-1.4	-2.9	-3.8	-3.7	-3.0	2.8	4.2	4.7	4.9	4.9	4.0	3.2	2.2	0.7	-0.2	-1.5	-2.8	-2.5	-3.4	0.41	4.91																							
30-Jan	-3.3	-3.6	-4.0	-4.3	-4.9	-5.8	-6.1	-5.6	-6.4	-5.7	-3.8	-1.9	-0.7	0.6	2.1	1.7	1.0	-0.1	-0.5	-1.5	-1.7	-1.6	-1.9	-2.2	-2.51	2.15																							
31-Jan	-3.4	-4.3	-5.2	-4.8	-4.5	-4.3	-3.1	-1.8	-2.5	-2.7	-2.3	-0.9	0.8	2.5	1.6	1.5	0.6	-0.5	-1.4	-1.6	-2.0	-2.3	-2.6	-3.2	-1.94	2.50																							
																								-8.27	-8.35	-8.69	-8.82	-9.01	-9.21	-9.44	-9.54	-9.74	-9.64	-8.15	-5.93	-4.00	-2.12	-1.13	-1.18	-2.25	-3.71	-5.00	-6.04	-6.78	-7.20	-7.50	-7.83	Diurnal Average	
																								8.88	8.59	7.50	8.20	8.77	7.92	7.75	8.16	8.77	8.41	9.12	9.04	9.00	9.50	9.74	9.35	8.99	9.14	8.23	8.73	8.86	9.69	9.48	8.96	Diurnal Maximum	



