

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

AIR QUALITY MONITORING
February 2017
Monthly Report

Prepared by:

West Central Airshed Society
Drayton Valley, Alberta





March 15, 2017

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 February 2017
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 Patrick Andersen, Interim 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 two (2) readings in February in excess of the 1-hour average TRS guideline, and one (1) reading in excess of the 24-hour average TRS guideline as indicated in Air Monitoring Directive Section III.A.3. (a).

2. Operational times less than 90 percent:

All analyzers and meteorological equipment returned operational times greater than 90%.

3. Monitoring Notes:

AMS 906 (Hinton)

The PM_{2.5} analyzer returned an uptime of 95.8% due to instrument malfunctioning and maintenance. All other analyzers and meteorological equipment returned uptimes of 100% for the month of February.

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

Sincerely,

A handwritten signature in black ink, appearing to read 'Patrick Andersen'.

Patrick Andersen
Environmental Specialist and Interim Executive Director

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
	2017	FEBRUARY

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	0.012	2	0.004	1
PM _{2.5}	906	95.8	45.9 µg/m ³	0	21.90 µg/m ³	0
H ₂ S	906	100.0	0.005	0	0.002	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
FEBRUARY 2017**

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													February 2017		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)	37	635	100.0	0.9	0.0	12.0	0.2	0.2	0.4	1.0	2.1	2	1	0.004	
SO ₂ (ppb)	37	635	100.0	1.1	0.0	18.7	0.0	0.1	0.1	0.4	3.1	0	-	0.007	
H ₂ S (ppb)	37	635	100.0	0.3	0.0	5.0	0.0	0.1	0.1	0.3	0.7	0	0	0.002	
O ₃ (ppb)	32	640	100.0	26.4	0.4	47.2	7.3	15.8	28.9	36.9	41.5	0	-	0.042	
NO (ppb)	34	638	100.0	3.2	0.0	78.8	0.1	0.3	1.0	2.6	7.8	-	-	-	
NO ₂ (ppb)	34	638	100.0	9.4	0.6	44.8	2.7	4.4	7.1	11.9	19.7	0	0	0.016	
NO _x (ppb)	34	638	100.0	12.6	0.5	121.0	3.1	5.2	8.3	14.1	29.3	-	-	-	
Particulate Matter 2.5 microns (µm ³)	0	644	95.8	9.1	0.0	45.9	0.3	2.8	6.8	11.8	22.4	0	0	21.9 ug/m3	
Wind Speed (kph)	0	672	100.0	3.4	0.0	17.6	0.5	1.0	2.2	5.2	8.2	-	-	-	
Temperature (°C)	0	672	100.0	-6.6	-30.3	13.5	-19.7	-14.8	-6.3	0.9	5.9	-	-	-	
Relative Humidity (%)	0	672	100.0	63.9	17.9	93.5	35.5	50.2	69.6	78.7	84.8	-	-	-	
Std Dev Wind Direction (deg)	0	672	100.0	46.5	14.3	99.6	25.3	32.7	42.7	57.1	75.0	-	-	-	
Std Dev Wind Speed (kph)	0	672	100.0	2.5	0.0	10.0	0.9	1.1	1.8	3.2	5.3	-	-	-	



WCAS - Hinton
Summary of Hourly Averages

Total Reduced Sulphur (TRS) - ppb
February 2017

Maximum Value: 11.51 ppb on Feb 27 08:00		Maximum Daily Average: 3.81 ppb on Feb 27		Hours in Service: 672																						
Minimum Value: 0 ppb on Feb 13 08:00		Minimum Daily Average: 0.19 ppb on Feb 24		Hours of Data: 635																						
Maximum Diurnal Average: 1.83 ppb at hour 10		Minimum Diurnal Average: 0.43 ppb at hour 14		Hours of Missing Data: 37																						
Monthly Average: 0.895 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.4 Q ₃ = 1.0 P ₉₀ = 2.1 P ₉₉ = 6.8		Hours of Calibration: 37																						
				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-Feb	1	1	1	Z	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.41	1.26
2-Feb	0	0	1	Z	1	0	0	0	0	1	1	1	1	1	1	0	0	1	1	0	0	1	1	0.62	1.42	
3-Feb	0	0	0	Z	0	0	0	0	1	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0.53	3.36	
4-Feb	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.27	0.37	
5-Feb	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	0.43	
6-Feb	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.28	0.42	
7-Feb	0	0	0	Z	0	0	1	1	1	1	2	2	2	1	C	C	C	C	C	C	C	C	C	--	2.45	
8-Feb	1	1	2	Z	1	1	2	2	1	1	2	1	0	0	0	0	0	0	0	1	1	1	1	0.88	2.46	
9-Feb	1	1	1	Z	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0.48	0.95	
10-Feb	0	0	0	Z	0	0	0	1	1	0	0	0	0	0	2	2	1	2	0	0	0	1	0	0.56	2.26	
11-Feb	1	1	1	Z	2	1	3	3	3	1	1	1	1	1	0	0	1	1	1	1	1	1	1	1.20	2.98	
12-Feb	1	1	1	Z	1	2	1	1	1	0	1	1	0	1	1	0	1	0	1	1	0	1	2	0.93	1.73	
13-Feb	1	3	2	Z	2	2	2	0	0	0	0	0	1	1	0	0	0	2	3	1	0	0	0	0.84	2.53	
14-Feb	0	0	0	Z	1	1	0	0	1	1	0	1	1	0	1	1	2	2	1	1	2	0	0	0.79	1.75	
15-Feb	0	0	0	Z	0	0	0	0	1	1	2	1	1	1	1	1	1	0	0	0	0	0	0	0.62	1.50	
16-Feb	0	0	0	Z	1	1	1	2	6	11	3	1	0	1	1	1	1	1	2	2	1	2	1	1.81	11.43	
17-Feb	1	2	1	Z	1	3	2	1	2	2	1	1	0	0	0	1	1	1	0	1	1	1	1	1.06	3.28	
18-Feb	1	1	0	Z	1	1	1	1	1	2	4	1	0	0	0	0	0	0	0	0	0	0	0	0.60	3.89	
19-Feb	0	0	0	Z	1	0	1	2	3	2	2	2	2	0	0	0	0	0	0	0	0	0	0	0.71	2.75	
20-Feb	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.26	0.33	
21-Feb	0	2	5	Z	4	4	3	4	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1.26	4.92	
22-Feb	0	0	0	Z	1	1	1	3	3	1	2	2	1	1	0	0	0	0	2	2	1	0	0	1.04	3.41	
23-Feb	0	0	0	Z	1	1	1	2	4	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0.73	3.60	
24-Feb	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.19	0.32	
25-Feb	1	2	1	Z	1	2	3	4	4	3	1	1	0	0	0	0	1	1	1	0	0	0	1	1.12	3.77	
26-Feb	2	3	3	Z	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.61	2.95	
27-Feb	3	4	9	Z	6	2	7	12	7	10	8	4	2	1	0	0	0	1	4	2	1	1	2	3.81	11.51	
28-Feb	2	0	1	Z	3	2	5	3	4	7	9	4	2	0	0	1	1	1	0	0	1	3	2	2.31	8.77	
0.70		0.91	1.13	--	1.19	0.90	1.34	1.59	1.62	1.83	1.66	1.08	0.59	0.43	0.45	0.45	0.48	0.48	0.68	0.69	0.51	0.53	0.65	0.59	Diurnal Average	
3.42		4.13	9.21	--	6.10	3.84	7.18	11.51	6.57	11.43	8.77	4.46	1.74	1.33	1.75	2.26	1.75	1.67	3.85	2.53	2.05	2.80	2.40	2.05	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
February 2017

Maximum Value: 18.65 ppb on Feb 10 16:00		Maximum Daily Average: 7.27 ppb on Feb 12		Hours in Service: 672																							
Minimum Value: 0.0 ppb on Feb 2 18:00		Minimum Daily Average: 0.01 ppb on Feb 26		Hours of Data: 635																							
Maximum Diurnal Average: 2.27 ppb at hour 16		Minimum Diurnal Average: 0.44 ppb at hour 9		Hours of Missing Data: 37																							
Monthly Average: 1.110 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.4 P ₉₀ = 3.1 P ₉₉ = 14.8		Hours of Calibration: 37																							
				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-Feb	0.1	0.1	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10	0.17	
2-Feb	0.1	0.1	0.1	Z	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.3	0.1	0.2	0.2	0.1	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.09	0.33	
3-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.08	0.16	
4-Feb	0.2	0.0	0.2	Z	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.11	0.34	
5-Feb	0.0	0.1	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.12	0.21	
6-Feb	0.2	0.2	0.3	Z	0.2	0.4	0.9	1.2	1.2	0.7	0.7	0.6	0.5	0.4	0.3	0.3	0.3	0.4	0.3	0.2	0.1	0.1	0.2	0.0	0.42	1.20	
7-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.2	C	C	C	C	C	C	C	C	C	0.1	--	0.34	
8-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.5	0.5	0.2	0.1	0.3	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.15	0.51	
9-Feb	0.3	0.2	0.1	Z	0.1	0.2	0.2	0.1	0.3	0.3	0.2	0.3	0.4	1.0	2.5	0.9	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.40	2.52	
10-Feb	0.2	0.1	0.2	Z	0.1	0.1	0.2	0.4	0.3	0.1	0.1	0.1	0.3	2.7	16.5	18.7	8.9	9.3	0.8	0.8	0.3	0.3	0.2	1.1	2.68	18.65	
11-Feb	0.4	0.2	0.2	Z	0.1	0.2	0.2	0.5	0.6	0.3	6.2	11.1	8.7	8.9	6.0	4.3	2.0	5.3	10.4	3.4	9.1	10.6	12.3	14.2	5.00	14.21	
12-Feb	7.2	11.7	12.2	Z	16.5	18.1	16.8	7.8	2.8	2.5	5.4	7.7	4.5	7.8	6.2	3.1	8.3	2.3	5.6	5.3	1.4	5.1	6.8	1.8	7.27	18.09	
13-Feb	3.3	7.3	10.2	Z	9.1	3.5	2.6	0.4	0.6	0.8	3.0	2.5	1.2	8.6	4.7	0.5	0.1	0.4	5.4	8.6	2.9	0.4	0.2	0.1	3.33	10.17	
14-Feb	0.1	0.1	0.0	Z	0.2	0.1	0.1	0.0	0.3	0.9	0.4	0.6	0.4	5.0	9.1	15.6	9.1	14.6	12.3	11.7	4.0	9.2	0.4	0.7	4.12	15.58	
15-Feb	0.1	0.2	0.3	Z	0.2	0.3	0.6	2.5	4.0	8.3	13.5	4.2	1.8	8.9	6.9	6.9	5.8	0.7	0.6	0.7	1.2	0.3	0.3	0.2	2.98	13.50	
16-Feb	0.2	0.2	0.1	Z	0.1	0.2	0.2	0.1	0.1	0.2	0.3	0.6	0.8	2.1	3.2	5.5	3.0	0.8	1.8	0.4	0.3	0.3	0.2	0.2	0.91	5.53	
17-Feb	0.4	0.5	0.6	Z	0.1	0.2	0.3	0.2	0.9	2.5	0.6	0.2	0.8	1.7	0.6	2.0	2.5	0.2	0.1	0.2	0.2	0.0	0.1	0.0	0.65	2.48	
18-Feb	0.1	0.0	0.0	Z	0.4	0.2	0.2	0.2	0.2	0.3	0.0	0.0	0.3	0.6	0.7	0.5	0.4	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.22	0.69	
19-Feb	0.1	0.2	0.1	Z	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	3.9	0.8	0.5	0.3	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.34	3.92	
20-Feb	0.0	0.1	0.1	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.4	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.10	0.42	
21-Feb	0.0	0.1	0.1	Z	0.0	0.2	0.2	0.1	0.2	0.1	0.1	0.4	0.8	0.5	0.5	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.18	0.78	
22-Feb	0.0	0.1	0.0	Z	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.7	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.10	0.66	
23-Feb	0.0	0.0	0.1	Z	0.0	0.0	0.1	0.1	0.0	0.1	0.7	0.8	0.7	0.4	0.2	0.2	0.2	0.2	1.0	0.2	0.1	0.1	0.1	0.1	0.24	0.98	
24-Feb	0.2	0.2	0.1	Z	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.11	0.24	
25-Feb	0.0	0.0	0.1	Z	0.0	0.0	0.2	0.1	0.2	0.2	0.6	0.5	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.11	0.57	
26-Feb	0.0	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.01	0.06	
27-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.6	0.5	0.2	0.0	0.0	0.0	0.2	0.2	0.1	0.0	0.1	0.10	0.65	
28-Feb	0.0	0.1	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.6	1.1	0.1	0.8	0.8	0.6	1.2	0.6	0.5	1.5	3.1	3.0	1.4	0.68	3.09	
		0.48	0.78	0.90	--	0.99	0.87	0.83	0.51	0.44	0.65	1.19	1.15	0.91	1.97	2.26	2.27	1.60	1.38	1.52	1.26	0.84	1.15	0.94	0.76	Diurnal Average	
		7.23	11.70	12.24	--	16.52	18.09	16.84	7.81	4.02	8.27	13.50	11.10	8.74	8.88	16.47	18.65	9.10	14.64	12.33	11.68	9.06	10.57	12.30	14.21	Diurnal Maximum	
Z - zerospan		C - Calibration																									
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr 172 ppb										24-hr 48 ppb															



WCAS - Hinton
Summary of Hourly Averages

Hydrogen Sulphide (H2S) - ppb
February 2017

Maximum Value: 5.16 ppb on Feb 27 08:00 Maximum Daily Average: 1.62 ppb on Feb 27																			Hours in Service: 672 Hours of Data: 635																														
Minimum Value: 0 ppb on Feb 14 01:00 Minimum Daily Average: 0.01 ppb on Feb 20 Maximum Diurnal Average: 0.69 ppb at hour 10 Minimum Diurnal Average: 0.11 ppb at hour 14 Monthly Average: 0.304 ppb Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.7 P ₉₉ = 3.0																			Hours of Missing Data: 37 Hours of Calibration: 37 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-Feb	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	0.18	0.38																						
2-Feb	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	0.23	0.36																						
3-Feb	0	0	0	Z	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.21	1.20																						
4-Feb	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	0.12	0.17																						
5-Feb	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	0.11	0.19																						
6-Feb	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	0.15	0.26																						
7-Feb	0	0	0	Z	0	0	0	0	0	0	1	1	0	0	C	C	C	C	C	C	C	C	C	C	1	--	0.81																						
8-Feb	0	0	1	Z	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.31	0.87																						
9-Feb	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	0.17	0.40																						
10-Feb	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.17	0.61																						
11-Feb	0	0	0	Z	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.40	1.11																						
12-Feb	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0.29	0.61																						
13-Feb	0	1	1	Z	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0.25	0.81																						
14-Feb	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	0.14	0.42																						
15-Feb	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	0.11	0.34																						
16-Feb	0	0	0	Z	0	0	0	1	3	5	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0.60	4.62																						
17-Feb	0	1	0	Z	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.28	0.96																						
18-Feb	0	0	0	Z	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.19	1.40																						
19-Feb	0	0	0	Z	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.23	1.00																						
20-Feb	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	0.01	0.04																						
21-Feb	0	1	2	Z	2	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.42	1.80																						
22-Feb	0	0	0	Z	0	0	0	1	1	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0.32	1.41																						
23-Feb	0	0	0	Z	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.22	1.44																						
24-Feb	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	0.03	0.12																						
25-Feb	0	1	0	Z	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.36	1.30																						
26-Feb	1	1	1	Z	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.22	1.09																						
27-Feb	2	2	4	Z	3	1	3	5	3	4	3	1	0	0	0	0	0	0	2	1	0	0	1	1	1	1.62	5.16																						
28-Feb	1	0	0	Z	1	1	2	1	2	2	3	2	0	0	0	0	0	0	0	0	0	1	1	0	0	0.82	3.08																						
																								0.25	0.31	0.40	--	0.47	0.32	0.51	0.61	0.62	0.69	0.57	0.33	0.16	0.11	0.11	0.11	0.13	0.12	0.21	0.20	0.16	0.16	0.21	0.19	Diurnal Average	
																								1.55	1.78	3.97	--	2.92	1.38	3.36	5.16	2.77	4.62	3.17	1.54	0.51	0.29	0.44	0.61	0.44	0.46	1.57	0.88	0.60	0.70	1.03	0.75	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

Ozone (O₃) - ppb
February 2017

Maximum Value: 47.21 ppb on Feb 17 15:00		Maximum Daily Average: 42.26 ppb on Feb 12		Hours in Service: 672																									
Minimum Value: 0.4 ppb on Feb 21 08:00		Minimum Daily Average: 11.12 ppb on Feb 7		Hours of Data: 640																									
Maximum Diurnal Average: 38.08 ppb at hour 15		Minimum Diurnal Average: 17.05 ppb at hour 8		Hours of Missing Data: 32																									
Monthly Average: 26.352 ppb		Percentiles: P ₁ = 0.9 P ₁₀ = 7.3 Q ₁ = 15.8 Median = 28.9 O ₃ = 36.9 P ₉₀ = 41.5 P ₉₉ = 45.4		Hours of Calibration: 32																									
				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-Feb	34.8	34.7	34.8	Z	32.9	30.4	27.4	21.3	21.4	18.2	21.8	32.0	39.1	40.9	40.5	39.1	39.2	37.0	32.2	26.8	27.9	20.8	20.1	15.6	29.94	40.90			
2-Feb	11.2	10.7	9.8	Z	19.7	20.3	20.4	20.0	18.1	22.1	27.3	29.7	32.5	32.9	34.5	33.7	33.8	33.7	17.5	3.4	15.8	15.6	15.7	15.7	21.48	34.51			
3-Feb	15.6	14.1	13.6	Z	15.3	9.4	6.1	7.4	6.2	4.2	5.0	11.7	22.4	29.8	33.0	33.0	31.5	32.1	32.2	31.5	30.5	30.1	30.2	30.7	20.68	33.01			
4-Feb	31.6	32.2	32.0	Z	31.8	31.9	31.1	31.5	28.5	28.0	30.1	30.6	35.5	36.0	37.4	36.5	34.9	31.7	29.4	22.3	22.3	27.9	21.8	21.9	30.31	37.42			
5-Feb	23.1	26.2	26.9	Z	26.4	31.4	28.1	28.7	24.8	29.8	31.7	32.5	34.3	34.7	35.1	35.8	35.5	32.9	30.0	30.1	31.8	34.4	34.0	32.3	30.90	35.84			
6-Feb	31.6	28.9	28.0	Z	29.8	28.5	24.4	23.1	25.9	28.4	30.6	31.0	30.9	32.8	32.6	30.4	29.0	27.7	26.9	24.1	12.4	6.7	13.5	11.8	25.61	32.76			
7-Feb	9.8	13.1	11.9	Z	12.2	10.0	3.7	3.4	3.9	10.7	12.9	19.1	22.3	26.6	C	C	C	C	10.4	8.8	6.1	6.6	9.5	10.4	11.12	26.58			
8-Feb	7.7	11.5	13.0	Z	16.6	20.6	18.8	15.6	16.0	19.4	23.4	29.7	32.8	34.8	36.9	37.6	39.9	38.8	32.3	4.1	1.9	2.9	2.5	4.1	20.05	39.91			
9-Feb	1.4	5.9	9.0	Z	8.3	3.4	9.4	11.3	1.6	7.3	22.7	29.6	36.0	38.1	36.1	36.3	33.1	30.3	29.0	28.8	27.8	25.0	25.1	20.0	20.66	38.11			
10-Feb	19.4	14.7	9.8	Z	6.4	4.6	2.0	0.4	1.6	7.1	9.1	11.9	17.7	22.5	36.8	37.7	40.5	37.8	41.1	39.5	34.2	13.3	30.0	39.4	20.76	41.12			
11-Feb	36.4	39.2	35.3	Z	28.1	23.6	14.0	0.9	0.8	7.6	37.2	40.9	42.9	43.1	43.7	43.6	44.4	40.8	38.4	42.4	39.4	40.4	38.1	36.9	32.96	44.42			
12-Feb	41.5	38.1	38.9	Z	38.4	36.7	38.6	41.7	42.1	42.2	43.1	43.4	46.0	44.7	45.4	46.4	43.5	45.1	42.2	42.5	45.2	42.9	38.8	44.7	42.26	46.43			
13-Feb	42.2	39.0	37.4	Z	34.6	39.5	40.9	43.4	41.5	42.3	42.4	43.7	41.2	42.8	41.2	41.9	39.9	33.9	30.4	37.5	40.8	40.9	40.3	40.1	43.73	40.01	43.73		
14-Feb	38.8	39.4	39.7	Z	36.1	37.3	36.3	34.1	25.1	27.5	33.8	36.4	39.5	42.0	41.3	41.4	42.7	39.8	39.8	39.7	44.9	38.5	43.6	39.8	38.17	44.93			
15-Feb	44.6	31.5	18.4	Z	20.4	25.6	23.4	28.2	34.2	32.9	31.1	36.4	37.1	34.3	34.9	35.1	35.4	38.3	37.0	33.5	36.8	28.6	17.7	13.4	30.81	44.59			
16-Feb	16.8	12.4	8.6	Z	2.9	1.7	2.4	5.1	8.9	8.0	21.0	31.1	32.1	32.3	36.4	37.6	40.0	43.3	37.1	27.6	30.8	34.7	30.1	24.6	22.85	43.25			
17-Feb	40.9	39.6	37.9	Z	17.2	8.9	1.5	2.1	16.2	38.5	43.1	41.6	46.8	46.7	47.2	45.7	45.0	42.7	16.5	24.4	6.8	8.5	6.7	9.4	27.56	47.21			
18-Feb	1.9	2.3	3.7	Z	1.6	1.1	1.0	0.9	1.6	5.3	13.3	22.9	33.3	36.4	36.1	33.7	31.5	26.4	17.3	13.2	18.0	16.2	10.5	14.4	14.90	36.45			
19-Feb	11.3	16.2	14.7	Z	15.3	21.6	19.6	14.0	14.1	15.9	16.5	21.2	28.4	35.0	36.0	35.1	34.2	32.2	12.3	17.5	25.2	23.8	25.1	28.0	22.31	35.99			
20-Feb	24.8	25.5	27.5	Z	24.8	25.7	23.4	26.8	25.4	26.8	27.7	29.0	29.7	29.7	28.9	25.2	24.1	23.8	22.1	21.5	19.8	17.5	17.2	18.3	24.58	29.69			
21-Feb	15.2	9.7	6.5	Z	3.9	1.0	0.5	0.4	1.0	6.8	12.0	19.0	24.7	27.1	27.7	24.0	24.9	21.9	24.2	29.6	25.8	20.4	26.3	30.5	16.65	30.52			
22-Feb	26.1	24.8	16.8	Z	11.3	3.9	5.0	5.3	11.0	15.4	20.6	29.6	35.4	38.3	39.5	38.5	37.4	34.5	32.6	25.7	21.5	23.4	15.8	16.3	22.99	39.50			
23-Feb	25.0	26.2	15.2	Z	20.0	15.3	9.4	17.4	19.2	21.1	29.3	33.0	36.6	39.7	40.1	40.6	40.7	37.6	29.3	29.5	14.5	16.9	22.4	24.8	26.25	40.69			
24-Feb	28.2	26.3	28.5	Z	30.3	33.0	37.4	38.9	36.3	35.1	33.5	33.7	34.7	35.0	34.7	34.9	34.8	32.9	28.8	17.6	15.1	7.3	7.1	12.5	28.54	38.86			
25-Feb	14.9	12.0	13.5	Z	11.3	5.0	0.9	0.8	2.5	30.3	41.5	41.9	43.3	44.1	43.3	43.0	40.8	37.8	39.9	43.2	40.8	41.9	40.3	39.3	29.23	44.14			
26-Feb	36.3	36.8	37.4	Z	37.1	41.1	40.7	27.7	37.3	42.7	44.0	43.6	43.3	43.7	44.2	44.3	43.6	42.2	31.3	13.5	14.5	13.3	11.5	17.3	34.23	44.33			
27-Feb	19.3	21.2	21.1	Z	17.8	13.2	16.8	13.9	8.9	20.1	31.2	36.0	37.3	38.9	41.7	40.9	38.8	34.0	28.9	10.7	3.2	7.4	11.3	8.4	22.65	41.67			
28-Feb	5.2	6.4	6.8	Z	14.8	14.0	9.1	13.0	14.3	12.7	26.2	33.3	36.4	40.3	41.3	41.3	40.8	40.1	38.8	35.3	38.6	36.0	33.9	36.6	26.74	41.34			
		23.41	22.81	21.31	--	20.19	19.24	17.58	17.05	17.45	21.65	27.22	31.19	34.81	36.48	38.08	37.51	37.11	35.38	29.69	25.62	24.60	22.92	22.85	23.49	Diurnal Average			
		44.59	39.56	39.74	--	38.41	41.06	40.89	43.37	42.11	42.65	44.05	43.59	46.76	46.65	47.21	46.43	44.96	45.06	42.22	43.18	45.18	42.85	43.64	44.74	Diurnal Maximum			
Z - zerospan		C - Calibration																											
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr 82.5 ppb		24-hr -- ppb																									



