

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

AIR QUALITY MONITORING
September 2015
Monthly Report

Prepared by:

West Central Airshed Society
Drayton Valley, Alberta





October 15th, 2015

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 September 2015
For Hinton Pulp – A Division of West Fraser Mills Ltd.**

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

Network Station is AMS 906 Hinton
Identified as:

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

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

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

There were 7 readings occurring in September 2015 in excess of the one – hour average guidelines as indicated in Air Monitoring Directive Section III.A.3. (a) for H₂S. The maximum one-hour average reading was 28.90 ppb, occurring September 28th. There was one reading in September 2015 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 4.93 ppb.

2. Operational times less than 90 percent:

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

3. Monitoring Notes:

AMS 906 (Hinton)

The PM_{2.5} analyzer experienced unstable operation, returning an uptime of 99.6 percent. All other analyzers and meteorological equipment returned uptimes of 100 percent for the month of September.

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
	2015	September

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	0.029	7	0.005	1
PM _{2.5}	906	99.6	45.7 µg/m ³	0	13.83 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
SEPTEMBER 2015**

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													September 2015		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)	35	685	100.0	1.4	0.0	29.0	0.2	0.2	0.5	1.5	3.5	7	1	0.005	
SO ₂ (ppb)	35	685	100.0	0.5	0.0	11.3	0.0	0.1	0.1	0.3	1.4	0	-	0.003	
O ₃ (ppb)	35	685	100.0	16.3	0.0	46.5	1.0	3.5	14.9	27.2	33.9	0	0	0.031	
NO (ppb)	36	684	100.0	4.0	0.0	114.9	0.2	0.6	1.3	3.6	11.2	-	-	-	
NO ₂ (ppb)	36	684	100.0	4.5	0.0	22.9	1.9	2.6	3.7	5.7	8.0	0	0	0.008	
NO _x (ppb)	36	684	100.0	8.5	0.3	127.1	2.6	3.6	5.4	9.5	18.3	-	-	-	
Particulate Matter 2.5 microns (µm ³)	0	717	99.6	6.8	0.0	45.7	2.3	3.6	5.5	8.2	12.8	0	0	13.83 ug/m3	
Wind Speed (kph)	0	720	100.0	2.6	0.0	14.8	0.4	0.8	1.7	3.3	6.8	-	-	-	
Temperature (°C)	0	720	100.0	8.5	-1.9	28.1	2.2	4.1	7.8	12.0	15.7	-	-	-	
Relative Humidity (%)	0	720	100.0	69.5	14.4	92.3	32.1	49.2	78.9	88.9	91.0	-	-	-	
Std Dev Wind Direction (deg)	0	720	100.0	58.2	19.2	109.8	34.3	41.4	54.5	75.2	88.3	-	-	-	
Std Dev Wind Speed (kph)	0	720	100.0	2.4	0.1	9.0	0.9	1.2	1.8	2.9	4.8	-	-	-	



WCAS - Hinton
Summary of Hourly Averages

Total Reduced Sulphur (TRS) - ppb
September 2015

Maximum Value: 28.90 ppb on Sep 28 06:00		Maximum Daily Average: 4.93 ppb on Sep 28		Hours in Service: 720																																													
Minimum Value: 0 ppb on Sep 30 13:00		Minimum Daily Average: 0.23 ppb on Sep 15		Hours of Data: 685																																													
Maximum Diurnal Average: 3.07 ppb at hour 6		Minimum Diurnal Average: 0.73 ppb at hour 18		Hours of Missing Data: 35																																													
Monthly Average: 1.386 ppb		Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.2 Median = 0.5 Q ₃ = 1.5 P ₉₀ = 3.5 P ₉₉ = 11.6		Hours of Calibration: 35																																													
				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-Sep	1	0	0	Z	1	3	1	0	0	0	0	0	1	2	3	2	0	0	0	0	1	1	2	0.86	2.95																								
2-Sep	1	1	7	Z	3	1	1	1	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0.96	7.09																								
3-Sep	0	0	0	Z	4	4	4	3	3	6	1	2	1	0	0	0	0	0	0	0	0	2	2	1.49	5.57																								
4-Sep	1	1	0	Z	0	1	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.34	1.16																								
5-Sep	0	0	1	Z	2	2	2	2	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0.73	2.47																								
6-Sep	0	4	2	Z	1	0	1	1	1	3	3	2	1	0	0	0	0	0	0	0	1	1	1	1.01	3.85																								
7-Sep	1	2	6	Z	4	1	1	C	C	C	C	C	2	1	1	1	0	0	0	0	0	0	0	1.12	5.69																								
8-Sep	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.32	0.64																								
9-Sep	1	1	2	Z	1	1	1	1	4	5	4	1	0	0	0	0	0	0	0	0	0	0	0	1.06	5.00																								
10-Sep	0	0	0	Z	1	1	1	2	5	6	3	2	1	1	1	1	1	1	3	3	4	2	1	1.78	6.19																								
11-Sep	1	1	2	Z	2	2	1	1	0	0	2	2	1	3	2	2	1	1	4	4	4	2	3	1.84	4.10																								
12-Sep	1	2	3	Z	1	1	1	1	1	1	3	2	2	0	0	0	0	0	0	0	1	1	1	1.08	3.39																								
13-Sep	1	1	1	Z	2	1	1	0	1	1	1	0	0	0	0	0	0	0	0	2	0	0	1	0.65	1.81																								
14-Sep	0	0	0	Z	1	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.33	1.03																								
15-Sep	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.23	0.86																								
16-Sep	1	1	0	Z	1	1	1	0	3	3	1	0	1	0	1	1	2	1	0	0	0	1	1	0.83	3.19																								
17-Sep	3	6	1	Z	5	5	1	5	6	3	2	0	1	1	0	0	0	0	0	0	0	1	1	1.86	6.12																								
18-Sep	1	0	0	Z	0	0	2	20	8	2	5	3	2	0	0	1	1	1	1	1	2	3	1	2.63	20.14																								
19-Sep	1	3	3	Z	2	1	0	0	3	0	1	1	2	2	1	0	1	1	1	1	8	8	3	2.09	8.08																								
20-Sep	0	1	1	Z	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0.41	1.78																								
21-Sep	3	1	1	Z	1	3	2	1	1	0	0	1	1	0	0	1	0	0	1	0	0	0	3	1.01	3.23																								
22-Sep	2	1	2	Z	5	4	3	2	8	12	5	3	4	1	1	0	0	0	0	0	0	0	0	2.41	11.79																								
23-Sep	0	0	0	Z	6	1	0	1	2	3	3	1	1	0	1	2	4	7	2	0	0	0	0	1.55	7.07																								
24-Sep	0	0	0	Z	0	0	0	0	0	1	0	0	0	1	1	6	6	4	2	0	0	0	0	1.12	6.44																								
25-Sep	0	1	1	Z	1	1	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0.47	3.11																								
26-Sep	1	1	2	Z	3	6	6	5	6	2	0	2	1	1	3	3	1	1	4	4	4	5	3	2.85	5.79																								
27-Sep	1	1	6	Z	10	20	1	1	0	1	5	3	5	5	5	1	0	0	0	0	0	0	0	2.92	20.28																								
28-Sep	0	0	0	Z	5	29	20	15	4	8	0	1	1	1	1	1	1	0	0	5	12	3	2	4.93	28.90																								
29-Sep	2	0	0	Z	1	1	1	1	1	0	0	0	0	0	0	0	0	1	3	5	0	8	3	1.31	8.40																								
30-Sep	1	1	0	Z	1	1	1	2	2	2	3	0	0	0	0	1	0	0	0	1	1	0	5	1.34	8.10																								
																								0.86	1.05	1.42	--	2.23	3.07	1.88	2.37	2.24	2.27	1.74	1.04	0.92	0.79	0.80	0.91	0.78	0.73	0.85	0.98	1.35	1.31	1.04	1.32	Diurnal Average	
																								3.17	6.12	7.09	--	10.41	28.90	19.65	20.14	8.42	11.79	5.20	3.45	4.83	5.18	4.65	5.87	6.44	7.07	4.02	5.11	11.64	8.40	4.81	8.10	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
September 2015

Maximum Value: 11.26 ppb on Sep 18 22:00		Maximum Daily Average: 3.08 ppb on Sep 19		Hours in Service: 720																						
Minimum Value: 0.0 ppb on Sep 1 20:00		Minimum Daily Average: 0.03 ppb on Sep 9		Hours of Data: 685																						
Maximum Diurnal Average: 1.18 ppb at hour 12		Minimum Diurnal Average: 0.16 ppb at hour 10		Hours of Missing Data: 35																						
Monthly Average: 0.543 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 1.4 P ₉₉ = 6.7		Hours of Calibration: 35																						
				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-Sep	0.1	0.2	0.2	Z	0.0	0.2	0.1	0.1	0.1	0.3	0.1	0.3	0.3	0.1	0.4	0.5	1.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.24	1.43
2-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.5	3.4	0.8	1.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.31	3.43
3-Sep	0.1	0.2	0.1	Z	0.0	0.2	0.2	0.2	0.1	0.2	0.1	0.5	0.5	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.17	0.51
4-Sep	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.11	0.20
5-Sep	0.1	0.2	0.2	Z	0.0	0.1	0.1	0.1	0.1	0.1	0.3	1.0	0.5	0.3	0.1	0.2	0.5	0.3	0.2	0.2	0.2	0.2	0.1	0.0	0.22	0.97
6-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.5	0.5	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.12	0.55
7-Sep	0.1	0.1	0.2	Z	0.1	0.1	0.2	C	C	C	C	C	0.4	0.6	0.8	0.3	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.28	0.81
8-Sep	0.2	0.3	0.2	Z	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.6	0.3	0.1	0.1	0.0	0.0	0.2	0.2	0.1	0.0	0.17	0.56
9-Sep	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.18
10-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.1	0.1	0.1	1.4	1.9	1.7	1.9	1.7	1.3	0.4	1.2	2.1	0.5	0.2	0.1	0.2	0.2	0.65	2.14
11-Sep	0.2	0.1	0.2	Z	0.1	0.2	0.2	0.2	0.1	0.2	2.5	2.8	1.3	6.8	5.2	2.6	3.6	1.6	0.9	0.2	0.2	0.2	0.1	0.1	1.29	6.79
12-Sep	0.1	0.1	0.1	Z	0.0	0.1	0.1	0.2	0.0	0.2	0.8	5.4	2.3	1.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.48	5.43
13-Sep	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.03	0.25
14-Sep	0.1	0.0	0.1	Z	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.06	0.13
15-Sep	0.1	0.1	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.07	0.16
16-Sep	0.1	0.1	0.0	Z	0.6	0.2	0.1	0.2	1.0	0.3	0.4	0.3	1.4	0.8	1.0	2.5	3.2	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.59	3.24
17-Sep	0.2	0.2	0.2	Z	0.1	0.2	0.2	0.2	0.3	0.2	0.3	0.4	0.3	0.5	0.3	0.5	0.2	0.4	0.4	0.2	0.1	0.1	0.1	0.0	0.24	0.52
18-Sep	0.1	0.1	0.1	Z	0.1	0.2	0.2	0.3	0.3	0.1	0.1	1.7	3.3	1.4	1.9	8.8	4.9	3.4	4.9	5.9	7.1	11.3	4.6	6.8	2.93	11.26
19-Sep	7.8	3.8	2.6	Z	4.8	4.8	1.1	0.3	2.2	0.5	4.1	6.0	5.0	4.6	2.5	1.2	3.3	3.9	1.5	2.1	2.5	1.1	3.6	1.5	3.08	7.82
20-Sep	0.4	0.5	0.3	Z	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.15	0.47
21-Sep	0.1	0.1	0.1	Z	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.4	0.3	0.6	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.13	0.58
22-Sep	0.1	0.2	0.2	Z	0.1	0.1	0.2	0.2	0.2	0.2	1.5	9.6	2.5	2.2	2.5	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.91	9.60
23-Sep	0.2	0.1	0.1	Z	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.5	0.8	2.1	1.7	0.9	0.3	0.3	0.1	0.0	0.1	0.0	0.1	0.37	2.10
24-Sep	0.0	0.1	0.1	Z	0.0	0.1	0.2	0.3	0.1	0.2	0.2	0.0	9.3	1.6	5.1	1.2	0.9	1.8	1.5	0.2	0.1	0.1	0.1	0.0	1.00	9.30
25-Sep	0.1	0.1	0.1	Z	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.08	0.24
26-Sep	0.1	0.1	0.0	Z	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.3	0.3	0.5	1.5	0.9	1.8	1.3	1.0	0.6	0.8	0.8	0.9	3.0	0.63	2.95
27-Sep	2.9	4.0	2.1	Z	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.4	0.9	0.2	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.1	0.51	4.02
28-Sep	0.0	0.0	0.1	Z	0.1	0.1	0.1	0.3	0.3	0.4	0.6	2.6	1.3	1.9	1.2	2.4	1.4	0.1	0.2	1.1	0.3	0.1	0.2	0.4	0.66	2.59
29-Sep	0.1	0.0	0.1	Z	0.0	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.7	1.3	0.6	0.8	1.0	1.4	0.2	0.2	0.2	0.2	0.35	1.40
30-Sep	0.2	0.2	0.2	Z	0.2	0.4	0.7	0.9	0.6	0.4	0.6	0.2	0.6	0.6	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.2	0.3	0.37	0.89
																								Diurnal Average		
																								Diurnal Maximum		
																								7.82 4.02 2.63 -- 4.84 4.75 1.07 0.89 2.19 0.47 4.08 9.60 9.30 6.79 5.19 8.78 4.86 3.86 4.87 5.90 7.07 11.26 4.58 6.76		
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAQO): 1-hr 172 ppb 24-hr 48 ppb																										



WCAS - Hinton
Summary of Hourly Averages

Ozone (O₃) - ppb
September 2015

Maximum Value: 46.50 ppb on Sep 23 16:00	Maximum Daily Average: 30.54 ppb on Sep 19	Hours in Service: 720
Minimum Value: 0.0 ppb on Sep 26 05:00	Minimum Daily Average: 7.14 ppb on Sep 9	Hours of Data: 685
Maximum Diurnal Average: 30.09 ppb at hour 16	Minimum Diurnal Average: 4.86 ppb at hour 7	Hours of Missing Data: 35
Monthly Average: 16.250 ppb	Percentiles: P ₁ = 0.1 P ₁₀ = 1.0 Q ₁ = 3.5 Median = 14.9 Q ₃ = 27.2 P ₉₀ = 33.9 P ₉₉ = 44.1	Hours of Calibration: 35
		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-Sep	21.8	24.9	18.2	Z	13.5	11.2	13.9	15.6	19.2	21.4	25.3	30.6	35.3	34.8	35.6	35.5	35.3	34.4	27.2	16.0	12.7	7.8	5.5	4.4	21.75	35.55
2-Sep	3.5	4.7	4.4	Z	1.0	0.9	1.1	1.5	2.6	4.6	10.1	31.8	35.9	34.5	34.2	32.1	32.9	29.7	24.4	17.8	7.8	3.1	3.1	2.6	14.11	35.88
3-Sep	1.1	0.8	0.8	Z	0.7	0.9	1.0	1.3	2.2	5.7	10.9	14.8	17.7	18.3	21.7	22.8	18.5	16.4	16.6	15.1	16.1	15.4	12.9	12.1	10.60	22.80
4-Sep	11.2	10.0	9.9	Z	8.6	6.5	5.3	5.9	7.4	9.4	12.3	13.9	14.8	16.6	15.5	18.5	14.0	14.9	13.3	10.6	11.7	4.6	1.9	1.9	10.39	18.52
5-Sep	1.9	1.0	0.8	Z	0.7	0.7	1.1	1.6	3.2	6.0	8.2	8.8	10.1	10.5	11.5	12.6	13.3	14.6	11.6	14.1	14.6	15.5	15.4	13.9	8.33	15.52
6-Sep	8.4	2.8	1.3	Z	0.3	0.5	0.6	1.0	1.2	3.9	8.5	13.5	18.3	23.5	24.5	25.6	23.1	19.4	19.8	14.9	12.3	9.1	4.5	4.2	10.49	25.60
7-Sep	3.9	3.0	2.5	Z	0.7	1.1	1.4	C	C	C	C	C	18.1	27.7	28.5	25.9	29.3	22.0	20.5	10.1	3.9	2.2	2.2	1.9	11.40	29.35
8-Sep	1.3	1.1	0.9	Z	0.5	0.7	0.9	1.0	1.6	3.0	8.8	13.9	16.1	18.9	21.7	26.0	25.7	26.4	28.7	14.0	3.4	1.2	1.5	2.0	9.54	28.71
9-Sep	1.0	1.0	0.9	Z	0.4	0.8	0.8	1.3	1.6	2.3	3.6	13.5	18.7	23.0	21.4	19.1	13.3	13.6	10.2	8.6	4.6	2.7	1.1	0.9	7.14	22.97
10-Sep	0.8	0.8	0.8	Z	0.6	0.8	1.0	1.4	4.0	12.0	19.7	26.8	29.4	30.4	30.4	31.2	32.0	32.1	26.8	25.3	7.5	3.8	1.5	1.7	13.95	32.11
11-Sep	4.1	6.0	12.3	Z	6.3	9.7	9.1	8.9	18.0	20.5	26.4	31.2	38.5	42.2	44.1	45.0	44.7	44.5	40.4	26.2	12.4	3.2	3.9	3.5	21.80	45.03
12-Sep	2.0	2.6	3.8	Z	1.1	1.4	1.6	2.4	13.7	22.6	34.6	39.4	40.4	36.4	28.4	30.4	34.2	33.0	28.3	23.9	24.4	22.6	20.1	16.7	20.17	40.40
13-Sep	9.7	7.7	9.0	Z	6.2	4.5	2.7	5.6	9.0	18.3	29.1	32.2	31.1	32.2	28.3	29.8	25.9	26.8	30.2	19.1	12.8	14.6	10.1	11.3	17.66	32.23
14-Sep	9.9	7.1	5.9	Z	3.5	4.0	3.2	8.6	15.9	14.1	18.4	23.9	25.4	30.1	29.5	28.9	29.3	26.4	21.6	14.5	14.9	17.4	16.5	15.1	16.70	30.14
15-Sep	16.3	17.2	17.1	Z	17.0	17.2	14.7	12.7	19.5	19.0	16.6	18.4	19.7	20.2	22.0	26.2	24.4	21.6	17.1	15.9	5.1	2.0	2.7	4.2	15.95	26.25
16-Sep	4.8	7.8	12.0	Z	13.5	11.9	6.9	7.4	10.4	12.9	15.9	20.6	23.3	25.8	34.9	35.6	33.7	29.3	21.7	8.3	2.2	1.9	2.1	1.5	14.97	35.56
17-Sep	1.9	1.7	1.2	Z	1.0	1.3	1.1	1.7	2.8	7.7	22.7	32.8	35.9	36.1	37.8	36.8	37.2	36.2	41.2	30.3	26.5	21.0	10.0	7.0	18.78	41.20
18-Sep	6.7	4.3	2.7	Z	0.9	1.1	1.1	1.6	2.4	4.1	28.0	31.3	33.6	37.9	37.2	32.4	33.7	37.0	34.6	34.5	30.9	32.9	33.1	31.5	21.45	37.90
19-Sep	33.8	34.6	33.9	Z	30.8	31.9	33.9	29.8	29.2	35.0	35.0	35.2	34.3	34.2	34.8	34.8	31.5	30.0	29.7	27.4	22.1	22.0	19.2	19.2	30.54	35.25
20-Sep	20.5	22.0	21.7	Z	12.3	21.5	13.8	12.5	20.9	20.8	19.4	19.7	27.8	27.0	24.8	29.0	37.7	32.1	31.9	27.4	28.1	26.5	26.1	22.1	23.72	37.66
21-Sep	14.1	14.2	16.5	Z	10.3	9.1	4.4	4.0	11.1	14.1	18.4	22.8	22.9	29.1	28.3	26.6	30.6	31.8	24.4	11.8	1.5	1.5	1.2	1.0	15.21	31.79
22-Sep	0.7	0.7	0.6	Z	0.3	0.6	0.6	1.0	2.2	6.3	11.6	16.8	24.6	34.9	41.6	39.4	34.6	31.4	32.3	21.9	17.1	18.2	15.9	11.5	15.86	41.62
23-Sep	8.7	6.5	3.8	Z	0.4	2.0	1.6	1.3	4.9	10.7	14.2	17.1	21.0	28.3	39.3	46.5	46.2	44.1	19.5	39.9	38.2	20.7	12.3	7.0	18.87	46.50
24-Sep	6.4	3.1	3.3	Z	0.5	0.3	0.2	0.7	1.6	6.5	11.6	22.4	31.0	39.5	38.5	38.5	39.1	34.3	31.0	16.1	11.1	6.8	2.2	4.0	15.16	39.50
25-Sep	2.1	1.0	0.4	Z	0.8	0.2	1.2	21.4	24.1	21.4	22.3	25.0	25.5	21.9	22.1	24.2	22.2	10.9	8.0	3.3	2.0	0.9	0.6	0.5	11.39	25.53
26-Sep	1.9	0.7	0.0	Z	0.0	0.1	0.2	0.7	2.9	12.9	20.7	25.2	34.7	37.5	38.0	38.6	37.5	37.3	33.8	32.6	31.0	31.3	32.5	31.1	20.92	38.60
27-Sep	33.4	29.4	30.2	Z	32.6	24.4	17.5	14.0	31.8	32.5	32.7	32.3	31.7	30.4	27.0	22.6	19.8	18.2	14.6	9.5	4.0	4.9	7.9	5.0	22.02	33.43
28-Sep	2.1	0.7	0.1	Z	0.0	0.8	0.1	0.4	2.9	13.7	31.3	33.5	33.4	32.9	33.9	33.1	34.1	34.2	31.4	24.0	25.3	18.4	12.9	19.1	18.18	34.20
29-Sep	7.8	21.3	27.8	Z	20.3	13.0	4.7	0.4	3.9	23.3	26.7	28.8	30.2	31.0	30.8	30.3	29.7	28.1	24.4	19.8	22.7	15.2	4.7	1.2	19.40	30.99
30-Sep	1.3	0.8	0.6	Z	0.0	0.0	0.0	0.2	1.0	10.3	20.9	24.7	27.3	28.3	27.2	24.7	23.2	23.0	13.6	0.7	0.6	0.7	0.8	0.4	10.01	28.25