WCAS - Hinton
Summary of Hourly Averages

Wind Speed (WS) - kph
January 2016

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1 Spd	4.2	3.9	4.0	3.3	4.0	3.6	3.8	2.8	3.1	3.6	3.8	3.4	3.3	2.5	1.1	2.1	1.9	2.4	2.1	2.1	1.5	2.2	2.6	2.0	2.81	4.16	
Dir	WNW	WNW	WNW	WNW	NW	NW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	W	WSW	W	W	W	W	WNW	W	W	WNW	WNW	
2 Spd	1.1	0.9	0.3	0.7	0.2	1.1	0.6	0.3	0.5	1.3	0.7	0.9	1.6	1.3	1.7	1.8	4.0	1.6	0.3	0.4	1.1	0.9	1.1	1.2	0.94	4.01	
Dir	WSW	WSW	S	SW	ENE	SW	NW	S	WNW	WSW	NW	WNW	WSW	WSW	WSW	WSW	SW	SSW	SSW	WSW	W	SW	WSW	WSW	WSW	WSW	
3 Spd	0.9	1.4	0.4	0.3	0.9	0.5	0.6	0.7	0.9	0.4	0.6	1.4	1.3	1.4	2.1	1.6	2.8	1.7	2.1	2.7	2.2	2.5	3.1	2.1	1.35	3.14	
Dir	W	WSW	W	SW	WSW	WSW	SW	W	W	SW	WNW	WSW	W	W	SW	W	WSW	W	WNW	WNW	W	W	WNW	WNW	W	WNW	
4 Spd	1.3	2.9	3.0	2.1	2.9	1.7	1.6	2.2	1.8	0.9	1.2	1.4	1.4	2.1	1.5	2.9	1.3	1.1	0.7	0.4	0.3	1.5	1.3	2.3	0.77	3.02	
Dir	WNW	NW	WNW	WNW	WNW	NW	WNW	W	WNW	WNW	WNW	WSW	WSW	SSW	SSW	S	S	SSE	ESE	S	NNW	E	E	E	W	WNW	
5 Spd	1.0	0.5	0.3	1.3	0.6	1.1	0.4	0.4	1.2	0.7	0.4	1.7	2.5	2.6	6.8	6.7	5.2	2.1	0.3	0.9	1.7	1.1	0.3	1.52	6.76		
Dir	ENE	NE	E	NE	E	NE	NE	NE	ENE	NE	NE	WNW	NW	ENE	ENE	ENE	ENE	ENE	SE	E	ENE	ENE	ENE	ENE	ENE	ENE	
6 Spd	0.9	1.0	0.6	0.9	0.4	2.0	3.1	0.9	0.5	0.3	0.8	0.9	0.4	2.9	4.2	3.5	3.6	2.1	0.9	1.8	0.9	1.2	2.0	3.9	1.50	4.16	
Dir	E	ENE	NE	ENE	NE	ENE	ENE	ESE	N	WNW	NNW	NNW	ENE	ENE	ENE	ENE	ENE	E	E	ESE	N	NE	ENE	ENE	ENE	ENE	
7 Spd	2.0	1.8	2.5	2.5	0.9	0.7	0.4	0.6	0.2	0.7	1.7	0.1	2.7	4.2	5.7	4.8	5.2	1.8	1.6	0.5	1.7	1.9	1.2	1.0	1.24	5.74	
Dir	ENE	ENE	E	ENE	ENE	E	ENE	ENE	NE	NW	WNW	SSE	E	ENE	ENE	ENE	ENE	ENE	ENE	ENE	WNW	W	WSW	W	W	ENE	ENE
8 Spd	2.1	1.4	0.1	0.2	0.5	0.4	0.7	0.9	0.9	1.3	2.6	1.0	0.2	0.6	2.9	1.6	1.3	1.3	0.7	1.1	1.3	0.8	0.2	0.2	0.51	2.88	
Dir	SW	WSW	SE	NE	SW	ESE	NE	E	N	NW	ENE	SE	S	ENE	ENE	ENE	E	E	E	E	ENE	ENE	SE	NE	E	ENE	
9 Spd	1.0	0.5	0.6	0.6	0.9	0.8	0.8	1.0	1.0	0.4	1.1	2.8	6.1	10.9	12.5	13.4	10.9	3.6	3.3	3.6	5.2	8.0	13.0	3.60	13.36		
Dir	E	ENE	NNE	NE	NW	N	NE	NNW	WNW	WNW	NW	NNW	WNW	WSW	WSW	WSW	SW	SW	WNW	WNW	WNW	W	WSW	WSW	WSW	WSW	
10 Spd	14.2	13.6	13.3	13.4	15.4	15.1	14.2	14.0	11.6	11.5	11.9	13.3	12.8	12.3	9.6	7.0	6.0	5.7	6.6	4.7	5.2	6.1	4.0	4.1	10.21	15.43	
Dir	WSW	WSW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	WSW	WSW	SW	SW	WSW	SW	SW	
11 Spd	4.1	5.0	5.5	6.9	7.2	3.4	2.0	2.7	4.3	3.4	1.9	1.8	2.1	2.1	1.4	1.5	1.3	1.3	1.3	0.9	1.4	0.2	0.4	0.3	1.79	7.19	
Dir	WSW	WSW	SW	SW	SW	WSW	W	WSW	SW	WSW	WNW	NW	WNW	WNW	WNW	E	ENE	SE	SE	ESE	ENE	NNE	ENE	SW	WSW	SW	
