

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

AIR QUALITY MONITORING
May 2016
Monthly Report

Prepared by:

West Central Airshed Society
Drayton Valley, Alberta





June 20th, 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 May 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 was one reading occurring in May 2016 in excess of the one – hour average guideline as indicated in Air Monitoring Directive Section III.A.3. (a) for PM_{2.5}. The maximum one-hour average reading was 85.02 µg/m³, occurring May 18th. There were no readings in May 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 17.73 µg/m³, occurring May 16th.

2. Operational times less than 90 percent:

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

3. Monitoring Notes:

AMS 906 (Hinton)

All analyzers and meteorological equipment returned uptimes of 100% for the month of May.

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	May

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	0.010	0	0.002	0
PM _{2.5}	906	100.0	85.0 µg/m ³	1	17.73 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
MAY 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													May 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)	37	707	100.0	0.9	0.0	10.0	0.1	0.2	0.3	1.0	2.4	0	0	0.002	
SO ₂ (ppb)	34	710	100.0	0.2	0.0	6.5	0.0	0.0	0.1	0.2	0.6	0	-	0.001	
O ₃ (ppb)	35	709	100.0	28.9	1.3	62.4	7.7	15.5	29.2	41.7	48.8	0	0	0.045	
NO (ppb)	37	707	100.0	0.8	0.0	13.1	0.0	0.1	0.3	0.8	2.1	-	-	-	
NO ₂ (ppb)	37	707	100.0	5.0	0.7	19.8	1.7	2.6	4.3	6.4	9.3	0	0	0.008	
NO _x (ppb)	37	707	100.0	5.8	0.7	26.5	1.9	2.9	4.8	7.2	10.9	-	-	-	
Particulate Matter 2.5 microns (µm ³)	0	744	100.0	8.5	0.0	85.0	2.5	4.0	6.2	10.4	16.7	1	0	17.73 ug/m3	
Wind Speed (kph)	0	744	100.0	2.9	0.0	13.4	0.5	1.1	2.3	4.1	6.3	-	-	-	
Temperature (°C)	0	744	100.0	9.9	-3.9	27.7	1.5	4.6	8.7	14.5	20.2	-	-	-	
Relative Humidity (%)	0	744	100.0	53.5	4.7	90.5	16.7	28.6	58.2	77.1	86.8	-	-	-	
Std Dev Wind Direction (deg)	0	744	100.0	55.8	12.9	114.0	31.9	41.0	53.1	69.3	84.9	-	-	-	
Std Dev Wind Speed (kph)	0	744	100.0	2.4	0.0	8.1	1.0	1.4	2.2	3.1	4.4	-	-	-	



WCAS - Hinton
Summary of Hourly Averages

Total Reduced Sulphur (TRS) - ppb
May 2016

Maximum Value: 9.73 ppb on May 22 21:00 Minimum Value: 0 ppb on May 9 19:00 Maximum Diurnal Average: 2.15 ppb at hour 8 Monthly Average: 0.927 ppb		Maximum Daily Average: 2.02 ppb on May 7 Minimum Daily Average: 0.16 ppb on May 12 Minimum Diurnal Average: 0.32 ppb at hour 17 Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 1.0 P ₉₀ = 2.4 P ₉₉ = 7.7		Hours in Service: 744 Hours of Data: 707 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-May	0	0	0	Z	0	0	1	1	1	2	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.47	1.53
2-May	8	4	2	Z	3	1	1	3	2	2	3	4	2	1	0	0	0	1	1	2	1	1	0	0	1.91	8.14
3-May	2	1	3	Z	1	4	5	3	1	3	1	1	0	0	1	1	2	3	2	2	1	0	0	1.67	4.56	
4-May	0	0	0	Z	0	1	1	0	0	1	2	1	1	1	1	1	1	0	0	0	0	0	0	0.57	2.14	
5-May	0	0	1	Z	0	1	1	1	2	1	1	1	1	0	0	0	0	0	0	0	0	0	2	0.59	1.60	
6-May	3	2	1	Z	5	2	5	7	3	3	3	1	0	0	0	0	0	0	0	6	1	1	0	1.95	6.94	
7-May	8	5	3	Z	1	1	0	2	2	0	0	0	2	2	2	2	1	2	3	5	2	0	0	2.02	7.96	
8-May	0	0	0	Z	0	0	0	1	2	0	1	2	1	0	1	0	0	0	2	0	1	2	1	1	0.71	2.29
9-May	2	3	2	Z	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	1	0.75	3.71	
10-May	5	4	5	Z	6	2	4	6	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1.74	5.93	
11-May	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.16	0.35	
12-May	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.16	0.28	
13-May	0	0	0	Z	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.33	2.25	
14-May	0	0	0	Z	0	0	1	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.36	2.57	
15-May	0	0	0	Z	0	0	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.43	3.42	
16-May	0	1	1	Z	2	6	4	1	1	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0.98	6.35	
17-May	1	0	0	Z	0	0	0	1	2	1	1	1	1	0	0	1	1	1	0	3	2	2	1	0.79	2.60	
18-May	0	0	0	Z	0	0	0	0	0	1	0	0	C	C	C	C	C	C	0	1	1	0	0	--	1.10	
19-May	0	0	2	Z	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0.43	1.81	
20-May	1	0	1	Z	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.29	0.90	
21-May	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.16	0.29	
22-May	0	0	0	Z	0	2	2	1	0	1	0	1	0	0	0	0	1	2	9	7	10	3	0	1.80	9.73	
23-May	1	6	8	Z	8	7	8	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.90	7.95	
24-May	3	5	6	Z	0	2	6	3	2	5	1	1	0	0	0	0	0	0	0	0	0	0	1	1.70	6.31	
25-May	0	0	3	Z	0	3	4	5	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0.98	4.68	
26-May	1	0	1	Z	1	1	1	4	2	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0.72	3.60	
27-May	0	1	0	Z	2	0	0	1	1	0	0	1	1	0	1	1	0	0	0	0	1	2	1	2	0.71	2.20
28-May	2	2	1	Z	0	0	0	0	0	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0.55	1.63	
29-May	0	0	0	Z	0	0	1	1	2	1	1	0	0	0	0	0	0	0	1	1	2	1	1	0.61	1.83	
30-May	0	2	3	Z	1	1	1	2	0	0	0	0	6	1	0	1	0	0	1	1	0	0	0	0.89	5.55	
31-May	2	4	5	Z	2	2	8	7	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	1.89	8.14	
																								Diurnal Average		
																								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
May 2016

Maximum Value: 6.48 ppb on May 2 12:00		Maximum Daily Average: 1.02 ppb on May 2		Hours in Service: 744																							
Minimum Value: 0.0 ppb on May 1 01:00		Minimum Daily Average: 0.00 ppb on May 23		Hours of Data: 710																							
Maximum Diurnal Average: 0.87 ppb at hour 11		Minimum Diurnal Average: 0.02 ppb at hour 5		Hours of Missing Data: 34																							
Monthly Average: 0.245 ppb		Percentiles: P₁ = 0.0 P₁₀ = 0.0 Q₁ = 0.0 Median = 0.1 Q₃ = 0.2 P₉₀ = 0.6 P₉₉ = 3.9		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-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.2	0.4	1.3	1.4	0.4	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.23	1.42	
2-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.6	3.1	3.7	6.5	5.2	0.9	0.1	0.2	0.8	0.7	0.3	0.2	0.9	0.2	0.0	0.1	1.02	6.48	
3-May	2.2	0.1	0.3	Z	0.1	0.1	0.0	0.3	1.6	3.1	0.7	1.8	0.6	0.2	0.3	0.5	0.1	0.1	0.5	0.7	0.7	0.0	0.0	0.0	0.60	3.08	
4-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.0	0.6	0.4	0.3	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.60	
5-May	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.1	0.6	0.8	0.7	0.5	0.4	0.6	0.8	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.24	0.84	
6-May	0.2	0.0	0.1	Z	0.0	0.0	0.1	0.1	0.4	2.0	3.9	1.2	0.3	0.1	0.2	0.7	0.5	1.0	0.2	0.1	0.1	0.2	0.2	0.1	0.51	3.88	
7-May	0.2	0.2	0.2	Z	0.2	0.2	0.1	0.5	1.6	1.0	0.3	0.8	1.7	2.1	2.4	2.6	0.5	4.1	1.6	1.5	0.7	0.2	0.3	0.2	1.01	4.10	
8-May	0.1	0.1	0.1	Z	0.1	0.0	0.0	0.2	0.3	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.3	0.0	0.1	0.2	0.1	0.2	0.11	0.32	
9-May	0.0	0.1	0.0	Z	0.0	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.06	0.20	
10-May	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.3	0.0	0.0	0.4	0.4	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.38	
11-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.2	0.5	0.4	0.3	0.3	0.4	0.2	0.1	0.1	0.12	0.49	
12-May	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.3	0.6	0.5	0.1	0.1	0.0	0.1	0.2	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.11	0.55	
13-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.6	0.1	0.3	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.11	0.58	
14-May	0.1	0.1	0.0	Z	0.0	0.0	0.0	0.3	0.9	0.8	0.2	0.3	0.3	0.3	0.3	0.4	0.5	0.3	0.3	0.2	0.1	0.1	0.1	0.1	0.25	0.93	
15-May	0.0	0.1	0.0	Z	0.1	0.0	0.1	0.3	0.5	0.6	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.2	0.21	0.59	
16-May	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.7	0.3	0.0	0.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.08	0.73	
17-May	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.7	1.4	0.5	0.7	0.6	0.2	0.8	0.8	0.2	0.3	0.2	0.9	0.2	0.3	0.1	0.2	0.36	1.37	
18-May	0.3	0.2	0.2	Z	0.1	0.1	0.0	0.1	0.2	1.0	C	C	C	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.11	1.01	
19-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.02	0.09	
20-May	0.0	0.0	0.1	Z	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.07	0.21	
21-May	0.0	0.1	0.1	Z	0.0	0.1	0.1	0.2	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.05	0.19	
22-May	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.23	
23-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.00	0.08	
24-May	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.8	0.8	1.8	0.5	0.8	0.8	0.3	0.3	0.2	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.30	1.81	
25-May	0.1	0.2	0.1	Z	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.1	0.3	0.1	0.8	0.6	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.14	0.76	
26-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.04	0.31		
27-May	0.1	0.0	0.1	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	0.0	0.0	0.0	0.0	0.0	0.01	0.12	
28-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	1.4	1.8	0.9	0.3	1.3	0.8	0.2	0.6	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.33	1.84	
29-May	0.0	0.1	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.3	5.4	1.3	0.4	1.4	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.44	5.44	
30-May	0.1	0.1	0.1	Z	0.0	0.0	0.1	0.0	0.1	2.2	0.5	0.3	0.0	0.0	0.0	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.17	2.18	
31-May	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.8	3.9	4.6	3.6	1.0	0.0	0.5	0.0	0.0	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.66	4.65	
		0.12	0.04	0.05	--	0.02	0.03	0.03	0.11	0.36	0.79	0.87	0.67	0.45	0.34	0.33	0.33	0.20	0.30	0.16	0.15	0.13	0.08	0.05	0.07	Diurnal Average	
		2.20	0.22	0.30	--	0.17	0.20	0.14	0.54	1.65	3.94	5.44	6.48	5.23	2.13	2.38	2.63	0.83	4.10	1.60	1.50	0.88	0.27	0.29	0.23	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

Ozone (O₃) - ppb
May 2016

Maximum Value: 62.36 ppb on May 14 19:00		Maximum Daily Average: 45.16 ppb on May 15		Hours in Service: 744																						
Minimum Value: 1.3 ppb on May 31 05:00		Minimum Daily Average: 11.77 ppb on May 22		Hours of Data: 709																						
Maximum Diurnal Average: 40.75 ppb at hour 17		Minimum Diurnal Average: 11.65 ppb at hour 6		Hours of Missing Data: 35																						
Monthly Average: 28.892 ppb		Percentiles: P ₁ = 2.1 P ₁₀ = 7.7 Q ₁ = 15.5 Median = 29.2 Q ₃ = 41.7 P ₉₀ = 48.8 P ₉₉ = 59.6		Hours of Calibration: 35																						
Percentiles: P ₁ = 2.1 P ₁₀ = 7.7 Q ₁ = 15.5 Median = 29.2 Q ₃ = 41.7 P ₉₀ = 48.8 P ₉₉ = 59.6		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-May	7.7	7.5	6.2	Z	5.7	9.0	17.8	26.4	32.0	31.5	38.9	41.2	36.1	34.0	33.9	33.5	33.3	35.1	38.3	35.7	23.7	25.3	23.1	14.3	25.67	41.21
2-May	9.5	6.5	4.5	Z	1.8	1.3	2.4	9.2	20.2	22.2	28.4	33.7	38.6	42.7	44.2	44.7	47.5	48.7	48.9	50.8	47.5	41.4	27.9	23.8	28.10	50.76
3-May	29.2	38.2	31.2	Z	31.4	21.1	20.0	27.0	32.9	35.6	42.6	47.0	48.3	49.1	50.9	52.1	52.9	50.0	48.0	47.9	42.8	41.9	38.5	28.5	39.44	52.92
4-May	24.0	20.0	19.6	Z	9.3	5.9	4.1	3.2	6.5	13.4	25.4	48.0	48.6	47.8	48.3	48.1	47.5	41.8	37.2	32.3	24.3	32.7	37.3	37.2	28.81	48.63
5-May	39.0	37.0	31.5	Z	29.4	19.5	20.8	27.4	31.1	33.6	35.2	39.1	42.3	43.9	46.1	48.9	48.7	48.2	47.9	45.9	39.7	17.0	13.4	13.3	34.74	48.90
6-May	12.2	8.8	7.1	Z	2.4	3.6	5.9	11.6	23.4	29.0	34.8	41.5	48.0	48.5	49.6	50.1	51.4	51.6	52.0	44.6	32.8	13.6	8.6	10.2	27.88	51.98
7-May	11.8	8.9	4.9	Z	2.8	2.9	11.3	29.9	36.1	41.7	46.1	49.2	48.7	49.7	49.9	49.8	51.9	48.1	49.3	47.3	37.8	20.0	34.9	38.4	33.44	51.94
8-May	33.4	31.7	38.6	Z	31.0	34.4	37.2	35.2	32.6	50.5	49.0	45.5	43.3	42.6	41.1	38.7	37.0	37.1	34.9	35.7	33.9	30.3	29.9	28.3	37.03	50.54
9-May	28.4	20.0	23.6	Z	23.7	25.4	24.0	25.8	32.5	34.9	35.5	40.9	42.3	41.7	41.8	41.1	41.2	40.5	40.4	38.5	32.7	29.2	26.0	15.6	32.43	42.33
10-May	10.4	6.6	7.1	Z	3.2	3.5	9.9	16.9	23.0	28.0	39.2	40.7	40.7	41.7	41.0	42.8	42.5	42.7	40.2	36.8	32.0	26.2	20.5	17.6	26.66	42.80
11-May	17.2	15.4	10.6	Z	4.2	3.4	7.6	8.6	15.9	25.1	31.8	37.2	44.5	45.2	44.6	47.2	47.4	48.0	47.7	45.2	46.8	44.8	43.6	40.3	31.41	48.03
12-May	35.9	33.4	35.3	Z	31.7	33.6	35.0	32.9	35.2	39.7	43.0	43.9	45.5	46.7	46.9	48.3	47.4	46.8	46.1	47.5	42.6	30.4	24.0	19.1	38.74	48.32
13-May	16.1	13.8	8.9	Z	4.3	3.1	7.4	8.5	21.8	33.1	44.7	49.3	49.3	50.5	51.8	52.7	53.3	53.7	53.3	52.5	49.5	43.6	36.4	32.7	34.36	53.72
14-May	27.9	21.5	20.3	Z	16.3	13.8	14.5	20.7	36.1	43.0	51.8	53.3	55.1	57.0	57.8	59.0	59.7	59.9	62.4	61.3	58.2	47.2	44.1	43.8	42.81	62.36
15-May	37.6	31.3	25.2	Z	14.3	16.3	20.9	29.0	41.7	47.2	50.5	57.0	60.4	61.1	60.7	59.3	59.0	58.9	59.5	58.6	53.8	48.1	47.2	41.3	45.16	61.09
16-May	31.3	29.8	23.5	Z	14.6	13.0	20.3	33.9	38.6	46.4	52.6	54.7	55.4	54.9	53.9	53.2	51.2	52.5	53.2	48.8	48.3	49.0	46.1	48.0	42.30	55.41
17-May	43.7	40.7	32.5	Z	25.6	16.5	14.3	26.8	37.9	40.8	41.2	40.7	40.8	39.2	36.3	32.5	32.0	30.9	30.9	27.2	26.7	22.2	13.6	11.1	30.62	43.71
18-May	6.7	6.3	5.8	Z	2.1	1.8	3.5	6.8	12.1	C	C	C	C	22.3	20.9	20.2	19.6	24.5	20.8	19.5	19.5	13.1	11.2	10.2	12.99	24.46
19-May	16.8	13.3	14.2	Z	33.2	28.5	29.4	29.1	25.1	17.4	14.4	16.1	15.2	15.5	14.7	15.0	15.7	14.5	14.5	14.9	14.7	14.8	17.0	17.5	18.33	33.21
20-May	18.1	18.9	18.7	Z	18.6	18.3	18.5	19.3	20.0	21.3	21.7	21.9	22.1	21.5	22.1	22.7	22.4	21.7	20.5	20.0	20.2	19.3	19.0	16.0	20.12	22.72
21-May	14.2	14.7	12.2	Z	10.5	9.9	11.6	13.5	14.6	16.1	18.0	18.3	20.1	19.8	20.1	20.7	20.4	19.3	17.8	15.9	13.9	11.5	10.7	13.7	15.55	20.75
22-May	16.1	15.6	13.2	Z	8.6	7.0	8.6	7.0	13.1	11.3	11.4	10.5	13.5	13.4	13.2	14.5	14.9	14.3	10.4	9.0	6.5	10.7	12.8	15.2	11.77	16.13
23-May	17.0	15.4	10.9	Z	5.9	7.8	6.3	14.5	23.7	27.0	32.0	36.1	39.6	45.3	47.0	50.2	52.9	54.7	54.1	53.4	48.2	35.0	27.1	25.7	31.73	54.71
24-May	17.1	10.3	5.8	Z	2.8	2.1	4.2	13.8	23.4	30.7	38.4	46.4	48.9	49.6	50.6	49.9	48.3	46.0	43.8	43.2	32.5	25.7	24.5	25.0	29.68	50.64
25-May	25.7	25.7	15.5	Z	6.8	6.9	5.7	10.4	11.2	13.1	22.5	23.7	35.7	41.1	38.1	38.5	42.0	38.8	37.3	33.0	30.4	43.7	43.9	36.9	27.25	43.88
26-May	25.3	23.2	16.1	Z	3.8	4.7	7.3	11.0	20.4	28.1	30.8	33.8	45.3	46.6	44.0	43.1	39.8	37.2	39.6	41.1	43.0	33.0	34.9	35.2	29.88	46.59
27-May	26.5	23.5	20.0	Z	21.3	27.7	33.0	27.1	28.8	34.5	32.1	31.5	27.5	31.5	31.0	31.8	31.9	32.3	29.3	27.8	20.0	21.1	24.3	20.5	27.61	34.48
28-May	14.4	17.2	13.4	Z	13.2	11.6	11.2	14.1	15.1	25.6	33.0	37.7	38.1	38.3	39.5	42.1	43.0	38.1	35.5	34.4	31.5	27.4	25.8	21.0	27.00	42.96
29-May	11.9	8.5	4.5	Z	2.8	3.1	4.2	9.6	13.6	23.6	34.5	43.5	43.9	43.9	39.9	38.8	40.6	35.6	36.2	28.4	22.5	17.3	11.8	8.3	22.92	43.89
30-May	7.7	6.3	4.7	Z	6.9	3.8	6.0	8.3	19.1	23.4	24.9	26.9	27.0	22.6	22.0	27.3	27.2	27.4	29.4	26.0	22.7	16.0	6.5	4.2	17.23	29.36
31-May	2.2	1.6	1.7	Z	1.3	1.6	2.9	8.9	13.9	20.0	24.3	30.1	33.5	41.7	47.0	43.8	40.2	38.5	37.5	34.4	31.3	19.9	6.0	6.2	21.25	47.01
20.49 18.43 15.72 -- 12.56 11.65 13.73 18.27 24.24 29.60 34.30 37.99 39.94 40.30 40.23 40.67 40.75 39.91 39.25 37.34 33.22 28.10 25.51 23.20																								Diurnal Average		
43.71 40.67 38.57 -- 33.21 34.37 37.17 35.18 41.71 50.54 52.59 56.96 60.40 61.09 60.72 59.32 59.73 59.90 62.36 61.31 58.18 48.97 47.16 48.02																								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
May 2016