8.10	7.99	8.12	--	6.16	5.98	4.86	5.72	9.35	13.63	19.44	24.18	26.89	29.13	29.79	30.09	29.56	27.79	24.29	18.46	14.25	11.60	9.48	8.61	Diurnal Average	
33.81	34.58	33.93	--	32.63	31.93	33.90	29.82	31.78	35.03	34.98	39.43	40.40	42.24	44.14	46.50	46.21	44.46	41.20	39.89	38.19	32.91	33.05	31.45	Diurnal Maximum	

Z - zeronspan C - Calibration
 Alberta Ambient Air Quality Objectives (AAQO): 1-hr 82.5 ppb 24-hr -- ppb



WCAS - Hinton
Summary of Hourly Averages

Nitrogen Oxide (NO) - ppb
September 2015

Maximum Value: 114.92 ppb on Sep 30 08:00																								Hours in Service: 720			
Maximum Daily Average: 20.96 ppb on Sep 30																								Hours of Data: 684			
Minimum Value: 0.0 ppb on Sep 27 05:00																								Hours of Missing Data: 36			
Minimum Daily Average: 0.68 ppb on Sep 20																								Hours of Calibration: 36			
Maximum Diurnal Average: 16.53 ppb at hour 8																								Percent Operational Time: 100.0			
Minimum Diurnal Average: 0.95 ppb at hour 16																											
Monthly Average: 3.953 ppb																											
Percentiles: P ₁ = 0.1 P ₁₀ = 0.2 Q ₁ = 0.6 Median = 1.3 Q ₃ = 3.6 P ₉₀ = 11.2 P ₉₉ = 35.5																											
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-Sep	0.2	0.1	0.5	Z	1.1	0.2	1.1	2.9	1.6	3.0	1.3	1.5	1.1	1.0	1.0	0.4	0.7	0.6	0.9	0.7	0.5	0.6	0.4	0.5	0.95	3.04	
2-Sep	0.2	0.1	0.1	Z	5.0	10.9	14.7	18.2	9.2	7.7	5.4	1.4	0.8	2.7	0.4	0.6	1.0	0.6	0.2	0.5	1.5	1.0	2.0	0.7	3.70	18.21	
3-Sep	1.5	3.7	3.9	Z	2.5	14.5	11.2	16.0	10.8	8.9	3.7	3.5	2.5	1.1	0.3	1.0	0.9	1.0	0.2	0.5	0.8	0.1	0.1	0.1	3.86	16.01	
4-Sep	0.1	0.2	0.5	Z	0.4	0.2	4.3	1.6	0.7	1.3	1.2	1.5	2.2	2.2	2.6	1.0	1.2	0.5	1.0	0.4	0.6	1.4	5.4	2.4	1.43	5.37	
5-Sep	0.8	2.9	6.8	Z	0.5	1.5	4.1	5.2	5.6	4.1	6.1	4.6	3.3	2.3	1.6	0.7	0.6	1.1	0.8	0.6	0.4	0.5	0.1	0.2	2.37	6.81	
6-Sep	0.6	1.8	2.6	Z	6.8	11.6	11.7	11.6	9.8	4.4	3.5	2.9	2.0	0.7	0.2	0.2	1.1	2.1	0.3	0.6	1.1	0.2	0.8	0.6	3.35	11.74	
7-Sep	0.5	0.5	0.3	Z	0.8	0.5	0.6	C	C	C	C	C	C	0.8	1.1	0.1	0.1	1.4	1.9	1.9	2.1	2.2	2.0	0.6	--	2.24	
8-Sep	2.3	4.9	4.2	Z	9.0	10.0	10.6	15.6	11.8	7.4	6.9	1.3	1.3	1.4	1.7	1.4	1.0	1.0	1.5	0.3	7.1	6.6	2.8	1.0	4.83	15.60	
9-Sep	10.0	3.4	3.6	Z	4.6	13.0	8.6	14.5	20.3	15.7	20.8	3.5	1.6	0.9	0.7	0.5	0.8	0.8	1.9	0.6	0.4	1.2	3.8	1.9	5.78	20.77	
10-Sep	6.8	5.2	2.8	Z	12.4	16.0	22.9	19.2	21.4	11.3	3.6	3.5	1.0	1.9	1.6	1.2	0.8	0.7	0.4	0.1	8.3	4.8	6.7	3.6	6.79	22.90	
11-Sep	1.6	0.7	0.1	Z	0.9	0.4	0.3	1.5	1.2	2.4	1.9	1.9	1.5	1.5	1.1	1.0	0.8	0.4	0.1	1.7	6.2	6.4	5.3	3.0	1.83	6.38	
12-Sep	1.9	2.1	1.7	Z	10.3	11.8	13.8	29.5	4.5	4.3	1.8	2.1	0.9	0.5	0.2	0.6	0.8	0.8	0.2	0.1	0.1	0.1	0.1	0.1	3.84	29.54	
13-Sep	0.1	0.2	0.7	Z	1.8	1.1	3.5	2.3	1.8	1.8	0.9	0.8	0.7	1.8	0.9	0.6	1.2	0.4	0.7	0.3	1.0	0.5	0.1	0.1	1.02	3.47	
14-Sep	0.1	0.1	0.6	Z	2.7	3.6	2.3	1.2	0.7	1.6	1.5	1.0	1.3	0.3	1.0	0.7	1.5	0.9	0.5	0.5	0.1	0.3	0.1	0.3	0.99	3.55	
15-Sep	0.2	0.1	0.3	Z	0.8	1.7	2.5	3.2	1.4	0.6	1.4	1.4	1.8	2.1	1.1	0.9	0.3	1.2	2.1	0.4	4.3	4.9	4.5	1.5	1.68	4.94	
16-Sep	0.8	0.3	0.1	Z	0.4	0.3	2.5	5.0	1.6	1.9	1.9	1.5	2.1	1.0	1.3	1.0	0.7	0.2	3.0	6.7	10.1	8.0	3.7	3.3	2.50	10.15	
17-Sep	2.5	4.2	11.4	Z	4.4	22.0	14.7	11.3	18.2	15.1	5.7	2.5	0.9	1.2	0.7	1.0	0.7	0.5	0.1	0.1	0.5	0.3	0.4	0.4	5.16	21.99	
18-Sep	0.5	0.7	1.3	Z	14.1	25.9	28.6	55.2	35.8	16.5	1.5	1.2	1.4	0.7	1.2	2.2	1.1	0.6	0.5	0.2	0.2	0.4	0.2	0.4	8.27	55.18	
19-Sep	0.2	0.2	0.1	Z	0.3	0.1	0.3	0.9	1.0	0.5	2.2	2.4	2.4	2.2	1.3	0.8	1.5	1.3	0.3	0.1	0.4	0.2	0.5	0.3	0.85	2.44	
20-Sep	0.3	0.1	0.1	Z	1.8	0.7	0.9	1.1	1.1	1.0	1.1	1.0	1.2	1.4	0.6	0.4	0.4	0.8	0.1	1.2	0.3	0.1	0.1	0.1	0.68	1.77	
21-Sep	0.0	0.0	0.1	Z	0.1	0.9	5.4	16.2	11.9	6.9	3.9	3.6	0.7	1.3	0.1	0.2	0.6	0.6	0.4	1.7	6.4	3.9	2.0	3.9	3.08	16.21	
22-Sep	4.8	3.6	4.1	Z	9.8	7.1	15.8	19.8	17.7	15.3	9.0	13.0	4.9	2.3	1.3	1.6	4.0	2.0	1.5	0.7	0.8	0.5	0.5	1.2	6.14	19.84	
23-Sep	0.6	2.2	3.6	Z	4.4	5.8	6.0	12.3	11.7	7.2	5.3	4.9	3.8	2.3	2.3	1.2	0.7	0.2	9.7	3.1	0.5	0.8	0.3	4.0	4.04	12.28	
24-Sep	1.2	2.4	2.9	Z	3.6	14.3	21.9	28.5	22.2	16.8	9.0	4.2	4.9	1.7	3.0	1.3	0.8	1.7	1.6	3.6	4.0	2.0	5.3	1.6	6.88	28.49	
25-Sep	1.8	3.2	3.9	Z	4.3	15.9	31.6	0.1	0.9	0.6	1.5	0.6	0.4	0.9	1.3	1.2	1.2	1.6	2.6	3.9	3.6	4.3	3.7	1.7	3.94	31.62	
26-Sep	0.5	2.9	5.3	Z	4.5	15.7	6.6	3.6	7.8	1.7	2.3	1.3	0.9	0.8	1.3	0.7	1.1	0.7	0.4	0.2	0.3	0.2	0.2	0.4	2.59	15.68	
27-Sep	0.4	0.6	0.2	Z	0.0	0.5	0.9	7.7	0.1	0.1	0.1	0.1	0.1	0.1	0.3	1.3	1.3	2.0	1.7	0.8	0.4	2.0	0.5	0.4	0.3	0.95	7.72
28-Sep	0.6	2.0	2.8	Z	4.8	5.1	9.0	33.9	25.7	13.6	1.5	2.4	2.3	2.5	1.7	2.0	0.9	0.4	0.1	0.2	0.2	0.3	2.3	0.3	4.98	33.85	
29-Sep	1.0	0.2	0.2	Z	0.4	1.4	4.5	26.4	17.7	1.8	1.3	1.9	1.2	1.4	1.3	1.3	0.9	0.6	0.2	0.2	1.1	0.2	6.3	5.5	3.35	26.42	
30-Sep	1.0	7.1	4.1	Z	20.2	47.4	75.3	114.9	71.7	14.4	3.2	2.1	3.1	1.7	1.4	1.2	1.4	3.0	1.9	36.9	27.8	20.3	8.5	13.3	20.96	114.92	
1.44 1.85 2.29 -- 4.42 8.66 11.21 16.53 11.92 6.48 3.77 2.55 1.81 1.42 1.19 0.95 1.03 0.98 1.20 2.28 3.09 2.43 2.29 1.77																								Diurnal Average			
9.99 7.10 11.41 -- 20.18 47.39 75.32 114.92 71.67 16.77 20.77 13.02 4.89 2.69 3.01 2.16 4.01 3.01 9.69 36.85 27.85 20.34 8.52 13.28																								Diurnal Maximum			
Z - zerospan C - Calibration																											
Alberta Ambient Air Quality Objectives (AAQO): 1-hr --- ppb 24-hr --- ppb																											



WCAS - Hinton
Summary of Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
September 2015

Maximum Value: 22.85 ppb on Sep 11 22:00		Maximum Daily Average: 8.46 ppb on Sep 30		Hours in Service: 720																						
Minimum Value: 0.0 ppb on Sep 7 17:00		Minimum Daily Average: 2.57 ppb on Sep 14		Hours of Data: 684																						
Maximum Diurnal Average: 6.90 ppb at hour 21		Minimum Diurnal Average: 2.82 ppb at hour 15		Hours of Missing Data: 36																						
Monthly Average: 4.547 ppb		Percentiles: P ₁ = 0.6 P ₁₀ = 1.9 Q ₁ = 2.6 Median = 3.7 Q ₃ = 5.7 P ₉₀ = 8.0 P ₉₉ = 15.5		Hours of Calibration: 36																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	1.9	0.7	4.3	Z	6.6	3.2	4.4	3.7	2.2	3.8	2.2	3.1	2.6	1.6	2.1	1.2	2.8	3.5	4.6	7.3	5.7	7.1	4.7	4.4	3.65	7.34
2-Sep	4.5	4.2	2.9	Z	2.5	3.6	3.9	4.5	3.8	5.0	9.6	3.7	2.1	4.5	1.9	2.2	1.9	2.4	2.1	3.7	7.5	6.3	2.9	2.7	3.85	9.62
3-Sep	3.6	2.7	2.6	Z	3.1	4.5	4.9	5.1	5.7	7.2	3.5	4.5	3.3	2.6	1.5	2.3	2.7	3.1	1.5	2.6	3.0	1.6	1.7	2.0	3.27	7.17
4-Sep	2.9	2.4	3.1	Z	3.1	3.8	5.3	4.3	2.3	3.2	2.6	2.0	2.5	2.2	2.4	1.3	2.0	1.4	2.2	1.9	2.2	3.9	5.5	2.7	2.85	5.52
5-Sep	2.8	3.8	5.0	Z	3.8	3.2	3.9	3.2	3.9	5.5	5.8	3.8	2.1	1.8	2.3	2.3	2.4	2.8	3.5	2.1	2.1	2.2	1.9	2.6	3.17	5.83
6-Sep	5.2	7.0	5.3	Z	2.2	1.7	1.6	2.2	2.2	2.7	4.0	3.4	3.3	1.4	0.8	1.0	3.0	5.2	3.3	3.9	4.2	4.0	4.6	5.2	3.37	6.98
7-Sep	2.8	3.0	1.8	Z	2.3	2.9	2.3	C	C	C	C	C	C	1.1	1.6	0.2	0.0	3.4	4.7	7.3	7.1	3.4	2.6	1.9	--	7.29
8-Sep	2.0	2.4	2.2	Z	2.1	2.0	2.5	3.3	4.6	4.4	5.5	2.6	2.6	2.9	3.4	2.9	2.3	2.8	4.7	4.5	9.5	6.6	3.4	2.3	3.55	9.50
9-Sep	4.9	3.9	4.7	Z	2.4	3.2	2.1	4.0	5.4	6.9	8.8	4.6	2.4	1.7	1.8	1.4	2.3	2.2	3.7	3.2	1.9	2.1	1.6	1.1	3.33	8.85
10-Sep	0.9	1.1	0.6	Z	2.4	3.1	3.0	3.3	7.9	10.3	5.5	5.8	2.4	3.1	2.9	2.8	2.7	3.3	5.5	2.2	15.2	13.7	12.8	7.5	5.13	15.23
11-Sep	3.4	2.8	2.7	Z	5.1	5.8	3.8	3.7	2.1	2.6	3.7	3.8	3.4	4.9	3.5	4.3	3.4	3.8	2.8	12.3	18.2	22.9	15.2	10.8	6.31	22.85
12-Sep	10.6	7.1	6.4	Z	7.3	7.3	7.6	9.3	6.6	8.9	5.6	5.7	2.7	2.6	1.8	2.3	3.9	5.6	2.7	2.2	2.2	4.7	3.4	3.9	5.22	10.60
13-Sep	3.3	3.1	3.8	Z	4.0	4.3	6.2	3.1	2.7	3.7	2.5	2.1	2.6	5.1	2.1	1.6	4.0	2.0	4.1	4.0	6.5	3.5	3.8	3.0	3.52	6.50
14-Sep	2.2	1.7	2.8	Z	3.3	3.4	5.4	4.1	3.1	5.5	3.4	2.1	2.1	0.6	1.6	1.5	2.7	2.4	3.1	2.4	1.3	1.5	1.5	1.5	2.57	5.47
15-Sep	1.2	0.9	1.4	Z	2.2	3.9	5.7	7.2	4.2	2.7	3.7	3.0	3.1	3.0	2.1	1.9	1.5	3.6	5.2	2.1	6.8	7.1	6.1	4.6	3.62	7.19
16-Sep	5.2	3.4	2.0	Z	3.5	2.9	6.5	5.5	2.2	2.9	2.4	1.7	2.4	2.4	2.1	2.5	2.1	1.0	7.1	10.8	10.9	8.2	5.3	4.3	4.23	10.94
17-Sep	3.3	3.4	3.1	Z	4.0	4.6	2.5	2.6	5.3	7.7	6.8	4.1	3.1	4.2	2.7	4.4	2.8	5.0	2.5	5.6	6.9	7.5	5.5	3.6	4.40	7.67
18-Sep	3.7	3.2	2.9	Z	4.4	6.3	5.4	7.3	8.6	8.7	2.6	6.2	6.9	3.7	3.7	10.5	7.7	4.8	7.0	6.5	10.1	7.3	7.6	9.2	6.27	10.49
19-Sep	7.2	4.3	3.7	Z	8.8	7.3	3.0	5.0	6.8	2.4	5.2	6.2	5.4	4.5	2.4	1.9	3.7	4.5	2.9	3.6	5.2	3.6	7.8	5.7	4.83	8.81
20-Sep	2.7	1.9	1.9	Z	5.7	2.8	3.7	3.7	4.2	3.9	3.5	3.5	2.5	3.5	2.7	2.6	1.9	4.3	3.0	4.9	5.2	3.8	5.6	4.7	3.59	5.72
21-Sep	3.4	3.6	3.9	Z	4.5	7.0	11.6	13.9	11.5	5.5	5.8	5.5	1.8	2.6	0.5	0.7	1.7	2.3	3.4	7.4	10.0	6.7	5.0	3.6	5.30	13.90
22-Sep	2.8	2.5	2.7	Z	5.9	5.4	5.7	5.1	7.3	7.8	5.8	10.9	6.2	3.9	3.6	3.3	6.5	3.3	3.2	5.3	4.9	3.7	5.4	9.7	5.26	10.91
23-Sep	7.9	6.6	6.4	Z	6.4	7.5	8.3	7.4	6.2	6.1	4.9	4.5	4.2	4.1	6.4	5.3	4.0	2.5	21.9	5.2	4.5	8.9	8.2	10.6	6.87	21.89
24-Sep	7.3	5.8	5.7	Z	4.2	6.5	4.7	4.6	5.0	7.1	6.5	5.0	7.6	4.5	7.3	4.8	4.5	9.9	9.4	14.8	16.3	15.6	14.9	8.1	7.83	16.26
25-Sep	7.6	7.7	7.5	Z	6.4	8.9	10.0	2.0	4.5	4.6	6.6	2.7	1.4	3.2	3.8	3.3	3.6	5.4	7.7	8.6	6.1	4.7	1.8	1.6	5.20	9.98
26-Sep	2.2	3.7	3.2	Z	3.0	4.2	3.8	3.3	4.3	4.5	3.1	3.1	1.4	1.7	3.3	2.3	3.8	3.8	3.8	3.3	3.6	3.9	3.1	8.8	3.53	8.77
27-Sep	6.1	9.8	6.2	Z	0.4	3.7	8.9	14.5	0.8	0.6	0.4	0.3	0.4	1.3	4.5	3.1	4.3	4.1	3.7	4.9	6.1	2.9	3.1	2.3	4.02	14.53
28-Sep	3.0	2.8	3.0	Z	2.7	4.2	4.6	5.6	9.7	12.5	2.9	5.1	4.4	4.5	3.3	4.6	3.6	2.3	4.3	10.0	3.3	5.0	7.8	2.7	4.87	12.48
29-Sep	3.8	1.6	1.5	Z	3.4	5.8	8.6	12.1	8.9	2.9	1.9	1.9	1.6	1.7	2.8	3.2	2.7	4.1	6.0	9.4	4.7	6.4	10.1	11.5	5.08	12.15
30-Sep	7.0	5.7	5.8	Z	6.5	8.9	9.9	13.0	13.2	8.9	5.3	3.1	3.2	2.7	3.4	5.4	6.0	6.3	14.0	21.5	15.8	13.3	7.5	8.2	8.46	21.48
																								Diurnal Average		
																								Diurnal Maximum		
																								4.19 3.76 3.64 -- 4.08 4.73 5.33 5.74 5.34 5.47 4.48 3.93 3.09 2.92 2.82 2.91 3.22 3.71 5.12 6.13 6.90 6.41 5.67 5.03		
																								10.60 9.78 7.46 -- 8.81 8.91 11.61 14.53 13.23 12.48 9.62 10.91 7.65 5.12 7.33 10.49 7.70 9.88 21.89 21.48 18.19 22.85 15.21 11.49		
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
September 2015

