

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

AIR QUALITY MONITORING
October 2015
Monthly Report

Prepared by:

West Central Airshed Society
Drayton Valley, Alberta





November 9th, 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 October 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 17 readings occurring in October 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 22.18 ppb, occurring October 16th. There were four readings in October 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 6.84 ppb.

There were three readings occurring in October 2015 in excess of the one – hour average guidelines as indicated in Air Monitoring Directive Section III.A.3. (a) for PM_{2.5}. The maximum one-hour average reading was 96.89 µg/m³, occurring October 17th.

2. Operational times less than 90 percent:

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

3. Monitoring Notes:

AMS 906 (Hinton)

The NOx analyzer underwent maintenance, returning an uptime of 99.2 percent. All other analyzers and meteorological equipment returned uptimes of 100 percent for the month of October.

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	October

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	0.022	17	0.007	4
PM _{2.5}	906	100.0	96.9 µg/m ³	3	24.74 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
OCTOBER 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													October 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)	38	706	100.0	2.0	0.0	22.0	0.2	0.3	0.9	2.4	5.0	17	4	0.007	
SO ₂ (ppb)	38	706	100.0	0.5	0.0	10.9	0.0	0.1	0.2	0.4	1.5	0	-	0.002	
O ₃ (ppb)	36	708	100.0	16.7	0.0	43.9	0.2	2.1	15.7	28.5	36.9	0	0	0.039	
NO (ppb)	36	702	99.2	6.8	0.0	84.3	0.1	0.5	1.9	7.0	21.5	-	-	-	
NO ₂ (ppb)	36	702	99.2	7.2	0.2	39.4	1.9	3.5	5.9	9.9	14.0	0	0	0.015	
NO _x (ppb)	36	702	99.2	14.0	0.2	96.5	2.2	4.6	8.6	17.8	33.4	-	-	-	
Particulate Matter 2.5 microns (µm ³)	7	737	100.0	9.8	0.0	96.9	2.7	4.7	7.3	11.5	18.9	3	0	24.74 ug/m3	
Wind Speed (kph)	0	744	100.0	3.1	0.0	17.6	0.5	0.9	2.0	4.2	7.4	-	-	-	
Temperature (°C)	0	744	100.0	6.1	-6.6	22.7	-2.2	0.8	5.3	10.6	15.9	-	-	-	
Relative Humidity (%)	0	744	100.0	61.7	15.1	92.6	27.3	41.8	66.1	82.8	88.6	-	-	-	
Std Dev Wind Direction (deg)	0	744	100.0	56.2	13.4	110.3	30.2	38.7	51.6	73.6	90.7	-	-	-	
Std Dev Wind Speed (kph)	0	744	100.0	2.5	0.1	10.5	1.0	1.3	1.9	3.1	5.2	-	-	-	



WCAS - Hinton
Summary of Hourly Averages

Total Reduced Sulphur (TRS) - ppb
October 2015

Maximum Value: 22.18 ppb on Oct 16 23:00																								Maximum Daily Average: 6.84 ppb on Oct 16																								Hours in Service: 744	
Minimum Value: 0 ppb on Oct 1 15:00																								Minimum Daily Average: 0.22 ppb on Oct 4																								Hours of Data: 706	
Maximum Diurnal Average: 3.57 ppb at hour 9																								Minimum Diurnal Average: 0.58 ppb at hour 16																								Hours of Missing Data: 38	
Monthly Average: 2.008 ppb																								Percentiles: P ₁ = 0.0 P ₁₀ = 0.2 Q ₁ = 0.3 Median = 0.9 Q ₃ = 2.4 P ₉₀ = 5.0 P ₉₉ = 15.8																								Hours of Calibration: 38	
Percent Operational Time: 100.0																																																	
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Oct	7	4	18	Z	8	8	7	4	5	7	6	3	1	0	0	0	0	0	0	0	0	1	1	4	3.67	17.52																							
2-Oct	6	9	11	Z	4	12	3	2	11	8	4	1	0	0	0	0	0	1	1	0	0	0	2	1	3.38	12.27																							
3-Oct	2	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.27	2.10																							
4-Oct	0	0	0	Z	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.22	0.71																							
5-Oct	1	3	4	Z	4	2	2	4	4	9	6	2	0	0	0	0	0	0	0	0	0	0	0	0	1.90	8.93																							
6-Oct	1	4	1	Z	1	1	1	0	0	0	1	1	4	1	3	2	1	0	0	0	0	0	0	0	1.02	4.10																							
7-Oct	8	5	1	Z	1	1	1	2	2	2	1	1	1	0	0	0	0	1	5	2	1	1	1	0	1.58	8.18																							
8-Oct	0	0	0	Z	4	2	2	5	6	3	2	1	3	1	1	2	1	0	2	2	2	0	7	10	2.43	9.66																							
9-Oct	4	5	1	Z	1	1	0	0	0	1	1	0	0	1	1	1	1	2	2	2	1	0	0	0	1.16	5.38																							
10-Oct	1	2	1	Z	5	3	3	1	2	2	2	2	0	1	4	4	3	4	2	0	0	0	0	2	1.93	4.54																							
11-Oct	4	11	8	Z	1	0	0	2	3	2	1	1	1	1	0	0	0	0	1	1	3	1	0	1	1.93	10.80																							
12-Oct	0	2	3	Z	5	3	6	3	1	1	3	2	1	0	0	0	0	0	2	4	3	4	5	7	2.42	6.76																							
13-Oct	1	3	2	Z	1	3	2	2	1	3	1	1	1	1	1	0	1	2	7	2	1	1	1	1	1.60	6.70																							
14-Oct	1	0	1	Z	1	1	2	C	C	C	C	C	C	C	0	0	0	0	0	1	0	1	0	1	0	--	1.79																						
15-Oct	0	1	0	Z	5	4	2	2	6	4	3	2	1	1	0	0	0	1	1	1	1	0	0	2	1.75	6.45																							
16-Oct	8	13	13	Z	5	2	9	16	16	9	3	3	2	1	0	0	1	1	1	1	1	21	22	8	6.84	22.18																							
17-Oct	10	9	18	Z	10	7	8	3	9	4	4	5	0	0	0	0	1	1	1	3	2	1	5	10	4.83	17.71																							
18-Oct	18	5	3	Z	2	1	1	1	1	1	0	0	0	1	1	2	4	1	0	0	0	0	0	0	1.95	18.33																							
19-Oct	1	1	1	Z	1	1	2	3	3	5	7	4	3	0	0	1	1	1	0	0	1	1	1	0	1.64	7.27																							
20-Oct	0	1	3	Z	2	7	8	8	16	14	9	8	1	1	1	1	3	8	3	1	0	0	0	0	4.24	15.93																							
21-Oct	0	1	1	Z	0	0	1	1	1	0	4	5	2	2	1	1	1	0	1	1	0	1	1	0	1.10	5.11																							
22-Oct	0	2	2	Z	11	7	4	9	3	4	3	0	1	0	0	1	1	2	5	2	2	1	1	1	2.77	10.95																							
23-Oct	0	0	0	Z	1	1	1	1	1	1	1	1	1	0	1	1	3	0	0	0	0	0	0	0	0.67	3.14																							
24-Oct	1	1	2	Z	2	1	3	3	1	1	0	0	1	1	0	0	0	0	0	0	0	5	4	3	1.30	4.84																							
25-Oct	2	2	3	Z	1	3	2	3	2	2	3	4	2	0	0	0	0	0	1	0	1	2	4	2	1.71	4.07																							
26-Oct	1	1	1	Z	4	3	5	3	2	3	2	2	2	1	1	0	1	0	1	0	0	0	0	0	1.34	4.67																							
27-Oct	0	0	1	Z	1	0	1	5	6	2	1	0	0	0	0	0	0	0	3	2	1	0	1	1	1.09	6.06																							
28-Oct	1	1	0	Z	1	2	3	2	1	1	0	1	0	0	0	0	1	4	7	1	0	1	0	2	1.23	6.59																							
29-Oct	2	2	2	Z	1	1	1	1	1	1	0	2	1	2	1	0	1	5	5	3	1	0	0	0	1.43	4.81																							
30-Oct	1	1	1	Z	2	4	7	2	0	0	1	3	3	0	0	1	1	6	9	2	5	4	14	5	3.07	14.36																							
31-Oct	2	2	4	Z	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0.82	3.74																							
2.69 2.90 3.43 -- 2.73 2.68 2.80 3.01 3.57 2.93 2.41 1.88 1.22 0.68 0.67 0.58 0.81 1.42 1.87 1.06 0.94 1.64 2.34 1.99																								Diurnal Average																									
18.33 12.55 17.71 -- 10.95 12.27 9.07 16.07 15.93 13.78 8.89 7.60 4.10 2.22 3.53 3.64 3.63 8.27 8.55 4.09 4.84 20.64 22.18 9.66																								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
October 2015

Maximum Value: 10.93 ppb on Oct 16 15:00		Maximum Daily Average: 1.82 ppb on Oct 10		Hours in Service: 744																													
Minimum Value: 0.0 ppb on Oct 2 05:00		Minimum Daily Average: 0.05 ppb on Oct 3		Hours of Data: 706																													
Maximum Diurnal Average: 1.12 ppb at hour 15		Minimum Diurnal Average: 0.13 ppb at hour 24		Hours of Missing Data: 38																													
Monthly Average: 0.513 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.1 Median = 0.2 Q ₃ = 0.4 P ₉₀ = 1.5 P ₉₉ = 5.2		Hours of Calibration: 38																													
				Percent Operational Time: 100.0																													
Day	Hourly Period Ending At																								Daily Average	Daily Maximum							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24									
1-Oct	0.3	0.1	0.2	Z	0.2	0.2	0.4	0.5	0.4	0.2	0.5	7.9	2.7	1.5	0.6	0.4	0.3	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.76	7.91							
2-Oct	0.1	0.1	0.1	Z	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.08	0.14							
3-Oct	0.1	0.1	0.1	Z	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.05	0.11							
4-Oct	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10	0.57							
5-Oct	0.0	0.1	0.1	Z	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.4	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.16	0.42							
6-Oct	0.0	0.1	0.1	Z	0.0	0.1	0.1	0.1	0.2	0.0	0.5	0.3	1.3	0.6	0.5	0.5	0.4	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.25	1.30							
7-Oct	0.1	0.1	0.1	Z	0.0	0.2	0.3	0.5	0.5	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.15	0.55							
8-Oct	0.0	0.1	0.2	Z	0.1	0.2	0.4	0.4	0.4	0.2	0.3	0.6	3.0	3.1	2.6	3.1	2.0	0.4	0.8	0.4	0.8	0.2	0.6	0.3	0.87	3.10							
9-Oct	0.8	1.2	2.1	Z	0.4	0.2	0.1	0.2	0.2	0.2	0.1	0.4	1.3	2.9	1.4	1.8	1.9	6.1	4.8	5.1	2.5	0.9	1.0	0.6	1.57	6.06							
10-Oct	1.2	4.5	2.0	Z	1.7	0.3	2.2	3.1	2.7	7.8	4.0	3.8	0.4	0.1	1.8	3.7	1.4	0.8	0.4	0.0	0.0	0.0	0.0	0.0	1.82	7.82							
11-Oct	1.2	0.1	0.0	Z	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	1.4	1.3	1.5	1.2	1.0	2.7	2.8	5.3	3.2	0.7	0.6	1.01	5.30							
12-Oct	1.3	0.9	1.6	Z	2.1	3.4	1.9	5.4	3.7	0.9	0.7	0.4	2.3	0.3	1.0	0.2	0.3	0.4	1.8	0.3	1.9	1.2	0.4	0.3	1.42	5.42							
13-Oct	1.0	0.6	0.3	Z	1.1	0.3	0.3	0.4	0.4	0.5	1.9	1.2	4.1	2.3	1.9	0.2	0.1	0.8	0.3	0.8	0.2	0.2	0.3	0.2	0.86	4.11							
14-Oct	0.2	0.2	0.2	Z	0.1	0.2	0.3	C	C	C	C	C	C	C	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	--	0.31							
15-Oct	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.3	0.5	1.2	1.0	1.5	1.1	0.5	0.3	0.3	0.4	0.4	0.1	0.1	0.2	0.2	0.39	1.51							
16-Oct	0.1	0.1	0.1	Z	0.2	0.3	0.1	0.2	0.3	0.3	1.7	4.2	1.7	2.4	10.9	6.0	2.6	1.4	0.4	0.3	0.2	0.1	0.1	0.1	1.47	10.93							
17-Oct	0.0	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.9	0.1	0.1	0.0	0.1	0.2	1.0	0.9	0.5	0.5	0.1	0.2	0.1	0.25	1.02							
18-Oct	0.1	0.0	0.1	Z	0.0	0.1	0.3	0.4	0.3	0.1	0.0	0.2	1.0	0.4	0.2	0.0	0.0	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.16	0.96							
19-Oct	0.0	0.1	0.0	Z	0.0	0.0	0.2	0.3	0.1	0.3	0.2	0.5	0.3	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.11	0.48							
20-Oct	0.1	0.1	0.1	Z	0.1	0.1	0.2	0.2	0.4	0.4	0.3	0.4	0.4	2.0	4.1	2.4	1.1	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.58	4.12							
21-Oct	0.1	0.1	0.0	Z	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.0	0.3	1.9	3.3	1.0	1.7	2.4	0.2	0.5	0.1	0.2	0.1	0.58	3.29							
22-Oct	0.2	0.1	0.2	Z	0.1	0.2	0.4	0.4	0.3	0.4	0.7	1.3	2.1	1.0	0.9	1.6	3.0	1.2	0.3	0.2	0.2	0.2	0.2	0.1	0.67	3.04							
23-Oct	0.2	0.2	0.2	Z	0.1	0.2	0.3	0.2	0.2	0.2	0.3	1.6	0.8	0.4	1.5	1.2	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.37	1.64							
24-Oct	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.06	0.25							
25-Oct	0.2	0.1	0.1	Z	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.5	0.8	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.2	0.1	0.20	0.81							
26-Oct	0.1	0.1	0.1	Z	0.0	0.1	0.2	0.2	0.3	0.2	0.1	0.2	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.11	0.27							
27-Oct	0.1	0.2	0.1	Z	0.0	0.2	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.14	0.23							
28-Oct	0.2	0.3	0.2	Z	0.2	0.3	0.4	0.4	0.3	0.3	0.2	0.4	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.20	0.45							
29-Oct	0.1	0.1	0.2	Z	0.0	0.3	0.4	0.5	0.4	0.2	0.1	0.5	1.2	4.4	1.6	0.5	1.1	1.2	0.7	0.2	0.1	0.0	0.0	0.2	0.60	4.39							
30-Oct	1.8	1.7	1.4	Z	1.7	3.3	1.5	1.4	0.3	0.1	0.5	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.62	3.32							
31-Oct	0.1	0.0	0.1	Z	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.05	0.19							
		0.32	0.37	0.32	--	0.28	0.35	0.35	0.52	0.42	0.47	0.47	0.94	0.88	0.88	1.12	0.91	0.60	0.60	0.58	0.43	0.45	0.26	0.18	0.13	Diurnal Average							
		1.85	4.51	2.10	--	2.13	3.38	2.17	5.42	3.73	7.82	4.00	7.91	4.11	4.39	10.93	5.95	3.04	6.06	4.81	5.13	5.30	3.19	1.02	0.61	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
October 2015

Maximum Value: 43.90 ppb on Oct 12 17:00		Maximum Daily Average: 39.42 ppb on Oct 12		Hours in Service: 744																						
Minimum Value: 0.0 ppb on Oct 1 02:00		Minimum Daily Average: 6.43 ppb on Oct 25		Hours of Data: 708																						
Maximum Diurnal Average: 30.58 ppb at hour 15		Minimum Diurnal Average: 6.99 ppb at hour 8		Hours of Missing Data: 36																						
Monthly Average: 16.706 ppb		Percentiles: P₁ = 0.0 P₁₀ = 0.2 Q₁ = 2.1 Median = 15.7 Q₃ = 28.5 P₉₀ = 36.9 P₉₉ = 42.4		Hours of Calibration: 36																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.7	3.3	10.5	14.4	25.2	28.1	30.2	28.5	23.0	22.1	20.4	27.4	34.4	25.8	19.2	16.9	14.36	34.42
2-Oct	8.7	7.4	3.9	Z	0.5	0.4	0.0	0.4	2.3	5.0	2.4	10.4	19.9	21.0	23.0	24.2	23.7	22.3	17.2	17.2	17.0	13.9	11.6	11.4	11.48	24.19
3-Oct	9.3	7.6	13.2	Z	11.4	8.8	7.3	6.6	7.7	7.8	10.5	11.0	15.8	16.0	16.0	16.2	15.7	16.0	16.6	13.7	12.9	14.2	14.9	12.0	12.22	16.62
4-Oct	11.3	10.6	10.0	Z	8.2	9.7	8.2	6.8	7.7	10.1	12.0	15.1	17.5	16.7	14.6	16.7	14.6	11.7	10.1	6.6	0.8	0.1	0.0	0.2	9.54	17.52
5-Oct	0.2	0.0	0.0	Z	0.0	0.6	0.1	0.2	0.5	1.8	5.3	20.2	35.0	35.5	35.8	33.7	31.3	33.0	20.7	18.4	21.9	16.8	12.4	5.1	14.28	35.83
6-Oct	4.2	2.0	1.1	Z	0.0	0.0	0.0	0.2	0.6	4.9	9.3	12.3	19.0	23.6	25.6	23.8	15.8	13.0	8.3	5.9	4.9	3.3	1.6	0.7	7.84	25.64
7-Oct	1.3	0.4	0.3	Z	0.0	0.1	0.2	0.5	0.5	1.0	10.9	18.2	21.0	25.0	25.9	27.7	31.1	26.5	22.5	6.9	1.2	0.8	0.4	0.6	9.71	31.11
8-Oct	0.9	0.2	0.0	Z	0.0	0.0	0.0	0.5	1.3	5.5	14.5	28.5	32.9	30.2	30.5	26.6	25.3	26.8	24.2	27.8	27.8	33.7	27.9	32.0	17.27	33.69
9-Oct	29.8	29.4	34.4	Z	33.8	6.6	4.9	5.7	8.8	8.6	10.5	26.5	36.1	38.5	38.4	37.3	36.3	26.9	30.4	29.8	34.6	38.8	40.6	40.6	27.27	40.61
10-Oct	39.8	33.8	37.7	Z	33.8	34.9	33.9	35.3	35.4	35.7	38.5	39.3	40.1	40.4	40.6	38.9	41.5	39.3	35.8	32.7	29.4	19.9	17.3	14.6	34.29	41.54
11-Oct	30.2	31.2	31.1	Z	32.0	32.9	30.9	35.5	34.3	39.2	40.9	42.4	43.3	41.2	41.7	41.4	41.2	40.7	36.6	36.0	31.3	36.6	40.8	38.8	36.97	43.33
12-Oct	38.6	37.3	36.2	Z	36.6	32.9	37.1	34.1	37.3	40.8	41.5	42.2	40.5	42.1	41.8	43.7	43.9	42.4	36.6	41.2	38.7	40.1	41.5	39.6	39.42	43.90
13-Oct	37.2	35.7	27.1	Z	26.6	10.3	1.4	1.3	3.8	15.0	37.2	40.7	38.8	40.1	41.1	43.4	41.9	36.7	33.6	17.0	8.6	9.9	6.2	4.8	24.28	43.44
14-Oct	3.9	5.2	2.0	Z	0.7	1.4	0.6	C	C	C	C	C	33.1	42.2	42.8	41.3	40.5	39.2	38.3	27.4	25.6	27.2	22.2	15.0	22.70	42.80
15-Oct	10.9	8.8	4.7	Z	2.3	1.3	1.8	0.8	2.9	7.3	17.4	22.6	27.0	31.3	32.2	31.0	19.4	4.0	1.1	0.4	3.8	2.9	0.6	2.0	10.28	32.21
16-Oct	2.4	1.6	0.2	Z	0.0	0.2	2.0	0.7	1.3	8.3	22.4	27.1	32.1	35.6	35.6	33.9	30.5	5.6	5.8	0.8	0.8	2.4	2.8	0.8	11.01	35.65
17-Oct	2.0	2.6	0.7	Z	0.0	0.0	16.0	20.5	15.3	25.7	30.2	30.0	31.5	34.3	32.0	27.7	12.9	5.1	0.7	0.8	0.8	7.4	3.3	1.6	13.09	34.33
18-Oct	1.0	0.6	4.8	Z	1.2	0.2	0.0	0.0	0.8	5.4	13.4	25.1	31.4	38.4	38.6	39.1	38.0	32.0	20.8	12.5	13.3	5.1	1.6	2.3	14.16	39.13
19-Oct	0.2	1.4	2.0	Z	0.2	0.0	0.0	0.0	0.3	3.2	13.6	16.7	16.3	23.9	27.5	26.8	25.1	22.5	21.7	19.8	11.3	3.7	1.1	0.4	10.33	27.45
20-Oct	0.1	0.0	0.0	Z	0.0	0.0	0.1	0.4	0.7	1.7	5.4	14.5	30.1	34.1	34.9	35.6	34.1	33.8	18.9	11.1	6.9	5.5	2.6	2.6	11.87	35.57
21-Oct	0.6	8.3	2.8	Z	25.3	25.9	5.6	0.2	1.1	1.0	4.3	16.8	17.6	23.2	34.0	33.6	34.9	33.9	32.0	35.8	36.9	28.7	26.8	23.5	19.68	36.94
22-Oct	16.8	15.2	10.1	Z	5.0	1.4	0.4	0.6	0.8	5.9	24.7	36.7	36.3	36.6	37.9	37.7	35.5	32.2	18.9	5.7	3.4	3.1	0.6	9.6	16.31	37.89
23-Oct	11.9	7.2	5.2	Z	0.8	0.0	0.1	0.2	1.9	5.6	8.9	33.7	37.5	38.7	38.0	35.1	33.0	33.9	38.0	38.1	35.0	31.6	32.7	30.6	21.64	38.67
24-Oct	25.1	24.8	11.0	Z	6.6	9.7	3.5	5.9	12.5	14.7	17.3	16.5	15.1	16.9	18.7	22.2	19.8	10.2	1.1	0.0	0.2	0.2	0.2	0.3	10.98	25.09
25-Oct	0.1	0.3	0.3	Z	0.2	0.2	0.0	0.0	0.6	3.3	10.9	17.7	20.5	25.2	23.5	21.5	18.6	4.7	0.1	0.0	0.0	0.0	0.1	0.0	6.43	25.17
26-Oct	0.2	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.5	0.7	2.1	3.8	10.3	17.8	19.0	15.0	18.5	21.5	21.8	21.8	25.9	27.2	27.4	10.15	27.37
27-Oct	27.8	30.2	29.2	Z	15.2	24.5	27.2	16.6	17.6	13.6	21.6	23.5	25.4	26.5	25.5	26.5	22.1	18.8	17.5	5.2	0.2	0.4	0.0	0.0	18.05	30.23
28-Oct	0.0	0.0	0.0	Z	0.5	14.0	12.3	14.5	18.6	22.1	25.7	25.8	27.3	27.3	26.8	26.1	21.0	20.0	21.6	23.1	22.2	18.1	23.4	17.2	17.73	27.35
29-Oct	17.7	18.0	15.7	Z	12.1	2.1	0.2	0.1	0.0	14.3	18.4	21.5	24.9	28.7	30.5	31.3	30.3	26.2	26.2	16.4	9.6	6.7	6.3	10.5	15.98	31.27
30-Oct	30.4	30.4	28.1	Z	28.9	24.6	25.3	22.4	20.7	27.5	25.6	27.5	29.6	27.7	20.4	18.3	14.8	19.4	24.4	20.6	13.8	10.0	17.3	10.0	22.50	30.40
31-Oct	4.7	3.6	3.2	Z	0.3	1.1	0.2	0.0	0.8	4.8	6.4	8.6	11.0	21.1	25.9	22.8	24.7	18.5	1.4	0.8	0.6	1.8	3.4	3.4	7.37	25.89
																								Diurnal Average		
																								Diurnal Maximum		
																								11.86 11.42 10.17 -- 9.10 7.86 7.07 6.99 7.89 11.45 17.02 22.92 26.96 29.69 30.58 30.07 27.60 23.75 20.10 16.80 15.16 14.02 13.12 12.09		
																								39.84 37.29 37.71 -- 36.56 34.91 37.06 35.55 37.27 40.82 41.47 42.44 43.33 42.15 42.80 43.67 43.90 42.40 38.29 41.25 38.73 40.12 41.45 40.59		
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
October 2015