WCAS - Hinton
Eight Hour Running Averages

Ozone (O₃) - ppb
February 2017

Maximum Value: 44.83 ppb on Feb 17 18:00 Maximum Daily Average: 41.58 ppb on Feb 12																							Hours in Service: 672 Hours of Data: 665			
Minimum Value: 1.7 ppb on Feb 18 09:00 Minimum Daily Average: 13.93 ppb on Feb 18 Maximum Diurnal Average: 35.28 ppb at hour 19 Minimum Diurnal Average: 19.21 ppb at hour 10 Monthly Average: 26.175 ppb Percentiles: P₁ = 3.5 P₁₀ = 10.1 O₁ = 17.6 Median = 27.4 O₃ = 34.2 P₉₀ = 39.8 P₉₉ = 44.3																							Hours of Missing Data: 7 Hours of Calibration: 7 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-Feb	36.8	36.4	36.3	36.2	35.2	34.0	32.7	30.9	29.0	26.6	24.8	25.7	26.5	27.8	29.4	31.6	33.9	36.2	37.5	36.8	35.4	32.9	30.4	27.4	32.10	37.49
2-Feb	23.9	20.6	17.8	16.6	15.4	15.3	15.4	16.0	17.0	18.6	21.1	22.2	23.8	25.4	27.1	28.9	30.8	32.3	31.0	27.7	25.7	23.5	21.2	18.9	22.35	32.26
3-Feb	16.6	14.2	13.7	15.2	15.1	14.2	12.8	11.6	10.3	8.9	7.7	8.2	9.1	11.6	15.0	18.2	21.3	24.8	28.2	30.7	31.7	31.7	31.4	31.1	18.05	31.73
4-Feb	31.1	31.1	31.1	31.1	31.2	31.5	31.6	31.7	31.3	30.7	30.4	30.4	30.9	31.4	32.2	32.8	33.6	34.1	34.0	33.0	31.3	30.3	28.4	26.5	31.33	34.10
5-Feb	25.1	24.4	24.1	24.3	24.9	25.4	26.3	27.3	27.5	28.0	28.7	29.2	30.2	30.6	31.5	32.3	33.7	34.1	33.9	33.6	33.2	33.2	33.1	32.6	29.46	34.07
6-Feb	32.1	31.6	31.4	31.6	31.3	30.5	29.1	27.8	27.0	26.9	27.3	27.7	27.9	28.4	29.4	30.3	30.7	30.6	30.2	29.3	27.0	23.7	21.3	19.0	28.41	32.13
7-Feb	16.6	14.8	12.9	11.3	11.3	11.8	10.4	9.2	8.3	8.0	8.1	9.5	10.8	12.8	14.1	15.9	C	C	C	C	C	C	C	8.6	--	16.63
8-Feb	8.5	8.9	9.2	9.2	10.8	12.8	14.1	14.8	16.0	17.1	18.6	20.0	22.0	23.8	26.1	28.8	31.8	34.3	35.4	32.2	28.3	24.3	20.0	15.8	20.12	35.37
9-Feb	11.0	6.9	4.0	3.9	4.9	4.9	5.9	6.9	7.0	7.2	9.1	11.7	15.1	19.5	22.8	26.0	29.9	32.8	33.6	33.5	32.4	30.8	29.4	27.4	17.35	33.56
10-Feb	25.7	23.7	21.3	20.3	17.2	14.3	11.0	8.2	5.6	4.5	4.4	5.4	6.8	9.0	13.4	18.0	22.9	26.7	30.7	34.2	36.3	35.1	34.3	34.5	19.31	36.26
11-Feb	34.0	34.1	33.4	32.5	31.7	33.1	30.8	25.3	20.3	15.8	16.0	19.1	21.0	23.4	27.2	32.5	37.9	42.1	42.2	42.4	42.0	41.6	40.9	40.1	31.65	42.41
12-Feb	39.7	39.4	39.5	39.1	38.9	38.4	38.4	39.1	39.2	39.8	40.4	40.8	41.7	42.7	43.6	44.2	44.3	44.7	44.6	44.5	44.4	44.1	43.3	43.1	41.58	44.70
13-Feb	42.9	42.2	41.6	41.4	39.9	39.5	39.8	39.6	39.5	39.9	40.7	40.9	42.0	42.2	42.5	42.2	42.2	41.9	40.9	39.4	38.6	38.6	38.3	38.2	40.62	42.94
14-Feb	37.8	37.7	38.5	39.6	39.4	38.9	38.3	37.4	35.4	33.7	32.9	33.3	33.8	34.4	35.0	35.9	38.1	39.6	40.4	40.8	41.5	41.0	41.3	41.1	37.74	41.47
15-Feb	41.4	40.3	37.6	37.3	33.8	32.0	29.1	27.4	26.0	26.2	28.0	29.0	31.1	32.2	33.6	34.5	34.6	35.3	36.1	35.7	35.7	35.0	32.8	30.1	33.12	41.37
16-Feb	27.8	24.5	21.0	19.2	14.3	10.5	8.3	7.1	6.0	5.4	7.1	10.1	13.8	17.6	21.9	25.9	29.8	34.2	36.2	35.8	35.6	35.9	35.2	33.5	21.54	36.24
17-Feb	33.6	33.2	33.3	34.1	32.1	28.4	24.4	21.2	17.6	17.5	18.2	21.1	24.8	29.5	35.3	40.7	44.3	44.8	41.5	39.4	34.4	29.6	24.5	20.0	30.15	44.83
18-Feb	14.6	9.6	8.0	5.6	4.9	3.8	3.0	1.8	1.7	2.2	3.5	6.0	9.9	14.3	18.7	22.8	26.6	29.2	29.7	28.5	26.6	24.1	20.9	18.4	13.93	29.70
19-Feb	15.9	14.6	14.3	14.5	14.1	14.9	16.2	16.1	16.5	16.5	16.7	17.3	18.9	20.6	22.7	25.3	27.8	29.8	29.3	28.8	28.4	27.0	25.7	24.8	20.69	29.83
20-Feb	23.6	22.8	24.7	25.7	25.6	25.9	25.7	25.5	25.6	25.8	25.8	26.2	26.8	27.3	28.0	27.8	27.7	27.3	26.6	25.6	24.4	22.9	21.4	20.6	25.38	28.01
21-Feb	19.4	17.7	15.7	14.9	12.6	10.3	7.9	5.3	3.3	2.9	3.7	5.6	8.2	11.4	14.9	17.8	20.8	22.7	24.2	25.5	25.7	24.8	24.6	25.4	15.21	25.65
22-Feb	25.6	25.9	25.0	24.4	22.3	19.9	16.9	13.3	11.2	9.8	10.4	12.8	15.8	20.1	24.4	28.5	31.8	34.2	35.7	35.2	33.5	31.6	28.7	25.9	23.46	35.72
23-Feb	24.4	23.3	21.2	20.5	20.3	19.1	18.2	18.4	17.6	16.8	18.8	20.6	22.7	25.7	29.5	32.4	35.1	37.2	37.2	36.7	34.0	31.1	28.9	26.9	25.70	37.19
24-Feb	25.4	24.0	23.9	23.1	25.4	27.7	29.8	31.8	33.0	34.2	34.9	34.8	35.3	35.6	35.2	34.7	34.5	34.3	33.7	31.7	29.2	25.8	22.3	19.5	29.98	35.55
25-Feb	17.0	14.4	12.5	11.8	11.2	10.9	10.0	8.3	6.6	9.2	13.2	16.8	20.8	25.7	31.0	36.2	41.0	42.0	41.8	41.9	41.6	41.3	41.0	40.5	24.44	41.97
26-Feb	39.9	39.8	39.5	39.0	38.4	38.3	38.4	36.7	36.9	37.7	38.7	39.3	40.0	40.4	40.8	42.9	43.7	43.6	42.0	38.3	34.6	30.9	26.8	23.4	37.91	43.68
27-Feb	20.4	17.7	16.5	16.9	17.4	17.4	18.1	17.6	16.1	16.0	17.4	19.8	22.2	25.4	28.5	31.9	35.6	37.3	37.1	33.9	29.6	25.7	21.9	17.8	23.25	37.34
28-Feb	13.6	10.2	7.4	7.0	8.6	9.5	9.2	9.9	11.2	12.1	14.8	17.1	19.9	23.1	27.2	30.7	34.0	37.5	39.0	39.3	39.6	39.0	38.1	37.5	22.32	39.57
25.88 24.43 23.40 23.07 22.44 21.90 21.13 20.23 19.37 19.21 20.05 21.45 23.27 25.43 27.89 30.35 33.28 34.95 35.28 34.61 33.36 31.69 29.85 27.46																							Diurnal Average			
42.94 42.18 41.58 41.44 39.93 39.45 39.76 39.56 39.47 39.94 40.66 40.88 42.02 42.73 43.57 44.16 44.34 44.83 44.59 44.47 44.37 44.14 43.31 43.10																							Diurnal Maximum			
C - Calibration																										



WCAS - Hinton
Summary of Hourly Averages

Nitrogen Oxide (NO) - ppb
February 2017

Maximum Value: 78.79 ppb on Feb 11 09:00		Maximum Daily Average: 10.87 ppb on Feb 18		Hours in Service: 672																																													
Minimum Value: 0.0 ppb on Feb 1 01:00		Minimum Daily Average: 0.49 ppb on Feb 1		Hours of Data: 638																																													
Maximum Diurnal Average: 9.93 ppb at hour 9		Minimum Diurnal Average: 0.96 ppb at hour 2		Hours of Missing Data: 34																																													
Monthly Average: 3.172 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.3 Median = 1.0 Q ₃ = 2.6 P ₉₀ = 7.8 P ₉₉ = 30.3		Hours of Calibration: 34																																													
				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-Feb	0.0	0.0	0.1	Z	0.0	0.4	1.1	0.4	1.4	2.8	1.5	1.1	0.3	0.0	0.2	0.4	0.4	0.5	0.2	0.0	0.3	0.1	0.0	0.2	0.49	2.81																							
2-Feb	1.1	0.6	1.3	Z	0.0	0.2	0.0	0.1	0.9	1.3	2.0	2.8	1.9	1.8	1.1	1.3	0.6	0.0	3.0	26.5	0.1	0.0	0.0	0.0	2.02	26.48																							
3-Feb	0.0	0.0	0.1	Z	0.0	0.8	2.6	4.2	4.1	14.2	22.3	7.2	2.9	1.4	1.3	1.4	2.3	1.6	0.9	1.1	0.8	0.2	0.1	0.3	3.03	22.32																							
4-Feb	0.7	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.7	1.1	2.3	1.3	2.6	0.9	0.9	1.8	3.1	1.5	0.6	0.2	0.1	0.3	0.1	0.80	3.08																							
5-Feb	0.0	0.0	0.1	Z	0.9	0.1	0.1	0.0	0.6	1.0	1.4	1.8	2.0	1.5	1.7	1.5	1.8	2.2	1.3	0.7	0.6	0.5	0.5	0.1	0.89	2.19																							
6-Feb	0.2	0.2	0.3	Z	0.4	1.0	3.6	3.7	2.5	2.2	2.3	2.3	3.4	2.2	1.6	2.7	2.3	2.8	1.2	0.5	1.0	3.4	0.7	0.6	1.78	3.65																							
7-Feb	1.4	0.6	1.4	Z	0.9	1.3	12.8	9.7	14.6	11.9	20.9	16.8	11.6	6.4	C	C	C	C	C	C	12.2	7.2	4.8	6.0	--	20.89																							
8-Feb	7.1	0.3	0.1	Z	0.1	0.0	0.1	0.9	1.5	3.1	4.2	3.0	2.7	2.2	1.9	2.0	0.8	0.6	0.2	23.1	15.6	14.7	12.6	10.7	4.67	23.07																							
9-Feb	15.7	10.0	5.7	Z	3.4	4.8	4.5	4.5	15.8	16.0	7.2	5.2	2.9	2.7	3.1	2.4	2.3	1.5	1.5	0.4	0.2	0.5	0.2	2.3	4.91	16.03																							
10-Feb	0.4	0.4	0.7	Z	1.1	1.5	14.9	32.9	18.7	5.3	8.1	7.8	7.6	7.8	4.7	3.3	1.2	0.7	0.1	0.2	0.2	5.4	0.3	0.4	5.39	32.92																							
11-Feb	0.0	0.0	0.1	Z	0.5	2.1	24.7	52.9	78.8	38.1	2.7	2.9	2.4	2.6	1.8	1.2	0.5	0.5	0.7	0.2	0.5	0.6	0.9	1.0	9.38	78.79																							
12-Feb	0.5	0.6	0.6	Z	1.2	1.3	1.4	0.6	0.3	0.4	0.8	1.4	1.0	1.7	1.3	0.6	1.0	0.3	0.2	0.1	0.1	0.1	0.2	0.1	0.69	1.74																							
13-Feb	0.1	0.2	0.3	Z	0.4	0.1	0.3	0.7	0.3	0.4	1.0	0.7	0.9	2.1	1.3	1.0	0.5	0.3	0.2	0.3	0.3	0.2	0.1	0.1	0.50	2.10																							
14-Feb	0.1	0.0	0.0	Z	0.0	0.1	0.0	0.9	1.5	2.5	1.4	1.4	2.5	1.4	1.1	1.5	1.0	1.1	0.7	0.8	0.2	0.3	0.3	0.6	0.84	2.46																							
15-Feb	0.1	0.3	2.9	Z	1.8	3.1	6.3	2.1	0.8	1.5	3.2	1.1	0.7	3.0	2.2	1.8	1.1	0.1	0.2	1.6	0.5	2.5	3.6	2.0	1.85	6.34																							
16-Feb	0.9	1.4	7.3	Z	5.9	13.6	23.8	11.6	7.1	15.9	9.2	1.8	1.5	2.0	1.5	2.0	0.8	0.2	0.8	1.4	3.4	0.4	0.1	1.5	4.96	23.84																							
17-Feb	0.1	0.1	0.0	Z	4.9	13.6	18.6	13.4	22.5	0.5	0.2	0.2	0.6	1.1	0.8	0.9	0.8	0.3	3.5	0.7	7.0	6.3	7.8	5.6	4.76	22.51																							
18-Feb	9.9	7.6	5.6	Z	47.8	35.8	32.1	28.2	22.1	30.7	9.4	5.9	1.5	1.0	1.3	1.1	0.8	1.1	3.1	2.9	0.3	0.6	0.6	0.5	10.87	47.85																							
19-Feb	0.1	0.0	0.0	Z	0.1	0.1	0.0	0.1	0.6	1.7	3.0	2.1	2.0	1.3	0.6	0.7	0.3	0.2	3.9	1.3	0.3	1.3	0.5	0.4	0.90	3.94																							
20-Feb	0.9	0.4	0.6	Z	0.4	0.9	0.8	2.6	3.6	1.5	1.6	0.9	0.8	0.9	1.1	1.6	1.3	1.3	0.9	0.5	0.6	1.1	1.9	0.4	1.15	3.59																							
21-Feb	0.4	0.1	0.8	Z	2.1	24.1	22.7	15.3	24.1	6.7	5.5	3.5	2.8	2.7	1.8	2.6	1.7	2.0	0.8	2.1	0.4	0.6	1.3	0.2	5.40	24.13																							
22-Feb	0.2	0.1	0.3	Z	0.6	14.5	6.6	5.6	2.3	4.0	4.7	2.5	2.8	0.6	0.3	0.5	1.8	0.9	0.1	0.6	0.5	0.1	1.5	0.6	2.24	14.46																							
23-Feb	0.1	0.1	0.2	Z	0.0	0.0	2.6	0.1	0.8	2.1	2.6	3.0	0.9	0.6	1.3	0.9	0.0	0.9	4.1	0.6	9.0	1.3	0.2	0.0	1.37	9.03																							
24-Feb	0.0	0.0	0.0	Z	0.0	0.5	0.1	0.0	0.3	0.2	0.4	0.9	1.2	2.0	0.7	1.3	1.8	1.5	1.1	2.4	1.2	2.9	0.8	0.8	0.88	2.92																							
25-Feb	0.1	0.1	0.0	Z	0.1	7.0	15.7	23.3	30.4	3.6	0.7	0.8	0.2	0.0	0.1	0.0	0.2	0.5	0.1	0.4	0.3	0.0	0.0	0.0	3.63	30.43																							
26-Feb	0.0	0.0	0.0	Z	0.0	0.0	0.0	1.8	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.9	9.2	4.5	2.0	1.5	0.1	0.90	9.17																							
27-Feb	0.1	0.1	0.1	Z	0.8	0.3	0.2	3.8	18.1	4.5	1.5	1.8	3.4	3.1	1.8	2.0	2.1	1.8	3.1	18.4	19.7	7.8	1.2	1.3	4.21	19.69																							
28-Feb	3.6	3.9	1.8	Z	0.1	0.4	1.3	0.8	4.1	20.0	16.4	5.5	5.7	4.6	1.7	1.3	1.1	1.1	0.4	1.8	0.5	0.4	0.5	0.3	3.37	20.02																							
																								1.57	0.96	1.09	--	2.63	4.56	7.04	7.86	9.93	6.90	4.84	3.09	2.41	2.12	1.38	1.37	1.12	1.00	1.28	3.64	2.87	2.16	1.52	1.29	Diurnal Average	
																								15.73	9.96	7.25	--	47.85	35.83	32.06	52.92	78.79	38.11	22.32	16.80	11.62	7.83	4.71	3.34	2.33	3.08	4.10	26.48	19.69	14.66	12.55	10.71	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
February 2017