12 Spd	3.0	6.9	11.5	10.8	8.6	7.9	5.8	8.1	6.5	9.0	10.7	11.4	9.3	11.0	9.7	9.5	9.9	9.7	9.5	10.8	11.6	5.3	3.1	3.9	7.63	11.63	
Dir	WNW	WSW	SW	WSW	SW	WSW	W	WSW	WSW	WSW	SW	WSW	SW	WSW	WSW	WSW	WSW	WSW	SW	SW	SSW	SSW	ENE	E	WSW	SSW	
13 Spd	4.3	7.3	8.8	1.9	1.4	3.3	1.4	4.0	3.2	7.9	7.3	2.7	0.9	1.9	2.5	2.9	2.9	0.6	0.9	3.6	1.0	2.5	1.2	1.0	2.13	8.78	
Dir	SW	SW	SW	WNW	WNW	WSW	NW	SW	WSW	SW	SW	NNW	NE	ENE	ENE	SE	SSW	WSW	S	W	SW	WSW	WSW	SW	SW	SW	
14 Spd	4.1	1.3	1.0	2.1	3.4	0.8	0.6	0.5	1.0	0.2	0.7	0.5	0.7	0.4	0.5	2.1	5.0	9.2	5.7	5.3	5.3	6.3	4.7	4.5	1.53	9.17	
Dir	SW	W	W	WSW	SW	WNW	W	ENE	ENE	NE	E	WNW	N	SSE	WNW	ENE	ENE	ENE	ENE	ENE	NE	ENE	NE	NE	ENE	ENE	
15 Spd	4.9	5.5	4.9	4.5	4.5	5.5	4.4	5.3	4.5	4.9	4.9	5.5	4.3	4.5	5.0	4.3	4.5	4.8	3.9	3.8	2.3	3.0	3.1	4.6	4.47	5.53	
Dir	NE	ENE	NE	NE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	NE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	NE	NE	ENE	ENE	ENE
16 Spd	5.2	4.5	6.0	6.2	5.7	5.6	6.8	8.0	7.0	8.0	9.8	9.5	10.4	9.7	11.1	10.9	9.1	9.6	9.1	8.3	7.5	7.0	6.9	6.6	7.84	11.12	
Dir	ENE	NE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE
17 Spd	7.2	6.2	4.8	4.4	4.9	2.1	1.2	0.3	1.5	2.1	3.1	5.0	6.3	5.3	5.3	5.6	5.5	4.8	4.9	2.9	2.9	2.4	2.2	3.8	3.93	7.16	
Dir	ENE	ENE	ENE	ENE	ENE	NE	ENE	NE	E	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	ENE	NE	ENE	ENE	ENE
18 Spd	3.5	0.9	1.2	0.2	1.3	1.8	0.2	0.7	0.8	1.2	1.2	0.8	1.0	2.9	4.1	2.3	3.2	1.7	1.1	1.4	0.6	0.7	0.6	0.2	0.39	4.08	
Dir	ENE	NE	ENE	S	WSW	WSW	W	W	WNW	WSW	WNW	ENE	E	W	W	W	SW	SE	SE	SE	ESE	SE	SE	SSE	SW	W	
19 Spd	0.4	0.4	1.6	0.1	0.7	0.2	0.7	0.6	0.4	0.7	0.5	0.3	0.2	0.1	0.3	1.1	3.6	1.4	0.3	0.4	1.0	1.1	1.8	1.0	0.58	3.57	
Dir	ESE	NE	E	E	NE	NNE	NE	SSW	E	NW	NNW	NW	WNW	S	NE	ESE	ENE	E	ENE	SE	E	ENE	E	E	ENE	ENE	
20 Spd	0.4	1.1	4.0	3.7	1.7	2.2	2.4	2.4	0.7	0.9	2.1	1.5	2.2	0.4	2.1	0.3	0.6	0.7	0.5	0.5	0.3	0.1	0.5	0.5	1.01	3.97	
Dir	NNE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	E	ESE	ENE	ENE	E	E	SW	SSW	SSE	S	SSE	SE	S	NNE	ENE	ENE	E	ENE	
21 Spd	0.8	0.7	0.6	1.0	1.4	2.2	2.6	2.9	1.8	2.2	3.4	2.8	2.2	3.0	3.1	5.1	5.1	18.9	17.0	3.7	6.6	12.5	7.6	1.1	2.23	18.90	
Dir	E	ENE	E	E	E	E	E	E	E	E	ENE	E	E	E	SW	WSW	WSW	WSW	WSW	SW	W	WSW	WSW	S	NE	SW	WSW
22 Spd	2.4	2.1	2.1	1.0	1.7	0.7	0.3	0.0	2.7	0.4	0.5	0.5	2.4	1.7	4.1	3.3	5.2	3.3	2.7	1.9	2.2	2.2	3.0	2.5	1.54	5.16	
Dir	W	W	ENE	NW	E	ENE	E	WNW	ENE	ENE	WSW	SSE	E	NE	ENE	ENE	ENE	E	E	ENE	E	ENE	ENE	ENE	ENE	ENE	ENE