Maximum Value: 84.26 ppb on Oct 7 08:00		Maximum Daily Average: 17.28 ppb on Oct 7		Hours in Service: 744																																													
Minimum Value: 0.0 ppb on Oct 27 01:00		Minimum Daily Average: 0.24 ppb on Oct 11		Hours of Data: 702																																													
Maximum Diurnal Average: 23.71 ppb at hour 8		Minimum Diurnal Average: 1.35 ppb at hour 16		Hours of Missing Data: 42																																													
Monthly Average: 6.764 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.5 Median = 1.9 Q ₃ = 7.0 P ₉₀ = 21.5 P ₉₉ = 48.3		Hours of Calibration: 36																																													
Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.5 Median = 1.9 Q ₃ = 7.0 P ₉₀ = 21.5 P ₉₉ = 48.3		Percent Operational Time: 99.2																																															
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-Oct	6.9	3.8	5.4	Z	5.9	19.9	47.5	58.5	39.1	16.5	10.4	11.8	2.9	1.6	0.6	3.2	5.9	2.5	1.5	2.8	0.1	0.1	0.1	0.0	10.74	58.47																							
2-Oct	0.1	0.1	1.0	Z	1.2	1.5	14.1	11.9	8.2	5.4	5.0	1.2	1.2	4.8	1.0	0.2	0.1	0.1	0.7	0.9	0.7	1.2	0.1	0.2	2.64	14.08																							
3-Oct	0.1	0.1	0.2	Z	0.5	1.7	1.8	2.3	0.7	3.9	3.3	2.4	1.7	2.0	1.5	1.8	0.9	1.5	0.5	1.6	0.4	0.2	0.1	0.7	1.31	3.88																							
4-Oct	0.3	0.3	0.2	Z	1.6	1.3	1.8	2.1	2.8	2.7	2.5	3.1	2.9	1.5	3.1	3.3	2.1	1.5	2.3	2.4	5.5	4.7	5.1	1.3	2.35	5.54																							
5-Oct	0.5	3.6	3.0	Z	12.2	32.1	27.6	31.2	32.0	27.4	15.2	7.1	1.1	0.9	1.0	1.0	1.3	0.6	2.0	1.5	0.2	0.8	0.5	1.0	8.86	32.11																							
6-Oct	0.1	0.5	3.0	Z	15.9	9.6	15.7	17.8	19.3	12.0	9.2	8.4	6.3	2.2	4.0	2.1	4.3	2.9	8.7	5.5	2.8	4.6	6.1	10.1	7.44	19.31																							
7-Oct	1.9	16.7	10.1	Z	16.3	25.3	47.5	84.3	72.9	42.5	7.3	1.2	2.0	1.8	2.6	3.2	0.5	1.4	3.2	19.4	16.8	9.6	7.1	3.9	17.28	84.26																							
8-Oct	1.3	5.9	12.5	Z	18.5	29.9	50.2	69.6	50.4	16.0	8.0	4.6	3.0	2.7	1.7	1.7	0.9	1.0	0.4	0.6	0.5	0.1	0.1	0.1	12.16	69.57																							
9-Oct	0.1	0.2	0.2	Z	0.1	7.4	7.5	5.6	5.0	9.2	10.0	3.7	1.4	1.7	1.1	0.8	0.6	1.6	0.8	0.9	0.3	0.1	0.1	0.1	2.54	9.98																							
10-Oct	0.1	0.7	0.2	Z	0.1	2.1	0.8	0.4	1.0	2.3	1.4	1.2	0.2	0.1	0.5	1.1	0.4	0.2	0.2	1.0	1.6	0.8	0.6	0.6	0.76	2.26																							
11-Oct	0.3	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.9	0.7	0.6	0.5	0.2	0.3	0.2	0.9	0.2	0.1	0.1	0.24	0.94																							
12-Oct	0.1	0.1	0.1	Z	0.5	1.2	0.5	1.8	1.0	0.4	0.2	0.2	1.2	0.3	0.8	0.3	0.2	0.1	0.2	0.0	0.3	0.2	0.1	0.0	0.43	1.82																							
13-Oct	0.0	0.1	0.3	Z	0.5	10.2	30.1	51.7	31.6	16.5	1.9	1.1	1.9	1.5	0.4	0.0	0.2	0.4	1.5	5.2	4.0	2.4	6.6	4.0	7.48	51.68																							
14-Oct	7.1	1.7	7.1	Z	7.6	14.2	35.3	C	C	C	C	C	0.1	0.2	0.1	0.1	0.1	0.1	2.1	1.4	0.4	0.2	0.6	4.35	35.35																								
15-Oct	0.4	2.4	1.8	Z	2.6	5.6	7.3	13.6	20.4	27.9	7.9	5.6	5.3	2.7	1.8	2.3	5.5	22.4	33.5	42.8	4.3	5.3	9.7	3.4	10.20	42.76																							
16-Oct	1.2	1.3	3.7	Z	16.7	21.5	3.0	15.8	35.1	21.6	2.6	2.2	1.1	1.4	3.2	2.8	2.1	58.1	15.9	27.8	15.0	3.2	0.3	3.9	11.28	58.09																							
17-Oct	0.9	0.3	2.6	Z	7.0	19.2	1.1	0.5	3.8	1.3	1.1	1.2	0.6	0.4	0.9	1.7	14.7	26.6	48.3	39.0	36.3	2.3	4.6	3.3	9.46	48.26																							
18-Oct	5.1	7.1	2.3	Z	9.7	24.4	41.3	50.1	40.3	11.9	6.0	2.3	2.1	0.4	0.2	0.1	0.0	1.0	5.7	3.2	1.4	4.6	6.9	2.8	9.94	50.08																							
19-Oct	4.6	4.1	1.4	Z	5.7	11.8	25.2	36.6	21.4	31.3	5.9	4.5	6.6	2.7	1.7	0.9	0.4	0.2	1.6	1.2	0.8	1.7	3.4	4.1	7.73	36.62																							
20-Oct	4.4	3.5	3.3	Z	5.6	9.2	17.2	30.7	37.4	47.4	24.4	14.4	1.5	1.1	1.6	1.0	0.3	0.0	1.9	4.6	2.0	1.4	2.9	1.5	9.45	47.38																							
21-Oct	5.1	2.0	0.9	Z	0.9	1.1	12.3	29.8	18.9	13.2	21.5	5.0	4.7	4.5	1.3	0.9	0.3	0.2	0.2	0.1	0.1	0.5	0.1	0.4	5.39	29.81																							
22-Oct	0.3	0.5	1.0	Z	2.9	15.0	35.7	37.4	36.1	23.4	4.9	0.8	0.7	0.8	0.7	0.8	0.6	0.2	9.9	8.4	6.4	3.9	8.6	1.0	8.69	37.37																							
23-Oct	0.4	5.0	3.1	Z	8.6	28.4	24.6	25.5	21.6	13.3	15.8	2.0	0.8	0.8	0.6	0.6	0.2	0.3	0.0	0.1	0.1	0.4	0.1	0.1	6.62	28.36																							
24-Oct	0.2	0.3	0.1	Z	0.8	0.1	2.1	0.2	0.5	0.9	1.1	0.5	1.2	2.6	1.7	0.6	0.9	5.9	11.1	14.4	5.6	2.6	2.4	4.1	2.59	14.36																							
25-Oct	4.7	2.8	5.5	Z	1.3	8.6	8.1	14.9	17.6	13.2	7.0	4.8	3.5	1.2	1.9	1.7	1.6	15.1	26.1	19.3	15.3	5.2	12.8	13.0	8.93	26.11																							
26-Oct	12.3	11.6	11.3	Z	7.5	17.3	28.6	26.7	29.3	40.4	26.0	21.8	7.7	M	M	M	M	M	M	0.2	0.1	0.0	0.1	0.0	--	40.37																							
27-Oct	0.0	0.0	0.0	Z	2.7	1.0	1.1	0.7	1.2	5.3	4.0	2.6	2.4	1.9	2.6	1.8	3.3	1.9	0.1	10.6	21.3	6.1	9.5	13.7	4.08	21.26																							
28-Oct	12.0	21.7	19.8	Z	25.9	2.0	7.0	5.1	2.7	2.4	1.2	1.8	0.9	0.8	1.0	0.7	0.6	0.2	0.2	0.2	0.2	0.1	0.1	0.1	4.64	25.91																							
29-Oct	0.1	0.1	0.2	Z	1.4	34.7	40.8	62.1	51.1	19.1	2.8	1.0	2.2	2.3	0.8	0.5	0.4	0.2	0.2	1.3	2.6	1.2	0.8	0.3	9.84	62.07																							
30-Oct	0.1	0.2	0.1	Z	0.1	0.3	0.3	8.7	3.8	3.2	1.3	0.3	0.2	0.3	3.3	3.2	4.1	2.0	0.1	0.2	1.7	1.7	1.4	3.7	1.75	8.67																							
31-Oct	6.2	2.1	1.4	Z	11.1	8.0	12.6	16.0	23.5	5.4	6.5	4.5	3.1	2.1	0.8	1.6	1.0	5.5	20.8	21.8	18.3	2.7	1.3	1.3	7.73	23.50																							
																								2.49	3.19	3.28	--	6.18	11.77	17.70	23.71	20.96	14.53	7.14	4.05	2.28	1.59	1.44	1.35	1.80	5.13	6.60	7.71	5.39	2.21	2.96	2.56	Diurnal Average	
																								12.32	21.65	19.83	--	25.91	34.75	50.22	84.26	72.90	47.38	25.97	21.83	7.75	4.78	3.99	3.28	14.72	58.09	48.26	42.76	36.35	9.56	12.84	13.67	Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																																																	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr --- ppb 24-hr --- ppb																																																	



WCAS - Hinton
Summary of Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
October 2015

Maximum Value: 39.35 ppb on Oct 16 18:00		Maximum Daily Average: 15.13 ppb on Oct 15		Hours in Service: 744																																													
Minimum Value: 0.2 ppb on Oct 11 11:00		Minimum Daily Average: 2.43 ppb on Oct 11		Hours of Data: 702																																													
Maximum Diurnal Average: 11.00 ppb at hour 20		Minimum Diurnal Average: 3.50 ppb at hour 14		Hours of Missing Data: 42																																													
Monthly Average: 7.234 ppb		Percentiles: P ₁ = 0.5 P ₁₀ = 1.9 Q ₁ = 3.5 Median = 5.9 Q ₃ = 9.9 P ₉₀ = 14.0 P ₉₉ = 26.0		Hours of Calibration: 36																																													
				Percent Operational Time: 99.2																																													
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-Oct	6.3	5.2	6.0	Z	5.2	5.8	6.9	8.4	7.3	10.7	10.9	10.5	4.6	3.3	2.1	5.8	8.2	6.9	8.3	7.3	2.0	6.4	6.3	3.7	6.43	10.87																							
2-Oct	6.3	4.3	7.6	Z	5.2	3.9	5.8	5.4	7.8	7.6	8.2	3.6	2.1	4.8	2.3	1.0	0.8	1.3	5.9	4.7	3.5	4.8	3.6	2.9	4.50	8.16																							
3-Oct	1.2	1.5	1.5	Z	2.2	3.0	3.2	4.5	1.6	3.5	2.8	2.3	1.6	2.0	2.1	2.6	3.1	3.6	2.4	4.8	3.7	2.1	1.5	2.1	2.58	4.79																							
4-Oct	2.0	2.1	1.7	Z	3.4	2.8	3.8	4.5	3.2	2.0	1.9	2.9	3.5	1.5	2.1	1.0	2.6	2.4	2.8	5.1	6.6	4.8	3.0	1.1	2.91	6.55																							
5-Oct	1.1	2.3	2.0	Z	2.5	4.8	4.0	5.0	4.7	5.5	6.7	8.8	2.4	2.1	2.1	2.9	5.0	3.7	12.0	9.3	3.8	5.3	5.4	7.5	4.74	11.99																							
6-Oct	2.9	3.5	3.9	Z	6.1	4.4	4.9	4.8	5.6	7.6	7.1	7.3	8.1	4.7	9.4	8.5	11.1	11.2	14.8	12.7	11.3	13.2	11.1	11.0	8.07	14.79																							
7-Oct	7.1	7.5	5.1	Z	4.3	5.3	6.3	9.9	9.0	11.5	9.3	5.4	5.0	3.7	7.8	7.8	3.1	5.1	10.6	21.9	20.3	11.6	8.9	6.0	8.38	21.94																							
8-Oct	3.7	3.7	4.0	Z	2.9	5.3	5.3	6.1	7.7	8.4	9.1	10.1	7.9	7.4	6.0	7.7	6.8	5.2	7.7	5.2	6.4	1.5	5.1	2.0	5.88	10.12																							
9-Oct	5.7	8.0	7.5	Z	4.9	10.3	9.3	8.6	9.6	14.0	14.4	7.5	5.4	5.2	3.7	3.9	4.9	13.8	9.4	9.5	5.0	1.9	1.5	2.0	7.22	14.35																							
10-Oct	3.5	9.9	5.8	Z	7.5	5.6	8.2	7.3	7.5	7.8	4.3	3.1	0.8	0.6	2.7	6.8	3.1	2.2	4.1	5.6	6.9	7.6	8.1	7.2	5.48	9.93																							
11-Oct	4.7	0.7	0.5	Z	1.2	1.0	2.0	0.8	1.1	0.3	0.2	0.3	0.4	2.4	2.2	2.3	2.4	2.1	5.6	5.7	10.3	5.4	1.5	2.7	2.43	10.32																							
12-Oct	3.6	3.8	4.2	Z	4.6	9.2	5.0	9.7	6.6	1.5	0.6	0.5	3.5	1.0	2.4	0.9	1.1	2.0	6.4	0.6	5.2	2.8	0.7	0.8	3.33	9.66																							
13-Oct	4.1	4.3	10.6	Z	11.1	18.8	24.0	23.8	17.8	16.7	6.3	3.4	5.1	4.2	2.2	0.7	1.0	6.2	5.7	21.9	22.0	17.0	22.7	20.7	11.75	24.02																							
14-Oct	19.0	16.0	16.9	Z	14.2	13.9	16.9	C	C	C	C	C	3.9	0.9	0.7	0.8	0.8	1.0	1.1	10.8	11.2	8.7	6.8	11.6	8.61	18.97																							
15-Oct	12.9	14.9	17.0	Z	16.3	16.2	14.1	14.0	13.9	19.1	11.4	9.0	9.1	5.8	5.4	6.4	17.3	29.9	32.3	27.4	14.2	13.8	14.9	12.4	15.13	32.32																							
16-Oct	9.3	10.5	12.8	Z	12.9	12.3	9.3	12.0	13.8	15.5	5.0	4.9	3.3	4.5	10.7	10.2	12.8	39.4	23.4	27.1	20.4	13.0	10.3	11.3	13.26	39.35																							
17-Oct	7.3	6.6	8.2	Z	8.8	11.2	5.7	4.8	6.9	5.0	4.1	4.4	2.4	1.7	3.7	7.8	22.3	28.8	26.4	23.7	18.7	10.7	15.5	15.8	10.89	28.80																							
18-Oct	15.1	14.7	8.6	Z	9.6	12.7	14.5	13.8	10.8	7.5	6.7	4.4	4.2	1.6	1.0	0.6	0.5	6.7	13.0	15.9	10.4	13.2	14.1	10.4	9.13	15.89																							
19-Oct	11.5	9.0	6.8	Z	6.1	7.1	8.3	9.1	7.4	14.5	9.1	9.2	11.5	3.3	3.1	4.1	4.8	3.4	2.7	3.7	4.4	6.5	6.5	5.4	6.85	14.55																							
20-Oct	3.6	3.2	3.5	Z	3.6	4.4	6.3	7.5	8.4	11.5	13.0	17.0	4.1	3.6	5.7	5.2	2.5	0.7	9.6	12.1	10.4	7.4	7.0	6.0	6.80	17.00																							
21-Oct	5.3	5.4	3.3	Z	4.0	5.0	9.0	9.3	9.6	8.8	10.0	10.5	12.9	10.2	3.7	5.0	2.9	3.2	4.6	3.1	3.6	5.3	4.4	4.6	6.25	12.87																							
22-Oct	7.1	9.1	10.7	Z	12.7	17.9	17.3	17.0	11.5	14.7	10.0	3.2	4.1	3.8	3.8	3.5	5.7	5.6	16.5	26.3	21.1	17.7	18.7	7.2	11.54	26.28																							
23-Oct	5.2	7.7	8.6	Z	10.4	13.9	13.9	12.6	8.5	9.1	12.0	5.7	2.7	2.3	2.8	4.4	2.9	2.2	0.5	0.5	0.6	1.7	1.2	0.6	5.65	13.92																							
24-Oct	4.1	5.3	4.3	Z	12.0	2.8	7.4	3.2	4.2	3.6	3.1	1.5	2.5	3.4	2.8	2.3	4.1	9.2	8.1	6.8	3.4	4.8	3.1	3.4	4.59	12.02																							
25-Oct	4.6	3.2	4.1	Z	2.7	4.1	3.7	5.2	6.2	5.9	7.4	7.7	6.0	2.8	3.0	2.5	4.8	14.6	11.2	7.0	5.8	5.5	6.2	4.5	5.60	14.62																							
26-Oct	3.9	3.1	3.2	Z	3.8	4.5	6.3	5.5	8.2	10.4	8.4	10.7	11.9	M	M	M	M	M	M	1.5	1.3	0.7	0.9	0.5	--	11.90																							
27-Oct	0.4	1.1	1.0	Z	11.7	8.4	5.3	8.1	7.0	10.8	7.1	3.6	2.7	2.9	4.2	3.3	6.9	8.0	6.0	13.0	15.8	11.2	12.2	10.8	7.02	15.77																							
28-Oct	10.2	10.3	8.0	Z	10.2	10.6	11.2	13.0	8.2	4.8	2.9	5.9	3.1	2.9	3.7	4.4	8.9	8.7	5.7	4.0	4.3	5.1	2.2	4.3	6.64	13.01																							
29-Oct	3.7	3.3	4.0	Z	6.6	18.6	17.2	17.7	13.1	11.6	9.6	8.4	8.2	7.0	4.4	3.6	5.5	7.5	8.4	12.2	9.0	8.3	9.2	6.7	8.86	18.57																							
30-Oct	6.8	6.8	8.2	Z	7.1	10.3	6.9	12.2	12.6	4.1	6.1	2.6	1.0	1.4	8.1	10.7	11.8	8.3	4.0	10.1	10.6	10.2	7.0	17.1	8.00	17.11																							
31-Oct	16.4	12.1	10.5	Z	14.0	9.0	9.0	9.5	10.0	5.4	6.2	7.3	5.5	3.8	3.9	6.4	6.6	11.7	26.2	21.5	16.8	12.1	8.9	8.1	10.48	26.16																							
																								6.42	6.42	6.46	--	7.34	8.49	8.75	9.11	8.32	8.64	7.13	6.07	4.83	3.50	3.93	4.44	5.82	8.49	9.85	11.00	9.32	7.76	7.38	6.80	Diurnal Average	
																								18.97	15.97	17.04	--	16.28	18.75	24.02	23.80	17.79	19.06	14.35	17.00	12.87	10.17	10.74	10.73	22.31	39.35	32.32	27.40	21.99	17.70	22.72	20.67	Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																																																	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																																																	