Maximum Value: 44.85 ppb on Feb 11 08:00 Maximum Daily Average: 16.12 ppb on Feb 9																							Hours in Service: 672			
Minimum Value: 0.6 ppb on Feb 26 15:00 Minimum Daily Average: 4.58 ppb on Feb 20																							Hours of Data: 638			
Maximum Diurnal Average: 13.71 ppb at hour 20 Minimum Diurnal Average: 4.09 ppb at hour 15																							Hours of Missing Data: 34			
Monthly Average: 9.362 ppb Percentiles: P₁ = 0.7 P₁₀ = 2.7 Q₁ = 4.4 Median = 7.1 Q₃ = 11.9 P₉₀ = 19.7 P₉₉ = 35.0																							Hours of Calibration: 34			
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-Feb	1.7	1.3	1.6	Z	1.0	3.9	9.6	11.0	7.8	11.3	7.7	3.9	1.6	0.6	1.0	2.3	2.9	6.2	7.9	10.4	8.4	10.0	6.3	9.4	5.55	11.26
2-Feb	13.1	12.5	14.2	Z	5.0	5.7	6.1	8.1	11.4	7.0	6.2	6.7	4.6	4.9	4.1	6.3	5.3	3.0	21.2	37.4	14.9	12.2	11.9	11.1	10.11	37.43
3-Feb	10.9	11.1	12.0	Z	8.3	14.3	17.8	15.9	16.1	24.8	25.3	17.1	9.4	5.2	4.5	5.6	7.7	6.4	5.5	5.3	5.9	5.6	4.9	4.8	10.62	25.35
4-Feb	4.4	3.5	3.3	Z	3.4	2.9	2.6	2.6	4.6	5.6	5.3	7.2	4.3	4.2	2.9	3.3	5.7	9.4	10.7	13.9	12.2	3.4	8.4	6.0	5.63	13.95
5-Feb	3.5	6.4	4.9	Z	7.3	4.5	5.4	4.3	7.5	4.9	4.3	3.8	3.3	3.1	3.1	3.3	4.1	7.1	9.3	9.2	7.3	4.1	4.4	5.5	5.24	9.26
6-Feb	5.6	7.5	8.3	Z	7.2	8.2	12.6	14.7	11.4	8.7	5.9	5.6	6.7	6.2	5.2	6.1	6.6	8.0	8.1	9.8	22.5	28.9	19.1	19.0	10.51	28.88
7-Feb	20.1	14.8	16.9	Z	12.9	15.3	27.7	25.8	26.1	15.6	15.1	12.6	10.3	6.9	C	C	C	C	C	C	32.5	30.0	23.0	21.7	--	32.48
8-Feb	23.5	16.1	14.5	Z	11.1	7.5	9.1	12.5	13.5	9.3	7.4	5.8	4.9	4.5	4.7	5.7	4.3	5.6	10.8	39.6	35.0	30.2	29.4	30.5	14.59	39.63
9-Feb	34.8	29.1	25.9	Z	19.7	27.0	19.0	16.1	31.5	24.8	13.8	10.6	7.5	6.7	9.2	8.1	9.7	12.0	12.7	11.1	9.5	10.0	9.8	12.2	16.12	34.77
10-Feb	10.0	11.9	12.5	Z	12.7	14.6	18.3	20.0	16.7	10.3	11.9	11.0	9.8	9.2	10.0	9.1	6.5	9.1	4.7	6.1	7.9	21.7	7.6	5.2	11.16	21.66
11-Feb	4.4	1.2	7.0	Z	15.1	20.1	24.3	44.8	42.4	30.6	8.9	7.6	6.1	5.7	4.9	4.3	3.2	6.8	9.3	4.9	8.1	7.5	9.6	10.7	12.50	44.85
12-Feb	5.5	9.0	9.0	Z	10.4	11.9	9.8	5.9	4.8	5.6	5.4	5.4	3.2	4.7	4.3	2.7	6.0	3.6	6.5	5.9	2.6	5.6	9.4	3.6	6.11	11.86
13-Feb	5.4	8.0	10.5	Z	11.5	4.9	4.8	3.3	4.8	3.6	3.9	4.1	3.2	7.8	5.9	5.5	3.9	5.3	11.4	13.3	6.6	2.5	2.0	1.8	5.82	13.30
14-Feb	3.0	1.9	1.4	Z	3.9	3.0	3.0	6.2	10.5	10.1	5.0	6.3	7.6	6.5	10.5	12.1	7.6	11.4	10.7	10.5	4.7	10.3	4.1	6.1	6.79	12.09
15-Feb	3.0	12.7	15.0	Z	12.3	11.3	15.2	12.5	6.4	7.4	9.5	2.7	1.9	6.4	5.4	5.4	5.4	1.0	1.4	7.2	4.0	10.0	15.6	15.0	8.12	15.63
16-Feb	6.6	9.2	10.1	Z	12.3	14.9	16.5	11.7	12.3	19.6	13.5	4.5	3.4	3.9	3.8	6.3	4.0	1.2	7.1	15.0	10.0	7.9	10.2	11.5	9.37	19.59
17-Feb	2.7	1.8	2.1	Z	17.0	24.5	23.7	18.2	17.5	7.0	2.1	1.9	1.8	3.4	2.4	4.2	5.3	5.7	31.5	16.8	27.8	23.0	25.3	21.7	12.50	31.54
18-Feb	27.2	25.7	22.3	Z	25.3	21.5	19.7	17.9	14.4	19.3	14.1	9.8	4.3	3.7	4.2	5.8	7.5	11.2	19.1	19.8	12.1	12.6	15.3	15.7	15.16	27.17
19-Feb	11.7	6.1	6.7	Z	8.6	7.0	7.4	10.1	9.4	7.9	9.3	5.5	5.3	4.7	3.4	3.3	3.4	4.0	22.1	12.2	4.9	6.0	5.1	3.6	7.29	22.06
20-Feb	4.4	4.1	3.6	Z	4.1	4.8	4.9	4.8	6.3	4.4	3.6	2.2	1.9	2.0	2.4	3.8	4.3	4.8	6.0	5.9	6.2	8.3	7.5	5.0	4.58	8.33
21-Feb	6.2	7.9	9.3	Z	10.6	14.4	13.9	11.5	11.9	6.8	5.3	4.3	4.1	4.3	4.8	7.1	6.4	8.3	7.6	7.1	5.1	5.5	6.4	3.5	7.50	14.40
22-Feb	2.9	6.1	9.7	Z	14.5	19.8	17.0	16.5	9.1	11.9	11.1	5.5	5.0	2.4	1.3	2.6	5.8	6.3	4.0	8.9	12.6	9.0	15.1	13.3	9.14	19.78
23-Feb	6.4	5.3	11.1	Z	5.1	8.7	17.7	10.3	8.4	8.2	5.5	4.7	3.9	2.4	2.3	1.9	0.7	5.2	15.0	11.3	21.3	17.6	11.6	9.5	8.44	21.28
24-Feb	4.4	4.6	4.6	Z	3.9	5.1	2.4	2.1	3.2	2.0	1.8	2.1	2.0	2.6	1.7	2.7	3.0	4.0	7.2	15.8	15.8	21.4	20.0	10.6	6.22	21.45
25-Feb	6.6	10.3	7.8	Z	8.6	19.2	23.5	23.9	23.0	8.7	3.9	4.2	2.5	1.3	1.9	1.9	3.3	6.5	4.9	3.2	4.8	1.6	3.3	2.0	7.69	23.94
26-Feb	4.5	2.9	2.7	Z	2.1	1.2	1.5	13.4	3.3	1.4	0.8	0.7	0.6	0.6	0.6	0.6	1.3	2.1	12.2	30.1	27.5	24.1	21.2	10.7	7.21	30.10
27-Feb	6.3	7.2	7.0	Z	8.1	9.7	7.1	11.8	18.1	10.9	5.2	4.5	6.5	5.6	3.2	4.4	5.5	8.9	11.7	28.9	35.0	27.6	19.0	21.5	11.90	35.02
28-Feb	21.6	17.7	16.5	Z	5.6	8.0	14.0	10.7	9.9	16.6	15.3	8.1	8.0	4.1	2.9	3.0	3.3	5.2	6.4	10.6	6.0	8.4	10.4	7.8	9.57	21.60
9.29 9.14 9.66 -- 9.56 11.21 12.66 13.10 12.94 10.87 8.11 6.03 4.77 4.41 4.09 4.71 4.91 6.23 10.56 13.71 13.25 13.03 11.99 10.67																							Diurnal Average			
34.77 29.10 25.89 -- 25.29 26.98 27.74 44.85 42.45 30.63 25.35 17.05 10.25 9.15 10.45 12.09 9.72 12.00 31.54 39.63 35.03 30.19 29.42 30.52																							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
February 2017

Maximum Value: 121.02 ppb on Feb 11 09:00 Maximum Daily Average: 26.08 ppb on Feb 18																						Hours in Service: 672				
Minimum Value: 0.5 ppb on Feb 26 15:00 Minimum Daily Average: 5.78 ppb on Feb 20																						Hours of Data: 638				
Maximum Diurnal Average: 22.90 ppb at hour 9 Minimum Diurnal Average: 5.49 ppb at hour 15																						Hours of Missing Data: 34				
Monthly Average: 12.563 ppb Percentiles: P₁ = 0.7 P₁₀ = 3.1 Q₁ = 5.2 Median = 8.3 Q₃ = 14.1 P₉₀ = 29.3 P₉₉ = 61.9																						Hours of Calibration: 34				
																						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-Feb	1.6	1.3	1.6	Z	1.0	4.3	10.7	11.4	9.3	14.1	9.2	4.9	1.9	0.6	1.2	2.7	3.3	6.6	8.1	10.4	8.7	10.1	6.3	9.6	6.04	14.08
2-Feb	14.2	13.0	15.5	Z	5.0	5.9	6.1	8.3	12.3	8.4	8.2	9.4	6.5	6.7	5.1	7.5	5.8	3.0	24.2	63.8	14.9	12.2	11.9	11.1	12.12	63.76
3-Feb	10.9	11.1	12.1	Z	8.3	15.2	20.4	20.0	20.2	39.0	47.6	24.2	12.3	6.6	5.8	7.0	9.9	8.0	6.4	6.4	6.7	5.9	5.0	5.0	13.66	47.62
4-Feb	5.1	3.5	3.3	Z	3.4	2.9	2.5	2.5	4.7	6.3	6.4	9.5	5.5	6.8	3.8	4.2	7.5	12.5	12.2	14.6	12.4	3.4	8.7	6.0	6.43	14.57
5-Feb	3.6	6.4	4.9	Z	8.2	4.6	5.5	4.3	8.0	5.9	5.6	5.6	5.2	4.5	4.8	4.8	5.9	9.3	10.6	9.9	7.9	4.6	4.9	5.6	6.13	10.62
6-Feb	5.8	7.7	8.7	Z	7.7	9.1	16.2	18.3	13.9	10.8	8.2	7.9	10.1	8.3	6.8	8.8	8.9	10.8	9.3	10.2	23.5	32.3	19.8	19.6	12.29	32.26
7-Feb	21.6	15.4	18.3	Z	13.8	16.7	40.7	35.6	40.8	27.7	36.2	29.7	22.1	13.5	C	C	C	C	C	C	44.1	36.7	27.4	27.4	--	44.12
8-Feb	30.4	16.3	14.6	Z	11.3	7.5	9.2	13.5	15.1	12.5	11.6	8.8	7.7	6.7	6.7	7.7	5.1	6.2	11.0	62.8	50.7	44.9	42.1	41.3	19.30	62.75
9-Feb	50.6	39.2	31.7	Z	23.1	31.9	23.6	20.8	47.5	40.9	21.2	15.8	10.5	9.5	12.3	10.6	12.0	13.5	14.3	11.6	9.7	10.5	10.0	14.6	21.10	50.59
10-Feb	10.5	12.3	13.3	Z	13.9	16.2	33.3	52.9	35.5	15.6	20.0	18.9	17.5	17.0	14.8	12.5	7.7	9.9	4.9	6.4	8.1	27.1	8.0	5.6	16.60	52.92
11-Feb	4.4	1.2	7.1	Z	15.7	22.3	49.1	96.9	121.0	68.7	11.7	10.6	8.5	8.3	6.7	5.6	3.7	7.3	10.0	5.1	8.6	8.1	10.5	11.7	21.86	121.02
12-Feb	6.0	9.6	9.6	Z	11.6	13.3	11.2	6.5	5.1	6.0	6.2	6.8	4.2	6.5	5.6	3.3	7.0	3.9	6.7	6.1	2.7	5.7	9.6	3.7	6.83	13.26
13-Feb	5.5	8.3	10.8	Z	12.0	5.1	5.1	4.1	5.1	4.0	4.9	4.8	4.2	10.0	7.2	6.6	4.5	5.6	11.7	13.7	6.9	2.7	2.1	1.9	6.37	13.70
14-Feb	3.1	1.9	1.4	Z	4.0	3.1	3.0	7.1	12.0	12.6	6.5	7.8	10.1	8.0	11.6	13.7	8.6	12.6	11.5	11.4	4.9	10.6	4.5	6.7	7.68	13.68
15-Feb	3.1	13.0	18.0	Z	14.2	14.5	21.6	14.7	7.3	9.0	12.8	3.8	2.6	9.5	7.6	7.2	6.5	1.1	1.6	8.9	4.6	12.5	19.3	17.1	10.01	21.57
16-Feb	7.5	10.7	17.3	Z	18.2	28.5	40.4	23.4	19.4	35.5	22.8	6.3	5.0	5.9	5.3	8.4	4.8	1.4	7.9	16.5	13.4	8.3	10.4	13.1	14.36	40.36
17-Feb	2.8	1.9	2.2	Z	22.0	38.2	42.4	31.7	40.0	7.4	2.4	2.1	2.4	4.5	3.2	5.1	6.1	6.0	35.2	17.6	35.0	29.4	33.2	27.3	17.31	42.41
18-Feb	37.2	33.4	28.1	Z	73.1	57.4	51.7	46.2	36.6	50.1	23.6	15.8	5.9	4.7	5.5	6.9	8.3	12.3	22.3	22.8	12.5	13.3	16.0	16.3	26.08	73.06
19-Feb	11.8	6.2	6.7	Z	8.7	7.2	7.5	10.2	10.0	9.7	12.4	7.7	7.3	6.0	4.1	4.0	3.8	4.2	26.1	13.6	5.2	7.4	5.6	4.0	8.23	26.11
20-Feb	5.3	4.6	4.3	Z	4.5	5.6	5.7	7.5	9.9	6.0	5.3	3.1	2.6	2.9	3.5	5.5	5.6	6.2	6.9	6.4	6.8	9.5	9.5	5.4	5.78	9.95
21-Feb	6.6	8.0	10.2	Z	12.8	38.5	36.7	26.9	36.1	13.4	10.8	7.9	7.0	7.1	6.6	9.7	8.1	10.3	8.4	9.3	5.5	6.2	7.8	3.7	12.94	38.52
22-Feb	3.1	6.2	10.0	Z	15.2	34.3	23.6	22.2	11.4	16.0	15.8	8.0	7.9	3.0	1.7	3.1	7.6	7.3	4.1	9.5	13.1	9.1	16.7	13.9	11.42	34.29
23-Feb	6.6	5.4	11.4	Z	5.2	8.8	20.4	10.4	9.2	10.4	8.1	7.8	4.9	3.1	3.6	2.8	0.7	6.1	19.1	11.9	30.4	19.0	11.8	9.6	9.85	30.36
24-Feb	4.4	4.6	4.7	Z	3.9	5.6	2.5	2.1	3.5	2.2	2.2	3.0	3.1	4.7	2.4	4.1	4.9	5.5	8.4	18.4	17.1	24.5	20.9	11.5	7.14	24.48
25-Feb	6.6	10.4	7.9	Z	8.8	26.4	39.4	47.3	53.5	12.4	4.6	5.1	2.7	1.2	2.0	1.8	3.5	7.0	5.0	3.6	5.1	1.5	3.3	1.9	11.34	53.46
26-Feb	4.5	2.9	2.6	Z	2.1	1.1	1.4	15.2	3.4	1.6	0.9	0.7	0.5	0.6	0.5	0.5	1.4	2.3	13.2	39.4	32.2	26.3	22.8	10.9	8.13	39.37
27-Feb	6.5	7.3	7.1	Z	8.9	10.0	7.3	15.6	36.3	15.5	6.8	6.4	9.9	8.8	5.1	6.4	7.6	10.7	14.8	47.4	54.8	35.6	20.3	22.9	16.18	54.77
28-Feb	25.4	21.7	18.4	Z	5.7	8.4	15.4	11.6	14.0	36.8	31.8	13.7	13.8	8.7	4.7	4.4	4.5	6.3	6.9	12.4	6.5	8.9	11.0	8.1	13.00	36.75
																								Diurnal Average		
																								Diurnal Maximum		
10.88 10.12 10.78 -- 12.22 15.80 19.73 20.97 22.90 17.80 12.99 9.16 7.21 6.56 5.49 6.10 6.05 7.26 11.88 17.39 16.15 15.22 13.55 11.98																										
50.59 39.16 31.71 -- 73.06 57.36 51.75 96.89 121.02 68.71 47.62 29.65 22.13 17.02 14.79 13.68 12.03 13.53 35.16 63.76 54.77 44.94 42.06 41.32																										
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
February 2017

Maximum Value: 45.90 µg/m ³ on Feb 17 22:00		Maximum Daily Average: 21.90 µg/m ³ on Feb 10		Hours in Service: 672																						
Minimum Value: 0.0 µg/m ³ on Feb 1 15:00		Minimum Daily Average: 2.53 µg/m ³ on Feb 26		Hours of Data: 644																						
Maximum Diurnal Average: 11.93 µg/m ³ at hour 21		Minimum Diurnal Average: 5.16 µg/m ³ at hour 17		Hours of Missing Data: 28																						
Monthly Average: 9.131 µg/m ³		Percentiles: P ₁ = 0.0 P ₁₀ = 0.3 Q ₁ = 2.8 Median = 6.8 Q ₃ = 11.8 P ₉₀ = 22.4 P ₉₉ = 42.4		Hours of Calibration: 0																						
				Percent Operational Time: 95.8																						
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-Feb	5.4	1.6	6.3	7.3	5.3	3.2	1.6	5.7	6.8	5.0	4.5	4.6	4.8	0.4	0.0	5.9	0.1	15.6	29.2	41.6	42.8	42.7	43.1	29.1	13.03	43.07
2-Feb	35.3	31.4	32.2	25.3	17.9	16.3	14.4	11.9	13.1	6.8	6.7	14.0	3.9	0.0	5.1	13.4	9.8	5.0	8.0	31.2	31.1	22.3	8.0	6.5	15.40	35.30
3-Feb	9.5	2.2	13.2	11.7	8.0	7.3	15.4	35.1	42.5	29.6	31.0	24.1	16.3	0.0	0.6	1.6	4.9	0.0	0.0	5.0	4.6	5.3	4.0	11.33	42.52	
4-Feb	1.9	1.1	5.1	9.1	3.5	0.0	0.0	1.8	2.4	5.8	5.2	6.0	7.2	3.1	3.3	1.8	3.9	3.9	13.0	9.3	12.5	7.7	5.8	6.5	4.99	13.04
5-Feb	9.3	3.5	14.6	2.7	4.5	3.7	4.2	3.6	6.7	5.5	5.4	3.8	4.4	2.0	5.1	2.9	0.0	0.4	0.9	4.3	0.7	0.2	1.2	0.4	3.76	14.63
6-Feb	2.4	1.6	0.0	1.5	6.7	4.4	9.9	5.9	5.7	0.2	1.5	0.0	0.0	5.6	10.6	8.8	14.9	17.7	7.5	2.9	3.4	8.3	6.8	9.4	5.66	17.66
7-Feb	11.9	5.5	13.8	14.0	15.6	20.3	9.4	9.4	10.6	11.6	17.7	29.9	30.3	24.8	22.4	24.1	20.6	12.6	15.1	29.7	28.8	31.2	30.0	14.2	18.89	31.25
8-Feb	16.9	11.2	22.5	18.3	14.0	14.8	12.4	7.8	8.8	6.3	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	--	22.50
9-Feb	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF	M	M	14.6	16.4	20.6	15.3	23.3	31.7	35.3	44.0	37.0	22.5	25.0	26.9	--	43.98
10-Feb	25.4	26.5	34.2	37.6	39.5	35.9	35.5	35.9	31.8	31.3	34.8	33.1	19.5	20.8	21.0	11.4	4.6	0.0	0.0	0.0	0.0	17.8	19.6	9.4	21.90	39.49
11-Feb	0.0	1.1	0.0	0.6	2.5	5.1	4.8	7.3	7.8	14.5	17.8	20.7	16.7	10.3	8.2	10.2	3.2	1.3	8.1	9.7	7.0	10.2	13.8	13.6	8.10	20.65
12-Feb	11.0	10.2	10.2	6.8	15.9	16.1	15.4	15.1	8.1	4.0	10.3	7.7	13.2	12.7	9.4	6.0	3.6	6.9	5.6	5.1	4.1	7.0	10.9	11.5	9.45	16.07
13-Feb	3.4	7.3	15.5	14.4	10.1	18.6	10.7	6.7	4.8	4.9	7.4	9.6	8.4	7.6	13.1	6.4	2.0	0.0	3.8	7.6	10.7	1.5	0.5	0.7	7.33	18.60
14-Feb	5.5	7.0	0.0	0.0	2.8	1.4	0.0	2.7	0.1	2.0	9.9	8.5	8.0	3.3	4.6	7.9	10.1	11.1	7.4	9.5	7.6	9.3	8.0	6.9	5.57	11.08
15-Feb	0.0	0.0	2.9	12.6	40.4	18.7	9.4	2.5	7.2	7.5	11.5	7.9	4.6	5.8	7.2	6.2	4.6	3.9	0.0	0.4	1.9	0.5	7.1	8.0	7.11	40.43
16-Feb	7.8	3.7	8.0	9.3	9.2	9.9	4.6	6.5	4.2	9.6	13.3	7.5	0.7	1.3	3.5	1.9	5.4	0.0	1.1	8.4	12.5	5.5	1.1	5.7	5.87	13.34
17-Feb	10.0	8.4	0.1	1.3	0.3	5.9	17.7	15.0	15.9	15.6	4.7	1.9	2.2	6.3	1.6	2.4	2.3	0.9	17.6	30.6	41.0	45.9	38.6	30.0	13.17	45.90
18-Feb	30.1	26.1	23.3	22.8	29.9	27.2	24.6	16.1	12.5	18.8	25.9	18.1	6.5	0.9	0.7	0.3	2.7	7.0	7.1	14.8	12.0	9.9	7.8	12.1	14.88	30.07
19-Feb	8.9	9.6	10.5	17.0	20.0	10.5	9.0	6.6	12.3	11.6	8.9	7.4	10.6	9.0	4.9	2.0	1.6	0.9	8.8	12.0	5.3	3.1	6.4	4.9	8.42	20.01
20-Feb	0.0	2.1	7.7	5.7	4.3	8.7	6.2	5.3	10.1	10.6	9.0	7.9	7.6	6.2	10.9	6.8	3.8	7.2	5.8	14.1	12.7	14.4	16.2	14.8	8.25	16.22
21-Feb	6.5	7.0	14.4	16.8	15.1	9.7	8.9	AF	AF	37.8	23.1	14.5	12.8	12.3	10.2	2.4	4.5	6.0	8.9	7.0	7.8	7.8	4.1	2.3	10.90	37.76
22-Feb	5.1	8.1	6.9	8.5	6.8	5.9	6.4	4.5	3.8	6.8	6.2	6.3	2.7	2.8	1.5	0.0	4.1	6.9	6.0	5.5	10.7	7.5	8.3	13.3	6.03	13.30
23-Feb	6.2	0.0	3.0	9.3	6.8	7.0	7.5	4.1	2.3	7.4	8.2	9.1	5.0	0.0	0.2	0.4	0.0	0.0	2.6	4.9	6.5	10.1	8.8	3.5	4.70	10.07
24-Feb	5.5	0.0	5.6	8.0	4.8	3.2	4.2	2.4	2.3	2.0	4.0	0.0	1.3	1.4	0.8	2.7	6.8	3.2	0.0	0.0	2.6	6.5	5.9	4.7	3.25	7.96
25-Feb	0.0	0.0	3.3	0.9	2.2	2.8	11.5	12.1	15.4	25.9	14.6	9.4	7.5	5.2	2.8	5.7	0.1	4.5	5.0	2.3	2.0	0.0	4.0	3.8	5.88	25.91
26-Feb	7.3	7.6	2.7	4.1	4.9	0.5	0.0	1.5	0.0	0.0	0.0	0.7	1.5	1.2	2.1	0.2	0.0	0.0	0.0	0.0	6.1	5.9	9.2	5.2	2.53	9.21
27-Feb	6.9	5.6	2.5	5.2	3.9	4.6	6.8	3.3	7.8	9.1	6.2	3.2	8.3	6.8	3.2	2.4	0.0	0.0	0.0	1.0	9.4	10.6	2.4	6.1	4.81	10.58
28-Feb	6.9	0.0	17.6	18.8	3.1	2.3	0.0	1.5	0.0	13.2	14.2	13.2	17.6	6.1	0.7	0.0	2.2	0.0	0.0	2.6	1.2	8.0	9.7	8.5	6.14	18.81
																								Diurnal Average		
																								Diurnal Maximum		
8.86 6.98 10.23 10.72 11.05 9.78 9.28 8.86 9.34 11.23 11.62 10.36 8.75 6.38 6.45 5.52 5.16 5.43 7.29 11.05 11.93 11.90 11.40 9.71																								8.86		
35.30 31.43 34.15 37.55 40.43 35.89 35.54 35.88 42.52 37.76 34.80 33.10 30.35 24.77 22.44 24.06 23.35 31.72 35.35 43.98 42.80 45.90 43.07 29.99																								35.30		