Maximum Value: 13.06 ppb on May 13 08:00		Maximum Daily Average: 2.07 ppb on May 2		Hours in Service: 744																							
Minimum Value: 0.0 ppb on May 3 05:00		Minimum Daily Average: 0.11 ppb on May 9		Hours of Data: 707																							
Maximum Diurnal Average: 3.03 ppb at hour 8		Minimum Diurnal Average: 0.17 ppb at hour 2		Hours of Missing Data: 37																							
Monthly Average: 0.830 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.3 O ₃ = 0.8 P ₉₀ = 2.1 P ₉₉ = 7.8		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-May	0.2	0.2	0.2	Z	2.7	0.8	0.2	0.4	0.6	2.0	0.3	0.7	0.8	0.9	1.0	0.8	0.5	0.7	0.5	0.2	0.6	0.1	0.4	0.7	0.67	2.70	
2-May	0.1	0.1	0.1	Z	1.6	4.7	12.5	12.2	2.0	2.2	2.8	4.0	2.3	0.7	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.4	2.07	12.50	
3-May	0.2	0.1	0.1	Z	0.0	0.1	0.8	0.8	0.9	1.7	1.3	0.8	0.3	0.2	0.3	0.3	0.2	0.2	0.4	0.3	0.3	0.3	0.2	0.2	0.42	1.72	
4-May	0.2	0.2	0.1	Z	1.4	2.2	3.5	7.7	5.9	4.8	3.8	0.2	0.1	0.4	0.6	0.5	0.3	0.2	0.4	0.5	0.2	0.1	0.1	0.0	1.46	7.72	
5-May	0.0	0.0	0.0	Z	0.4	0.0	0.2	0.2	0.3	1.6	1.5	0.9	0.7	0.8	0.6	0.5	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.35	1.56	
6-May	0.2	0.1	1.1	Z	0.3	1.1	4.5	6.5	1.8	2.6	4.0	2.1	0.6	0.8	0.7	0.6	0.5	0.4	0.2	0.1	0.6	2.5	0.4	0.2	1.38	6.51	
7-May	0.2	0.2	1.4	Z	6.5	10.0	8.0	0.5	0.7	0.7	0.4	0.7	0.7	0.6	1.0	1.0	0.3	0.8	0.3	0.3	0.3	1.0	0.2	0.3	1.57	10.01	
8-May	0.2	0.1	0.2	Z	0.2	0.1	0.6	0.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.0	0.15	0.94	
9-May	0.0	0.0	0.0	Z	0.7	0.2	0.5	0.8	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	0.0	0.1	0.2	0.11	0.78	
10-May	0.3	0.4	0.9	Z	3.2	4.2	1.1	1.8	2.6	1.5	0.2	0.8	0.7	0.5	0.9	0.5	0.4	0.1	0.6	0.1	0.2	0.0	0.2	0.1	0.93	4.23	
11-May	0.0	0.0	0.1	Z	0.9	2.5	4.3	5.7	3.3	2.0	1.5	1.2	1.0	0.2	0.6	0.6	0.7	0.4	0.3	0.4	0.2	0.1	0.2	0.1	1.14	5.68	
12-May	0.1	0.2	0.1	Z	0.3	0.3	0.7	1.4	0.8	0.9	0.3	0.4	0.5	0.1	0.3	0.3	0.1	0.2	0.4	0.7	0.0	0.2	0.0	0.0	0.35	1.39	
13-May	0.1	0.1	0.5	Z	3.0	4.5	3.3	13.1	8.3	1.6	1.0	0.5	0.4	0.8	0.3	0.5	0.5	0.2	0.2	0.1	0.1	0.0	0.1	0.1	1.71	13.06	
14-May	0.0	0.3	0.1	Z	0.2	0.5	2.3	5.1	2.1	1.2	0.8	0.5	0.4	0.5	0.4	0.4	0.4	0.5	0.3	0.2	0.1	0.1	0.3	0.3	0.73	5.12	
15-May	0.1	0.1	0.1	Z	0.5	0.5	0.9	2.7	1.7	0.9	0.6	0.3	0.3	0.4	0.4	0.2	0.4	0.4	0.2	0.2	0.1	0.3	0.1	0.7	0.52	2.69	
16-May	0.0	0.0	0.0	Z	0.1	0.3	0.7	1.1	1.0	0.6	0.5	0.4	0.6	0.7	0.1	0.1	0.1	0.1	0.1	0.4	0.1	0.2	0.1	0.1	0.32	1.07	
17-May	0.1	0.1	0.1	Z	0.1	1.2	1.1	1.9	2.6	1.6	0.5	0.7	1.1	0.6	0.5	0.7	0.6	0.5	0.4	0.5	0.3	0.8	0.4	0.4	0.74	2.63	
18-May	1.6	0.8	0.8	Z	2.4	5.8	5.2	3.8	2.5	C	C	C	C	C	C	0.8	0.3	0.9	0.3	0.4	0.5	0.2	0.2	0.1	--	5.78	
19-May	0.1	0.1	0.1	Z	0.0	3.9	0.3	0.3	0.8	0.6	0.5	0.9	1.0	0.2	0.3	0.1	0.1	0.1	0.4	0.1	0.0	0.0	0.0	0.0	0.43	3.90	
20-May	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.1	0.3	0.3	0.1	0.1	0.1	0.3	0.5	0.6	0.2	0.2	0.1	0.4	0.2	0.2	0.2	0.1	0.19	0.61	
21-May	0.6	0.1	0.1	Z	0.3	0.3	0.5	0.9	0.6	0.6	0.7	0.9	0.6	0.4	0.5	0.6	0.7	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.43	0.87	
22-May	0.0	0.0	0.1	Z	0.4	0.1	0.5	1.7	1.3	0.8	1.2	2.6	1.9	2.4	1.6	1.5	0.9	0.8	0.4	0.3	0.4	0.7	0.7	0.3	0.90	2.57	
23-May	0.1	0.0	0.2	Z	0.1	0.8	5.0	4.3	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.4	0.51	4.99		
24-May	0.1	0.0	0.3	Z	1.5	5.2	7.9	4.3	2.7	1.5	1.5	0.9	0.4	0.6	0.4	0.1	0.0	0.1	0.0	0.4	0.9	0.5	0.3	0.2	1.29	7.93	
25-May	0.2	0.2	0.2	Z	1.0	2.5	7.6	0.8	0.3	4.5	1.2	3.8	1.0	0.4	0.3	0.4	0.6	0.4	0.3	0.6	0.1	0.0	0.0	0.0	1.16	7.56	
26-May	0.0	0.0	0.0	Z	0.7	1.2	1.4	4.5	4.0	2.1	0.7	0.6	0.5	0.6	0.1	0.3	0.2	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.75	4.53	
27-May	0.0	0.0	0.0	Z	0.1	0.2	0.3	1.1	0.9	0.0	0.0	0.1	0.5	0.1	1.0	0.4	0.0	0.0	0.0	0.3	0.1	0.0	0.1	0.1	0.23	1.11	
28-May	0.1	0.1	0.1	Z	0.0	0.5	0.4	0.5	0.9	1.7	1.0	0.5	0.3	0.5	0.5	0.5	0.4	0.4	0.3	0.1	0.1	0.1	0.1	0.0	0.40	1.73	
29-May	0.1	0.2	0.2	Z	1.1	0.5	3.9	1.8	1.6	1.7	2.6	0.7	0.5	0.5	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.70	3.93	
30-May	0.2	0.1	0.3	Z	0.1	0.4	1.2	4.1	2.3	1.6	0.4	0.6	0.7	0.7	1.4	1.6	0.3	0.4	0.1	0.0	0.0	0.7	0.8	0.4	0.80	4.06	
31-May	1.7	1.4	2.6	Z	1.3	6.9	10.2	3.6	2.8	2.7	2.8	1.9	0.8	0.6	0.6	0.0	0.7	0.3	0.1	0.2	0.3	1.2	1.1	0.4	1.92	10.15	
		0.22	0.17	0.32	--	1.00	1.99	2.90	3.03	1.84	1.48	1.08	0.92	0.63	0.51	0.51	0.44	0.32	0.30	0.23	0.24	0.21	0.33	0.22	0.19	Diurnal Average	
		1.67	1.37	2.64	--	6.53	10.01	12.50	13.06	8.33	4.85	4.01	4.03	2.28	2.45	1.61	1.55	0.93	0.88	0.59	0.69	0.87	2.53	1.13	0.71	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
May 2016

Maximum Value: 19.79 ppb on May 6 23:00		Maximum Daily Average: 8.41 ppb on May 6		Hours in Service: 744																																													
Minimum Value: 0.7 ppb on May 29 18:00		Minimum Daily Average: 1.88 ppb on May 20		Hours of Data: 707																																													
Maximum Diurnal Average: 7.19 ppb at hour 8		Minimum Diurnal Average: 3.11 ppb at hour 14		Hours of Missing Data: 37																																													
Monthly Average: 4.951 ppb		Percentiles: P ₁ = 1.0 P ₁₀ = 1.7 Q ₁ = 2.6 Median = 4.3 Q ₃ = 6.4 P ₉₀ = 9.3 P ₉₉ = 14.6		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-May	9.1	8.7	8.3	Z	7.1	4.2	3.8	4.3	4.0	7.4	3.2	3.7	3.7	4.6	4.9	4.7	4.3	5.5	5.2	6.0	9.2	5.7	4.7	9.2	5.71	9.18																							
2-May	5.7	6.8	6.8	Z	8.9	9.2	8.4	13.9	6.4	6.1	7.7	11.9	8.3	4.3	2.9	3.8	4.5	5.2	5.7	5.2	8.9	10.6	12.8	12.0	7.65	13.94																							
3-May	10.3	4.5	5.4	Z	4.3	10.0	9.3	6.2	5.0	7.5	5.0	5.2	3.8	3.8	4.8	5.7	5.5	5.8	7.6	8.6	11.5	10.5	7.6	9.3	6.83	11.49																							
4-May	7.1	7.6	5.2	Z	9.2	10.7	12.0	14.0	12.2	12.0	15.0	3.4	2.4	4.2	3.9	4.2	3.8	3.7	4.3	6.2	6.5	2.3	1.5	1.4	6.64	15.03																							
5-May	1.5	1.9	3.1	Z	5.3	3.1	3.4	2.5	2.5	5.1	4.7	4.1	3.3	3.1	3.5	3.2	1.7	1.9	2.1	2.0	4.4	14.8	10.4	6.4	4.08	14.75																							
6-May	9.0	10.3	11.0	Z	8.8	8.5	8.9	10.9	6.4	7.7	10.7	7.4	3.8	3.7	4.3	4.6	4.7	5.2	5.0	4.4	11.8	19.8	19.8	7.0	8.41	19.79																							
7-May	6.0	7.5	10.3	Z	12.5	14.1	11.6	4.9	5.1	4.5	3.8	4.9	5.4	6.7	9.3	7.6	5.0	9.4	6.5	6.9	10.9	17.0	6.4	4.1	7.84	17.01																							
8-May	4.8	3.4	2.5	Z	3.5	2.2	3.7	3.9	4.3	1.5	1.4	1.6	1.7	1.8	1.9	2.0	2.0	2.0	3.7	2.0	2.5	6.2	4.1	4.4	2.90	6.17																							
9-May	2.0	3.2	2.4	Z	6.4	5.1	5.8	4.3	2.6	2.6	2.6	2.5	2.3	2.3	2.1	2.2	2.2	2.2	2.1	2.3	2.4	2.6	6.0	8.9	3.35	8.94																							
10-May	9.5	11.6	9.8	Z	10.4	9.7	6.4	6.3	6.9	6.3	2.7	3.0	4.0	4.3	5.1	4.3	4.1	3.2	4.9	5.5	6.8	5.5	6.4	6.8	6.24	11.61																							
11-May	6.9	5.2	6.2	Z	12.0	12.3	9.9	11.2	8.6	8.0	6.8	6.2	5.0	3.9	5.0	4.7	5.6	4.5	4.6	5.3	4.4	4.5	4.1	5.0	6.52	12.31																							
12-May	4.5	4.9	3.7	Z	4.9	4.4	5.0	7.9	5.7	4.5	3.2	3.4	3.4	2.9	3.7	3.4	3.2	3.3	3.8	4.3	3.8	9.5	8.3	7.3	4.73	9.46																							
13-May	7.2	6.1	7.1	Z	12.0	12.6	8.1	13.4	14.2	6.4	4.4	3.6	3.8	4.0	3.3	3.7	4.0	3.3	3.7	3.8	5.0	6.3	7.8	8.6	6.62	14.22																							
14-May	9.1	10.8	8.3	Z	4.2	7.3	10.6	15.0	9.4	7.5	4.5	4.3	3.9	4.1	3.9	4.1	4.4	5.1	4.6	4.6	4.3	8.3	9.3	8.5	6.78	14.98																							
15-May	7.9	8.0	8.2	Z	14.2	11.9	7.6	12.3	9.2	6.3	5.2	4.0	3.6	3.6	4.1	4.4	5.0	5.5	4.9	5.6	5.8	8.4	7.8	13.2	7.25	14.21																							
16-May	11.6	5.5	6.4	Z	9.2	9.3	8.3	7.9	6.7	4.5	3.9	3.9	4.4	5.1	4.4	4.8	4.6	4.5	4.5	4.9	4.5	5.0	4.6	5.0	5.80	11.56																							
17-May	5.9	6.6	6.8	Z	5.5	12.4	10.2	9.1	9.9	7.0	4.0	5.2	4.9	3.8	4.3	5.4	4.9	4.9	4.4	6.6	6.2	9.4	11.5	9.0	6.86	12.36																							
18-May	11.8	10.2	8.2	Z	9.7	10.1	7.7	8.9	6.9	C	C	C	C	C	C	4.4	3.1	4.4	3.3	5.2	5.7	4.9	4.6	3.1	--	11.79																							
19-May	3.6	3.5	2.5	Z	1.4	9.5	7.1	6.3	6.3	4.2	2.1	2.3	2.8	2.0	2.1	1.8	1.6	1.6	1.9	1.7	1.6	1.7	1.6	1.5	3.07	9.53																							
20-May	1.6	1.8	1.8	Z	1.6	1.5	1.6	1.8	2.0	1.5	1.4	1.4	1.4	1.7	2.1	1.8	1.7	1.7	1.6	2.4	2.4	2.6	3.1	2.9	1.88	3.12																							
21-May	5.2	3.1	2.5	Z	3.5	3.4	3.3	3.1	2.8	2.8	2.3	2.2	2.0	1.9	1.9	2.2	2.4	2.3	2.6	2.8	3.1	3.4	3.7	2.9	2.84	5.23																							
22-May	2.2	2.3	3.8	Z	3.7	4.7	4.9	7.4	4.0	3.7	4.9	6.3	4.6	4.9	4.0	3.7	3.8	4.4	5.3	5.7	7.1	5.5	4.4	3.2	4.55	7.41																							
23-May	3.1	3.9	5.6	Z	6.8	4.7	7.8	6.2	1.9	1.2	1.2	1.1	1.2	1.2	1.4	1.3	1.6	1.8	1.6	2.4	2.7	5.0	5.7	6.6	3.30	7.81																							
24-May	4.5	3.3	5.3	Z	5.1	5.4	6.4	5.7	5.6	5.1	5.4	3.9	2.7	3.4	2.7	2.2	2.3	2.4	2.5	4.0	8.3	8.4	8.0	6.8	4.76	8.41																							
25-May	5.9	4.8	6.0	Z	9.5	9.0	11.9	5.5	3.2	8.2	5.4	6.7	2.8	2.1	2.2	3.2	3.5	3.3	3.2	4.4	2.8	2.3	1.9	2.2	4.78	11.88																							
26-May	4.5	2.9	4.2	Z	5.5	4.1	3.3	6.8	7.5	5.4	3.0	3.6	2.2	2.0	1.6	2.6	1.7	1.5	1.2	1.2	2.7	4.2	3.4	2.1	3.36	7.48																							
27-May	5.3	2.9	1.7	Z	4.2	4.7	3.7	8.5	5.6	1.0	0.9	1.6	3.2	0.9	3.4	2.2	1.1	1.2	1.0	3.0	3.7	2.8	3.4	1.3	2.93	8.46																							
28-May	1.3	2.3	1.6	Z	3.0	3.6	3.0	2.8	2.1	3.2	2.9	1.7	1.2	1.5	2.0	1.9	1.9	1.7	1.6	1.5	1.6	3.4	2.5	2.3	2.20	3.57																							
29-May	3.7	3.6	3.6	Z	2.1	1.5	4.8	3.5	3.5	3.7	5.9	1.6	1.5	1.7	1.1	1.0	0.8	0.7	1.6	1.8	2.3	2.3	1.3	1.0	2.37	5.92																							
30-May	1.9	1.6	4.1	Z	1.6	2.3	2.3	5.1	2.7	2.8	1.8	1.6	1.9	2.4	4.7	2.5	1.8	1.5	0.8	1.1	1.2	4.4	7.2	4.6	2.69	7.20																							
31-May	5.8	4.4	4.4	Z	3.0	3.5	4.6	3.3	3.8	4.4	4.8	4.2	2.3	1.4	2.2	0.8	2.7	2.5	2.1	3.3	4.7	7.1	14.6	9.8	4.33	14.65																							
																								5.75	5.26	5.37	--	6.42	6.93	6.62	7.19	5.70	5.07	4.37	3.88	3.24	3.11	3.43	3.37	3.21	3.42	3.48	4.03	5.11	6.59	6.41	5.69	Diurnal Average	
																								11.79	11.61	10.99	--	14.21	14.08	12.01	14.98	14.22	12.04	15.03	11.95	8.28	6.72	9.32	7.65	5.59	9.40	7.61	8.61	11.77	19.75	19.79	13.18	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
May 2016

