

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

AIR QUALITY MONITORING
July 2015
Monthly Report

Prepared by:

West Central Airshed Society
Drayton Valley, Alberta





August 7th, 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 July 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 13 readings occurring in July 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 38.09 ppb, occurring July 28th. There were two readings in July 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 4.27 ppb.

2. Operational times less than 90 percent:

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

3. Monitoring Notes:

AMS 906 (Hinton)

The PM_{2.5} analyzer experienced unstable operation, returning an uptime of 98.9 percent. All other analyzers and meteorological equipment returned uptimes of 100 percent for the month of July.

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	July

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	0.038	13	0.004	2
PM _{2.5}	906	98.9	78.8 µg/m ³	0	23.26 µg/m ³	0

38.09 4.27

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
JULY 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												24 Hour Average Max (ppm)
July 2015												
Parameter	Calibration Hours	Number of Data	Percent Uptime	Mean	Min	Max	P10	Q1	Percentile Median	Q3	P90	
TRS (ppb)	42	702	100.0	1.3	0.0	38.0	0.1	0.2	0.4	1.4	3.2	0.004
SO ₂ (ppb)	42	702	100.0	0.4	0.0	6.7	0.0	0.0	0.0	0.2	1.2	0.001
O ₃ (ppb)	43	701	100.0	22.5	0.4	70.1	4.0	11.8	22.7	33.2	39.3	0.029
NO (ppb)	36	708	100.0	1.4	0.0	16.0	0.1	0.2	0.7	1.5	3.5	-
NO ₂ (ppb)	36	708	100.0	3.4	0.1	14.3	0.8	1.6	2.7	4.6	7.2	0.006
NO _x (ppb)	36	708	100.0	4.8	0.1	25.7	0.9	2.1	3.7	6.2	10.1	-
Particulate Matter 2.5 microns (μ/m ³)	7	729	98.9	9.9	0.0	78.8	2.0	3.9	7.0	13.4	20.9	23.26 ug/m3
Wind Speed (kph)	0	744	100.0	2.5	0.1	15.1	0.5	0.9	1.9	3.3	5.4	-
Temperature (°C)	0	744	100.0	16.7	4.6	34.5	9.2	12.0	16.3	20.9	24.8	-
Relative Humidity (%)	0	744	100.0	55.2	6.8	91.5	23.4	34.7	55.4	75.9	86.6	-
Std Dev Wind Direction (deg)	0	744	100.0	59.7	17.7	114.3	34.7	43.7	56.1	75.1	89.6	-
Std Dev Wind Speed (kph)	0	744	100.0	2.3	0.0	8.0	1.0	1.4	2.1	2.9	4.0	-



WCAS - Hinton
Summary of Hourly Averages

Total Reduced Sulphur (TRS) - ppb
July 2015

Maximum Value: 38.09 ppb on Jul 28 08:00 Maximum Daily Average: 4.27 ppb on Jul 28		Hours in Service: 744 Hours of Data: 702 Hours of Missing Data: 42 Hours of Calibration: 42 Percent Operational Time: 100.0																									
Minimum Value: 0 ppb on Jul 24 23:00 Maximum Diurnal Average: 4.91 ppb at hour 8 Monthly Average: 1.322 ppb		Minimum Daily Average: 0.42 ppb on Jul 17 Minimum Diurnal Average: 0.27 ppb at hour 17 Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.4 O ₃ = 1.4 P ₉₀ = 3.2 P ₉₉ = 14.1																									
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-Jul	0	1	0	Z	1	1	1	1	0	1	1	2	1	0	0	2	1	1	0	0	0	0	1	0	0.79	2.20	
2-Jul	0	0	0	Z	3	4	4	4	2	2	2	1	0	0	0	0	0	0	1	1	3	2	1	3	1.45	4.20	
3-Jul	6	2	2	Z	2	3	8	5	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1.55	8.42	
4-Jul	0	0	0	Z	1	1	3	4	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0.66	4.38	
5-Jul	0	0	0	Z	1	3	3	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.52	2.97	
6-Jul	0	0	0	Z	0	0	2	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0.46	2.20	
7-Jul	0	0	1	Z	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	2	1	1	1	1	0.63	2.07	
8-Jul	1	1	2	Z	0	0	1	4	2	0	0	0	0	0	1	1	0	0	1	2	0	0	0	0	0.71	3.51	
9-Jul	0	1	1	Z	7	13	3	8	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.76	12.63	
10-Jul	0	0	0	Z	1	1	0	7	4	2	1	0	0	0	0	0	0	1	0	1	1	1	2	1	1.02	6.81	
11-Jul	1	1	0	Z	0	0	0	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0.48	1.77	
12-Jul	1	2	1	Z	1	1	1	3	3	1	1	0	0	0	1	0	0	0	0	0	0	1	1	3	0.99	3.36	
13-Jul	2	0	1	Z	1	1	1	2	3	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0.76	3.19	
14-Jul	0	1	2	Z	1	4	4	4	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1.02	4.44	
15-Jul	0	0	0	Z	0	0	3	2	5	2	2	2	1	1	0	0	1	0	1	1	1	1	1	1	0.99	4.72	
16-Jul	0	1	1	Z	0	0	0	0	1	2	0	0	0	0	0	1	0	0	0	1	1	2	2	3	0.70	3.07	
17-Jul	1	0	0	Z	0	0	0	1	1	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0.42	2.46	
18-Jul	4	4	13	Z	21	11	2	0	3	0	0	0	0	0	1	0	0	2	1	1	9	1	0	0	3.24	20.92	
19-Jul	0	0	0	Z	1	2	1	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.51	3.28	
20-Jul	0	0	0	Z	0	7	9	3	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	1.08	9.02	
21-Jul	3	5	3	Z	1	3	2	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0.97	4.53	
22-Jul	0	0	0	Z	1	3	2	2	4	2	2	2	1	0	0	0	0	0	0	1	1	0	0	3	1	1.13	3.59
23-Jul	0	1	1	Z	1	2	2	5	3	2	2	1	0	0	0	0	0	0	0	0	0	0	3	1	1.03	4.82	
24-Jul	1	0	0	Z	0	0	0	C	C	C	C	C	C	C	C	C	C	C	C	6	5	5	5	0	0	--	5.52
25-Jul	0	0	2	Z	1	1	1	2	2	1	1	2	0	0	0	0	0	2	1	0	0	2	2	3	1.13	3.33	
26-Jul	2	4	7	Z	2	4	6	5	4	2	1	0	0	1	0	1	0	0	0	0	4	1	0	1	1.98	7.13	
27-Jul	1	1	5	Z	10	14	7	7	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2.16	14.20	
28-Jul	1	1	1	Z	2	1	4	38	24	11	1	2	2	3	1	0	0	0	0	0	0	2	1	2	4.27	38.09	
29-Jul	2	1	0	Z	1	1	1	1	1	3	2	2	1	2	2	1	0	1	0	0	0	0	0	1	0.97	3.45	
30-Jul	0	1	1	Z	3	3	15	9	13	4	2	1	1	0	0	0	0	0	0	0	0	0	0	0	2.45	15.24	
31-Jul	0	0	0	Z	14	13	9	20	9	5	3	5	1	0	0	0	0	0	0	0	0	0	0	0	3.56	20.00	
0.98 0.94 1.51 -- 2.52 3.14 3.14 4.91 3.35 1.80 0.95 0.77 0.39 0.45 0.33 0.31 0.27 0.42 0.49 0.53 0.87 0.78 0.64 0.93																								Diurnal Average			
6.29 4.53 12.82 -- 20.92 14.20 15.24 38.09 23.84 11.40 2.81 4.62 1.67 3.29 1.82 1.79 1.04 2.44 5.52 4.66 8.50 5.15 2.75 3.33																								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
July 2015