M - Maintenance AF - Analyzer Failure
 Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 80 ul/m³ 24-hr 30 ul/m³

Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: February 7, 2017

Parameter: NO/NO₂/NO_x

Instrument: Teco 42i

Serial Number: CM13040041

Previous Calibration Date: January 25 2017

Calibration: Routine

Calibration Equipment: SABIO 2010 sn # 04300810

Barometric Pressure: 26.50" Hg

Calibration Method: Std.Gas Dilution / GPT

Cylinder ID: FF27662

Temperature: 20.0° C

Cylinder Concentration: 11.9 ppm NO & 12.0 ppm NO_x

In Service: June 2 2016; Exp Jan 20 2019

Technician: Dean Yustak

Instrument Settings	NO bkg ppb	NO _x bkg ppb	Pre-reactor bkg ppb	NO Coefficient	NO _x Coefficient	NO ₂ Coefficient	Monitoring Range
Previous	15.6	17.1	na	1.387	0.998	0.995	200 ppb
Current	13.9	14.2	na	1.283	0.998	0.995	200 ppb

NO	Final Zero: -0.8 ppb	Final Span: 156.9 ppb	As Found Correction Factor: 0.923
NO ₂	Final Zero: 0.4 ppb	Final Span: 1.8 ppb	As Found Correction Factor: NA
NO _x	Final Zero: -1.1 ppb	Final Span: 157.8 ppb	As Found Correction Factor: 0.925

Results of Linear Regression			Slope	Intercept	R ²
NO	R _c vs C _c	Previous	149.538200	-7.553164	0.999997
		Current	149.747100	106.657500	0.999781
	C _i vs C _c	Current	1.000000	0.000020	0.999781
NO ₂	R _c vs C _c	Previous	149.708600	18.145800	0.999997
		Current	150.565100	-74.601160	0.999896
	C _i vs C _c	Current	1.000000	-0.000004	0.999896
NO _x	R _c vs C _c	Previous	149.915100	-56.347000	0.999997
		Current	150.166100	108.571700	0.999752
	C _i vs C _c	Current	1.000000	0.000000	0.999752

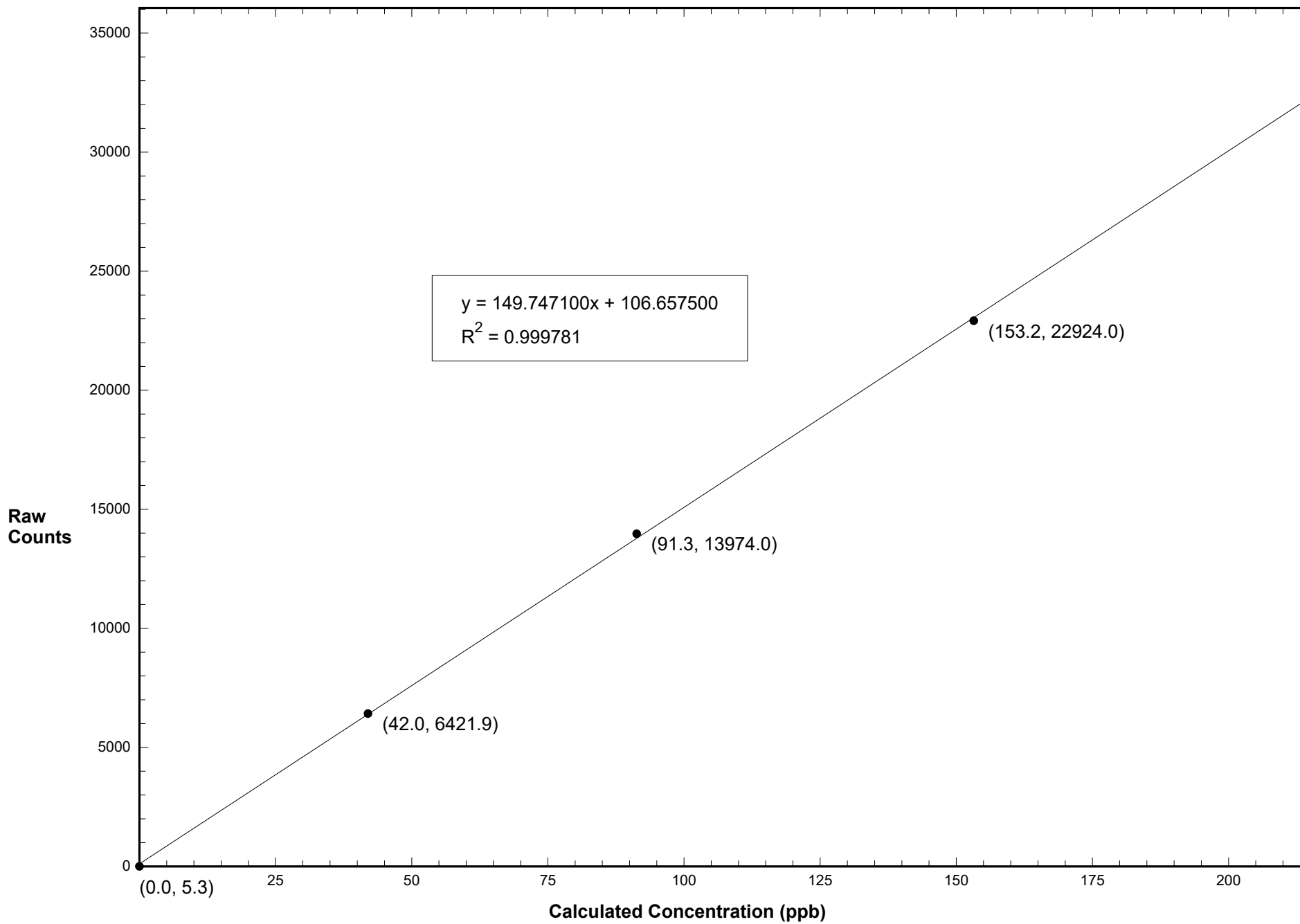
Comments: Sample flow: 0.473 lpm

Calibration Data Summary (Page 2)

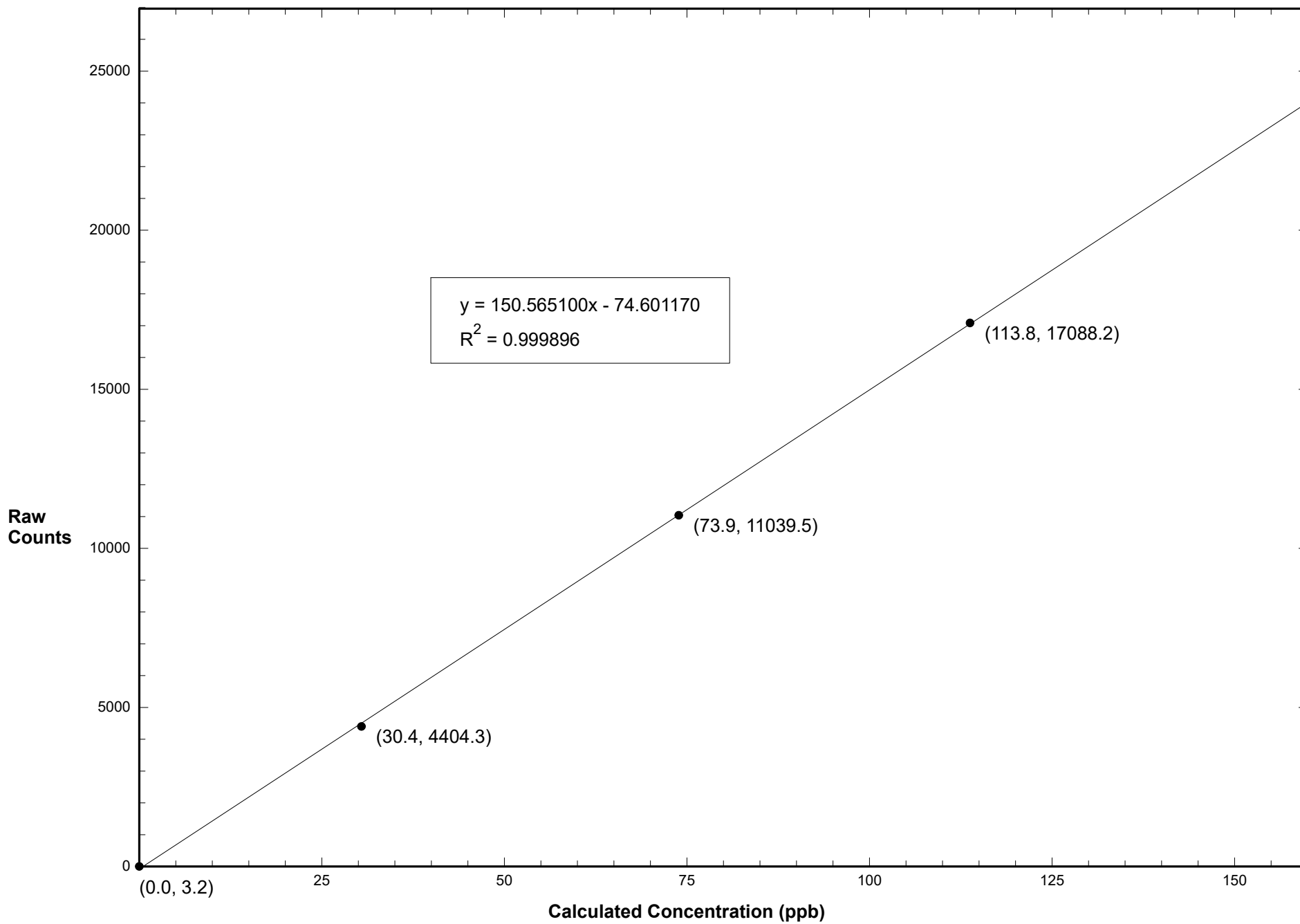
February 7, 2017 - Station 906

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		
0.07700	5.904	153.2	22924.0	152.4	1.005		
0.04640	6.001	91.3	13974.0	92.6	0.986		
0.02122	5.997	42.0	6421.9	42.2	0.995		
0.00000	5.946	0.0	5.3	-0.7			
NO Calibration					Average Correction Factor:	0.995	
0.07700	5.904	154.5	23174.2	153.6	1.006		
0.04640	6.001	92.1	14138.9	93.4	0.986		
0.02122	5.997	42.3	6507.4	42.6	0.993		
0.00000	5.946	0.0	-6.1	-0.8			
NO _x Calibration					Average Correction Factor:	0.995	
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
154.8	6253.8	41.1	113.8	17088.2	114.0	0.998	1.002
154.8	12226.5	80.9	73.9	11039.5	73.8	1.001	0.999
154.8	18734.5	124.4	30.4	4404.3	29.7	1.023	0.978
			0.0	3.2	0.5		
					Average Correction Factor:	1.007	
NO ₂ Gas Phase Titration					Average Converter Efficiency:	0.993	
Parameter	Correction Factor (Previous)	Correction Factor: (Current)	Percent Change of Correction Factor				
NO	1.000	1.005	0.5				
NO ₂	1.000	0.998	-0.2				
NO _x	0.999	1.006	0.7				

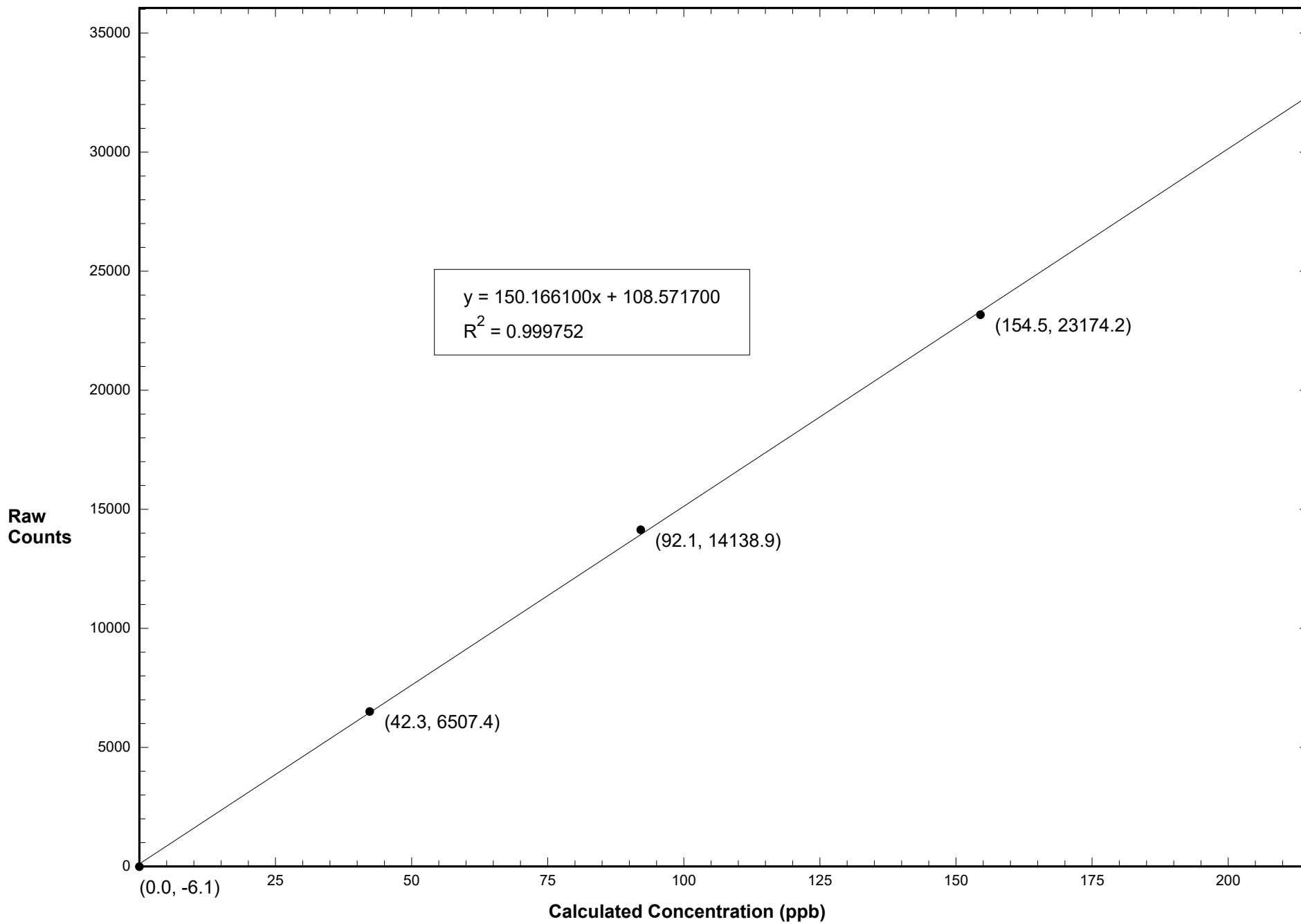
Station 906 NO February 7, 2017: Linear Regression



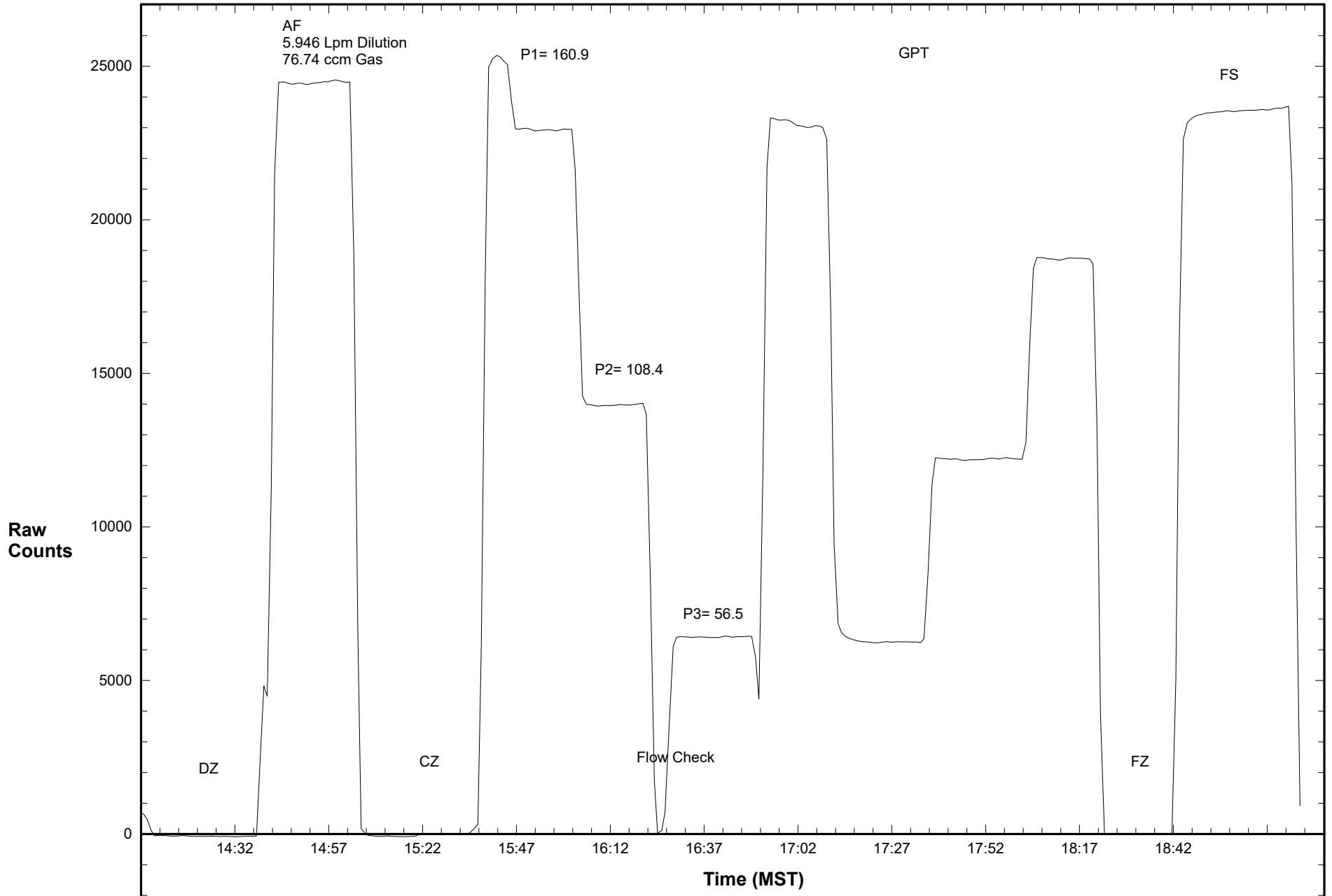
Station 906 NO2 February 7, 2017: Linear Regression



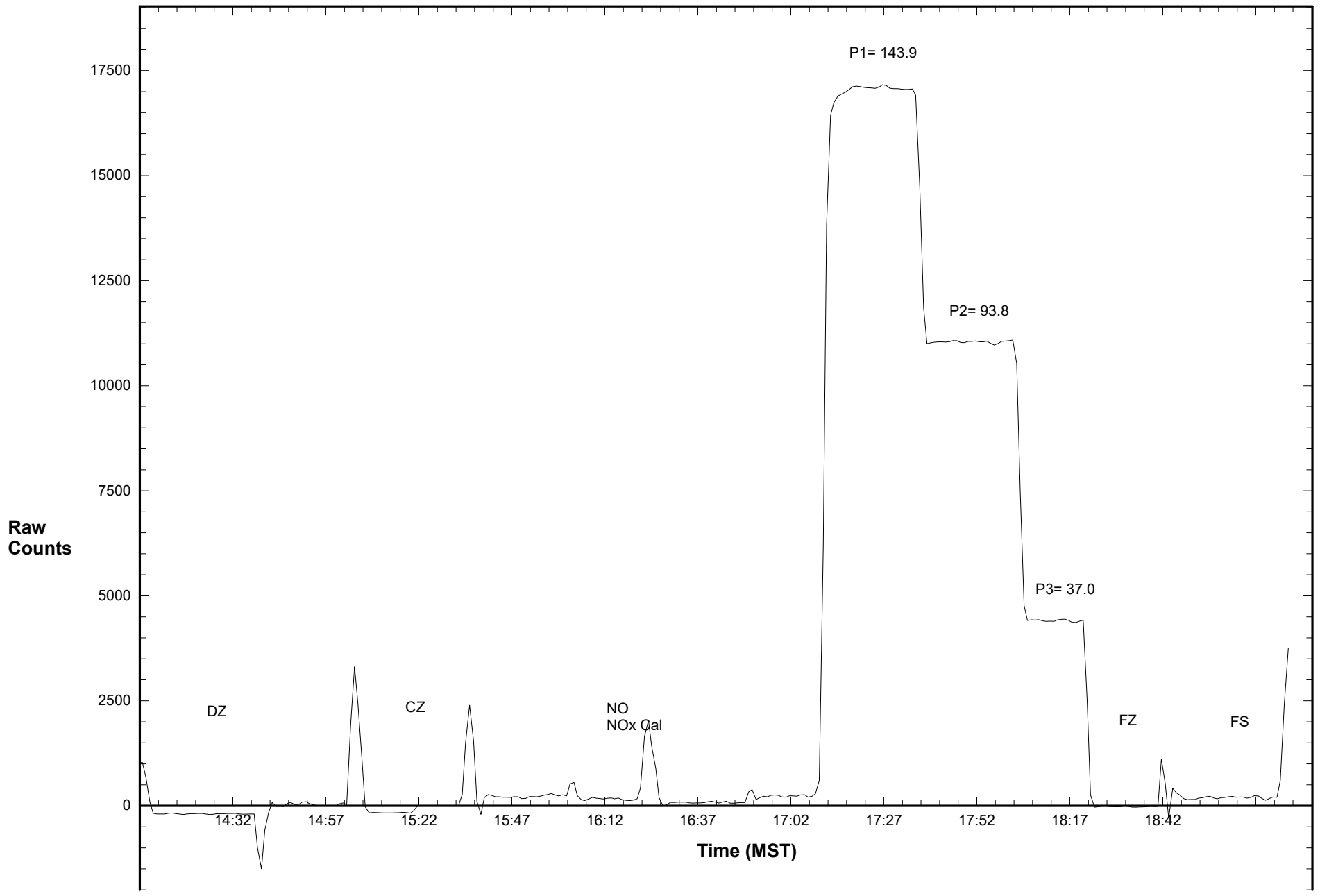
Station 906 NOX February 7, 2017: Linear Regression