Maximum Value: 26.52 ppb on May 13 08:00 Maximum Daily Average: 9.81 ppb on May 6		Hours in Service: 744 Hours of Data: 707 Hours of Missing Data: 37 Hours of Calibration: 37 Percent Operational Time: 100.0																								
Minimum Value: 0.7 ppb on May 29 18:00 Maximum Diurnal Average: 10.24 ppb at hour 8 Monthly Average: 5.786 ppb		Minimum Daily Average: 2.08 ppb on May 20 Minimum Diurnal Average: 3.53 ppb at hour 17 Percentiles: P ₁ = 1.0 P ₁₀ = 1.9 Q ₁ = 2.9 Median = 4.8 O ₃ = 7.2 P ₉₀ = 10.9 P ₉₉ = 20.4																								
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-May	9.3	8.8	8.5	Z	9.8	5.0	4.0	4.6	4.6	9.4	3.6	4.5	4.5	5.5	6.0	5.5	4.8	6.2	5.7	6.2	9.8	5.9	5.1	9.9	6.40	9.89
2-May	5.8	6.9	6.9	Z	10.5	13.9	20.9	26.1	8.4	8.3	10.6	16.0	10.6	5.0	2.9	4.0	4.7	5.4	5.9	5.4	9.1	10.8	13.3	12.5	9.73	26.13
3-May	10.5	4.6	5.4	Z	4.3	10.1	10.2	7.0	5.9	9.2	6.4	6.0	4.2	4.0	5.1	6.0	5.6	6.0	8.0	8.9	11.8	10.8	7.8	9.5	7.27	11.78
4-May	7.3	7.8	5.2	Z	10.7	12.9	15.5	21.7	18.2	16.9	18.9	3.6	2.5	4.7	4.5	4.7	4.1	3.8	4.7	6.7	6.7	2.3	1.5	1.4	8.11	21.75
5-May	1.5	1.9	3.2	Z	5.7	3.1	3.6	2.8	2.8	6.7	6.2	4.9	4.1	3.9	4.1	3.6	1.6	1.8	2.1	1.9	4.6	14.9	10.4	6.4	4.43	14.86
6-May	9.1	10.4	12.1	Z	9.0	9.6	13.4	17.4	8.2	10.4	14.7	9.5	4.4	4.5	5.0	5.2	5.2	5.6	5.1	4.5	12.4	22.3	20.2	7.2	9.81	22.32
7-May	6.2	7.6	11.7	Z	19.0	24.1	19.6	5.3	5.8	5.2	4.2	5.6	6.1	7.4	10.3	8.6	5.3	10.2	6.9	7.2	11.1	18.1	6.7	4.5	9.43	24.11
8-May	5.0	3.6	2.7	Z	3.7	2.3	4.3	4.4	5.3	1.5	1.3	1.5	1.6	1.7	1.8	1.9	2.0	2.0	4.0	2.0	2.4	6.3	4.1	4.5	3.04	6.31
9-May	2.0	3.2	2.4	Z	7.1	5.3	6.2	5.1	2.7	2.7	2.7	2.5	2.2	2.2	2.0	2.1	2.1	2.1	2.0	2.2	2.3	2.5	6.1	9.2	3.44	9.20
10-May	9.7	12.0	10.7	Z	13.6	14.0	7.5	8.2	9.6	7.8	2.9	3.8	4.7	4.8	6.1	4.8	4.6	3.4	5.5	5.7	7.0	5.5	6.6	6.9	7.19	13.96
11-May	6.9	5.2	6.2	Z	12.9	14.8	14.3	16.9	11.9	10.0	8.4	7.5	6.1	4.2	5.6	5.3	6.3	4.9	4.9	5.7	4.6	4.5	4.3	5.1	7.68	16.94
12-May	4.6	5.1	3.8	Z	5.2	4.6	5.7	9.3	6.5	5.4	3.5	3.8	3.8	3.0	4.0	3.7	3.4	3.6	4.1	5.0	3.9	9.7	8.3	7.3	5.10	9.66
13-May	7.2	6.2	7.6	Z	15.0	17.1	11.4	26.5	22.6	8.0	5.4	4.1	4.2	4.8	3.6	4.2	4.5	3.5	3.9	4.0	5.2	6.3	7.9	8.7	8.34	26.52
14-May	9.1	11.1	8.4	Z	4.3	7.8	12.9	20.1	11.5	8.7	5.3	4.8	4.3	4.6	4.2	4.5	4.7	5.6	4.9	4.8	4.3	8.4	9.5	8.8	7.52	20.15
15-May	8.0	8.1	8.3	Z	14.7	12.4	8.5	15.0	10.9	7.2	5.7	4.3	3.9	4.0	4.5	4.6	5.4	5.9	5.1	5.9	5.8	8.7	7.9	13.9	7.76	14.96
16-May	11.6	5.5	6.4	Z	9.3	9.6	9.1	9.0	7.7	5.1	4.4	4.4	5.0	5.8	4.5	4.9	4.7	4.6	4.5	5.3	4.6	5.2	4.7	5.1	6.12	11.56
17-May	6.0	6.7	6.9	Z	5.6	13.6	11.3	11.0	12.5	8.6	4.5	6.0	6.1	4.5	4.8	6.1	5.6	5.5	4.9	7.1	6.4	10.3	11.8	9.4	7.61	13.63
18-May	13.4	11.1	9.0	Z	12.1	15.9	13.0	12.7	9.3	C	C	C	C	C	C	5.2	3.4	5.3	3.7	5.7	6.2	5.2	4.7	3.3	--	15.91
19-May	3.7	3.6	2.5	Z	1.4	13.4	7.3	6.7	7.0	4.8	2.6	3.1	3.8	2.2	2.4	1.9	1.8	1.7	2.3	1.8	1.6	1.7	1.6	1.5	3.51	13.44
20-May	1.6	1.8	1.8	Z	1.7	1.6	1.8	1.9	2.3	1.8	1.5	1.5	1.5	2.0	2.6	2.5	1.9	1.9	1.7	2.8	2.6	2.8	3.3	2.9	2.08	3.32
21-May	5.8	3.2	2.6	Z	3.8	3.6	3.8	4.0	3.4	3.5	3.0	3.0	2.6	2.3	2.3	2.7	3.1	2.8	3.0	3.1	3.3	3.5	3.8	3.0	3.27	5.82
22-May	2.2	2.3	3.9	Z	4.1	4.9	5.5	9.1	5.3	4.5	6.2	8.8	6.6	7.4	5.6	5.2	4.8	5.1	5.8	5.9	7.5	6.2	5.1	3.4	5.45	9.15
23-May	3.1	3.9	5.8	Z	6.9	5.5	12.8	10.5	2.2	1.3	1.2	1.1	1.2	1.1	1.5	1.3	1.6	2.0	1.6	2.4	2.6	5.0	5.7	7.0	3.80	12.80
24-May	4.5	3.3	5.6	Z	6.6	10.7	14.4	10.0	8.3	6.6	7.0	4.7	3.2	4.0	3.1	2.3	2.3	2.5	2.5	4.4	9.2	8.9	8.4	6.9	6.06	14.38
25-May	6.1	5.0	6.1	Z	10.5	11.5	19.5	6.3	3.5	12.8	6.6	10.5	3.9	2.5	2.6	3.6	4.0	3.7	3.6	5.1	2.9	2.3	1.9	2.1	5.94	19.46
26-May	4.5	2.9	4.2	Z	6.2	5.3	4.7	11.4	11.4	7.5	3.7	4.2	2.6	2.6	1.7	2.9	2.0	1.6	1.3	1.2	2.9	4.3	3.4	2.1	4.11	11.45
27-May	5.3	3.0	1.8	Z	4.3	5.0	4.0	9.6	6.5	1.1	0.9	1.8	3.6	1.0	4.4	2.6	1.1	1.2	1.0	3.3	3.8	2.8	3.5	1.4	3.17	9.57
28-May	1.4	2.4	1.7	Z	3.0	4.1	3.4	3.3	3.0	5.0	3.9	2.3	1.5	2.0	2.5	2.4	2.3	2.1	1.9	1.6	1.6	3.5	2.6	2.3	2.61	5.00
29-May	3.8	3.7	3.8	Z	3.2	2.0	8.7	5.4	5.1	5.4	8.6	2.3	2.0	2.2	1.3	1.0	0.9	0.7	1.7	1.9	2.3	2.3	1.4	1.1	3.08	8.71
30-May	2.1	1.6	4.4	Z	1.7	2.7	3.6	9.2	5.0	4.4	2.3	2.1	2.6	3.0	6.2	4.1	2.2	1.9	0.9	1.2	1.2	5.2	8.0	5.0	3.50	9.20
31-May	7.4	5.8	7.1	Z	4.3	10.4	14.8	6.9	6.7	7.1	7.6	6.1	3.1	1.9	2.8	0.8	3.4	2.8	2.2	3.5	5.1	8.3	15.8	10.1	6.26	15.77
5.97 5.43 5.70 -- 7.43 8.94 9.53 10.24 7.55 6.56 5.46 4.81 3.88 3.63 3.94 3.81 3.53 3.73 3.72 4.27 5.32 6.92 6.63 5.88																								Diurnal Average		
13.41 11.99 12.07 -- 19.04 24.11 20.87 26.52 22.59 16.92 18.90 16.01 10.58 7.38 10.34 8.65 6.31 10.22 7.99 8.92 12.43 22.32 20.21 13.90																								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
May 2016

Maximum Value: 85.02 µg/m ³ on May 18 10:00		Maximum Daily Average: 17.73 µg/m ³ on May 16		Hours in Service: 744																							
Minimum Value: 0.0 µg/m ³ on May 8 10:00		Minimum Daily Average: 1.83 µg/m ³ on May 19		Hours of Data: 744																							
Maximum Diurnal Average: 13.15 µg/m ³ at hour 8		Minimum Diurnal Average: 5.41 µg/m ³ at hour 15		Hours of Missing Data: 0																							
Monthly Average: 8.464 µg/m ³		Percentiles: P ₁ = 0.1 P ₁₀ = 2.5 Q ₁ = 4.0 Median = 6.2 Q ₃ = 10.4 P ₉₀ = 16.7 P ₉₉ = 41.4		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-May	13.2	7.7	8.1	6.1	5.4	6.5	6.2	3.3	4.8	8.3	2.5	2.5	4.6	5.7	4.6	5.5	3.4	4.2	4.4	7.1	9.1	7.5	6.6	8.9	6.09	13.16	
2-May	10.6	6.9	5.6	6.3	4.4	4.8	7.1	13.6	10.4	8.4	12.8	20.1	8.7	2.1	1.6	2.3	1.4	2.9	4.8	4.3	7.3	9.4	10.4	8.7	7.28	20.13	
3-May	10.7	6.2	10.0	5.7	5.8	12.1	11.4	8.7	7.4	13.9	5.2	5.8	3.7	2.7	2.9	4.2	4.4	6.3	7.3	7.5	11.5	9.0	7.2	9.3	7.46	13.89	
4-May	11.0	9.5	8.2	6.5	9.6	13.1	20.1	30.0	28.4	27.3	29.2	3.2	2.5	3.9	4.1	3.3	4.3	13.9	6.5	4.6	7.4	1.1	2.7	2.0	10.52	30.02	
5-May	2.9	2.3	5.0	3.4	2.1	4.2	3.9	3.1	4.7	8.6	5.1	5.3	4.6	3.6	4.5	3.3	2.8	3.1	3.0	4.9	8.0	12.7	10.3	10.5	5.08	12.67	
6-May	5.6	6.8	6.3	6.1	4.1	4.6	9.0	9.7	9.6	11.0	16.3	8.0	0.1	1.3	3.0	3.9	2.2	2.3	3.3	7.8	8.4	13.4	13.3	14.0	7.08	16.32	
7-May	5.3	5.8	7.1	7.4	6.9	11.0	12.6	5.4	2.8	1.2	1.1	0.5	3.4	6.1	5.8	10.0	7.6	8.4	5.3	5.5	11.3	34.2	22.7	10.6	8.25	34.24	
8-May	11.8	28.3	12.4	8.3	4.2	1.0	2.3	4.6	11.9	0.0	1.5	2.0	2.0	2.5	3.4	5.3	7.8	18.1	5.2	4.6	11.0	12.3	5.2	4.5	7.10	28.33	
9-May	3.6	3.3	2.0	5.3	6.1	5.9	6.1	4.7	3.0	4.1	3.4	2.3	2.0	3.2	3.4	4.5	3.3	5.7	4.2	5.1	4.8	4.1	4.9	4.1	4.13	6.13	
10-May	5.5	6.3	4.3	4.5	5.4	6.7	9.7	9.7	10.6	6.9	4.1	2.1	4.0	4.5	5.1	4.5	4.8	4.1	6.2	5.0	5.0	15.1	8.7	7.3	6.26	15.07	
11-May	5.4	6.3	8.7	7.8	5.4	7.8	7.8	11.2	16.6	14.9	5.8	4.1	5.8	5.4	6.0	7.1	8.0	8.1	14.5	10.7	10.7	10.9	18.3	22.0	9.57	22.03	
12-May	14.4	14.2	12.7	11.4	7.4	12.7	21.1	24.5	27.8	25.6	18.2	13.8	13.3	14.9	9.8	10.3	9.6	14.7	14.4	14.1	17.4	32.8	21.4	17.2	16.41	32.82	
13-May	13.6	15.1	13.0	11.9	11.1	12.5	16.9	25.9	43.9	27.5	19.9	22.3	20.5	19.7	14.2	11.0	10.7	7.0	6.9	6.6	7.5	9.1	12.5	12.8	15.51	43.93	
14-May	10.6	42.0	20.5	10.4	9.9	9.0	13.1	31.5	21.6	15.6	8.8	26.4	34.9	7.9	8.8	9.0	8.8	10.2	10.9	10.4	11.4	23.7	17.4	14.1	16.12	42.02	
15-May	13.5	27.8	12.5	11.8	11.4	14.8	24.8	40.4	19.9	12.1	10.0	7.3	12.6	7.9	10.9	11.9	9.0	9.1	8.4	9.6	62.7	21.8	10.8	18.2	16.64	62.67	
16-May	34.6	34.1	20.3	22.7	8.7	13.0	17.6	30.8	22.5	13.9	23.0	16.8	5.9	13.5	11.5	9.6	13.9	11.5	9.9	17.3	24.6	18.0	18.6	12.9	17.73	34.57	
17-May	14.0	5.1	8.4	10.1	6.9	10.5	20.4	19.0	16.8	9.4	5.4	9.2	8.5	21.6	3.6	7.3	6.6	10.0	6.1	9.7	6.2	21.0	17.4	32.3	11.89	32.31	
18-May	26.7	23.0	15.4	9.9	11.5	16.2	26.2	45.2	42.6	85.0	54.3	14.4	21.0	5.1	1.6	0.0	0.0	0.0	0.0	0.9	1.1	0.6	0.3	0.6	16.74	85.02	
19-May	0.4	0.8	0.0	1.0	0.0	1.4	2.2	2.7	2.9	3.8	1.3	1.1	2.5	2.0	2.9	2.2	2.3	2.3	1.4	2.8	3.3	2.1	1.8	0.5	1.83	3.84	
20-May	1.0	2.1	1.7	2.0	2.3	2.1	3.3	3.4	2.5	2.2	2.2	2.8	2.8	3.6	3.8	3.5	3.7	3.9	3.2	5.6	4.1	3.6	2.2	2.8	2.94	5.57	
21-May	2.4	2.7	3.4	1.4	2.1	3.6	2.8	4.1	3.3	3.6	3.7	3.5	3.2	3.4	3.9	4.9	5.0	4.8	4.5	4.4	4.5	4.4	3.7	4.0	3.64	4.96	
22-May	4.3	3.5	4.0	4.4	3.1	4.7	2.6	2.2	2.1	3.6	2.7	4.7	4.7	5.0	4.2	3.5	4.7	6.5	8.0	7.4	7.4	5.1	3.8	2.7	4.37	7.97	
23-May	3.7	6.0	6.2	4.7	5.1	5.1	7.7	7.1	6.1	5.9	4.0	4.4	4.6	3.9	4.8	4.5	4.9	5.4	5.3	7.6	8.0	10.9	11.3	10.2	6.15	11.34	
24-May	12.0	7.8	6.6	10.3	7.0	10.9	11.3	9.4	9.7	9.5	8.2	6.5	7.5	9.5	8.5	8.7	9.2	9.8	10.5	14.2	20.3	16.7	15.6	16.4	10.67	20.31	
25-May	11.0	9.9	12.6	9.8	9.3	10.5	14.1	10.1	8.3	9.7	11.2	9.3	3.6	3.8	5.4	6.8	7.6	9.0	5.0	6.5	8.3	4.7	5.1	6.6	8.26	14.12	
26-May	6.1	5.7	7.6	5.5	5.3	4.7	6.1	9.7	16.7	13.4	8.0	6.3	3.4	3.8	5.7	8.2	5.5	2.2	3.2	3.9	7.2	9.3	6.1	6.1	6.66	16.68	
27-May	7.3	7.7	7.6	7.5	9.7	8.9	8.8	12.9	11.9	5.8	5.6	5.2	6.3	3.8	4.3	4.9	5.4	4.4	5.6	6.0	6.6	6.7	6.0	4.9	6.82	12.91	
28-May	4.5	4.5	3.5	4.3	3.7	4.9	4.8	4.3	3.8	5.4	3.8	2.9	3.2	2.0	2.9	6.7	6.0	4.9	5.3	5.0	5.9	7.5	6.3	9.1	4.81	9.08	
29-May	8.2	6.9	5.5	5.1	7.0	5.9	9.6	6.8	6.7	7.4	8.2	1.7	3.2	3.8	7.6	7.5	3.8	4.8	4.0	5.6	4.9	4.5	3.0	4.8	5.69	9.63	
30-May	2.7	3.6	5.3	5.4	3.5	3.8	4.0	7.1	3.3	4.6	4.3	4.8	6.0	7.6	5.9	3.3	6.7	3.2	2.7	4.1	3.4	4.6	5.2	4.2	4.55	7.57	
31-May	4.0	3.2	3.3	3.4	2.8	4.2	7.6	6.5	8.8	8.3	9.7	8.3	1.1	2.2	3.0	3.3	5.6	7.1	5.7	9.7	7.9	11.7	12.8	7.6	6.15	12.84	
		9.05	10.18	8.00	7.11	6.04	7.65	10.37	13.15	12.63	12.15	9.67	7.35	6.78	6.00	5.41	5.84	5.77	6.70	5.99	7.05	10.23	11.24	9.41	9.36	Diurnal Average	
		34.57	42.02	20.49	22.67	11.46	16.24	26.16	45.21	43.93	85.02	54.28	26.41	34.91	21.63	14.17	11.89	13.94	18.10	14.54	17.34	62.67	34.24	22.67	32.31	Diurnal Maximum	
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: May 18, 2016

Parameter: NO/NO₂/NO_x

Instrument: Teco 42i

Serial Number: CM13040041

Previous Calibration Date: April 13, 2016

Calibration: Routine

Calibration Equipment: SABIO 2010 sn # 04300810

Barometric Pressure: 26.50" Hg

Calibration Method: Std.Gas Dilution / GPT

Cylinder ID: FF16109

Temperature: 21.0° C

Cylinder Concentration: 12.1 ppm NO & NO_x

In Service: January 14, 2015

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	5.8	6.0	na	0.913	0.999	1.000	200 ppb
Current	5.9	7.3	na	0.914	0.997	1.000	200 ppb

NO	Final Zero: -0.7 ppb	Final Span: -0.5 ppb	As Found Correction Factor: 0.974
NO ₂	Final Zero: -1.4 ppb	Final Span: 1.7 ppb	As Found Correction Factor: NA
NO _x	Final Zero: -2.0 ppb	Final Span: 1.4 ppb	As Found Correction Factor: 0.969

Results of Linear Regression			Slope	Intercept	R ²
NO	R _c vs C _c	Previous	150.176800	15.322850	0.999997
		Current	150.168400	120.851400	0.999768
	C _i vs C _c	Current	1.000000	-0.000021	0.999769
NO ₂	R _c vs C _c	Previous	150.477600	-44.782180	0.999997
		Current	149.720200	101.949400	0.999915
	C _i vs C _c	Current	1.000000	0.000003	0.999914
NO _x	R _c vs C _c	Previous	150.335700	6.985573	0.999997
		Current	150.017800	196.212400	0.999608
	C _i vs C _c	Current	1.000000	0.000000	0.999608

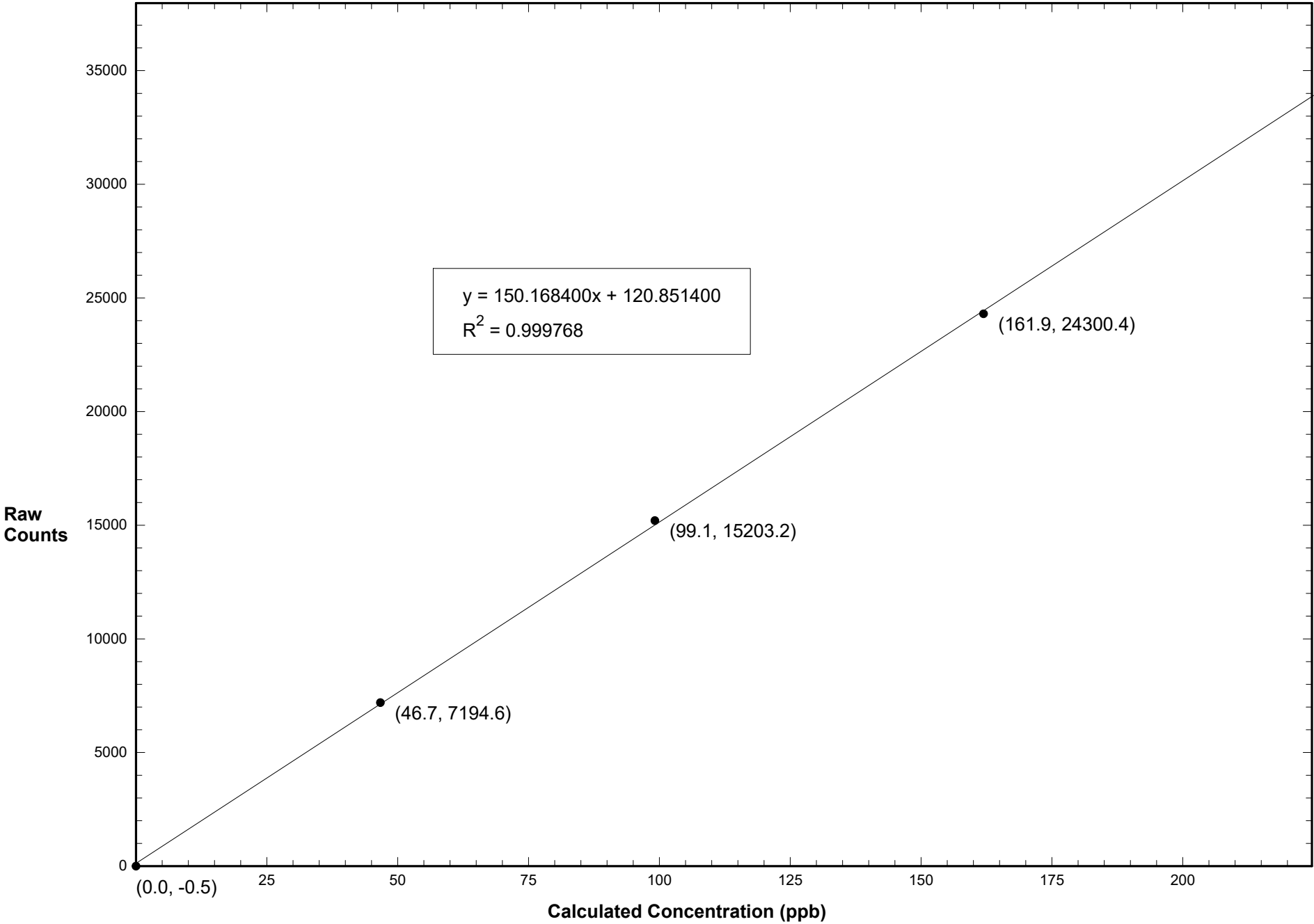
Comments:

Calibration Data Summary (Page 2)

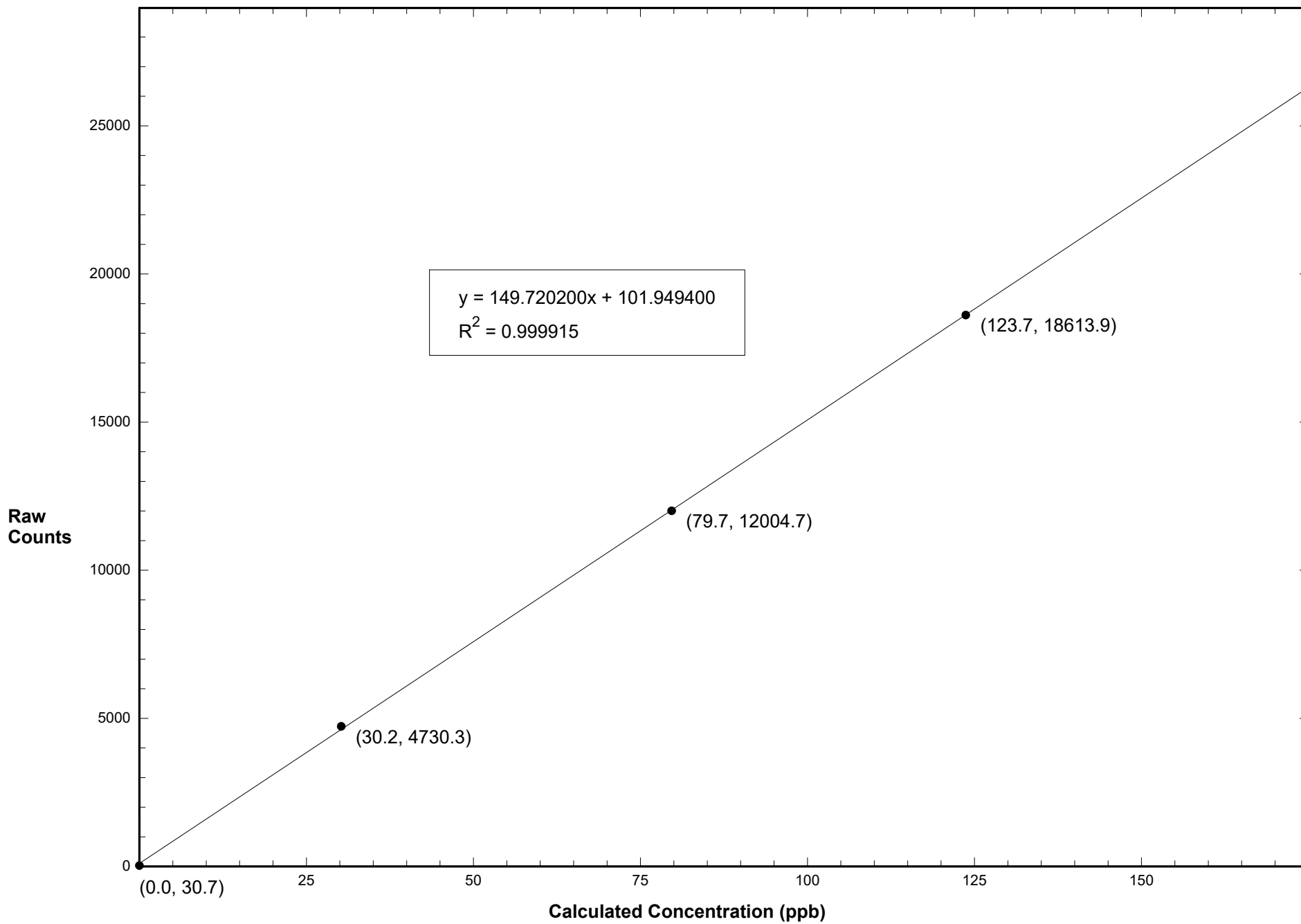
May 18, 2016 - Station 906

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		
0.06705	4.943	161.9	24300.4	161.0	1.006		
0.04170	5.048	99.1	15203.2	100.4	0.987		
0.01953	5.043	46.7	7194.6	47.1	0.991		
0.00000	4.950	0.0	-0.5	-0.8			
NO Calibration					Average Correction Factor:	0.995	
0.06705	4.943	161.9	24311.3	160.7	1.007		
0.04170	5.048	99.1	15313.0	100.8	0.984		
0.01953	5.043	46.7	7297.1	47.3	0.986		
0.00000	4.950	0.0	31.4	-1.1			
NO _x Calibration					Average Correction Factor:	0.992	
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	5566.4	36.3	123.7	18613.9	123.6	1.001	0.999
160.0	12179.4	80.3	79.7	12004.7	79.5	1.002	0.998
160.0	19607.7	129.8	30.2	4730.3	30.9	0.977	1.023
			0.0	30.7	-0.5		
					Average Correction Factor:	0.993	
NO ₂ Gas Phase Titration					Average Converter Efficiency: 1.007		
Parameter	Correction Factor (Previous)	Correction Factor: (Current)	Percent Change of Correction Factor				
NO	1.000	1.006	0.6				
NO ₂	0.999	1.001	0.2				
NO _x	1.000	1.007	0.7				

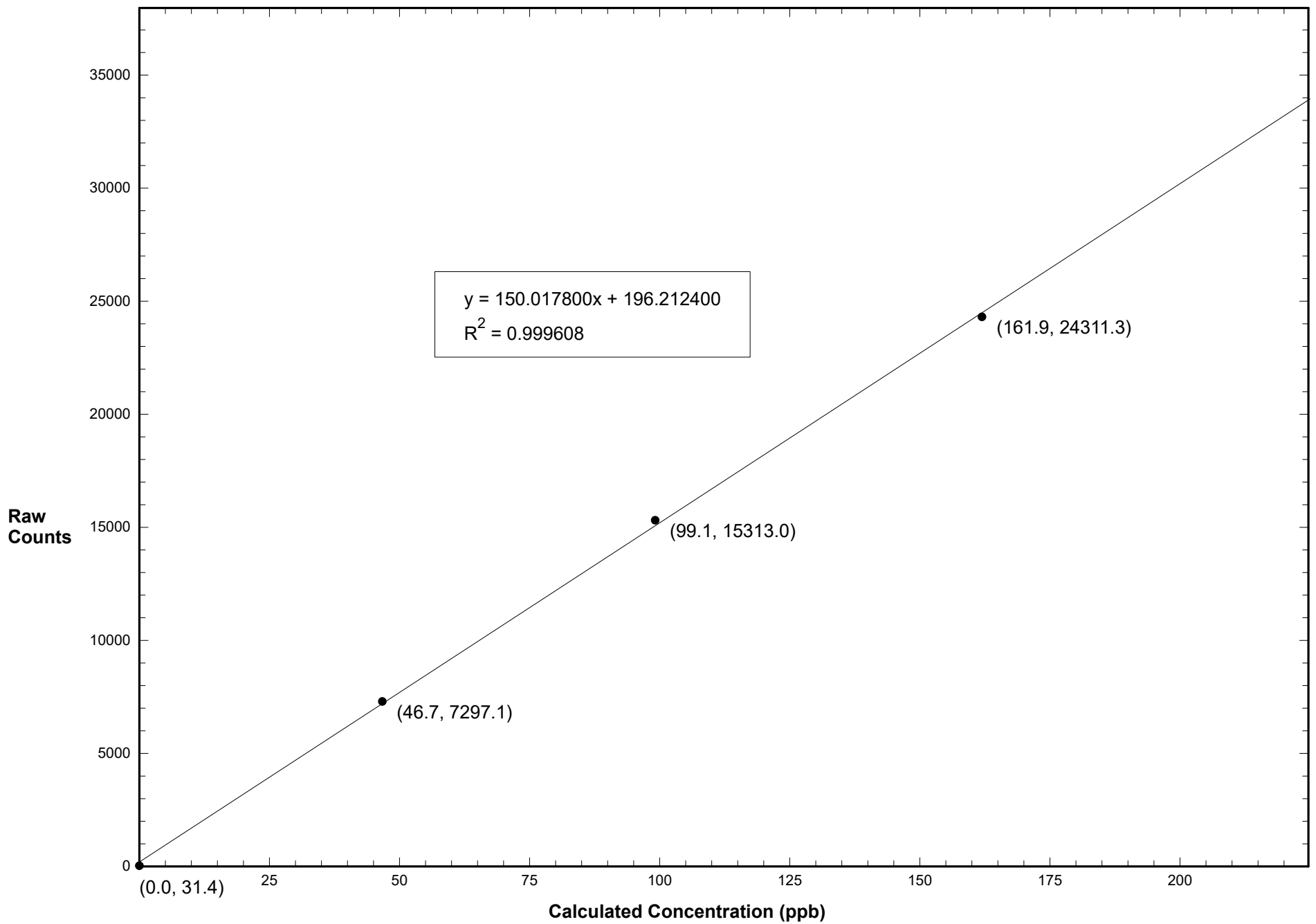
Station 906 NO May 18, 2016: Linear Regression



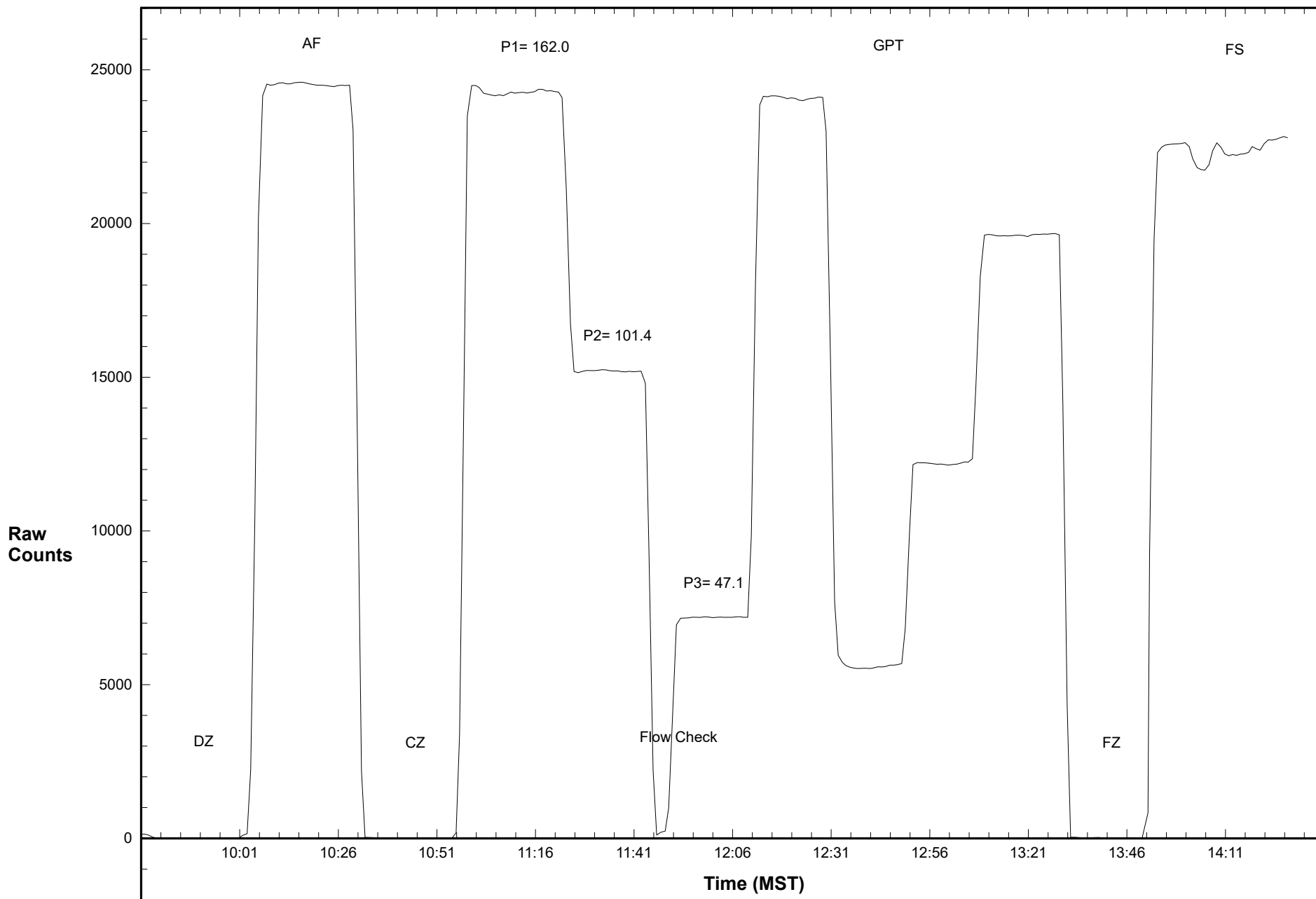
Station 906 NO2 May 18, 2016: Linear Regression



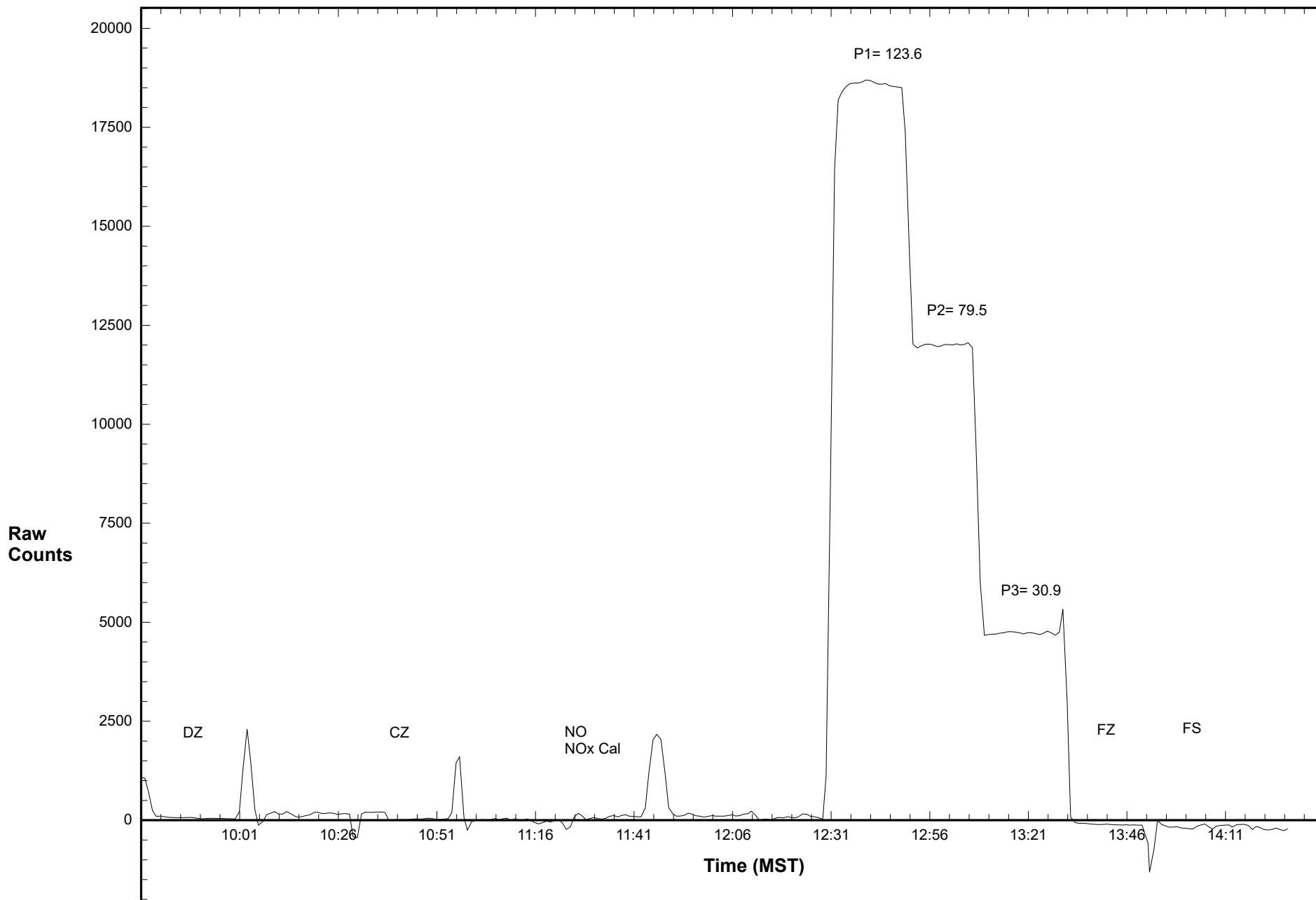
Station 906 NOX May 18, 2016: Linear Regression



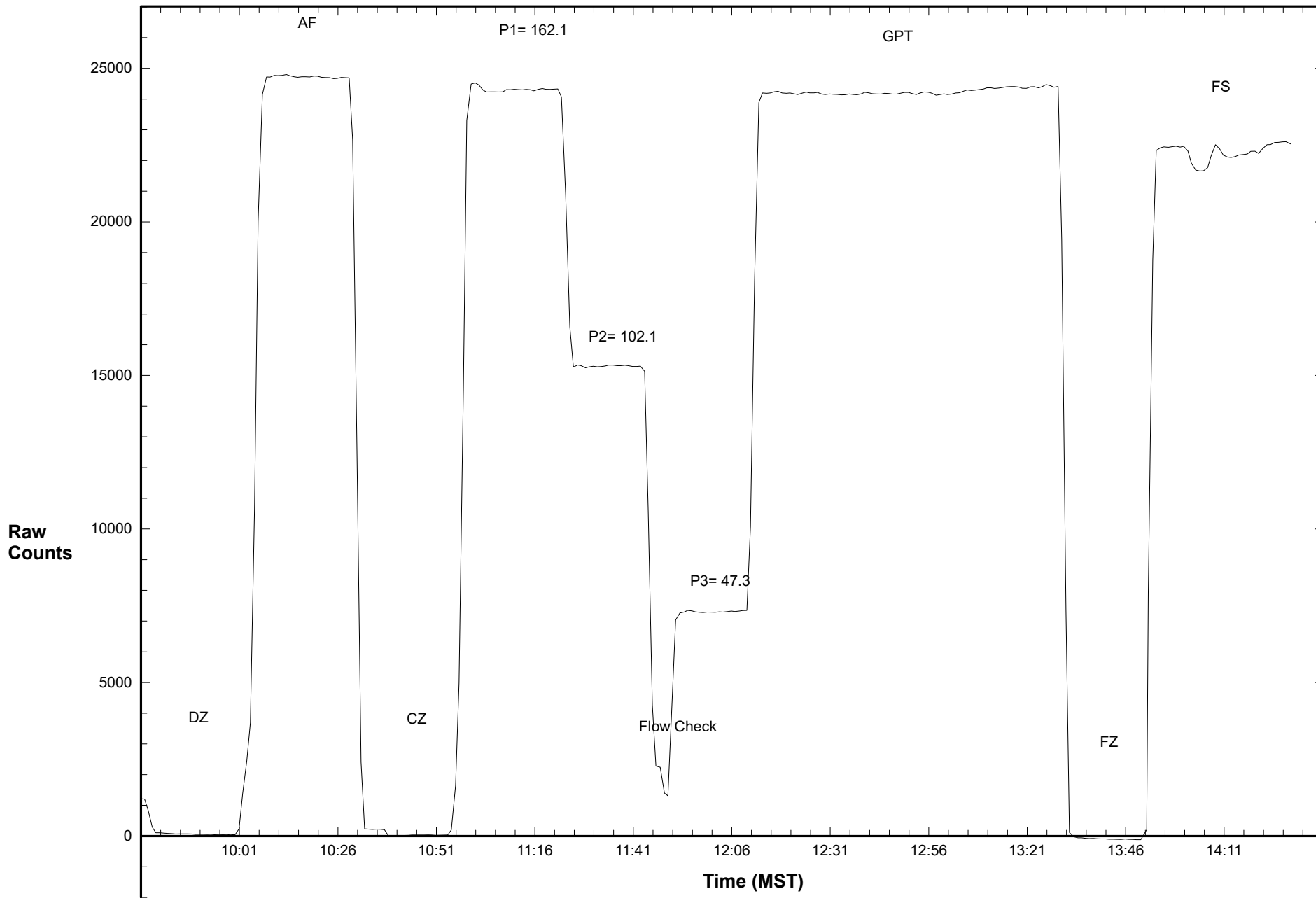
Station 906 NO May 18, 2016: Calibration Graph