WCAS - Hinton
Summary of Hourly Averages

Wind Speed (WS) - kph
January 2016

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
23 Spd	3.2	1.7	0.7	0.9	1.9	0.6	0.7	2.1	1.8	1.1	2.5	2.4	1.3	3.4	3.7	4.6	3.4	1.9	2.1	1.7	0.5	0.3	1.0	0.6	1.40	4.56	
Dir	E	E	WSW	SSW	WSW	SSW	SSE	ENE	ENE	ENE	E	E	E	E	ENE	ENE	ENE	NE	NE	ENE	E	NNE	SSE	S	E	ENE	
24 Spd	0.9	0.2	0.7	0.6	0.8	0.8	0.7	0.9	1.4	0.2	0.2	1.2	0.6	1.3	3.8	9.4	5.9	2.2	1.8	1.0	0.5	0.1	0.3	0.3	1.19	9.40	
Dir	WSW	E	SE	W	SW	SW	WSW	WSW	WSW	NNW	WNW	SW	WNW	W	WSW	SW	SW	S	SW	NE	E	SE	ESE	E	SW	WSW	
25 Spd	0.2	0.6	0.4	0.7	0.8	1.7	0.6	0.9	0.7	0.4	0.9	1.1	0.6	8.7	8.8	7.8	6.2	7.0	9.0	11.0	8.6	7.6	10.4	10.2	3.56	11.00	
Dir	ESE	NE	E	ESE	ENE	E	E	ESE	ESE	ESE	ENE	ENE	NNE	WSW	WSW	WSW	WSW	WSW	SW	SW	SSW	SSW	SW	WSW	SW	SW	
26 Spd	8.4	6.4	5.6	4.3	3.6	10.3	10.6	9.6	11.2	11.0	10.0	10.8	5.8	5.7	6.4	7.0	1.6	2.8	2.8	3.6	5.8	4.5	4.4	6.7	6.25	11.22	
Dir	WSW	WSW	W	WSW	W	WSW	SW	SW	SSW	SW	SW	SW	WSW	W	WSW	WSW	W	WSW	SSW	WSW	SW	SSW	SW	SW	SW	SSW	
27 Spd	5.5	2.8	3.0	3.2	2.8	1.8	3.0	9.1	8.0	9.2	5.5	4.6	12.8	9.4	15.5	15.6	9.0	10.1	6.0	8.1	8.4	18.4	12.9	9.3	7.75	18.36	
Dir	WSW	WSW	W	W	W	W	WSW	WSW	WSW	SW	SW	SW	WSW	SW	WSW	WSW	WSW	SW	SSW	SSW	SSW	WSW	WSW	WSW	SW	SSW	
28 Spd	15.7	17.7	7.6	10.9	15.6	8.9	6.2	6.1	9.7	9.7	8.0	7.0	5.9	7.0	6.3	6.9	5.1	6.6	5.3	2.0	2.0	5.0	7.8	4.7	7.47	17.67	
Dir	WSW	SW	WSW	WSW	SW	WSW	WSW	SSW	WSW	SW	WSW	WSW	WSW	WSW	WSW	NW	W	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	SW
29 Spd	3.9	5.3	2.9	2.2	0.9	0.3	2.7	1.8	1.3	0.8	4.2	4.3	7.9	10.8	10.6	9.8	6.2	7.4	7.0	4.7	2.6	2.0	2.8	2.1	4.00	10.82	
Dir	WNW	WNW	WNW	WSW	W	WSW	SSW	SW	SSW	NW	W	W	WSW	SW	WSW	WSW	SW	SW	SW	SW	W	WNW	WSW	W	WSW	SW	
30 Spd	3.3	2.6	3.4	2.6	1.2	0.0	0.9	1.9	0.5	0.4	1.2	1.8	0.8	0.4	0.6	4.7	2.9	8.2	3.1	0.5	0.8	0.4	1.1	1.0	0.88	8.16	
Dir	W	WNW	WNW	WNW	NW	NW	W	NW	NE	ESE	ENE	ESE	ENE	ESE	ENE	NW	WSW	SSW	SW	SW	SSW	ESE	SE	WSW	W	SSW	
31 Spd	0.6	0.4	0.4	0.2	0.2	0.5	2.3	4.9	0.9	1.2	0.4	1.6	3.6	0.8	2.2	1.8	3.7	1.6	1.2	1.1	0.4	2.0	1.1	1.4	0.22	4.87	
Dir	W	WNW	NE	NE	ENE	NW	WSW	SW	NE	SW	N	SSW	SW	SSW	ENE	NNE	N	NE	NNW	E	ESE	SW	ENE	NE	WNW	SW	
Spd	1.45	1.62	1.12	1.18	1.42	1.08	0.90	1.35	1.12	1.57	1.05	1.07	1.14	1.35	1.53	1.38	0.88	1.70	1.30	0.94	1.00	1.51	0.99	0.69	Diurnal Average		
Dir	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	WSW	WSW	WSW	SW	WSW	SW	WSW	SW	SSW	SSW	SSW	SSW	SW	SW	WSW	Diurnal Maximum		
Spd	15.68	17.67	13.34	13.38	15.57	15.09	14.17	14.01	11.61	11.45	11.90	13.33	12.83	12.27	15.48	15.65	13.36	18.90	16.96	11.00	11.63	18.36	12.89	12.99	Diurnal Maximum		
Dir	238.50	230.51	233.23	234.03	234.88	233.08	231.13	230.14	231.42	233.46	231.49	230.68	234.08	226.32	237.71	237.47	233.78	237.51	222.64	217.06	208.43	213.10	246.21	238.09			
Maximum Speed Value: 18.9 kph on Jan 21 18:00		Minimum Speed Value: 0.0 kph on Jan 30 06:00														Hours in Service: 744											
Maximum Daily Speed Average: 10.21 kph on Jan 10		Minimum Daily Speed Average: 0.22 kph on Jan 19														Hours of Data: 744											
Maximum Diurnal Speed Average: 1.70 kph at hour 18		Minimum Diurnal Speed Average: 0.69 kph at hour 24														Hours of Missing Data: 0											
Monthly Average Velocity: 1.185 kph 235.25 deg		Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 0.9 Median = 2.1 Q ₃ = 5.0 P ₉₀ = 9.1 P ₉₉ = 15.5														Percent Operational Time: 100.0											
All monthly, daily, and diurnal averages have been calculated using vector methods																											
Frequency Distribution																											
		Speed Range (kph)																									
Direction	0 to 5	5 to 11	11 to 19	19 to 28	28 to 38	> 38	Total																				
North	17	0	0	0	0	0	17																				
NorthEast	120	29	0	0	0	0	149																				
East	126	17	1	0	0	0	144																				
SouthEast	29	0	0	0	0	0	29																				
South	22	3	1	0	0	0	26																				
SouthWest	71	87	33	0	0	0	191																				
West	116	15	0	0	0	0	131																				
NorthWest	55	2	0	0	0	0	57																				
Total	556	153	35	0	0	0	744																				