Maximum Value: 6.69 ppb on Jul 13 10:00		Maximum Daily Average: 1.37 ppb on Jul 2		Hours in Service: 744																							
Minimum Value: 0.0 ppb on Jul 1 01:00		Minimum Daily Average: 0.03 ppb on Jul 17		Hours of Data: 702																							
Maximum Diurnal Average: 1.21 ppb at hour 10		Minimum Diurnal Average: 0.01 ppb at hour 5		Hours of Missing Data: 42																							
Monthly Average: 0.367 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.0 Q ₃ = 0.2 P ₉₀ = 1.2 P ₉₉ = 4.2		Hours of Calibration: 42																							
				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-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.5	4.0	1.7	2.3	0.7	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.47	3.97	
2-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.6	2.8	5.8	3.8	1.8	1.6	2.9	3.5	1.9	1.3	3.0	0.5	2.2	0.0	0.0	0.0	1.37	5.78	
3-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.3	0.0	0.0	0.0	0.0	0.06	0.44	
4-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	1.2	0.1	0.0	0.0	0.1	0.1	0.2	1.6	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.28	3.08	
5-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.06	0.24	
6-Jul	0.2	0.2	0.0	Z	0.1	0.1	0.1	0.2	2.0	2.8	1.4	0.4	0.5	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.37	2.76	
7-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	2.0	1.0	2.1	4.9	1.2	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.51	4.87	
8-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	3.6	2.6	0.0	0.0	0.0	0.9	0.2	2.6	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.47	3.56	
9-Jul	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.3	0.4	0.9	1.1	1.0	0.8	2.3	1.3	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39	2.26	
10-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.4	0.9	0.4	0.1	0.3	0.2	0.2	0.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.15	0.85	
11-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.3	0.9	1.5	0.7	4.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.36	4.46	
12-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.4	4.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.37	4.29	
13-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	1.9	6.7	1.6	2.0	2.7	6.5	1.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.00	6.69	
14-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.4	3.8	3.4	0.9	0.7	0.3	0.6	0.1	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.46	3.76	
15-Jul	0.0	0.0	0.0	Z	0.0	0.1	0.1	0.0	0.0	1.7	0.4	5.0	3.3	2.8	1.3	0.0	0.8	0.0	0.2	0.0	0.1	0.1	0.0	0.0	0.69	5.01	
16-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.3	2.4	0.2	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.4	0.2	0.18	2.36	
17-Jul	0.1	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.03	0.44	
18-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	2.5	3.5	3.7	0.7	1.0	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.58	3.66	
19-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.3	2.1	2.4	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.24	2.44	
20-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.2	0.5	0.9	1.2	0.6	0.4	0.3	0.1	0.1	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.21	1.16	
21-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.1	0.1	0.0	0.0	0.0	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.15	2.47	
22-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.7	0.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.13	1.65	
23-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.5	1.1	1.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.14	1.13	
24-Jul	0.1	0.1	0.2	Z	0.1	0.1	0.1	C	C	C	C	C	C	C	C	C	C	C	C	5.4	1.5	1.6	0.2	0.1	0.0	--	5.37
25-Jul	0.2	0.1	0.1	Z	0.0	0.0	0.0	0.1	0.1	0.2	0.4	1.3	0.2	0.4	0.1	0.1	0.1	0.1	0.4	0.1	0.1	0.0	0.0	0.0	0.18	1.32	
26-Jul	0.1	0.0	0.1	Z	0.0	0.0	0.0	0.0	0.1	2.5	1.5	0.2	0.4	0.8	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.5	0.6	0.2	0.34	2.49
27-Jul	0.1	0.1	0.1	Z	0.0	0.0	0.1	0.1	0.1	0.3	1.2	0.4	0.9	0.8	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.21	1.15
28-Jul	0.1	0.2	0.1	Z	0.0	0.1	0.1	0.2	0.2	1.1	2.5	0.7	1.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.31	2.55	
29-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6	1.8	1.6	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.24	1.76	
30-Jul	0.0	0.1	0.3	Z	0.0	0.0	0.0	0.4	1.1	2.1	3.8	1.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.43	3.82	
31-Jul	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.2	0.6	1.5	1.8	3.7	1.1	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.42	3.72	
		0.03	0.03	0.03	--	0.01	0.02	0.02	0.19	0.46	1.21	1.16	1.02	1.04	1.12	0.77	0.31	0.30	0.15	0.33	0.09	0.15	0.05	0.05	0.03	Diurnal Average	
		0.20	0.18	0.32	--	0.10	0.13	0.12	3.56	2.61	6.69	5.78	5.01	4.87	6.54	4.29	3.51	3.08	1.33	5.37	1.51	2.17	0.54	0.58	0.24	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
July 2015