WCAS - Hinton
Summary of Hourly Averages

NOx (NO_x) - ppb
October 2015

Maximum Value: 96.52 ppb on Oct 16 18:00		Maximum Daily Average: 25.40 ppb on Oct 7		Hours in Service: 744																																													
Minimum Value: 0.2 ppb on Oct 11 11:00		Minimum Daily Average: 2.66 ppb on Oct 11		Hours of Data: 702																																													
Maximum Diurnal Average: 32.73 ppb at hour 8		Minimum Diurnal Average: 5.07 ppb at hour 14		Hours of Missing Data: 42																																													
Monthly Average: 13.958 ppb		Percentiles: P ₁ = 0.5 P ₁₀ = 2.2 Q ₁ = 4.6 Median = 8.6 Q ₃ = 17.8 P ₉₀ = 33.4 P ₉₉ = 74.3		Hours of Calibration: 36																																													
Percentiles: P ₁ = 0.5 P ₁₀ = 2.2 Q ₁ = 4.6 Median = 8.6 Q ₃ = 17.8 P ₉₀ = 33.4 P ₉₉ = 74.3		Percentiles: P ₁ = 0.5 P ₁₀ = 2.2 Q ₁ = 4.6 Median = 8.6 Q ₃ = 17.8 P ₉₀ = 33.4 P ₉₉ = 74.3		Percent Operational Time: 99.2																																													
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-Oct	13.2	9.0	11.4	Z	11.1	25.6	54.0	66.4	46.0	27.0	21.1	22.2	7.4	4.8	2.7	9.0	14.0	9.3	9.7	10.1	2.1	6.5	6.4	3.7	17.08	66.44																							
2-Oct	6.4	4.4	8.5	Z	6.4	5.4	19.8	17.2	15.9	12.9	13.1	4.8	3.3	9.5	3.2	1.1	0.9	1.3	6.6	5.5	4.2	6.0	3.7	3.1	7.10	19.79																							
3-Oct	1.3	1.6	1.7	Z	2.7	4.7	5.0	6.9	2.3	7.4	6.1	4.7	3.3	4.0	3.6	4.4	4.0	5.1	2.9	6.3	4.1	2.3	1.6	2.8	3.86	7.37																							
4-Oct	2.2	2.4	1.9	Z	4.9	4.1	5.5	6.6	6.0	4.7	4.4	5.9	6.5	3.0	5.1	4.3	4.6	3.9	5.1	7.4	12.0	9.5	8.0	2.4	5.24	12.03																							
5-Oct	1.6	5.8	5.0	Z	14.6	36.7	31.4	35.9	36.5	32.7	21.7	15.8	3.4	3.1	3.0	3.9	6.3	4.3	14.0	10.7	4.0	6.1	5.8	8.5	13.52	36.67																							
6-Oct	3.0	4.0	6.9	Z	21.9	13.9	20.4	22.5	24.8	19.5	16.3	15.7	14.4	7.0	13.4	10.6	15.4	14.1	23.3	18.1	14.1	17.7	17.1	21.0	15.43	24.81																							
7-Oct	9.0	24.0	15.1	Z	20.5	30.4	53.4	93.5	81.3	53.7	16.5	6.6	7.0	5.5	10.4	11.0	3.5	6.5	13.7	38.9	36.9	21.1	15.8	9.9	25.40	93.49																							
8-Oct	5.0	9.5	16.4	Z	21.3	34.9	55.2	75.2	57.7	24.3	17.0	14.7	10.9	10.0	7.7	9.4	7.7	6.2	8.0	5.7	6.9	1.5	5.2	2.1	17.93	75.17																							
9-Oct	5.8	8.1	7.7	Z	5.0	17.6	16.7	14.1	14.6	23.0	24.2	11.2	6.8	6.9	4.8	4.7	5.5	15.3	10.2	10.3	5.3	2.0	1.6	2.0	9.72	24.22																							
10-Oct	3.6	10.6	5.9	Z	7.6	7.6	8.9	7.7	8.4	10.0	5.6	4.3	1.0	0.7	3.1	7.9	3.5	2.3	4.3	6.5	8.4	8.3	8.6	7.8	6.21	10.61																							
11-Oct	5.0	0.7	0.6	Z	1.2	1.1	2.0	0.9	1.1	0.3	0.2	0.3	0.5	3.3	2.9	3.0	2.9	2.3	5.9	5.9	11.2	5.5	1.5	2.7	2.66	11.22																							
12-Oct	3.7	3.9	4.3	Z	5.0	10.4	5.5	11.4	7.5	1.9	0.8	0.6	4.7	1.3	3.2	1.2	1.3	2.1	6.6	0.6	5.5	3.0	0.8	0.8	3.74	11.44																							
13-Oct	4.1	4.4	10.8	Z	11.6	28.8	53.8	75.0	49.1	33.0	8.2	4.6	6.9	5.7	2.6	0.7	1.2	6.5	7.2	26.9	25.8	19.3	29.3	24.6	19.13	74.99																							
14-Oct	25.9	17.6	23.9	Z	21.7	28.1	52.0	C	C	C	C	C	4.2	0.6	0.5	0.6	0.5	0.8	0.9	12.7	12.3	8.9	6.8	12.0	12.79	52.05																							
15-Oct	13.3	17.3	18.8	Z	18.9	21.9	21.5	27.6	34.3	47.0	19.4	14.6	14.4	8.6	7.3	8.7	22.8	52.3	65.7	70.1	18.5	19.1	24.7	15.8	25.33	70.11																							
16-Oct	10.5	11.8	16.5	Z	29.6	33.8	12.3	27.8	48.9	37.1	7.6	7.1	4.4	5.9	13.9	13.0	15.0	96.5	39.3	54.9	35.5	16.2	10.6	15.2	24.50	96.52																							
17-Oct	8.2	6.8	10.8	Z	15.8	30.4	6.8	5.3	10.6	6.3	5.2	5.6	3.0	2.1	4.6	9.5	37.0	55.4	74.5	62.7	55.1	13.0	20.1	19.1	20.35	74.54																							
18-Oct	20.2	21.9	11.0	Z	19.3	37.1	55.8	63.8	51.1	19.3	12.7	6.7	6.3	1.9	1.2	0.6	0.5	7.7	18.7	19.1	11.8	17.8	21.0	13.2	19.07	63.83																							
19-Oct	16.1	13.2	8.1	Z	11.9	18.8	33.5	45.7	28.7	45.9	15.0	13.7	18.1	6.0	4.9	5.0	5.2	3.5	4.3	4.9	5.3	8.2	9.9	9.5	14.58	45.87																							
20-Oct	8.0	6.6	6.8	Z	9.2	13.7	23.5	38.2	45.8	58.8	37.4	31.5	5.7	4.7	7.4	6.2	2.8	0.7	11.5	16.7	12.5	8.8	10.0	7.5	16.25	58.79																							
21-Oct	10.4	7.4	4.1	Z	5.0	6.1	21.3	39.1	28.5	22.0	31.5	15.5	17.6	14.7	5.0	5.9	3.2	3.5	4.8	3.2	3.7	5.8	4.5	5.0	11.64	39.07																							
22-Oct	7.4	9.6	11.7	Z	15.6	32.9	52.9	54.4	47.5	38.2	14.9	4.0	4.8	4.6	4.5	4.3	6.4	5.8	26.4	34.7	27.6	21.6	27.4	8.3	20.24	54.39																							
23-Oct	5.6	12.7	11.7	Z	19.0	42.3	38.5	38.1	30.1	22.4	27.8	7.7	3.5	3.0	3.4	5.0	3.1	2.5	0.6	0.6	0.7	2.1	1.3	0.6	12.26	42.27																							
24-Oct	4.3	5.6	4.4	Z	12.8	3.0	9.5	3.4	4.6	4.5	4.2	1.9	3.7	6.0	4.5	2.9	5.0	15.1	19.2	21.1	8.9	7.4	5.5	7.5	7.18	21.12																							
25-Oct	9.3	6.0	9.6	Z	4.1	12.8	11.8	20.0	23.7	19.0	14.4	12.6	9.5	3.9	4.9	4.2	6.5	29.7	37.3	26.3	21.0	10.7	19.1	17.5	14.52	37.29																							
26-Oct	16.2	14.7	14.5	Z	11.3	21.9	34.9	32.3	37.7	50.8	34.6	32.7	19.8	M	M	M	M	M	M	1.6	1.2	0.6	0.9	0.5	--	50.84																							
27-Oct	0.3	1.1	0.9	Z	14.3	9.4	6.4	8.8	8.1	16.1	11.1	6.2	5.1	4.8	6.8	5.0	10.2	9.9	6.0	23.6	37.1	17.3	21.7	24.5	11.07	37.05																							
28-Oct	22.2	32.0	27.9	Z	36.1	12.5	18.2	18.1	10.9	7.2	4.1	7.7	3.9	3.7	4.7	5.1	9.4	8.9	5.9	4.2	4.5	5.3	2.3	4.4	11.26	36.13																							
29-Oct	3.8	3.4	4.2	Z	7.9	53.3	58.0	79.8	64.3	30.7	12.3	9.4	10.4	9.3	5.1	4.1	5.9	7.7	8.5	13.5	11.6	9.5	10.0	7.0	18.67	79.84																							
30-Oct	6.9	6.9	8.2	Z	7.2	10.6	7.2	20.8	16.4	7.3	7.4	2.9	1.2	1.6	11.4	13.9	15.9	10.3	4.2	10.3	12.2	11.9	8.3	20.8	9.72	20.81																							
31-Oct	22.6	14.2	11.9	Z	25.1	17.0	21.6	25.5	33.5	10.8	12.6	11.8	8.6	6.0	4.7	8.0	7.6	17.1	46.9	43.3	35.1	14.7	10.2	9.4	18.18	46.94																							
																								8.88	9.58	9.72	--	13.50	20.21	26.37	32.73	29.20	23.13	14.24	10.11	7.11	5.07	5.34	5.77	7.59	13.55	16.41	18.60	14.67	9.93	10.31	9.33	Diurnal Average	
																								25.92	31.96	27.88	--	36.13	53.29	57.98	93.49	81.31	58.79	37.38	32.73	19.84	14.72	13.92	13.91	37.03	96.52	74.54	70.11	55.06	21.65	29.26	24.61	Diurnal Maximum	
Z - zerospan C - Calibration M - Maintenance																																																	
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
October 2015

Maximum Value: 96.89 µg/m ³ on Oct 17 18:00		Maximum Daily Average: 24.74 µg/m ³ on Oct 17		Hours in Service: 744																																												
Minimum Value: 0.0 µg/m ³ on Oct 1 02:00		Minimum Daily Average: 3.08 µg/m ³ on Oct 3		Hours of Data: 737																																												
Maximum Diurnal Average: 15.69 µg/m ³ at hour 18		Minimum Diurnal Average: 6.41 µg/m ³ at hour 24		Hours of Missing Data: 7																																												
Monthly Average: 9.789 µg/m ³		Percentiles: P ₁ = 0.0 P ₁₀ = 2.7 Q ₁ = 4.7 Median = 7.3 Q ₃ = 11.5 P ₉₀ = 18.9 P ₉₉ = 49.2		Hours of Calibration: 7																																												
				Percent Operational Time: 100.0																																												
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																								
1-Oct	0.8	0.0	9.3	8.3	8.9	16.4	19.4	15.1	16.0	11.8	16.3	16.9	14.4	13.9	8.4	11.0	25.8	15.8	23.6	2.7	3.6	6.9	5.8	2.9	11.42	25.83																						
2-Oct	7.1	2.6	2.6	1.7	2.7	0.1	7.3	9.1	10.3	7.9	10.5	5.2	2.6	4.1	2.5	2.4	2.0	3.6	0.0	4.6	8.5	1.6	9.2	0.5	4.53	10.49																						
3-Oct	2.6	4.3	2.1	1.0	0.0	7.1	3.2	0.0	4.7	0.3	4.6	5.3	9.2	6.6	3.2	3.4	3.7	2.2	2.4	3.8	3.0	0.0	0.0	1.2	3.08	9.17																						
4-Oct	2.7	2.7	4.5	1.6	2.1	2.5	2.5	10.1	6.7	4.1	3.2	7.9	7.2	7.2	13.5	6.9	3.3	0.0	11.4	5.6	8.4	6.4	0.0	6.9	5.31	13.55																						
5-Oct	10.0	9.7	5.1	6.4	7.9	9.2	10.1	10.9	13.7	13.8	15.9	14.9	3.3	4.4	6.7	9.4	10.3	7.8	13.2	11.0	8.3	0.5	9.2	6.4	9.09	15.85																						
6-Oct	4.7	4.4	5.2	5.7	7.8	6.9	8.6	9.1	8.7	6.5	13.1	14.0	18.3	7.8	27.0	19.3	22.5	18.9	21.3	18.6	11.2	14.4	12.5	1.3	11.99	27.00																						
7-Oct	7.5	11.1	10.8	9.5	10.5	13.6	12.2	24.1	26.0	21.6	9.0	7.6	4.5	5.3	6.2	12.2	6.6	5.7	8.6	23.7	20.9	10.7	8.4	6.4	11.78	25.99																						
8-Oct	4.5	4.2	5.6	4.2	5.6	12.5	12.3	15.8	23.6	16.5	18.6	20.5	10.6	9.1	5.7	8.3	9.0	0.0	4.2	6.9	9.1	1.8	9.0	0.5	9.09	23.55																						
9-Oct	2.0	7.3	8.1	6.1	4.5	11.3	10.2	12.5	5.4	14.1	19.5	7.4	9.6	35.4	22.7	14.2	4.5	15.4	10.8	8.7	11.2	0.0	0.0	9.1	10.41	35.43																						
10-Oct	5.9	11.9	8.2	7.7	11.9	5.6	17.5	2.7	8.4	10.3	9.9	7.2	0.0	0.0	4.2	7.5	9.4	9.7	1.6	6.2	0.0	12.6	0.3	4.1	6.79	17.53																						
11-Oct	12.4	8.1	1.8	0.6	7.7	0.0	6.0	0.6	15.9	0.0	6.4	2.6	7.7	3.5	9.3	8.1	5.8	7.8	6.7	5.5	10.5	7.2	3.4	4.1	5.91	15.85																						
12-Oct	1.2	5.7	6.9	9.0	7.4	11.2	10.5	11.5	12.0	7.3	6.4	3.2	7.5	4.2	6.1	1.2	5.6	0.7	7.4	4.3	6.8	4.3	3.8	0.0	6.01	12.04																						
13-Oct	7.0	7.0	8.7	10.0	10.7	62.5	46.1	49.2	31.4	20.2	0.0	1.6	16.7	13.8	0.4	4.8	5.6	12.1	9.5	31.7	28.9	27.1	19.2	12.9	18.20	62.46																						
14-Oct	14.6	8.8	11.3	11.4	20.1	15.3	15.7	C	C	C	C	C	C	C	3.5	6.8	9.1	13.0	11.6	9.4	9.8	7.1	5.6	5.8	--	20.14																						
15-Oct	5.7	7.4	7.2	8.4	7.6	8.7	8.2	16.6	10.5	17.1	14.6	12.7	14.0	18.4	19.3	14.4	24.4	76.8	31.2	51.7	33.8	26.3	21.3	12.4	19.54	76.81																						
16-Oct	9.7	7.8	8.1	6.9	10.5	15.0	9.0	9.7	19.4	14.3	4.9	6.5	7.0	8.7	19.5	19.8	27.6	86.3	40.7	62.6	28.2	18.8	8.3	8.7	19.08	86.31																						
17-Oct	6.5	5.5	6.5	6.8	7.5	10.5	5.8	3.2	7.1	5.6	4.8	5.0	7.0	5.2	25.0	55.4	90.7	96.9	50.0	40.6	51.2	32.1	34.5	30.7	24.74	96.89																						
18-Oct	25.6	21.5	22.6	18.1	17.3	18.4	17.4	26.6	30.0	20.2	15.0	11.5	10.1	4.1	2.7	2.8	2.7	7.3	20.8	24.4	26.0	24.9	27.3	7.3	16.87	29.99																						
19-Oct	10.3	19.3	13.4	8.4	10.0	15.2	28.3	18.9	11.9	13.9	12.1	14.9	15.2	4.4	3.1	3.7	4.7	9.6	5.1	4.1	4.5	4.7	4.3	3.2	10.13	28.25																						
20-Oct	2.9	3.0	2.7	1.8	2.7	2.5	3.8	6.8	6.8	11.3	14.6	17.1	1.0	0.0	3.2	4.2	3.7	1.8	15.7	21.7	14.8	8.2	9.2	7.4	6.96	21.74																						
21-Oct	11.0	9.7	6.0	6.7	4.8	4.6	7.4	20.1	12.1	11.7	11.1	7.3	13.5	11.0	3.8	5.2	4.6	3.6	5.3	2.5	3.6	5.8	4.6	4.3	7.52	20.13																						
22-Oct	4.2	6.8	8.9	8.9	8.3	10.7	13.0	14.2	12.3	14.0	10.5	1.8	5.3	2.9	4.3	4.8	6.5	7.8	14.9	18.9	18.6	14.1	14.6	8.6	9.80	18.88																						
23-Oct	4.7	7.3	5.7	7.5	6.6	9.3	9.5	9.8	11.4	10.7	18.2	7.5	3.1	2.4	4.2	6.3	4.9	4.4	4.3	6.1	4.2	4.1	4.1	3.2	6.65	18.18																						
24-Oct	4.5	4.0	4.5	4.2	4.7	2.7	4.6	3.2	4.1	4.7	3.2	2.4	5.9	8.8	6.9	4.4	6.6	12.9	13.4	14.5	6.8	6.3	5.3	5.3	6.00	14.49																						
25-Oct	5.2	4.7	5.5	4.3	3.4	4.7	3.7	5.9	8.6	8.8	11.4	12.6	12.3	4.7	4.5	5.6	6.8	21.9	21.1	14.9	10.0	4.9	7.5	6.7	8.32	21.92																						
26-Oct	8.7	6.5	5.8	6.8	5.9	6.5	7.6	7.8	13.3	19.2	15.0	16.4	10.6	8.3	5.0	6.8	5.9	3.3	5.0	7.6	5.6	4.3	3.9	2.7	7.86	19.15																						
27-Oct	2.7	3.8	3.4	5.0	6.8	6.5	5.5	5.4	7.2	12.8	8.2	5.5	4.5	6.3	9.3	4.5	5.2	5.1	5.8	12.1	12.3	5.2	6.7	7.7	6.56	12.79																						
28-Oct	5.0	12.5	10.0	6.6	10.9	10.4	8.0	9.8	7.5	2.5	5.1	11.3	4.4	5.0	5.5	5.7	7.0	10.7	9.5	5.9	4.7	8.6	4.8	8.2	7.48	12.47																						
29-Oct	6.8	5.8	7.6	7.1	6.8	9.3	12.8	9.7	8.6	5.4	5.0	9.0	6.7	8.2	5.1	4.5	6.9	7.1	7.2	9.5	9.6	4.6	3.5	3.6	7.10	12.79																						
30-Oct	9.1	9.4	8.7	6.4	5.5	11.9	5.1	8.5	6.0	4.6	4.8	4.5	2.7	6.5	4.0	5.5	7.0	6.3	4.7	8.7	6.6	9.4	7.5	12.2	6.90	12.22																						
31-Oct	9.8	6.7	6.4	5.4	7.2	6.8	6.4	6.6	9.3	4.8	3.2	5.2	4.3	4.3	4.8	7.9	6.9	11.9	16.0	23.6	16.7	7.9	6.8	4.7	8.07	23.64																						
																								6.95	7.40	7.20	6.52	7.56	10.58	10.89	11.78	12.29	10.54	9.84	8.85	7.98	7.49	8.07	8.93	11.15	15.69	13.00	15.23	12.82	9.38	8.41	6.41	Diurnal Average
																								25.62	21.50	22.57	18.07	20.14	62.46	46.07	49.16	31.40	21.61	19.55	20.45	18.25	35.43	27.00	55.35	90.68	96.89	50.01	62.58	51.17	32.07	34.46	30.71	Diurnal Maximum
C - Calibration																																																
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 80 ul/m ³ 24-hr 30 ul/m ³																																																

Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: October 14, 2015

Parameter: NO/NO₂/NO_x

Instrument: Teco 42i

Serial Number: CM13040041

Previous Calibration Date: Sept.9 ,2015

Calibration: Routine

Calibration Equipment: SABIO 2010 sn# 05200311

Barometric Pressure: 27.47" Hg

Calibration Method: Standard Gas Dilution/ GPT

Cylinder ID: FF 9469

Temperature: 23.0° C

Cylinder Concentration: 12.6 ppm NO / NO_x

In Service: Jan. 14,2015

Technician: J. McClintock

Instrument Settings	NO bkg ppb	NO _x bkg ppb	Pre-reactor bkg ppb	NO Coefficient	NO _x Coefficient	NO ₂ Coefficient	Monitoring Range
Previous	4.6	4.7	na	0.778	1.004	0.997	200 ppb
Current	4.7	4.9	na	0.767	1.000	0.997	200 ppb

NO	Final Zero: 0.1 ppb	Final Span: 144.3 ppb	As Found Correction Factor: 0.972
NO ₂	Final Zero: 0.0 ppb	Final Span: 0.2 ppb	As Found Correction Factor: 1.006
NO _x	Final Zero: 0.2 ppb	Final Span: 144.5 ppb	As Found Correction Factor: 0.975