WCAS - Hinton
Summary of Hourly Averages

Relative Humidity (RH) - %
January 2016

Maximum Value: 89.73 % on Jan 14 19:00 Maximum Daily Average: 85.17 % on Jan 14																						Hours in Service: 744				
Minimum Value: 25.8 % on Jan 29 14:00 Minimum Daily Average: 38.53 % on Jan 27																						Hours of Data: 744				
Maximum Diurnal Average: 72.96 % at hour 7 Minimum Diurnal Average: 52.35 % at hour 15																						Hours of Missing Data: 0				
Monthly Average: 67.800 % Percentiles: P₁ = 30.5 P₁₀ = 43.8 Q₁ = 54.1 Median = 74.9 Q₃ = 80.5 P₉₀ = 84.5 P₉₉ = 88.6																						Hours of Calibration: 0				
																						Percent Operational Time: 100.0				
Day	Hourly Period Ending At																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Jan	54.9	57.6	58.4	60.0	61.8	63.0	59.9	57.9	57.8	58.9	47.1	40.9	36.9	34.6	28.8	30.7	35.8	42.7	49.8	56.2	65.2	69.6	72.9	72.9	53.10	72.94
2-Jan	76.6	79.4	80.4	80.1	80.4	79.9	79.7	79.8	78.6	78.6	76.8	66.7	54.1	41.5	35.9	36.9	42.5	55.2	63.7	71.0	77.1	80.1	80.1	80.4	68.96	80.39
3-Jan	80.2	80.4	78.9	78.6	78.7	78.3	77.8	77.6	77.4	77.5	78.8	80.3	65.6	52.5	40.7	42.0	46.7	55.4	62.0	71.3	73.8	79.6	81.2	77.9	70.55	81.18
4-Jan	78.7	80.0	80.9	81.2	77.6	78.3	78.3	80.2	79.0	80.1	75.3	57.6	49.8	45.4	39.1	40.7	51.6	64.1	70.9	74.9	77.7	79.1	76.8	75.6	69.69	81.19
5-Jan	77.7	80.3	79.7	78.3	78.8	79.1	80.1	79.6	80.3	80.5	78.9	68.9	71.6	66.2	58.4	61.8	68.3	73.4	77.8	80.0	81.1	80.6	80.2	80.2	75.90	81.07
6-Jan	79.6	78.9	78.6	78.4	78.0	77.9	80.0	78.7	78.1	78.8	79.2	79.3	79.8	79.4	78.3	77.0	75.7	77.1	78.0	77.7	78.5	80.0	80.3	81.6	78.71	81.59
7-Jan	82.5	82.7	82.8	82.6	82.6	82.3	81.2	79.9	79.5	79.7	77.3	70.0	68.1	67.7	67.3	68.6	75.9	80.1	80.3	80.6	79.8	78.5	78.6	78.6	77.80	82.75
8-Jan	79.0	77.7	76.9	75.8	75.3	75.5	74.9	75.4	75.6	74.5	74.1	74.0	68.4	63.9	63.5	61.4	71.9	76.3	78.0	77.8	76.4	75.4	74.8	73.7	73.76	79.03
9-Jan	73.0	72.4	71.6	72.1	72.9	72.0	71.6	70.8	71.7	71.8	73.3	79.3	79.7	51.4	42.5	40.9	42.3	44.2	54.2	65.6	67.7	54.0	53.8	48.7	63.23	79.68
10-Jan	48.0	47.6	47.6	47.7	47.0	47.1	47.0	46.4	46.7	46.7	46.3	45.4	44.6	42.5	43.0	43.5	44.5	45.7	46.8	48.4	48.4	49.3	50.3	51.1	46.74	51.12
11-Jan	52.2	51.9	52.1	53.1	54.5	57.5	61.6	61.7	61.6	62.7	63.0	60.8	59.2	53.1	47.2	48.6	53.2	62.5	71.1	74.7	78.3	81.0	82.4	82.3	61.92	82.42
12-Jan	81.2	54.1	49.0	51.4	51.0	48.8	52.9	51.9	53.1	48.7	47.1	44.5	40.7	36.9	38.6	39.0	38.0	37.9	38.9	41.1	43.3	44.8	49.0	52.2	47.25	81.16
13-Jan	48.2	46.3	48.9	56.5	61.4	58.1	61.6	60.8	63.0	65.0	64.5	62.2	61.2	53.8	55.7	56.1	56.6	60.5	68.6	72.4	76.1	76.4	79.0	84.7	62.41	84.67
14-Jan	84.6	85.3	87.6	87.9	87.2	87.6	88.8	88.9	89.3	89.3	89.2	88.7	85.1	77.5	69.7	67.6	74.7	88.2	89.7	89.2	87.9	87.1	86.9	86.2	85.17	89.73
15-Jan	85.8	85.4	85.1	84.9	84.7	84.5	84.5	84.4	84.3	84.2	84.1	83.8	83.9	83.7	83.9	84.0	84.3	84.5	84.4	84.3	84.4	84.4	84.2	84.0	84.40	85.79
16-Jan	83.7	83.4	83.2	82.9	82.6	82.5	82.2	81.7	81.3	80.9	79.9	79.8	79.2	79.0	78.9	79.0	79.2	79.3	78.8	78.7	78.0	77.1	76.8	77.3	80.23	83.70
17-Jan	77.0	76.6	76.3	76.2	76.2	76.3	77.1	77.3	77.2	76.7	75.0	73.5	72.6	72.8	75.4	76.9	78.6	79.0	79.3	79.4	79.7	79.4	79.6	79.3	76.97	79.72
18-Jan	79.4	79.1	79.4	79.9	81.2	81.5	81.7	82.1	81.5	81.9	82.5	80.5	72.3	63.2	54.2	56.7	57.3	75.2	82.4	83.8	86.0	86.5	86.4	85.8	77.51	86.53
19-Jan	84.8	84.1	84.3	84.2	84.5	84.8	85.0	86.0	86.0	86.3	86.4	86.3	84.3	70.2	65.8	72.2	79.1	81.6	83.9	86.1	87.0	87.5	87.4	87.4	83.14	87.49
20-Jan	87.3	87.5	86.3	84.7	84.2	83.9	83.7	83.1	83.3	84.5	83.9	78.3	75.4	70.0	66.7	62.4	70.0	78.5	82.4	84.3	84.8	84.3	83.3	82.1	80.63	87.53
21-Jan	81.5	81.0	80.7	81.0	81.4	81.5	81.6	82.0	81.8	82.3	81.6	81.1	80.4	75.1	57.5	46.8	50.0	49.2	50.4	59.0	55.3	52.2	56.5	65.4	69.81	82.29
22-Jan	71.7	73.5	81.2	84.3	85.1	85.8	86.2	85.7	85.5	85.9	80.6	63.4	61.6	58.6	58.6	59.9	64.7	70.2	75.7	80.7	83.7	82.0	77.9	77.4	75.83	86.24
23-Jan	79.0	80.1	83.9	86.4	87.8	88.3	87.6	86.1	85.5	85.3	86.3	76.7	60.4	56.3	48.8	43.9	51.9	59.1	64.5	69.4	74.6	76.5	78.9	79.8	74.05	88.33
24-Jan	80.6	81.5	84.7	85.6	86.5	86.1	85.4	85.7	87.2	86.4	76.7	62.7	57.1	48.8	42.7	39.8	41.8	56.3	62.2	71.3	77.6	80.9	82.8	83.9	72.26	87.18
25-Jan	84.3	83.6	83.4	83.2	82.8	82.3	82.2	82.9	83.2	82.3	79.6	68.6	57.4	35.8	35.0	34.2	34.5	34.9	37.5	37.5	39.1	37.5	33.9	35.7	59.63	84.27
26-Jan	39.3	44.9	48.7	49.7	51.9	45.3	45.0	46.4	48.4	46.5	45.6	44.9	42.3	45.5	45.5	55.9	58.3	57.3	60.4	61.3	61.4	67.8	69.8	59.2	51.72	69.84
27-Jan	46.5	44.1	45.5	44.0	44.2	41.6	38.3	32.8	31.1	32.8	30.5	26.0	26.4	31.5	33.0	36.8	39.1	37.8	43.8	43.9	43.5	41.4	43.4	46.9	38.53	46.86
28-Jan	47.8	49.0	53.8	50.3	48.7	52.2	53.0	50.0	48.3	49.6	47.1	47.7	50.5	49.0	49.6	55.0	67.8	63.0	50.3	67.7	75.7	70.7	59.4	59.4	54.81	75.73
29-Jan	59.3	52.0	53.8	49.9	53.2	55.6	64.1	67.2	67.4	63.6	36.1	30.8	27.6	25.8	26.0	29.1	33.6	34.0	41.2	46.0	53.4	59.2	57.8	61.4	47.83	67.36
30-Jan	61.2	62.5	64.5	67.1	69.2	74.0	76.1	75.2	78.0	78.0	74.3	67.0	62.7	58.1	49.9	58.4	65.7	78.7	76.9	80.0	81.4	78.0	76.6	75.8	70.39	81.41
31-Jan	79.8	79.9	82.6	83.6	82.4	81.4	72.4	60.1	65.8	67.4	67.9	59.1	45.9	37.5	42.7	50.6	56.6	63.5	68.7	75.6	80.1	81.6	83.2	85.0	68.89	84.98
																								Diurnal Average		
																								Diurnal Maximum		