Maximum Value: 70.11 ppb on Jul 24 14:00																						Maximum Daily Average: 29.43 ppb on Jul 6																						Hours in Service: 744					
Minimum Value: 0.4 ppb on Jul 2 03:00																						Minimum Daily Average: 10.74 ppb on Jul 22																						Hours of Data: 701					
Maximum Diurnal Average: 35.23 ppb at hour 14																						Minimum Diurnal Average: 5.75 ppb at hour 6																						Hours of Missing Data: 43					
Monthly Average: 22.500 ppb																						Percentiles: P ₁ = 1.1 P ₁₀ = 4.0 Q ₁ = 11.8 Median = 22.7 Q ₃ = 33.2 P ₉₀ = 39.3 P ₉₉ = 48.7																						Hours of Calibration: 43					
																						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-Jul	20.0	17.5	19.4	Z	17.2	13.1	11.2	14.1	16.3	14.9	15.3	21.5	C	C	C	C	C	C	26.0	19.6	14.2	4.2	1.9	3.1	--	25.95																							
2-Jul	1.1	0.8	0.4	Z	0.7	0.9	3.3	8.9	13.8	20.2	28.3	31.3	34.3	36.1	37.5	37.2	39.3	40.1	41.2	43.1	37.9	21.5	14.6	10.6	21.87	43.10																							
3-Jul	5.0	3.0	2.8	Z	1.5	3.5	7.2	17.9	23.8	25.1	26.6	28.8	25.9	28.8	29.8	34.7	47.5	49.8	50.2	48.1	46.6	42.9	39.4	31.0	26.94	50.16																							
4-Jul	24.0	17.0	10.7	Z	9.4	9.6	11.8	23.5	36.7	38.7	36.4	30.3	29.8	31.7	32.7	35.0	34.2	33.5	29.2	28.2	27.7	29.1	27.4	27.9	26.71	38.70																							
5-Jul	26.1	25.1	22.7	Z	11.8	9.7	10.7	18.4	28.2	29.8	32.8	36.0	37.5	35.1	34.8	35.4	36.0	37.9	34.8	34.6	33.1	31.3	28.4	27.8	28.61	37.91																							
6-Jul	25.1	20.4	14.9	Z	6.4	3.5	5.9	14.2	27.5	28.1	34.2	38.7	39.0	35.5	36.7	35.7	48.6	47.3	43.9	43.3	43.4	39.9	26.0	18.5	29.43	48.61																							
7-Jul	15.9	11.3	9.7	Z	3.4	2.4	5.7	12.0	23.6	35.1	38.6	43.9	50.2	46.5	45.0	42.3	40.8	41.8	45.3	42.6	35.9	25.2	18.1	15.6	28.29	50.22																							
8-Jul	9.5	4.8	3.8	Z	13.4	13.4	20.1	24.5	29.5	35.8	36.3	40.7	41.0	41.3	41.0	40.9	41.5	39.8	39.5	36.9	23.5	24.1	23.4	13.8	27.76	41.53																							
9-Jul	9.2	5.5	4.9	Z	2.2	3.1	8.2	17.7	27.6	35.2	35.1	35.6	35.2	36.6	38.6	41.4	43.0	43.5	41.3	37.0	38.3	34.9	25.3	15.1	26.72	43.46																							
10-Jul	9.8	9.7	8.8	Z	5.5	3.6	7.0	15.3	35.0	44.9	49.1	38.2	38.1	40.0	41.1	40.3	38.8	29.8	21.6	17.7	14.7	6.8	5.2	13.2	23.23	49.10																							
11-Jul	8.3	2.7	2.1	Z	1.2	1.0	1.4	3.3	12.8	22.8	33.0	40.5	45.6	53.4	51.0	42.0	40.7	42.0	47.4	46.3	48.0	42.1	36.7	29.5	28.43	53.40																							
12-Jul	30.1	28.0	17.6	Z	7.6	6.0	7.3	9.8	12.3	11.3	16.2	21.8	38.2	45.1	44.9	42.6	33.0	28.1	27.5	29.3	30.2	24.7	19.6	17.2	23.85	45.07																							
13-Jul	12.6	8.8	6.8	Z	2.9	3.3	3.8	11.4	22.6	28.4	38.3	43.2	43.9	43.6	41.0	27.7	37.3	37.4	37.4	37.7	34.3	35.0	21.3	17.2	25.91	43.93																							
14-Jul	10.5	5.4	3.9	Z	2.3	2.4	3.0	6.2	14.7	29.4	35.0	34.5	36.0	37.3	37.7	37.5	35.7	31.1	30.0	28.5	29.1	31.5	28.0	23.8	23.20	37.74																							
15-Jul	28.0	19.8	13.0	Z	6.5	4.5	4.9	5.5	15.5	25.3	24.0	29.7	35.2	38.6	35.0	35.5	37.0	39.3	36.5	31.4	36.6	25.0	16.3	13.2	24.18	39.28																							
16-Jul	11.7	8.9	9.4	Z	3.6	3.8	5.2	9.7	16.9	18.1	20.7	20.2	23.3	21.8	18.1	18.8	18.3	20.9	22.7	18.5	15.6	13.3	15.1	15.3	15.21	23.28																							
17-Jul	16.8	17.4	16.9	Z	14.1	15.4	16.2	16.8	15.5	16.5	17.6	18.5	20.2	21.4	20.8	22.0	20.6	21.4	22.2	22.4	18.0	10.6	7.0	8.1	17.23	22.43																							
18-Jul	9.4	10.7	5.8	Z	3.8	5.2	9.8	11.1	14.9	21.0	23.8	23.5	23.4	24.4	24.1	23.1	22.6	21.0	20.3	19.9	17.5	14.1	12.7	11.2	16.23	24.42																							
19-Jul	14.2	25.2	31.8	Z	24.0	26.6	23.5	22.6	31.5	34.6	38.0	39.9	38.3	35.4	33.9	34.1	31.7	29.5	32.9	33.7	27.9	22.7	20.6	18.3	29.17	39.90																							
20-Jul	12.9	7.9	7.1	Z	10.0	5.9	8.9	13.8	26.5	32.3	37.5	36.3	36.2	34.8	33.2	31.9	30.5	26.0	19.2	22.7	14.1	7.2	5.0	13.3	20.58	37.50																							
21-Jul	14.3	13.9	18.7	Z	10.2	9.0	7.0	9.3	13.3	22.0	27.2	29.0	32.9	30.1	27.9	31.3	36.7	37.1	37.2	28.9	25.6	15.3	8.7	8.4	21.47	37.18																							
22-Jul	5.2	3.6	4.7	Z	1.8	2.5	2.3	3.9	11.8	17.0	19.9	24.5	26.2	23.2	15.5	16.4	12.6	14.3	16.0	12.8	6.9	2.7	1.6	1.7	10.74	26.25																							
23-Jul	1.4	1.6	1.3	Z	1.1	1.1	1.2	2.5	5.3	11.5	21.0	24.4	21.2	22.0	20.8	23.7	21.0	21.0	18.7	15.9	15.2	13.2	9.2	2.8	12.05	24.40																							
24-Jul	4.6	2.5	1.9	Z	1.1	1.6	2.3	C	C	C	C	C	30.3	70.1	32.1	32.2	37.7	Z	33.5	36.5	34.6	29.0	21.6	18.4	--	70.11																							
25-Jul	14.3	23.6	31.6	Z	18.7	11.0	9.6	17.8	21.2	26.8	27.5	31.2	33.6	31.4	34.4	30.2	31.0	29.3	29.8	27.1	19.9	19.2	18.8	16.4	24.11	34.44																							
26-Jul	14.7	16.0	8.5	Z	2.6	3.5	6.1	9.2	18.7	24.4	29.2	26.5	29.2	30.0	28.9	26.9	29.6	27.0	27.3	23.5	20.3	24.3	25.0	20.4	20.52	29.98																							
27-Jul	18.6	15.4	8.0	Z	2.9	3.7	4.3	10.0	15.9	18.8	22.9	25.3	25.8	26.7	24.7	24.4	25.8	25.4	25.4	21.9	18.0	18.2	19.2	14.6	18.09	26.74																							
28-Jul	10.5	5.6	4.3	Z	1.2	1.3	2.0	5.2	8.8	15.3	22.2	24.3	25.9	29.6	29.4	26.1	32.4	34.0	28.6	26.4	27.4	29.1	17.8	14.3	18.33	33.99																							
29-Jul	10.7	8.5	6.4	Z	3.5	1.7	2.1	4.2	15.6	26.8	26.0	25.1	29.0	31.1	36.4	40.3	40.8	39.5	38.7	36.2	33.2	27.5	21.0	17.6	22.69	40.75																							
30-Jul	22.7	20.7	20.5	Z	7.0	4.0	8.2	14.2	24.6	27.8	32.3	36.5	38.7	35.2	38.1	38.3	39.8	37.7	38.6	32.3	27.9	21.0	16.0	12.0	25.83	39.78																							
31-Jul	5.5	5.4	4.0	Z	3.5	2.1	2.8	9.0	21.3	25.9	31.5	38.6	40.0	40.3	35.4	33.5	32.3	30.8	29.8	27.4	24.2	13.9	8.6	7.4	20.57	40.27																							
																								13.64	11.82	10.41	--	6.48	5.75	7.19	12.06	20.06	25.46	29.22	31.28	33.47	35.23	33.35	32.71	33.90	32.98	32.02	30.01	27.09	22.56	18.05	15.41	Diurnal Average	
																								30.13	28.02	31.82	--	24.02	26.62	23.46	24.49	36.72	44.92	49.10	43.88	50.22	70.11	50.95	42.60	48.61	49.84	50.16	48.10	48.02	42.91	39.39	30.98	Diurnal Maximum	
Z - zerospan C - Calibration																																																	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82.5 ppb 24-hr -- ppb																																																	