Results of Linear Regression			Slope	Intercept	R ²
NO	R _c vs C _c	Previous	149.946200	39.193260	0.999973
		Current	149.602300	2.840458	0.999995
	C _i vs C _c	Current	1.000000	-0.000001	0.999995
NO ₂	R _c vs C _c	Previous	150.525100	129.170600	0.999973
		Current	149.892100	-4.450916	0.999997
	C _i vs C _c	Current	1.000000	-0.000007	0.999997
NO _x	R _c vs C _c	Previous	151.112900	44.788520	0.999973
		Current	149.838100	-18.327410	0.999991
	C _i vs C _c	Current	1.000000	-0.000021	0.999991

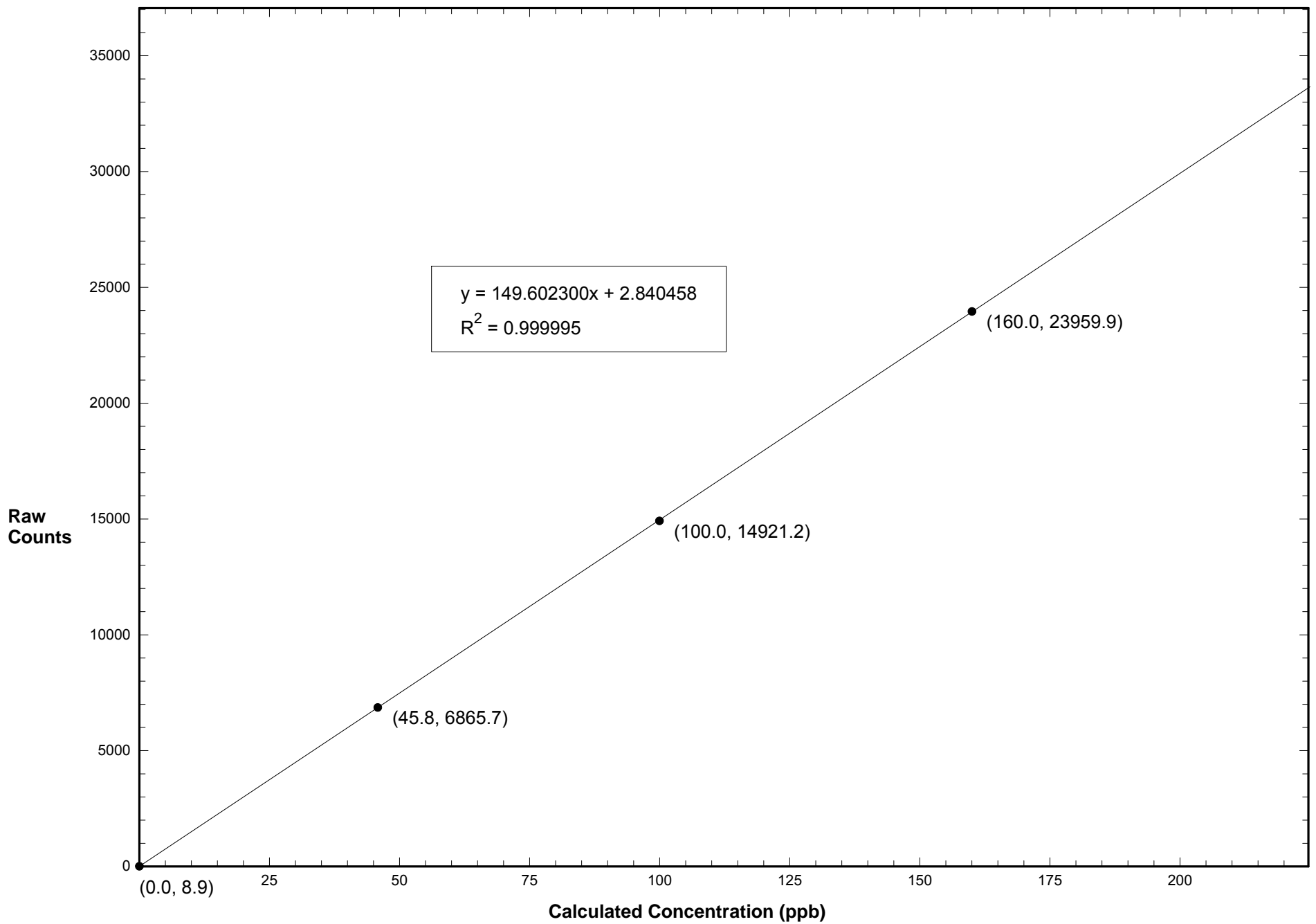
Comments: Changed avg time to 120 from 60 .

Calibration Data Summary (Page 2)

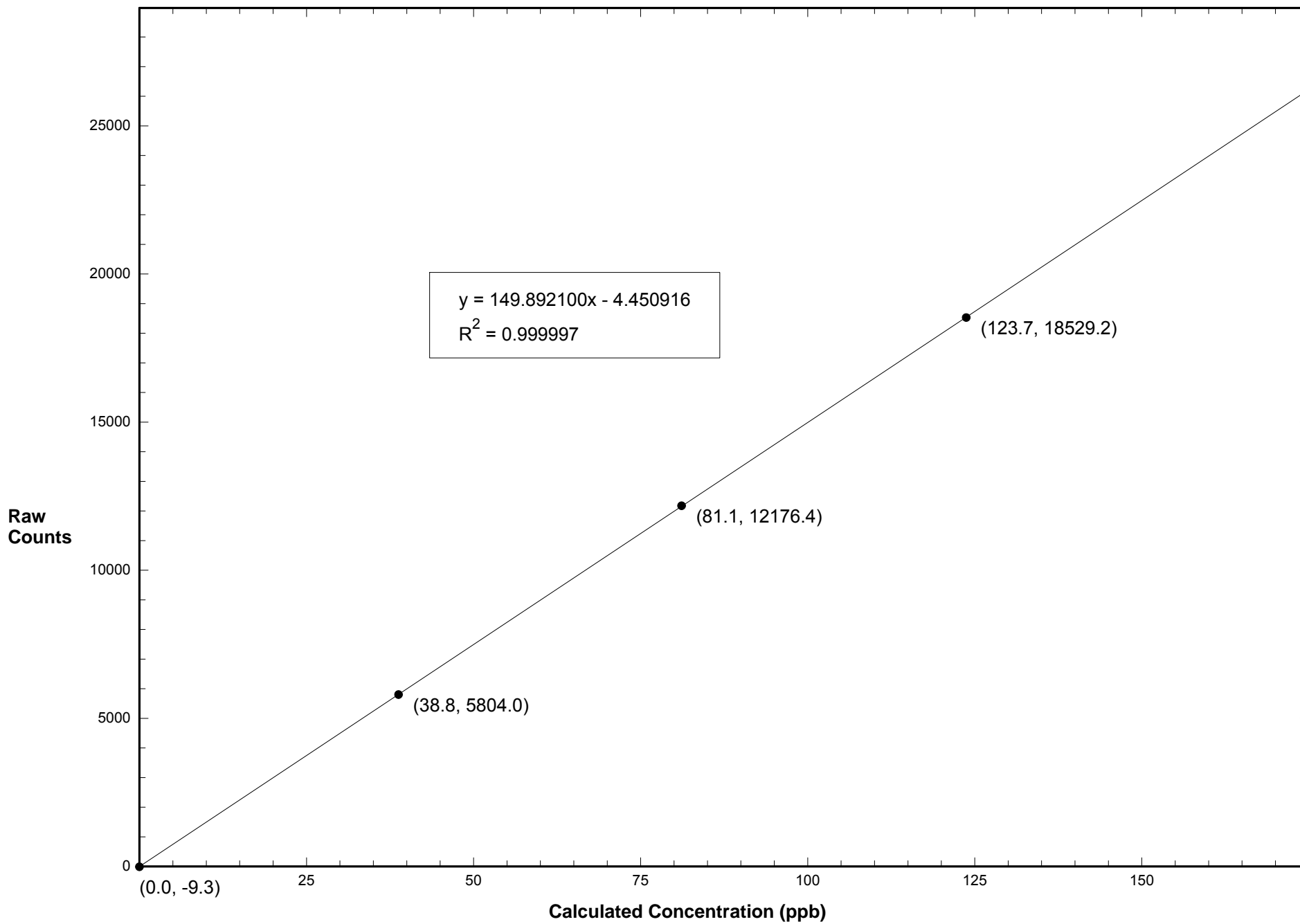
October 14, 2015 - Station 906

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		
0.06560	5.100	160.0	23959.9	160.1	0.999		
0.04070	5.090	100.0	14921.2	99.7	1.002		
0.01850	5.070	45.8	6865.7	45.9	0.999		
0.00000	5.000	0.0	8.9	0.0			
NO Calibration					Average Correction Factor:	1.000	
0.06560	5.100	160.0	23984.9	160.2	0.999		
0.04070	5.090	100.0	14917.5	99.7	1.003		
0.01850	5.070	45.8	6839.1	45.8	1.001		
0.00000	5.000	0.0	1.6	0.1			
NO _x Calibration					Average Correction Factor:	1.001	
Reference Concentration NO (ppb)	Raw Count Output NO	Calculated Concentration NO (ppb)	Calculated Concentration NO ₂ , C _c (ppb)	Raw Count Output R _c	Indicated Concentration C _i (ppb)	Correction Factor C _c /C _i	Converter Efficiency C _i /C _c
159.8	5400.9	36.1	123.7	18529.2	123.6	1.001	0.999
159.8	11774.2	78.7	81.1	12176.4	81.3	0.998	1.002
159.8	18110.7	121.0	38.8	5804.0	38.8	1.001	0.999
			0.0	-9.3	0.0		
					Average Correction Factor:	1.000	
NO ₂ Gas Phase Titration					Average Converter Efficiency: 1.000		
Parameter	Correction Factor (Previous)	Correction Factor: (Current)	Percent Change of Correction Factor				
NO	0.998	0.999	0.1				
NO ₂	0.992	1.001	0.9				
NO _x	0.998	0.999	0.1				

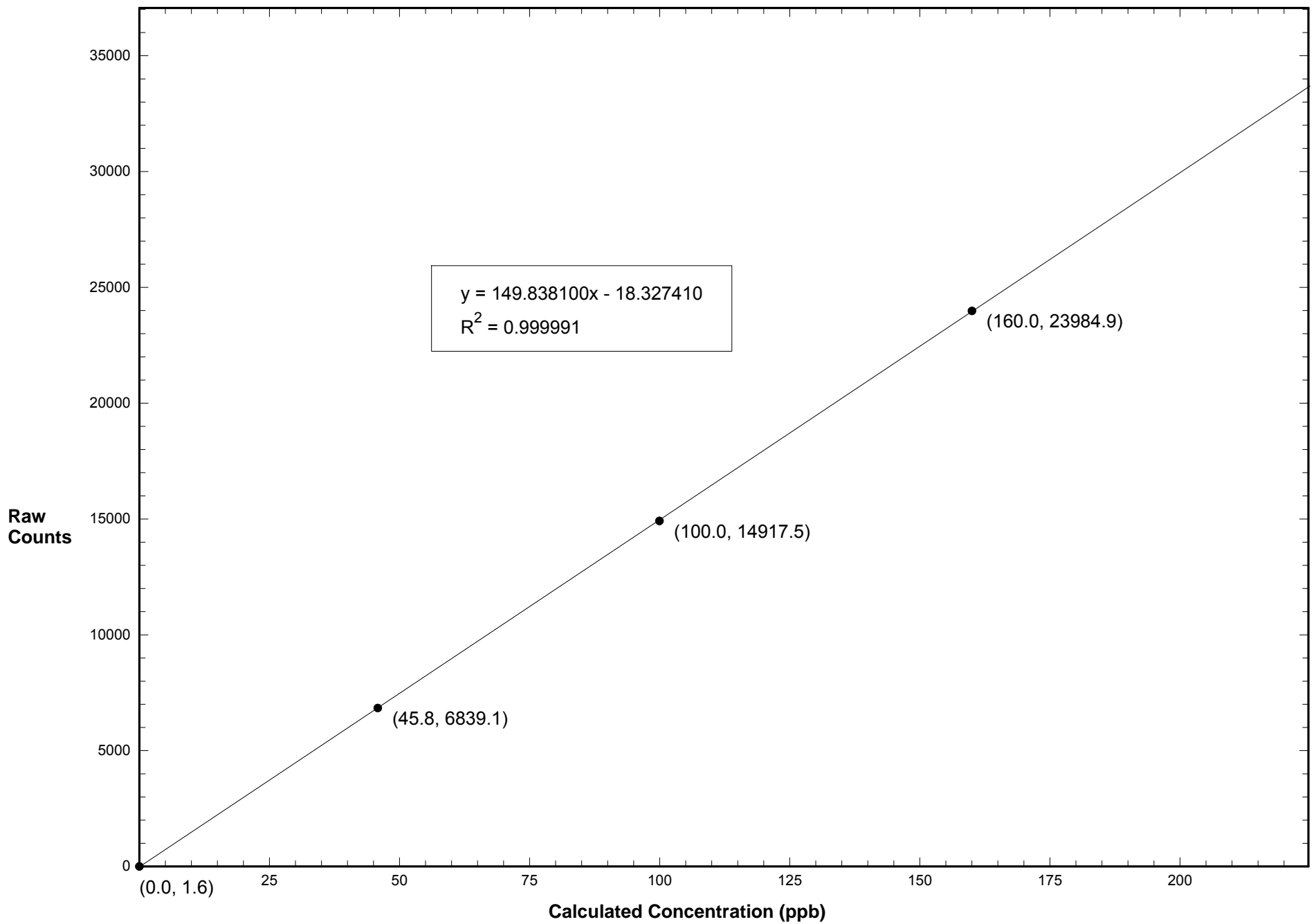
Station 906 NO October 14, 2015: Linear Regression



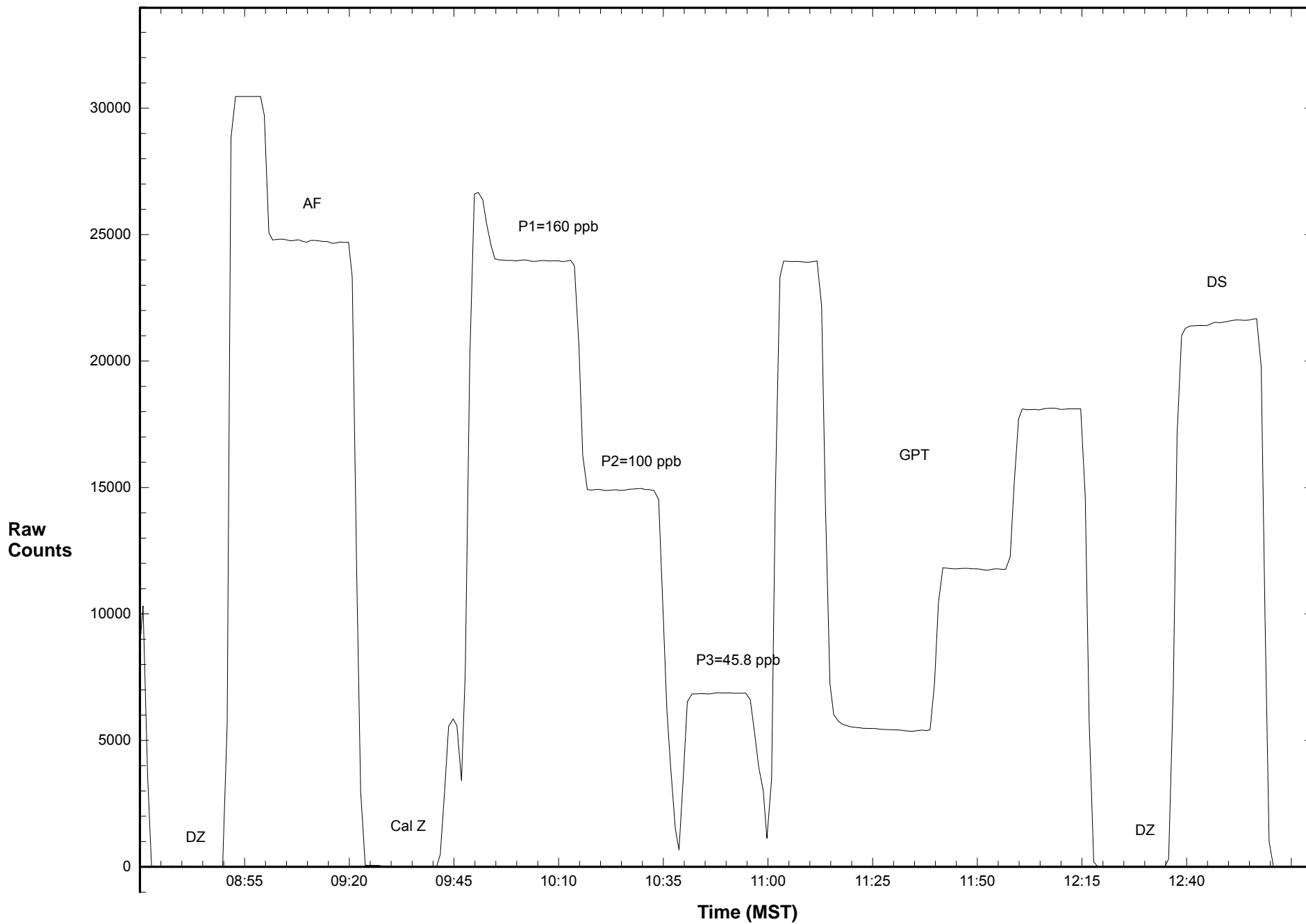
Station 906 NO2 October 14, 2015: Linear Regression



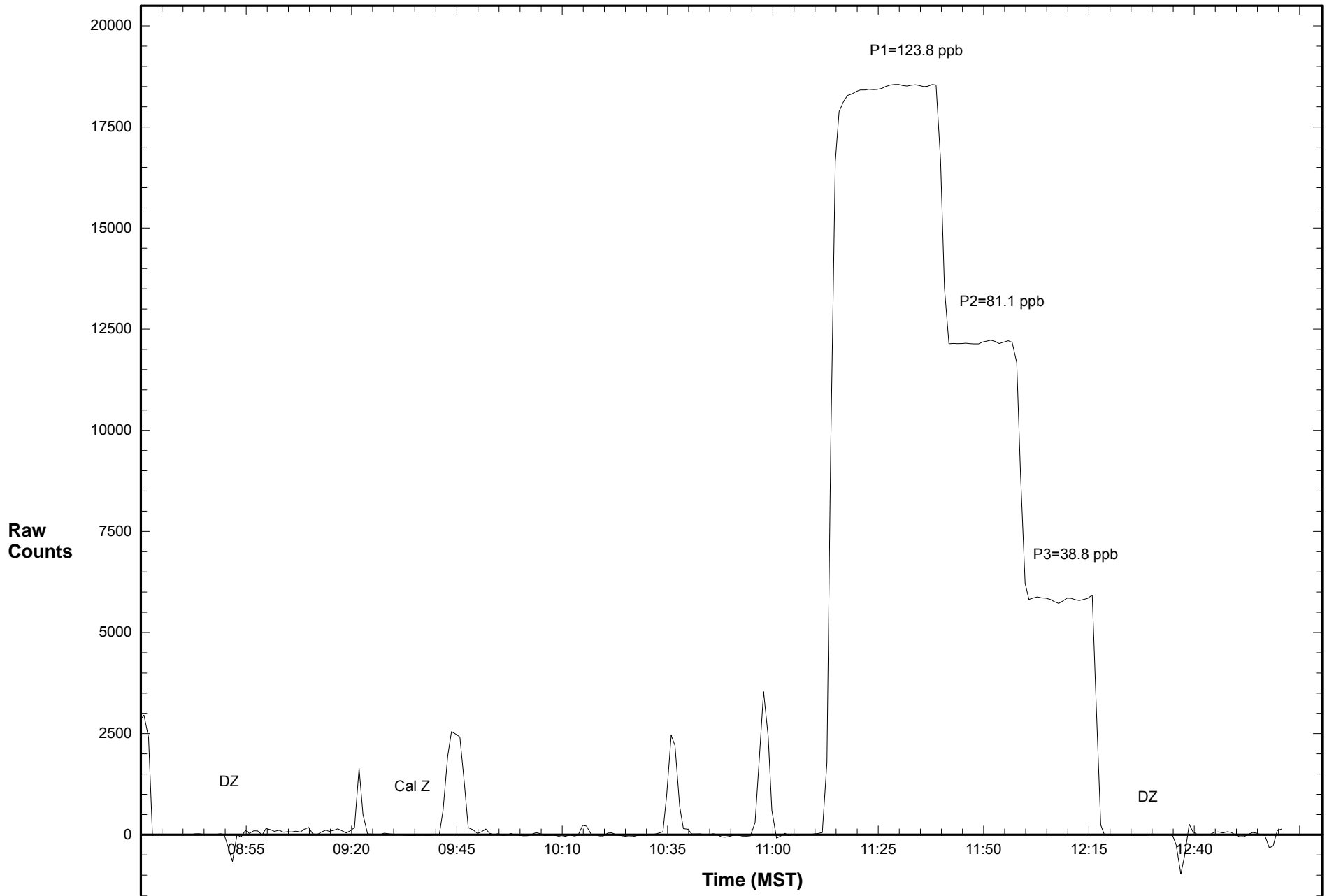
Station 906 NOX October 14, 2015: Linear Regression