WCAS - Hinton
Summary of Hourly Standard Deviations

Wind Speed (WS) - kph
January 2016

Maximum Value: 9.25 kph on Jan 27 15:00		Maximum Daily Average: 5.74 kph on Jan 27		Hours in Service: 744																							
Minimum Value: 0.1 kph on Jan 19 14:00		Minimum Daily Average: 1.03 kph on Jan 19		Hours of Data: 744																							
Maximum Diurnal Average: 3.06 kph at hour 16		Minimum Diurnal Average: 1.93 kph at hour 5		Hours of Missing Data: 0																							
Monthly Average: 2.285 kph		Percentiles: P₁ = 0.5 P₁₀ = 0.9 Q₁ = 1.1 Median = 1.6 Q₃ = 2.7 P₉₀ = 5.2 P₉₉ = 8.1		Hours of Calibration: 0																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	2.3	2.1	2.1	1.6	1.4	1.3	1.3	2.2	1.4	2.0	3.1	2.6	2.3	1.5	1.4	2.1	1.6	1.5	1.6	1.2	1.3	0.9	1.3	1.7	1.73	3.11	
2-Jan	1.2	1.2	1.0	0.9	1.0	1.2	1.1	0.8	1.0	1.4	0.8	1.1	1.4	1.5	1.6	1.7	2.6	1.3	0.6	1.2	1.5	1.2	1.1	1.6	1.25	2.64	
3-Jan	1.2	1.1	0.7	0.6	1.0	1.0	0.9	0.9	0.9	1.0	0.9	1.7	1.6	1.6	2.2	1.6	2.6	1.4	1.3	1.8	2.2	1.4	1.4	1.4	1.35	2.56	
4-Jan	1.3	1.5	1.5	1.4	1.7	1.1	1.2	1.7	1.4	1.4	1.3	1.5	1.7	1.5	1.2	1.2	1.2	1.1	1.0	1.1	1.6	1.7	1.6	1.6	1.39	1.68	
5-Jan	1.2	1.0	1.2	1.1	1.2	1.0	1.0	0.8	0.9	0.8	0.5	0.8	1.0	2.1	1.9	3.3	2.6	1.9	1.0	1.3	1.0	1.3	1.1	1.0	1.30	3.30	
6-Jan	1.2	1.0	0.8	0.9	0.5	1.9	1.8	1.0	0.7	0.6	0.8	0.9	0.9	1.5	1.6	2.1	1.6	1.1	1.1	1.3	0.9	1.2	1.3	1.5	1.18	2.13	
7-Jan	1.3	1.3	1.0	1.3	0.9	0.8	0.6	0.9	0.6	0.8	1.3	0.7	1.4	1.6	2.2	2.4	2.5	1.1	1.0	1.0	1.2	1.4	1.1	1.2	1.23	2.54	
8-Jan	1.3	1.3	1.0	0.6	1.0	1.0	0.7	1.0	1.0	1.0	1.7	1.4	0.8	1.0	1.1	1.2	1.3	1.1	1.3	1.3	1.0	1.1	0.9	0.8	1.09	1.71	
9-Jan	1.0	0.9	0.9	0.8	0.9	1.0	1.0	0.9	0.9	1.0	1.0	1.0	2.1	4.7	5.2	5.5	5.9	5.5	2.2	1.7	1.9	4.0	6.0	5.9	2.58	6.01	
10-Jan	6.7	6.2	6.2	5.6	7.0	6.5	6.2	5.9	5.7	5.4	5.5	5.7	5.4	4.8	4.2	3.7	3.6	3.8	4.1	3.2	3.3	3.3	3.3	3.0	4.93	6.98	
11-Jan	2.9	3.7	3.2	3.1	3.5	2.7	1.5	2.0	2.5	2.8	1.7	1.0	1.3	1.5	1.2	1.2	1.1	1.0	1.7	2.1	1.4	1.0	1.1	1.3	1.94	3.71	
12-Jan	1.6	4.8	5.0	6.0	4.4	4.9	5.3	4.8	5.4	6.0	5.7	5.9	5.7	6.8	7.8	8.0	7.7	6.7	4.6	4.6	3.9	3.8	1.9	2.4	5.16	8.04	
13-Jan	3.2	3.9	5.2	1.3	1.1	3.1	1.4	2.2	2.5	3.5	3.2	2.8	1.3	1.8	1.8	1.7	1.9	2.0	1.9	2.3	1.3	1.6	1.4	1.2	2.23	5.17	
14-Jan	2.3	1.7	1.3	2.2	1.8	1.2	1.6	1.0	1.2	1.1	1.1	0.9	1.0	0.8	0.8	1.1	2.1	3.9	2.5	2.6	3.0	2.7	2.5	2.5	1.80	3.93	
15-Jan	2.6	2.7	2.8	2.3	1.9	1.8	1.9	1.9	2.2	1.7	2.4	2.5	2.2	2.4	2.2	1.9	1.9	2.1	1.7	2.1	1.5	1.8	2.0	2.0	2.11	2.83	
16-Jan	2.3	1.9	2.0	2.0	2.1	2.4	2.5	2.4	2.9	3.3	3.1	3.2	3.4	3.2	3.7	3.4	3.5	3.7	3.2	2.8	2.4	2.3	1.9	2.2	2.73	3.71	
17-Jan	2.4	2.4	2.0	2.0	1.7	1.8	1.1	0.8	1.2	1.3	2.0	2.1	2.4	2.2	2.2	2.6	2.5	2.5	2.3	2.1	1.7	1.7	1.5	1.6	1.92	2.59	
18-Jan	1.8	1.3	1.5	1.5	1.1	1.7	0.9	1.1	1.4	1.4	1.3	1.1	1.1	3.2	3.6	2.6	2.4	1.2	1.6	1.2	1.3	1.5	1.2	1.0	1.58	3.56	
19-Jan	1.1	1.3	1.6	1.1	1.3	1.4	1.4	1.2	0.8	1.0	0.8	0.5	0.5	0.1	0.6	1.1	1.7	1.3	0.7	0.7	1.0	1.1	1.7	1.1	1.03	1.74	
20-Jan	0.9	1.2	1.3	1.9	1.3	1.1	1.3	1.7	0.8	1.4	1.1	1.4	1.2	1.1	1.5	1.0	0.8	0.9	0.9	1.1	1.1	0.5	0.7	0.9	1.14	1.94	
21-Jan	1.3	1.1	1.0	1.2	1.4	1.8	2.0	2.0	1.8	1.9	2.3	2.1	2.4	3.5	3.7	4.5	5.5	9.1	4.7	3.9	4.2	5.1	5.7	1.7	3.08	9.07	
22-Jan	2.3	2.0	1.4	1.3	1.6	1.2	0.9	0.8	2.0	1.1	1.0	0.8	1.6	2.4	2.8	1.9	2.3	2.1	1.8	1.4	1.7	2.0	2.2	1.9	1.69	2.84	
23-Jan	1.7	1.6	2.4	1.5	1.5	1.4	1.7	1.5	1.5	1.1	1.7	1.7	1.3	1.8	1.2	1.9	1.9	1.3	1.1	1.3	0.8	0.7	1.3	0.9	1.46	2.36	
24-Jan	1.1	1.1	1.2	1.0	1.2	1.8	1.2	1.4	1.3	0.2	0.5	1.2	1.0	1.4	3.3	3.3	3.5	1.4	1.4	1.2	0.8	0.7	0.8	0.7	1.37	3.52	
25-Jan	0.5	1.0	1.0	1.1	1.3	1.6	0.9	1.1	1.1	0.8	1.0	1.1	1.9	4.7	4.7	3.7	3.3	3.4	2.3	4.0	2.9	2.8	4.6	5.8	2.36	5.83	
26-Jan	6.2	5.3	5.6	4.5	2.9	6.6	6.9	5.6	4.1	5.0	5.6	5.3	4.6	5.6	5.4	6.1	2.0	2.7	2.2	2.6	3.3	2.2	2.6	3.6	4.44	6.92	
27-Jan	3.4	3.1	2.8	3.5	3.0	2.7	4.5	6.3	4.9	3.4	3.4	4.5	7.7	6.9	9.3	9.1	6.7	5.5	6.5	8.1	6.8	9.1	8.5	8.1	5.74	9.25	
28-Jan	7.8	7.0	5.5	6.7	6.9	6.9	4.5	4.9	6.4	5.6	5.5	5.8	4.5	4.8	4.8	4.2	4.7	6.8	3.9	2.5	1.7	4.1	2.6	3.5	5.07	7.81	
29-Jan	2.9	2.3	2.2	2.6	1.6	1.2	1.7	1.4	1.8	1.6	4.4	4.4	6.0	5.8	6.2	6.4	3.9	3.6	2.6	2.8	2.8	1.6	2.5	1.8	3.09	6.39	
30-Jan	1.8	1.6	1.4	1.1	1.2	0.4	1.6	1.0	0.9	1.0	1.5	1.8	1.0	0.7	1.5	2.4	2.7	2.2	2.9	0.8	1.3	1.7	1.4	1.7	1.48	2.89	
31-Jan	0.9	0.7	0.7	0.6	0.5	0.7	1.8	2.6	1.8	1.4	1.1	1.4	2.4	2.1	2.2	1.5	2.2	1.4	1.0	1.3	1.3	1.7	1.1	1.1	1.40	2.63	
		2.25	2.24	2.17	2.05	1.93	2.11	2.01	2.06	2.04	2.00	2.18	2.21	2.35	2.72	3.02	3.06	2.90	2.74	2.16	2.15	1.99	2.16	2.21	2.15	Diurnal Average	
		7.81	6.98	6.16	6.73	6.98	6.87	6.92	6.27	6.41	6.00	5.73	5.93	7.66	6.88	9.25	9.08	7.69	9.07	6.50	8.06	6.80	9.06	8.51	8.08	Diurnal Maximum	
,Alberta Ambient Air Quality Objectives (AAAQO): 1-hr --- ul/m^3 24-hr 100 ul/m^3																											