Station 906 NO2 May 18, 2016: Calibration Graph



Station 906 NOX May 18, 2016: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton
 Calibration Date: May 18, 2016
 Parameter: O₃

Instrument: Teco 49i

Serial Number: 1150790050

Previous Calibration Date: April 13, 2016

Calibration: Routine

Calibration Equipment: 2B Tech 306 SN-135

Barometric Pressure: 26.50" Hg

Calibration Method: Certified Ozone Generator

Temperature: 21.0° C

Technician: Dean Yustak

Instrument Settings	Background	Coefficient	Monitoring Range
Previous	-0.4	1.011	500 ppb
Current	-0.7	1.028	500 ppb

Final Zero: -1.0 ppb

Final Span: 357.3 ppb

As Found Correction Factor: 0.000

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	409.0	24525.7	408.6	1.001
3.000	255.0	15348.4	255.6	0.998
3.000	102.3	6149.3	102.2	1.001
3.000	0.0	11.3	-0.2	

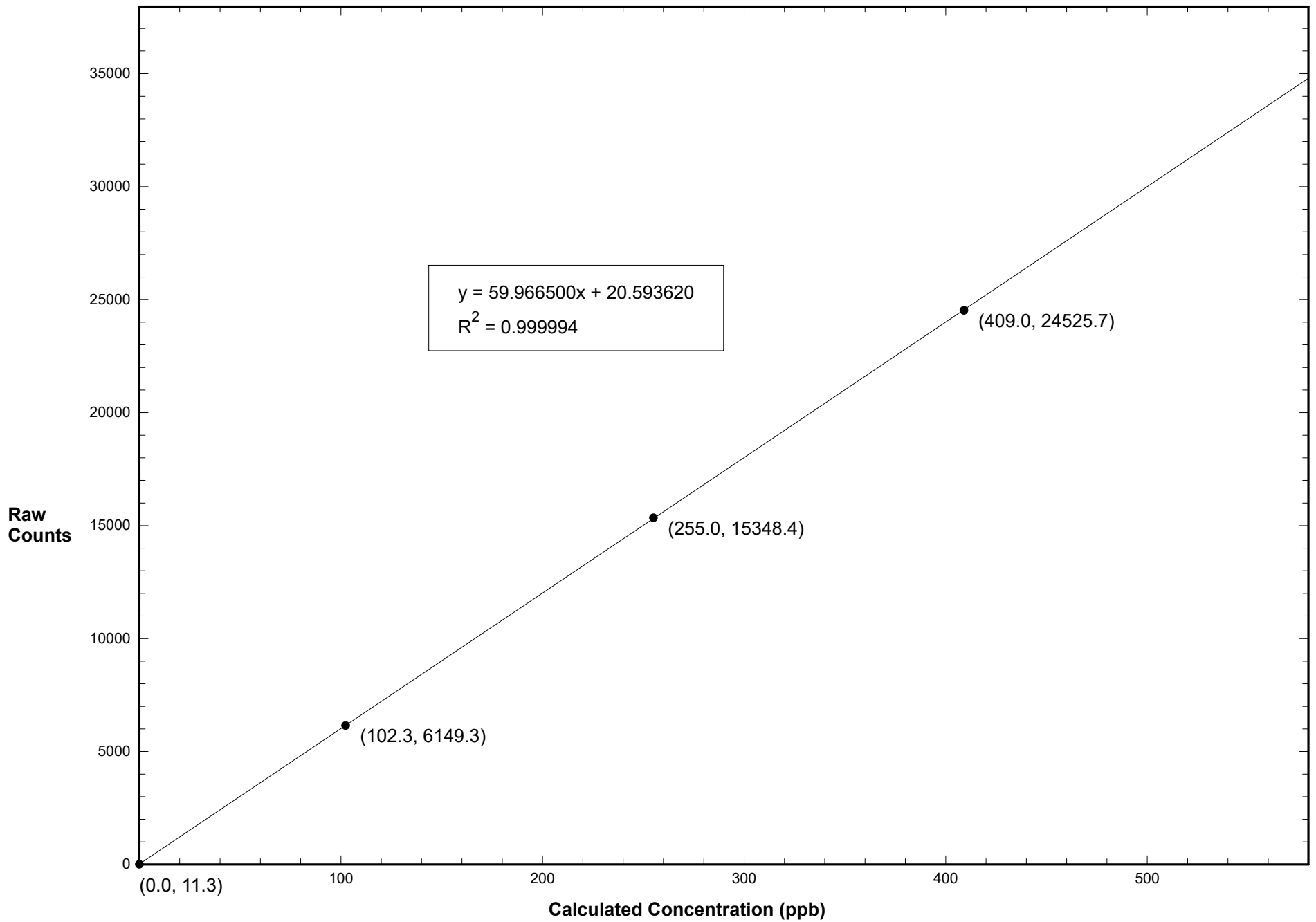
Results of Linear Regression

R _c vs C _c	Slope	Intercept	R ²
Previous	60.078040	24.662950	0.999990
Current	59.966500	20.593620	0.999994
C _i vs C _c			
Current	1.000000	-0.000039	0.999994

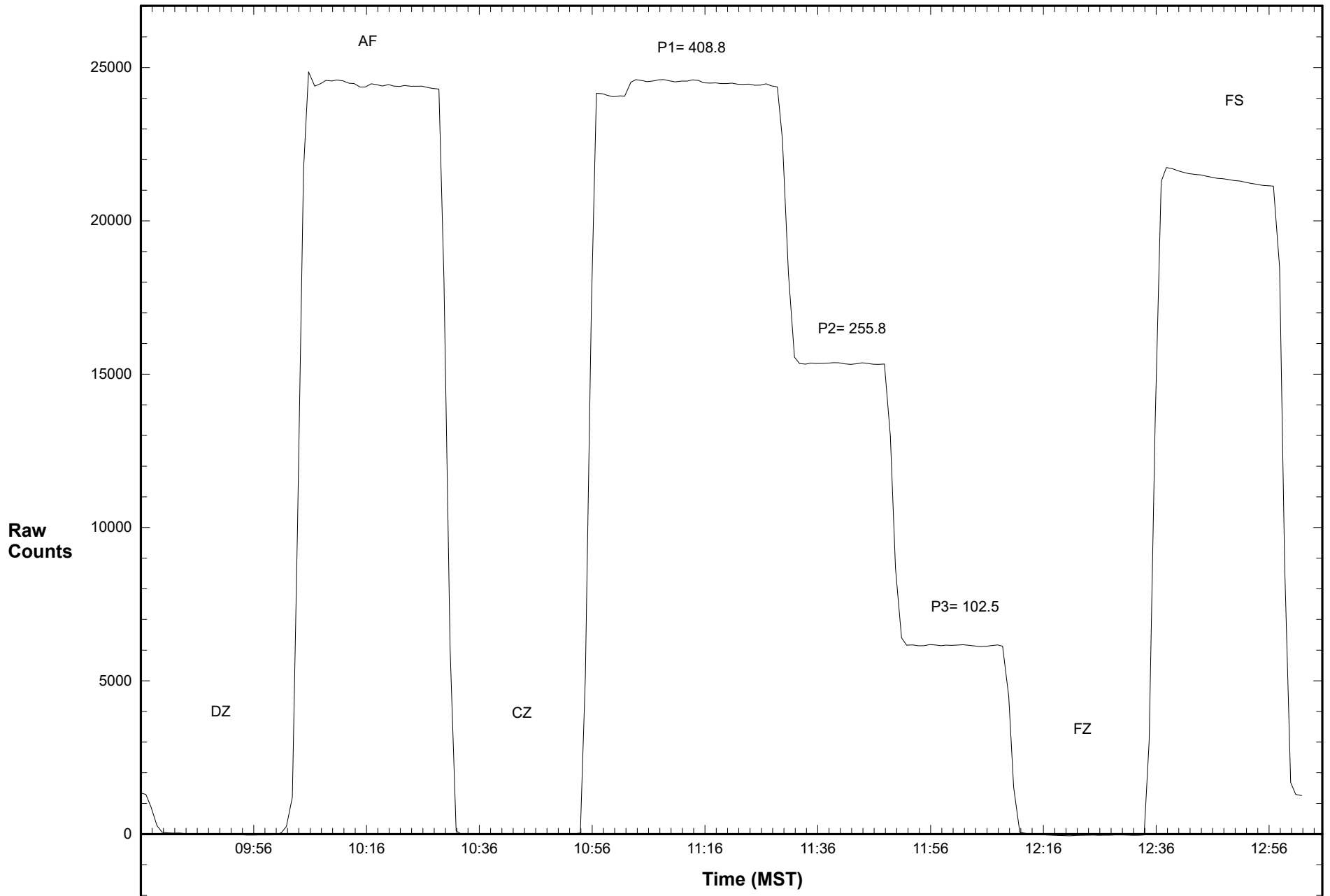
Average Correction Factor: 1.000
 Previous Correction Factor: 1.001
 Current Correction Factor: 1.001
 Percent Change of Correction Factor: 0.0

Comments:

Station 906 O3 May 18, 2016: Linear Regression



Station 906 O3 May 18, 2016: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton
 Calibration Date: May 18, 2016
 Parameter: SO₂

Instrument: Teco 43i	Serial Number: CM 12499009	Previous Calibration Date: April 13, 2016
Calibration: Routine	Calibration Equipment: SABIO 2010 sn # 04300810	Barometric Pressure: 26.50" Hg
Calibration Method: Std.Gas Dilution	Cylinder ID: FF16109	Temperature: 21.0° C
Cylinder Concentration: 6.11 ppm SO ₂	In Service: January 14, 2015	Technician: Dean Yustak

Instrument Settings	SO ₂ bkg ppb	SO ₂ Coefficient	Monitoring Range
Previous	25.9	1.007	100 ppb
Current	25.3	1.006	100 ppb

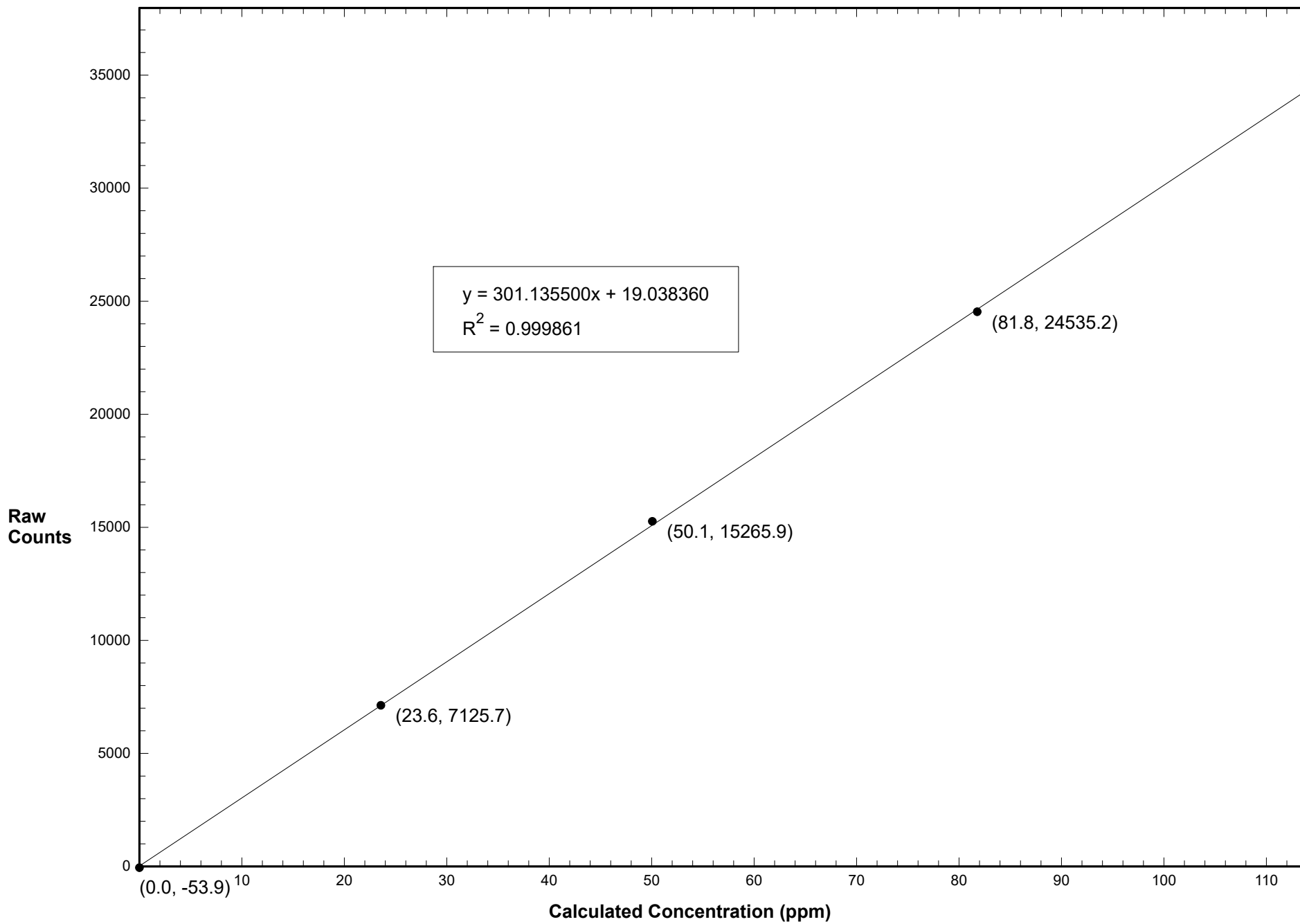
Final Zero: -0.3 ppm Final Span: 66.5 ppm As Found Correction Factor: 0.985

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
0.0671	4.943	81.8	24535.2	81.4	1.004
0.0417	5.048	50.1	15265.9	50.6	0.989
0.0195	5.043	23.6	7125.7	23.6	0.999
0.0000	4.950	0.0	-53.9	-0.2	

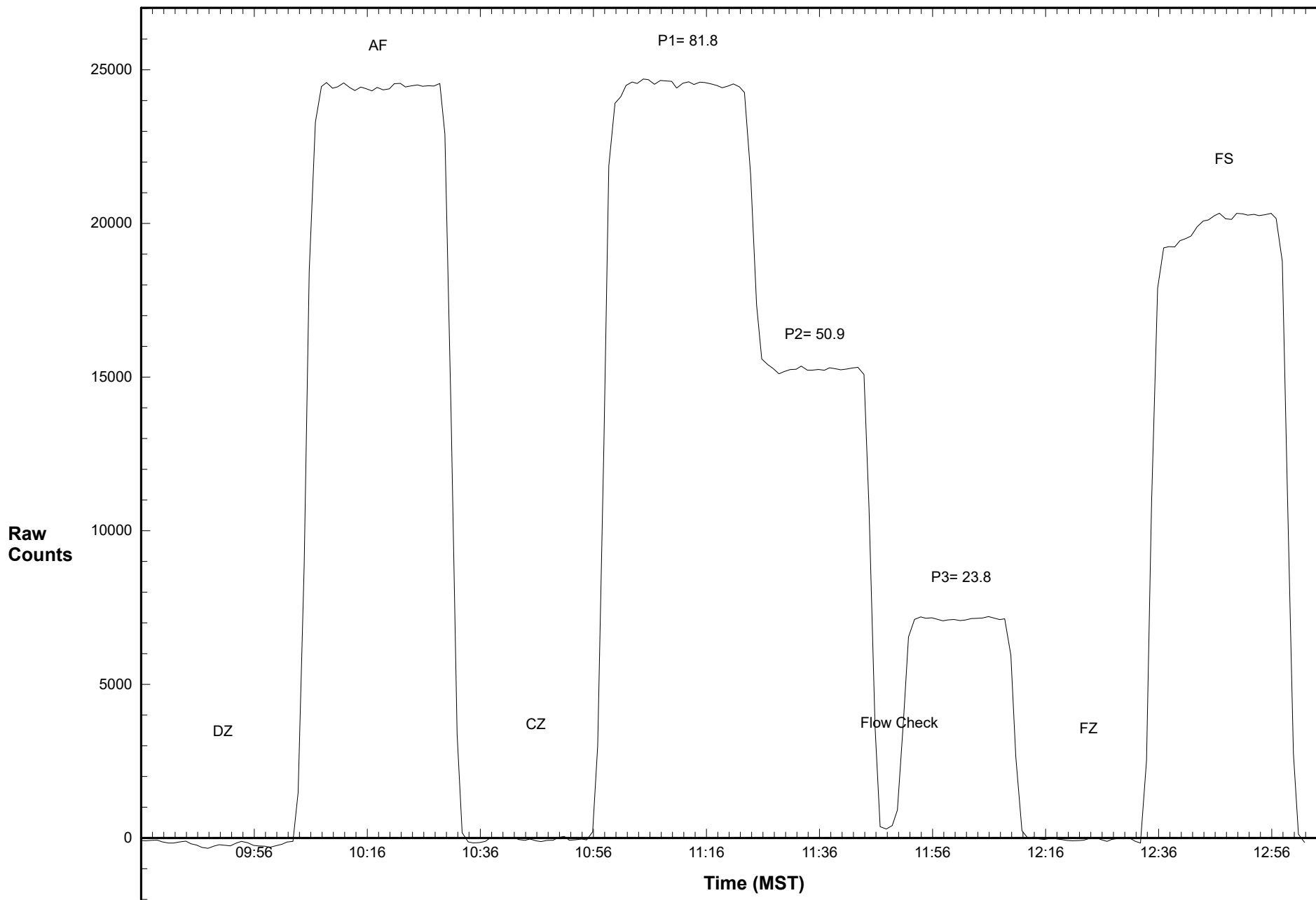
Results of Linear Regression				Average Correction Factor:	0.997
R _c vs C _c	Slope	Intercept	R ²	Previous Correction Factor:	0.996
Previous	303.113100	-177.858400	0.999836	Current Correction Factor:	1.004
Current	301.135500	19.038360	0.999861	Percent Change of Correction Factor:	0.8
C _i vs C _c					
Current	1.000000	0.000000	0.999861		

Comments:

Station 906 SO2 May 18, 2016: Linear Regression



Station 906 SO2 May 18, 2016: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton
 Calibration Date: May 18, 2016
 Parameter: TRS

Instrument: Teco 43C	Serial Number: 43CTL - 60324 - 326	Previous Calibration Date: April 13, 2016
Calibration: Routine	Calibration Equipment: SABIO 2010 sn # 04300810	Barometric Pressure: 26.50" Hg
Calibration Method: Std.Gas Dilution	Permeation Device ID: SV14360, 4.89 ppm H2S	Temperature: 24.0° C
Permeation Rate: 0 ng/min	In Service: February 5, 2013	Technician: Dean Yustak

Instrument Settings	H ₂ S bkg ppb	H ₂ S Coefficient	Monitoring Range
Previous	1.80	0.797	100 ppb
Current	1.82	0.807	100 ppb

Final Zero: 0.0 ppb Final Span: 70.3 ppb As Found Correction Factor: 1.034

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
0.067	79.3	23832.5	79.4	0.999
0.042	49.7	14886.9	49.6	1.003
0.022	25.9	7799.1	26.0	0.998
0.000	0.0	8.0	0.0	

Results of Linear Regression			
R _c vs C _c	Slope	Intercept	R ²
Previous	300.788400	-52.508020	0.999937
Current	300.200400	-0.249286	0.999991
C _i vs C _c			
Current	1.000000	-0.000010	0.999992