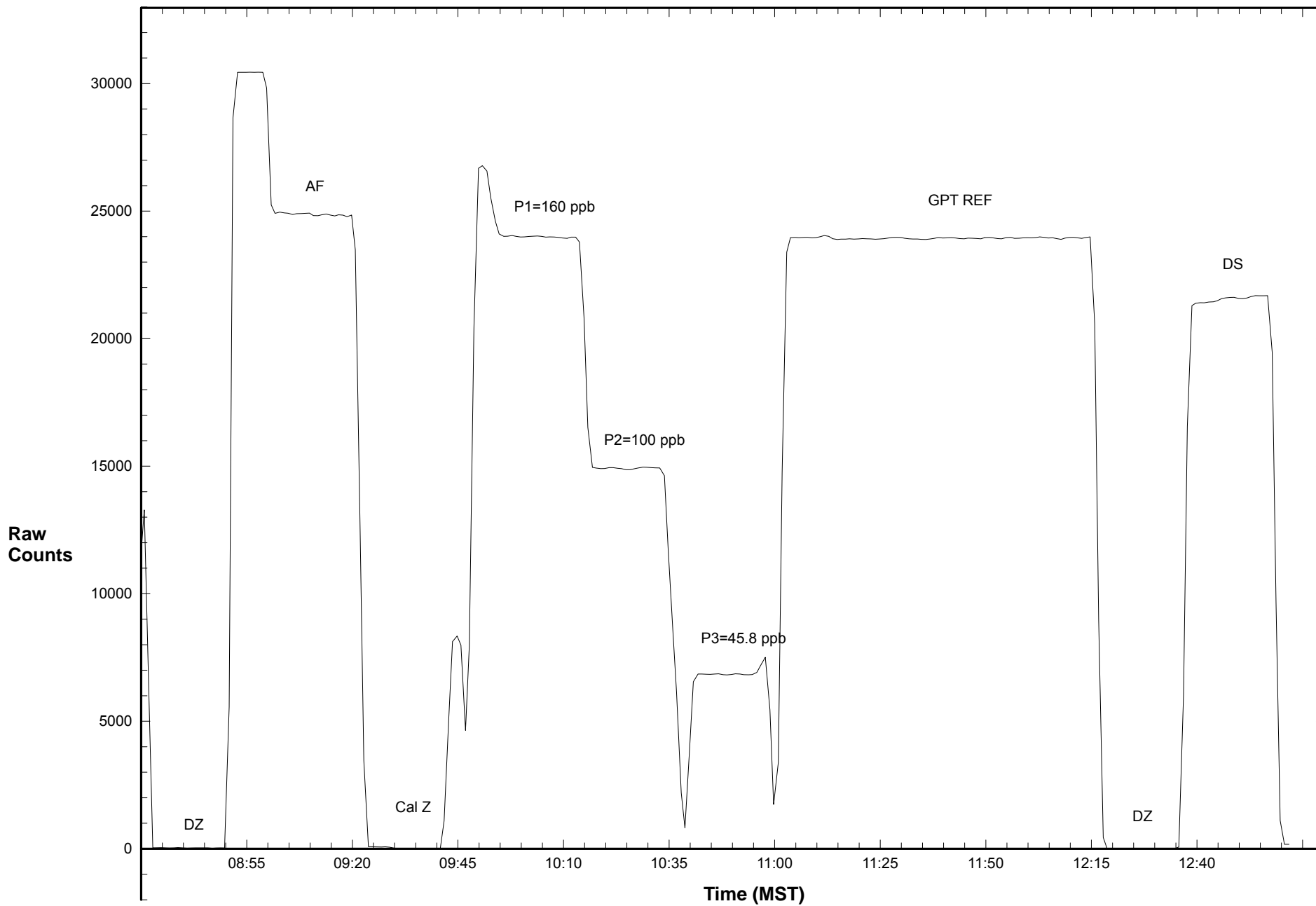
Station 906 NO October 14, 2015: Calibration Graph



Station 906 NO2 October 14, 2015: Calibration Graph



Station 906 NOX October 14, 2015: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: October 14, 2015

Parameter: O₃

Instrument: Teco 49i

Serial Number: 1150790050

Previous Calibration Date: Sept.9 ,2015

Calibration: Routine

Calibration Equipment: 2B Technologies 306 sn#145 Barometric Pressure: 27.47" Hg

Calibration Method: Certified Ozone Generator

Temperature: 23.0° C

Technician: J. McClintock

Instrument Settings	Background	Coefficient	Monitoring Range
Previous	-1.4	1.085	500 ppb
Current	-0.3	0.993	500 ppb

Final Zero: 0.6 ppb

Final Span: 443.3 ppb

As Found Correction Factor: 0.914

Calibration System Flow Rate (LPM)	Calculated Concentration C _c (ppb)	Raw Count Output R _c	Indicated Concentration C _i (ppb)	Correction Factor C _c /C _i
3.000	397.0	23808.1	398.0	0.998
3.000	252.0	14979.2	250.8	1.005
3.000	101.0	5949.6	100.2	1.008
3.000	0.0	1.4	1.0	

Results of Linear Regression

R _c vs C _c	Slope	Intercept	R ²
Previous	60.071430	-36.210960	0.999954
Current	59.974770	-60.695600	0.999954
C _i vs C _c			
Current	1.000000	0.000000	0.999954

Average Correction Factor: 1.003

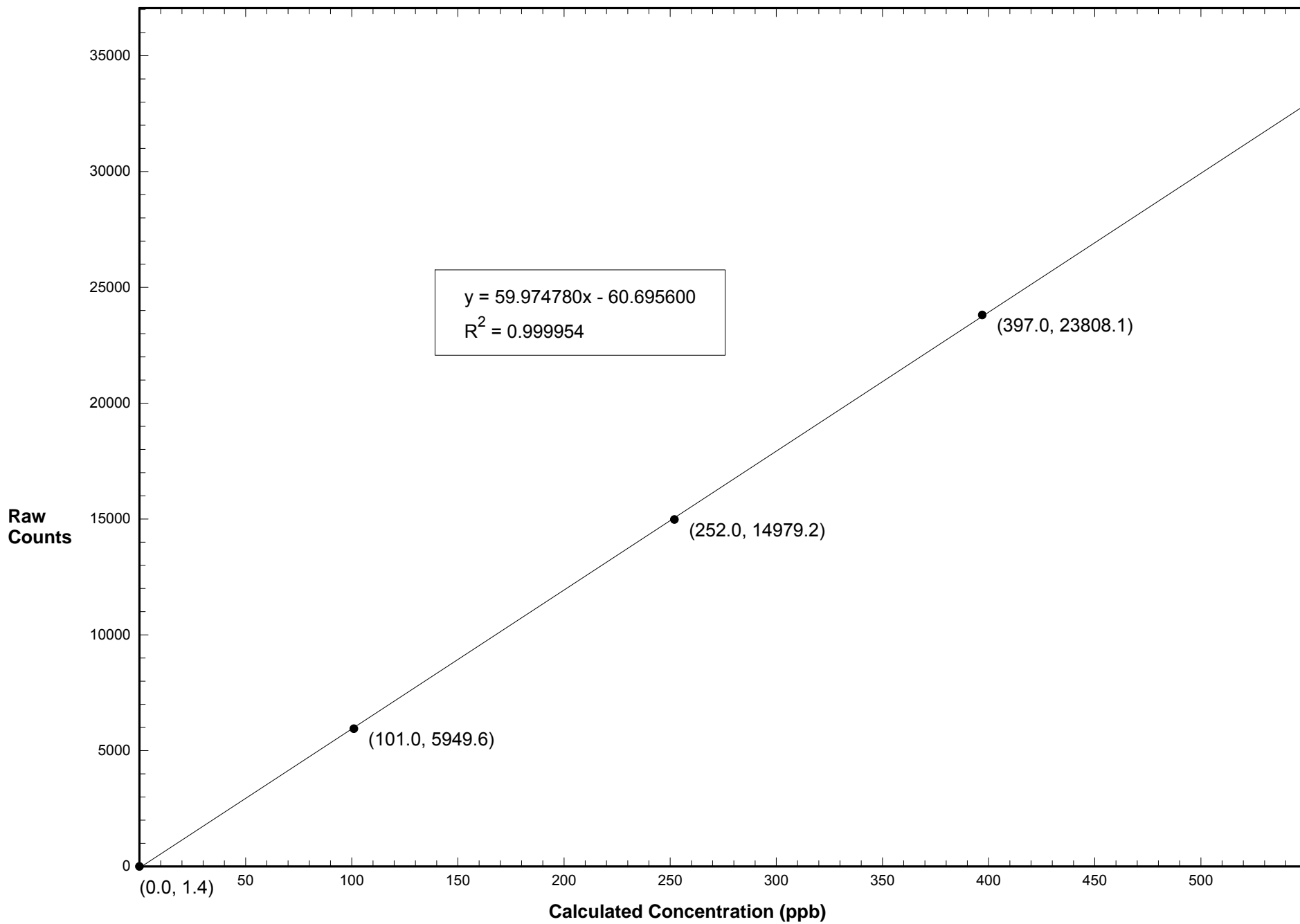
Previous Correction Factor: 0.998

Current Correction Factor: 0.998

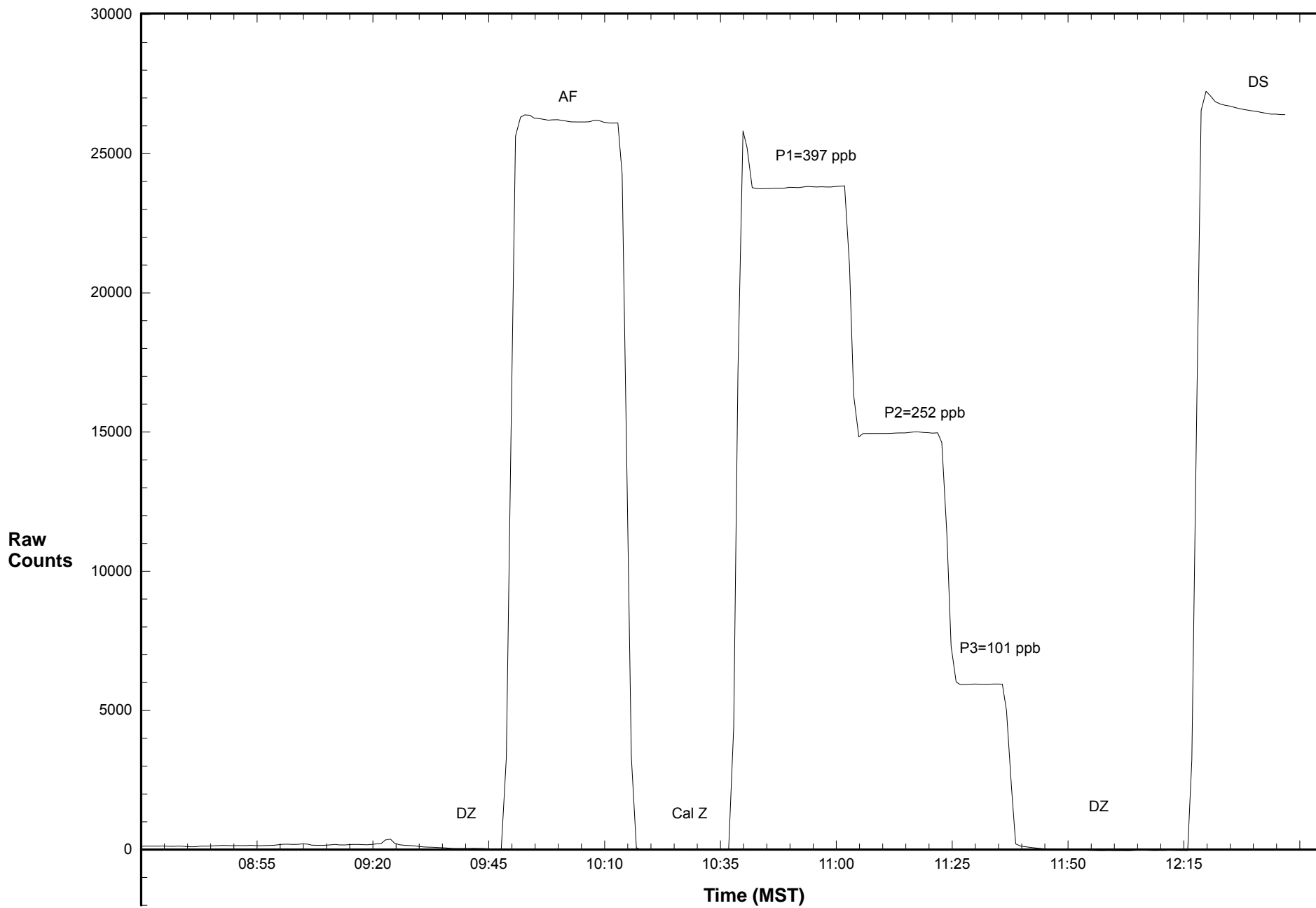
Percent Change of Correction Factor: 0.0

Comments:

Station 906 O3 October 14, 2015: Linear Regression



Station 906 O3 October 14, 2015: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: October 14, 2015

Parameter: SO₂

Instrument: Teco 43i

Serial Number: CM 12499009

Previous Calibration Date: Sept.9 ,2015

Calibration: Routine

Calibration Equipment: SABIO 2010 sn# 05200311

Barometric Pressure: 27.47" Hg

Calibration Method: Standard Gas Dilution

Cylinder ID: FF 9469

Temperature: 23.0° C

Cylinder Concentration: 6.2 ppb SO₂

In Service: Jan. 14,2015

Technician: J. McClintock

Instrument Settings	SO ₂ bkg ppb	SO ₂ Coefficient	Monitoring Range
Previous	26.8	0.994	100 ppb
Current	25.4	0.946	100 ppb

Final Zero: 0.1 ppm

Final Span: 61.8 ppm

As Found Correction Factor: 0.969

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
0.0656	5.100	78.7	23638.5	78.9	0.998
0.0407	5.090	49.2	14643.5	48.9	1.005
0.0185	5.070	22.5	6682.1	22.4	1.005
0.0000	5.000	0.0	0.5	0.2	

Results of Linear Regression

R _c vs C _c	Slope	Intercept	R ²
Previous	302.874800	-29.122180	0.999907
Current	300.181300	-50.140660	0.999964
C _i vs C _c			
Current	1.000000	0.000001	0.999963

Average Correction Factor: 1.003

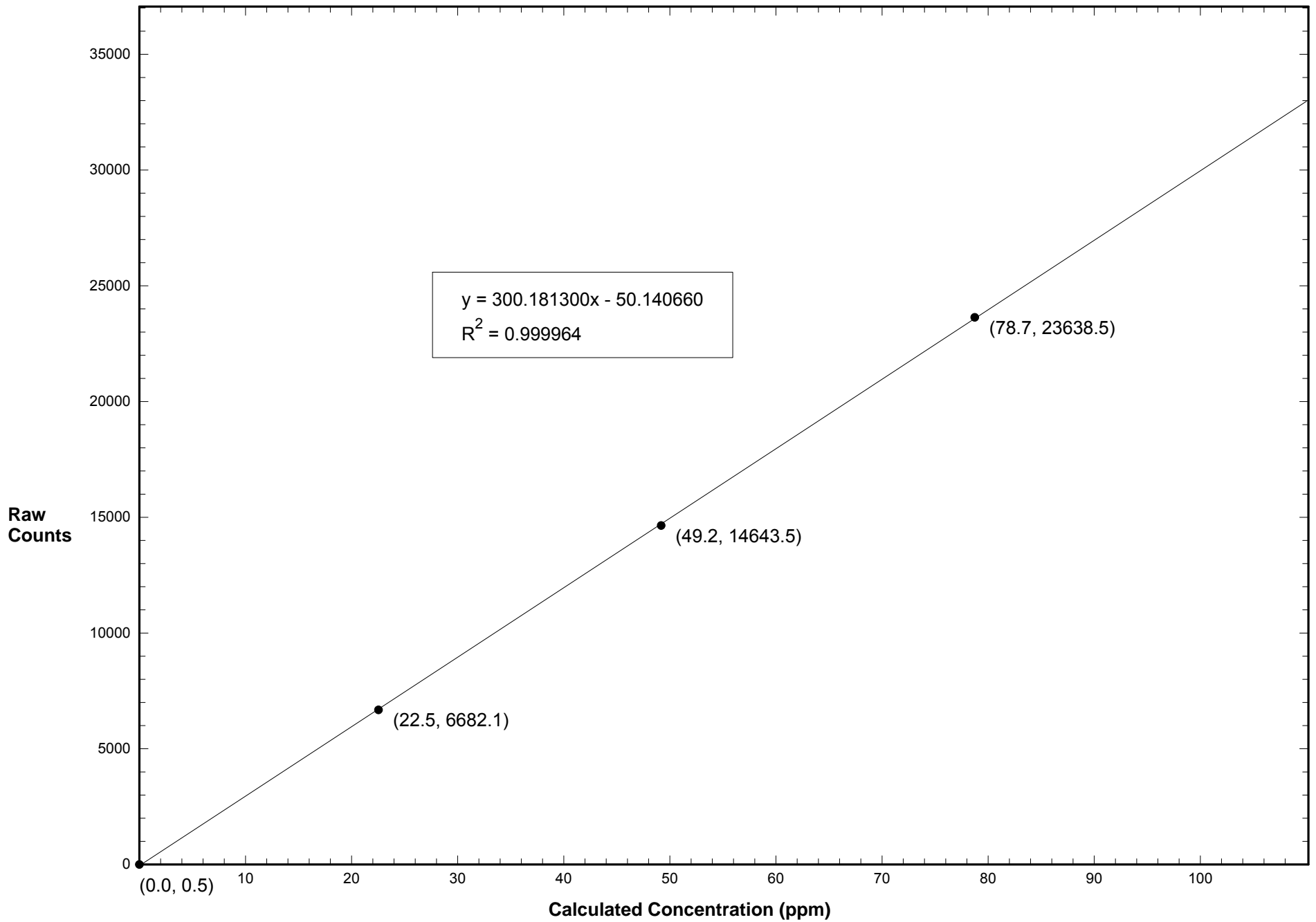
Previous Correction Factor: 0.996

Current Correction Factor: 0.998

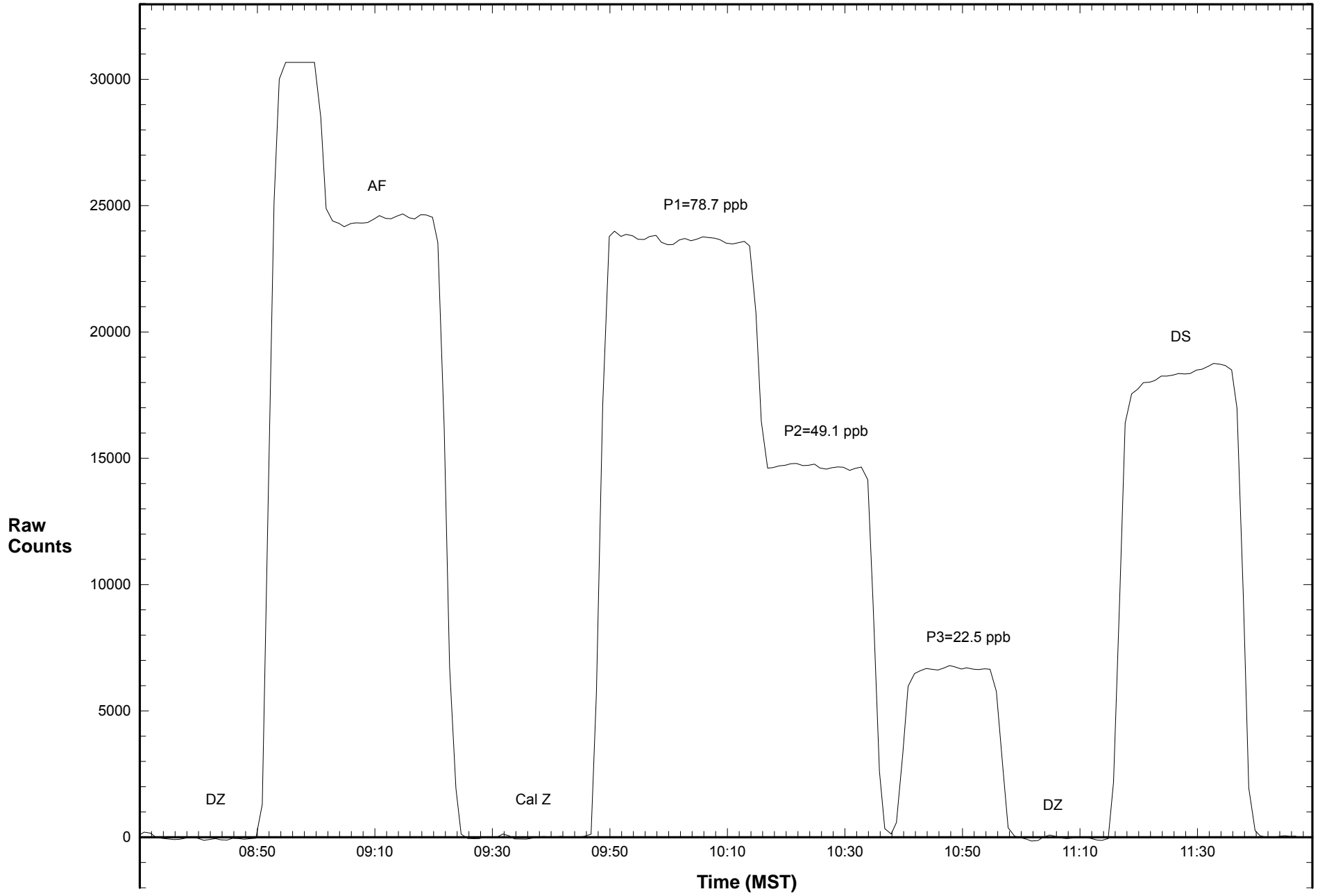
Percent Change of Correction Factor: 0.2

Comments:

Station 906 SO2 October 14, 2015: Linear Regression



Station 906 SO2 October 14, 2015: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: October 14, 2015