Maximum Value: 127.14 ppb on Sep 30 08:00																								Maximum Daily Average: 29.23 ppb on Sep 30																								Hours in Service: 720	
Minimum Value: 0.3 ppb on Sep 27 12:00																								Minimum Daily Average: 3.54 ppb on Sep 14																								Hours of Data: 684	
Maximum Diurnal Average: 22.16 ppb at hour 8																								Minimum Diurnal Average: 3.86 ppb at hour 16																								Hours of Missing Data: 36	
Monthly Average: 8.469 ppb																								Percentiles: P ₁ = 0.7 P ₁₀ = 2.6 Q ₁ = 3.6 Median = 5.4 Q ₃ = 9.5 P ₉₀ = 18.3 P ₉₉ = 40.1																								Hours of Calibration: 36	
																								Percent Operational Time: 100.0																									
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Sep	2.0	0.8	4.8	Z	7.8	3.4	5.6	6.7	3.7	6.9	3.5	4.6	3.7	2.6	3.2	1.6	3.4	4.1	5.5	8.1	6.2	7.8	5.1	4.9	4.60	8.09																							
2-Sep	4.7	4.4	3.0	Z	7.5	14.5	18.5	22.6	13.0	12.8	15.0	5.1	2.9	7.2	2.3	2.8	2.8	3.1	2.3	4.2	9.0	7.3	4.9	3.4	7.54	22.64																							
3-Sep	5.1	6.5	6.4	Z	5.6	18.9	16.1	21.1	16.5	16.1	7.1	8.0	5.8	3.6	1.8	3.4	3.6	4.1	1.7	3.1	3.8	1.7	1.8	2.1	7.13	21.09																							
4-Sep	3.1	2.6	3.6	Z	3.6	4.0	9.6	5.9	3.0	4.6	3.9	3.5	4.7	4.4	5.0	2.3	3.2	1.9	3.2	2.3	2.8	5.4	10.9	5.1	4.29	10.90																							
5-Sep	3.6	6.6	11.8	Z	4.4	4.8	8.1	8.4	9.5	9.7	11.9	8.4	5.4	4.1	3.9	3.0	3.0	3.9	4.3	2.8	2.5	2.8	2.0	2.9	5.56	11.90																							
6-Sep	5.8	8.8	7.9	Z	8.9	13.3	13.3	13.7	11.9	7.2	7.5	6.4	5.4	2.1	1.0	1.2	4.2	7.3	3.6	4.5	5.3	4.2	5.4	5.8	6.73	13.71																							
7-Sep	3.3	3.6	2.1	Z	3.1	3.2	2.7	C	C	C	C	C	C	2.6	3.3	0.8	0.6	5.3	7.0	9.6	9.5	5.9	4.9	2.6	--	9.55																							
8-Sep	4.4	7.4	6.4	Z	11.0	11.8	13.0	18.8	16.3	11.8	12.3	3.9	3.9	4.2	5.1	4.3	3.3	3.8	6.2	4.8	16.5	13.0	6.1	3.3	8.33	18.80																							
9-Sep	14.8	7.2	8.2	Z	7.0	16.1	10.6	18.3	25.5	22.5	29.4	8.0	4.1	2.5	2.5	1.9	3.0	3.0	5.6	3.8	2.3	3.3	5.3	3.0	9.04	29.45																							
10-Sep	7.6	6.3	3.4	Z	14.8	18.9	25.7	22.4	29.1	21.5	9.0	9.3	3.4	5.0	4.5	4.0	3.5	4.0	5.8	2.3	23.4	18.4	19.5	11.0	11.86	29.11																							
11-Sep	5.0	3.6	2.7	Z	5.9	6.1	4.1	5.2	3.3	5.0	5.6	5.7	4.9	6.4	4.6	5.3	4.2	4.3	2.9	14.0	24.3	29.1	20.4	13.8	8.11	29.13																							
12-Sep	12.4	9.2	8.1	Z	17.5	18.9	21.2	38.6	11.1	13.1	7.4	7.8	3.6	3.0	1.9	2.9	4.6	6.4	2.9	2.3	2.3	4.8	3.5	4.0	9.02	38.56																							
13-Sep	3.4	3.2	4.5	Z	5.8	5.4	9.6	5.3	4.5	5.5	3.4	2.8	3.2	6.9	3.0	2.2	5.2	2.4	4.9	4.3	7.5	4.0	3.9	3.1	4.52	9.62																							
14-Sep	2.4	1.8	3.3	Z	6.0	7.0	7.7	5.3	3.7	7.0	4.8	3.1	3.4	0.9	2.6	2.2	4.2	3.3	3.6	2.9	1.3	1.8	1.5	1.8	3.54	7.65																							
15-Sep	1.4	1.0	1.6	Z	3.0	5.6	8.2	10.4	5.5	3.3	5.1	4.4	4.8	5.0	3.2	2.8	1.7	4.7	7.3	2.5	11.0	12.0	10.6	6.1	5.27	11.96																							
16-Sep	6.0	3.7	2.1	Z	3.9	3.2	9.0	10.4	3.8	4.8	4.3	3.1	4.5	3.3	3.4	3.5	2.8	1.1	10.0	17.5	21.0	16.1	9.0	7.5	6.69	20.96																							
17-Sep	5.8	7.5	14.4	Z	8.4	26.4	17.1	13.8	23.3	22.6	12.4	6.6	4.0	5.4	3.4	5.4	3.5	5.5	2.7	5.6	7.4	7.8	5.9	4.0	9.51	26.44																							
18-Sep	4.2	3.9	4.2	Z	18.4	32.0	33.7	62.0	44.1	25.0	4.0	7.4	8.2	4.4	4.8	12.6	8.8	5.4	7.5	6.7	10.3	7.7	7.7	9.6	14.46	62.01																							
19-Sep	7.3	4.4	3.7	Z	9.0	7.4	3.3	5.8	7.7	2.8	7.4	8.5	7.8	6.7	3.7	2.7	5.1	5.8	3.1	3.7	5.6	3.8	8.2	6.0	5.64	9.03																							
20-Sep	3.0	1.9	2.0	Z	7.5	3.5	4.6	4.7	5.3	5.0	4.6	4.5	3.7	4.8	3.3	2.9	2.4	5.0	3.1	6.1	5.5	3.9	5.7	4.7	4.25	7.45																							
21-Sep	3.4	3.7	4.0	Z	4.5	7.9	16.9	30.0	23.3	12.3	9.6	9.1	2.5	3.9	0.5	0.8	2.3	2.9	3.8	9.1	16.4	10.5	7.0	7.4	8.34	30.00																							
22-Sep	7.6	6.1	6.8	Z	15.6	12.4	21.4	24.8	24.8	23.0	14.7	23.8	11.0	6.2	4.8	4.9	10.5	5.2	4.7	5.9	5.7	4.2	5.9	10.8	11.34	24.77																							
23-Sep	8.4	8.7	9.9	Z	10.7	13.2	14.2	19.5	17.8	13.2	10.2	9.4	8.0	6.3	8.7	6.4	4.7	2.7	31.4	8.2	4.9	9.7	8.5	14.5	10.85	31.42																							
24-Sep	8.5	8.1	8.5	Z	7.7	20.7	26.4	32.9	27.0	23.7	15.3	9.2	12.5	6.2	10.3	6.1	5.3	11.5	11.0	18.3	20.1	17.6	20.1	9.6	14.64	32.86																							
25-Sep	9.4	10.8	11.3	Z	10.7	24.6	41.3	2.1	5.3	5.1	8.0	3.3	1.7	4.1	5.1	4.5	4.8	7.1	10.3	12.5	9.6	8.9	5.4	3.3	9.10	41.32																							
26-Sep	2.8	6.6	8.4	Z	7.5	19.7	10.3	6.9	12.0	6.2	5.3	4.5	2.3	2.5	4.5	3.0	4.9	4.4	4.1	3.5	3.9	4.1	3.3	9.2	6.08	19.73																							
27-Sep	6.5	10.4	6.3	Z	0.4	4.2	9.8	22.2	0.8	0.7	0.4	0.3	0.5	1.6	5.8	4.4	6.3	5.8	4.5	5.3	8.1	3.5	3.4	2.6	4.95	22.16																							
28-Sep	3.6	4.8	5.8	Z	7.4	9.3	13.6	39.2	35.2	25.9	4.4	7.4	6.6	6.9	5.1	6.6	4.5	2.7	4.4	10.1	3.5	5.2	10.0	3.0	9.81	39.22																							
29-Sep	4.8	1.8	1.7	Z	3.8	7.2	13.0	38.4	26.4	4.7	3.2	3.8	2.8	3.1	4.1	4.5	3.6	4.7	6.1	9.6	5.8	6.5	16.3	16.9	8.38	38.36																							
30-Sep	8.0	12.7	9.9	Z	26.6	55.9	84.6	127.1	84.3	23.1	8.5	5.2	6.3	4.4	4.8	6.6	7.4	9.3	15.8	57.8	43.4	33.4	15.9	21.4	29.23	127.14																							
																								5.61	5.60	5.90	--	8.46	13.31	16.44	22.16	17.17	11.90	8.23	6.46	4.88	4.35	4.01	3.86	4.25	4.69	6.31	8.38	9.96	8.81	7.94	6.77	Diurnal Average	
																								14.85	12.68	14.39	--	26.55	55.91	84.62	127.14	84.31	25.94	29.45	23.80	12.48	7.24	10.30	12.61	10.45	11.50	31.42	57.77	43.39	33.44	20.42	21.37	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
September 2015

Maximum Value: 45.72 µg/m ³ on Sep 30 08:00	Maximum Daily Average: 13.83 µg/m ³ on Sep 30	Hours in Service: 720
Minimum Value: 0.0 µg/m ³ on Sep 7 21:00	Minimum Daily Average: 3.52 µg/m ³ on Sep 15	Hours of Data: 717
Maximum Diurnal Average: 10.21 µg/m ³ at hour 10	Minimum Diurnal Average: 4.77 µg/m ³ at hour 4	Hours of Missing Data: 3
Monthly Average: 6.755 µg/m ³	Percentiles: P ₁ = 0.0 P ₁₀ = 2.3 Q ₁ = 3.6 Median = 5.5 Q ₃ = 8.2 P ₉₀ = 12.8 P ₉₉ = 30.3	Hours of Calibration: 0
		Percent Operational Time: 99.6

Day	Hourly Period Ending At																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Sep	6.4	1.3	2.4	3.5	1.9	2.7	4.7	4.0	3.6	4.1	4.0	0.0	3.6	4.2	2.3	3.3	4.3	3.5	21.1	16.4	8.8	9.7	5.8	4.4	5.25	21.14
2-Sep	5.2	4.8	4.0	2.6	3.0	4.7	8.2	10.6	9.4	9.8	11.2	0.6	2.5	6.1	2.6	6.7	5.1	7.3	4.7	3.6	3.3	5.7	4.0	2.2	5.33	11.25
3-Sep	4.1	4.2	3.9	4.0	4.3	6.9	8.0	9.5	8.2	13.0	2.6	8.3	7.7	5.9	2.6	5.0	5.8	5.1	2.4	4.3	3.8	4.0	3.0	2.8	5.39	13.04
4-Sep	3.0	2.6	2.8	2.7	2.7	3.5	3.2	4.2	3.1	4.1	3.8	3.3	3.1	4.8	3.8	2.5	5.1	3.8	5.5	5.1	4.7	5.7	4.6	3.3	3.79	5.67
5-Sep	3.6	2.1	3.0	4.9	3.2	2.9	5.9	8.3	8.3	13.9	14.8	12.9	7.5	7.1	9.5	7.6	7.6	7.8	9.8	6.6	7.4	6.5	4.4	5.8	7.14	14.76
6-Sep	9.1	25.0	12.0	7.3	7.9	7.7	8.4	8.2	8.7	9.8	10.2	8.7	5.5	2.5	4.5	7.1	12.1	15.7	8.5	7.7	5.6	5.4	5.2	5.8	8.69	25.03
7-Sep	2.7	3.3	3.4	3.5	3.1	4.3	5.9	7.7	7.1	10.7	1.5	17.5	9.0	8.3	3.0	5.2	5.0	3.8	4.0	7.0	0.0	2.2	0.0	7.3	5.23	17.49
8-Sep	2.5	2.4	2.1	6.2	5.1	4.4	4.9	2.6	6.7	6.2	6.5	5.0	2.8	5.9	6.4	6.4	8.9	10.4	2.0	3.9	8.1	6.1	2.4	2.9	5.04	10.41
9-Sep	0.0	0.0	1.5	3.0	2.6	2.1	6.3	2.9	7.7	17.0	19.4	7.6	12.9	0.0	6.6	8.7	5.6	3.1	6.2	4.5	5.4	9.5	1.0	8.3	5.91	19.38
10-Sep	4.3	6.4	4.3	1.2	6.1	2.4	8.9	4.7	16.4	24.0	13.0	11.3	2.5	4.5	5.7	7.7	12.0	9.3	11.8	7.5	34.7	26.5	17.4	11.0	10.57	34.68
11-Sep	1.4	2.1	5.9	6.0	6.5	6.2	4.8	6.2	3.9	5.5	7.3	7.5	5.5	6.5	5.2	8.2	6.3	7.5	9.6	19.3	31.1	32.2	25.5	16.3	9.85	32.21
12-Sep	12.6	9.5	8.5	11.3	14.0	14.8	17.3	30.3	13.0	20.6	13.3	7.6	3.6	8.7	12.7	6.1	0.0	6.6	3.4	3.1	1.8	3.1	3.6	5.1	9.60	30.25
13-Sep	3.4	2.4	4.1	2.4	3.3	3.7	1.6	3.5	10.0	6.2	2.3	1.3	5.8	1.5	5.5	3.9	5.3	5.5	3.0	6.2	5.6	4.6	4.0	3.6	4.10	9.96
14-Sep	4.3	3.1	4.1	2.7	3.7	4.8	5.3	4.3	4.6	5.6	1.4	1.6	5.4	0.0	3.9	5.0	7.1	7.4	4.6	7.9	5.3	3.6	2.4	3.6	4.23	7.87
15-Sep	1.5	3.0	4.2	4.1	2.0	3.1	3.7	5.7	4.3	5.0	4.6	2.0	3.6	3.5	3.4	3.4	4.2	5.2	2.9	0.0	3.9	5.6	0.2	5.2	3.52	5.65
16-Sep	8.3	3.7	2.5	3.0	5.9	3.6	6.0	7.5	3.7	9.0	6.5	5.3	6.3	2.1	2.4	5.1	5.5	5.5	12.6	17.4	17.8	9.6	8.3	6.7	6.84	17.82
17-Sep	3.9	1.8	4.6	5.2	4.6	10.5	5.5	4.4	12.8	11.9	10.6	4.5	4.0	5.7	3.2	5.0	1.7	3.5	3.1	6.9	7.1	7.8	9.3	5.9	5.98	12.84
18-Sep	5.9	5.4	4.4	10.0	8.9	6.6	8.2	23.8	19.8	12.9	4.3	3.2	4.2	5.1	2.9	11.9	6.8	5.0	4.2	9.8	6.2	2.0	8.1	8.4	7.84	23.84
19-Sep	6.3	4.4	5.7	7.3	7.7	7.9	2.7	3.1	6.0	6.8	7.2	11.1	8.9	6.8	6.6	4.4	6.5	8.6	3.8	5.9	5.6	7.6	10.4	7.6	6.62	11.07
20-Sep	0.1	4.7	5.5	4.5	5.3	4.5	4.8	5.2	3.7	5.2	4.6	2.0	0.8	3.9	UO	5.9	0.6	7.2	4.0	5.9	2.4	0.0	7.5	1.5	3.90	7.48
21-Sep	3.6	3.5	4.6	2.6	4.2	3.4	5.6	9.1	14.5	4.3	12.9	13.3	UO	2.3	3.2	3.3	1.7	3.6	8.1	14.1	10.9	4.5	3.8	6.2	6.23	14.54
22-Sep	6.5	4.5	4.3	6.7	6.9	6.8	4.6	8.8	15.3	27.6	11.3	19.0	12.4	6.1	4.4	6.4	11.8	13.4	5.7	11.7	3.3	6.4	7.3	10.5	9.24	27.64
23-Sep	1.0	7.1	8.2	6.9	7.0	7.1	5.6	6.9	8.1	12.8	10.6	12.7	8.9	6.8	6.8	11.5	8.0	3.5	38.5	8.9	8.3	12.7	9.5	9.1	9.44	38.52
24-Sep	8.5	8.1	5.6	5.1	7.7	8.8	12.0	17.9	12.9	8.8	13.5	9.9	10.6	10.2	8.7	1.0	7.9	12.4	16.2	13.1	22.1	15.9	14.4	13.1	11.03	22.14
25-Sep	8.1	9.0	9.1	9.4	7.9	12.2	10.4	5.4	1.1	1.1	1.2	6.5	0.0	5.3	0.0	1.7	2.0	4.1	2.7	2.6	5.2	6.8	0.0	2.4	4.76	12.19
26-Sep	4.9	3.7	1.8	2.0	0.0	3.2	4.5	5.0	6.9	6.9	3.8	2.3	0.0	0.1	3.6	4.5	1.6	3.0	4.5	4.7	5.4	7.4	4.7	8.2	3.87	8.17
27-Sep	6.1	10.7	8.1	4.4	4.6	1.3	10.4	21.5	4.3	4.0	2.1	2.8	3.9	6.9	4.6	5.0	4.9	2.7	1.8	6.4	4.6	3.3	1.9	6.0	5.52	21.51
28-Sep	4.1	3.0	4.0	4.6	4.1	6.3	6.4	12.2	13.2	17.5	3.5	4.4	4.6	UO	12.8	9.6	7.7	3.7	3.6	9.8	5.1	6.7	7.2	3.9	6.87	17.48
29-Sep	7.5	4.6	3.5	2.6	4.9	8.5	3.6	6.1	10.0	3.9	5.2	6.0	2.8	5.1	6.4	4.8	6.6	8.7	7.7	14.0	5.5	8.0	14.3	15.4	6.90	15.40
30-Sep	9.9	8.5	6.9	3.4	13.7	17.0	19.4	45.7	30.6	18.3	9.5	7.6	5.2	6.4	0.0	6.9	9.9	12.6	0.0	36.9	16.8	18.3	16.8	11.2	13.83	45.72

4.96	5.16	4.85	4.77	5.41	6.07	6.90	9.84	9.26	10.21	7.42	6.87	5.30	4.92	4.94	5.80	5.92	6.65	7.21	9.04	8.52	8.24	6.90	6.79	Diurnal Average	
12.57	25.03	12.00	11.26	13.96	17.05	19.41	45.72	30.63	27.64	19.38	19.03	12.94	10.17	12.81	11.87	12.10	15.72	38.52	36.94	34.68	32.21	25.45	16.29	Diurnal Maximum	

UO - Unstable Operation
 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: September 7, 2015

Parameter: NO/NO₂/NO_x

Instrument: Teco 42i

Serial Number: CM13040041

Previous Calibration Date: August 20, 2015

Calibration: Routine

Calibration Equipment: Sabio 2010 SN 08600312

Barometric Pressure: 26.73" Hg

Calibration Method: Standard Gas Dilution/GPT

Cylinder ID: FF14354

Temperature: 21.1° C

Cylinder Concentration: 12.6 ppm NO

In Service: January 14, 2015

Technician: L. Burns

Instrument Settings	NO bkg ppb	NO _x bkg ppb	Pre-reactor bkg ppb	NO Coefficient	NO _x Coefficient	NO ₂ Coefficient	Monitoring Range
Previous	4.7	4.8	NA	0.772	1.001	0.997	300 ppb
Current	4.6	4.7	NA	0.778	1.004	0.997	300 ppb

NO	Final Zero: -0.2 ppb	Final Span: 147.5 ppb	As Found Correction Factor: 1.022
NO ₂	Final Zero: -0.8 ppb	Final Span: -0.2 ppb	As Found Correction Factor: 0.000
NO _x	Final Zero: -0.2 ppb	Final Span: 147.1 ppb	As Found Correction Factor: 1.019

Results of Linear Regression			Slope	Intercept	R ²
NO	R _c vs C _c	Previous	150.424200	17.306610	0.999997
		Current	149.946200	39.193260	0.999973
	C _i vs C _c	Current	1.000000	0.000002	0.999973
NO ₂	R _c vs C _c	Previous	151.222000	-67.909000	0.999997
		Current	150.525100	129.170600	0.999653
	C _i vs C _c	Current	1.000000	0.000017	0.999653
NO _x	R _c vs C _c	Previous	150.758400	3.005959	0.999997
		Current	151.112900	44.788520	0.999976
	C _i vs C _c	Current	1.000000	0.000000	0.999975