Average Correction Factor: 1.000

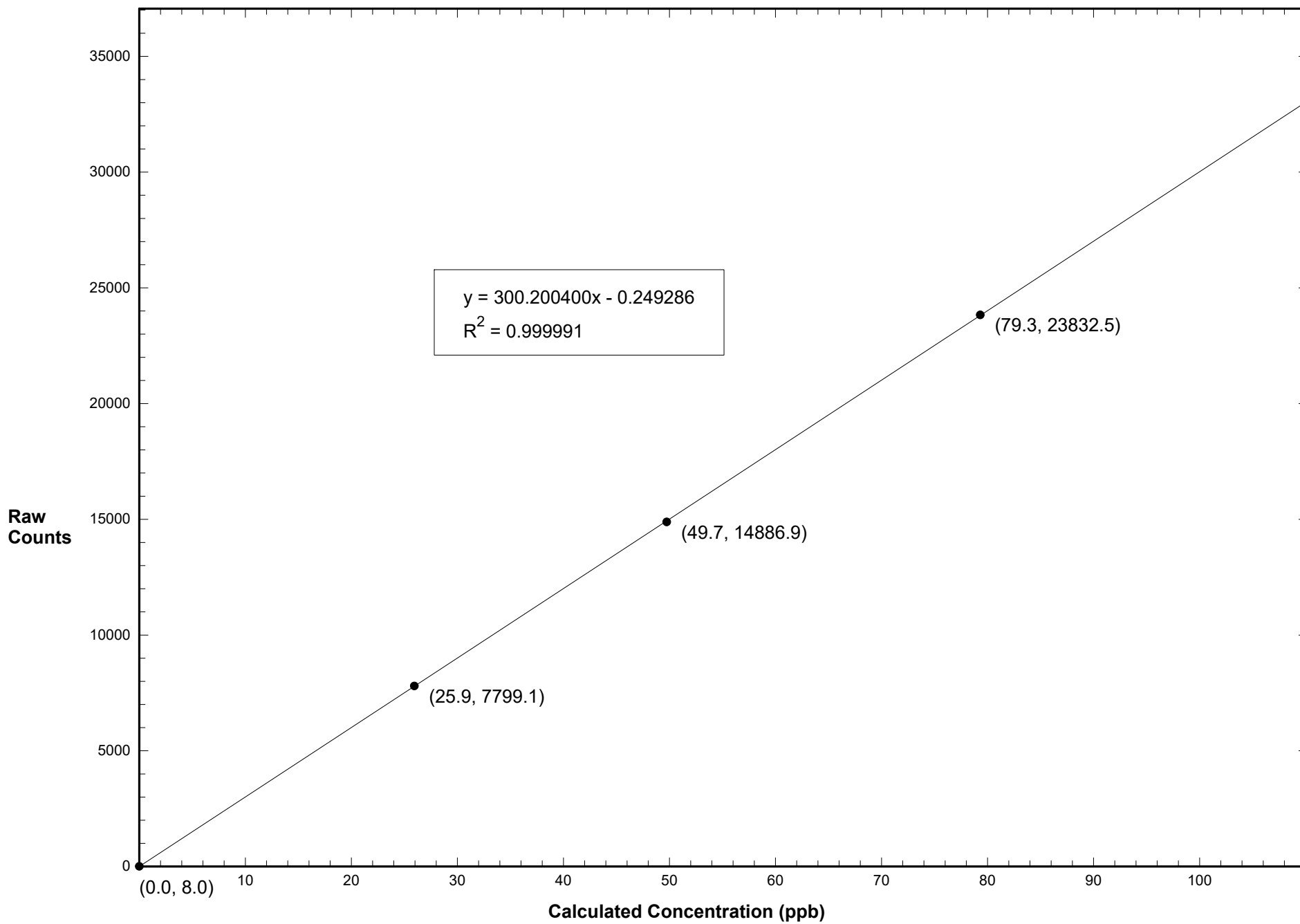
Previous Correction Factor: 0.997

Current Correction Factor: 0.999

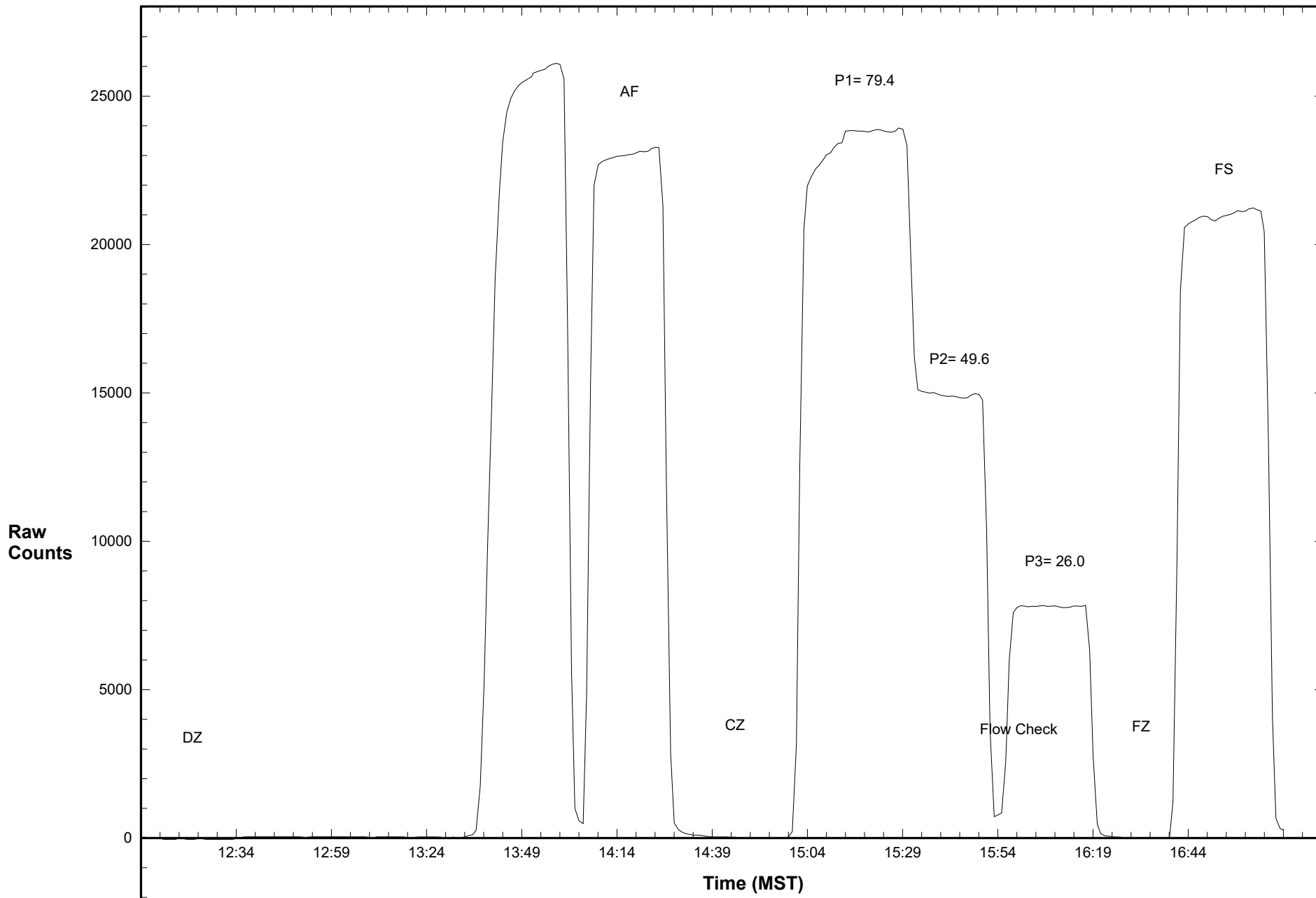
Percent Change of Correction Factor: 0.2

Comments:

Station 906 TRS May 18, 2016: Linear Regression



Station 906 TRS May 18, 2016: Calibration Graph



WEST CENTRAL AIRSHED SOCIETY

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

**AMS 906
HINTON
MAY 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
May 2016

Maximum Value: 27.74 C on May 2 16:00		Maximum Daily Average: 18.13 C on May 3		Hours in Service: 744																							
Minimum Value: -3.9 C on May 13 06:00		Minimum Daily Average: 2.55 C on May 22		Hours of Data: 744																							
Maximum Diurnal Average: 15.78 C at hour 16		Minimum Diurnal Average: 2.78 C at hour 6		Hours of Missing Data: 0																							
Monthly Average: 9.862 C		Percentiles: P₁ = -2.3 P₁₀ = 1.5 Q₁ = 4.6 Median = 8.7 Q₃ = 14.5 P₉₀ = 20.2 P₉₉ = 26.1		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-May	2.1	1.2	0.4	-0.2	-0.4	0.0	2.6	7.3	9.3	12.6	15.5	17.6	19.6	21.7	22.8	24.5	24.6	24.6	23.8	22.6	18.9	17.7	15.4	12.4	13.19	24.64	
2-May	10.0	8.4	7.0	6.1	5.3	4.4	4.5	9.7	13.3	15.8	18.2	21.3	23.8	25.3	27.3	27.7	27.6	26.9	25.1	23.7	21.8	19.1	15.1	12.2	16.64	27.74	
3-May	12.7	13.7	11.8	10.8	10.2	8.2	9.1	12.5	16.0	18.9	21.9	23.5	24.5	25.7	26.2	27.0	26.1	23.5	22.2	21.1	19.9	18.5	16.6	14.5	18.13	27.02	
4-May	12.3	11.0	9.8	8.8	8.3	7.7	7.5	7.6	9.0	11.7	15.6	18.7	18.7	18.9	20.6	19.9	18.9	16.1	14.4	13.6	12.8	11.3	10.0	7.7	12.95	20.56	
5-May	6.4	5.5	5.4	4.7	4.5	4.3	4.4	5.0	6.4	8.0	9.6	10.7	12.1	13.1	14.6	16.6	18.0	17.9	16.5	14.9	11.9	8.6	5.7	3.8	9.52	17.98	
6-May	3.3	1.7	0.5	-0.6	-1.5	-1.8	-0.1	3.6	8.4	11.7	14.4	17.0	19.2	20.7	21.8	22.9	23.6	23.5	22.6	20.2	17.5	12.5	9.2	7.0	11.55	23.59	
7-May	5.7	4.7	4.0	3.4	2.9	2.8	4.7	9.8	14.5	16.2	20.1	23.2	24.4	24.2	24.6	26.2	25.6	25.1	24.1	22.9	19.9	16.2	16.8	16.3	15.77	26.23	
8-May	13.7	12.3	10.2	7.3	6.4	5.3	5.1	5.9	8.5	10.9	11.7	12.9	13.2	12.5	12.5	11.4	9.4	8.5	8.1	7.4	6.4	5.2	4.7	4.9	8.93	13.73	
9-May	4.9	4.2	4.2	4.2	3.7	4.2	4.2	4.1	4.9	5.7	7.0	8.7	9.1	9.5	9.9	9.6	10.3	10.8	9.4	8.4	6.8	4.8	3.5	1.8	6.41	10.83	
10-May	0.1	-0.8	-1.6	-2.0	-2.4	-2.2	0.4	3.9	7.3	9.2	10.9	10.8	12.3	12.8	13.1	13.7	13.7	13.6	13.1	12.1	9.3	6.7	4.3	2.6	6.70	13.70	
11-May	1.4	-0.2	-1.3	-2.1	-2.3	-1.9	-0.3	1.5	3.7	7.3	9.3	11.0	12.0	11.9	11.8	11.5	11.0	10.8	10.1	10.2	9.5	8.9	7.9	6.5	6.17	12.04	
12-May	5.6	5.5	4.9	4.7	4.3	3.6	3.9	4.8	5.9	7.5	8.1	8.5	9.5	9.9	10.0	10.1	10.7	10.6	10.4	10.0	8.6	5.5	2.4	0.2	6.88	10.73	
13-May	-1.1	-1.8	-2.7	-3.2	-3.6	-3.9	-2.3	0.6	4.1	8.2	11.3	12.1	13.2	14.1	15.0	15.6	15.8	16.0	14.7	13.6	12.0	8.6	6.3	4.7	6.98	16.04	
14-May	3.6	2.0	0.2	-1.5	-2.3	-2.5	-0.9	3.3	6.7	11.4	14.3	15.5	16.3	17.1	17.9	18.7	18.7	18.7	17.6	16.4	14.3	10.8	9.1	8.1	9.74	18.71	
15-May	6.2	4.0	1.8	0.1	-1.2	-1.8	0.5	4.9	8.3	12.0	15.6	17.6	19.1	20.2	21.1	21.7	22.1	22.1	20.9	19.7	17.0	14.1	12.7	11.5	12.10	22.14	
16-May	7.6	5.5	3.5	2.0	1.2	0.6	4.1	10.7	14.4	17.3	20.5	22.3	23.2	23.8	23.8	23.1	22.4	23.3	22.5	19.9	18.1	17.3	16.0	15.0	14.93	23.75	
17-May	13.2	11.8	10.9	9.7	8.7	8.4	9.1	12.3	15.3	18.0	18.0	18.4	20.1	21.4	20.9	21.1	21.0	20.9	20.8	19.3	18.0	16.6	13.4	10.8	15.76	21.43	
18-May	9.5	9.0	8.4	8.1	7.8	8.1	9.2	11.4	13.1	15.5	16.7	17.2	12.2	11.1	12.2	12.0	10.3	9.1	8.6	8.2	8.1	7.9	7.6	7.6	10.37	17.18	
19-May	7.3	7.3	7.0	6.6	5.3	4.6	4.6	4.7	5.0	5.4	4.9	4.4	4.5	4.3	3.9	3.3	2.9	2.8	2.2	1.9	1.6	1.1	0.9	0.8	4.06	7.32	
20-May	0.8	0.7	0.7	0.6	0.6	0.6	0.9	1.2	1.9	3.6	4.6	5.4	5.6	6.2	5.7	6.5	7.3	6.6	6.0	5.2	4.3	3.7	3.1	2.5	3.51	7.25	
21-May	2.4	2.0	1.8	1.6	1.2	1.1	0.8	1.4	2.1	2.5	3.2	4.1	5.6	5.8	6.7	7.3	7.7	7.6	7.0	6.5	5.9	5.3	4.7	4.4	4.11	7.71	
22-May	4.2	4.0	3.5	3.2	2.1	1.5	0.8	0.6	1.2	1.3	1.0	2.0	2.9	2.9	2.4	2.2	2.6	3.2	3.2	3.0	3.2	3.4	3.5	3.4	2.55	4.16	
23-May	3.4	3.4	3.2	3.2	3.1	3.4	3.8	6.5	7.7	9.5	10.8	12.6	13.7	15.4	16.3	17.3	17.8	17.3	16.4	15.4	13.0	9.8	7.4	6.2	9.86	17.75	
24-May	4.4	2.4	1.0	-0.5	-1.3	-1.3	1.0	5.6	10.1	13.6	16.5	19.1	20.7	21.5	22.2	23.3	22.6	23.3	22.3	21.6	18.4	15.6	13.4	13.5	12.87	23.31	
25-May	13.4	12.9	11.2	9.2	8.3	8.3	9.3	10.4	11.3	12.7	14.3	12.4	15.3	18.1	20.4	19.8	16.4	15.2	14.3	14.0	13.2	12.0	10.8	9.7	13.04	20.36	
26-May	9.2	9.2	8.7	8.0	6.8	5.8	6.5	8.1	11.4	14.5	16.7	15.8	17.4	17.7	15.9	12.2	11.1	10.1	8.6	8.0	7.8	7.3	6.8	6.7	10.43	17.69	
27-May	6.5	6.3	6.0	5.9	5.9	5.6	5.8	6.5	7.5	7.8	7.0	6.8	6.9	6.9	7.3	8.0	8.8	8.3	8.0	7.4	6.9	6.4	6.2	5.7	6.85	8.78	
28-May	5.5	5.0	4.9	4.9	4.8	5.0	5.7	6.2	6.9	10.3	11.5	13.3	15.0	15.1	14.2	14.2	14.6	12.0	11.5	10.8	9.8	9.0	7.8	6.3	9.35	15.11	
29-May	4.9	4.1	3.7	3.2	3.2	3.3	4.3	5.4	7.0	9.0	12.1	13.6	14.5	15.6	13.6	12.1	13.5	10.7	7.4	6.9	7.2	6.3	5.3	4.8	7.99	15.61	
30-May	4.4	3.9	4.0	4.1	3.8	4.2	5.4	7.2	8.6	11.1	11.5	12.1	11.7	8.0	7.7	10.9	12.7	10.4	12.5	11.2	9.7	7.2	5.5	3.9	7.98	12.71	
31-May	3.1	2.0	1.3	0.4	0.1	0.3	1.7	5.2	9.0	11.5	13.2	15.5	16.0	17.9	18.1	18.5	18.0	17.7	16.6	16.0	15.0	12.8	10.6	9.2	10.40	18.50	
		6.02	5.19	4.33	3.58	3.02	2.78	3.76	6.06	8.34	10.66	12.45	13.67	14.59	15.13	15.50	15.78	15.68	15.07	14.22	13.29	11.82	10.00	8.47	7.25	Diurnal Average	
		13.73	13.73	11.75	10.79	10.20	8.43	9.34	12.51	16.03	18.93	21.94	23.54	24.45	25.68	27.29	27.74	27.64	26.93	25.07	23.69	21.76	19.08	16.77	16.25	Diurnal Maximum	