Parameter: TRS

Instrument: Teco 43C

Serial Number: 43CTL - 60324 - 326

Previous Calibration Date: Sept.9 ,2015

Calibration: Routine

Calibration Equipment: SABIO 2010 sn# 05200311

Barometric Pressure: 27.47" Hg

Calibration Method: Standard Gas Dilution

Permeation Device ID: SV14360, 4.89 ppm H2S

Temperature: 23.0° C

Permeation Rate: 0 ng/min

In Service: Feb 5,2013

Technician: J. McClintock

Instrument Settings	H ₂ S bkg ppb	H ₂ S Coefficient	Monitoring Range
Previous	1.77	0.768	100 ppb
Current	1.91	0.794	100 ppb

Final Zero: 0.0 ppb

Final Span: 66.1 ppb

As Found Correction Factor: 1.040

Calibration System Flow Rate (LPM)	Calculated Concentration C _c (ppb)	Raw Count Output R _c	Indicated Concentration C _i (ppb)	Correction Factor C _c /C _i
0.075	70.4	21110.6	70.4	1.000
0.051	48.1	14461.8	48.2	0.998
0.026	24.6	7275.6	24.4	1.009
0.000	0.0	-22.2	0.1	

Results of Linear Regression

R _c vs C _c	Slope	Intercept	R ²
Previous	300.182400	-44.507940	0.999965
Current	300.799000	-51.734960	0.999975
C _i vs C _c			
Current	1.000000	0.000000	0.999976

Average Correction Factor: 1.002

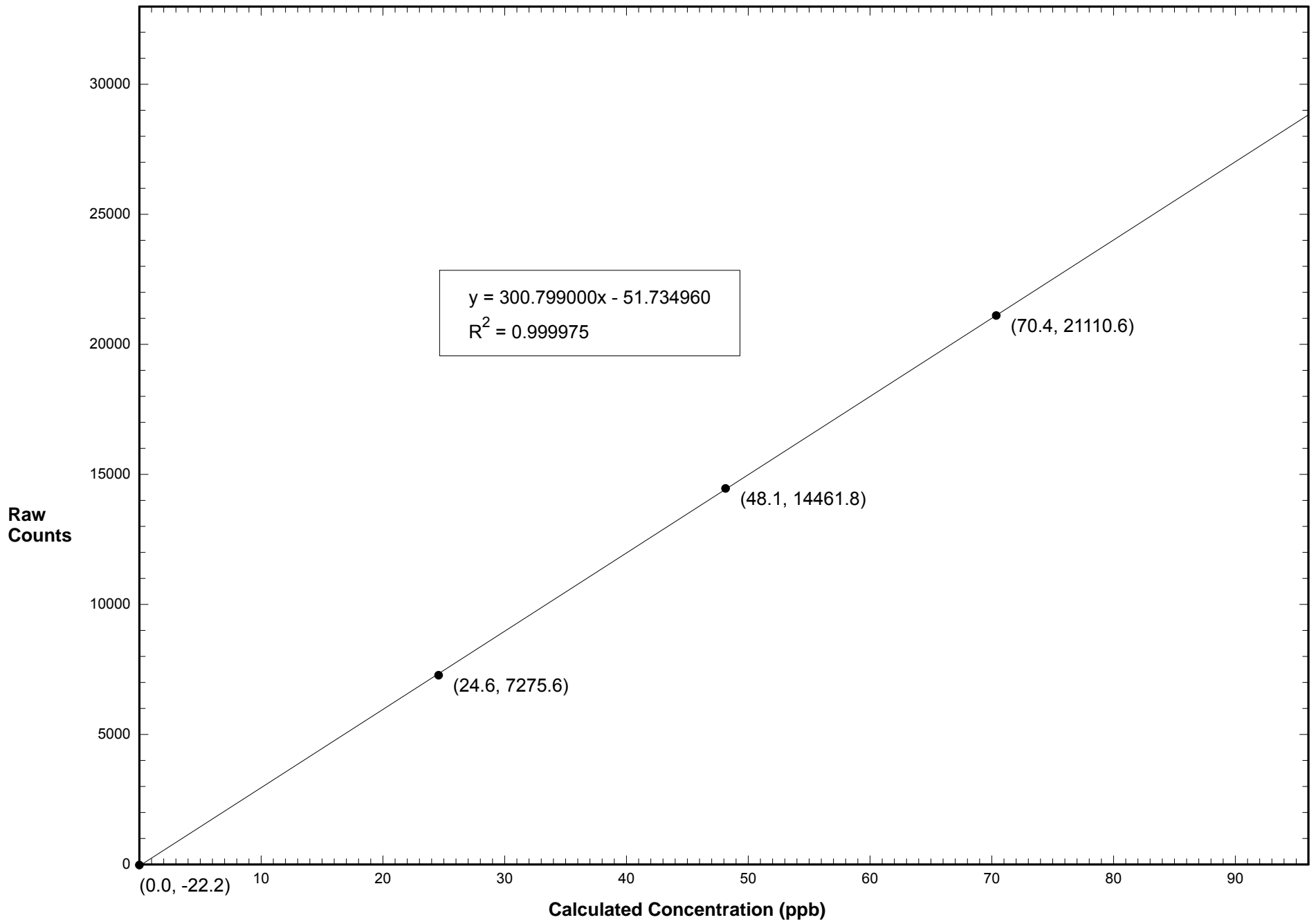
Previous Correction Factor: 0.998

Current Correction Factor: 1.000

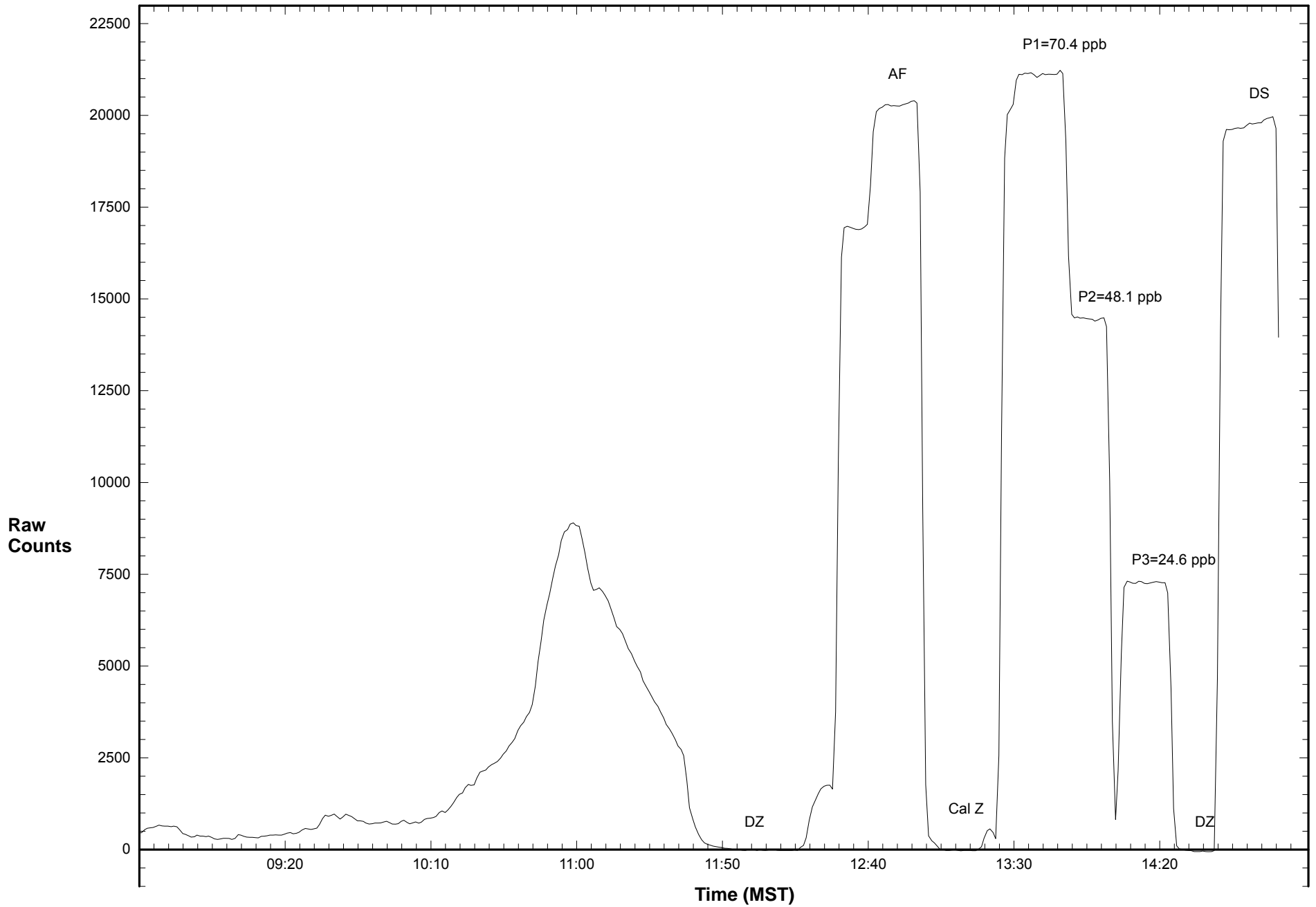
Percent Change of Correction Factor: 0.2

Comments: Changed avg time to 120 from 90 .

Station 906 TRS October 14, 2015: Linear Regression



Station 906 TRS October 14, 2015: Calibration Graph



WEST CENTRAL AIRSHED SOCIETY

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

**AMS 906
HINTON
OCTOBER 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
October 2015

Maximum Value: 22.65 C on Oct 1 15:00		Maximum Daily Average: 16.44 C on Oct 9		Hours in Service: 744																							
Minimum Value: -6.6 C on Oct 25 08:00		Minimum Daily Average: -1.31 C on Oct 25		Hours of Data: 744																							
Maximum Diurnal Average: 12.55 C at hour 15		Minimum Diurnal Average: 1.32 C at hour 8		Hours of Missing Data: 0																							
Monthly Average: 6.050 C		Percentiles: P₁ = -5.5 P₁₀ = -2.2 Q₁ = 0.8 Median = 5.3 Q₃ = 10.6 P₉₀ = 15.9 P₉₉ = 20.6		Hours of Calibration: 0																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Oct	7.2	6.3	5.8	5.4	6.1	6.5	6.5	6.3	8.1	10.0	12.7	16.8	19.0	20.9	22.7	21.9	21.5	19.6	17.2	16.8	16.3	14.6	12.6	10.6	12.97	22.65	
2-Oct	9.2	7.6	6.8	5.9	5.2	4.4	4.3	4.6	6.0	7.8	8.6	8.4	6.5	4.8	3.6	2.9	2.6	2.0	1.6	1.4	1.5	1.8	1.9	1.9	4.63	9.19	
3-Oct	1.6	1.5	1.3	1.3	1.0	0.9	0.8	0.7	1.2	1.8	2.2	3.1	3.7	3.8	3.3	3.7	3.1	3.2	2.5	2.1	1.8	1.5	1.4	1.2	2.03	3.84	
4-Oct	1.2	1.1	0.7	0.6	0.6	0.6	0.4	0.6	1.6	3.8	4.7	6.4	8.6	9.6	9.2	9.9	9.2	7.5	5.2	3.5	1.6	0.2	-0.3	-0.9	3.56	9.85	
5-Oct	-0.7	-0.5	-1.1	-1.4	-1.7	-1.8	-2.2	-1.9	-1.3	1.1	5.1	8.2	10.6	12.1	12.2	12.6	11.8	10.5	7.9	5.9	5.1	3.8	2.3	0.9	4.06	12.57	
6-Oct	-0.5	-1.0	-1.3	-1.4	-1.4	-1.0	-0.9	-0.5	0.3	2.3	6.3	8.6	12.8	14.5	15.5	15.5	14.2	12.7	11.5	10.2	9.3	8.6	7.9	7.6	6.24	15.55	
7-Oct	6.7	5.8	5.1	4.7	4.7	5.0	4.8	5.1	6.7	9.1	10.8	11.7	13.2	14.7	15.4	16.4	16.3	13.9	13.0	10.9	9.9	8.0	6.5	6.2	9.36	16.44	
8-Oct	6.0	5.4	4.3	3.3	2.5	1.5	1.0	1.1	2.7	6.7	12.2	16.4	19.1	18.9	18.6	18.0	17.3	16.8	16.1	16.0	15.9	16.1	15.3	15.2	11.10	19.13	
9-Oct	15.3	15.5	16.4	16.4	15.7	10.1	8.7	8.5	9.9	12.5	13.8	16.3	19.6	20.9	20.7	20.3	19.6	19.0	18.9	18.8	19.1	19.3	19.7	19.5	16.44	20.93	
10-Oct	19.4	18.9	18.4	17.8	17.2	16.3	16.4	15.7	17.1	18.8	19.7	18.8	19.4	18.9	19.0	19.5	18.6	15.3	13.7	12.9	12.3	10.8	10.1	9.3	16.43	19.73	
11-Oct	11.4	10.9	10.4	10.5	10.1	9.6	8.8	9.6	9.8	12.3	13.4	15.0	15.7	15.5	14.4	13.5	12.7	11.5	10.8	10.5	10.3	10.8	11.1	10.5	11.62	15.69	
12-Oct	10.6	10.4	10.3	10.7	10.8	10.6	10.1	9.8	9.9	10.2	11.8	12.4	12.0	12.3	12.7	12.7	12.2	11.1	9.6	8.5	9.3	9.1	8.9	8.2	10.60	12.74	
13-Oct	8.5	7.6	6.1	5.6	6.8	3.6	1.2	-0.1	2.4	8.3	12.9	13.7	14.9	15.1	13.6	12.2	12.8	11.5	9.1	8.1	4.8	3.0	2.8	1.2	7.72	15.05	
14-Oct	0.2	-0.9	-1.8	-2.4	-2.8	-2.9	-3.1	-3.3	-2.1	1.8	7.6	12.4	13.1	13.6	13.9	12.8	10.0	8.8	6.9	5.4	4.3	3.6	0.4	-1.1	3.94	13.94	
15-Oct	-2.4	-2.8	-3.5	-4.2	-4.9	-5.5	-6.0	-6.5	-4.2	-0.4	2.4	6.0	8.0	9.6	10.9	11.9	11.1	8.7	5.9	3.7	2.4	0.8	-0.8	-1.6	1.61	11.86	
16-Oct	-2.0	-2.1	-2.4	-2.7	-2.9	-3.0	-2.9	-3.1	-0.8	4.4	8.1	11.3	13.6	16.0	17.4	18.1	17.8	14.2	9.6	6.9	4.0	2.3	0.9	-0.4	5.09	18.14	
17-Oct	-1.5	-1.7	-2.1	-2.2	-2.4	-2.4	0.9	3.0	4.9	10.9	13.7	15.2	15.9	19.4	20.4	20.5	19.8	17.2	13.6	11.5	10.5	11.4	11.0	10.4	9.07	20.50	
18-Oct	9.3	7.7	7.9	7.3	6.0	4.1	2.7	1.6	2.2	6.7	11.1	15.4	18.2	19.8	20.7	20.3	18.9	17.4	13.7	10.3	7.9	5.3	3.7	2.4	10.02	20.68	
19-Oct	1.5	1.4	1.5	1.2	0.3	0.0	0.8	1.4	2.4	5.0	8.9	11.7	14.2	16.6	17.9	16.6	15.7	12.1	9.2	8.5	7.8	6.5	4.8	3.3	7.04	17.85	
20-Oct	2.7	2.4	1.5	0.4	-0.5	-0.6	-1.1	-1.6	-1.8	0.1	3.8	8.6	12.7	14.7	15.1	15.0	13.9	11.7	9.3	7.5	4.8	3.1	1.8	1.0	5.20	15.14	
21-Oct	0.2	2.2	0.9	-0.2	7.4	8.8	4.1	1.4	2.0	2.4	4.4	10.5	14.0	16.9	18.1	17.2	16.2	15.0	13.6	13.0	12.1	9.1	7.2	5.6	8.42	18.14	
22-Oct	3.9	3.9	3.1	3.1	3.1	2.1	0.8	0.7	0.0	4.8	8.7	10.6	10.2	10.1	10.4	10.6	9.8	7.7	5.6	3.5	0.8	-0.8	-1.2	-0.8	4.61	10.58	
23-Oct	-0.7	-1.4	-2.0	-2.6	-3.0	-3.6	-3.9	-3.9	-3.3	0.9	5.5	10.0	11.2	11.6	10.9	10.1	9.1	8.2	7.6	6.1	4.3	3.4	3.0	1.8	3.31	11.59	
24-Oct	0.5	0.8	0.4	0.5	0.7	0.4	0.4	0.3	0.4	0.9	1.5	1.6	2.5	5.3	7.1	6.7	5.6	3.6	0.8	-1.0	-1.5	-1.4	-1.4	-1.9	1.36	7.11	
25-Oct	-2.4	-2.9	-3.5	-4.1	-4.8	-5.1	-6.0	-6.6	-6.1	-3.8	-1.6	1.3	3.2	4.9	5.8	6.1	5.2	2.5	-0.7	-2.0	-2.1	-2.5	-2.7	-3.4	-1.31	6.05	
26-Oct	-3.9	-4.3	-4.7	-4.4	-4.6	-4.7	-4.0	-3.7	-3.0	-1.9	-0.1	2.3	3.0	3.6	4.1	2.8	2.0	1.8	2.3	2.5	2.1	1.8	1.3	0.5	-0.38	4.14	
27-Oct	-0.2	-0.4	-1.3	-1.6	-2.2	-1.3	-1.3	-3.0	-3.3	-1.5	0.3	2.2	3.4	5.0	6.0	5.8	5.0	3.4	1.6	-0.8	-2.3	-3.1	-3.5	-4.0	0.12	6.01	
28-Oct	-4.6	-4.9	-5.4	-6.0	-5.8	-2.2	-2.4	-1.6	-0.7	1.0	2.5	3.6	4.5	5.0	5.6	5.7	5.6	5.7	5.6	5.7	5.5	4.7	4.8	4.2	1.51	5.73	
29-Oct	4.1	4.3	4.0	3.1	3.3	1.1	0.6	1.2	1.0	5.4	6.8	7.8	9.7	11.7	10.7	10.6	9.9	8.2	7.5	4.5	1.4	-0.2	-0.4	0.1	4.85	11.70	
30-Oct	8.1	8.7	8.5	8.9	9.1	8.6	7.9	8.4	7.7	8.0	8.1	8.5	9.3	7.5	5.9	6.7	7.2	5.6	4.5	4.1	2.6	1.2	1.8	1.7	6.60	9.26	
31-Oct	-0.5	-2.1	-2.8	-3.2	-3.3	-3.4	-3.4	-3.2	-3.2	-1.8	0.1	0.5	2.1	5.9	7.1	6.6	5.8	3.9	1.0	-1.2	-2.4	-2.8	-3.2	-3.5	-0.30	7.12	
		3.50	3.14	2.64	2.26	2.27	1.83	1.42	1.32	2.15	4.77	7.28	9.53	11.09	12.23	12.55	12.36	11.62	10.01	8.21	6.90	5.79	4.84	4.11	3.40	Diurnal Average	
		19.41	18.89	18.35	17.82	17.23	16.26	16.40	15.74	17.13	18.79	19.73	18.81	19.58	20.93	22.65	21.89	21.54	19.62	18.89	18.84	19.11	19.30	19.69	19.51	Diurnal Maximum	