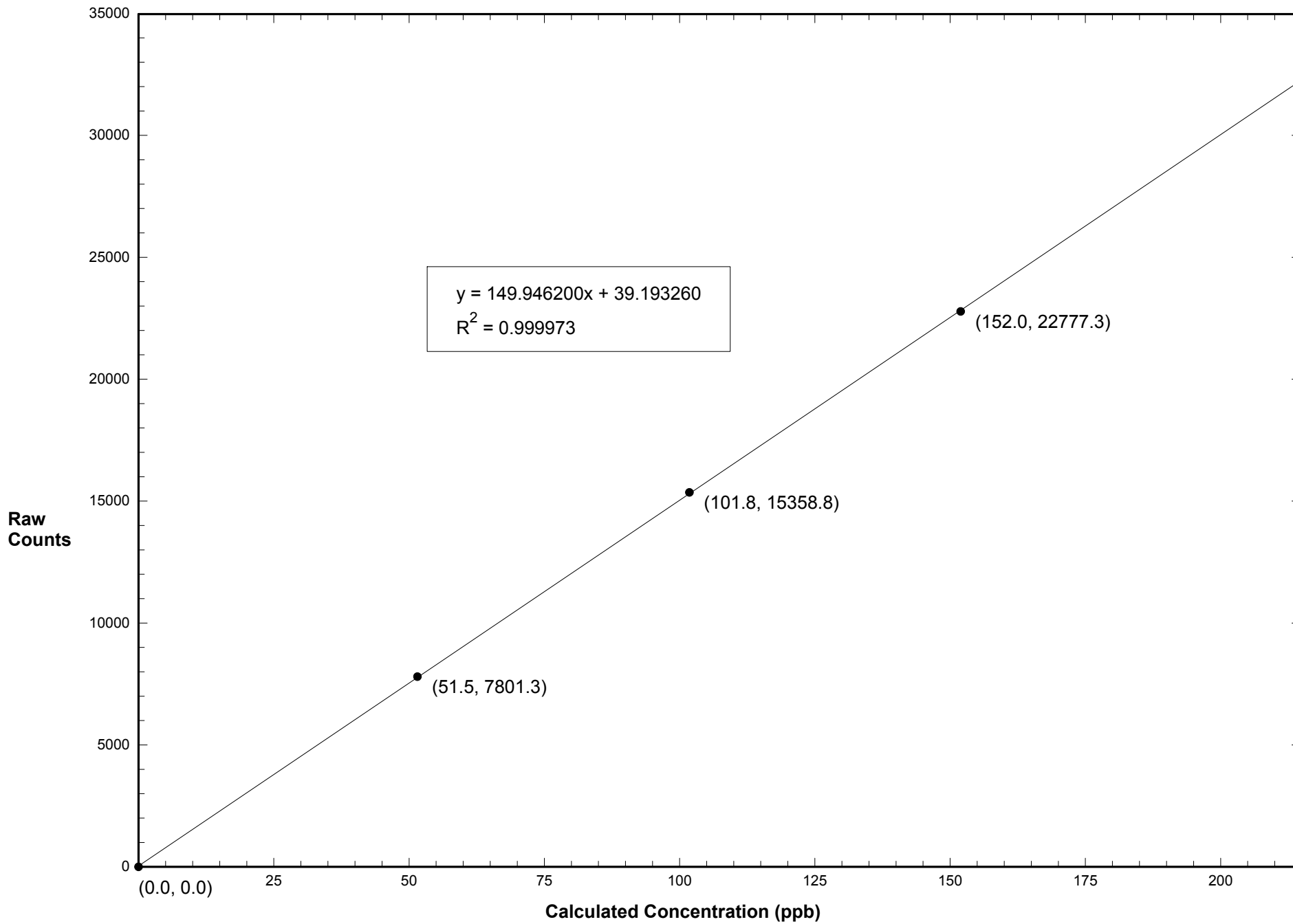
Comments:

Calibration Data Summary (Page 2)

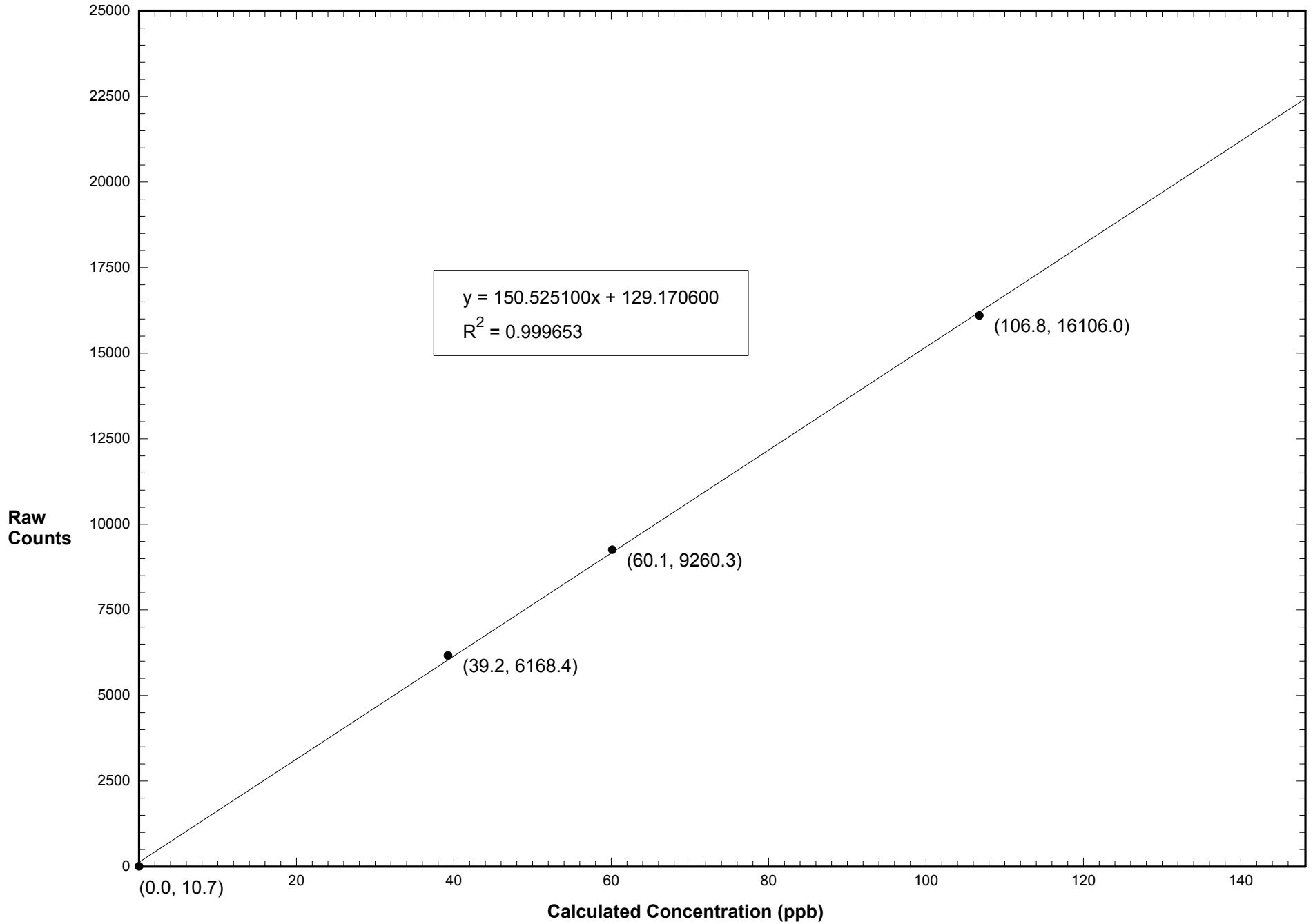
September 7, 2015 - Station 906

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		
0.07533	6.171	152.0	22777.3	151.6	1.002		
0.05009	6.149	101.8	15358.8	102.2	0.997		
0.02519	6.132	51.5	7801.3	51.8	0.996		
0.00000	6.000	0.0	0.0	-0.3			
NO Calibration					Average Correction Factor:	0.998	
0.07533	6.171	152.0	22960.7	151.6	1.002		
0.05009	6.149	101.8	15487.9	102.2	0.996		
0.02519	6.132	51.5	7856.2	51.7	0.997		
0.00000	6.000	0.0	11.2	-0.2			
NO _x Calibration					Average Correction Factor:	0.998	
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
154.6	7216.5	47.9	106.8	16106.0	106.1	1.006	0.994
154.6	14209.5	94.5	60.1	9260.3	60.7	0.991	1.009
154.6	17340.5	115.4	39.2	6168.4	40.1	0.978	1.022
			0.0	10.7	-0.8		
					Average Correction Factor:	0.992	
NO ₂ Gas Phase Titration					Average Converter Efficiency: 1.008		
Parameter	Correction Factor (Previous)	Correction Factor: (Current)	Percent Change of Correction Factor				
NO	1.001	1.002	0.1				
NO ₂	0.997	1.006	0.9				
NO _x	1.001	1.002	0.1				

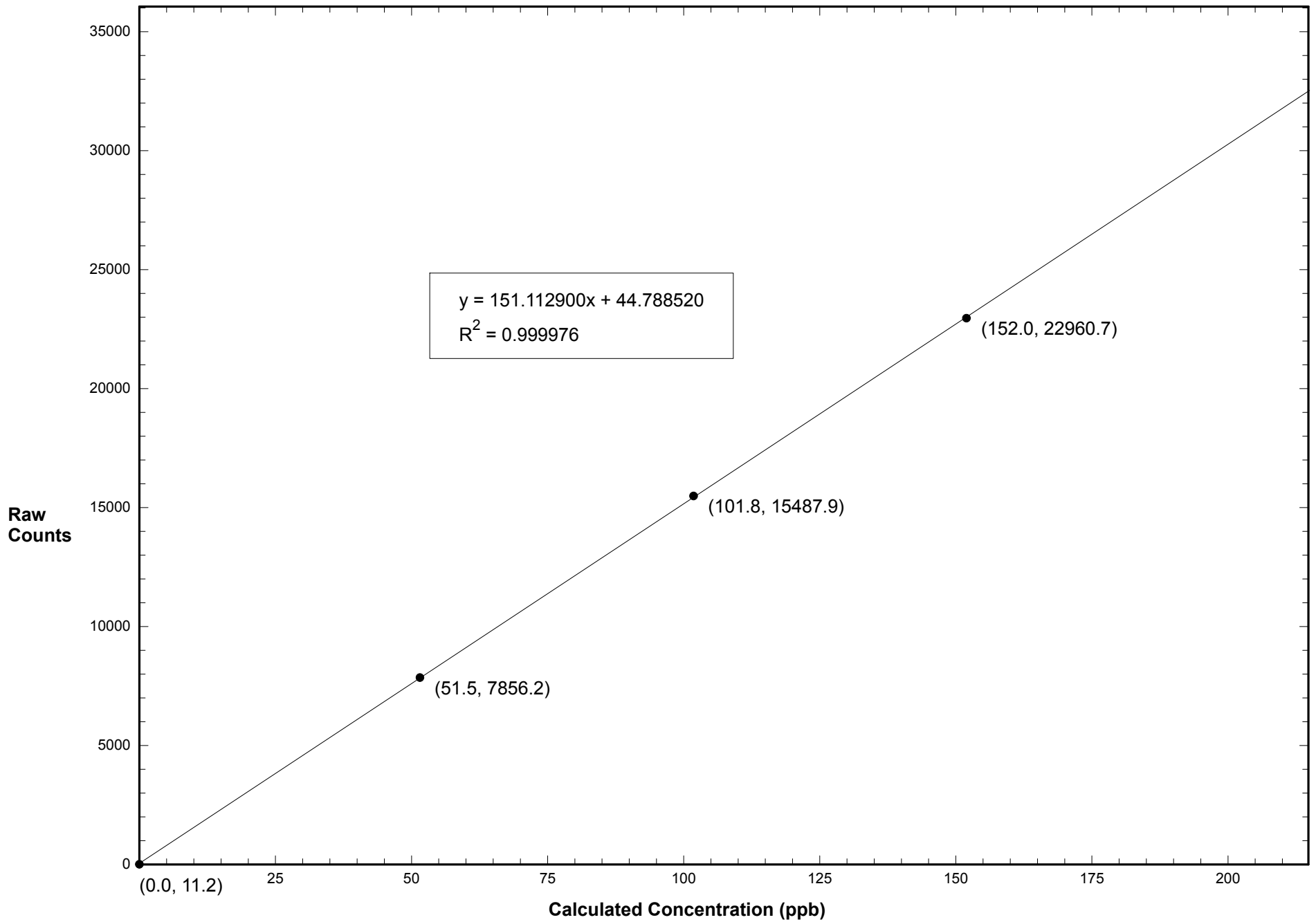
Station 906 NO September 7, 2015: Linear Regression



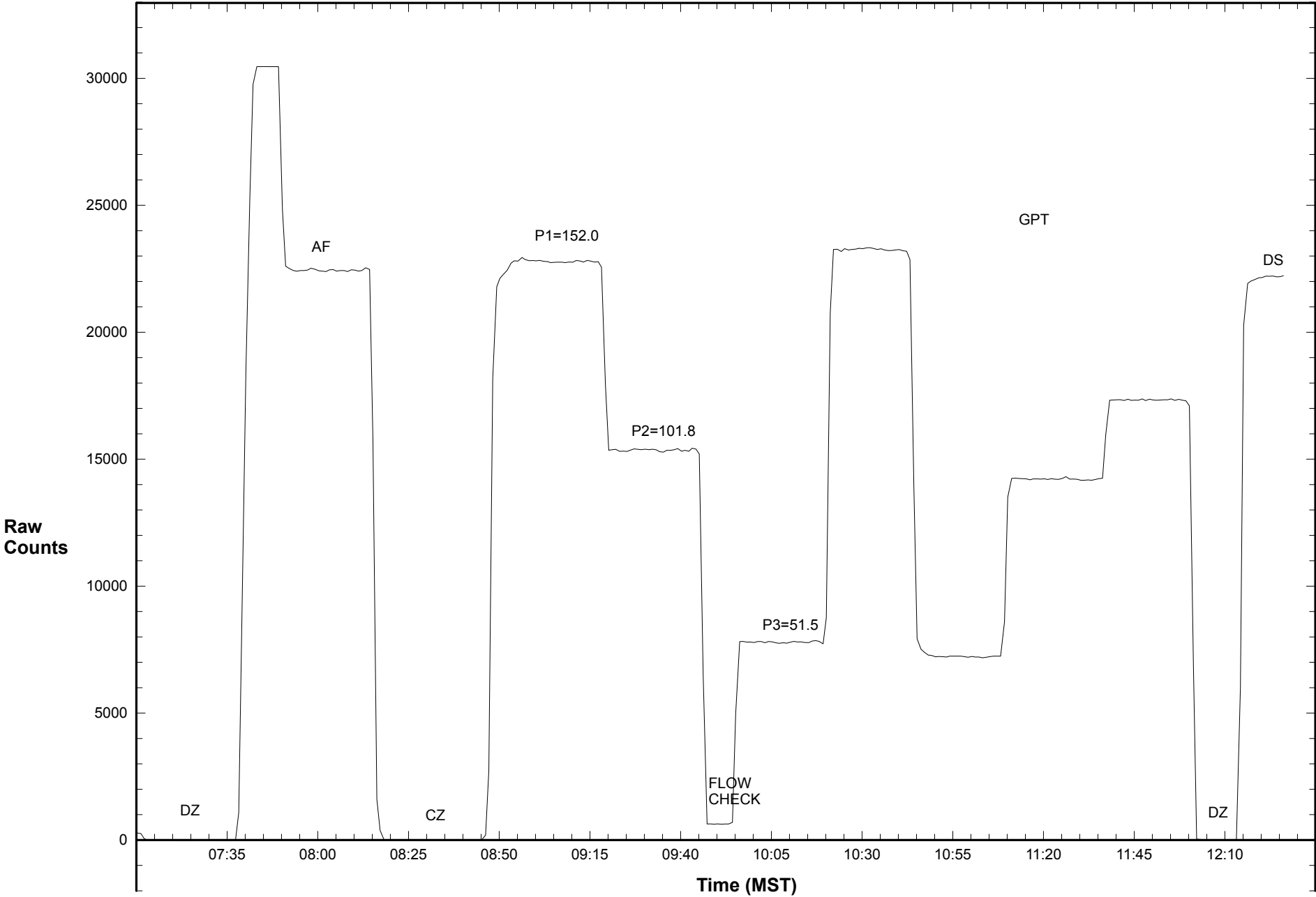
Station 906 NO2 September 7, 2015: Linear Regression



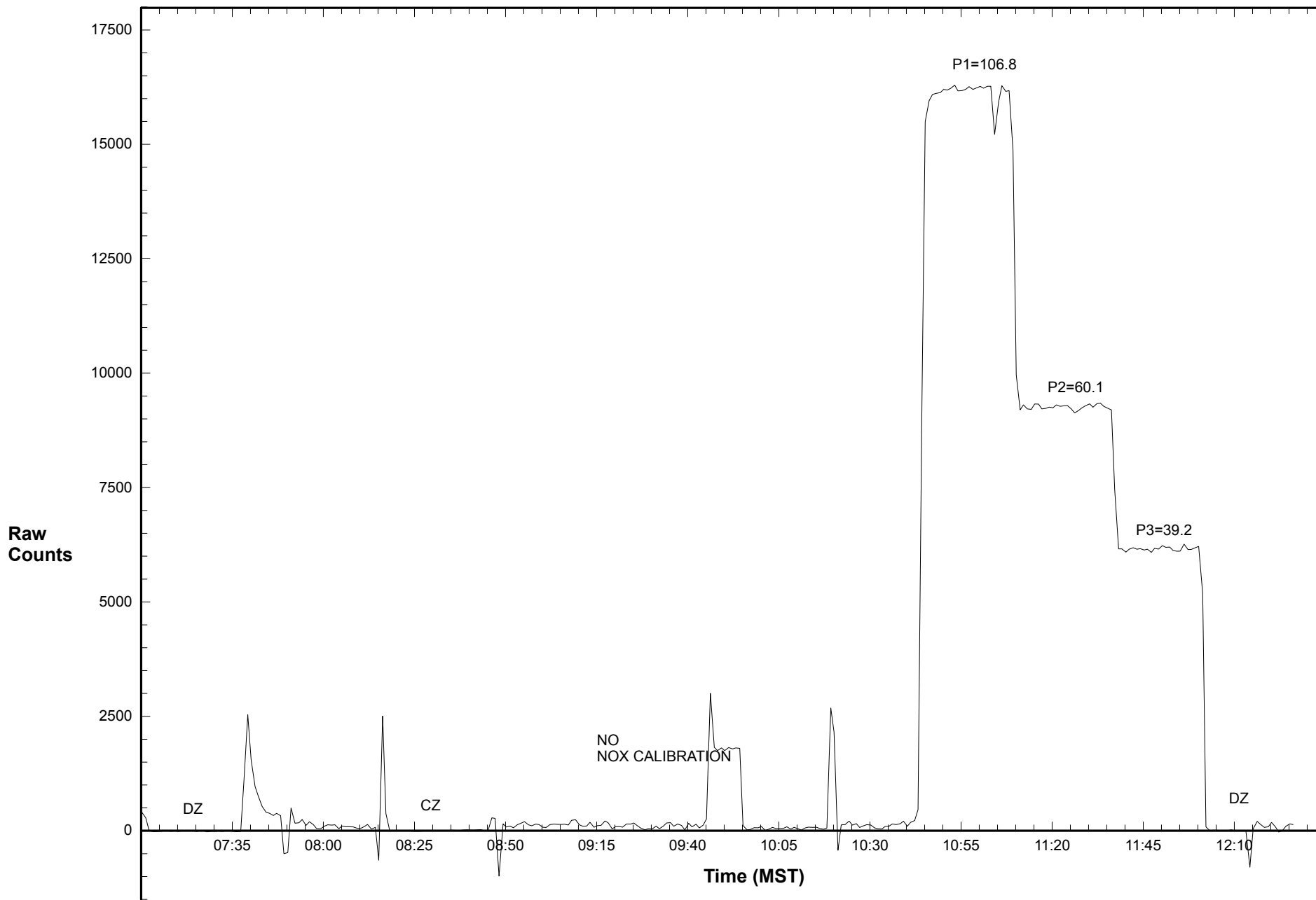
Station 906 NOX September 7, 2015: Linear Regression