WCAS - Hinton
Summary of Hourly Averages

Nitrogen Oxide (NO) - ppb
July 2015

Maximum Value: 15.96 ppb on Jul 29 08:00 Minimum Value: 0.0 ppb on Jul 3 18:00 Maximum Diurnal Average: 4.86 ppb at hour 8 Monthly Average: 1.394 ppb		Maximum Daily Average: 3.10 ppb on Jul 28 Minimum Daily Average: 0.39 ppb on Jul 17 Minimum Diurnal Average: 0.23 ppb at hour 20 Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.7 Q ₃ = 1.5 P ₉₀ = 3.5 P ₉₉ = 11.4		Hours in Service: 744 Hours of Data: 708 Hours of Missing Data: 36 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-Jul	0.0	0.1	0.3	Z	0.2	0.4	1.1	1.4	1.3	1.2	1.4	2.1	2.1	0.8	6.0	0.9	0.5	0.3	0.2	0.1	0.7	0.9	1.9	1.4	1.10	5.97	
2-Jul	3.1	1.9	1.0	Z	2.1	3.0	2.4	1.5	1.3	1.7	2.2	1.2	1.2	1.4	0.6	1.2	1.3	0.4	0.2	0.2	0.1	1.7	0.1	0.2	1.30	3.05	
3-Jul	1.1	2.0	0.4	Z	7.0	4.5	5.8	3.3	0.7	0.4	0.9	0.4	0.6	1.5	1.2	0.5	0.8	0.0	0.0	0.0	0.3	0.0	0.0	0.1	1.37	7.04	
4-Jul	0.1	0.3	0.6	Z	1.5	3.8	2.5	1.5	1.3	0.7	0.5	0.1	0.7	0.1	0.6	0.9	0.7	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.69	3.80	
5-Jul	0.0	0.0	0.0	Z	0.6	0.4	1.4	2.2	1.1	1.4	0.2	0.8	0.6	0.1	0.4	0.5	0.4	1.1	0.3	0.2	0.3	0.5	0.4	0.1	0.56	2.25	
6-Jul	0.5	0.0	0.0	Z	0.7	9.1	7.8	5.1	1.5	1.6	1.3	0.7	0.5	0.2	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	1.33	9.11	
7-Jul	0.2	0.3	0.7	Z	3.8	7.7	6.0	4.5	1.5	1.6	0.9	0.7	0.9	0.4	0.5	0.8	1.0	0.8	0.5	0.1	0.1	0.1	0.1	0.1	1.43	7.66	
8-Jul	0.1	0.5	0.7	Z	0.0	0.4	0.4	1.3	2.3	1.2	3.5	0.9	1.4	1.2	1.8	0.9	0.0	0.0	0.1	0.0	0.7	1.2	0.3	2.0	0.91	3.46	
9-Jul	0.8	0.5	0.5	Z	2.3	4.4	3.3	2.8	2.5	4.0	7.4	8.6	2.7	0.9	0.5	0.2	0.1	0.0	0.0	0.1	0.1	0.0	0.1	0.5	1.83	8.62	
10-Jul	0.4	0.2	0.0	Z	2.7	5.7	4.5	6.6	3.1	1.3	0.7	0.7	1.8	0.9	1.0	1.0	0.8	0.6	0.3	0.2	0.2	0.8	0.6	0.6	1.52	6.64	
11-Jul	0.5	0.4	2.3	Z	3.5	5.9	7.7	6.0	2.0	1.2	0.7	0.6	0.3	0.8	0.1	0.1	0.5	0.3	0.3	0.3	0.3	0.0	0.1	0.0	1.48	7.71	
12-Jul	0.2	0.1	0.1	Z	1.1	0.8	1.5	0.5	0.5	0.4	0.4	0.4	0.7	0.8	0.7	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.40	1.52	
13-Jul	0.1	0.2	0.7	Z	4.2	3.2	2.6	1.5	2.8	3.7	1.1	1.3	1.0	1.4	1.5	0.7	0.4	0.5	0.1	0.5	0.5	0.6	0.0	0.2	1.25	4.16	
14-Jul	0.2	1.2	1.2	Z	0.9	5.2	8.1	10.0	5.0	3.2	1.3	0.5	0.3	0.5	0.4	0.4	0.4	0.4	0.2	0.1	0.0	0.1	0.3	0.2	1.74	10.05	
15-Jul	0.1	0.1	0.1	Z	0.2	1.9	4.1	6.9	3.9	1.8	0.9	6.7	2.6	1.3	1.0	0.1	0.3	0.2	0.3	0.1	0.4	0.5	0.1	0.2	1.47	6.93	
16-Jul	0.1	0.6	0.1	Z	1.5	2.5	1.4	2.2	2.5	4.0	0.3	0.1	0.0	0.1	0.8	0.5	0.0	0.0	0.0	0.2	0.3	0.5	0.3	0.2	0.78	3.99	
17-Jul	0.2	0.1	0.1	Z	0.2	0.4	0.6	0.9	1.5	0.3	0.1	0.2	0.1	0.0	0.2	0.1	0.0	0.8	0.7	0.0	0.2	0.4	0.6	1.2	0.39	1.47	
18-Jul	0.0	0.1	0.1	Z	0.3	0.9	0.9	1.1	2.2	0.9	0.5	0.7	1.4	1.5	1.8	0.7	0.8	0.6	0.1	0.0	0.0	0.0	0.3	0.66	2.18		
19-Jul	0.4	0.0	0.0	Z	0.1	0.0	0.1	0.4	0.5	1.6	1.5	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3	0.2	0.3	0.5	0.1	0.1	0.39	1.62	
20-Jul	0.1	0.6	0.9	Z	1.5	2.1	3.0	4.9	1.4	2.2	1.3	0.5	0.6	0.5	1.0	1.2	0.6	1.1	0.8	0.8	0.5	0.4	0.4	0.5	1.17	4.93	
21-Jul	0.3	0.3	0.1	Z	1.6	0.3	1.2	4.1	3.4	1.4	2.2	1.3	0.6	0.7	1.0	0.7	1.3	0.7	0.4	0.3	0.2	0.5	1.2	0.3	1.04	4.05	
22-Jul	0.4	1.1	0.4	Z	4.3	3.5	10.9	7.3	4.1	2.3	1.1	3.8	2.2	1.5	1.1	1.9	2.4	2.5	0.3	0.3	1.4	2.0	2.1	0.8	2.52	10.89	
23-Jul	1.7	2.0	1.7	Z	1.3	10.8	9.0	14.0	3.4	2.2	2.2	1.1	1.2	1.1	1.6	0.6	0.8	1.4	0.6	0.4	0.4	0.1	1.2	1.1	2.61	14.03	
24-Jul	0.8	2.1	1.6	Z	7.1	6.2	5.0	C	C	C	C	C	2.3	0.4	0.7	1.8	1.1	1.3	2.5	0.5	0.3	0.2	0.3	0.2	1.92	7.07	
25-Jul	0.2	0.2	0.1	Z	0.8	1.9	1.3	1.5	3.3	0.9	1.1	2.7	1.1	1.1	2.4	0.2	0.2	1.4	0.3	0.1	0.0	0.3	0.9	0.2	0.97	3.32	
26-Jul	1.5	0.3	0.1	Z	3.2	1.2	0.8	1.5	1.8	2.9	1.3	0.3	0.5	0.4	0.2	0.5	0.2	0.4	1.2	0.7	0.6	0.2	0.1	0.2	0.88	3.24	
27-Jul	0.1	0.0	0.2	Z	0.7	1.1	5.0	3.4	4.9	4.6	3.4	1.6	2.1	0.8	0.8	1.0	0.8	0.7	0.0	0.0	0.2	0.3	0.2	1.2	1.45	5.03	
28-Jul	0.4	2.8	1.9	Z	9.6	12.1	9.9	11.7	10.4	4.3	2.8	1.0	1.8	0.4	0.1	0.1	0.1	0.0	0.0	0.3	0.1	0.0	1.2	0.1	3.10	12.11	
29-Jul	0.7	1.6	0.9	Z	5.1	11.5	13.8	16.0	4.2	3.7	0.7	0.9	1.8	1.6	0.7	0.1	0.0	0.1	0.0	0.0	0.0	0.4	0.4	0.8	2.82	15.96	
30-Jul	0.2	0.3	0.4	Z	4.8	4.9	5.4	9.3	4.7	4.0	3.6	1.1	1.0	0.9	0.7	0.5	1.0	0.7	0.3	0.3	0.6	0.8	0.4	2.6	2.11	9.35	
31-Jul	2.2	0.6	0.5	Z	0.8	3.8	12.3	12.1	1.9	2.3	1.7	2.6	1.1	0.6	0.7	0.4	0.4	0.3	0.1	0.5	0.1	1.8	0.5	1.3	2.12	12.30	
		0.54	0.67	0.57	--	2.38	3.86	4.50	4.86	2.69	2.10	1.57	1.47	1.15	0.79	1.00	0.62	0.57	0.55	0.34	0.23	0.29	0.49	0.47	0.56	Diurnal Average	
		3.05	2.78	2.30	--	9.64	12.11	13.76	15.96	10.37	4.64	7.42	8.62	2.65	1.60	5.97	1.93	2.37	2.50	2.55	0.83	1.41	2.00	2.12	2.61	Diurnal Maximum	
Z - zerospan		C - Calibration																									
Alberta Ambient Air Quality Objectives (AAAQO):		1-hr --- ppb								24-hr --- ppb																	