WCAS - Hinton
Summary of Hourly Standard Deviations

Wind Direction (WD) - deg
January 2016

Maximum Value: 107.40 deg on Jan 8 23:00		Maximum Daily Average: 68.40 deg on Jan 24		Hours in Service: 744																							
Minimum Value: 15.5 deg on Jan 1 07:00		Minimum Daily Average: 20.22 deg on Jan 16		Hours of Data: 744																							
Maximum Diurnal Average: 54.73 deg at hour 6		Minimum Diurnal Average: 37.16 deg at hour 16		Hours of Missing Data: 0																							
Monthly Average: 47.685 deg		Percentiles: P ₁ = 18.1 P ₁₀ = 22.5 Q ₁ = 29.6 Median = 42.3 Q ₃ = 61.0 P ₉₀ = 82.8 P ₉₉ = 102.4		Hours of Calibration: 0																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Jan	26.2	25.1	27.6	26.4	19.8	22.5	15.5	38.5	24.3	29.2	50.5	41.1	40.2	29.6	51.3	52.5	41.9	35.0	29.7	34.4	45.6	24.4	34.8	49.8	34.00	52.53	
2-Jan	52.1	46.9	92.8	58.7	89.2	49.5	86.4	73.9	79.1	39.1	79.5	71.4	42.5	44.1	42.5	42.3	31.9	44.3	42.8	73.0	60.6	55.4	47.8	65.8	58.82	92.81	
3-Jan	50.2	48.8	58.5	84.6	40.4	64.0	76.7	45.2	46.2	87.9	64.9	46.2	65.8	53.5	37.3	42.4	40.1	38.6	37.0	26.5	45.3	37.7	24.5	34.5	49.87	87.89	
4-Jan	67.2	30.6	25.2	34.3	38.9	31.6	46.1	43.1	38.8	54.9	44.1	50.8	57.3	49.0	50.7	25.8	66.4	91.2	87.8	92.7	87.9	59.3	92.7	46.5	54.71	92.73	
5-Jan	67.3	82.4	90.6	55.3	82.4	40.8	75.7	47.6	25.2	29.7	37.1	90.3	35.3	59.2	41.5	25.7	21.4	19.5	29.8	79.9	57.5	32.8	35.9	73.6	51.51	90.56	
6-Jan	59.9	33.0	48.9	29.8	25.0	31.4	22.5	52.9	53.9	71.5	33.7	59.6	63.6	26.9	22.9	30.4	26.1	28.1	55.9	34.9	39.6	39.1	31.8	20.9	39.27	71.49	
7-Jan	25.0	24.6	21.3	18.2	28.5	51.5	41.8	61.0	77.2	27.4	39.7	52.4	44.9	21.8	19.7	20.8	25.0	36.1	35.1	91.3	35.7	28.5	44.8	56.2	38.70	91.29	
8-Jan	35.8	45.4	94.9	71.1	70.0	87.9	31.8	51.7	52.7	36.8	43.5	80.1	98.3	47.3	16.9	26.7	79.0	44.8	86.5	62.1	47.4	73.1	107.4	95.1	61.93	107.40	
9-Jan	53.2	62.0	74.7	81.5	64.4	66.5	53.4	51.1	44.2	47.4	88.3	38.4	41.2	39.9	24.8	22.8	22.1	24.1	36.5	31.7	33.7	42.2	39.6	25.2	46.21	88.27	
10-Jan	24.7	24.6	23.8	22.4	23.7	23.0	22.3	22.1	28.7	24.3	24.3	21.8	22.2	21.6	21.7	28.8	31.7	36.0	31.8	40.1	32.3	27.1	51.6	41.2	27.99	51.62	
11-Jan	41.4	41.1	29.2	21.2	23.8	39.1	37.0	36.0	28.8	46.1	43.7	22.9	24.2	31.2	45.4	39.6	28.4	47.6	90.4	102.6	53.9	89.2	104.4	99.4	48.61	104.38	
12-Jan	34.0	38.0	21.9	29.3	30.4	35.6	50.8	29.5	37.8	35.0	31.3	30.7	35.0	34.8	46.6	49.9	44.0	40.1	25.3	21.9	18.2	51.3	42.9	37.2	35.49	51.31	
13-Jan	63.0	29.0	28.1	33.7	34.5	58.6	46.4	22.9	34.4	21.0	22.2	48.3	74.1	69.4	40.1	31.6	47.4	100.7	76.9	49.7	65.8	31.7	51.3	78.8	48.32	100.67	
14-Jan	50.3	69.6	54.0	59.0	20.2	61.5	96.7	69.2	55.4	72.9	85.3	77.8	50.6	96.2	71.5	36.2	22.1	23.8	23.8	26.5	32.8	25.5	30.6	35.3	51.95	96.68	
15-Jan	33.9	26.9	36.0	31.0	25.5	16.2	22.6	18.3	23.8	17.8	28.2	24.6	28.7	32.8	25.7	27.0	21.7	20.2	21.7	26.4	34.9	33.0	38.6	21.9	26.56	38.55	