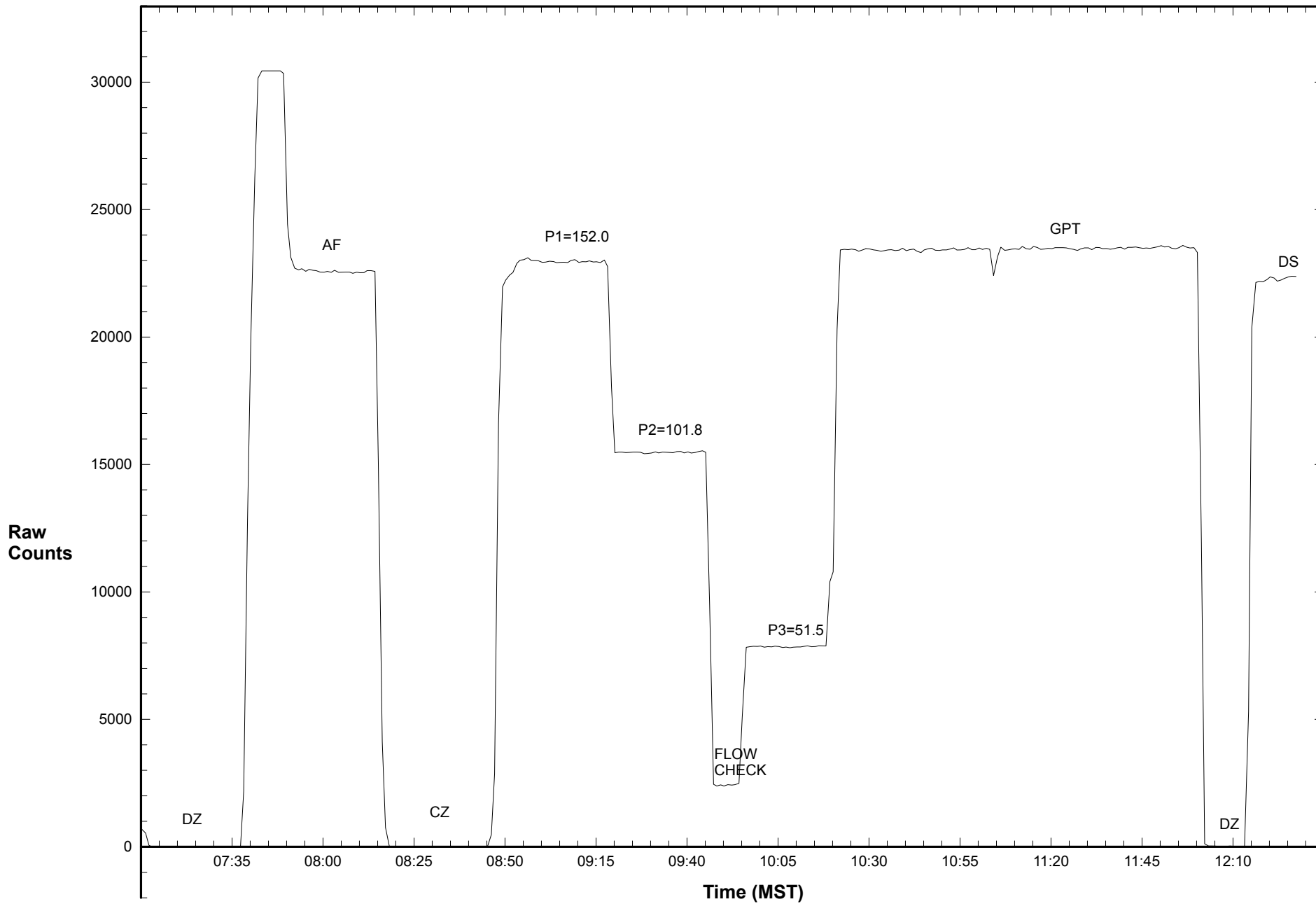
Station 906 NO September 7, 2015: Calibration Graph



Station 906 NO2 September 7, 2015: Calibration Graph



Station 906 NOX September 7, 2015: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: September 7, 2015

Parameter: O₃

Instrument: Teco 49i

Serial Number: 1150790050

Previous Calibration Date: August 20, 2015

Calibration: Routine

Calibration Equipment: TECO 175-51760-291

Barometric Pressure: 26.73" Hg

Calibration Method: Certified Ozone Generator

Temperature: 21.1° C

Technician: L. Burns

Instrument Settings	Background	Coefficient	Monitoring Range
Previous	0.1	0.995	500 ppb
Current	-1.4	1.085	500 ppb

Final Zero: 0.9 ppb

Final Span: 475.2 ppb

As Found Correction Factor: 1.097

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	402.0	24159.1	402.8	0.998
3.000	203.0	12054.9	201.3	1.009
3.000	104.0	6232.9	104.4	0.997
3.000	0.0	-1.1	0.6	

Results of Linear Regression

R _c vs C _c	Slope	Intercept	R ²
Previous	60.042020	15.967950	0.999997
Current	60.071430	-36.210960	0.999954
C _i vs C _c			
Current	1.000000	0.000063	0.999954

Average Correction Factor: 1.001

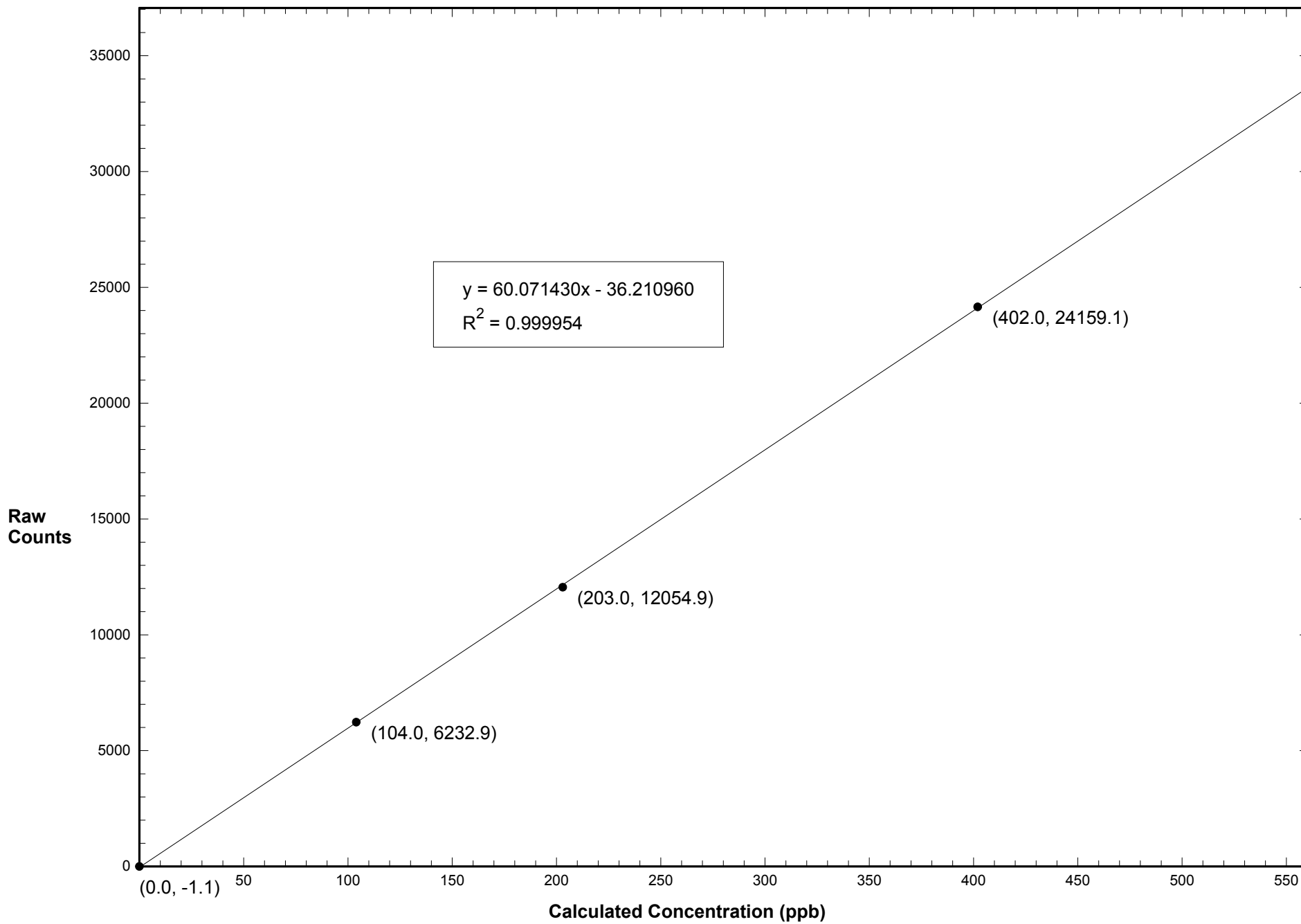
Previous Correction Factor: 1.001

Current Correction Factor: 0.998

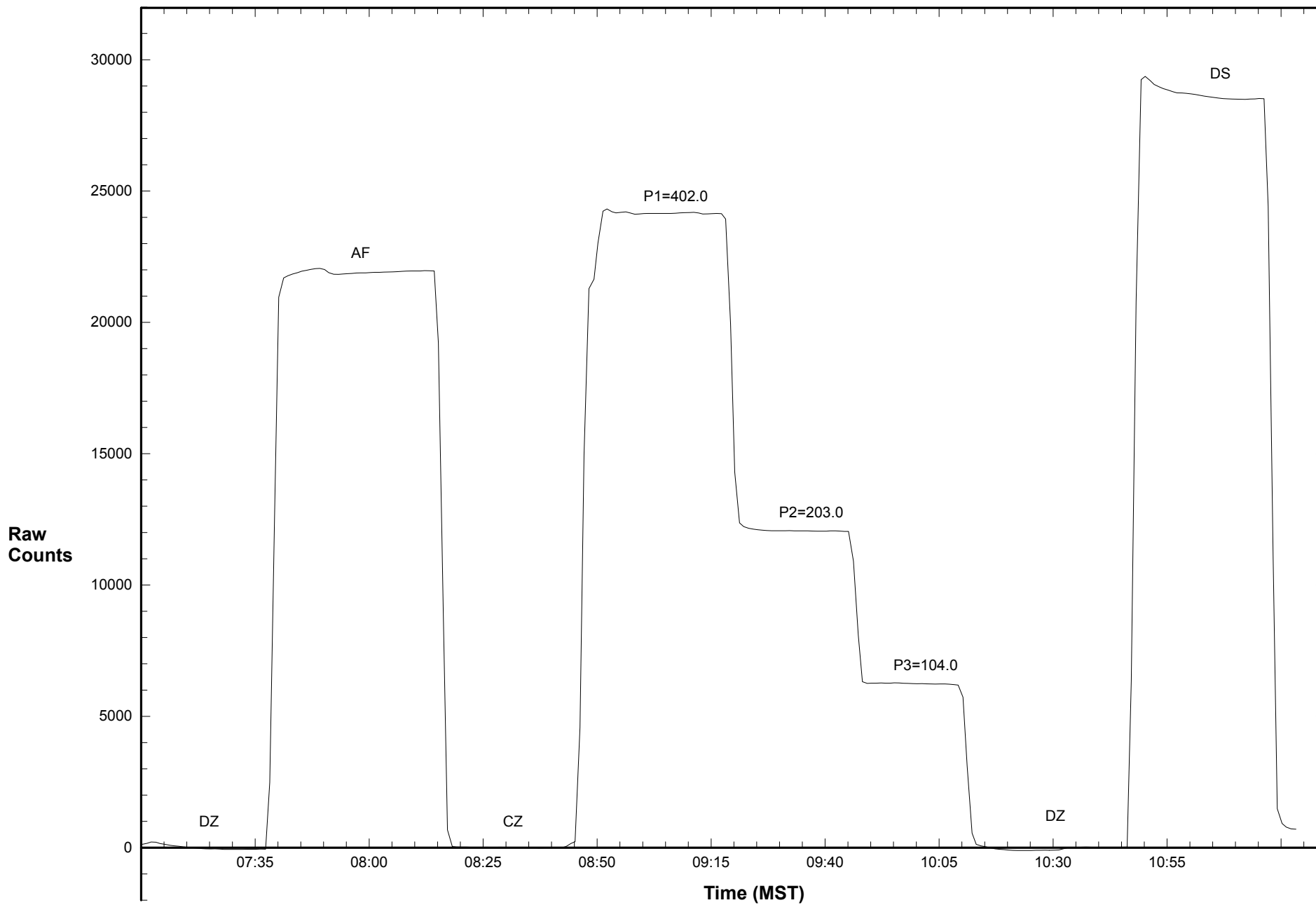
Percent Change of Correction Factor: -0.3

Comments:

Station 906 O3 September 7, 2015: Linear Regression



Station 906 O3 September 7, 2015: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: September 7, 2015

Parameter: SO₂

Instrument: TECO 43i

Serial Number: CM12499009

Previous Calibration Date: August 20, 2015

Calibration: Routine

Calibration Equipment: Sabio 2010 SN 08600312

Barometric Pressure: 26.73" Hg

Calibration Method: Standard Gas Dilution

Cylinder ID: FF14354

Temperature: 21.1° C

Cylinder Concentration: 6.34 ppm SO₂

In Service: January 14, 2015

Technician: L. Burns

Instrument Settings	SO ₂ bkg ppb	SO ₂ Coefficient	Monitoring Range
Previous	26.3	0.968	200 ppb
Current	26.8	0.994	200 ppb

Final Zero: 0.1 ppm

Final Span: 65.4 ppm

As Found Correction Factor: 1.044

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
0.0753	6.171	76.5	23213.5	76.7	0.996
0.0501	6.149	51.2	15400.8	50.9	1.006
0.0252	6.132	25.9	7746.2	25.7	1.010
0.0000	6.000	0.0	52.5	0.3	

Results of Linear Regression

R _c vs C _c	Slope	Intercept	R ²
Previous	299.272800	43.570220	0.999976
Current	302.874800	-29.122180	0.999907
C _i vs C _c			
Current	1.000000	-0.000012	0.999907

Average Correction Factor: 1.004

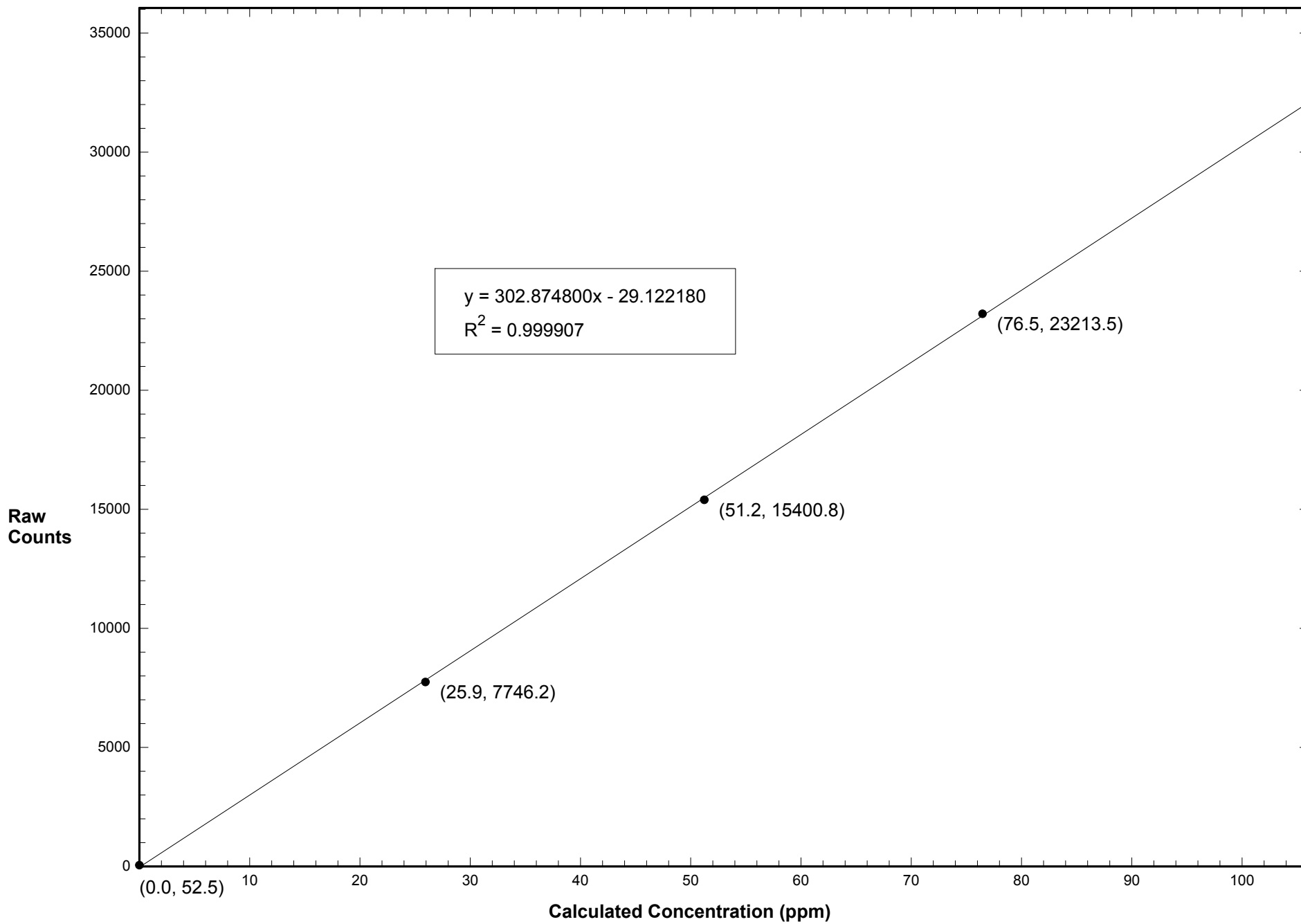
Previous Correction Factor: 1.002

Current Correction Factor: 0.996

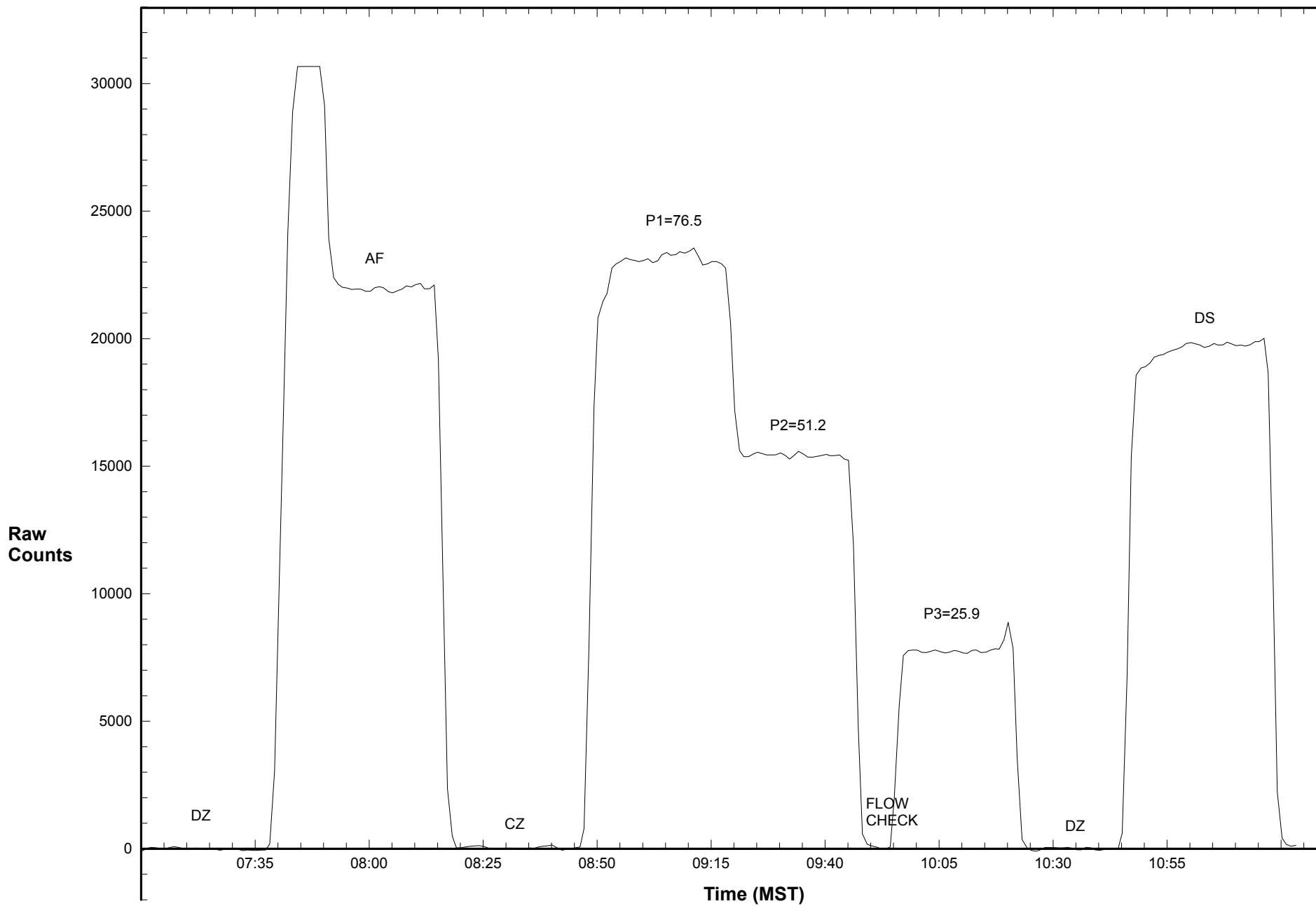
Percent Change of Correction Factor: -0.6

Comments:

Station 906 SO2 September 7, 2015: Linear Regression



Station 906 SO2 September 7, 2015: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: September 7, 2015

Parameter: TRS

Instrument: Teco 43C

Serial Number: 43CTL 60324 - 326

Previous Calibration Date: August 20, 2015

Calibration: Routine

Calibration Equipment: Sabio 2010 SN 08600312

Barometric Pressure: 26.73" Hg

Calibration Method: Standard Gas Dilution

Permeation Device ID: SV14360, 4.89 ppm H₂S

Temperature: 21.1° C

Permeation Rate: 0 ng/min

In Service: February 5, 2013

Technician: L. Burns

Instrument Settings	H ₂ S bkg ppb	H ₂ S Coefficient	Monitoring Range
Previous	2.01	0.816	100 ppb
Current	1.77	0.768	100 ppb