WCAS - Hinton
Summary of Hourly Averages

Wind Speed (WS) - kph
May 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	0.2	0.2	0.2	0.4	0.5	0.9	1.7	2.9	5.8	3.1	6.1	9.8	6.2	3.6	3.1	2.4	1.1	1.1	3.6	1.7	2.0	5.2	2.6	1.3	1.40	9.79	
Dir	WSW	NNW	E	NNE	NNW	NW	NW	W	SW	WSW	SW	SSW	SW	SW	SW	NW	SE	ESE	SSE	E	E	ENE	E	SW	SW	SSW	
2 Spd	1.3	2.1	0.5	1.1	2.7	1.6	0.4	0.1	1.4	2.6	2.5	2.1	2.4	4.3	3.1	4.3	3.8	3.0	2.7	2.5	4.8	5.5	0.8	2.1	1.80	5.49	
Dir	W	W	WNW	WSW	W	W	NNW	W	WNW	WNW	WSW	SW	SSE	SSE	W	W	W	W	W	W	SW	SW	ESE	SSW	WSW	SW	
3 Spd	3.3	8.1	2.6	3.9	2.4	1.6	1.0	2.1	2.7	3.3	4.4	5.5	4.5	4.2	2.3	4.2	4.7	4.5	3.4	4.5	3.5	5.5	3.0	1.5	3.11	8.06	
Dir	SW	SW	W	NW	W	WNW	NNW	WNW	WNW	WNW	SW	WSW	WSW	WNW	W	W	W	W	W	SW	WSW	SSW	SW	SSW	WSW	SW	
4 Spd	0.9	1.2	0.4	0.9	0.7	0.9	0.2	0.9	0.6	1.2	0.9	3.5	4.0	4.2	4.8	6.4	7.1	2.4	2.7	1.8	1.1	3.2	2.2	0.6	0.69	7.09	
Dir	ENE	ENE	ENE	E	E	NE	E	WNW	NNW	ENE	S	W	WNW	WSW	W	SW	SW	NNW	E	E	E	NNW	NNE	NW	W	SW	
5 Spd	2.5	3.3	4.0	3.1	3.7	0.6	0.8	0.7	1.2	3.9	3.5	2.2	6.7	10.2	4.9	2.3	2.8	2.7	2.1	1.2	0.5	1.1	1.6	1.4	1.99	10.17	
Dir	SSW	SW	SSW	SW	SSE	SW	W	W	W	SW	SW	SSW	SSW	SSW	SW	WNW	NNW	NNW	N	NNW	E	SSW	SW	SW	SW	SW	SSW
6 Spd	3.0	1.6	1.9	2.1	0.8	1.2	0.3	1.7	2.3	2.6	2.5	2.7	4.6	7.5	10.3	6.3	7.1	7.5	8.3	0.6	2.9	0.2	0.1	0.9	2.95	10.27	
Dir	SW	SW	SSW	W	W	W	W	NW	WNW	WNW	WSW	SW	SSW	SSW	SSW	SSW	SW	SW	SW	W	SSW	SE	WNW	W	SW	SSW	
7 Spd	1.1	0.6	0.1	0.3	0.3	0.6	0.1	2.2	2.4	4.3	3.8	8.0	3.9	5.3	6.3	9.6	13.4	8.9	4.1	2.6	1.4	1.7	3.2	4.0	2.89	13.35	
Dir	W	SW	WNW	N	ENE	SE	W	W	W	SW	SW	SW	W	WSW	SW	SW	SW	SW	W	WSW	SSW	S	N	E	SW	SW	
8 Spd	1.6	2.3	2.8	4.1	2.0	2.2	3.0	7.9	3.1	7.3	7.2	5.1	6.2	7.2	6.4	6.7	6.5	4.8	3.9	4.2	2.2	4.9	4.9	4.4	2.57	7.90	
Dir	ENE	N	NE	ESE	ESE	NE	SSE	SSW	W	NW	WNW	WNW	WNW	WNW	WNW	NW	NNW	NW	WNW	NW	W	SW	SW	SW	WNW	SSW	
9 Spd	2.0	1.8	1.9	3.1	9.3	3.4	3.7	1.7	3.9	4.2	4.6	5.5	4.6	5.3	5.9	4.8	5.8	4.7	3.9	2.7	0.7	1.3	3.6	4.3	2.46	9.31	
Dir	W	WNW	WNW	WSW	SSW	SSW	SW	NNE	NNW	NNW	NW	NNW	NNW	NNW	NNW	NW	NW	N	NW	NW	NW	SW	SW	SSW	WNW	SSW	
10 Spd	1.7	1.3	1.6	1.6	0.9	0.2	1.4	2.6	2.8	1.8	1.4	3.7	4.0	3.4	5.7	3.0	3.2	1.3	2.8	3.2	2.2	1.4	1.2	1.9	0.72	5.72	
Dir	SW	WSW	SW	WSW	SW	NW	WNW	WNW	WSW	WSW	WSW	S	SSW	SE	SSW	ESE	E	ESE	ESE	ENE	E	NE	ENE	ENE	S	SSW	
11 Spd	1.3	0.5	0.2	0.4	0.4	0.6	0.3	0.6	1.0	2.3	1.3	2.7	5.4	7.3	5.0	8.3	7.6	8.6	7.4	4.9	8.5	6.4	8.6	5.3	3.59	8.62	
Dir	ENE	N	NNE	NE	ENE	NE	ESE	E	NW	NNE	ENE	SE	ESE	ENE	ENE	ESE	E	ESE	ESE	ENE	ESE	E	ESE	ESE	E	ESE	ESE
12 Spd	2.2	2.9	3.3	1.9	3.3	3.2	5.5	3.9	2.9	3.6	4.4	5.3	3.8	2.5	1.9	2.3	2.5	3.9	2.6	5.9	0.9	0.8	0.4	0.4	2.47	5.93	
Dir	ENE	SE	E	E	ENE	ENE	ENE	ENE	NE	ESE	ENE	E	ENE	NE	ENE	ENE	NNE	E	ESE	SSE	SE	S	NE	N	E	SSE	
13 Spd	0.7	0.2	0.2	0.2	0.6	0.4	1.2	0.4	2.0	4.2	5.8	7.8	6.2	6.9	4.9	5.5	6.3	5.0	6.4	7.3	5.5	1.1	0.8	0.9	2.94	7.77	
Dir	NE	WNW	NE	NNW	ENE	NNW	NW	NNE	E	NE	E	ESE	ESE	SE	ESE	ESE	ESE	ENE	E	ENE	ENE	NE	NE	ESE	E	ESE	
14 Spd	1.3	0.3	0.2	0.2	0.9	0.1	1.1	0.2	0.9	4.6	6.5	7.1	8.4	7.5	6.7	6.4	8.0	7.3	8.3	7.0	4.6	2.1	3.9	3.2	3.57	8.36	
Dir	WSW	S	NE	NW	W	N	NNW	WSW	NE	NE	E	E	ESE	ESE	ESE	E	ESE	ESE	E	E	ENE	E	E	E	E	ESE	
15 Spd	1.3	0.9	0.4	0.3	0.3	0.4	1.0	0.5	1.8	2.7	4.4	7.3	7.1	6.8	7.6	7.8	7.8	7.2	8.3	6.6	3.4	2.3	1.6	1.0	3.33	8.27	
Dir	E	E	ENE	NNE	N	NNW	NNW	WNW	E	ENE	NE	ESE	ESE	ESE	ESE	ESE	ESE	E	E	E	NE	E	SE	SSE	E	E	
16 Spd	0.3	1.1	0.3	0.5	2.1	0.8	0.3	2.7	3.3	6.1	11.1	8.8	9.0	9.6	3.9	2.6	2.2	3.0	2.2	0.9	1.5	1.5	0.8	3.4	2.21	11.10	
Dir	NW	W	WNW	W	W	WNW	NNW	W	W	SW	SSW	SSW	SSW	SSW	NW	WNW	NNW	NNW	NNW	W	NNW	ENE	NNW	WSW	WSW	SSW	
17 Spd	1.9	3.3	1.6	1.0	0.1	0.4	0.8	0.8	1.4	0.9	2.9	5.0	5.8	7.2	3.5	3.1	8.6	8.3	10.5	2.5	4.0	2.5	0.7	0.5	2.92	10.55	
Dir	SSW	SW	SW	WNW	SE	ESE	NW	W	SW	NNW	W	SW	SW	SW	WSW	WSW	SW	SW	SW	W	SW	SW	ENE	ENE	SW	SW	
18 Spd	0.8	0.6	1.2	1.1	0.4	0.8	1.7	1.3	0.5	0.6	3.5	4.5	4.9	5.5	4.2	1.5	1.8	2.1	0.9	1.4	3.6	0.0	0.5	0.2	1.05	5.49	
Dir	E	E	E	SE	ENE	NE	ENE	ENE	N	E	N	ENE	ENE	ENE	E	NNW	ESE	WSW	WSW	SW	NNW	NNE	NNE	ENE	ENE	ENE	
19 Spd	1.6	1.0	1.0	0.5	1.8	5.5	4.7	4.5	6.1	2.6	0.8	1.4	1.3	2.3	1.6	1.9	2.7	1.2	0.8	1.4	1.3	1.1	3.1	2.2	1.68	6.08	
Dir	SSW	WSW	SW	WSW	WSW	SW	SW	SW	SW	WSW	NNW	SSW	SW	N	NNW	NW	NW	NW	WNW	WSW	NW	W	WSW	WSW	WSW	WSW	SW
20 Spd	3.2	3.2	2.5	1.5	2.4	1.9	2.2	2.2	2.7	3.0	4.2	3.4	2.8	2.3	3.2	3.8	2.3	3.1	2.6	5.7	4.4	3.7	3.4	0.9	0.90	5.74	
Dir	SW	WSW	WSW	W	WSW	WNW	W	WSW	WSW	NW	NNW	NNW	NNW	NNE	NE	E	NE	NNE	N	E	ENE	ENE	ENE	ENE	N	E	
21 Spd	2.2	1.7	0.9	1.9	0.7	0.9	1.6	2.4	2.3	2.1	1.9	1.8	3.5	3.5	3.2	1.9	2.9	3.1	3.5	2.7	1.7	1.1	2.4	1.8	1.99	3.54	
Dir	ESE	ENE	NE	ENE	NNE	NE	NE	NE	NNE	ENE	ENE	ESE	E	ENE	ENE	E	E	ENE	ENE	NE	NE	NE	NE	N	ENE	ENE	
22 Spd	1.3	0.7	1.9	4.4	3.4	1.6	1.5	4.0	9.3	1.6	3.1	4.6	6.0	8.9	8.3	8.3	5.2	4.4	1.3	0.9	2.1	3.8	6.3	6.3	3.94	9.28	
Dir	NNW	NNW	SW	SSW	SW	WSW	W	SW	SSW	SW	SW	SW	SW	SSW	SW	SW	SW	SW	W	W	WSW	SW	SW	SW	SW	SW	SSW



WCAS - Hinton
Summary of Hourly Averages

Wind Speed (WS) - kph
May 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	5.0	2.5	1.2	0.7	0.8	1.5	1.4	4.1	2.0	2.1	2.3	2.9	1.7	2.7	3.0	2.0	2.2	4.5	3.2	4.5	2.0	1.5	1.4	0.8	0.56	5.05	
Dir	SW	WSW	W	W	WSW	WSW	WSW	SW	NW	NW	NNW	NNW	N	N	NE	NNE	NNE	E	ENE	ENE	ENE	ESE	ENE	W	N	SW	
24 Spd	0.6	1.5	0.5	0.3	0.4	0.2	0.2	0.2	1.0	2.1	1.3	1.7	1.0	4.9	3.1	1.2	0.3	1.3	2.1	2.3	1.1	1.8	0.3	2.4	0.22	4.93	
Dir	WNW	W	W	N	WNW	NNW	WNW	N	NW	NW	NW	WSW	SSE	SSW	S	NNE	ENE	ENE	NNE	ESE	ENE	ESE	SE	S	SSW	SSW	
25 Spd	2.5	4.4	1.1	1.9	3.1	1.3	1.1	0.8	0.9	1.7	2.8	3.0	3.7	0.9	1.8	2.8	4.4	3.6	2.4	3.7	0.7	3.0	2.6	0.2	0.88	4.40	
Dir	S	SW	W	SW	SSW	SW	WSW	WNW	NW	S	WSW	SSW	SE	SSE	N	S	E	ENE	ENE	SE	NNE	E	ENE	SSE	SSE	SW	
26 Spd	2.5	0.7	1.4	1.5	1.7	0.7	0.2	1.3	1.2	2.4	4.4	4.7	6.9	7.1	1.6	0.9	2.2	3.0	1.3	0.5	4.2	3.4	4.9	4.4	0.51	7.11	
Dir	SSE	SW	SW	SW	SW	W	NW	ESE	NE	NE	NE	ENE	E	ESE	N	E	NE	NE	N	NNW	SW	SW	SW	SW	ESE	ESE	
27 Spd	3.5	0.8	0.6	1.8	2.9	5.7	6.0	3.8	2.5	1.9	1.0	2.8	2.0	1.4	4.1	3.9	1.0	1.2	0.2	1.9	0.1	1.6	2.3	0.7	1.96	5.96	
Dir	WSW	W	NW	WSW	WSW	SW	SW	SW	WSW	WNW	WNW	WSW	WSW	W	SW	SW	NW	NNE	SSW	SSE	SW	WSW	WSW	WSW	WSW	SW	
28 Spd	0.6	1.3	0.7	2.6	0.8	1.0	0.5	1.1	0.3	0.1	4.4	5.6	4.1	4.5	8.9	2.6	5.6	9.1	4.5	3.8	2.3	4.8	2.8	0.9	0.64	9.11	
Dir	W	WSW	WSW	SW	W	SW	WNW	W	NE	WSW	WSW	WSW	W	W	SW	SW	SE	ESE	ENE	ENE	NE	ENE	ENE	ENE	S	ESE	
29 Spd	1.3	0.4	0.2	0.4	0.4	0.8	0.6	0.6	0.6	2.3	2.1	6.4	6.1	4.9	5.1	5.2	3.7	4.9	1.7	2.9	1.7	1.3	1.6	1.1	0.49	6.35	
Dir	ENE	ENE	ENE	WNW	NE	WNW	SW	WNW	N	E	E	SW	SSW	SW	NE	NNE	N	NNW	NW	SW	SW	WSW	SW	WNW	WNW	SW	
30 Spd	1.5	1.5	2.3	0.9	0.7	1.2	1.5	2.0	5.1	2.2	0.8	5.0	4.1	2.0	3.8	3.9	1.2	1.4	0.9	1.3	0.9	2.5	1.2	0.4	0.99	5.06	
Dir	SSW	WSW	SW	W	WNW	WNW	WNW	WSW	SSW	SSW	ESE	ENE	ESE	SSW	S	S	NNW	ESE	W	WNW	WSW	SSW	WSW	SSW	SSW	SSW	
31 Spd	1.3	0.9	1.0	0.2	0.8	0.7	1.1	1.4	1.4	2.0	1.2	1.5	5.3	8.3	4.5	1.9	4.3	2.6	1.2	0.5	1.1	0.3	0.2	0.6	0.78	8.34	
Dir	SW	WSW	SW	WNW	W	WSW	WNW	WNW	WNW	WNW	WSW	SW	S	SSW	SSW	NW	ESE	E	NE	NNE	ENE	ENE	S	SSE	SSW	SSW	
Spd	0.84	1.06	0.54	0.65	0.91	0.64	0.59	1.04	1.26	0.81	0.74	1.60	1.67	1.94	1.15	0.72	0.41	0.77	0.57	0.99	0.49	0.68	0.53	0.82	Diurnal Average		
Dir	SSW	WSW	SW	WSW	SW	WSW	W	WSW	WSW	WNW	W	SSW	S	SSW	SSW	SSW	SSE	E	E	E	ESE	SSE	SSE	SSW	Diurnal Maximum		
Spd	5.05	8.06	3.98	4.35	9.31	5.74	5.96	7.90	9.28	7.34	11.10	9.79	9.04	10.17	10.27	9.62	13.35	9.11	10.55	7.28	8.55	6.38	8.60	6.33	Diurnal Maximum		
Dir	219.28	226.02	212.58	207.08	205.60	232.35	228.69	205.94	212.91	310.95	212.98	212.86	199.45	208.88	206.30	233.58	225.92	113.38	223.01	72.08	105.82	79.50	114.78	215.87	Diurnal Maximum		
Maximum Speed Value: 13.4 kph on May 7 17:00																		Minimum Speed Value: 0.0 kph on May 18 22:00						Hours in Service:		744	
Maximum Daily Speed Average: 3.94 kph on May 8																		Minimum Daily Speed Average: 0.22 kph on May 24						Hours of Data:		744	
Maximum Diurnal Speed Average: 1.94 kph at hour 14																		Minimum Diurnal Speed Average: 0.41 kph at hour 17						Hours of Missing Data:		0	
Monthly Average Velocity: 0.573 kph 208.90 deg																		Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.5 Q ₁ = 1.1 Median = 2.3 Q ₃ = 4.1 P ₉₀ = 6.3 P ₉₉ = 9.5						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	47	1	0	0	0	0	48																				
NorthEast	89	1	0	0	0	0	90																				
East	87	36	0	0	0	0	123																				
SouthEast	29	14	0	0	0	0	43																				
South	28	5	0	0	0	0	33																				
SouthWest	128	51	2	0	0	0	181																				
West	132	1	0	0	0	0	133																				
NorthWest	82	11	0	0	0	0	93																				
Total	622	120	2	0	0	0	744																				



WCAS - Hinton
Summary of Hourly Averages

Relative Humidity (RH) - %
May 2016

Maximum Value: 90.49 % on May 23 06:00 Maximum Daily Average: 87.11 % on May 22 Minimum Value: 4.7 % on May 7 17:00 Minimum Daily Average: 24.94 % on May 3 Maximum Diurnal Average: 79.09 % at hour 6 Minimum Diurnal Average: 33.21 % at hour 16 Monthly Average: 53.531 % Percentiles: P ₁ = 7.3 P ₁₀ = 16.7 Q ₁ = 28.6 Median = 58.2 Q ₃ = 77.1 P ₉₀ = 86.8 P ₉₉ = 90.1																								Hours in Service:	744	
																								Hours of Data:	744	
																								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-May	68.3	71.2	75.2	77.8	78.9	79.0	69.5	52.4	41.6	34.3	25.6	21.2	22.4	21.2	19.7	17.7	16.8	15.4	15.6	19.0	28.7	31.3	39.2	50.7	41.36	78.99
2-May	62.1	68.4	72.6	75.8	77.1	78.6	79.9	62.2	47.2	39.9	33.0	25.9	18.2	12.5	9.6	8.9	7.6	7.6	9.0	9.4	10.3	15.2	25.4	33.6	37.09	79.88
3-May	30.9	28.1	35.9	40.5	41.3	49.8	51.0	41.8	31.4	26.4	20.2	15.5	14.2	12.0	9.9	8.5	8.5	12.8	14.6	14.6	17.0	19.1	23.7	31.0	24.94	50.96
4-May	41.8	48.6	53.1	58.1	62.0	65.5	67.5	69.0	66.8	56.3	45.2	28.5	28.0	26.9	22.7	22.3	24.2	45.5	58.8	63.8	68.8	66.7	66.2	74.9	51.30	74.90
5-May	78.8	83.7	85.1	86.8	85.5	86.7	88.3	87.5	79.4	68.0	55.5	44.3	37.8	34.0	27.5	20.4	16.0	14.5	15.3	18.9	26.5	45.1	56.8	64.6	54.45	88.29
6-May	65.4	69.8	73.6	79.7	85.1	86.6	83.8	68.3	49.3	37.7	27.3	20.3	12.4	9.3	8.2	7.7	6.8	5.9	5.8	11.5	16.7	30.8	43.9	56.2	40.09	86.58
7-May	60.7	64.1	67.2	70.4	71.5	72.7	64.2	44.1	28.8	21.7	15.7	8.5	8.1	7.6	6.8	5.0	4.7	5.9	7.3	8.7	13.4	24.4	25.7	29.3	30.69	72.67
8-May	47.2	56.7	59.5	71.0	80.1	82.5	76.2	71.7	67.2	30.3	22.6	21.4	19.7	19.5	20.2	24.4	34.9	38.6	43.2	46.9	54.5	67.3	72.0	67.8	49.80	82.48
9-May	67.0	75.2	72.6	74.2	78.5	72.4	71.5	71.3	62.7	56.9	51.5	41.0	34.7	32.5	30.7	34.8	29.9	29.8	35.1	42.3	51.8	58.4	61.4	67.2	54.30	78.52
10-May	75.6	78.9	81.7	82.4	84.8	85.4	79.5	64.3	49.3	40.8	29.9	29.5	25.3	23.3	22.3	20.6	20.8	20.6	22.2	26.5	35.0	47.7	57.6	63.9	48.66	85.39
11-May	67.6	74.2	78.7	81.2	82.2	82.1	77.7	70.1	59.7	44.0	36.8	30.1	24.4	26.6	27.2	28.6	33.1	35.1	37.3	33.5	37.3	41.5	50.6	62.6	50.93	82.25
12-May	69.6	70.1	71.5	70.6	61.0	52.0	48.7	47.2	44.3	38.7	34.8	32.1	28.6	26.8	26.4	25.7	25.4	24.1	24.4	23.3	33.5	46.1	58.8	68.4	43.84	71.52
13-May	73.5	75.7	80.9	81.9	82.9	83.7	83.0	71.4	58.3	43.4	25.5	22.1	21.2	18.7	16.0	14.2	13.2	12.1	13.7	15.7	19.2	27.5	35.4	42.4	42.98	83.74
14-May	46.3	53.7	63.0	69.0	75.3	74.5	67.4	54.7	40.8	27.9	19.7	17.1	14.6	12.0	10.7	10.9	9.9	10.2	11.1	13.4	17.4	25.4	28.9	32.7	33.61	75.28
15-May	41.2	50.0	59.3	68.2	72.9	75.0	68.6	51.9	39.8	30.8	24.1	15.7	9.2	7.3	7.3	7.8	8.2	8.5	9.2	11.1	17.1	22.2	24.6	27.3	31.55	74.95
16-May	41.6	51.6	57.8	63.4	68.2	73.0	62.1	37.3	27.1	19.8	12.6	9.7	7.6	7.6	9.7	10.6	13.0	11.7	11.8	16.8	21.6	26.4	32.1	37.6	30.45	72.95
17-May	46.6	49.3	53.2	58.9	62.4	65.6	66.8	54.7	39.7	30.6	28.5	27.1	23.8	21.8	22.5	23.0	22.6	22.8	22.7	26.6	29.3	33.6	45.5	55.9	38.90	66.77
18-May	60.7	63.0	67.2	68.8	71.3	71.9	69.6	61.2	56.1	43.1	48.5	46.9	73.6	84.9	80.7	80.3	86.3	83.5	86.7	88.5	88.9	88.9	89.6	89.9	72.91	89.86
19-May	90.1	90.2	90.3	90.3	90.1	89.3	88.6	87.2	85.7	86.1	83.1	78.6	80.5	80.9	80.7	80.0	77.4	76.2	75.7	73.8	72.3	73.8	72.2	71.0	81.84	90.35
20-May	70.0	69.7	70.0	69.4	69.5	69.9	69.2	67.2	64.5	59.2	56.8	54.2	53.7	54.0	54.3	51.9	50.9	54.1	58.4	63.4	67.4	70.4	71.1	75.2	63.10	75.17
21-May	73.6	75.0	77.8	79.3	81.5	83.2	84.8	85.3	81.0	75.0	69.3	66.6	61.0	60.6	58.6	57.4	57.7	59.9	63.7	67.5	71.0	74.7	76.6	75.7	71.52	85.35
22-May	74.8	75.5	81.7	86.6	87.7	88.7	89.5	90.3	90.3	89.3	89.9	89.9	86.7	84.5	87.3	87.7	88.0	88.2	88.6	89.5	89.9	89.7	88.5	88.0	87.11	90.28
23-May	87.6	88.8	89.5	89.9	90.2	90.5	90.4	86.0	79.7	70.0	58.8	48.6	40.6	30.8	26.7	22.6	20.1	18.1	18.5	20.5	29.6	45.4	55.1	59.1	56.55	90.49
24-May	69.6	79.1	83.3	86.1	87.6	88.6	87.4	67.0	49.5	39.6	30.0	22.7	19.2	19.3	18.0	16.7	17.9	16.8	20.0	19.9	29.1	40.9	49.5	51.5	46.23	88.56
25-May	51.7	52.9	62.4	69.3	71.7	72.6	72.2	70.8	68.2	60.1	55.2	73.4	58.4	41.6	36.3	33.6	48.9	62.9	63.1	65.1	67.1	65.7	69.2	79.1	61.32	79.09
26-May	86.9	85.7	87.6	88.4	89.1	89.6	90.0	88.3	73.9	60.7	55.6	59.8	45.0	40.0	44.2	61.8	68.8	68.8	73.9	77.7	74.8	82.6	85.5	84.1	73.45	89.99
27-May	84.4	84.5	86.8	88.1	88.1	87.3	84.6	82.9	77.3	72.7	77.7	78.8	83.7	85.3	82.5	80.2	80.5	80.0	80.5	82.4	84.8	87.5	86.6	86.0	83.05	88.14
28-May	87.8	88.5	88.6	88.7	88.4	89.0	88.4	86.5	84.2	63.7	50.5	38.3	33.8	30.8	29.5	35.1	33.7	49.9	56.6	56.9	61.7	66.5	71.7	77.1	64.41	89.03
29-May	82.6	85.7	86.9	87.9	88.6	88.9	88.8	83.9	74.9	62.6	42.4	28.3	25.5	23.0	38.4	47.9	42.8	51.9	71.1	79.4	74.9	79.8	83.8	86.3	66.92	88.87
30-May	87.1	86.8	87.9	86.8	86.9	87.3	85.5	76.1	61.7	49.4	47.2	46.4	49.5	74.7	77.9	60.1	54.4	65.3	51.4	58.1	63.9	72.6	78.1	84.3	69.97	87.85
31-May	86.4	87.5	88.5	89.0	89.7	90.0	89.6	81.4	63.9	54.5	48.5	38.9	28.7	22.5	21.0	23.3	24.3	27.6	32.2	36.2	39.0	51.8	63.6	69.4	56.14	89.96
																								Diurnal Average		
																								Diurnal Maximum		