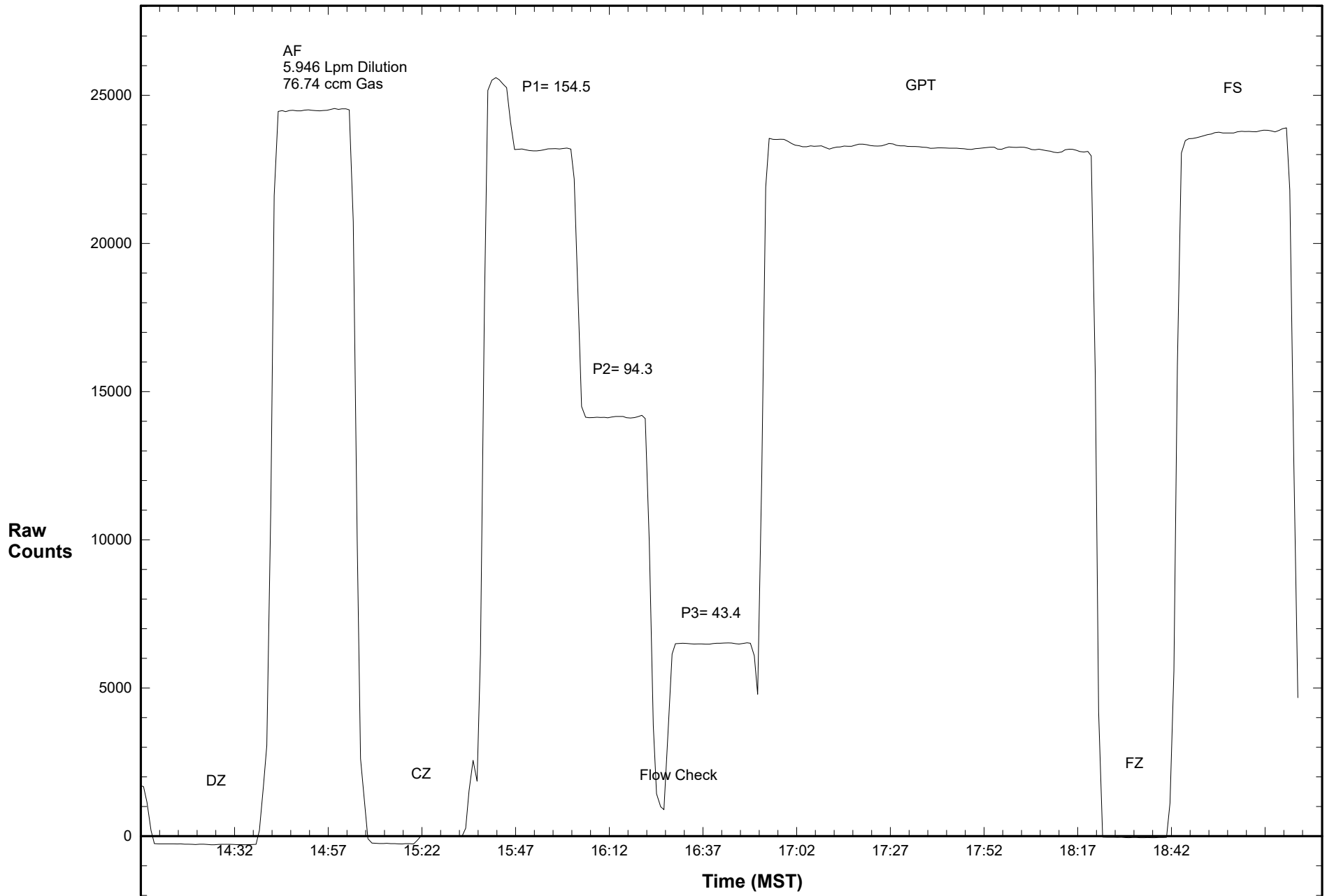
Station 906 NO February 7, 2017: Calibration Graph



Station 906 NO2 February 7, 2017: Calibration Graph



Station 906 NOX February 7, 2017: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: February 7, 2017

Parameter: O₃

Instrument: Teco 49i

Serial Number: 1150790050

Previous Calibration Date: January 25 2017

Calibration: Routine

Calibration Equipment: 2B Tech 306 SN-135

Barometric Pressure: 26.50" Hg

Calibration Method: Certified Ozone Generator In service: January 17 2017

Temperature: 20.0° C

Technician: Dean Yustak

Instrument Settings	Background	Coefficient	Monitoring Range
Previous	-0.1	0.978	100 ppb
Current	-0.1	0.997	100 ppb

Final Zero: -0.3 ppb

Final Span: 366.0 ppb

As Found Correction Factor: 1.025

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
0.000	403.0	24154.0	403.2	1.000
0.000	254.0	15186.4	253.3	1.003
0.000	100.1	6095.6	101.3	0.989
0.000	0.0	4.3	-0.6	

Results of Linear Regression

R _c vs C _c	Slope	Intercept	R ²
Previous	60.140920	39.730130	0.999973
Current	59.809600	39.613530	0.999976
C _i vs C _c			
Current	1.000000	0.000018	0.999976

Average Correction Factor: 0.997

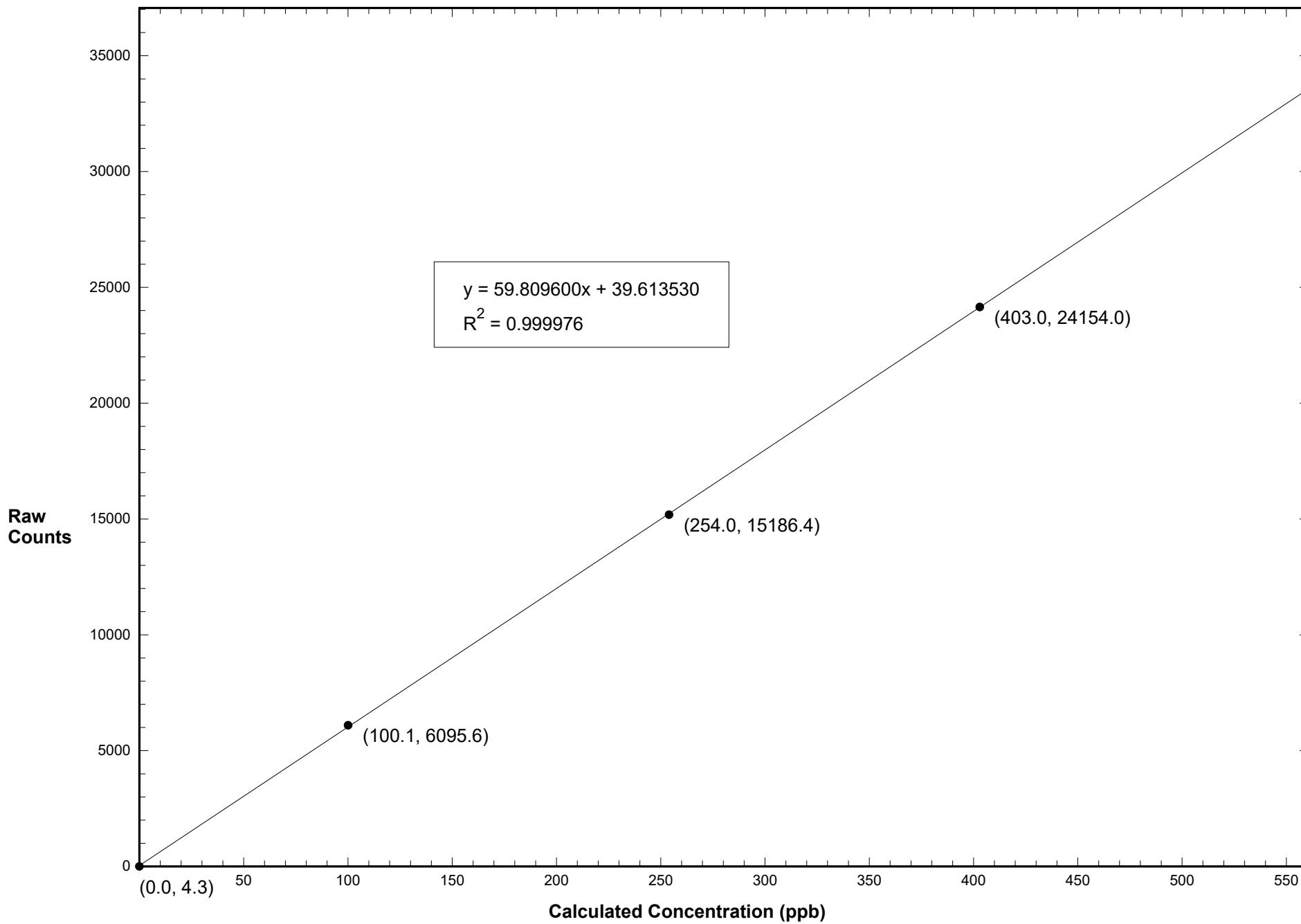
Previous Correction Factor: 1.002

Current Correction Factor: 1.000

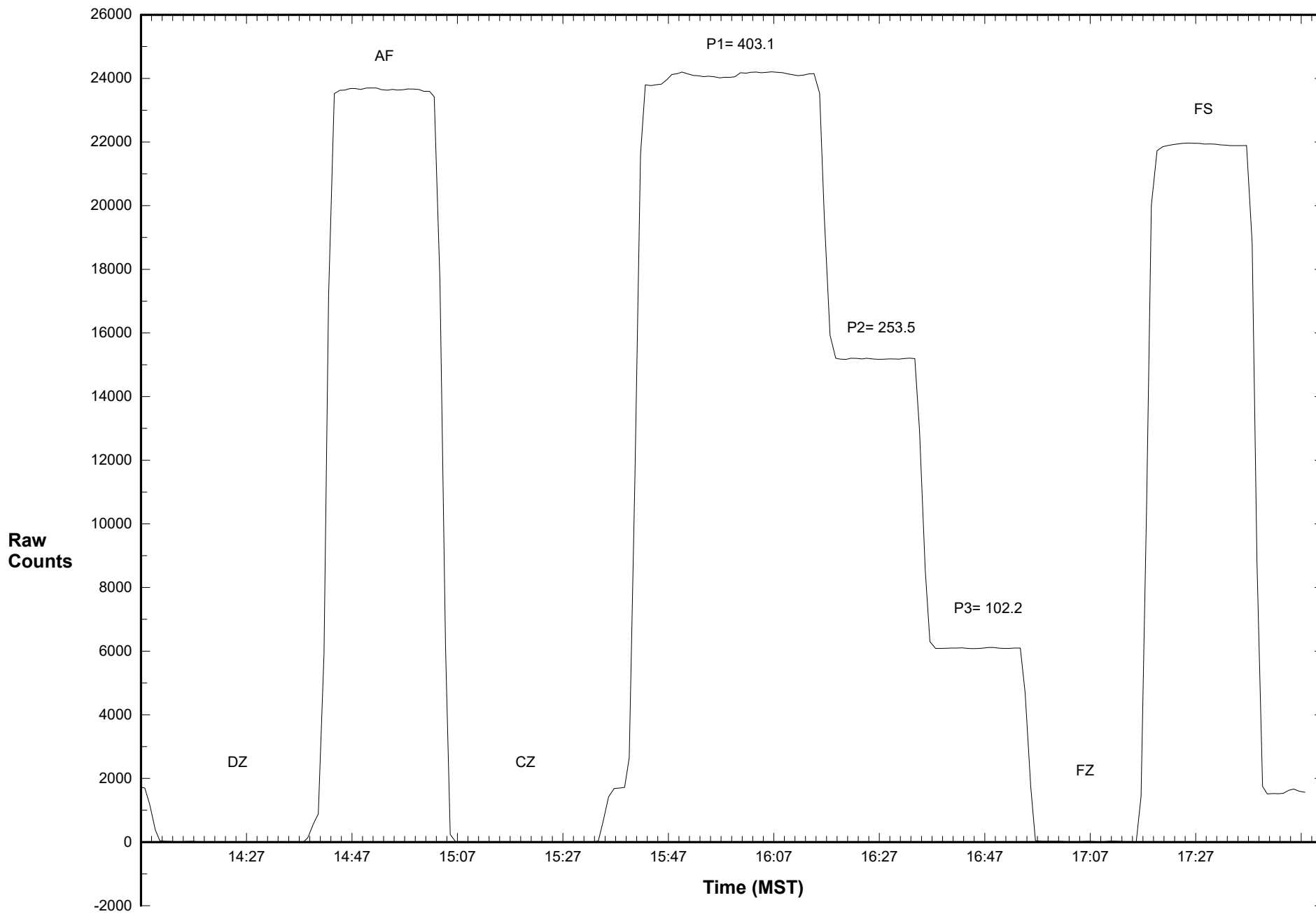
Percent Change of Correction Factor: -0.2

Comments: Sample flows: 0.716 & 0.695 lpm

Station 906 O3 February 7, 2017: Linear Regression



Station 906 O3 February 7, 2017: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: February 7, 2017

Parameter: SO₂

Instrument: Teco 43i

Serial Number: CM 12499009

Previous Calibration Date: January 25 2017

Calibration: Routine

Calibration Equipment: SABIO 2010 sn # 04300810

Barometric Pressure: 26.50" Hg

Calibration Method: Std.Gas Dilution

Cylinder ID: FF27662

Temperature: 20.0° C

Cylinder Concentration: 5.92 ppm SO₂

In Service: June 2 2016; Exp Jan 20 2019

Technician: Dean Yustak

Instrument Settings	SO ₂ bkg ppb	SO ₂ Coefficient	Monitoring Range
Previous	25.4	0.997	100 ppb
Current	26.4	1.041	100 ppb

Final Zero: 0.1 ppm

Final Span: 73.4 ppm

As Found Correction Factor: 1.015

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
0.0770	5.904	76.2	22926.6	76.0	1.003
0.0464	6.001	45.4	13838.1	45.9	0.990
0.0212	5.997	20.9	6241.0	20.7	1.010
0.0000	5.946	0.0	2.4	0.0	

Results of Linear Regression

R _c vs C _c	Slope	Intercept	R ²
Previous	298.555100	76.041430	0.999962
Current	301.490500	10.327000	0.999914
C _i vs C _c			
Current	1.000000	0.000010	0.999913

Average Correction Factor: 1.001

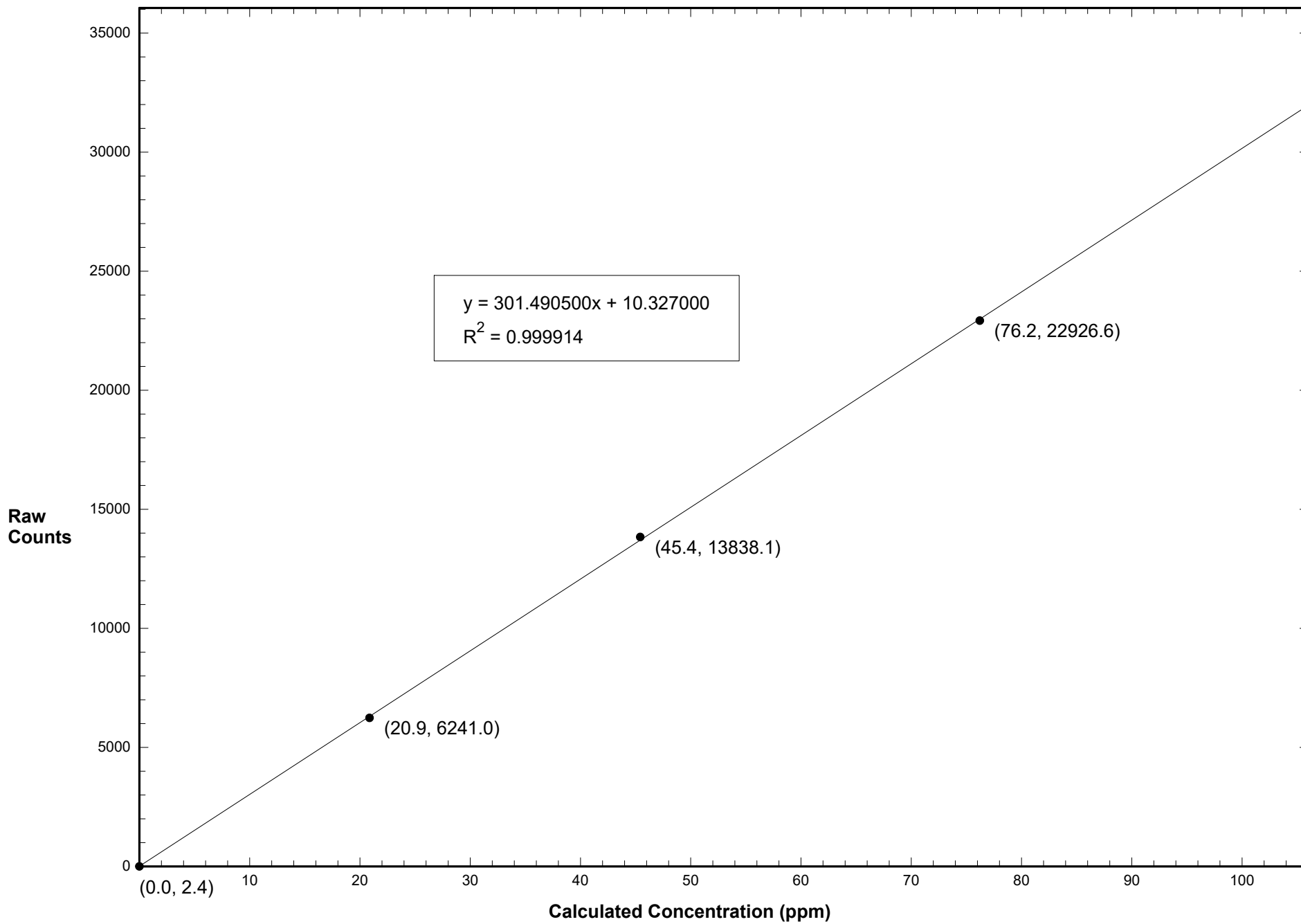
Previous Correction Factor: 1.002

Current Correction Factor: 1.003

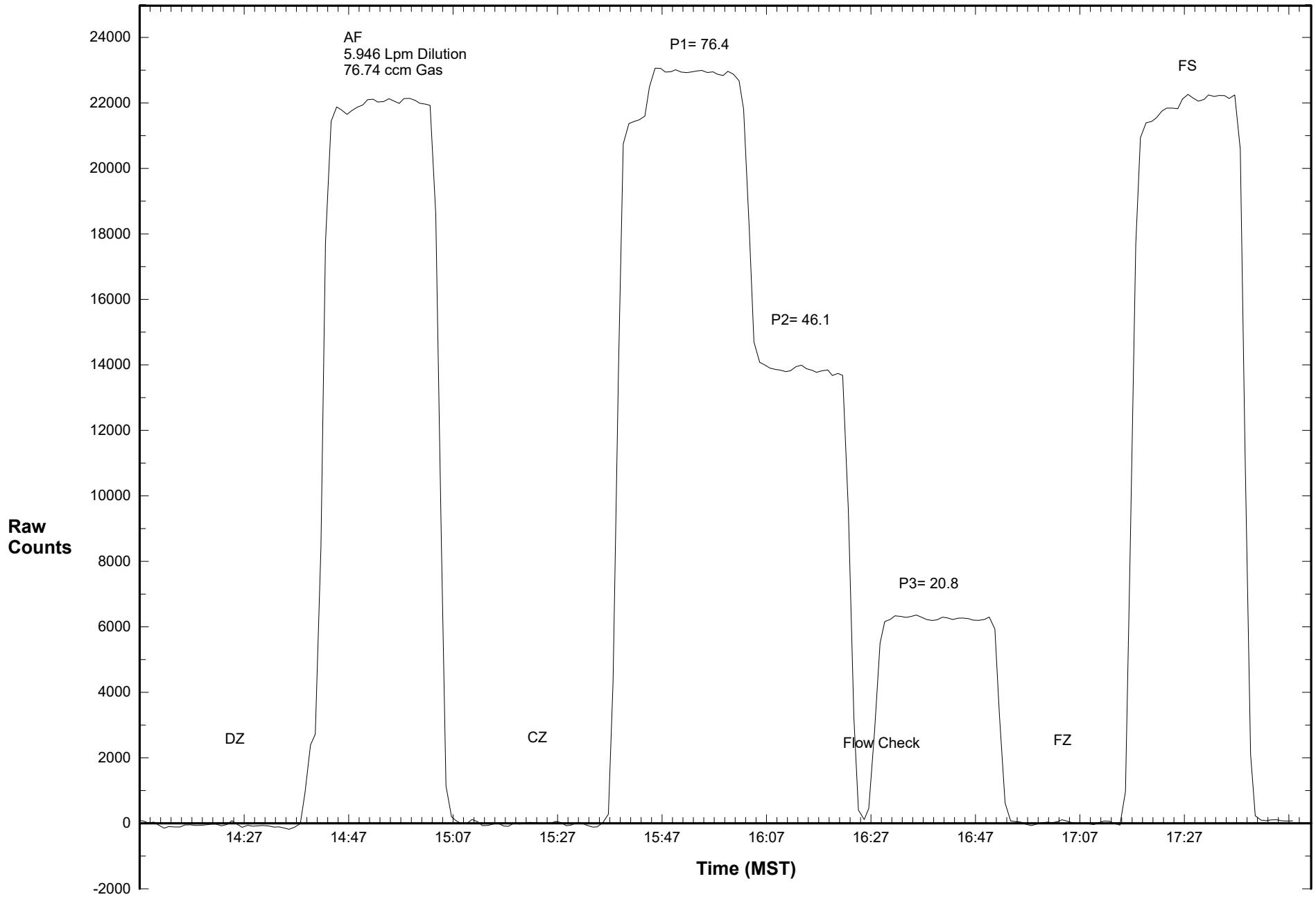
Percent Change of Correction Factor: 0.1