WCAS - Hinton
Summary of Hourly Averages

Nitrogen Dioxide (NO₂) - ppb
July 2015

Maximum Value: 14.33 ppb on Jul 10 09:00		Maximum Daily Average: 6.08 ppb on Jul 30		Hours in Service: 744																							
Minimum Value: 0.1 ppb on Jul 16 17:00		Minimum Daily Average: 1.37 ppb on Jul 17		Hours of Data: 708																							
Maximum Diurnal Average: 6.13 ppb at hour 8		Minimum Diurnal Average: 1.71 ppb at hour 19		Hours of Missing Data: 36																							
Monthly Average: 3.403 ppb		Percentiles: P ₁ = 0.2 P ₁₀ = 0.8 Q ₁ = 1.6 Median = 2.7 Q ₃ = 4.6 P ₉₀ = 7.2 P ₉₉ = 11.6		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-Jul	2.0	5.8	2.0	Z	3.8	4.7	3.4	4.2	2.1	2.5	2.3	3.5	3.3	1.9	1.2	2.7	2.0	1.3	1.2	1.4	3.8	4.3	5.8	4.1	3.01	5.84	
2-Jul	4.8	3.2	1.5	Z	1.5	1.4	2.1	2.6	2.5	3.7	5.4	3.0	2.4	2.5	2.1	2.9	2.6	1.7	2.3	2.4	6.0	11.7	7.8	7.7	3.64	11.74	
3-Jul	7.8	7.3	4.5	Z	5.1	3.0	7.3	9.0	3.5	3.3	4.9	2.6	1.4	2.2	2.4	1.7	2.5	0.4	0.9	1.3	2.0	1.5	1.9	5.7	3.57	9.00	
4-Jul	5.3	6.4	8.4	Z	7.3	9.5	7.9	7.2	6.1	2.5	1.7	0.9	2.5	1.8	2.0	3.5	3.5	1.1	0.9	0.9	0.8	0.7	0.5	0.5	3.57	9.53	
5-Jul	0.7	0.6	1.2	Z	5.6	3.4	3.5	4.7	2.8	2.0	0.9	1.4	0.9	0.7	1.3	1.1	1.3	2.3	1.6	1.2	1.9	3.0	4.1	3.2	2.15	5.56	
6-Jul	3.7	3.7	3.0	Z	3.9	7.0	6.6	6.7	4.7	4.0	3.4	2.3	1.8	0.9	1.6	1.2	1.0	1.0	0.7	0.8	1.0	2.5	9.0	10.7	3.53	10.67	
7-Jul	6.5	7.4	7.2	Z	9.6	9.2	8.8	10.6	5.0	5.0	3.1	3.5	4.3	2.7	2.5	2.3	2.7	2.5	2.6	2.7	3.5	6.0	5.0	2.5	5.01	10.62	
8-Jul	2.5	6.9	8.1	Z	2.4	5.4	3.9	7.6	6.3	2.9	4.8	1.9	2.7	2.5	4.4	3.2	0.4	0.9	1.1	1.2	8.3	5.4	3.6	7.4	4.08	8.32	
9-Jul	7.8	8.3	6.4	Z	7.5	7.2	10.6	7.6	7.0	7.0	9.1	7.0	2.5	2.4	1.9	1.2	0.7	0.3	0.4	1.0	1.3	1.8	7.0	9.9	5.03	10.59	
10-Jul	9.4	4.9	3.4	Z	6.1	7.3	7.1	13.4	14.3	7.9	5.6	2.4	2.2	2.8	2.2	2.8	4.3	3.7	4.0	3.0	4.7	5.4	5.2	2.7	5.43	14.33	
11-Jul	3.4	4.0	3.8	Z	2.1	2.4	2.4	3.3	4.0	4.3	3.8	3.6	2.0	4.2	1.0	0.8	2.5	1.9	2.3	2.4	2.1	1.9	1.8	1.7	2.67	4.28	
12-Jul	3.1	4.2	3.2	Z	5.6	4.4	3.3	3.4	3.5	2.3	2.0	1.5	1.7	2.4	3.0	1.0	0.6	0.3	0.4	0.4	0.7	2.5	3.3	2.1	2.38	5.64	
13-Jul	2.6	3.2	4.5	Z	6.4	3.5	2.1	2.7	5.5	6.8	2.7	2.7	3.1	4.7	2.6	3.0	1.3	1.8	0.8	1.6	1.1	2.0	1.0	1.3	2.92	6.84	
14-Jul	2.5	5.0	4.1	Z	2.9	4.1	3.7	6.0	7.2	6.1	3.1	1.3	1.2	1.1	1.5	0.9	1.3	1.3	1.2	1.6	0.5	0.6	1.6	1.8	2.64	7.17	
15-Jul	1.1	1.6	1.7	Z	2.5	3.4	4.5	6.5	6.1	4.8	4.1	6.5	5.3	3.1	1.9	0.5	1.9	0.8	4.0	2.2	2.1	4.1	1.7	2.4	3.17	6.52	
16-Jul	1.1	5.1	2.7	Z	1.8	3.5	2.5	4.5	4.2	4.8	0.5	0.2	0.1	0.2	1.0	1.0	0.1	0.1	0.3	2.0	2.3	3.7	4.7	3.2	2.16	5.07	
17-Jul	0.5	0.2	0.3	Z	0.6	0.8	0.5	1.4	1.4	0.4	0.2	0.4	0.3	0.2	1.0	0.3	0.2	1.9	2.3	0.4	2.8	5.0	4.8	5.7	1.37	5.65	
18-Jul	4.1	3.9	5.0	Z	4.4	4.1	2.3	1.9	2.9	1.3	1.0	1.2	1.7	2.0	2.7	1.2	1.4	2.3	1.0	0.5	1.5	1.4	2.0	3.2	2.30	5.00	
19-Jul	2.2	0.7	0.4	Z	2.3	1.3	1.0	2.5	2.0	3.4	3.4	1.3	0.7	0.5	0.7	0.6	1.2	1.4	1.1	1.1	3.1	4.4	4.3	3.9	1.90	4.40	
20-Jul	5.1	7.6	5.7	Z	5.7	6.3	6.2	8.4	3.7	3.6	2.9	2.4	1.7	1.7	2.4	3.3	1.9	3.0	2.0	2.8	1.9	2.0	1.5	2.8	3.67	8.40	
21-Jul	2.6	3.9	3.1	Z	5.0	2.1	3.2	5.0	4.6	2.8	3.2	1.1	1.1	1.7	1.8	1.8	3.4	3.1	1.7	2.6	2.5	4.7	5.6	2.4	3.00	5.64	
22-Jul	2.4	3.0	1.3	Z	3.8	3.2	4.7	4.0	5.6	4.4	2.8	5.3	2.8	2.3	2.6	2.8	4.0	2.8	0.9	1.5	3.2	3.8	3.2	2.8	3.19	5.63	
23-Jul	2.6	2.4	1.5	Z	0.8	1.6	1.5	3.7	2.5	2.3	3.0	1.7	1.4	1.6	1.9	1.1	2.1	3.6	2.6	1.9	2.4	1.1	3.5	6.6	2.33	6.59	
24-Jul	5.0	5.8	5.1	Z	4.6	3.5	2.4	C	C	C	C	C	3.9	1.1	1.5	8.9	3.4	3.7	9.7	3.9	4.4	1.3	2.4	2.5	4.05	9.66	
25-Jul	4.1	2.2	2.5	Z	4.9	9.2	4.7	4.1	4.5	3.4	2.7	4.9	2.1	2.2	1.8	0.9	0.6	3.0	1.3	0.7	0.8	3.1	5.2	2.9	3.11	9.19	
26-Jul	4.8	2.6	1.6	Z	4.4	2.9	1.7	2.2	2.9	3.9	2.4	0.7	1.0	1.2	0.6	0.7	0.6	1.0	1.7	2.7	4.2	4.1	2.5	6.3	2.48	6.25	
27-Jul	2.5	2.7	5.2	Z	4.4	3.4	3.9	4.2	3.1	4.1	3.3	1.6	2.1	1.4	2.1	1.6	1.0	1.2	0.4	0.6	1.5	1.2	0.5	3.5	2.42	5.19	
28-Jul	4.0	7.3	6.8	Z	6.8	5.6	4.1	10.8	10.4	6.0	3.8	1.8	3.9	1.2	0.5	0.4	0.4	0.4	0.5	1.8	3.2	2.1	8.9	6.9	4.23	10.80	
29-Jul	9.1	9.5	8.2	Z	8.5	9.3	9.2	9.8	6.8	7.4	1.6	1.6	3.5	3.4	2.1	0.3	0.2	0.4	0.5	0.5	0.5	4.0	4.9	7.8	4.75	9.84	
30-Jul	2.6	5.1	5.8	Z	12.0	11.2	8.8	13.7	10.8	7.2	6.4	2.4	2.1	3.1	2.0	2.0	2.7	3.3	1.8	4.9	7.4	8.6	7.7	8.4	6.08	13.71	
31-Jul	12.0	8.6	8.1	Z	5.5	6.7	7.2	12.3	5.9	5.7	4.8	8.0	5.0	2.8	1.9	1.0	1.2	1.4	1.1	4.3	4.5	8.7	9.2	7.4	5.79	12.30	
		4.12	4.61	4.08	--	4.78	4.86	4.54	6.13	5.07	4.19	3.29	2.62	2.28	2.02	1.88	1.83	1.71	1.74	1.71	1.82	2.78	3.63	4.21	4.52	Diurnal Average	
		12.03	9.47	8.45	--	11.97	11.15	10.59	13.71	14.33	7.94	9.08	7.97	5.30	4.75	4.39	8.86	4.28	3.74	9.66	4.92	8.32	11.74	9.20	10.67	Diurnal Maximum	
Z - zerospan																											
C - Calibration																											
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 159 ppb 24-hr 106 ppb																											