Final Zero: 0.0 ppb

Final Span: 65.1 ppb

As Found Correction Factor: 0.954

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
0.091	71.4	21452.9	71.6	0.998
0.061	48.4	14417.8	48.2	1.004
0.031	24.4	7250.9	24.3	1.004
0.000	0.0	-4.7	0.1	

Results of Linear Regression

R _c vs C _c	Slope	Intercept	R ²
Previous	305.275100	-88.960990	0.999988
Current	300.182400	-44.507940	0.999965
C _i vs C _c			
Current	1.000000	-0.000002	0.999966

Average Correction Factor: 1.002

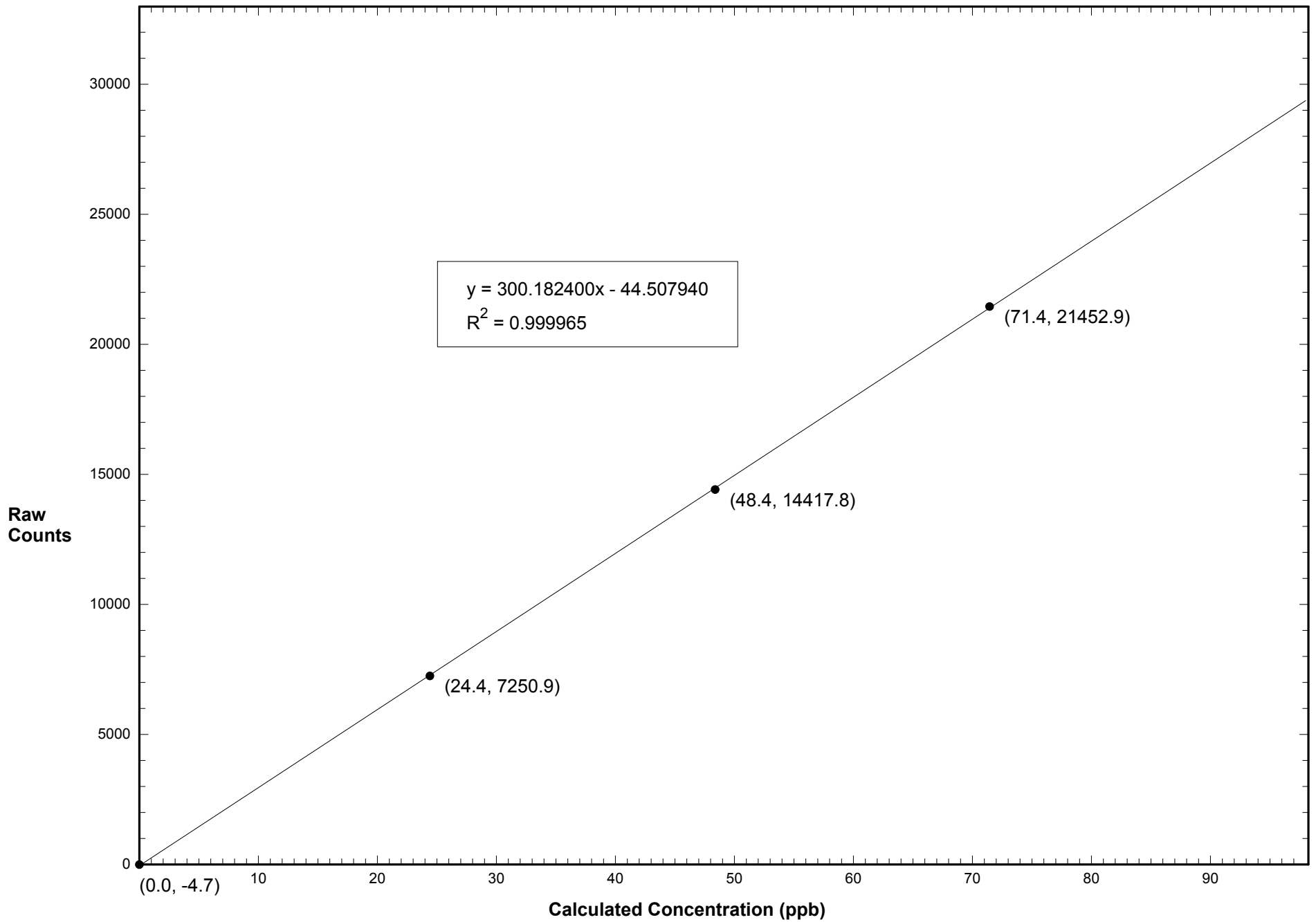
Previous Correction Factor: 1.000

Current Correction Factor: 0.998

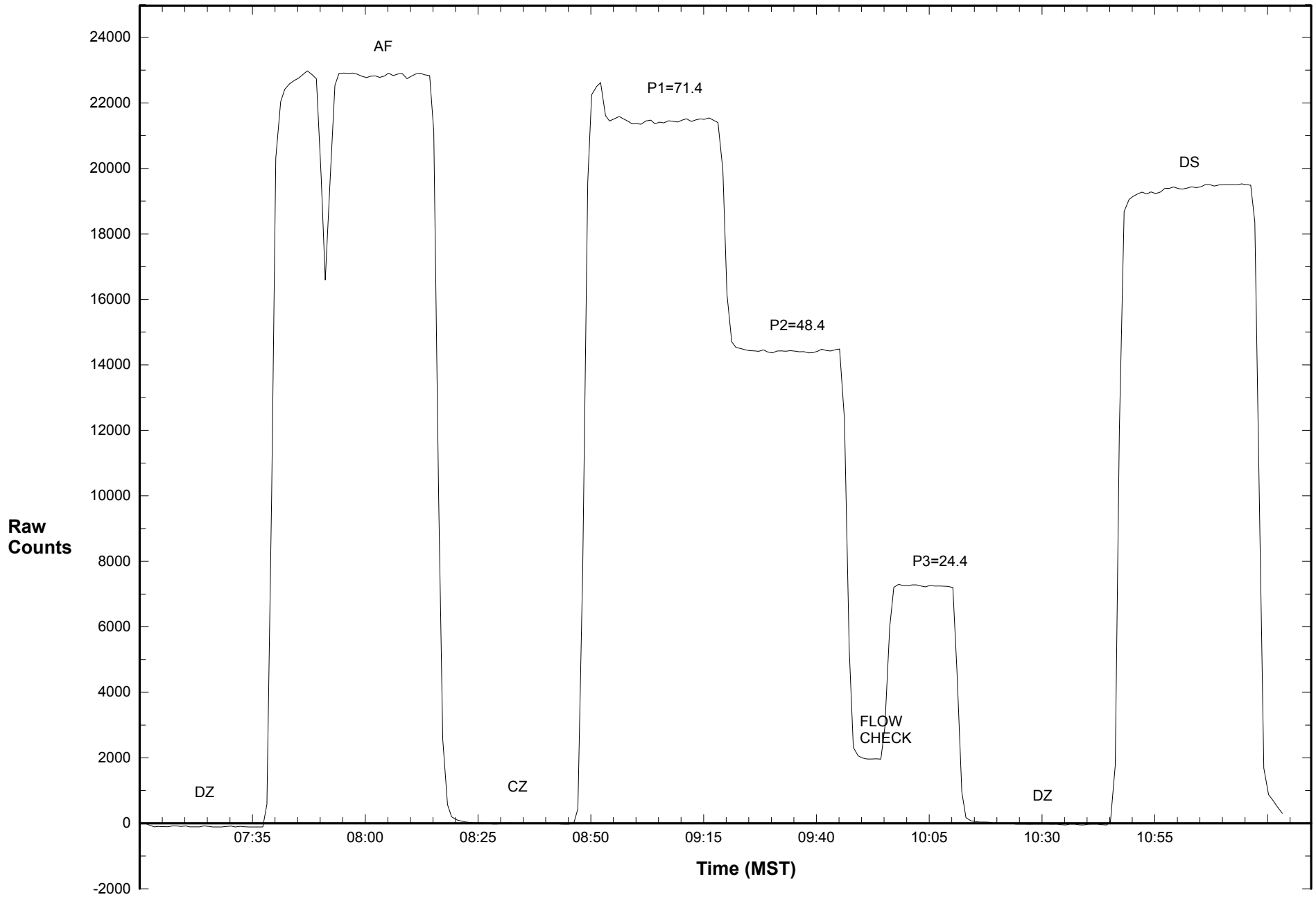
Percent Change of Correction Factor: -0.2

Comments:

Station 906 TRS September 7, 2015: Linear Regression



Station 906 TRS September 7, 2015: Calibration Graph



WEST CENTRAL AIRSHED SOCIETY

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

**AMS 906
HINTON
SEPTEMBER 2015**

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
September 2015

Maximum Value: 28.08 C on Sep 11 16:00		Maximum Daily Average: 17.11 C on Sep 11		Hours in Service: 720																																													
Minimum Value: -1.9 C on Sep 22 07:00		Minimum Daily Average: 4.18 C on Sep 21		Hours of Data: 720																																													
Maximum Diurnal Average: 14.48 C at hour 15		Minimum Diurnal Average: 3.79 C at hour 7		Hours of Missing Data: 0																																													
Monthly Average: 8.474 C		Percentiles: P ₁ = -0.9 P ₁₀ = 2.2 Q ₁ = 4.1 Median = 7.8 Q ₃ = 12.0 P ₉₀ = 15.7 P ₉₉ = 24.0		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-Sep	8.2	7.1	6.6	6.4	6.5	5.7	5.7	7.2	8.7	11.2	12.7	14.0	14.6	15.2	16.7	15.9	15.1	14.3	13.0	11.7	10.3	9.5	8.5	8.3	10.54	16.69																							
2-Sep	7.8	7.2	5.9	4.7	3.5	2.9	2.9	3.6	4.6	6.3	8.8	10.0	12.8	14.2	13.8	13.3	11.2	9.0	8.4	7.6	5.9	4.2	4.0	2.8	7.31	14.21																							
3-Sep	2.0	0.9	0.3	-0.2	0.1	0.3	0.6	1.6	2.2	3.5	6.2	7.2	8.3	8.9	9.2	9.3	8.3	7.7	6.7	6.2	5.7	4.5	3.9	3.6	4.46	9.33																							
4-Sep	3.3	3.2	3.1	2.9	2.9	3.1	3.1	3.3	3.6	4.0	4.9	5.9	7.1	8.0	8.4	9.6	9.0	8.7	8.2	7.2	6.2	5.0	3.4	2.0	5.25	9.65																							
5-Sep	2.1	1.1	0.5	0.3	0.3	0.3	0.3	0.8	1.7	2.3	3.0	4.5	6.9	9.6	10.6	10.9	10.7	10.8	10.1	9.5	8.9	8.5	7.4	6.5	5.31	10.88																							
6-Sep	5.4	4.0	3.3	2.7	2.2	2.1	2.4	3.1	4.1	6.4	9.2	11.1	13.5	14.9	15.1	14.4	13.8	12.9	10.4	9.0	7.9	7.4	7.2	7.1	7.90	15.13																							
7-Sep	6.4	5.8	4.9	4.3	3.3	2.9	3.4	4.4	5.2	6.7	9.8	11.2	12.8	14.9	15.6	15.4	15.3	10.8	10.6	9.2	7.8	7.1	6.7	6.3	8.36	15.63																							
8-Sep	5.5	4.8	4.6	4.5	4.7	5.0	5.2	5.6	6.1	7.0	9.0	11.3	13.1	13.5	14.8	14.9	12.8	11.5	8.7	8.0	6.8	5.6	5.0	4.9	8.04	14.92																							
9-Sep	4.5	4.0	4.0	3.3	3.3	3.7	3.8	4.5	5.5	6.8	8.6	10.0	12.3	13.3	12.7	12.7	11.8	12.1	11.7	11.1	10.3	9.6	9.1	8.9	8.23	13.30																							
10-Sep	8.6	8.4	8.3	8.4	7.7	7.1	7.0	6.7	7.9	12.4	16.8	19.7	20.4	21.2	21.7	22.0	21.7	21.5	19.6	17.2	14.5	12.1	10.6	9.5	13.79	21.98																							
11-Sep	9.2	9.0	10.2	9.6	9.2	9.9	8.6	9.6	13.9	16.8	19.9	22.5	24.9	27.2	28.0	28.1	28.1	27.5	24.7	21.0	16.9	13.8	11.8	10.2	17.11	28.08																							
12-Sep	8.9	8.9	9.3	8.3	8.1	8.3	8.2	10.3	15.2	19.0	22.6	25.1	26.7	25.1	20.3	14.3	11.9	10.9	10.2	10.1	9.9	9.9	9.7	9.5	13.36	26.67																							
13-Sep	9.1	9.1	8.8	8.0	8.2	8.0	8.0	7.8	8.6	9.8	11.9	10.5	7.9	8.3	8.3	10.9	10.1	7.9	6.5	5.5	5.4	5.2	5.2	5.0	8.08	11.91																							
14-Sep	4.9	4.5	4.1	4.0	3.9	3.9	4.0	4.1	4.3	5.0	6.0	7.1	7.5	8.7	9.6	9.2	9.5	8.7	6.7	5.8	5.5	5.5	5.2	4.9	5.94	9.57																							
15-Sep	4.7	4.4	4.4	4.3	4.0	3.3	3.2	3.2	3.2	3.8	4.3	4.5	5.5	7.1	7.7	8.8	8.2	7.0	6.2	5.0	3.8	3.6	3.7	3.5	4.89	8.83																							
16-Sep	3.5	3.2	3.1	3.0	2.7	2.5	1.8	2.6	4.3	5.3	7.1	9.1	10.6	11.2	12.7	13.0	13.5	11.7	9.6	6.6	4.6	2.7	1.8	0.8	6.12	13.46																							
17-Sep	0.4	0.3	0.3	0.3	0.8	1.1	0.9	1.5	3.0	6.7	12.0	13.3	13.7	13.6	14.0	14.2	13.9	13.3	12.7	10.8	9.5	7.5	4.9	4.2	7.20	14.16																							
18-Sep	4.0	3.1	2.1	1.5	1.3	0.6	0.2	1.0	3.5	6.7	12.2	13.6	14.0	14.3	14.7	14.7	14.4	14.3	13.7	13.4	13.1	13.5	13.5	13.8	9.04	14.74																							
19-Sep	14.1	14.1	13.7	13.4	13.8	14.0	13.6	12.8	13.8	15.6	18.0	18.5	19.4	19.6	19.0	18.7	18.3	17.4	15.8	14.7	13.7	13.0	12.9	12.3	15.43	19.64																							
20-Sep	12.2	12.0	11.6	11.0	10.2	9.2	8.3	8.2	7.3	7.1	7.7	8.0	7.8	7.8	7.6	6.7	4.9	4.5	3.9	4.0	3.8	2.8	2.6	1.9	7.12	12.21																							
21-Sep	0.8	0.9	1.2	0.6	0.2	0.2	-0.1	0.4	1.7	3.4	5.3	8.2	8.9	10.4	10.5	10.9	11.6	10.3	7.9	5.2	2.5	0.6	-0.4	-0.8	4.18	11.58																							
22-Sep	-1.0	-1.1	-0.9	-1.0	-1.3	-1.3	-1.9	-1.9	-0.7	1.1	5.6	8.8	12.1	14.4	14.8	13.8	13.8	12.5	11.6	9.2	7.9	7.2	6.4	6.1	5.60	14.84																							
23-Sep	5.1	3.6	2.9	3.1	2.6	2.7	2.3	2.0	3.5	5.7	8.0	10.4	12.9	15.6	18.2	19.0	18.3	16.0	13.5	14.0	12.7	8.4	5.3	3.9	8.74	18.95																							
24-Sep	3.2	2.5	1.7	1.2	0.5	0.3	-0.1	0.1	2.2	5.5	9.7	13.6	17.1	19.0	19.2	17.7	17.4	16.3	15.3	11.4	9.4	7.6	6.0	5.1	8.41	19.20																							
25-Sep	4.3	3.8	3.5	3.6	4.1	4.8	5.6	5.7	4.6	4.9	5.4	6.3	7.0	7.8	7.8	8.4	8.2	7.7	7.1	6.6	5.7	5.1	4.0	3.0	5.62	8.42																							
26-Sep	2.8	2.8	2.9	2.3	1.6	1.5	1.6	2.0	3.2	5.4	8.0	9.5	11.1	12.5	13.2	13.0	11.9	10.4	8.4	7.0	6.3	6.3	6.4	8.1	6.59	13.25																							
27-Sep	8.1	8.2	7.4	6.5	5.9	4.7	4.0	5.8	8.0	8.7	9.5	9.9	10.4	10.5	10.3	9.5	7.2	5.7	5.0	4.5	4.4	4.1	3.8	3.7	6.91	10.46																							
28-Sep	3.7	3.7	3.5	3.5	3.6	3.3	2.1	1.6	5.9	10.4	13.1	14.9	16.3	17.0	17.2	17.4	17.2	16.3	14.7	12.9	10.7	8.6	7.1	9.0	9.73	17.35																							
29-Sep	5.8	7.8	10.0	9.4	8.9	7.2	6.0	5.7	7.5	12.9	15.5	17.2	18.6	19.7	20.3	19.9	19.2	18.0	16.5	14.8	14.2	12.0	8.7	7.1	12.62	20.27																							
30-Sep	5.9	5.0	4.2	3.8	3.3	3.1	2.9	3.5	9.4	14.6	17.6	20.1	21.5	22.6	22.3	21.9	21.5	21.3	18.8	14.2	11.6	10.2	8.9	8.3	12.35	22.59																							
																								5.45	5.07	4.84	4.45	4.21	4.01	3.79	4.23	5.73	7.83	10.27	11.86	13.20	14.20	14.48	14.28	13.63	12.56	11.21	9.78	8.52	7.37	6.44	5.98	Diurnal Average	
																								14.11	14.07	13.69	13.38	13.78	13.97	13.55	12.84	15.16	19.03	22.63	25.10	26.67	27.18	27.98	28.08	28.06	27.46	24.73	20.98	16.89	13.82	13.55	13.77	Diurnal Maximum	