Comments: Sample flow 0.383 lpm

Station 906 SO2 February 7, 2017: Linear Regression



Station 906 SO2 February 7, 2017: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: February 7, 2017

Parameter: TRS

Instrument: Teco 43C

Serial Number: 43CTL - 60324 - 326

Previous Calibration Date: January 25 2017

Calibration: Routine

Calibration Equipment: SABIO 2010 sn # 04300810 Barometric Pressure: 26.50" Hg

Calibration Method: Std.Gas Dilution

Permeation Device ID: Cyl DT0014794 10.5 ppm H2S Temperature: 20.0° C

Permeation Rate: 0 ng/min

In Service: Oct 21 2016; Exp Oct 2019

Technician: Dean Yustak

Instrument Settings	H ₂ S bkg ppb	H ₂ S Coefficient	Monitoring Range
Previous	1.88	0.814	100 ppb
Current	1.81	0.829	100 ppb

Final Zero: 0.0 ppb

Final Span: 65.9 ppb

As Found Correction Factor: 1.045

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
0.047	80.8	24254.2	80.5	1.003
0.031	54.6	16572.5	55.0	0.992
0.016	28.4	8566.2	28.4	1.001
0.000	0.0	-0.2	-0.1	

Results of Linear Regression

R _c vs C _c	Slope	Intercept	R ²
Previous	300.699200	-36.412720	0.999987
Current	300.690400	36.862740	0.999928
C _i vs C _c			
Current	1.000000	0.000000	0.999928

Average Correction Factor: 0.999

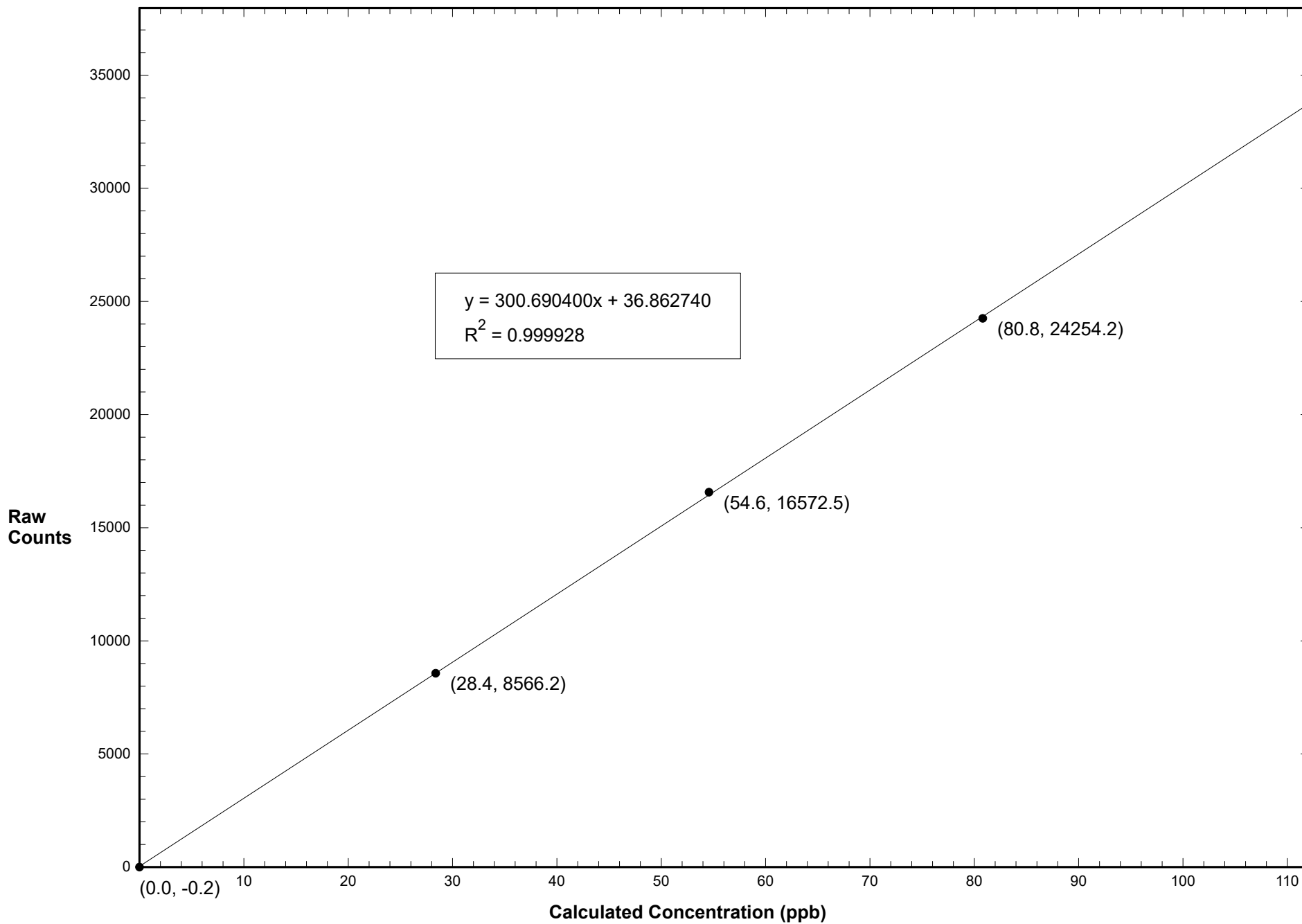
Previous Correction Factor: 0.999

Current Correction Factor: 1.003

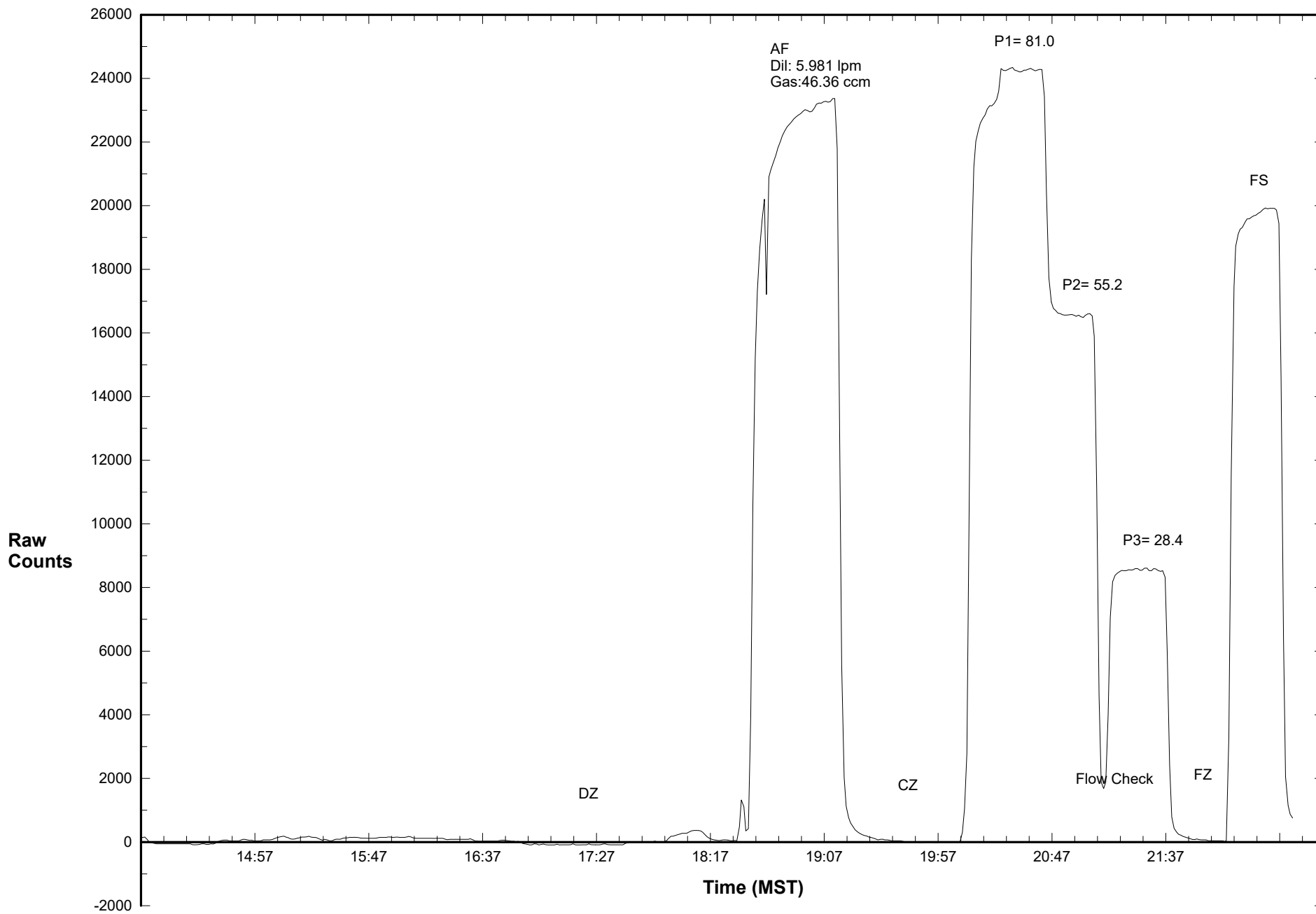
Percent Change of Correction Factor: 0.4

Comments:

Station 906 TRS February 7, 2017: Linear Regression



Station 906 TRS February 7, 2017: Calibration Graph



Calibration Summary

Parameter H₂S
 Air Monitoring Network Husky Energy



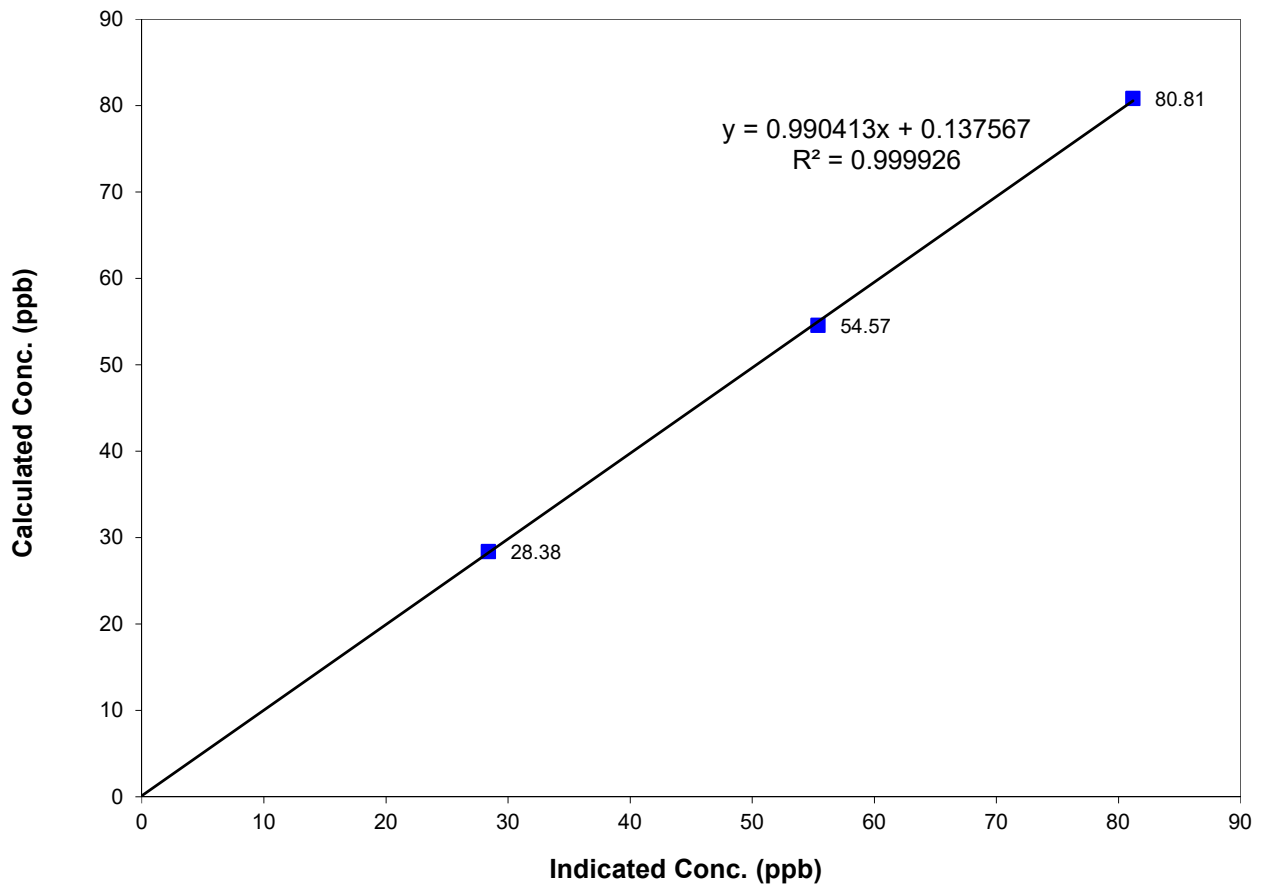
Station Information

Calibration Date	February 7, 2017	Previous Calibration	January 25 2017
Station Number	906	Station Location	Hinton
Start Time (MST)	18:00	End Time (MST)	22:00
Analyzer make/model	TECO 45C	Analyzer serial #	45c-71671-369

Calibration Data

Calculated concentration (ppb) (Cc)	Indicated concentration (ppb) (Ic)	Correction factor (Cc/Ic)	Statistical Evaluation	
0.00	-0.20	N/A		
80.81	81.20	0.9952	Slope	0.990413
54.57	55.40	0.9851	Intercept	0.137567
28.38	28.40	0.9994	Correlation Coefficient	0.999963
Calibration Compliance		Pass		Pass

H₂S Calibration Curve



WEST CENTRAL AIRSHED SOCIETY

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

**AMS 906
HINTON
FEBRUARY 2017**

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
February 2017

Maximum Value: 13.54 C on Feb 14 17:00 Maximum Daily Average: 9.17 C on Feb 15																						Hours in Service: 672				
Minimum Value: -30.3 C on Feb 7 09:00 Minimum Daily Average: -24.32 C on Feb 7																						Hours of Data: 672				
Maximum Diurnal Average: -2.05 C at hour 16 Minimum Diurnal Average: -10.19 C at hour 9																						Hours of Missing Data: 0				
Monthly Average: -6.587 C Percentiles: P₁ = -28.2 P₁₀ = -19.7 Q₁ = -14.8 Median = -6.3 Q₃ = 0.9 P₉₀ = 5.9 P₉₉ = 12.9																						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-Feb	-8.0	-8.0	-8.0	-8.2	-8.4	-8.5	-8.3	-8.4	-8.8	-8.5	-7.8	-6.6	-6.2	-5.9	-5.4	-5.8	-6.4	-7.3	-8.9	-10.1	-11.9	-13.8	-15.2	-16.0	-8.76	-5.38
2-Feb	-16.7	-17.6	-18.0	-18.7	-19.0	-19.3	-19.5	-19.7	-20.1	-18.9	-15.8	-13.0	-11.2	-9.8	-8.7	-7.6	-7.5	-9.0	-10.3	-11.5	-12.6	-13.6	-14.7	-15.1	-14.50	-7.53
3-Feb	-15.4	-15.7	-15.9	-15.9	-16.0	-16.0	-15.9	-15.8	-15.8	-15.2	-14.2	-13.1	-12.4	-12.0	-12.0	-12.1	-12.3	-13.1	-13.5	-13.7	-14.0	-14.3	-14.4	-14.5	-14.30	-11.99
4-Feb	-14.9	-15.5	-16.0	-16.5	-16.7	-17.1	-17.6	-17.7	-18.0	-17.5	-16.6	-15.7	-15.3	-14.8	-14.3	-14.1	-14.3	-14.4	-14.6	-15.4	-15.8	-16.0	-16.2	-16.4	-15.88	-14.06
5-Feb	-16.7	-16.1	-16.0	-16.3	-16.1	-16.1	-16.1	-16.1	-16.2	-16.7	-17.1	-16.6	-16.0	-15.8	-16.0	-16.1	-16.6	-17.9	-19.4	-19.8	-19.9	-20.3	-20.8	-21.1	-17.32	-15.76
6-Feb	-21.4	-22.1	-22.2	-22.0	-21.9	-21.9	-22.0	-22.3	-22.6	-22.3	-21.5	-20.8	-20.3	-19.8	-19.6	-19.9	-20.1	-20.4	-20.7	-21.5	-22.6	-23.0	-23.0	-24.3	-21.59	-19.64
7-Feb	-25.9	-27.3	-27.5	-28.3	-28.9	-29.4	-29.5	-29.9	-30.3	-28.6	-26.3	-22.7	-20.2	-18.5	-17.1	-16.6	-16.6	-17.7	-19.6	-22.0	-23.6	-24.7	-25.8	-26.4	-24.32	-16.58
8-Feb	-27.3	-27.8	-27.1	-27.6	-27.6	-27.6	-27.8	-28.2	-28.2	-26.7	-21.7	-17.9	-15.1	-12.8	-10.4	-8.7	-8.3	-8.8	-10.6	-14.5	-17.6	-19.2	-19.7	-19.6	-20.04	-8.29
9-Feb	-18.8	-18.3	-17.1	-15.3	-14.8	-13.7	-13.1	-13.0	-12.6	-11.9	-10.4	-9.4	-8.4	-6.6	-6.2	-5.6	-6.4	-7.6	-7.9	-8.2	-8.5	-8.8	-8.9	-8.8	-10.85	-5.56
10-Feb	-9.0	-9.7	-10.1	-10.7	-10.7	-11.1	-11.9	-12.3	-12.4	-11.7	-10.8	-9.5	-7.8	-3.4	5.2	5.6	5.0	3.7	2.8	2.1	0.2	-3.4	-1.7	-1.3	-5.12	5.57
11-Feb	-1.7	-2.8	-3.1	-4.5	-5.0	-6.0	-8.9	-10.6	-12.0	-9.8	-1.2	1.4	2.3	2.6	2.8	2.5	1.7	0.9	0.8	1.0	1.4	1.8	1.8	2.0	-1.78	2.78
12-Feb	1.6	1.6	2.1	2.6	2.9	3.1	3.2	2.9	2.1	2.7	4.1	5.4	6.8	7.1	7.3	6.6	6.3	5.9	5.2	5.0	4.9	4.9	4.9	5.2	4.35	7.29
13-Feb	5.0	5.0	5.3	4.7	5.1	4.5	5.2	4.8	4.6	5.4	7.6	8.2	9.5	10.3	10.3	10.1	9.6	8.9	8.4	7.7	7.5	6.6	6.0	5.3	6.91	10.32
14-Feb	4.8	4.5	4.4	4.2	3.5	3.8	3.3	3.2	1.4	2.7	5.2	8.0	9.7	12.5	12.9	13.5	13.5	13.4	12.9	12.9	12.5	11.4	10.7	9.4	8.10	13.54
15-Feb	10.0	7.5	4.1	2.7	4.3	7.8	6.7	9.8	11.0	11.3	11.6	12.2	12.7	13.1	13.1	12.9	12.5	10.9	9.2	9.3	9.4	7.6	6.0	4.5	9.17	13.10
16-Feb	2.7	1.1	-0.1	-0.9	-1.5	-1.7	-1.8	-0.9	-0.1	3.6	8.8	10.2	10.3	10.8	11.6	11.1	10.1	8.0	6.9	5.9	5.1	5.2	4.4	3.2	4.67	11.63
17-Feb	5.2	4.5	3.8	2.2	1.0	0.0	-1.5	-1.7	0.4	4.8	5.4	5.3	7.9	8.3	8.3	8.0	7.4	6.2	4.4	2.8	0.0	-0.9	-0.6	-1.4	3.33	8.32
18-Feb	-3.0	-3.6	-4.1	-4.9	-5.7	-6.3	-6.6	-6.9	-6.9	-4.8	-3.4	-0.5	1.6	2.7	3.2	2.8	2.4	1.6	0.6	0.2	-0.4	-1.4	-1.7	-1.4	-1.95	3.18
19-Feb	-1.3	-1.2	-1.1	-1.0	-1.0	-1.3	-1.8	-2.5	-2.9	-2.5	-1.3	-0.1	1.5	2.2	2.2	2.6	2.6	2.0	1.2	0.5	0.0	-0.2	-0.2	-0.4	-0.17	2.62
20-Feb	-0.6	-0.6	-0.6	-0.7	-0.8	-0.9	-0.9	-1.0	-1.4	-1.3	-1.1	0.3	1.7	3.3	4.2	3.8	2.2	0.8	-0.1	0.0	-0.2	-0.5	-0.6	-1.2	0.15	4.24
21-Feb	-1.8	-3.1	-3.9	-4.6	-5.5	-6.2	-6.8	-7.4	-7.1	-5.6	-3.3	-1.1	0.8	2.5	2.8	1.7	1.2	0.6	-0.1	-0.4	-0.9	-1.9	-2.5	-2.7	-2.31	2.80
22-Feb	-2.7	-2.8	-3.3	-3.6	-4.3	-5.1	-5.6	-6.0	-6.4	-6.0	-4.7	-3.2	-1.5	-1.7	-1.8	-2.1	-3.1	-3.0	-4.3	-5.0	-4.9	-5.1	-5.4	-5.6	-4.05	-1.55
23-Feb	-6.0	-6.2	-6.2	-6.4	-6.7	-6.9	-7.0	-7.9	-8.4	-7.1	-5.0	-3.8	-3.0	-2.5	-1.5	-1.7	-2.3	-3.0	-3.8	-4.7	-5.4	-6.1	-5.8	-6.3	-5.15	-1.49
24-Feb	-6.4	-6.4	-6.6	-6.8	-7.2	-7.6	-8.4	-9.0	-9.2	-9.2	-8.5	-8.6	-7.9	-7.1	-7.0	-6.6	-6.8	-7.3	-8.8	-10.8	-12.5	-14.1	-15.4	-16.0	-8.93	-6.35
25-Feb	-16.5	-17.3	-17.7	-18.1	-18.1	-17.5	-16.6	-15.4	-14.5	-7.4	-4.1	-3.2	-3.0	-3.9	-3.7	-3.8	-4.1	-4.2	-4.9	-6.0	-6.1	-6.5	-6.7	-7.1	-9.44	-2.97
26-Feb	-7.4	-7.6	-7.9	-8.1	-8.3	-9.0	-10.0	-10.5	-10.4	-10.3	-10.9	-9.7	-8.2	-7.9	-7.9	-8.0	-8.0	-8.5	-10.0	-12.8	-14.7	-16.5	-18.2	-19.2	-10.42	-7.43
27-Feb	-20.0	-19.9	-19.7	-19.3	-19.5	-20.1	-20.5	-20.1	-19.3	-16.7	-13.2	-10.4	-7.5	-6.2	-6.1	-6.0	-6.8	-7.0	-8.4	-9.5	-10.7	-11.5	-12.4	-12.5	-13.46	-6.03
28-Feb	-13.7	-15.2	-16.4	-17.4	-18.2	-19.5	-20.5	-21.3	-21.3	-16.5	-11.9	-9.1	-6.7	-5.1	-4.1	-3.7	-3.5	-4.1	-5.0	-5.3	-5.0	-5.0	-5.2	-5.0	-10.78	-3.52
																						Diurnal Average				
																						Diurnal Maximum				