WCAS - Hinton
Summary of Hourly Averages

NOx (NO_x) - ppb
July 2015

Maximum Value: 25.72 ppb on Jul 29 08:00		Maximum Daily Average: 8.18 ppb on Jul 30		Hours in Service: 744																							
Minimum Value: 0.1 ppb on Jul 16 17:00		Minimum Daily Average: 1.77 ppb on Jul 17		Hours of Data: 708																							
Maximum Diurnal Average: 11.01 ppb at hour 8		Minimum Diurnal Average: 2.04 ppb at hour 20		Hours of Missing Data: 36																							
Monthly Average: 4.805 ppb		Percentiles: P ₁ = 0.3 P ₁₀ = 0.9 Q ₁ = 2.1 Median = 3.7 Q ₃ = 6.2 P ₉₀ = 10.1 P ₉₉ = 20.7		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-Jul	2.0	6.0	2.3	Z	4.0	5.1	4.5	5.6	3.4	3.7	3.8	5.6	5.4	2.6	7.1	3.6	2.5	1.6	1.4	1.5	4.5	5.2	7.8	5.6	4.12	7.79	
2-Jul	7.9	5.1	2.5	Z	3.6	4.4	4.5	4.1	3.8	5.4	7.6	4.2	3.5	3.9	2.6	4.1	3.9	2.0	2.5	2.7	6.2	13.5	8.0	8.0	4.96	13.48	
3-Jul	9.0	9.3	5.0	Z	12.2	7.5	13.1	12.4	4.2	3.6	5.8	3.1	2.0	3.7	3.6	2.1	3.3	0.4	0.9	1.3	2.4	1.4	1.9	5.8	4.96	13.14	
4-Jul	5.4	6.8	9.1	Z	8.9	13.4	10.4	8.8	7.4	3.2	2.2	1.0	3.1	1.9	2.7	4.4	4.3	1.1	0.9	0.9	0.8	0.8	0.5	0.5	4.28	13.40	
5-Jul	0.7	0.7	1.3	Z	6.2	3.8	4.9	7.0	3.9	3.3	1.1	2.2	1.5	0.8	1.8	1.6	1.7	3.4	1.9	1.4	2.2	3.5	4.6	3.3	2.72	7.02	
6-Jul	4.2	3.7	3.0	Z	4.7	16.1	14.5	11.8	6.3	5.7	4.7	3.0	2.3	1.1	2.0	1.3	1.1	1.1	0.7	0.8	0.9	2.6	9.3	11.4	4.88	16.12	
7-Jul	6.7	7.7	7.9	Z	13.5	16.9	14.8	15.2	6.5	6.7	4.0	4.2	5.2	3.1	3.0	3.1	3.7	3.3	3.0	2.8	3.6	6.1	5.1	2.6	6.47	16.89	
8-Jul	2.7	7.4	8.8	Z	2.4	5.9	4.4	9.0	8.6	4.0	8.3	2.8	4.1	3.7	6.2	4.1	0.4	0.9	1.1	1.3	9.1	6.6	3.9	9.5	5.02	9.51	
9-Jul	8.7	8.9	6.9	Z	9.9	11.6	13.4	10.4	9.6	11.1	16.3	15.6	5.2	3.2	2.3	1.4	0.8	0.3	0.4	1.0	1.4	1.8	7.2	10.5	6.87	16.33	
10-Jul	9.8	5.1	3.4	Z	8.9	13.1	11.6	20.1	17.6	9.3	6.3	3.0	4.1	3.7	3.2	3.8	5.1	4.4	4.3	3.2	5.0	6.2	5.9	3.3	6.98	20.14	
11-Jul	3.9	4.4	6.2	Z	5.5	8.2	10.0	9.4	6.0	5.5	4.6	4.2	2.3	5.1	1.1	0.9	3.0	2.2	2.6	2.7	2.4	1.9	1.9	1.8	4.17	10.03	
12-Jul	3.3	4.2	3.3	Z	6.8	5.3	4.8	3.9	4.0	2.7	2.3	1.9	2.4	3.2	3.6	1.3	0.8	0.4	0.5	0.5	0.8	2.6	3.4	2.2	2.79	6.81	
13-Jul	2.7	3.4	5.2	Z	10.6	6.7	4.7	4.2	8.3	10.6	3.8	4.0	4.1	6.2	4.1	3.8	1.7	2.3	0.9	2.1	1.7	2.6	1.1	1.6	4.19	10.63	
14-Jul	2.7	6.2	5.3	Z	3.8	9.3	11.8	16.1	12.3	9.3	4.5	1.9	1.5	1.6	1.9	1.2	1.6	1.7	1.4	1.7	0.6	0.7	1.9	2.0	4.39	16.08	
15-Jul	1.2	1.7	1.7	Z	2.7	5.4	8.7	13.5	10.1	6.7	5.0	12.5	7.9	4.4	2.9	0.7	2.2	0.9	4.4	2.3	2.5	4.7	1.7	2.5	4.63	13.49	
16-Jul	1.1	5.7	2.8	Z	3.3	5.9	3.9	6.8	6.7	8.8	0.8	0.2	0.2	0.3	1.8	1.5	0.1	0.1	0.3	2.2	2.6	4.2	5.1	3.4	2.95	8.83	
17-Jul	0.7	0.3	0.4	Z	0.8	1.3	1.1	2.3	2.8	0.7	0.3	0.6	0.4	0.2	1.3	0.3	0.3	2.7	3.0	0.4	2.9	5.4	5.4	6.9	1.77	6.88	
18-Jul	4.2	4.0	5.2	Z	4.7	5.1	3.2	3.0	5.1	2.3	1.5	1.9	3.1	3.5	4.5	1.9	2.2	2.9	1.2	0.5	1.5	1.4	2.0	3.5	2.97	5.18	
19-Jul	2.6	0.8	0.4	Z	2.4	1.4	1.0	2.9	2.6	5.1	4.9	1.8	1.0	0.8	1.2	0.9	1.7	1.6	1.5	1.3	3.4	4.9	4.5	4.1	2.30	5.06	
20-Jul	5.3	8.2	6.6	Z	7.2	8.5	9.2	13.4	5.1	5.8	4.2	2.9	2.3	2.2	3.4	4.5	2.5	4.1	2.8	3.6	2.3	2.4	1.9	3.3	4.86	13.39	
21-Jul	2.9	4.2	3.2	Z	6.7	2.4	4.4	9.1	8.1	4.2	5.4	2.4	1.6	2.3	2.8	2.5	4.6	3.9	2.1	3.0	2.7	5.2	6.8	2.7	4.05	9.08	
22-Jul	2.8	4.0	1.8	Z	8.1	6.7	15.6	11.3	9.8	6.8	4.0	9.2	5.0	3.8	3.8	4.7	6.3	5.3	1.2	1.8	4.6	5.8	5.3	3.6	5.72	15.58	
23-Jul	4.4	4.4	3.2	Z	2.2	12.4	10.4	17.7	5.9	4.6	5.3	2.9	2.7	2.7	3.5	1.7	2.9	5.0	3.2	2.4	2.7	1.1	4.6	7.7	4.93	17.71	
24-Jul	5.8	7.9	6.8	Z	11.7	9.7	7.4	C	C	C	C	C	6.2	1.4	2.1	10.6	4.4	4.9	12.2	4.4	4.7	1.5	2.6	2.7	5.94	12.17	
25-Jul	4.3	2.4	2.6	Z	5.7	11.1	6.0	5.6	7.8	4.3	3.8	7.7	3.2	3.3	4.1	1.2	0.8	4.4	1.6	0.7	0.8	3.4	6.1	3.1	4.08	11.08	
26-Jul	6.4	2.9	1.7	Z	7.7	4.1	2.5	3.7	4.7	6.8	3.7	1.0	1.5	1.7	0.8	1.2	0.8	1.4	2.8	3.4	4.8	4.3	2.6	6.4	3.35	7.67	
27-Jul	2.6	2.7	5.4	Z	5.2	4.5	8.9	7.6	8.1	8.7	6.7	3.2	4.2	2.3	2.9	2.6	1.8	1.9	0.5	0.6	1.7	1.5	0.7	4.8	3.86	8.91	
28-Jul	4.4	10.1	8.7	Z	16.4	17.7	13.9	22.4	20.7	10.3	6.6	2.9	5.7	1.6	0.6	0.5	0.5	0.4	0.5	2.1	3.2	2.1	10.1	7.1	7.33	22.42	
29-Jul	9.7	11.1	9.0	Z	13.6	20.7	22.9	25.7	11.0	11.0	2.3	2.5	5.3	5.0	2.8	0.4	0.2	0.5	0.5	0.5	0.5	4.5	5.4	8.6	7.55	25.72	
30-Jul	2.8	5.5	6.3	Z	16.7	16.0	14.1	23.0	15.5	11.1	10.0	3.4	3.0	3.9	2.7	2.6	3.7	4.0	2.1	5.2	8.0	9.3	8.1	11.0	8.18	23.00	
31-Jul	14.2	9.1	8.6	Z	6.3	10.5	19.4	24.3	7.7	7.9	6.5	10.5	6.1	3.4	2.6	1.3	1.6	1.7	1.2	4.7	4.6	10.5	9.7	8.7	7.89	24.34	
		4.67	5.29	4.67	--	7.18	8.73	9.03	11.01	7.79	6.32	4.87	4.07	3.44	2.80	2.88	2.45	2.28	2.29	2.05	2.04	3.07	4.12	4.69	5.09	Diurnal Average	
		14.24	11.07	9.10	--	16.74	20.71	22.91	25.72	20.71	11.14	16.33	15.55	7.94	6.23	7.12	10.63	6.34	5.30	12.17	5.24	9.08	13.48	10.11	11.36	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
July 2015