WCAS - Hinton
Summary of Hourly Averages

Wind Speed (WS) - kph
September 2015

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	2.8	0.7	1.3	1.3	5.4	1.8	3.6	4.9	5.2	3.5	2.9	6.4	10.7	6.8	4.6	3.6	3.8	4.6	1.0	0.8	0.7	0.2	0.2	1.0	2.68	10.70
Dir	S	SW	SSE	SW	SSW	WSW	SW	SW	SSW	S	SE	SW	SW	SW	W	W	WSW	SW	S	ENE	SE	SW	WNW	ENE	SW	SW
2 Spd	0.7	0.6	0.8	0.7	0.2	0.4	0.5	1.2	1.1	1.1	1.5	1.5	0.4	2.2	2.8	2.0	4.5	0.5	1.4	0.5	1.0	1.0	0.2	0.1	0.12	4.55
Dir	NW	WNW	W	WSW	NNW	NW	NE	ENE	SE	SSW	SW	E	NE	SE	WSW	WNW	E	NE	N	SW	E	NNE	SE	W	E	E
3 Spd	0.4	0.4	0.8	0.7	0.4	0.3	1.0	0.8	0.6	0.1	0.6	2.1	1.8	0.4	2.7	2.1	3.4	2.7	2.1	1.8	2.7	0.3	1.0	2.1	0.54	3.44
Dir	NE	ENE	ENE	WSW	W	NE	SE	NNW	NNW	ESE	SW	SSW	SE	ENE	NNE	NE	NE	NE	NNE	NE	E	NNE	WSW	WSW	NE	NE
4 Spd	3.1	2.7	3.2	3.1	1.8	0.9	3.1	1.6	0.5	0.3	0.7	0.9	0.9	2.9	3.4	2.5	3.3	2.4	3.6	2.5	1.6	2.4	1.0	1.7	0.52	3.59
Dir	SW	SW	SW	SW	SW	WSW	SSW	SW	WNW	N	NE	NNW	SSE	SE	E	ENE	NE	ENE	ENE	NE	ENE	ENE	ESE	ENE	ESE	ENE
5 Spd	1.5	1.3	2.5	0.3	0.6	1.2	1.7	1.7	1.2	1.7	2.0	2.1	4.8	4.8	3.8	2.1	2.2	3.0	1.8	3.9	3.4	3.2	1.2	0.9	1.98	4.81
Dir	ENE	ESE	SE	ENE	N	N	ENE	NE	NE	NE	ENE	NE	ENE	NE	NE	NNE	NNE	ENE	ENE	ENE	ENE	ENE	NE	SSE	ENE	ENE
6 Spd	2.2	0.8	0.5	0.2	0.2	0.2	0.3	0.2	0.5	0.7	1.3	1.5	1.1	2.1	3.1	2.2	3.2	3.4	3.2	1.2	0.5	1.3	0.1	1.6	0.19	3.35
Dir	E	ENE	ENE	ENE	ENE	NW	N	WNW	WNW	W	WNW	SW	W	WNW	N	N	ENE	ENE	SW	SW	SSE	SW	WSW	SSW	NNW	ENE
7 Spd	1.4	1.8	1.4	1.1	0.4	0.3	0.3	0.5	1.4	1.7	1.8	2.7	3.1	2.8	4.6	1.5	2.6	1.9	3.7	0.9	0.7	0.2	0.4	0.1	0.88	4.59
Dir	SW	SW	WSW	WSW	W	WNW	W	WNW	WSW	WNW	W	WSW	WSW	W	SW	WNW	N	SE	SSE	SE	SSE	E	NE	NNW	WSW	SW
8 Spd	0.3	0.4	0.6	0.2	0.6	0.7	0.8	0.6	1.8	1.1	2.0	2.6	2.8	3.1	0.5	2.1	4.1	1.9	4.9	0.2	0.5	0.1	0.2	0.4	0.82	4.94
Dir	SE	ESE	E	N	ENE	NNE	ENE	N	ENE	NE	NE	NNE	NNE	NE	WSW	SW	ENE	ENE	SE	NE	S	WNW	NW	W	ENE	SE
9 Spd	0.9	0.4	0.4	1.1	0.8	0.3	0.4	0.3	0.6	0.5	0.6	1.8	3.2	3.3	3.0	2.2	1.5	2.1	2.3	1.9	0.7	1.0	0.2	0.2	0.88	3.32
Dir	SW	WNW	WSW	NW	WNW	S	NNW	NW	NW	NW	NNE	NNE	NE	NE	NE	NNE	ENE	NE	ENE	ENE	NE	NE	ENE	WNW	NNE	NE
10 Spd	0.2	0.3	0.5	0.4	1.3	1.0	0.4	0.9	0.6	0.9	1.0	4.3	4.5	7.3	7.3	8.0	8.4	7.0	3.6	1.3	0.6	0.5	0.3	0.3	2.30	8.41
Dir	NW	SE	W	WSW	SSW	SW	WSW	SW	NNW	E	NNW	SW	WSW	SW	SW	SW	SW	SW	WSW	SW	SW	SE	NNW	WNW	SW	SW
11 Spd	1.8	1.9	2.2	1.6	2.3	2.7	2.0	1.9	6.8	6.3	5.2	6.3	8.7	5.4	4.9	7.2	7.9	7.0	2.6	1.3	0.4	0.8	0.5	0.9	3.34	8.67
Dir	W	NW	W	WNW	W	W	WNW	W	SW	SW	SW	SW	SW	WSW	WSW	SW	SW	SW	WSW	SW	SW	SW	SSE	NE	WSW	SW
12 Spd	0.2	0.2	1.0	1.7	1.2	1.0	0.9	1.1	0.7	1.9	1.5	1.9	6.7	0.7	5.2	6.8	3.1	2.2	0.6	0.3	0.3	0.8	0.3	1.2	0.54	6.81
Dir	E	W	ENE	ENE	ENE	ENE	E	ENE	ESE	E	NNW	SW	SW	WSW	NNE	ENE	ENE	E	NNE	NNW	W	SW	WSW	SW	ENE	ENE
13 Spd	0.1	0.2	1.6	0.6	1.4	0.2	0.4	0.6	0.6	2.1	2.2	7.3	1.8	8.8	3.3	2.4	1.7	0.8	4.3	1.0	2.1	2.1	0.6	2.1	1.45	8.75
Dir	ENE	NNW	S	WNW	SE	NW	NE	NW	SSW	WSW	WSW	SSW	E	S	SSE	NE	S	SW	S	SW	SSW	SSW	WSW	SW	SSW	S
14 Spd	0.9	0.7	0.3	0.4	0.3	2.4	0.2	0.4	0.7	0.8	0.6	2.0	2.4	2.6	4.6	4.5	4.7	3.6	1.3	2.2	2.1	2.6	1.8	2.8	1.28	4.68
Dir	SW	WSW	WSW	SW	WSW	E	ENE	W	WSW	WSW	W	NE	SE	N	ENE	ENE	E	ENE	NE	NE	NNE	NE	NE	ENE	ENE	ENE
15 Spd	3.4	2.5	3.1	2.3	3.7	3.6	2.1	0.6	0.5	0.3	1.3	1.0	2.6	2.5	1.9	1.7	2.4	1.1	1.2	1.5	0.5	0.2	0.9	1.8	1.41	3.71
Dir	ENE	NE	ENE	ENE	ENE	ENE	E	ESE	SE	NW	NE	NE	ENE	NE	NNE	NNE	N	E	SE	ENE	ENE	NE	S	SW	ENE	ENE
16 Spd	0.5	2.5	2.4	3.1	4.0	2.0	3.5	2.0	1.8	1.6	3.0	4.7	4.6	0.7	2.6	6.1	2.8	1.4	1.0	0.3	1.2	0.8	0.1	1.2	1.99	6.12
Dir	SSE	SW	WSW	SW	SW	WSW	SW	SW	WNW	WSW	WSW	SW	SW	WSW	SW	SW	W	WNW	E	SSW	S	SSW	NNW	SW	SW	SW
17 Spd	2.0	1.6	0.4	0.5	1.5	0.3	0.8	0.9	0.8	1.9	1.5	4.7	4.7	5.9	8.4	6.7	9.2	7.5	7.9	3.3	4.1	2.0	0.9	0.6	2.86	9.23
Dir	SW	SW	NNW	W	SW	S	WNW	W	NE	E	SW	WSW	WSW	SW	SW	SW	SW	SW	SW	SW	SW	SW	ENE	NE	SW	SW
18 Spd	1.2	1.1	0.9	1.2	1.0	0.0	0.3	0.3	2.0	2.3	2.4	3.3	5.7	10.2	10.6	8.0	8.0	9.0	8.5	7.9	5.7	6.3	7.6	6.1	3.71	10.64
Dir	ENE	ENE	ENE	ENE	E	NNW	NW	N	ENE	NE	W	WSW	WSW	SW	SW	WSW	WSW	SW	SW	SW	WSW	WSW	SW	WSW	WSW	SW
19 Spd	9.8	5.1	6.4	4.3	4.6	8.5	8.0	3.4	3.3	9.7	10.1	12.0	11.2	9.2	13.7	14.8	13.3	11.4	12.2	10.0	2.6	3.6	3.9	3.0	8.02	14.76
Dir	SW	WSW	SW	WSW	WSW	SW	SW	SW	SW	SW	SW	SW	SW	WSW	SW	SW	SW	SW	SW	SW	W	SW	WSW	WSW	SW	SW
20 Spd	7.3	6.2	1.1	1.8	2.7	5.6	3.2	3.4	3.1	3.4	2.8	1.7	4.0	3.3	2.3	3.0	1.8	2.8	2.2	3.8	2.1	2.8	4.8	1.9	0.37	7.33
Dir	SW	SW	WSW	WSW	ENE	ENE	ENE	ENE	NNE	NE	NE	NE	E	ENE	NE	NE	WSW	SSW	SW	SSW	SSW	SW	SW	WSW	SE	SW
21 Spd	0.7	0.8	1.5	3.2	0.8	2.1	2.9	3.5	4.5	7.6	4.7	4.4	2.2	4.9	1.8	2.0	3.1	7.1	0.3	1.9	0.8	0.4	0.8	0.5	2.04	7.62
Dir	WNW	NW	WSW	SW	WNW	SW	SSW	SW	SSW	SSW	SW	SW	W	WSW	NW	NW	WSW	SW	ESE	ENE	E	ENE	W	WSW	SW	SSW
22 Spd	0.6	0.6	0.9	1.3	0.3	1.1	2.0	1.3	1.3	1.7	2.7	4.8	2.7	5.1	7.2	5.7	6.0	9.5	9.1	2.4	1.9	2.7	0.9	3.2	1.52	9.51
Dir	NNW	NE	NNE	ENE	N	NE	E	SSW	NW	SSE	SW	S	W	SSW	SW	SSW	S	SE	SE	NE	NE	ENE	E	ESE	SSE	SE



WCAS - Hinton
Summary of Hourly Averages

Wind Speed (WS) - kph
September 2015

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
23 Spd	3.5	2.6	0.9	0.8	1.2	1.7	2.1	1.0	1.6	1.5	1.0	1.5	1.6	1.6	0.4	4.3	3.1	1.2	1.9	7.1	3.0	1.9	0.8	1.0	0.69	7.07		
Dir	E	ENE	NE	SW	W	SSW	SW	W	S	NW	WNW	E	SSW	E	WSW	WSW	W	W	ESE	SSE	SE	SE	E	E	SSE	SSE		
24 Spd	1.0	1.9	1.5	1.7	0.2	0.9	0.4	0.3	0.3	2.6	1.5	1.1	1.8	1.6	3.2	4.1	3.8	2.9	1.4	0.6	0.9	0.6	0.9	0.2	0.51	4.11		
Dir	ESE	ENE	ENE	ENE	NE	ENE	N	N	NE	ENE	E	ESE	ESE	SSW	SSW	WSW	SW	SSW	ESE	ENE	ENE	ENE	E	NW	SE	WSW		
25 Spd	0.4	0.2	0.3	1.0	0.6	1.2	0.8	1.6	0.9	0.7	0.8	0.6	0.4	1.6	1.4	0.9	1.8	1.6	1.7	0.3	0.8	1.0	0.5	1.0	0.28	1.77		
Dir	ESE	S	SSW	ENE	SE	SSW	NW	NNW	NE	WSW	NNE	NW	NW	NNE	ENE	ESE	SE	ENE	ENE	E	S	SW	NNW	NW	ENE	SE		
26 Spd	0.9	1.2	0.9	0.6	0.8	1.2	1.6	0.9	1.2	1.9	5.3	4.0	11.5	8.5	4.9	4.4	8.7	8.8	3.5	3.2	2.7	2.5	3.3	7.8	3.55	11.49		
Dir	W	WSW	SW	W	W	WSW	WSW	WNW	WNW	WSW	SW	WSW	SW	SW	WSW	WSW	SW	SW	W	W	W	W	WSW	WSW	WSW	WSW		
27 Spd	9.0	8.6	4.7	3.0	1.7	0.7	0.2	1.7	4.1	3.4	3.1	3.6	2.9	3.5	2.9	3.2	4.8	3.3	1.5	0.4	0.8	0.8	0.8	0.3	1.57	9.04		
Dir	WSW	SW	SW	SW	W	NW	WSW	NW	NW	WNW	W	WNW	W	W	W	NNE	NE	NE	NE	NE	NE	NNE	ESE	NNE	W	WSW		
28 Spd	0.3	0.3	0.3	0.1	1.4	1.1	1.5	0.5	0.7	1.4	9.0	7.1	6.1	6.7	9.2	9.1	9.0	9.2	6.1	2.8	0.9	1.2	1.4	1.0	3.17	9.15		
Dir	N	ENE	NNE	NW	W	WSW	WSW	ENE	ENE	SSW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	W	NNE	NE	W	SW	SW		
29 Spd	0.4	5.3	7.1	6.4	2.9	2.4	0.3	0.6	0.6	7.3	9.1	13.3	14.6	13.7	10.8	11.2	9.9	7.8	4.7	2.3	5.0	1.6	0.6	0.3	5.50	14.57		
Dir	W	SW	SW	SW	WSW	SW	N	NNE	N	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	SW	W	ENE	NNE	SW	SW	
30 Spd	0.5	0.4	0.4	0.4	0.1	0.2	0.4	0.6	0.4	0.5	3.8	6.5	10.7	7.8	6.2	4.2	4.6	5.2	1.4	0.6	0.5	0.8	0.3	0.7	2.14	10.74		
Dir	NE	E	NE	E	E	E	ESE	SE	SE	WNW	SW	SW	SSW	SW	SW	SW	SW	SSW	SW	SSE	SSE	SW	SW	SW	SW	SW	SSW	
Spd	0.90	0.84	0.75	0.75	0.60	0.36	0.55	0.41	0.50	1.06	1.77	2.77	3.06	2.78	2.57	2.30	2.14	2.24	1.56	0.69	0.48	0.30	0.45	0.70	Diurnal Average			
Dir	SW	SW	SW	SW	SW	SW	SW	WSW	WSW	SW	SW	SW	SW	SW	SW	WSW	SW	SSW	SSW	SSW	S	SW	SW	SW				
Spd	9.81	8.64	7.07	6.39	5.40	8.49	8.02	4.94	6.79	9.66	10.11	13.33	14.57	13.70	13.69	14.76	13.32	11.44	12.24	10.00	5.67	6.29	7.57	7.85	Diurnal Maximum			
Dir	235.52	234.88	219.00	223.84	206.36	233.94	223.74	213.53	232.48	223.40	232.59	214.26	215.99	221.39	228.92	229.18	229.10	230.69	231.85	230.69	240.61	240.98	235.32	237.69				
Maximum Speed Value: 14.8 kph on Sep 19 16:00																				Minimum Speed Value: 0.0 kph on Sep 18 06:00				Hours in Service:				720
Maximum Daily Speed Average: 8.02 kph on Sep 19																				Minimum Daily Speed Average: 0.12 kph on Sep 25				Hours of Data:				720
Maximum Diurnal Speed Average: 3.06 kph at hour 13																				Minimum Diurnal Speed Average: 0.30 kph at hour 22				Hours of Missing Data:				0
Monthly Average Velocity: 1.246 kph 225.37 deg																				Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.4 Q ₁ = 0.8 Median = 1.7 Q ₃ = 3.3 P ₉₀ = 6.8 P ₉₉ = 11.5				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	41	1	0	0	0	0	42																					
NorthEast	138	1	0	0	0	0	139																					
East	80	1	0	0	0	0	81																					
SouthEast	39	3	0	0	0	0	42																					
South	31	2	0	0	0	0	33																					
SouthWest	140	84	12	0	0	0	236																					
West	98	1	0	0	0	0	99																					
NorthWest	48	0	0	0	0	0	48																					
Total	615	93	12	0	0	0	720																					



WCAS - Hinton
Summary of Hourly Averages

Relative Humidity (RH) - %
September 2015

Maximum Value: 92.29 % on Sep 21 08:00 Maximum Daily Average: 86.93 % on Sep 9																						Hours in Service: 720 Hours of Data: 720																											
Minimum Value: 14.4 % on Sep 11 18:00 Minimum Daily Average: 40.08 % on Sep 19 Maximum Diurnal Average: 86.24 % at hour 7 Minimum Diurnal Average: 44.48 % at hour 15 Monthly Average: 69.492 % Percentiles: P₁ = 17.9 P₁₀ = 32.1 Q₁ = 49.2 Median = 78.9 O₃ = 88.9 P₉₀ = 91.0 P₉₉ = 92.0																						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-Sep	81.9	85.6	87.1	89.1	87.2	89.1	87.3	82.7	74.7	63.3	55.0	42.1	35.1	37.3	34.0	38.0	39.7	41.0	50.3	61.6	69.0	73.0	77.9	79.2	65.04	89.13																							
2-Sep	81.3	83.3	85.7	87.4	88.5	89.2	89.8	89.9	89.3	84.9	75.9	65.9	48.0	41.8	37.9	42.5	49.9	66.6	73.9	78.4	83.6	87.1	88.7	89.1	74.95	89.95																							
3-Sep	89.6	90.1	90.5	91.1	91.4	91.6	91.6	91.4	91.1	90.5	74.7	67.1	61.3	60.0	58.5	58.0	66.3	72.1	76.2	77.3	79.0	86.2	88.4	89.0	80.13	91.63																							
4-Sep	89.0	88.9	88.8	88.5	88.4	89.0	89.2	89.1	89.5	89.5	87.6	81.4	72.9	67.4	69.0	62.8	71.9	70.0	72.8	77.9	78.2	85.2	87.1	88.4	81.77	89.50																							
5-Sep	90.0	90.8	91.4	91.8	91.9	92.0	92.2	92.1	92.0	91.6	91.1	84.5	73.6	65.6	64.7	66.0	68.5	68.2	72.0	71.4	72.8	72.7	75.9	78.9	80.90	92.18																							
6-Sep	82.0	85.9	87.6	88.4	89.1	89.7	90.0	90.2	89.9	85.1	72.5	63.6	52.2	41.4	37.4	39.5	45.9	54.3	70.0	78.9	87.1	88.9	89.8	90.4	74.57	90.36																							
7-Sep	90.4	90.5	90.6	90.7	90.7	90.9	91.2	91.3	91.2	89.9	77.9	70.4	63.6	47.2	41.4	47.3	44.7	77.1	75.2	84.8	88.9	89.8	90.3	90.5	79.02	91.34																							
8-Sep	90.6	90.8	91.0	91.2	91.3	91.4	91.5	91.5	91.5	91.6	91.0	83.5	75.4	70.5	60.2	50.7	66.2	71.7	81.1	86.9	88.9	89.7	90.2	90.6	83.72	91.65																							
9-Sep	90.7	90.9	91.1	91.1	91.3	91.4	91.4	91.6	91.6	91.7	91.8	89.9	77.5	70.4	71.9	74.6	84.5	83.7	84.2	86.2	88.5	89.5	90.1	90.5	86.93	91.76																							
10-Sep	90.8	91.0	91.1	91.3	91.3	91.5	91.6	91.6	91.9	82.4	58.0	42.0	35.0	31.9	31.3	29.6	29.3	30.5	38.0	46.5	59.9	71.2	77.0	81.1	65.24	91.89																							
11-Sep	81.2	80.6	74.5	76.0	76.2	72.2	76.6	73.7	56.0	47.0	38.0	29.8	22.6	18.5	16.2	15.1	14.4	14.4	20.5	29.2	44.2	57.6	67.4	74.1	49.01	81.24																							
12-Sep	79.6	80.2	77.9	80.7	82.1	81.9	81.4	76.1	58.8	46.2	33.2	24.9	18.3	22.7	41.6	72.7	82.1	84.4	88.9	90.2	90.6	90.9	91.0	91.2	69.47	91.16																							
13-Sep	91.2	91.4	91.4	91.5	91.8	91.7	91.8	91.8	91.9	88.6	70.9	69.8	84.1	75.3	80.6	72.8	68.6	78.2	79.3	87.6	88.5	87.7	88.9	89.7	84.80	91.92																							
14-Sep	89.3	89.7	90.2	90.5	90.6	90.8	90.9	90.9	90.7	88.9	81.9	74.3	70.7	66.2	60.2	61.4	57.2	62.9	73.0	80.5	82.4	81.1	82.9	86.3	80.14	90.90																							
15-Sep	87.1	88.5	88.7	89.1	89.4	88.9	89.2	89.4	88.8	88.1	86.3	85.5	83.0	77.2	72.2	65.3	69.5	77.3	81.9	85.4	88.4	89.6	90.0	89.8	84.53	90.01																							
16-Sep	89.6	88.7	86.4	85.7	85.0	86.3	86.4	86.1	80.7	76.6	69.6	60.5	53.9	48.1	29.7	27.4	30.3	41.2	48.7	67.9	76.9	82.0	84.7	87.6	69.17	89.64																							
17-Sep	88.1	88.5	88.7	89.3	89.4	88.6	89.1	89.5	88.0	72.7	48.8	37.9	35.0	34.2	30.8	31.8	30.4	34.7	36.8	44.6	49.5	58.7	73.7	79.2	62.42	89.48																							
18-Sep	79.7	82.7	86.2	87.8	88.2	88.6	89.5	90.1	87.5	77.6	52.4	41.6	37.0	32.8	31.7	32.8	34.7	34.8	36.7	38.1	40.0	38.6	38.7	39.0	57.78	90.08																							
19-Sep	38.1	38.7	40.4	43.1	42.5	41.2	42.6	46.7	46.1	39.3	32.1	30.2	28.4	27.8	27.8	28.5	29.5	32.1	38.1	43.0	49.9	53.7	58.5	63.4	40.08	63.42																							
20-Sep	62.5	63.3	63.9	68.2	72.3	78.3	87.0	89.4	89.7	90.5	90.9	90.7	88.1	86.3	88.1	89.0	86.4	85.4	88.1	88.7	87.2	87.9	88.7	88.7	83.30	90.89																							
21-Sep	89.9	90.8	91.0	91.6	91.9	92.0	92.3	92.3	91.5	83.3	76.6	64.7	57.1	39.1	39.6	41.2	30.3	30.7	46.8	67.0	77.0	83.8	87.9	89.4	72.41	92.29																							
22-Sep	89.9	90.4	90.6	91.1	91.4	91.6	91.9	92.1	92.1	91.6	68.9	51.6	41.0	27.6	21.7	24.5	26.8	37.9	38.4	51.9	62.6	66.6	71.3	73.0	65.69	92.13																							
23-Sep	79.6	83.8	86.3	85.4	84.6	84.3	84.4	85.1	79.3	65.8	57.4	49.9	42.9	33.7	22.4	16.4	17.5	22.6	30.6	24.3	28.2	47.7	63.7	70.5	56.10	86.33																							
24-Sep	75.7	80.2	83.7	86.0	87.6	88.6	89.1	89.7	86.3	69.8	55.1	41.1	29.2	25.9	31.0	31.1	32.0	36.9	53.8	61.4	68.9	75.9	79.7	81.84	89.65																								
25-Sep	82.4	84.4	85.4	86.0	84.5	83.8	86.9	89.0	88.9	89.2	88.6	86.5	82.8	82.3	80.6	76.0	75.6	83.7	85.5	85.8	88.0	88.5	89.2	89.9	85.16	89.93																							
26-Sep	90.6	90.8	91.0	91.2	91.4	91.6	91.7	91.7	91.3	74.4	62.9	43.8	33.3	27.5	25.2	25.2	26.7	34.4	38.8	40.7	39.6	38.7	30.5	60.60	91.72																								
27-Sep	30.8	33.1	37.7	41.6	45.2	52.6	56.3	53.9	48.2	46.9	44.9	44.5	42.9	46.3	48.7	58.3	70.5	76.0	81.3	83.6	85.3	86.3	85.1	85.4	57.72	86.33																							
28-Sep	86.5	87.6	88.2	88.6	88.9	88.4	88.5	89.5	76.4	55.6	38.6	32.8	29.4	28.5	28.0	27.9	28.0	29.7	35.9	42.8	51.1	59.7	67.0	58.3	58.16	89.54																							
29-Sep	71.4	62.2	51.5	53.6	58.2	80.0	87.6	88.7	86.5	51.5	41.3	36.2	32.1	29.3	28.4	29.0	30.6	34.8	39.7	44.9	46.0	55.6	69.4	75.9	53.52	88.69																							
30-Sep	80.1	83.1	85.1	86.7	87.4	88.1	88.3	88.4	72.8	53.0	41.7	32.8	28.1	26.0	26.6	28.7	29.5	30.2	39.1	57.6	68.6	73.4	78.7	80.0	60.58	88.44																							
																								81.32	82.22	82.46	83.47	83.99	85.18	86.24	86.19	82.83	75.81	65.56	57.95	51.50	46.48	44.48	45.46	47.84	52.83	58.48	65.18	70.08	74.38	78.23	79.64	Diurnal Average	
																								91.19	91.38	91.42	91.75	91.93	92.04	92.27	92.29	92.13	91.71	91.76	90.69	88.12	86.26	88.11	89.02	86.43	85.43	88.90	90.17	90.60	90.92	91.01	91.16	Diurnal Maximum	