WCAS - Hinton
Summary of Hourly Averages

Wind Speed (WS) - kph
February 2017

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	1.7	2.5	1.4	1.0	0.4	0.3	0.7	1.1	1.1	1.8	1.2	1.4	1.5	1.8	2.2	4.7	3.8	2.2	0.7	0.5	1.2	0.8	0.3	0.4	0.62	4.66	
Dir	W	WSW	WSW	WSW	W	WNW	SW	WSW	WSW	WSW	W	WSW	NW	N	N	NE	NNE	NNE	N	NNE	NNE	NE	NNW	NNE	NNW	NE	
2 Spd	0.3	0.8	0.2	0.4	0.5	0.8	0.7	0.5	0.9	1.6	2.3	2.4	3.3	3.4	3.5	2.0	1.6	0.5	0.5	0.5	0.7	1.5	1.2	1.3	1.18	3.49	
Dir	NE	NE	ENE	WSW	WNW	NW	NW	NW	NW	NW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WSW	SW	W	W	W	WNW	WNW	WNW	WNW	
3 Spd	0.4	0.5	1.1	0.7	0.4	0.5	0.4	0.4	0.7	1.2	0.7	1.5	5.0	5.8	6.9	6.3	5.0	7.1	5.7	5.6	4.1	2.5	2.2	2.2	2.43	7.12	
Dir	WNW	W	WNW	WNW	NW	NE	NNE	NE	NW	WNW	NE	NNE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE
4 Spd	3.7	2.0	2.1	1.7	0.5	0.2	0.5	1.0	0.4	1.0	0.6	0.8	3.1	2.7	0.3	2.0	3.0	3.1	1.7	0.5	0.6	0.6	0.7	0.7	0.56	3.74	
Dir	ENE	NNE	N	NNW	NNW	N	W	W	NW	NW	W	ENE	ENE	ENE	NW	ESE	S	SSE	SE	NE	NE	NNE	NE	NNW	ENE	ENE	
5 Spd	0.6	1.2	1.5	0.6	0.8	0.5	0.3	0.1	2.1	6.4	7.1	6.1	4.5	6.9	8.4	7.5	7.0	6.2	4.3	2.9	5.2	6.6	5.8	4.8	3.65	8.41	
Dir	W	SW	WNW	NNW	SW	NNW	NNW	E	NNE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE
6 Spd	5.0	3.6	3.2	4.2	3.6	5.9	6.5	7.4	8.5	6.3	5.8	5.9	6.4	6.2	6.1	6.2	4.8	4.3	3.5	2.3	1.0	1.2	1.0	0.5	4.52	8.52	
Dir	ENE	ENE	E	ENE	E	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	ENE	NE	ENE	ENE	ENE
7 Spd	1.0	0.5	0.9	1.2	1.0	0.8	0.6	1.0	0.5	1.8	1.6	0.7	2.1	3.4	2.0	3.1	1.9	1.4	4.3	2.8	2.4	2.0	1.4	0.3	0.87	4.33	
Dir	NE	NNE	NE	NE	NE	N	ENE	NE	NNW	NW	NW	WNW	W	WNW	WNW	WNW	WNW	WSW	SW	SW	SW	SW	WSW	W	W	SW	
8 Spd	1.9	1.0	1.0	1.5	1.1	1.6	0.9	2.3	2.1	1.8	1.9	2.7	4.0	5.1	5.0	5.2	9.4	8.0	2.0	0.7	0.5	0.6	0.5	0.5	2.18	9.42	
Dir	W	W	W	WNW	W	WNW	WNW	WNW	W	WNW	W	W	WSW	WSW	WSW	WSW	SW	SW	WSW	NNE	NE	ENE	ENE	WNW	WSW	WSW	
9 Spd	0.6	0.4	0.8	1.4	0.4	0.6	0.5	0.3	1.0	1.2	0.7	1.9	2.2	3.3	1.4	4.7	5.3	4.7	4.6	2.5	1.7	2.1	2.7	0.6	1.58	5.34	
Dir	ESE	ENE	NW	NNW	ENE	NNE	NE	NNE	ENE	NE	E	SW	E	ENE	SE	ENE	NE	ENE	ENE	NE	NE	ENE	ENE	NE	ENE	ENE	NE
10 Spd	0.5	0.6	0.6	0.5	0.8	0.8	0.9	0.0	2.4	3.8	3.0	5.2	5.9	4.8	8.8	9.5	9.9	5.8	6.3	6.3	2.8	0.6	3.9	5.9	0.97	9.85	
Dir	ENE	E	ENE	ENE	ENE	NE	E	NNW	ENE	ENE	ENE	ENE	ENE	ENE	ENE	WSW	WSW	WSW	WSW	WSW	WSW	SW	ENE	N	SW	WSW	WSW
11 Spd	1.8	3.1	2.6	1.5	3.3	4.1	1.4	0.8	0.3	1.4	5.6	9.9	10.3	12.3	11.0	9.4	9.3	8.1	9.4	10.7	9.8	10.3	9.2	9.2	6.20	12.30	
Dir	WSW	WNW	WSW	WSW	SW	SW	SW	SSE	ESE	E	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW
12 Spd	6.7	6.5	10.5	11.0	11.2	7.6	8.8	5.6	3.7	6.9	7.2	9.4	13.8	15.6	13.5	17.6	12.3	12.3	10.4	8.6	9.8	7.7	6.7	7.2	9.55	17.57	
Dir	W	WSW	WSW	WSW	WSW	W	W	W	WSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW
13 Spd	5.2	4.3	6.2	3.5	5.6	2.6	6.1	10.6	9.9	10.2	11.7	10.1	9.5	8.0	9.9	7.6	10.6	8.5	7.6	3.9	8.9	9.3	9.9	9.5	7.81	11.66	
Dir	SW	WSW	WSW	W	WSW	W	SW	SW	SW	SW	SW	WSW	SW	WSW	SW	SW	SW	SW	WSW	WSW	SW	SW	SW	SW	SW	SW	SW
14 Spd	9.5	6.4	7.0	7.5	5.1	6.7	4.8	6.5	1.5	1.9	3.5	3.7	7.3	4.7	9.1	12.6	7.2	8.9	7.6	10.8	15.4	5.8	5.1	2.5	6.52	15.37	
Dir	SW	WSW	WSW	SW	WSW	WSW	WSW	SW	W	W	SW	WSW	SW	SW	WSW	WSW	W	WSW	W	WSW	WSW	WSW	SSW	SSW	WSW	WSW	WSW
15 Spd	8.8	2.3	1.5	2.5	3.8	4.3	2.4	3.9	9.1	9.8	12.2	7.7	7.3	10.7	7.6	7.1	5.5	5.8	5.2	8.0	9.4	4.2	1.8	0.7	4.23	12.15	
Dir	SW	SSW	ESE	ENE	SE	ESE	NE	SW	WSW	WSW	WSW	W	W	WSW	W	WSW	WSW	WNW	WSW	SSW	SW	SE	S	SSE	WSW	WSW	
16 Spd	2.5	0.5	1.4	1.2	0.8	0.5	1.6	2.8	2.7	2.4	4.4	8.9	9.6	7.4	5.7	9.1	4.2	4.4	2.0	1.0	1.0	2.3	1.8	2.6	2.65	9.56	
Dir	ENE	ESE	E	ESE	ENE	ENE	WNW	WNW	W	W	WSW	WSW	SW	SW	WSW	WSW	W	W	W	WSW	WNW	SW	WSW	WSW	WSW	WSW	WSW
17 Spd	5.0	1.6	1.9	1.7	1.7	0.8	0.9	0.9	3.1	3.1	2.6	2.8	3.8	8.2	10.3	6.3	4.6	3.2	0.9	1.6	0.6	1.3	1.2	0.4	2.38	10.29	
Dir	WSW	W	W	WNW	SW	S	ENE	E	WSW	W	W	WNW	WSW	WSW	SW	WSW	SW	SW	SW	WSW	ESE	SW	ESE	NW	WSW	WSW	
18 Spd	0.5	0.3	0.1	0.0	0.2	0.3	0.5	0.2	0.1	0.6	1.3	2.8	3.4	3.5	5.1	5.6	4.6	3.0	0.8	1.3	1.1	0.1	0.3	0.2	1.28	5.58	
Dir	E	SSW	SSW	WSW	ENE	W	E	NNE	ENE	SW	WNW	E	ENE	NE	ENE	ENE	ENE	ENE	E	ENE	NE	NE	NE	SE	ENE	ENE	ENE
19 Spd	0.2	0.3	0.4	1.5	2.2	4.2	2.0	1.1	1.2	1.0	1.7	2.1	2.7	1.7	0.9	1.1	1.4	0.6	0.9	3.1	5.0	4.3	4.0	5.3	0.28	5.29	
Dir	W	NW	WNW	WSW	WSW	WSW	WSW	WNW	WNW	WNW	W	WNW	W	SW	S	NE	NNE	NNE	E	ENE	ENE	ENE	ENE	ENE	NNE	ENE	ENE
20 Spd	3.3	3.6	4.3	2.9	1.8	2.4	2.4	5.8	5.0	6.8	5.3	2.1	3.7	4.4	5.9	5.9	7.0	6.9	5.4	3.9	3.2	2.0	1.9	1.5	3.25	6.95	
Dir	ENE	ENE	ENE	NE	NE	E	E	SSE	SSE	SE	SE	E	NE	NE	ENE	NE	ENE	ENE	ENE	NE	ENE	NE	ENE	ENE	E	ENE	ENE
21 Spd	0.4	0.8	1.0	2.1	1.5	2.1	2.0	1.5	0.5	2.8	3.8	5.2	5.8	5.6	7.1	6.9	6.7	3.2	0.8	0.8	1.7	4.8	3.9	0.5	2.02	7.12	
Dir	E	W	W	WSW	WSW	SW	WSW	ENE	NE	ENE	ENE	ENE	ENE	NE	ENE	ENE	ENE	ENE	ENE	SSE	NE	ENE	SE	ENE	ENE	ENE	ENE
22 Spd	0.7	0.3	0.9	2.0	2.3	1.6	1.9	2.0	1.5	1.3	1.9	2.5	2.2	1.0	2.1	0.8	4.8	2.2	1.2	1.0	0.3	0.6	0.6	0.9	1.22	4.79	
Dir	WNW	SW	WSW	SW	SW	SW	WSW	WSW	SW	WSW	W	WSW	SW	N	WNW	NW	SW	SW	WSW	SW	NW	NW	SE	ESE	WSW	WSW	



WCAS - Hinton
Summary of Hourly Averages

Wind Speed (WS) - kph
February 2017

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	1.3	1.0	0.7	0.8	0.7	1.1	1.7	1.4	1.4	1.2	2.9	6.5	0.3	2.5	1.9	1.8	3.7	2.2	4.4	1.2	1.3	1.0	1.3	1.5	0.93	6.53
Dir	NE	ENE	SW	WSW	W	WSW	WSW	W	WNW	NW	W	SW	W	W	NW	W	NNW	SW	S	SW	SSW	E	ENE	NNE	WSW	SW
24 Spd	0.7	0.4	1.0	1.1	1.3	2.1	3.2	2.7	2.6	3.3	3.3	2.4	1.7	2.4	5.8	4.3	4.2	5.2	4.0	2.1	1.1	0.3	0.7	0.7	1.53	5.85
Dir	N	NW	ENE	ENE	N	ENE	N	N	NNE	NNW	NNE	NNE	WSW	SE	ENE	E	ESE	ENE	ENE	E	E	E	WSW	W	NE	ENE
25 Spd	1.4	2.5	1.4	1.3	1.2	1.4	0.6	0.9	1.2	7.7	10.1	10.6	5.5	2.4	2.2	2.8	1.2	0.9	3.3	1.8	0.8	0.9	2.2	1.2	1.90	10.57
Dir	WNW	WNW	NW	NW	NW	WNW	NW	NNE	ENE	WSW	WSW	WSW	W	NNW	NNE	NNW	W	WSW	NNE	NNW	SSE	WNW	W	W	W	WSW
26 Spd	2.1	1.5	1.7	0.8	1.7	4.1	2.0	0.1	2.8	4.1	4.9	4.2	5.8	5.7	5.6	6.0	2.4	1.9	2.2	1.7	3.8	2.5	0.9	1.0	1.96	5.97
Dir	SW	WSW	WSW	W	NW	N	N	NE	NW	NNW	NNW	N	NNW	NNW	NNW	NW	N	N	ENE	SSW	SW	SW	WSW	W	NW	NW
27 Spd	1.5	2.1	2.6	1.5	1.0	0.8	1.6	1.5	1.7	1.2	1.3	2.0	2.0	3.7	2.7	2.5	2.4	0.5	0.3	0.2	0.7	1.9	0.9	0.6	1.04	3.72
Dir	WNW	W	W	W	NNW	NW	W	W	W	WNW	WNW	WNW	W	SW	SSW	SW	ESE	SE	E	ESE	SSW	SW	SW	SW	WSW	SW
28 Spd	0.4	0.3	0.5	1.2	0.7	1.0	0.9	0.7	0.9	0.5	1.7	2.8	4.6	8.9	7.4	4.7	4.3	9.0	8.7	6.8	7.0	4.8	5.8	8.3	3.54	9.01
Dir	E	NNE	SE	WNW	WNW	WNW	NW	WNW	NW	NNW	WNW	WNW	WSW	SW	SW	WSW	WSW	SW	SW	SW	WSW	WSW	WSW	WSW	WSW	SW
Spd	0.87	0.81	0.96	0.90	0.96	0.61	0.72	0.83	0.82	1.06	1.64	1.86	1.72	1.71	1.70	1.62	1.20	1.25	1.15	1.36	1.61	0.78	0.78	1.13	Diurnal Average	
Dir	WSW	W	WSW	W	WSW	W	W	WSW	W	W	W	W	WSW	WSW	W	WSW	WSW	WSW	WSW	SW	SW	SW	SW	WSW	Diurnal Maximum	
Spd	9.52	6.54	10.51	10.97	11.19	7.63	8.81	10.56	9.86	10.16	12.15	10.57	13.78	15.65	13.53	17.57	12.30	12.29	10.38	10.79	15.37	10.32	9.94	9.50	Diurnal Maximum	
Dir	233.00	250.38	245.07	248.98	248.44	260.13	260.22	223.64	236.19	239.04	252.15	243.73	243.31	246.48	246.49	242.01	243.56	243.11	245.38	253.26	239.15	249.51	229.84	229.15		
Maximum Speed Value: 17.6 kph on Feb 12 16:00																		Minimum Speed Value: 0.0 kph on Feb 10 08:00						Hours in Service: 672		
Maximum Daily Speed Average: 9.55 kph on Feb 12																		Minimum Daily Speed Average: 0.28 kph on Feb 2						Hours of Data: 672		
Maximum Diurnal Speed Average: 1.86 kph at hour 12																		Minimum Diurnal Speed Average: 0.61 kph at hour 6						Hours of Missing Data: 0		
Monthly Average Velocity: 1.138 kph 250.90 deg																		Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.5 Q ₁ = 1.0 Median = 2.2 Q ₃ = 5.2 P ₉₀ = 8.2 P ₉₉ = 12.2						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	39	1	0	0	0	0	40																			
NorthEast	90	32	0	0	0	0	122																			
East	76	17	0	0	0	0	93																			
SouthEast	19	3	0	0	0	0	22																			
South	13	1	0	0	0	0	14																			
SouthWest	73	79	10	0	0	0	162																			
West	118	29	2	0	0	0	149																			
NorthWest	67	3	0	0	0	0	70																			
Total	495	165	12	0	0	0	672																			