Maximum Value: 78.80 µg/m ³ on Jul 2 23:00		Maximum Daily Average: 23.26 µg/m ³ on Jul 3		Hours in Service: 744																																													
Minimum Value: 0.0 µg/m ³ on Jul 12 19:00		Minimum Daily Average: 3.07 µg/m ³ on Jul 16		Hours of Data: 729																																													
Maximum Diurnal Average: 15.19 µg/m ³ at hour 9		Minimum Diurnal Average: 6.84 µg/m ³ at hour 3		Hours of Missing Data: 15																																													
Monthly Average: 9.862 µg/m ³		Percentiles: P ₁ = 0.0 P ₁₀ = 2.0 Q ₁ = 3.9 Median = 7.0 Q ₃ = 13.4 P ₉₀ = 20.9 P ₉₉ = 41.2		Hours of Calibration: 7																																													
				Percent Operational Time: 98.9																																													
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-Jul	0.1	3.5	1.8	2.6	2.6	3.6	5.3	5.9	3.3	6.9	6.8	6.2	4.3	8.4	2.6	7.2	5.1	1.6	2.2	9.3	10.3	12.7	11.1	5.1	5.36	12.71																							
2-Jul	5.2	6.6	5.6	8.5	5.6	10.1	7.0	7.3	8.7	9.2	13.2	6.2	4.9	6.6	4.7	8.6	12.3	32.7	9.3	4.9	11.2	50.3	78.8	35.8	14.73	78.80																							
3-Jul	36.6	37.8	19.2	19.5	30.4	42.8	22.5	48.2	35.2	40.1	41.6	17.4	18.9	10.9	9.8	4.9	3.1	13.4	22.2	18.0	14.0	13.7	12.1	26.0	23.26	48.18																							
4-Jul	15.4	11.7	12.9	12.8	11.6	18.9	21.5	15.9	20.1	21.1	19.1	36.1	15.7	14.1	16.5	13.2	24.5	49.8	36.4	22.0	17.3	9.8	9.5	7.0	18.87	49.80																							
5-Jul	8.1	5.8	10.8	21.4	9.8	18.3	12.3	11.5	10.8	8.3	8.2	5.7	6.0	12.2	9.4	7.5	8.2	6.1	11.2	7.3	9.8	10.5	8.3	7.3	9.78	21.40																							
6-Jul	8.1	12.4	17.3	29.3	11.5	32.5	39.6	24.6	23.2	15.9	10.9	9.8	14.5	10.7	9.5	10.1	14.7	19.4	16.1	16.0	14.6	16.0	20.1	18.2	17.29	39.56																							
7-Jul	15.8	14.9	15.4	15.6	16.9	17.4	19.1	21.9	19.5	23.4	20.6	20.3	25.7	19.3	19.6	21.8	21.5	23.0	24.3	18.0	16.1	17.0	15.1	13.1	18.97	25.70																							
8-Jul	12.4	15.1	16.8	13.7	13.8	14.8	18.1	22.1	19.3	13.8	19.0	18.1	18.6	18.9	19.3	15.5	11.9	16.0	13.4	18.1	28.9	14.5	15.4	19.2	16.94	28.88																							
9-Jul	16.2	13.8	14.8	17.2	19.5	43.1	30.8	36.8	21.6	27.3	14.4	9.9	9.9	8.8	3.0	1.7	3.5	3.9	6.5	7.9	8.3	12.3	12.4	13.5	14.88	43.06																							
10-Jul	11.9	10.8	8.1	6.4	7.0	9.2	12.4	38.1	47.5	29.9	24.7	2.0	8.7	9.7	11.2	15.3	18.2	41.9	19.9	19.0	19.4	21.8	15.8	4.9	17.24	47.50																							
11-Jul	10.6	4.9	7.8	8.5	7.7	15.2	23.3	23.0	36.7	42.8	41.6	43.0	6.4	19.7	23.8	24.1	29.6	18.3	25.1	22.0	14.0	26.6	23.3	25.1	21.79	42.97																							
12-Jul	18.2	20.9	17.7	17.2	21.2	19.5	21.7	23.1	20.6	20.9	18.4	14.5	UC	5.6	4.9	22.0	9.3	4.1	0.0	1.4	0.0	5.4	3.6	3.7	12.78	23.13																							
13-Jul	2.3	3.3	1.3	1.9	2.9	3.6	7.1	7.9	13.7	11.1	1.0	0.0	7.1	7.9	24.4	13.9	UC	0.0	45.4	22.3	8.6	5.3	1.4	1.0	8.40	45.40																							
14-Jul	0.0	0.7	2.1	0.6	0.4	8.3	15.0	8.6	12.6	2.1	1.3	1.5	2.9	UC	0.0	0.7	5.7	5.6	4.5	1.8	3.4	1.2	4.8	5.5	3.88	14.99																							
15-Jul	5.5	4.6	2.9	2.0	0.8	4.2	6.4	9.4	9.3	10.9	15.4	2.6	0.0	4.9	12.6	0.1	2.1	7.6	5.2	6.1	1.3	5.8	4.3	2.3	5.27	15.40																							
16-Jul	1.5	1.8	0.0	1.0	1.1	4.5	9.4	0.0	3.7	3.3	0.0	0.3	0.0	1.9	9.1	0.0	3.8	0.0	6.8	4.1	4.1	4.2	6.6	6.6	3.07	9.37																							
17-Jul	3.2	4.3	4.4	4.2	3.7	3.9	4.0	4.5	7.2	5.7	4.2	3.6	3.3	1.7	4.7	1.2	3.0	3.4	4.7	2.9	5.9	12.8	6.9	4.5	4.49	12.85																							