WCAS - Hinton
Summary of Hourly Standard Deviations

Wind Speed (WS) - kph
September 2015

Maximum Value: 8.96 kph on Sep 19 13:00 Minimum Value: 0.1 kph on Sep 6 06:00 Maximum Diurnal Average: 3.94 kph at hour 15 Monthly Average: 2.350 kph		Maximum Daily Average: 5.83 kph on Sep 19 Minimum Daily Average: 1.26 kph on Sep 9 Minimum Diurnal Average: 1.42 kph at hour 7 Percentiles: P ₁ = 0.4 P ₁₀ = 0.9 Q ₁ = 1.2 Median = 1.8 Q ₃ = 2.9 P ₉₀ = 4.8 P ₉₉ = 7.7		Hours in Service: 720 Hours of Data: 720 Hours of Missing Data: 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-Sep	3.6	1.3	1.9	2.0	4.9	2.1	3.0	3.9	3.3	3.2	3.2	4.9	6.3	6.7	4.7	3.7	4.0	3.4	1.7	1.5	1.7	1.2	0.8	1.6	3.10	6.75
2-Sep	1.5	1.5	1.1	1.2	1.0	0.8	1.3	1.6	1.6	1.9	3.2	2.3	1.8	2.4	3.4	2.8	3.9	2.7	1.8	1.2	1.4	1.5	1.2	1.0	1.83	3.91
3-Sep	0.9	0.9	1.2	1.3	0.8	1.3	1.8	1.0	0.9	1.0	1.7	2.4	2.2	1.8	2.6	2.6	2.8	2.5	2.1	2.2	2.7	0.9	1.3	2.2	1.72	2.83
4-Sep	2.2	2.1	1.8	1.7	1.3	1.1	1.9	1.7	0.8	0.6	1.0	1.3	1.8	2.4	2.2	2.5	2.8	2.8	2.1	2.1	1.9	1.7	1.3	1.5	1.77	2.79
5-Sep	1.4	1.4	1.1	1.2	0.8	1.1	1.5	1.5	1.3	1.7	1.5	2.0	2.6	3.0	2.8	2.0	1.9	2.1	1.7	2.2	2.3	2.5	2.2	2.0	1.83	3.01
6-Sep	1.2	1.2	0.9	0.4	0.8	0.1	0.6	0.5	0.8	1.2	1.6	1.9	1.6	2.4	2.5	2.5	3.1	2.5	2.4	2.7	2.5	1.5	1.6	2.8	1.64	3.06
7-Sep	1.6	1.9	1.5	1.8	0.7	0.5	0.4	0.7	1.7	1.5	2.0	2.6	3.0	2.6	4.1	1.7	2.6	3.4	2.9	2.3	1.3	0.8	1.0	0.3	1.78	4.07
8-Sep	1.0	1.0	1.4	0.9	1.0	1.1	1.2	0.8	1.6	1.3	2.0	1.8	2.1	2.3	3.5	4.7	3.1	3.0	4.3	0.9	0.9	0.3	0.8	0.8	1.74	4.75
9-Sep	1.4	0.9	0.8	1.0	1.0	1.0	0.5	0.6	0.8	0.7	0.8	1.6	2.4	2.5	2.4	2.1	1.6	1.9	1.7	1.7	0.9	1.1	0.4	0.3	1.26	2.51
10-Sep	0.6	0.8	0.7	0.7	1.4	1.2	0.8	1.3	0.9	1.3	1.3	4.8	4.1	4.8	5.3	5.4	4.9	4.7	3.8	1.3	1.2	0.9	0.6	1.2	2.25	5.41
11-Sep	1.3	1.3	1.6	1.8	1.8	2.5	1.5	2.5	4.6	3.9	3.7	4.4	5.4	5.2	5.0	5.2	5.4	4.8	3.5	1.7	1.2	1.2	1.3	1.0	2.99	5.40
12-Sep	0.7	1.7	1.7	1.7	1.6	1.6	1.2	1.7	1.5	1.9	1.5	3.4	5.5	3.1	4.5	4.1	3.3	2.4	1.5	0.9	0.9	1.4	1.0	1.6	2.11	5.53
13-Sep	0.5	0.4	1.5	0.9	2.4	0.7	0.8	0.9	1.6	1.8	2.2	4.6	2.4	3.6	4.0	2.0	2.3	3.2	4.8	1.3	1.6	2.1	1.1	1.8	2.03	4.77
14-Sep	1.2	1.1	1.0	1.1	1.5	1.5	1.1	0.8	1.0	1.3	1.2	1.7	2.5	2.3	3.2	2.7	2.9	1.8	1.9	2.1	2.1	2.1	2.4	2.4	1.80	3.21
15-Sep	2.5	2.1	1.7	2.1	2.1	2.0	1.5	1.1	1.0	0.8	1.4	1.7	2.1	2.1	1.8	1.8	1.6	1.8	1.5	1.9	0.8	0.9	1.3	1.6	1.63	2.50
16-Sep	1.3	2.3	1.9	2.5	3.1	2.0	1.8	1.9	1.6	1.8	2.8	3.6	4.0	1.7	3.5	4.5	3.2	1.8	1.3	1.1	1.4	1.4	0.8	1.2	2.18	4.54
17-Sep	1.8	1.4	0.8	0.8	1.1	1.2	1.1	1.2	1.2	1.4	2.1	4.0	4.3	5.0	5.4	5.1	5.1	4.7	4.9	2.6	2.6	1.9	1.2	1.2	2.59	5.40
18-Sep	1.4	1.3	1.1	1.2	1.4	1.2	0.8	1.1	1.8	1.7	2.8	3.7	5.0	6.1	6.5	6.4	6.7	6.0	6.4	5.9	4.7	6.0	5.6	6.0	3.79	6.70
19-Sep	7.2	5.0	4.5	3.9	4.8	5.6	4.9	2.2	3.2	5.7	7.4	8.6	9.0	8.2	8.6	8.5	8.3	7.9	7.5	5.9	3.1	2.8	3.8	3.4	5.83	8.96
20-Sep	3.7	3.9	2.1	2.7	2.1	2.8	2.3	2.3	2.4	2.3	2.1	1.7	2.8	2.6	2.1	2.6	4.0	3.0	2.4	2.8	2.2	2.3	2.9	1.8	2.58	4.00
21-Sep	0.9	1.1	1.5	2.1	1.2	1.8	2.2	2.7	2.8	2.7	2.8	2.9	2.7	4.4	1.4	1.8	4.0	4.0	2.6	1.8	1.0	0.7	1.1	1.0	2.14	4.45
22-Sep	0.8	0.8	1.3	1.3	0.9	1.2	1.3	1.7	1.1	1.5	2.5	2.6	2.1	4.6	5.2	3.2	2.4	3.3	3.4	2.1	1.8	2.3	1.4	1.8	2.10	5.20
23-Sep	2.3	1.5	1.0	1.2	1.1	1.5	1.6	1.0	1.6	1.5	1.7	2.0	1.9	2.0	2.8	4.6	3.8	2.3	1.9	3.3	2.4	2.7	1.2	1.4	2.02	4.59
24-Sep	1.4	1.9	1.7	1.6	1.3	1.5	1.1	1.2	1.0	1.8	1.7	1.9	2.0	2.7	3.6	4.5	3.8	3.3	2.8	1.5	1.9	1.7	1.7	1.4	2.05	4.52
25-Sep	1.3	1.3	1.4	1.6	1.6	1.8	1.5	1.8	1.5	0.9	1.2	0.9	1.1	1.3	1.8	2.2	2.1	1.3	1.0	1.1	1.4	1.4	0.7	1.2	1.40	2.24
26-Sep	1.1	1.2	1.3	1.3	0.9	1.1	1.3	1.0	1.4	2.1	3.3	3.5	5.8	7.8	4.9	5.0	7.1	6.5	4.3	3.2	2.9	3.2	4.7	5.9	3.36	7.84
27-Sep	6.2	5.7	3.5	2.6	2.3	1.5	0.8	2.9	2.4	2.8	3.6	3.2	3.4	3.7	3.6	3.0	3.3	2.6	1.7	0.7	1.2	1.2	1.4	0.7	2.66	6.20
28-Sep	0.6	0.6	0.4	0.8	1.1	1.2	1.2	0.9	0.9	2.3	4.8	5.8	4.8	5.8	6.1	5.8	5.9	5.1	3.7	2.4	1.5	1.3	1.8	2.5	2.80	6.09
29-Sep	1.0	3.5	3.3	3.0	3.2	3.8	0.7	0.9	1.2	4.3	4.6	6.1	6.9	7.3	6.7	6.6	6.1	5.1	4.3	2.5	2.5	1.4	1.1	1.0	3.63	7.26
30-Sep	0.9	0.8	0.8	0.8	0.5	0.8	1.1	1.0	0.7	1.3	3.5	4.5	4.5	4.6	3.8	3.3	2.4	2.4	2.0	1.1	1.0	1.2	1.1	1.4	1.89	4.57
																								Diurnal Average		
																								Diurnal Maximum		
1.79 1.74 1.55 1.57 1.66 1.59 1.42 1.47 1.61 1.95 2.51 3.22 3.54 3.84 3.94 3.76 3.80 3.45 2.93 2.13 1.84 1.71 1.62 1.79 7.22 5.68 4.45 3.90 4.92 5.59 4.88 3.85 4.58 5.73 7.44 8.64 8.96 8.21 8.58 8.47 8.29 7.92 7.51 5.90 4.75 6.04 5.61 5.98																										
,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
September 2015

Maximum Value: 109.81 deg on Sep 12 14:00 Maximum Daily Average: 78.74 deg on Sep 24																							Hours in Service: 720 Hours of Data: 720																									
Minimum Value: 19.2 deg on Sep 22 19:00 Minimum Daily Average: 43.77 deg on Sep 19 Maximum Diurnal Average: 73.81 deg at hour 23 Minimum Diurnal Average: 49.63 deg at hour 17 Monthly Average: 58.152 deg Percentiles: P ₁ = 24.5 P ₁₀ = 34.3 Q ₁ = 41.4 Median = 54.5 Q ₃ = 75.2 P ₉₀ = 88.3 P ₉₉ = 104.4																							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-Sep	75.8	76.8	94.0	54.5	54.8	53.2	48.3	44.2	39.7	61.3	87.8	46.8	37.8	57.1	55.1	58.2	60.3	44.8	88.1	83.4	77.9	83.5	85.4	86.6	64.80	94.00																						
2-Sep	73.7	93.3	41.4	58.4	70.6	70.1	87.4	55.1	79.5	94.0	98.2	83.8	94.8	75.3	61.6	69.4	57.7	90.1	58.5	96.9	97.4	63.9	104.6	85.9	77.57	104.56																						
3-Sep	73.1	87.5	76.7	59.4	68.6	74.3	86.4	57.3	53.0	105.2	85.1	72.9	67.2	100.4	43.6	58.2	41.3	48.2	44.1	53.3	48.9	65.7	65.2	38.0	65.57	105.16																						
4-Sep	34.9	37.5	27.5	26.4	32.5	38.9	30.2	45.4	41.4	67.3	52.2	68.9	85.5	52.1	45.1	75.9	42.1	45.0	34.3	45.2	56.7	27.7	61.2	42.3	46.51	85.47																						
5-Sep	33.0	54.6	28.1	79.4	44.0	38.9	35.7	39.6	47.5	52.6	43.2	56.2	38.1	34.2	40.7	43.7	43.2	37.0	49.6	27.9	34.6	39.4	81.3	104.9	46.99	104.86																						
6-Sep	42.2	67.2	50.6	50.7	64.8	67.1	43.1	87.5	45.0	65.6	64.1	72.2	80.8	67.6	45.5	60.0	77.0	35.9	53.0	62.5	93.9	54.5	93.4	96.4	64.19	96.44																						
7-Sep	58.1	35.6	37.0	38.5	35.0	34.7	40.3	30.2	43.6	43.0	53.2	55.4	51.5	55.7	51.0	49.6	53.1	70.9	63.3	86.5	100.6	92.3	63.2	78.1	55.02	100.56																						
8-Sep	81.5	83.5	60.6	97.0	57.3	55.8	71.0	72.3	41.7	38.9	45.4	33.3	40.6	43.2	91.4	93.6	42.6	68.6	74.1	78.9	97.8	93.7	79.4	52.4	66.44	97.75																						
9-Sep	55.7	59.6	70.3	33.9	44.6	87.5	27.6	57.7	37.1	39.9	41.4	42.5	42.1	41.4	42.2	39.6	39.7	39.6	29.0	40.3	32.7	27.4	85.5	69.1	46.94	87.49																						
10-Sep	81.3	81.0	37.5	41.3	43.1	50.6	50.5	74.6	79.9	82.2	89.6	84.2	52.5	42.8	40.8	40.6	33.8	38.8	47.0	30.5	59.7	71.2	82.8	83.7	59.17	89.58																						
11-Sep	40.5	35.6	34.2	42.2	39.4	44.0	32.9	45.1	38.9	36.5	42.0	41.9	36.0	55.4	56.8	43.0	39.8	38.4	49.7	68.5	81.2	59.0	85.0	57.7	47.66	85.03																						
12-Sep	91.0	91.9	81.2	84.0	74.7	80.9	67.3	96.6	78.3	51.4	52.8	96.6	48.3	109.8	45.0	38.4	52.4	55.2	81.8	62.0	73.2	82.5	86.4	75.7	73.23	109.81																						
13-Sep	92.3	76.9	75.5	48.0	98.2	77.0	60.8	75.4	91.9	46.7	58.6	27.9	87.9	25.3	93.2	51.8	77.0	100.9	81.2	77.3	46.0	55.4	50.8	36.9	67.21	100.89																						
14-Sep	70.7	66.6	82.3	90.4	72.4	22.5	81.8	50.4	52.1	73.9	73.3	54.1	89.0	55.4	40.7	38.9	38.2	50.0	54.5	36.0	48.1	43.7	56.2	42.6	57.66	90.44																						
15-Sep	37.3	46.0	26.0	46.2	27.3	27.2	26.7	87.6	80.5	77.7	49.4	74.2	47.1	45.2	54.2	72.2	37.8	76.5	75.1	62.9	49.3	95.2	77.6	31.5	55.46	95.24																						
16-Sep	85.2	28.3	37.9	36.5	35.6	40.3	22.0	56.5	46.4	59.0	56.1	49.0	59.9	88.7	86.9	44.9	60.0	58.3	59.1	103.7	93.2	78.1	89.7	51.6	59.46	103.70																						
17-Sep	49.0	66.3	81.7	40.7	60.0	99.8	51.1	45.7	75.8	39.9	81.8	54.6	54.9	47.6	39.2	43.3	32.4	36.3	33.8	38.9	29.6	62.8	50.2	69.3	53.52	99.77																						
18-Sep	60.7	59.3	65.4	55.7	69.4	99.4	82.8	94.4	44.4	37.6	57.0	59.4	51.1	35.3	37.3	47.2	47.5	40.4	43.4	43.9	48.1	54.6	44.3	55.1	55.57	99.44																						
19-Sep	43.6	57.2	42.4	52.9	61.5	39.4	30.1	41.0	46.5	31.5	45.3	41.0	45.2	52.1	38.0	34.3	34.8	40.2	36.6	31.1	55.6	41.7	52.2	56.3	43.77	61.47																						
20-Sep	25.8	37.9	92.7	78.0	45.7	25.4	40.0	27.8	41.8	32.3	38.0	52.3	44.8	40.3	56.0	45.2	86.7	57.7	64.2	53.6	65.8	36.0	31.1	64.7	49.32	92.72																						
21-Sep	44.0	57.9	59.6	44.1	66.9	47.2	47.2	48.0	35.6	19.5	35.5	46.6	51.9	50.5	42.7	55.4	63.1	30.2	93.6	48.0	50.1	66.5	84.6	79.5	52.84	93.56																						
22-Sep	58.1	44.1	47.2	67.0	87.9	53.1	36.8	67.6	43.0	67.8	58.8	33.1	52.0	57.3	45.6	34.4	29.0	20.2	19.2	50.2	59.4	41.8	86.2	40.3	50.01	87.93																						
23-Sep	38.0	34.6	44.6	58.3	35.9	50.2	39.5	33.3	69.6	61.6	88.4	74.9	85.7	84.4	107.6	59.5	66.8	82.5	53.7	24.6	64.6	77.8	76.8	93.4	62.75	107.61																						
24-Sep	92.8	47.4	60.8	58.8	98.4	78.7	94.1	91.2	82.7	50.0	66.9	94.3	63.0	88.2	71.4	64.8	60.0	78.2	77.6	88.5	94.5	107.8	86.0	93.5	78.74	107.77																						
25-Sep	100.6	97.2	104.3	71.2	92.9	88.1	96.0	46.7	57.4	55.1	76.5	58.9	82.3	37.1	63.7	74.2	77.6	27.0	28.4	84.5	88.3	56.9	76.3	74.6	71.49	104.34																						
26-Sep	45.1	41.1	63.8	55.1	39.5	37.3	34.1	28.2	53.5	53.9	37.6	48.2	29.1	52.6	58.4	60.6	50.5	44.7	55.7	49.0	51.7	60.5	56.1	42.1	47.86	63.75																						
27-Sep	38.8	37.3	37.2	49.9	60.4	66.3	93.7	106.1	31.4	48.0	56.7	51.5	59.2	56.4	68.3	63.7	41.7	41.8	48.7	66.9	67.4	52.8	86.5	65.4	58.17	106.08																						
28-Sep	85.3	54.9	50.4	79.6	31.1	48.2	59.6	50.9	28.4	81.8	31.5	51.6	50.7	51.5	39.8	39.6	38.0	32.7	33.4	42.6	64.9	53.8	94.3	99.2	53.91	99.16																						
29-Sep	95.5	37.0	24.2	23.7	57.0	82.9	89.9	69.2	79.7	33.1	28.5	28.0	26.7	30.8	36.1	35.2	36.3	39.6	48.3	54.2	30.6	37.5	72.4	95.4	49.66	95.52																						
30-Sep	78.6	84.6	67.2	79.7	97.4	83.4	84.6	76.2	60.7	91.5	52.1	38.6	24.8	36.6	34.5	42.5	28.5	27.3	58.2	91.3	70.6	66.5	69.6	69.5	63.11	97.43																						
																							62.74	59.28	56.75	56.72	58.90	58.76	56.39	60.06	54.90	56.63	58.24	56.43	56.02	55.69	54.41	52.60	49.63	49.90	54.57	59.44	64.42	61.67	73.81	67.72	Diurnal Average	
																							100.59	97.19	104.34	96.98	98.40	99.77	96.04	106.08	91.87	105.16	98.18	96.56	94.84	109.81	107.61	93.59	86.67	100.89	93.56	103.70	100.56	107.77	104.56	104.86	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
SEPTEMBER 2015**