WCAS - Hinton
Summary of Hourly Averages

Relative Humidity (RH) - %
February 2017

Maximum Value: 93.52 % on Feb 22 03:00 Maximum Daily Average: 80.26 % on Feb 22																							Hours in Service: 672 Hours of Data: 672			
Minimum Value: 17.9 % on Feb 14 18:00 Minimum Daily Average: 31.01 % on Feb 12 Maximum Diurnal Average: 74.85 % at hour 7 Minimum Diurnal Average: 46.29 % at hour 15 Monthly Average: 63.940 % Percentiles: P₁ = 18.6 P₁₀ = 35.5 Q₁ = 50.2 Median = 69.6 Q₃ = 78.7 P₉₀ = 84.8 P₉₉ = 91.8																							Hours of Missing Data: 0 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-Feb	69.0	69.6	68.4	70.3	71.4	71.5	69.3	74.1	78.2	78.4	74.7	60.8	48.7	45.6	45.3	47.6	48.1	50.2	57.7	64.6	68.8	77.0	81.3	82.8	65.56	82.83
2-Feb	82.5	81.9	81.3	80.7	79.7	79.8	79.2	78.9	78.3	77.0	71.5	63.2	54.2	48.0	43.9	40.0	39.8	45.2	50.5	58.8	62.9	67.1	70.5	72.5	66.13	82.54
3-Feb	73.2	75.9	76.2	77.6	78.2	80.5	81.4	82.0	82.1	79.0	78.2	78.1	75.7	71.0	66.9	65.0	62.4	70.1	72.1	68.5	74.1	77.3	77.9	78.6	75.08	82.08
4-Feb	77.1	77.6	76.0	77.0	78.0	78.3	78.2	75.0	77.0	77.0	73.4	68.3	63.7	60.3	53.5	55.4	57.4	61.1	64.8	72.3	74.4	75.6	78.5	80.4	71.26	80.37
5-Feb	81.3	74.5	74.4	78.2	78.9	79.0	80.9	80.5	80.7	74.5	69.8	67.5	65.7	66.2	62.9	62.1	60.7	65.9	72.4	71.9	71.4	72.0	71.8	72.8	72.34	81.33
6-Feb	72.7	74.1	73.5	72.5	72.8	72.6	71.7	71.6	71.0	71.1	68.0	67.0	67.5	67.6	66.6	67.8	69.2	67.9	69.0	74.0	75.6	75.2	76.2	74.9	71.25	76.16
7-Feb	73.0	72.2	71.3	70.8	71.0	69.4	69.4	68.5	68.2	67.6	66.7	65.9	63.7	60.6	56.3	55.6	59.0	62.9	68.5	71.8	74.1	73.6	72.6	72.4	67.72	74.15
8-Feb	71.2	71.2	71.9	71.0	71.1	71.0	70.9	70.4	70.3	70.1	67.9	63.4	54.1	48.0	41.4	37.7	36.2	38.9	48.3	65.6	74.3	78.0	78.5	78.7	63.33	78.69
9-Feb	78.9	79.1	79.1	76.8	78.6	78.7	78.2	79.4	81.6	82.5	76.4	71.3	67.3	61.3	60.4	62.0	67.5	73.3	76.2	84.2	86.2	86.3	85.4	84.8	76.48	86.33
10-Feb	85.0	86.9	86.7	87.7	87.3	86.6	87.2	86.3	86.6	85.9	84.5	82.8	77.6	64.0	36.3	33.6	33.0	37.1	38.9	41.5	48.4	62.7	68.7	70.5	68.58	87.69
11-Feb	69.6	60.8	49.9	52.9	51.6	54.2	71.4	73.6	78.7	70.3	39.5	30.3	28.0	28.1	27.4	28.2	31.2	35.1	36.5	35.3	35.5	35.0	37.6	37.2	45.74	78.74
12-Feb	39.0	39.1	36.9	36.4	35.9	37.4	35.7	36.2	35.9	31.7	27.4	23.6	20.6	20.8	21.5	22.2	24.9	26.1	29.8	31.6	31.5	32.9	34.4	32.7	31.01	39.12
13-Feb	35.5	38.1	37.1	40.3	41.2	45.1	43.5	43.6	45.3	43.9	38.3	37.5	34.7	34.4	34.5	35.2	36.6	39.6	43.4	46.8	46.3	48.7	50.4	52.9	41.37	52.89
14-Feb	54.5	55.6	55.9	55.8	58.6	57.1	58.3	57.7	64.8	60.4	49.6	37.3	27.8	18.6	18.8	18.8	19.0	17.9	18.4	18.9	18.3	21.6	21.2	25.1	37.93	64.82
15-Feb	23.6	31.7	47.8	56.1	55.2	47.6	53.4	47.1	43.8	43.4	42.2	40.8	37.8	34.6	33.6	32.8	33.0	36.9	42.6	41.7	41.4	48.4	54.8	61.6	42.99	61.60
16-Feb	66.7	73.6	78.1	81.4	83.3	85.8	89.8	88.1	91.1	77.2	55.3	50.2	48.7	45.6	37.1	34.6	34.8	39.9	43.1	46.6	50.9	50.6	54.9	59.6	61.12	91.06
17-Feb	49.9	50.4	51.6	57.2	62.2	67.4	75.4	76.8	63.2	36.5	31.6	31.9	20.0	19.5	21.1	21.9	21.7	26.8	32.3	39.9	53.8	60.7	62.1	65.5	45.80	76.84
18-Feb	73.9	77.5	79.7	83.2	85.7	88.1	90.0	90.5	90.8	84.2	79.5	67.1	55.2	51.9	49.6	51.9	54.3	56.1	60.6	64.2	74.7	85.9	90.6	91.2	74.03	91.17
19-Feb	91.7	91.9	91.8	91.2	88.0	80.4	79.9	82.5	82.5	80.3	75.2	69.9	59.7	51.8	52.0	51.0	51.5	53.7	59.9	65.2	72.8	78.2	77.8	77.4	73.18	91.94
20-Feb	77.4	76.3	75.5	76.0	76.3	75.0	75.7	72.7	73.7	72.5	69.9	63.2	57.3	52.2	50.2	55.2	62.5	68.4	73.2	73.2	74.3	75.3	76.0	78.8	70.03	78.76
21-Feb	80.8	84.6	85.6	86.6	87.4	89.7	89.8	91.8	91.2	89.1	78.9	67.9	57.5	49.4	48.9	56.3	59.1	62.3	65.9	69.0	72.8	81.5	88.0	91.0	76.05	91.76
22-Feb	92.4	93.0	93.5	92.6	90.9	90.9	90.7	90.1	88.7	83.9	78.7	69.8	61.5	57.3	63.0	63.9	71.5	71.8	80.2	85.5	79.3	74.6	80.2	82.3	80.26	93.52
23-Feb	84.5	85.9	86.6	86.0	86.0	86.4	83.5	80.7	81.7	76.4	62.8	57.3	53.6	48.5	43.5	41.9	51.6	52.9	59.2	62.5	68.0	70.8	73.3	84.8	69.52	86.64
24-Feb	87.7	90.2	88.4	86.7	85.7	81.9	78.5	70.2	68.8	66.4	61.3	59.4	53.3	49.5	53.0	51.1	49.3	53.2	60.0	69.6	74.6	79.8	82.4	82.0	70.12	90.16
25-Feb	81.9	81.8	81.7	81.3	81.5	81.9	82.5	83.0	83.2	60.1	42.9	41.9	50.9	77.8	79.0	82.0	88.9	90.4	88.6	85.2	81.8	77.3	79.5	83.3	77.02	90.38
26-Feb	83.5	81.5	83.7	82.6	83.2	74.5	73.6	77.2	75.4	66.7	63.7	55.9	49.3	48.4	47.3	49.2	46.9	50.2	57.2	68.7	73.8	76.9	78.9	80.3	67.86	83.73
27-Feb	79.1	79.6	79.8	79.7	79.3	79.4	78.7	79.4	79.5	79.1	71.4	58.1	47.3	44.9	53.2	59.5	73.6	70.4	75.8	81.1	84.8	84.5	84.3	84.4	73.61	84.80
28-Feb	84.0	83.0	82.2	81.3	80.3	79.4	78.8	77.3	77.1	73.1	65.9	57.6	44.7	33.1	29.0	27.5	27.7	24.6	26.6	29.7	34.6	39.3	41.3	40.8	54.95	83.99
72.13 72.78 73.02 73.92 74.26 73.91 74.85 74.48 74.62 69.94 63.04 57.43 51.65 48.53 46.29 46.80 48.99 51.74 56.12 60.27 63.56 66.67 68.90 70.68																							Diurnal Average			
92.36 93.04 93.52 92.55 90.92 90.92 90.74 91.76 91.20 89.11 84.53 82.79 77.62 77.80 79.00 82.01 88.94 90.38 88.56 85.51 86.21 86.33 90.55 91.17																							Diurnal Maximum			



WCAS - Hinton
Summary of Hourly Standard Deviations

Wind Speed (WS) - kph
February 2017

Maximum Value: 10.04 kph on Feb 12 14:00		Maximum Daily Average: 6.86 kph on Feb 12		Hours in Service: 672																							
Minimum Value: 0.0 kph on Feb 19 01:00		Minimum Daily Average: 1.11 kph on Feb 2		Hours of Data: 672																							
Maximum Diurnal Average: 3.86 kph at hour 15		Minimum Diurnal Average: 1.65 kph at hour 4		Hours of Missing Data: 0																							
Monthly Average: 2.467 kph		Percentiles: $P_1 = 0.3$ $P_{10} = 0.9$ $Q_1 = 1.1$ Median = 1.8 $Q_3 = 3.2$ $P_{90} = 5.3$ $P_{99} = 9.0$		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-Feb	1.4	2.1	1.5	1.3	0.6	0.5	0.9	1.2	1.1	1.7	1.4	1.5	1.8	2.1	2.6	2.9	2.7	2.1	0.9	0.6	1.1	0.9	0.3	0.7	1.41	2.91	
2-Feb	0.4	1.1	0.9	0.8	0.8	0.9	0.7	0.6	0.8	1.0	1.4	2.2	2.0	2.2	1.6	1.5	1.4	0.6	0.9	0.8	0.7	1.2	1.2	0.9	1.11	2.17	
3-Feb	0.6	0.7	1.1	0.8	0.5	0.7	0.6	1.0	0.8	0.9	1.0	1.4	2.5	2.5	2.8	2.8	2.9	2.5	2.2	2.0	1.7	1.5	1.5	1.5	1.51	2.86	
4-Feb	2.2	1.6	1.4	1.1	0.6	0.3	0.8	1.0	0.6	0.9	0.8	1.5	1.8	1.9	1.4	1.8	1.6	1.1	0.9	0.6	0.7	0.9	0.9	0.8	1.13	2.19	
5-Feb	0.9	1.2	1.0	0.9	1.4	0.6	0.4	0.3	1.8	3.6	2.5	2.8	2.5	2.9	2.9	3.0	3.1	2.6	1.8	1.7	2.5	3.0	2.3	1.9	1.98	3.64	
6-Feb	1.8	1.9	1.8	2.0	1.8	2.7	3.0	3.3	3.4	3.4	2.8	3.3	3.2	3.0	3.1	2.6	2.0	1.9	1.5	1.4	0.7	0.8	0.9	0.6	2.20	3.43	
7-Feb	0.8	0.7	0.9	1.2	0.9	0.8	1.0	1.1	0.7	1.4	1.5	1.3	2.1	1.5	1.6	1.4	1.3	1.3	1.4	1.6	1.8	1.5	1.5	0.9	1.25	2.12	
8-Feb	1.2	1.1	0.9	1.0	1.1	1.0	0.7	1.3	1.5	1.2	1.4	2.4	3.5	4.1	3.6	3.5	4.6	3.8	2.4	1.3	1.3	1.0	1.1	1.2	1.92	4.64	
9-Feb	1.2	1.1	1.4	1.3	0.9	1.0	1.0	0.6	1.0	1.3	1.4	1.5	2.2	2.4	1.8	2.8	3.3	2.8	2.2	2.0	1.4	1.5	1.3	0.9	1.59	3.25	
10-Feb	0.7	0.7	0.7	0.8	1.0	1.1	1.1	1.5	2.1	2.2	2.4	3.0	3.3	3.6	7.1	7.4	6.8	4.4	4.9	3.8	3.3	1.3	4.0	3.6	2.94	7.38	
11-Feb	2.1	2.1	2.3	1.6	1.6	1.8	1.7	1.5	1.4	1.3	5.7	7.2	7.5	8.2	7.2	5.7	6.0	5.8	6.6	6.6	7.1	7.1	7.8	7.2	4.71	8.18	
12-Feb	6.1	6.0	7.4	8.1	8.2	6.9	7.9	5.8	3.5	4.1	5.4	7.1	9.5	10.0	9.4	9.5	8.1	7.2	7.2	5.6	6.0	5.6	5.1	4.9	6.86	10.04	
13-Feb	3.7	4.2	4.9	3.5	4.3	3.0	5.4	4.2	4.7	5.1	5.7	5.8	5.6	6.0	5.6	4.8	4.3	4.1	4.3	3.5	4.0	4.1	4.7	4.5	4.58	5.95	
14-Feb	4.6	4.7	4.7	4.2	3.5	5.9	4.7	5.8	1.6	1.8	2.8	3.9	4.2	4.3	6.9	9.0	7.2	7.7	7.2	9.3	8.7	5.4	3.9	3.7	5.23	9.27	
15-Feb	3.4	2.4	1.6	2.0	2.7	2.8	2.4	5.0	7.3	8.8	9.3	6.7	6.5	8.8	7.2	6.8	4.8	3.9	3.4	3.6	4.0	1.6	1.9	1.6	4.52	9.34	
16-Feb	1.6	1.4	1.6	1.3	1.2	1.1	1.7	1.7	1.6	1.6	4.0	4.5	4.9	4.4	5.3	6.2	4.1	4.2	2.4	1.3	1.4	2.1	2.3	3.9	2.76	6.22	
17-Feb	4.3	1.7	1.8	1.2	1.9	1.6	1.3	1.0	4.1	2.9	2.7	2.0	3.2	4.6	6.2	5.0	3.6	2.7	1.3	1.7	1.1	1.8	2.2	1.2	2.56	6.25	
18-Feb	1.0	1.0	0.8	0.5	0.5	0.4	1.1	0.7	0.5	0.9	0.9	2.4	2.0	2.4	2.7	3.3	3.1	3.6	0.9	1.1	1.2	0.3	0.2	0.1	1.32	3.65	
19-Feb	0.0	0.5	0.6	1.5	1.6	2.6	2.2	1.4	1.3	1.0	1.9	1.5	2.1	2.0	1.6	1.2	1.3	0.8	0.8	2.6	2.9	2.6	2.6	1.9	1.60	2.90	
20-Feb	1.6	2.0	1.8	1.7	1.4	1.5	1.3	1.9	2.3	2.4	2.2	2.3	2.5	2.6	3.0	3.3	3.6	3.9	2.8	2.5	2.1	1.7	1.6	1.3	2.23	3.90	
21-Feb	1.1	1.0	1.1	1.3	1.2	1.2	1.1	1.6	0.8	1.5	2.0	2.6	2.7	2.8	3.9	2.5	3.1	2.7	1.0	1.4	3.0	2.7	2.3	1.5	1.92	3.89	
22-Feb	1.2	1.2	1.2	1.7	1.7	1.9	1.4	1.5	2.0	1.5	1.6	2.4	2.2	1.6	2.3	2.4	2.1	2.4	1.3	1.4	1.0	0.9	1.0	1.3	1.63	2.44	
23-Feb	1.2	1.0	1.2	0.9	0.8	1.4	1.7	1.6	1.3	1.1	2.3	3.3	1.7	2.1	2.1	2.4	2.7	2.2	1.9	1.1	1.5	1.2	1.5	1.4	1.65	3.27	
24-Feb	0.9	0.4	1.0	1.1	1.4	1.9	2.9	2.4	2.4	2.0	2.3	2.4	1.8	2.7	3.2	2.5	2.3	2.4	1.6	0.8	1.1	0.9	0.8	0.9	1.74	3.22	
25-Feb	1.2	1.3	0.9	0.9	1.1	1.0	1.0	1.0	1.3	6.4	5.9	5.7	4.1	1.9	1.7	2.1	1.3	1.6	3.1	3.4	2.8	1.7	2.3	1.3	2.29	6.44	
26-Feb	1.5	1.6	1.8	1.1	2.3	2.7	1.7	0.9	2.2	3.1	3.5	3.3	3.7	3.5	3.5	3.2	2.4	1.8	1.7	1.4	1.0	1.3	1.2	1.0	2.14	3.69	
27-Feb	1.1	1.1	1.4	1.3	1.1	1.1	1.1	1.4	1.4	1.1	1.3	1.6	2.1	3.5	2.9	2.9	2.3	1.6	1.0	1.3	1.2	1.0	1.1	0.9	1.52	3.51	
28-Feb	0.7	0.8	1.1	1.3	0.9	1.0	0.9	0.9	0.9	1.1	1.4	1.5	3.0	4.0	4.9	4.2	4.2	5.5	4.5	4.1	6.1	4.2	4.3	4.7	2.76	6.11	
		1.73	1.67	1.75	1.65	1.69	1.76	1.85	1.85	1.94	2.34	2.77	3.10	3.36	3.62	3.86	3.81	3.43	3.11	2.58	2.45	2.55	2.14	2.20	2.01	Diurnal Average	
		6.07	6.04	7.42	8.06	8.17	6.87	7.95	5.79	7.33	8.83	9.34	7.15	9.48	10.04	9.41	9.45	8.06	7.65	7.24	9.27	8.67	7.06	7.84	7.17	Diurnal Maximum	
,Alberta Ambient Air Quality Objectives (AAAQO): 1-hr --- μm^3 24-hr 100 $\mu\text{l}/\text{m}^3$																											



WCAS - Hinton
Summary of Hourly Standard Deviations

Wind Direction (WD) - deg
February 2017

Maximum Value: 99.61 deg on Feb 18 07:00 Maximum Daily Average: 59.32 deg on Feb 17																								Hours in Service: 672		
Minimum Value: 14.3 deg on Feb 2 07:00 Minimum Daily Average: 25.48 deg on Feb 6																								Hours of Data: 672		
Maximum Diurnal Average: 52.89 deg at hour 24 Minimum Diurnal Average: 39.95 deg at hour 18																								Hours of Missing Data: 0		
Monthly Average: 46.492 deg Percentiles: P₁ = 17.5 P₁₀ = 25.3 Q₁ = 32.7 Median = 42.7 Q₃ = 57.1 P₉₀ = 75.0 P₉₉ = 97.0																								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-Feb	51.3	43.0	46.1	43.6	35.8	59.2	48.9	40.2	41.1	46.3	56.7	61.5	62.8	71.8	66.6	36.6	42.6	45.2	40.0	23.6	30.6	28.4	36.9	54.5	46.39	71.81
2-Feb	35.6	40.4	74.1	75.1	38.5	54.6	14.3	31.3	31.5	22.8	35.4	46.0	33.1	34.4	26.4	37.8	29.9	24.9	81.9	69.4	37.1	30.4	27.4	18.5	39.61	81.89
3-Feb	45.0	33.3	23.0	36.8	37.3	32.2	60.6	61.5	31.0	35.1	64.2	46.1	25.1	22.9	21.7	22.3	31.3	19.6	20.3	19.5	18.7	23.2	28.5	29.9	32.88	64.21
4-Feb	26.2	36.3	29.5	20.6	22.0	27.5	49.7	22.7	37.2	25.7	56.2	90.7	42.9	45.2	97.0	57.1	45.4	25.4	43.5	34.2	26.6	47.0	48.0	68.7	42.72	96.96
5-Feb	46.6	72.3	26.3	37.9	52.5	31.1	29.7	71.2	31.1	35.4	19.4	22.8	34.3	25.9	19.9	23.6	23.6	17.7	19.2	27.5	25.6	25.2	20.8	18.4	31.58	72.30
6-Feb	18.9	21.0	30.8	22.5	25.3	20.9	25.6	22.9	22.2	31.6	27.2	33.4	29.9	30.4	30.1	23.4	24.3	25.6	22.0	16.0	24.2	29.6	28.9	24.7	25.48	33.41
7-Feb	29.1	54.0	30.6	37.0	34.7	40.6	72.6	36.0	81.1	63.3	75.1	81.8	47.0	25.4	63.6	24.0	32.6	31.8	16.4	26.0	38.4	46.9	49.7	97.0	47.28	96.97
8-Feb	47.0	49.8	35.9	31.1	39.5	23.7	23.8	20.2	26.5	23.9	37.4	46.0	48.7	45.3	48.1	38.1	27.4	24.7	62.8	85.9	80.4	64.3	78.2	92.7	45.89	92.73
9-Feb	91.0	90.2	79.7	70.4	71.2	57.2	73.6	64.7	42.1	39.0	83.5	60.6	61.2	45.8	57.1	30.7	36.7	35.9	25.2	42.6	40.1	36.1	16.8	51.7	54.30	90.98
10-Feb	38.4	54.0	41.5	50.8	39.0	59.0	52.2	96.5	71.8	39.3	63.2	49.0	39.4	66.0	48.9	44.3	37.5	45.4	45.9	34.5	69.7	80.1	67.7	50.8	53.54	96.55
11-Feb	47.9	43.2	43.1	52.9	27.0	36.6	69.5	81.0	99.2	61.5	55.5	40.3	40.2	38.0	34.1	37.6	38.4	39.6	40.6	33.9	39.1	40.6	47.6	43.8	47.14	99.24
12-Feb	51.6	51.4	39.2	41.5	42.9	49.1	48.9	58.5	57.7	32.5	43.1	43.7	40.7	37.7	40.3	30.0	37.5	35.3	39.2	37.0	35.2	40.5	44.2	35.1	42.20	58.46
13-Feb	38.9	52.8	41.7	54.2	44.8	54.1	50.8	22.0	26.6	28.8	28.3	31.0	32.9	44.2	30.9	32.8	21.6	27.1	31.3	50.7	21.6	22.3	26.3	25.3	35.04	54.24
14-Feb	26.1	41.0	37.1	31.4	37.1	54.1	46.5	65.0	64.3	48.7	53.1	63.9	36.3	66.6	42.6	41.1	56.8	48.4	51.6	46.6	30.5	54.0	65.2	98.1	50.26	98.12
15-Feb	17.7	37.1	52.2	59.1	58.6	59.6	67.1	89.0	57.0	50.6	45.6	49.4	50.7	44.5	53.3	52.3	49.0	38.6	36.8	33.7	29.1	30.7	77.8	88.1	51.15	88.97
16-Feb	51.9	96.8	63.3	60.9	75.7	85.8	57.3	34.9	29.1	40.2	45.3	29.8	26.3	32.6	52.2	38.0	52.7	49.9	64.4	60.6	58.5	45.1	53.7	96.0	54.20	96.82
17-Feb	41.3	53.6	51.3	50.8	77.3	78.1	60.9	62.9	65.8	52.2	55.9	34.6	51.7	33.6	34.1	43.8	52.5	50.4	62.0	74.6	83.0	68.8	86.9	97.7	59.32	97.74
18-Feb	77.2	75.5	89.1	90.3	61.2	43.2	99.6	69.6	90.8	69.1	39.2	61.9	45.6	48.1	32.3	33.7	40.4	48.6	53.7	47.0	46.1	77.8	26.5	34.1	58.36	99.61
19-Feb	57.9	52.0	42.0	34.4	33.7	35.1	51.4	42.8	42.5	29.7	50.3	36.5	49.1	67.2	93.3	53.7	51.5	22.4	28.0	35.0	33.0	34.7	34.3	18.7	42.90	93.34
20-Feb	20.7	33.3	29.8	32.7	58.6	50.0	37.7	31.6	40.1	21.1	29.9	66.0	51.9	40.7	32.6	34.3	29.5	31.1	30.4	39.5	35.6	45.4	44.9	46.8	38.09	66.01
21-Feb	67.1	36.4	32.3	30.2	34.5	34.4	36.9	65.9	55.1	31.4	37.1	32.4	30.4	34.0	31.9	21.3	27.4	40.3	58.5	92.8	91.3	29.4	40.6	64.9	44.02	92.81
22-Feb	61.4	82.5	70.1	71.5	32.4	39.8	37.1	37.2	31.5	50.1	48.7	49.3	62.3	84.7	66.4	90.2	45.4	44.7	41.9	57.2	94.9	78.0	88.1	50.6	58.99	94.88
23-Feb	36.3	57.8	45.0	41.5	36.1	37.5	46.0	44.3	36.8	38.7	43.1	37.1	98.2	55.7	76.3	70.7	39.1	65.7	26.0	35.1	66.7	71.1	44.2	41.0	49.58	98.20
24-Feb	33.2	17.2	41.3	47.2	64.4	48.8	65.3	54.1	49.5	38.5	47.1	61.5	73.2	65.3	35.2	41.6	44.8	25.9	18.1	29.9	39.4	81.0	40.0	44.5	46.12	81.04
25-Feb	36.8	21.3	30.9	24.7	33.8	36.8	80.2	38.3	57.2	45.6	32.4	30.4	42.9	51.3	49.1	49.2	54.9	83.8	48.6	83.0	93.2	90.3	62.7	59.0	51.52	93.25
26-Feb	33.8	70.8	54.5	64.9	63.2	33.2	42.7	87.5	50.9	45.6	44.2	54.7	38.4	38.3	39.9	33.2	69.0	52.0	23.0	75.0	14.4	39.3	58.7	40.8	48.67	87.46
27-Feb	32.7	27.3	21.4	41.9	47.3	36.3	27.9	50.8	49.5	46.3	37.8	42.7	58.5	55.5	79.1	82.6	70.0	83.1	84.7	83.8	77.4	41.6	68.9	58.4	54.39	84.73
28-Feb	52.0	85.9	85.3	59.6	72.7	45.0	59.4	47.6	32.9	87.0	55.4	31.6	41.9	26.6	38.8	54.9	52.3	35.7	30.0	34.9	45.8	52.7	45.0	30.9	50.16	87.03
43.33 51.09 45.96 46.99 46.33 45.13 51.29 51.80 48.28 42.13 46.80 47.67 46.27 45.63 47.92 42.10 41.57 39.95 40.92 47.48 47.37 48.38 48.51 52.89																								Diurnal Average		
90.98 96.82 89.10 90.30 77.32 85.82 99.61 96.55 99.24 87.03 83.55 90.69 98.20 84.74 96.96 90.17 69.98 83.84 84.73 92.81 94.88 90.27 88.15 98.12																								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
FEBRUARY 2017**