WCAS - Hinton
Summary of Hourly Averages

Wind Speed (WS) - kph
October 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	0.1	0.6	0.9	0.6	0.3	0.1	0.2	0.8	1.1	0.9	0.7	1.8	2.4	2.1	2.9	4.9	3.6	2.0	1.1	2.0	2.1	2.5	5.0	2.4	0.57	5.03
Dir	NNW	W	WSW	W	WSW	NNW	SSW	SW	NW	SSE	NW	SSE	E	E	NNE	SE	E	E	E	ESE	NE	SW	SSW	SW	SE	SSW
2 Spd	1.9	0.5	1.1	0.6	1.0	0.9	0.6	1.3	1.4	1.2	1.0	3.7	2.6	2.2	1.8	2.5	2.8	3.0	5.3	6.1	7.1	5.9	2.9	2.2	1.71	7.09
Dir	WSW	WSW	SW	WSW	SW	WNW	ESE	SW	W	W	NE	N	NNE	S	SW	WNW	WNW	WSW	SW	SW	SW	SSW	SW	SW	WSW	SW
3 Spd	0.6	0.5	1.9	1.1	1.8	1.4	1.8	1.0	2.4	4.7	4.9	4.3	4.3	4.6	2.9	2.0	2.3	3.7	3.2	3.3	2.3	2.7	2.9	2.1	2.22	4.91
Dir	NW	NW	SSW	SW	ESE	E	ENE	ENE	NNE	ENE	ENE	NE	NE	ENE	ENE	E	NE	ENE	ENE	ENE	NE	NE	NE	NE	ENE	ENE
4 Spd	2.8	3.7	3.0	2.8	2.1	3.0	3.3	2.4	3.0	4.0	2.0	1.5	2.7	5.8	8.2	7.2	5.9	4.8	4.2	3.1	1.1	0.1	0.1	0.4	2.93	8.25
Dir	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	NE	NE	ENE	ESE	NE	ESE	ESE	ESE	ENE	NE	ENE	ENE	NE	E	SE	NNW	ENE	ESE
5 Spd	0.7	0.8	0.8	1.1	1.2	1.5	0.9	0.5	1.6	2.3	0.8	1.8	2.4	2.2	3.7	4.0	4.4	4.2	1.8	2.3	2.4	2.1	0.6	0.5	1.17	4.42
Dir	WNW	NNE	WNW	SW	SSW	SSW	NE	NE	NW	NW	NNW	NNE	NNE	NE	NNE	NE	NNE	ENE	ENE	ENE	NE	NE	WSW	N	NNE	NNE
6 Spd	0.9	0.5	0.3	0.3	0.7	0.5	0.8	1.1	0.4	2.2	1.9	1.4	1.2	1.4	0.8	1.5	2.9	2.5	1.4	1.4	1.6	0.6	0.5	0.5	0.68	2.88
Dir	W	NNW	NNE	E	NE	NE	ENE	ENE	N	ENE	NE	SSE	WSW	WSW	N	NE	NE	ENE	E	E	NE	SE	SE	SE	ENE	NE
7 Spd	0.6	0.7	0.4	0.4	0.7	0.5	0.3	0.3	0.7	0.9	2.1	2.1	2.2	0.8	1.7	1.7	2.6	1.5	1.8	0.6	0.3	0.3	0.2	0.5	0.28	2.55
Dir	W	SSW	SE	NE	ENE	ENE	NE	E	ENE	NW	WSW	WSW	NW	NNW	ENE	ESE	NNW	NW	SW	S	NE	E	NW	NNE	NW	NNW
8 Spd	0.3	0.2	0.3	0.6	0.4	0.1	0.1	0.1	1.4	1.9	3.1	1.2	4.3	7.2	7.7	6.5	6.1	7.1	4.0	4.5	5.2	6.2	1.7	4.9	2.37	7.68
Dir	NNW	NE	SE	W	NNE	NE	SE	NW	ENE	ENE	ENE	ENE	WSW	SW	SW	WSW	SW	SSW	SW	SW	SW	SW	W	SW	SW	SW
9 Spd	4.0	3.6	7.9	7.7	5.3	2.8	3.2	3.9	3.8	1.9	0.7	5.5	9.3	16.0	17.6	16.8	14.5	10.0	12.1	11.2	12.4	13.5	15.2	15.0	7.59	17.59
Dir	WSW	WSW	SW	SW	SW	NE	ENE	ENE	ENE	E	SW	SSW	SW	SW	SW	SW	SW	WSW	WSW	SW	SW	SW	SW	SW	SW	SW
10 Spd	15.1	9.4	8.6	5.3	4.2	4.8	6.9	9.1	5.6	5.4	7.6	6.0	6.2	5.3	5.3	4.9	6.2	4.3	4.6	3.2	6.9	0.6	1.4	2.7	5.16	15.13
Dir	SW	WSW	SW	WSW	SW	SW	WSW	SW	SW	WSW	WSW	WSW	WNW	WNW	W	WSW	WSW	W	SW	SSW	S	NE	SSW	E	WSW	SW
11 Spd	3.4	1.6	1.7	1.4	3.8	3.2	3.3	3.6	3.3	5.2	7.3	7.0	6.2	7.9	13.2	13.9	15.6	12.7	10.7	8.3	5.5	5.2	10.0	8.1	6.06	15.58
Dir	WSW	WNW	WNW	WNW	NW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	W	WSW	SW	SW	SW	SW	SW	SW	WSW	SW	SW	SW	WSW	SW
12 Spd	9.2	5.8	4.3	6.5	5.0	7.2	7.7	9.2	13.0	14.5	6.7	7.7	12.3	14.8	13.4	15.3	14.5	12.3	5.1	3.5	4.3	4.1	4.9	4.7	8.29	15.32
Dir	SW	SW	WSW	WSW	W	WSW	WSW	WSW	WSW	SW	W	W	SW	SW	SW	SW	SW	SW	WSW	W	W	W	W	W	WSW	SW
13 Spd	7.0	2.9	1.1	4.3	6.1	0.6	1.3	0.2	1.9	1.4	7.5	10.2	5.2	6.7	4.2	7.5	3.6	4.6	1.7	2.3	0.7	0.9	1.9	0.9	2.70	10.22
Dir	SW	WSW	SW	SW	SW	NNW	ENE	NE	NE	SW	SW	WSW	SW	W	WNW	WNW	SW	WSW	S	SSE	NE	SE	SSE	WSW	WSW	SW
14 Spd	0.9	0.6	0.5	0.2	0.2	0.6	0.5	1.2	0.4	1.6	2.5	7.6	8.0	8.5	9.1	6.8	7.1	5.1	2.6	1.9	7.4	4.3	3.2	2.8	2.23	9.07
Dir	SSE	WSW	E	NE	SSE	ENE	SW	E	W	WSW	WSW	WNW	WNW	WNW	NW	NW	NW	NNW	NW	SSW	SSW	SSW	SW	SSW	WNW	NW
15 Spd	1.0	2.3	0.7	0.5	0.8	1.3	0.9	0.8	1.2	1.0	1.6	0.4	2.0	1.1	1.8	1.9	0.9	1.3	0.6	0.2	0.7	0.2	0.5	0.7	0.41	2.33
Dir	SSW	SSW	WSW	SSW	SW	WSW	W	W	WNW	SW	W	S	SSE	WSW	SW	NE	ENE	E	E	ENE	ENE	SW	W	SW	SW	SSW
16 Spd	0.7	1.6	0.7	0.7	0.1	1.1	1.6	0.7	0.5	1.1	2.3	2.7	3.1	2.2	0.9	1.6	0.8	0.8	2.3	0.8	0.0	1.4	1.0	0.6	0.71	3.14
Dir	W	WSW	SW	SW	NNW	WSW	WSW	SW	NW	W	W	W	W	W	NNW	S	ENE	SE	ENE	E	S	W	W	W	W	W
17 Spd	1.2	1.9	1.1	0.9	1.0	1.2	2.1	1.7	2.4	3.1	3.7	3.5	3.6	3.6	1.5	1.0	1.7	1.1	1.1	0.9	1.4	1.0	0.9	0.9	1.07	3.74
Dir	W	WSW	W	WSW	WSW	NE	WNW	WNW	WNW	W	W	W	WNW	WNW	NNW	NNE	ESE	ENE	SSW	SSW	ENE	NNE	SSW	WSW	WNW	W
18 Spd	0.2	0.2	1.9	1.3	0.8	0.6	0.4	0.8	1.2	1.2	1.5	1.6	1.8	3.1	3.6	3.6	2.5	5.3	2.0	1.7	1.4	0.4	1.0	0.4	0.26	5.31
Dir	SSW	SSW	SSE	ESE	E	E	SSE	S	ENE	E	ENE	E	ENE	W	W	W	W	SSW	ENE	ENE	SE	ESE	ENE	E	S	SSW
19 Spd	0.1	0.3	0.3	1.7	0.8	0.3	0.8	0.5	1.1	0.9	1.5	1.0	2.5	6.3	8.3	6.5	5.8	4.0	3.6	4.3	0.7	0.3	1.0	1.4	1.36	8.30
Dir	E	E	ENE	NE	E	S	SSW	SSW	NW	WSW	WSW	WSW	SSW	SSW	SW	SW	SW	NW	ESE	SE	SW	S	SSE	SSW	SSW	SSW
20 Spd	1.4	0.4	0.4	0.5	0.6	0.6	0.3	0.9	0.5	0.7	0.5	1.1	4.3	3.3	5.3	5.4	2.0	1.3	2.8	3.1	3.1	1.2	1.2	0.9	0.40	5.41
Dir	S	SE	NW	ENE	SW	NNW	W	NE	WNW	SE	NW	WSW	WSW	W	WSW	SW	W	W	ENE	ENE	ENE	NE	ENE	E	WSW	SW
21 Spd	1.2	1.9	1.5	1.7	6.8	6.9	1.3	1.2	2.7	0.4	2.2	3.0	1.7	2.5	10.0	10.5	12.2	10.4	8.4	10.2	7.2	0.6	1.7	2.0	3.47	12.16
Dir	NE	WSW	NNE	NNE	SSW	SW	WSW	NE	ENE	NW	SW	WSW	W	SW	SW	SW	SW	SW	SW	SW	SW	ENE	NNE	ESE	SW	SW
22 Spd	0.8	2.6	1.6	1.9	1.5	0.8	0.2	0.7	0.5	1.4	4.1	9.2	7.8	9.3	12.3	11.0	9.1	3.2	2.4	2.3	1.1	0.6	0.3	3.5	2.97	12.33
Dir	E	SSW	S	SW	WSW	SSE	SE	ESE	NE	E	SW	SW	SW	SW	SW	SW	SW	WSW	SW	SSW	NE	SW	SW	ENE	SW	SW



WCAS - Hinton
Summary of Hourly Averages

Wind Speed (WS) - kph
October 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	2.4	1.2	0.5	1.3	0.2	0.6	1.4	0.9	2.2	0.6	0.4	7.1	8.1	10.7	8.5	5.9	1.8	3.2	2.6	3.7	2.9	3.4	3.2	0.7	1.04	10.72
Dir	ENE	E	ESE	ENE	E	SW	ENE	ESE	ENE	N	N	SW	WSW	SW	SW	SW	W	WSW	NNW	N	NNE	NE	NE	WNW	WSW	SW
24 Spd	1.9	3.1	1.1	1.7	2.1	0.9	1.1	1.1	1.5	2.0	3.3	3.3	1.3	1.7	1.9	2.7	2.7	1.4	1.0	0.5	0.8	0.7	0.6	0.5	0.37	3.27
Dir	SSW	SSE	WNW	SW	SW	W	WSW	W	WSW	W	WSW	WNW	NW	E	NE	NNE	NE	ENE	E	NNW	ENE	NW	W	WNW	W	WNW
25 Spd	0.9	1.1	0.7	0.6	1.1	0.9	0.8	0.6	0.5	1.2	0.6	2.1	2.6	2.6	5.1	5.6	4.2	2.0	0.6	0.4	0.3	1.3	0.1	0.3	0.90	5.58
Dir	NW	W	WSW	SSW	WNW	WSW	NNW	NNW	NE	ENE	NNW	ENE	ENE	NNE	NE	ENE	ENE	E	SE	NE	NNE	WSW	SW	NNE	NE	ENE
26 Spd	0.5	0.1	0.1	1.0	0.5	2.1	1.0	0.6	0.5	1.3	0.9	1.4	0.5	2.1	3.0	0.2	2.4	2.3	3.0	3.0	2.9	3.9	2.0	3.0	0.88	3.95
Dir	ENE	NW	WSW	WSW	W	SW	WNW	N	NNW	NE	NE	NE	NNW	SSW	N	WNW	WSW	WNW	WSW	W	WSW	WNW	NNW	NW	WNW	WNW
27 Spd	4.3	4.3	1.8	3.4	5.1	6.4	3.3	2.0	1.6	2.8	4.6	4.9	7.1	3.7	4.7	9.6	8.8	4.1	2.1	0.1	0.9	1.7	1.4	1.6	2.99	9.62
Dir	NW	W	WSW	SW	SW	SW	SW	WSW	WSW	WSW	SW	SW	SSW	SW	SSW	SSW	SSW	SW	WSW	SE	E	ENE	ENE	ENE	SW	SSW
28 Spd	0.7	0.8	0.8	1.3	1.0	3.3	1.7	3.5	5.2	6.3	9.9	7.3	6.3	6.8	6.4	6.3	4.1	3.3	2.5	3.4	3.3	2.6	3.6	2.4	3.52	9.86
Dir	NE	SSE	ENE	ENE	SSE	WSW	SW	SW	SW	SW	SW	SW	WSW	SW	SW	SW	WSW	WSW	W	WSW	WSW	W	WSW	W	SW	SW
29 Spd	2.4	2.6	1.7	0.6	1.6	1.2	0.6	0.6	0.2	6.3	3.2	4.6	5.9	8.6	10.1	10.2	7.1	3.3	2.5	0.8	1.5	2.5	3.5	2.4	2.27	10.18
Dir	W	WSW	WSW	WSW	W	E	ENE	ESE	E	SSE	SW	WSW	SW	WSW	SW	SW	WSW	WSW	WSW	WSW	NE	ENE	ENE	ENE	SW	SW
30 Spd	6.0	6.7	4.5	5.3	7.4	5.2	3.3	4.2	3.4	9.0	7.2	2.2	3.3	5.0	1.1	1.1	0.2	2.6	3.0	2.9	1.0	0.4	0.5	2.2	2.89	8.99
Dir	SW	SW	WSW	WSW	SW	WSW	W	SSW	SSE	S	SW	W	W	NW	ESE	S	E	WSW	SW	WSW	SSW	E	WSW	SSW	SW	S
31 Spd	1.2	0.3	1.0	0.3	0.5	1.0	0.4	1.1	1.7	2.9	1.8	1.2	2.4	3.3	3.8	1.9	4.5	1.6	1.1	0.2	0.5	1.1	1.6	1.8	1.21	4.49
Dir	SSW	W	WSW	SSE	SE	ENE	ENE	ESE	ENE	ENE	ENE	E	ENE	NE	NE	ENE	ENE	ENE	SSE	E	S	E	ENE	E	ENE	ENE
Spd	1.57	1.40	1.11	1.10	1.39	1.01	0.62	0.65	0.50	0.90	1.80	2.31	2.48	3.27	3.37	3.40	2.65	2.17	1.55	1.38	1.27	0.93	1.07	1.00	Diurnal Average	
Dir	WSW	WSW	SW	SW	SW	SW	W	SW	W	SW	WSW	WSW	WSW	WSW	WSW	SW	WSW	WSW	SW	SW	SW	SW	SW	SW	Diurnal Maximum	
Spd	15.13	9.37	8.61	7.72	7.40	7.16	7.69	9.22	13.04	14.51	9.86	10.22	12.27	16.04	17.59	16.80	15.58	12.74	12.05	11.21	12.38	13.51	15.22	15.00	Diurnal Maximum	
Dir	233.52	239.10	229.87	234.00	236.09	247.67	252.72	250.41	246.23	232.11	227.94	231.27	235.43	233.09	229.71	231.20	229.80	228.22	237.26	231.87	227.88	226.00	229.91	230.93		
Maximum Speed Value: 17.6 kph on Oct 9 15:00																		Minimum Speed Value: 0.0 kph on Oct 16 21:00						Hours in Service:		744
Maximum Daily Speed Average: 8.29 kph on Oct 9																		Minimum Daily Speed Average: 0.26 kph on Oct 7						Hours of Data:		744
Maximum Diurnal Speed Average: 3.40 kph at hour 16																		Minimum Diurnal Speed Average: 0.50 kph at hour 9						Hours of Missing Data:		0
Monthly Average Velocity: 1.595 kph 237.44 deg																		Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.5 Q ₁ = 0.9 Median = 2.0 Q ₃ = 4.2 P ₉₀ = 7.4 P ₉₉ = 15.0						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	21	0	0	0	0	0																		21		
NorthEast	129	3	0	0	0	0																		132		
East	93	2	0	0	0	0																		95		
SouthEast	38	1	0	0	0	0																		39		
South	39	7	0	0	0	0																		46		
SouthWest	111	87	26	0	0	0																		224		
West	112	15	0	0	0	0																		127		
NorthWest	52	8	0	0	0	0																		60		
Total	595	123	26	0	0	0																		744		



WCAS - Hinton
Summary of Hourly Averages

Relative Humidity (RH) - %
October 2015

Maximum Value: 92.59 % on Oct 20 08:00 Maximum Daily Average: 85.96 % on Oct 24 Minimum Value: 15.1 % on Oct 16 16:00 Minimum Daily Average: 35.86 % on Oct 10 Maximum Diurnal Average: 78.14 % at hour 8 Minimum Diurnal Average: 38.26 % at hour 16 Monthly Average: 61.694 % Percentiles: P ₁ = 18.5 P ₁₀ = 27.3 Q ₁ = 41.8 Median = 66.1 Q ₃ = 82.8 P ₉₀ = 88.6 P ₉₉ = 91.7																								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-Oct	83.3	86.3	87.4	88.2	88.1	86.6	86.4	87.4	84.0	73.2	61.3	47.3	42.5	38.7	35.4	35.0	38.0	44.9	52.6	47.6	47.8	56.6	63.2	70.9	63.86	88.21																							
2-Oct	77.6	81.9	85.1	86.6	87.9	88.7	88.9	88.7	87.3	80.7	77.6	75.0	69.8	72.1	74.8	76.7	76.5	80.3	84.2	86.8	86.9	85.9	85.6	85.3	82.12	88.92																							
3-Oct	86.9	88.1	87.3	87.0	87.2	88.3	88.7	88.7	88.6	84.7	78.5	75.2	70.3	70.1	76.1	74.7	80.4	77.5	82.8	85.0	85.9	86.2	85.1	86.6	82.91	88.74																							
4-Oct	86.8	86.6	86.8	87.2	86.4	85.3	85.6	85.6	81.6	70.2	65.0	60.7	55.3	55.0	58.9	57.0	58.7	65.8	73.6	78.8	83.9	86.8	88.5	89.2	75.80	89.21																							
5-Oct	90.0	90.4	91.1	91.3	91.4	91.1	90.8	91.2	91.2	87.8	71.0	53.1	34.2	31.7	33.0	34.3	36.5	39.0	48.9	58.7	62.0	67.3	73.9	79.3	67.89	91.40																							
6-Oct	84.8	86.7	87.5	88.2	88.7	88.6	88.6	88.2	86.7	78.4	63.2	56.3	45.2	39.5	38.4	39.5	46.0	51.3	56.5	62.8	66.0	67.7	72.7	75.0	68.61	88.68																							
7-Oct	79.1	82.0	84.3	85.4	85.7	85.7	85.9	86.2	83.8	77.4	70.6	66.2	60.9	53.6	50.8	43.7	45.2	53.8	53.7	62.9	69.1	77.2	83.5	84.6	71.31	86.21																							
8-Oct	85.3	85.9	87.6	88.4	89.0	89.7	90.2	90.7	90.7	80.2	59.5	46.3	35.1	34.6	35.0	37.0	39.3	39.9	42.8	43.1	44.1	42.5	46.7	45.8	61.23	90.73																							
9-Oct	44.3	42.3	35.8	34.4	36.9	61.9	70.3	71.5	65.7	58.2	54.4	38.4	26.6	21.4	23.1	25.6	27.8	31.7	33.9	34.4	30.8	27.5	24.6	24.2	39.41	71.54																							
10-Oct	23.1	24.0	24.1	26.0	28.0	31.7	33.5	37.7	31.9	28.3	26.9	31.9	30.3	29.4	25.2	22.4	25.8	40.4	46.6	49.9	53.2	59.5	63.4	67.5	35.86	67.47																							
11-Oct	59.2	62.1	61.1	57.4	56.3	56.2	57.2	42.6	40.8	30.1	26.5	22.5	20.7	22.3	23.0	23.4	23.7	24.3	25.4	26.3	27.4	25.5	26.6	30.6	36.30	62.08																							
12-Oct	31.8	33.7	36.3	36.6	37.3	40.1	43.0	45.9	43.7	42.7	37.8	35.5	35.5	33.5	31.6	29.5	29.0	31.5	38.0	40.3	35.2	35.2	36.9	41.5	36.76	45.94																							
13-Oct	39.8	43.7	48.6	53.0	49.9	61.9	71.9	77.6	69.0	48.0	26.9	23.0	21.3	19.5	20.7	19.5	19.6	24.1	30.7	34.5	47.3	53.8	54.9	61.4	42.54	77.64																							
14-Oct	66.2	70.5	74.7	77.6	79.2	81.1	80.4	82.1	78.5	67.6	52.5	23.3	18.5	17.4	16.6	18.2	22.1	25.2	30.4	35.2	39.9	41.4	53.2	59.0	50.45	82.15																							
15-Oct	64.0	66.6	69.7	72.4	76.8	79.7	81.5	83.2	78.3	63.7	55.0	43.6	35.4	28.8	26.0	24.2	27.3	39.2	48.5	55.6	63.3	69.1	74.2	76.7	58.45	83.24																							
16-Oct	79.1	81.2	82.1	82.9	82.8	82.3	81.2	83.3	79.1	56.4	36.5	27.3	22.2	17.9	15.7	15.1	16.7	27.1	43.2	51.7	61.4	71.6	75.9	79.7	56.35	83.29																							
17-Oct	82.4	84.0	83.9	84.8	84.6	84.9	75.5	61.1	58.6	38.8	29.4	27.1	26.5	21.7	21.6	22.6	24.9	35.3	48.4	55.3	59.1	55.5	56.2	59.9	53.41	84.88																							
18-Oct	64.7	68.7	68.4	70.6	74.0	79.2	82.3	84.7	83.2	68.3	54.2	42.6	32.1	25.0	22.3	21.7	24.2	27.2	38.4	49.4	58.6	67.1	72.8	76.5	56.52	84.71																							
19-Oct	79.3	80.0	79.8	80.2	84.1	86.1	84.4	83.2	83.3	74.4	61.3	56.5	51.7	44.4	36.1	36.8	39.3	64.6	76.9	80.4	84.5	88.2	89.2	89.6	71.44	89.62																							
20-Oct	90.0	90.2	90.8	91.6	92.0	92.3	92.4	92.6	92.5	92.1	91.6	74.2	36.9	22.9	19.1	18.9	22.7	27.5	38.1	48.3	59.4	68.1	73.4	76.5	66.42	92.59																							
21-Oct	79.7	72.3	74.9	81.4	50.7	43.4	63.0	76.5	75.2	75.5	71.1	49.6	43.9	32.8	25.0	25.7	27.2	29.4	34.6	33.9	33.6	44.6	51.0	58.5	52.24	81.42																							
22-Oct	65.0	67.2	70.3	71.5	73.2	76.3	80.0	82.3	84.1	68.1	50.4	32.2	31.0	29.8	26.6	26.5	28.5	35.2	43.1	50.6	61.4	68.4	70.9	70.2	56.78	84.06																							
23-Oct	69.3	72.4	76.4	78.7	80.8	82.1	83.3	83.7	82.3	66.6	52.4	31.5	25.0	22.8	23.8	26.6	30.9	33.9	38.0	52.1	68.4	75.3	78.7	84.9	59.16	84.89																							
24-Oct	89.3	89.9	90.1	90.6	90.7	90.9	91.1	91.2	91.4	91.3	90.4	89.8	88.8	78.6	67.6	62.2	65.4	74.2	85.9	89.0	90.5	91.2	91.5	91.7	85.96	91.69																							
25-Oct	91.9	91.6	91.2	90.7	90.2	89.9	89.3	88.9	89.3	90.1	88.7	69.6	57.7	50.9	51.8	51.0	51.9	64.5	78.9	85.6	87.1	87.8	88.0	88.6	79.38	91.85																							
26-Oct	89.2	89.6	89.6	90.0	90.0	90.0	89.1	89.0	88.9	88.4	87.7	81.0	72.6	77.2	70.5	77.2	84.0	78.0	73.4	71.6	72.1	70.1	68.2	66.1	80.97	90.02																							
27-Oct	65.2	61.8	67.2	69.3	72.5	65.4	64.4	73.8	76.3	70.8	62.8	58.6	55.4	51.6	50.6	49.0	52.6	59.4	67.9	76.9	82.0	84.8	86.4	87.0	67.16	86.99																							
28-Oct	87.8	88.6	88.5	88.5	88.6	79.4	75.8	71.0	64.2	58.2	51.4	49.2	46.2	45.4	45.5	46.9	50.6	55.0	58.7	59.8	64.3	68.3	75.7	78.7	66.09	88.61																							
29-Oct	79.0	74.4	73.7	78.5	74.2	82.8	86.4	85.7	86.3	66.0	56.3	52.8	43.1	34.2	34.8	34.3	36.2	41.2	40.8	51.2	64.9	72.8	74.1	72.9	62.36	86.36																							
30-Oct	41.9	40.3	41.1	38.9	37.6	41.4	45.2	41.4	46.2	46.0	46.8	48.1	45.9	58.0	70.6	66.5	64.8	61.8	61.3	59.4	65.1	72.7	66.1	63.1	52.92	72.71																							
31-Oct	71.7	79.3	82.6	83.4	83.5	85.2	86.1	86.1	86.2	81.5	73.3	71.1	66.2	49.6	42.8	44.2	44.9	50.2	62.7	72.4	77.7	80.0	81.5	82.7	71.87	86.16																							
																								71.86	72.98	74.13	75.20	74.79	76.38	77.81	78.14	76.42	67.85	59.07	50.31	43.44	39.69	38.49	38.26	40.67	46.24	52.87	57.72	62.35	66.09	68.80	71.10	Diurnal Average	
																								91.85	91.55	91.19	91.58	92.03	92.26	92.38	92.59	92.52	92.11	91.57	89.75	88.79	78.62	76.14	77.18	84.05	80.26	85.87	89.03	90.46	91.20	91.50	91.69	Diurnal Maximum	