16-Jan	23.4	23.9	18.0	18.1	21.1	22.6	18.0	18.3	22.3	22.9	19.3	21.0	18.5	19.7	18.5	18.4	21.8	19.9	20.1	20.5	20.5	20.4	19.4	18.8	20.22	23.86	
17-Jan	18.9	21.2	23.2	24.0	21.6	35.8	34.3	73.8	47.6	30.0	35.6	22.8	20.9	23.4	23.5	27.1	27.6	30.5	27.6	40.3	38.9	44.7	38.8	25.4	31.56	73.76	
18-Jan	30.9	53.9	70.1	88.4	54.1	53.8	76.6	71.7	87.8	62.7	63.1	61.1	65.7	49.1	41.4	51.6	60.9	48.2	75.7	60.3	82.8	92.3	104.1	92.2	66.60	104.06	
19-Jan	93.7	87.8	62.9	95.2	74.5	105.4	98.4	93.1	58.8	74.0	55.6	44.0	64.6	69.0	78.7	65.3	22.9	60.1	53.6	61.3	29.4	41.5	35.3	49.1	65.59	105.40	
20-Jan	82.4	38.4	20.5	29.3	35.1	24.0	23.5	31.9	31.7	59.4	37.0	39.8	38.2	76.6	53.1	76.7	39.7	51.9	87.7	88.6	93.8	102.8	53.9	82.9	54.12	102.76	
21-Jan	74.7	77.1	72.7	60.4	66.2	57.8	45.8	52.4	54.3	54.6	50.9	52.8	73.7	83.5	89.2	74.5	71.6	27.9	20.1	61.9	38.0	22.1	53.4	83.0	59.12	89.24	
22-Jan	49.3	64.6	45.5	71.1	57.9	94.6	63.4	89.0	47.7	72.3	76.8	52.6	34.4	75.5	29.9	35.6	26.7	39.1	42.0	40.2	56.5	54.6	50.1	47.1	54.85	94.56	
23-Jan	26.9	49.4	100.1	95.5	50.0	97.6	89.3	35.2	45.0	54.2	45.3	31.9	39.4	28.2	18.7	19.9	27.8	34.6	37.6	35.1	53.2	88.3	75.6	66.6	51.90	100.06	
24-Jan	53.6	103.2	94.5	71.4	69.7	95.1	78.3	80.5	62.8	40.0	76.2	58.0	90.3	47.2	45.2	20.7	39.5	74.0	40.1	50.5	55.6	101.2	93.7	100.3	68.40	103.23	
25-Jan	89.2	64.5	84.8	88.3	75.2	52.9	58.4	55.4	72.6	75.4	60.9	45.0	78.0	29.6	29.4	25.2	29.3	24.5	19.4	24.3	18.4	21.7	24.4	29.8	49.02	89.21	
26-Jan	42.6	44.9	44.8	51.1	39.4	28.3	38.8	38.2	29.2	24.2	32.1	24.9	45.3	54.2	47.5	48.5	63.4	53.1	61.0	48.9	41.5	55.4	32.8	23.0	42.22	63.40	
27-Jan	33.9	60.1	48.7	55.4	59.8	73.3	75.6	36.0	34.0	24.2	37.5	52.4	30.8	40.1	32.1	30.5	41.7	29.6	55.3	55.6	50.8	31.4	38.7	49.8	44.88	75.61	
28-Jan	28.0	21.4	35.8	28.6	23.6	37.2	41.1	49.8	37.5	30.1	40.2	45.1	43.8	39.9	45.6	37.9	43.2	52.3	58.3	75.3	55.9	34.9	20.0	40.6	40.25	75.29	
29-Jan	36.1	24.1	37.2	60.1	69.4	97.9	38.7	41.7	76.2	78.5	52.4	54.1	43.5	30.1	33.0	30.9	33.3	25.9	18.9	29.7	42.2	33.4	36.1	42.0	44.39	97.88	
30-Jan	31.1	33.8	19.4	18.9	50.0	97.8	86.0	27.4	79.1	69.1	30.9	81.3	53.6	45.4	91.0	33.6	50.9	18.1	41.0	69.4	79.2	98.0	84.9	67.4	56.57	98.00	
31-Jan	68.8	45.2	51.9	73.6	83.8	43.2	40.3	26.7	81.5	74.9	80.1	60.2	40.7	102.4	68.6	52.9	30.6	35.6	33.7	56.5	73.8	37.5	24.2	24.5	54.63	102.44	
		47.34	46.50	50.25	51.16	47.36	54.73	52.65	47.88	48.99	47.99	48.72	48.49	48.56	47.46	42.07	37.16	38.07	40.49	45.26	52.01	49.09	49.37	50.46	52.38	Diurnal Average	
		93.70	103.23	100.06	95.55	89.16	105.40	98.42	93.14	87.80	87.89	88.27	90.29	98.29	102.44	91.00	76.73	78.98	100.67	90.36	102.58	93.84	102.76	107.40	100.31	Diurnal Maximum	
,Alberta Ambient Air Quality Objectives (AAAQO): 1-hr --- ul/m^3 24-hr 100 ul/m^3																											

WEST CENTRAL AIRSHED SOCIETY

**CONTINUOUS AMBIENT AIR QUALITY
MONITORING PROGRAM
MONTHLY REPORT**

**END OF REPORT
JANUARY 2016**