WCAS - Hinton
Summary of Hourly Standard Deviations

Wind Speed (WS) - kph
May 2016

Maximum Value: 8.12 kph on May 7 17:00		Maximum Daily Average: 3.49 kph on May 8		Hours in Service: 744																							
Minimum Value: 0.0 kph on May 19 00:00		Minimum Daily Average: 1.73 kph on May 24		Hours of Data: 744																							
Maximum Diurnal Average: 3.90 kph at hour 14		Minimum Diurnal Average: 1.34 kph at hour 4		Hours of Missing Data: 0																							
Monthly Average: 2.411 kph		Percentiles: P₁ = 0.4 P₁₀ = 1.0 Q₁ = 1.4 Median = 2.2 Q₃ = 3.1 P₉₀ = 4.4 P₉₉ = 6.1		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-May	0.7	0.6	0.8	0.8	1.1	1.0	1.3	3.0	3.9	2.8	3.5	3.7	4.0	3.5	3.3	2.5	2.3	2.2	3.0	1.6	1.5	2.8	3.1	2.0	2.29	3.98	
2-May	1.2	1.3	0.8	1.4	1.7	1.6	0.8	1.0	1.6	2.2	2.4	2.6	2.8	3.4	3.3	3.6	3.1	2.9	3.2	3.0	2.4	2.3	1.1	2.0	2.17	3.63	
3-May	2.7	5.9	2.2	1.4	1.9	1.4	1.4	1.6	2.0	2.4	3.6	4.3	3.9	3.3	3.4	3.5	4.4	4.5	3.9	4.5	3.1	2.6	2.3	2.2	3.01	5.90	
4-May	1.7	1.5	0.9	1.1	1.1	1.6	1.3	1.4	1.4	2.4	3.4	3.2	3.7	4.9	4.2	6.8	2.7	2.2	1.6	1.6	3.3	3.3	1.9	2.45	6.83		
5-May	2.9	2.6	2.6	2.3	3.2	0.9	1.1	1.2	1.7	2.7	3.4	3.3	4.5	4.7	4.0	2.7	2.8	2.7	2.3	1.3	1.2	1.4	1.7	1.7	2.46	4.71	
6-May	1.9	1.3	1.4	1.5	0.9	1.2	0.8	1.4	1.6	2.1	2.7	2.8	3.6	5.3	5.1	4.6	5.2	5.7	5.8	1.2	2.5	1.1	0.8	1.2	2.57	5.77	
7-May	1.3	1.3	1.2	1.2	1.2	1.2	0.8	2.3	2.3	3.5	3.4	4.5	4.3	5.3	5.4	7.7	8.1	6.7	4.5	3.3	1.8	2.0	5.0	4.1	3.44	8.12	
8-May	2.6	2.5	3.3	4.5	2.5	2.5	2.1	4.7	3.1	3.7	4.9	4.4	4.7	3.7	4.0	3.4	3.9	2.9	3.1	2.4	2.3	4.4	4.3	4.1	3.49	4.88	
9-May	2.3	1.6	1.6	3.1	6.2	3.4	3.5	2.4	3.1	2.7	3.3	3.3	3.3	3.5	3.4	2.9	3.3	3.9	2.5	2.0	1.2	1.2	2.0	2.0	2.82	6.22	
10-May	1.6	1.2	1.2	1.3	1.2	0.4	1.3	1.8	2.4	2.7	2.9	3.4	4.1	4.0	4.4	2.9	2.7	2.3	2.0	1.6	2.0	1.4	1.3	1.7	2.15	4.37	
11-May	1.5	0.7	0.3	0.6	0.7	0.8	0.9	1.1	1.3	2.0	2.2	2.8	4.4	4.4	4.2	5.2	4.5	4.8	4.7	2.8	4.3	3.4	4.3	3.2	2.70	5.19	
12-May	2.5	3.1	2.3	1.7	2.5	2.2	2.5	2.4	2.4	3.6	3.3	3.5	2.9	2.9	2.0	2.4	2.0	3.1	2.5	2.4	2.2	1.2	0.7	0.8	2.38	3.57	
13-May	0.8	0.9	0.5	0.1	0.8	0.5	1.2	1.1	1.8	2.6	4.6	5.4	4.7	4.6	4.0	4.4	3.3	3.4	3.4	3.6	2.5	1.6	1.1	1.3	2.43	5.37	
14-May	1.4	1.1	0.8	0.3	0.9	0.1	0.9	0.9	1.8	2.7	4.3	4.6	5.0	5.1	5.1	4.4	4.9	3.9	4.4	3.4	1.8	1.8	1.9	1.9	2.65	5.15	
15-May	1.9	1.2	0.9	0.5	0.3	0.5	0.9	1.1	1.8	2.1	2.9	4.4	4.5	4.5	4.8	4.4	4.4	4.2	4.3	3.3	2.4	1.9	2.4	1.8	2.56	4.82	
16-May	1.0	1.2	0.7	0.8	1.6	1.0	0.7	3.0	3.1	4.1	5.4	5.1	5.3	5.4	2.7	2.4	1.8	2.5	1.8	1.4	2.0	2.7	2.0	4.3	2.58	5.40	
17-May	2.6	1.9	1.9	1.4	0.4	1.2	0.8	1.5	1.8	2.2	3.4	4.7	4.8	6.3	3.7	3.5	5.3	5.7	5.8	3.5	3.2	2.1	0.9	0.9	2.90	6.29	
18-May	1.4	1.6	1.2	1.4	1.0	1.3	1.8	1.4	1.2	1.7	3.0	3.6	3.3	2.9	2.5	1.8	2.1	2.4	1.4	1.6	2.3	0.7	0.6	0.0	1.76	3.58	
19-May	1.7	1.5	1.4	0.8	2.0	2.9	2.4	2.7	3.1	2.4	1.9	3.4	2.6	1.8	1.7	2.0	2.2	1.9	1.7	2.1	2.2	2.0	2.5	2.3	2.13	3.35	
20-May	2.6	2.4	2.5	1.9	2.2	2.1	1.9	2.2	2.7	2.6	2.7	2.4	2.6	2.5	2.5	2.3	2.5	2.2	2.0	2.9	2.8	2.1	2.1	1.1	2.33	2.90	
21-May	1.6	1.6	1.1	1.4	1.0	1.1	1.4	1.4	1.7	1.4	1.9	2.2	2.5	2.4	2.3	2.1	2.5	2.3	2.3	2.2	1.7	1.5	1.8	1.8	1.80	2.52	
22-May	1.5	1.3	2.0	1.9	2.2	1.4	1.6	2.7	4.2	2.7	2.0	3.3	3.4	4.6	2.7	3.6	3.8	3.1	1.5	1.4	1.6	2.8	2.9	2.9	2.54	4.57	
23-May	3.1	2.0	1.3	1.0	1.3	1.7	1.4	3.2	2.3	2.1	2.0	2.1	2.2	2.6	3.0	2.8	2.5	3.3	2.5	2.3	1.9	1.4	1.5	1.6	2.13	3.27	
24-May	1.4	1.4	1.0	0.5	0.6	0.5	0.5	1.0	1.6	1.5	1.8	2.5	2.8	4.0	3.1	2.6	2.3	2.0	1.9	2.1	1.2	1.6	1.5	2.3	1.73	3.95	
25-May	2.3	2.2	1.3	1.3	1.6	1.4	1.4	0.9	0.9	2.1	2.6	2.8	3.0	2.3	2.2	3.5	3.3	3.4	2.9	3.5	1.7	2.9	2.4	1.5	2.23	3.55	
26-May	2.9	1.7	1.7	1.2	1.2	1.0	0.5	1.4	1.6	2.4	3.0	3.0	3.4	4.6	2.3	2.9	3.2	3.9	2.6	1.6	2.9	2.5	2.5	2.3	2.35	4.60	
27-May	2.3	1.4	0.9	2.0	2.7	3.2	2.7	2.3	2.5	2.0	1.5	2.0	2.0	1.4	2.4	2.2	1.3	1.4	0.7	1.8	1.1	1.6	2.1	1.2	1.86	3.16	
28-May	1.0	1.6	0.9	1.8	1.0	1.4	1.0	1.4	1.2	1.5	5.0	5.2	3.3	4.6	4.9	4.9	6.2	4.5	3.3	2.8	2.3	2.8	2.2	1.1	2.76	6.18	
29-May	1.4	1.0	0.5	0.7	0.8	0.9	1.2	1.3	1.2	1.7	2.2	4.8	5.0	4.7	3.9	4.2	3.1	3.2	3.1	3.0	1.9	1.4	1.4	1.2	2.25	5.01	
30-May	1.6	1.3	1.5	1.2	0.9	1.2	1.5	2.1	2.3	2.1	2.2	4.0	3.3	3.4	3.1	2.7	1.7	3.3	1.3	1.6	1.2	2.8	1.2	0.9	2.02	3.96	
31-May	1.2	1.1	1.2	0.4	1.1	0.9	1.0	1.5	1.6	1.9	2.0	2.9	3.1	5.2	4.6	1.8	2.5	2.2	1.3	1.0	1.6	1.0	1.0	1.1	1.80	5.22	
		1.82	1.68	1.35	1.34	1.55	1.38	1.37	1.85	2.12	2.36	2.98	3.56	3.63	3.90	3.51	3.37	3.48	3.32	2.84	2.35	2.08	2.07	2.07	1.88	Diurnal Average	
		3.07	5.90	3.25	4.46	6.22	3.44	3.54	4.73	4.23	4.12	5.36	5.37	5.25	6.29	5.43	7.69	8.12	6.67	5.83	4.46	4.27	4.35	5.01	4.26	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
May 2016

Maximum Value: 114.03 deg on May 28 10:00																							Maximum Daily Average: 71.59 deg on May 4																							Hours in Service: 744		
Minimum Value: 12.9 deg on May 14 07:00																							Minimum Daily Average: 37.64 deg on May 22																							Hours of Data: 744		
Maximum Diurnal Average: 63.76 deg at hour 24																							Minimum Diurnal Average: 51.67 deg at hour 20																							Hours of Missing Data: 0		
Monthly Average: 55.840 deg																							Percentiles: P₁ = 21.0 P₁₀ = 31.9 Q₁ = 41.0 Median = 53.1 Q₃ = 69.3 P₉₀ = 84.9 P₉₉ = 104.3																							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-May	65.7	98.5	93.6	65.1	85.1	35.9	31.9	45.4	43.5	51.0	39.2	22.1	42.9	59.2	65.6	62.2	86.3	91.7	46.0	46.3	48.2	36.4	60.2	94.1	59.01	98.51																						
2-May	53.8	23.7	58.2	71.8	25.3	47.9	69.3	87.1	66.4	49.6	59.4	72.1	82.5	56.2	61.7	51.5	51.4	54.9	62.4	62.3	26.3	21.1	72.3	50.9	55.76	87.08																						
3-May	59.8	59.1	43.7	21.4	47.9	35.7	57.1	38.4	42.7	42.2	55.7	52.5	55.4	53.1	82.9	52.8	53.8	54.8	61.3	54.8	46.2	22.9	55.6	91.4	51.71	91.36																						
4-May	101.4	64.0	90.2	60.4	75.7	87.4	109.3	84.1	94.3	63.1	82.0	52.8	44.4	50.4	59.5	42.6	49.1	60.9	62.3	70.2	71.1	61.5	81.9	99.7	71.59	109.30																						
5-May	79.6	50.5	35.9	35.1	67.6	66.9	59.1	58.3	65.8	51.5	58.6	79.2	53.5	30.1	48.0	68.7	58.8	61.6	58.2	39.9	52.6	71.2	68.3	73.4	58.02	79.57																						
6-May	52.6	34.9	49.5	27.3	39.4	64.7	89.5	34.3	41.7	48.2	63.4	71.3	55.2	46.2	30.0	50.3	41.6	41.3	35.9	66.6	52.2	90.9	88.3	54.4	52.90	90.94																						
7-May	87.7	92.3	104.7	99.8	77.8	83.5	94.4	53.6	54.9	51.3	55.3	38.7	61.8	58.9	56.1	48.9	35.1	46.5	60.3	62.0	65.5	70.0	73.9	72.5	66.89	104.72																						
8-May	82.5	66.2	65.1	91.2	88.5	66.6	65.4	27.7	53.5	32.9	43.7	51.7	49.6	34.1	38.8	31.7	32.7	40.1	48.3	38.8	54.9	54.9	51.7	55.6	52.77	91.22																						
9-May	55.2	39.9	42.7	61.2	36.5	64.3	58.3	74.8	47.4	43.7	41.7	39.4	46.6	37.6	37.7	42.0	35.6	47.0	37.1	36.8	75.8	45.1	25.9	19.7	45.51	75.82																						
10-May	43.1	35.7	32.3	26.0	69.8	46.9	44.5	42.9	53.6	75.0	91.2	61.9	79.6	86.5	55.5	71.5	69.0	76.4	39.7	24.5	53.8	60.9	50.0	62.8	56.37	91.23																						
11-May	66.9	43.1	40.4	46.6	42.5	32.3	93.6	78.1	71.6	56.7	74.6	70.9	53.9	39.3	47.4	35.6	34.0	34.1	33.0	29.6	35.0	28.4	32.0	34.1	48.07	93.61																						
12-May	58.3	68.6	45.1	37.2	34.4	37.3	25.3	37.0	49.8	64.1	46.2	41.2	53.1	66.6	60.4	80.5	50.5	44.7	58.7	23.4	99.9	74.4	69.3	66.8	53.87	99.95																						
13-May	31.7	92.5	70.3	25.6	47.9	54.3	31.3	83.0	64.9	43.5	54.7	49.2	51.3	48.8	61.3	59.7	44.1	46.4	34.4	27.3	21.5	71.0	58.9	84.9	52.43	92.49																						
14-May	61.5	97.3	94.8	69.3	35.3	72.5	12.9	98.7	95.8	40.0	48.0	40.4	44.8	49.9	54.3	52.3	40.6	40.8	34.9	27.0	19.9	41.7	29.8	42.2	51.86	98.72																						
15-May	74.4	52.4	71.7	70.0	39.6	47.1	47.3	86.7	78.4	59.4	46.9	46.4	42.7	49.3	46.8	38.1	39.5	41.3	30.6	32.7	42.0	55.1	91.1	98.7	55.34	98.71																						
16-May	75.9	38.9	63.9	76.1	26.9	39.3	78.9	56.2	48.9	41.6	27.6	38.2	39.5	39.3	45.3	60.6	43.2	39.2	34.2	73.5	85.2	97.1	92.6	59.4	55.06	97.06																						
17-May	84.5	34.1	61.9	66.8	94.4	79.0	48.1	71.4	77.0	102.6	59.2	54.1	56.4	52.6	60.3	59.2	36.1	41.5	32.5	60.3	44.6	36.6	52.6	71.3	59.88	102.61																						
18-May	85.9	86.7	69.4	85.9	81.9	65.4	52.2	61.2	73.5	91.3	50.8	53.1	45.2	26.4	31.6	71.3	64.2	71.4	65.9	86.3	31.0	90.8	20.1	61.9	63.48	91.30																						
19-May	34.0	51.9	52.5	48.5	42.8	25.6	25.8	35.1	26.6	48.7	93.7	109.4	80.2	52.4	62.8	60.7	41.0	76.1	88.9	80.3	78.2	81.8	49.7	70.0	59.04	109.43																						
20-May	44.5	45.3	57.4	63.3	54.8	63.6	50.3	56.3	55.2	56.7	36.7	48.2	62.5	61.7	49.6	56.6	70.6	52.1	40.1	31.5	42.4	29.0	25.8	35.2	49.56	70.58																						
21-May	41.0	44.4	47.6	30.9	48.9	44.1	34.1	40.8	40.9	51.6	69.9	78.6	47.8	37.6	46.8	83.2	57.5	39.7	36.5	44.2	41.1	51.6	42.7	50.9	48.01	83.15																						
22-May	33.1	74.0	56.2	19.7	32.8	31.8	50.7	33.4	28.0	59.7	32.7	34.2	31.4	26.3	16.2	21.0	38.6	39.7	48.1	68.6	42.5	40.2	23.1	21.3	37.64	73.99																						
23-May	28.4	44.3	49.9	48.0	67.8	54.4	46.5	39.3	72.0	59.6	57.7	50.0	82.2	66.6	64.7	69.5	70.5	52.3	47.1	26.0	36.4	42.5	65.8	85.0	55.27	85.02																						
24-May	77.5	43.6	79.3	29.3	64.2	68.9	82.2	86.8	83.2	42.9	81.3	83.4	94.1	56.3	69.1	87.4	101.7	71.9	38.7	45.1	41.9	63.6	93.8	62.4	68.69	101.66																						
25-May	73.2	22.7	44.0	33.0	24.1	46.2	49.8	37.7	19.8	74.7	50.5	67.1	52.9	105.2	74.2	82.9	64.1	49.1	63.8	77.8	86.2	66.2	53.4	100.3	59.12	105.19																						
26-May	77.8	80.9	74.6	30.0	31.8	32.8	80.5	70.6	68.5	66.9	44.3	40.1	38.6	43.8	76.3	101.3	73.8	80.2	76.6	94.0	27.7	35.1	26.8	24.3	58.22	101.32																						
27-May	31.3	40.3	52.7	43.9	40.0	26.5	22.4	32.9	49.1	58.7	59.5	39.1	47.3	42.4	30.9	28.9	54.6	58.5	107.1	51.5	105.5	36.0	43.4	49.5	48.01	107.07																						
28-May	45.1	38.6	29.9	25.0	50.9	84.2	72.1	55.7	95.1	114.0	57.0	52.9	54.4	57.8	27.7	82.7	64.6	31.9	49.7	43.1	50.8	36.2	48.1	50.7	54.93	114.03																						
29-May	45.0	89.4	40.8	72.6	55.5	64.5	99.6	65.2	69.6	48.7	79.9	50.1	52.0	64.6	48.9	50.8	55.1	39.7	89.4	47.9	63.9	67.6	38.6	69.1	61.19	99.57																						
30-May	75.8	50.0	57.9	67.6	56.3	35.3	46.6	51.5	30.0	64.5	102.2	53.7	61.0	77.3	82.1	53.5	73.6	85.0	72.9	60.2	45.6	84.8	57.2	87.5	63.83	102.15																						
31-May	49.4	48.1	39.5	55.1	37.5	45.1	47.8	56.2	61.8	60.7	84.2	85.2	43.5	39.5	57.6	55.1	34.7	35.7	30.2	69.3	77.8	87.5	91.1	76.7	57.06	91.09																						
																							60.54	56.51	58.57	51.73	52.38	53.22	57.32	57.43	58.83	58.56	59.61	55.71	55.05	52.12	53.23	58.48	53.74	53.11	52.41	51.67	53.74	56.52	55.93	63.76	Diurnal Average	
																							101.41	98.51	104.72	99.76	94.42	87.40	109.30	98.72	95.78	114.03	102.15	109.43	94.13	105.19	82.95	101.32	101.66	91.72	107.07	93.97	105.53	97.06	93.75	100.28	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
MAY 2016**