WCAS - Hinton
Summary of Hourly Standard Deviations

Wind Speed (WS) - kph
October 2015

Maximum Value: 10.51 kph on Oct 9 14:00		Maximum Daily Average: 6.15 kph on Oct 12		Hours in Service: 744																						
Minimum Value: 0.1 kph on Oct 1 06:00		Minimum Daily Average: 1.24 kph on Oct 7		Hours of Data: 744																						
Maximum Diurnal Average: 4.00 kph at hour 15		Minimum Diurnal Average: 1.75 kph at hour 3		Hours of Missing Data: 0																						
Monthly Average: 2.526 kph		Percentiles: P ₁ = 0.6 P ₁₀ = 1.0 Q ₁ = 1.3 Median = 1.9 Q ₃ = 3.1 P ₉₀ = 5.2 P ₉₉ = 8.8		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-Oct	0.8	0.8	1.1	0.9	0.6	0.1	1.3	2.0	1.2	1.4	1.4	1.7	2.0	2.0	2.4	2.7	2.1	2.0	2.0	2.4	2.6	2.4	2.0	2.0	1.66	2.68
2-Oct	1.7	0.9	1.2	0.9	1.1	1.2	3.1	1.4	1.5	1.5	1.8	3.4	3.5	2.4	4.0	3.1	2.4	2.3	2.7	2.7	2.5	2.7	2.3	2.0	2.19	3.98
3-Oct	1.0	0.8	1.8	1.3	2.1	1.7	1.4	1.4	1.8	2.8	2.5	2.4	2.5	2.3	2.5	2.1	1.8	2.0	2.2	1.7	1.8	2.3	1.9	1.6	1.91	2.81
4-Oct	1.5	2.0	1.9	1.9	1.4	1.7	2.1	1.7	1.9	1.9	2.1	2.1	2.3	4.4	3.5	2.7	3.1	2.7	1.8	1.6	0.9	0.6	0.6	0.6	1.96	4.41
5-Oct	0.9	1.2	1.0	1.4	1.4	1.2	1.1	1.0	1.1	1.2	1.2	2.0	2.1	2.5	2.5	2.8	2.9	2.5	1.5	2.1	2.8	1.7	1.4	1.1	1.68	2.94
6-Oct	1.1	0.8	0.4	0.7	0.9	0.9	1.0	1.1	0.9	1.8	1.6	1.6	2.0	2.0	1.3	1.5	2.3	1.8	1.4	1.4	1.4	1.5	2.0	1.4	1.36	2.28
7-Oct	1.0	1.2	1.1	0.7	1.0	1.1	0.9	1.0	1.1	1.0	2.1	2.1	1.4	1.3	1.4	1.6	1.6	1.5	2.0	1.3	0.8	0.7	0.6	1.2	1.24	2.12
8-Oct	0.9	0.7	0.9	0.9	0.9	0.8	1.2	1.1	1.4	1.7	1.4	1.6	4.7	5.3	5.6	5.5	4.0	3.2	3.4	3.7	4.0	4.8	2.4	4.9	2.70	5.62
9-Oct	3.4	3.5	5.8	5.3	5.1	1.7	2.6	2.6	2.8	2.3	2.1	4.1	7.5	10.5	9.9	9.4	8.8	7.9	8.7	7.1	7.4	8.1	8.5	8.4	5.96	10.51
10-Oct	8.9	7.2	5.1	5.0	3.9	3.2	5.8	4.5	4.4	5.3	8.9	5.5	3.4	3.4	4.8	5.3	5.7	4.2	3.7	2.4	1.9	1.5	1.7	2.5	4.50	8.90
11-Oct	3.8	1.6	1.3	1.5	1.7	2.1	1.9	2.8	2.6	3.9	5.2	4.7	4.8	7.1	7.8	8.3	7.9	6.6	7.4	5.8	5.6	4.1	5.5	5.1	4.55	8.26
12-Oct	5.2	4.7	3.5	5.3	5.2	6.2	7.4	8.2	9.9	9.9	5.4	6.9	8.0	8.2	7.6	7.3	7.1	6.9	4.8	3.1	4.4	4.7	4.2	3.6	6.15	9.90
13-Oct	4.7	2.5	1.4	2.5	2.5	1.1	1.3	1.2	2.1	2.9	5.7	6.5	4.8	5.6	3.8	3.6	2.9	3.7	1.7	2.0	1.7	2.2	1.9	1.4	2.89	6.51
14-Oct	1.7	1.7	1.4	1.3	1.5	1.7	2.1	1.4	1.4	1.9	4.3	3.9	4.1	4.2	4.0	4.2	3.4	2.8	2.0	2.9	3.9	1.5	1.8	1.8	2.52	4.33
15-Oct	1.5	0.9	1.1	0.9	1.0	1.1	1.0	0.8	1.1	1.5	1.5	1.5	2.0	1.7	1.6	1.9	1.1	1.3	1.4	1.4	1.4	0.9	0.8	1.1	1.26	1.95
16-Oct	0.8	1.2	1.0	1.2	0.8	1.2	1.4	1.3	1.0	1.3	1.6	2.0	1.9	1.8	1.5	1.4	1.2	1.1	1.7	1.0	0.7	1.4	1.3	0.9	1.28	1.96
17-Oct	1.0	1.3	1.4	1.5	1.7	1.3	1.7	1.4	1.7	2.2	3.2	2.4	1.5	2.0	1.5	1.3	1.4	1.3	1.4	1.3	2.1	1.8	1.4	1.8	1.65	3.24
18-Oct	1.3	1.6	2.4	2.0	1.5	1.3	1.1	1.8	1.6	1.5	1.5	1.7	1.7	3.0	3.8	3.4	2.6	2.4	2.1	2.4	2.8	1.4	1.5	1.1	1.98	3.76
19-Oct	1.1	1.3	1.4	1.4	1.3	1.1	1.5	1.2	1.2	1.4	1.6	1.7	2.1	3.4	5.1	4.5	4.7	4.4	3.7	2.5	1.8	1.4	1.3	1.5	2.19	5.08
20-Oct	1.4	1.1	1.5	1.4	1.7	0.9	1.1	1.1	1.0	1.1	1.0	1.7	3.8	3.8	4.7	4.8	2.4	1.9	2.4	1.6	1.9	1.6	1.2	1.5	1.94	4.76
21-Oct	1.3	2.7	1.5	1.7	3.7	2.3	1.8	1.5	1.9	1.6	2.9	2.7	1.9	3.3	6.7	6.6	7.0	5.5	6.0	5.2	5.0	1.7	1.9	2.6	3.30	6.98
22-Oct	2.3	3.0	2.6	1.8	1.6	2.0	1.1	1.8	1.5	1.5	4.6	5.9	6.1	5.2	6.5	7.0	5.3	3.3	1.3	1.9	1.6	1.5	1.6	1.9	3.04	6.99
23-Oct	1.5	1.3	1.2	1.4	1.3	1.9	1.3	1.4	1.7	1.2	1.3	5.9	6.0	6.4	5.7	4.5	1.7	4.4	2.4	2.7	1.8	2.1	1.9	1.4	2.59	6.35
24-Oct	2.4	2.4	1.0	1.3	2.0	0.9	1.1	1.2	1.9	1.5	2.6	1.6	1.6	1.7	1.6	1.7	1.2	1.5	1.1	1.0	0.8	0.9	0.9	0.9	1.49	2.59
25-Oct	0.9	1.1	1.2	1.3	1.0	1.0	0.9	0.9	0.7	1.1	0.9	1.3	1.8	2.0	3.1	3.0	2.5	1.1	1.0	1.2	1.0	1.2	0.8	0.8	1.33	3.07
26-Oct	0.9	0.9	0.7	0.9	0.6	1.8	1.1	0.8	1.3	1.2	1.2	1.3	1.3	2.9	3.1	2.0	2.0	2.5	3.3	3.1	2.0	4.0	3.2	3.5	1.89	3.98
27-Oct	3.4	2.9	1.7	2.8	3.4	3.4	3.5	2.1	1.5	2.1	2.9	2.8	2.9	2.9	3.3	3.7	3.4	2.5	2.1	0.6	1.0	1.2	1.5	1.1	2.46	3.72
28-Oct	1.0	1.0	1.1	1.1	1.4	3.5	2.8	2.9	3.6	4.8	5.3	5.3	4.4	4.5	4.1	3.8	3.2	2.9	2.3	2.9	3.1	2.8	2.9	1.6	3.02	5.31
29-Oct	1.7	3.2	1.6	2.0	2.5	1.3	1.1	1.2	1.6	2.3	2.6	3.4	3.9	6.5	6.0	5.7	5.5	3.3	2.8	1.6	1.6	2.2	2.4	3.0	2.87	6.51
30-Oct	4.5	4.5	3.9	4.7	4.9	4.6	3.0	3.6	2.8	4.4	5.0	2.6	2.9	2.9	1.6	1.5	1.6	2.4	2.7	2.8	2.4	1.5	1.1	1.7	3.06	4.96
31-Oct	1.5	1.6	1.1	1.1	1.5	1.3	1.1	1.8	1.3	1.9	1.8	1.7	2.3	2.9	2.6	1.7	1.7	1.5	1.5	1.3	1.6	2.1	1.6	2.1	1.69	2.89
																								Diurnal Average		
																								Diurnal Maximum		
2.10 1.99 1.75 1.87 1.97 1.80 1.93 1.87 1.97 2.31 2.72 3.05 3.26 3.81 4.00 3.81 3.41 3.01 2.77 2.37 2.37 2.29 2.05 2.13																										
8.90 7.18 5.84 5.31 5.22 6.20 7.44 8.16 9.90 9.89 8.86 6.90 7.96 10.51 9.90 9.36 8.79 7.88 8.67 7.05 7.36 8.13 8.53 8.36																										
,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
October 2015

Maximum Value: 110.31 deg on Oct 21 10:00 Maximum Daily Average: 80.00 deg on Oct 18																							Hours in Service:	744		
Minimum Value: 13.4 deg on Oct 10 21:00 Minimum Daily Average: 37.63 deg on Oct 11																							Hours of Data:	744		
Maximum Diurnal Average: 64.47 deg at hour 8 Minimum Diurnal Average: 40.64 deg at hour 17																							Hours of Missing Data:	0		
Monthly Average: 56.165 deg Percentiles: P ₁ = 20.0 P ₁₀ = 30.2 Q ₁ = 38.7 Median = 51.6 Q ₃ = 73.6 P ₉₀ = 90.7 P ₉₉ = 103.9																							Hours of Calibration:	0		
																							Percent Operational Time:	100.0		
Day	Hourly Period Ending At																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Oct	80.8	37.5	46.2	43.9	65.1	54.4	104.6	104.8	46.0	59.9	91.8	60.4	55.8	68.3	53.2	42.0	36.0	59.7	88.0	84.6	68.7	45.3	15.7	39.4	60.50	104.79
2-Oct	41.2	48.2	45.9	38.8	47.4	39.7	86.6	38.2	47.8	60.2	85.9	46.5	74.2	86.0	106.5	66.7	54.3	43.5	27.5	25.5	21.3	25.0	27.3	43.2	51.14	106.50
3-Oct	33.2	45.2	48.7	55.2	58.1	58.9	30.1	53.4	29.0	30.3	28.8	34.8	35.9	32.5	51.5	67.4	43.3	25.6	27.7	25.4	38.1	40.3	36.6	39.8	40.41	67.37
4-Oct	27.4	29.1	38.4	28.4	29.1	31.7	32.7	36.8	31.2	26.9	64.4	78.6	61.7	59.2	25.7	25.2	28.3	32.1	22.2	19.9	25.7	77.7	88.3	51.9	40.53	88.29
5-Oct	60.7	70.6	41.9	78.9	53.7	40.4	63.3	81.7	21.3	24.2	64.3	64.0	65.7	68.2	45.6	42.3	40.9	31.0	45.0	63.3	71.2	84.3	91.5	79.2	58.04	91.48
6-Oct	60.1	83.6	40.0	57.5	51.6	68.5	48.9	42.1	82.6	33.6	48.8	86.9	89.1	64.2	64.2	44.9	46.5	39.3	58.6	47.1	67.6	96.3	102.3	96.8	63.38	102.29
7-Oct	76.6	76.4	97.1	83.3	61.9	90.3	93.9	85.5	58.3	55.9	48.9	48.8	31.1	80.9	47.6	63.6	39.4	67.3	44.3	76.7	84.2	67.6	103.3	77.5	69.18	103.25
8-Oct	72.4	86.3	94.8	37.1	86.3	94.9	91.1	79.3	69.0	50.4	24.9	71.7	60.7	44.0	46.5	47.8	34.1	24.7	45.8	42.9	42.5	43.4	62.3	39.3	58.00	94.94
9-Oct	44.2	53.7	40.9	36.9	79.5	52.7	55.1	50.7	54.6	73.6	100.2	54.0	59.6	37.4	32.0	31.3	34.1	45.9	40.4	36.1	33.4	33.4	32.3	31.1	47.61	100.15
10-Oct	31.5	44.6	33.5	51.0	52.1	43.7	46.6	27.9	47.2	56.8	54.1	48.3	30.7	36.0	49.0	56.6	48.6	45.2	42.5	46.7	13.4	75.6	61.3	61.3	46.01	75.63
11-Oct	53.4	40.9	28.9	42.4	22.9	33.2	26.6	39.4	44.7	42.3	35.1	39.2	45.7	48.7	35.2	35.9	27.7	28.1	38.1	35.6	51.6	41.9	31.4	34.1	37.63	53.43
12-Oct	32.9	41.0	42.1	38.8	56.5	51.2	51.1	47.8	43.3	37.6	48.5	47.9	37.7	32.0	32.5	27.2	27.0	30.2	48.8	47.0	57.8	56.6	42.3	38.7	42.36	57.83
13-Oct	32.7	42.2	58.0	22.0	22.7	76.5	39.9	98.3	48.5	92.6	43.0	37.7	49.7	50.5	51.2	23.7	44.7	42.4	50.0	78.4	96.4	95.8	71.5	94.0	56.77	98.27
14-Oct	96.9	94.4	91.5	110.1	94.8	96.4	93.6	63.2	102.8	56.8	48.0	31.3	24.9	25.2	25.4	30.7	26.1	32.7	60.2	60.1	23.9	55.8	42.1	30.1	59.03	110.06
15-Oct	79.5	23.8	63.2	87.9	44.0	28.0	58.6	70.5	50.4	80.4	52.7	97.6	72.9	83.7	68.0	54.6	39.8	55.8	78.3	87.0	70.4	96.5	66.5	70.2	65.85	97.65
16-Oct	55.0	30.3	64.5	75.7	79.6	85.7	35.0	92.2	66.5	69.3	41.0	45.9	43.1	56.5	91.9	43.0	70.6	56.1	45.9	54.7	89.7	31.2	51.7	70.2	60.22	92.21
17-Oct	22.7	28.5	75.2	80.7	70.9	77.9	41.3	32.4	35.0	40.9	42.2	38.7	24.3	30.0	58.0	40.2	35.2	60.1	80.9	70.2	73.5	88.0	75.4	93.0	54.80	93.03
18-Oct	107.3	100.0	94.8	89.6	83.9	89.4	94.8	101.3	79.2	82.4	74.3	67.4	81.0	59.4	55.2	50.1	53.8	29.2	81.2	80.4	95.8	97.6	77.6	94.3	80.00	107.29
19-Oct	103.5	81.3	94.9	39.6	76.3	76.2	86.5	92.3	73.8	70.7	67.0	74.4	44.8	30.6	37.4	39.7	43.0	64.3	74.0	47.4	91.5	100.7	70.6	67.3	68.65	103.49
20-Oct	69.3	102.0	92.2	74.8	93.6	64.2	84.3	59.2	72.3	76.1	91.4	70.1	53.0	58.0	47.9	48.4	56.5	51.9	65.6	39.9	32.6	56.1	50.1	74.9	66.02	101.95
21-Oct	55.0	77.0	61.0	64.3	32.7	19.1	85.6	78.6	46.2	110.3	58.2	44.7	52.2	60.6	37.6	37.1	29.3	30.2	38.3	27.5	44.2	90.2	69.5	87.6	55.70	110.31
22-Oct	99.9	66.6	86.5	63.7	79.6	97.3	99.2	89.7	89.6	57.8	73.8	37.1	44.1	32.7	26.4	35.9	32.7	38.6	31.6	48.0	91.1	105.7	95.2	31.8	64.78	105.68
23-Oct	33.2	65.3	80.2	55.6	97.0	94.9	60.5	70.6	57.4	98.9	103.3	44.0	41.1	32.8	40.1	39.2	43.0	45.2	40.6	42.0	39.4	28.9	35.7	85.6	57.28	103.25
24-Oct	63.9	65.4	19.4	30.1	28.6	26.6	44.5	27.7	38.8	31.2	44.1	23.1	77.1	60.0	55.8	31.4	31.1	53.6	70.6	86.6	65.8	32.1	46.4	80.3	47.25	86.62
25-Oct	36.6	38.7	65.6	79.6	32.0	49.9	45.7	82.5	34.1	38.3	57.3	56.7	45.6	49.8	39.2	26.0	32.1	34.4	74.2	97.6	94.4	36.4	85.4	68.3	54.19	97.60
26-Oct	82.0	99.5	87.8	36.9	27.5	42.0	36.9	47.5	80.2	42.3	54.3	33.1	86.4	83.1	52.3	78.3	52.3	55.3	59.3	59.7	44.9	52.0	89.8	74.9	60.76	99.52
27-Oct	42.9	40.9	52.6	49.4	45.2	26.8	59.6	53.1	43.2	40.6	37.4	36.8	25.2	59.9	59.4	20.1	18.3	25.1	41.7	85.9	58.2	43.6	47.5	34.7	43.69	85.91
28-Oct	69.7	55.4	69.8	47.7	67.9	51.1	75.6	51.0	39.6	42.2	30.9	39.3	41.6	36.6	35.2	30.2	41.0	39.0	48.4	43.6	51.9	56.2	42.3	36.9	47.63	75.59
29-Oct	35.9	56.3	68.7	94.9	57.0	61.1	75.9	77.0	93.8	21.6	53.9	41.6	33.2	40.2	34.2	29.7	41.0	43.6	54.3	84.9	70.5	50.7	44.8	84.1	56.20	94.85
30-Oct	38.0	38.7	46.7	45.6	36.1	44.9	50.1	50.1	62.1	41.2	32.6	56.8	46.6	44.1	84.4	66.9	89.4	48.4	45.1	64.9	91.3	96.6	100.3	58.7	57.49	100.32
31-Oct	87.0	91.5	72.4	90.5	90.9	59.7	78.3	74.1	55.3	31.8	58.0	73.0	52.4	66.1	39.7	52.4	19.9	61.6	71.4	110.3	94.9	95.9	64.5	89.0	70.03	110.25
58.88 59.84 62.69 59.06 58.87 58.94 63.75 64.47 56.25 54.10 56.75 52.59 51.20 52.16 49.32 42.86 40.64 43.23 52.92 58.71 61.16 64.43 61.98 63.17																							Diurnal Average			
107.29 101.95 97.06 110.06 97.00 97.26 104.63 104.79 102.79 110.31 103.25 97.65 89.08 86.01 106.50 78.29 89.38 67.34 88.00 110.25 96.42 105.68 103.25 96.85																							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
OCTOBER 2015**