18-Jul	4.6	2.5	4.1	2.0	3.0	6.6	3.3	3.6	9.1	4.2	4.7	5.9	5.7	6.9	6.5	4.0	4.3	5.9	1.3	4.5	5.5	6.4	4.1	4.1	4.70	9.09																							
19-Jul	15.4	0.7	0.0	7.4	3.8	3.9	6.2	5.7	UC	2.5	7.3	4.1	4.6	6.2	3.9	6.2	8.8	6.4	5.9	7.4	11.7	11.0	8.2	9.0	6.36	15.43																							
20-Jul	9.0	7.0	7.2	6.8	7.3	11.0	13.3	13.9	10.7	12.9	12.9	13.8	0.8	7.4	9.0	24.6	UC	16.4	9.0	0.0	9.2	6.5	8.1	UC	9.86	24.56																							
21-Jul	0.0	2.7	3.7	3.2	0.9	1.3	5.9	4.1	7.9	2.1	3.3	3.7	8.8	8.4	3.5	8.2	UC	0.8	4.6	12.0	11.6	11.6	7.5	0.7	5.06	12.00																							
22-Jul	2.6	2.7	0.0	1.9	4.4	6.5	12.5	13.7	9.1	9.9	8.3	4.8	2.5	14.2	15.8	4.2	4.9	UC	2.6	3.2	4.0	1.3	3.5	0.9	5.80	15.80																							
23-Jul	0.6	1.2	0.5	0.7	2.2	5.8	5.9	12.5	11.8	0.0	0.0	0.0	8.0	6.6	1.4	0.7	8.3	3.4	9.1	6.5	5.1	5.0	4.6	5.1	4.37	12.52																							
24-Jul	2.5	2.2	0.9	2.0	5.8	6.2	8.1	C	C	C	C	C	C	C	3.4	11.6	0.7	2.7	8.8	4.7	4.3	4.1	4.7	4.0	--	11.58																							
25-Jul	6.1	3.2	1.7	1.0	2.3	2.8	3.7	3.9	4.3	4.3	3.6	6.5	3.0	4.4	3.5	6.1	3.3	3.1	3.0	2.5	3.6	3.9	4.2	3.3	3.63	6.46																							
26-Jul	2.4	2.6	2.5	4.1	4.6	4.2	4.5	5.0	5.3	5.4	2.7	3.0	2.4	2.8	2.7	2.9	2.5	4.2	5.6	5.7	6.3	9.5	4.3	5.9	4.21	9.47																							
27-Jul	4.2	3.0	5.3	3.6	3.8	4.7	7.4	7.2	4.6	3.6	5.0	4.2	5.2	5.3	5.1	5.0	5.8	5.5	3.3	3.9	6.6	5.6	3.2	4.4	4.82	7.44																							
28-Jul	3.9	4.6	5.8	5.7	7.0	8.7	9.3	23.8	20.0	9.4	5.6	4.1	6.5	4.7	3.8	2.6	1.7	3.1	4.3	5.0	4.6	3.4	6.8	6.7	6.72	23.75																							
29-Jul	6.4	5.7	6.7	6.1	6.7	9.6	9.3	13.8	12.2	15.4	5.2	2.1	3.2	3.6	3.8	2.5	2.2	3.8	2.9	3.8	3.8	4.3	6.6	6.7	6.10	15.39																							
30-Jul	5.9	5.4	6.2	6.5	7.6	9.0	10.3	16.2	20.2	10.8	10.3	4.7	4.6	8.2	7.0	7.4	7.8	10.9	10.1	9.7	11.1	11.3	9.9	9.3	9.18	20.18																							
31-Jul	11.3	10.2	8.8	9.1	10.7	12.7	14.0	19.6	12.3	12.2	11.9	18.1	14.4	10.1	9.7	6.5	7.9	7.8	7.8	8.4	8.6	13.4	12.2	9.9	11.15	19.64																							
																								7.93	7.30	6.84	7.82	7.63	11.71	12.55	15.06	15.19	12.84	11.36	9.07	7.47	8.61	8.52	8.39	8.38	10.69	10.70	8.99	9.13	10.88	10.89	8.96	Diurnal Average	
																								36.59	37.84	19.18	29.32	30.40	43.06	39.56	48.18	47.50	42.78	41.63	42.97	25.70	19.68	24.38	24.56	29.64	49.80	45.40	22.28	28.88	50.31	78.80	35.78	Diurnal Maximum	
C - Calibration																								UO - Unstable Operation																									
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: July 24, 2015

Parameter: NO/NO₂/NO_x

Instrument: Teco 42i

Serial Number: CM 12499009

Previous Calibration Date: June 23,2015

Calibration: Routine

Calibration Equipment: SABIO 2010 sn# 05200311

Barometric Pressure: 26.42" Hg

Calibration Method: Standard Gas Dilution/ GPT

Cylinder ID: FF 9469

Temperature: 22.0° 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	4.4	4.6	na	0.745	1.002	0.997	300 ppb
Current	4.6	4.7	na	0.756	1.002	0.997	300 ppb

NO	Final Zero: 0.5 ppb	Final Span: 196.0 ppb	As Found Correction Factor: 1.011
NO ₂	Final Zero: -0.1 ppb	Final Span: 0.4 ppb	As Found Correction Factor: 1.007
NO _x	Final Zero: 0.6 ppb	Final Span: 196.0 ppb	As Found Correction Factor: 1.011

Results of Linear Regression			Slope	Intercept	R ²
NO	R _c vs C _c	Previous	99.917400	4.991645	0.999991
		Current	99.684060	-37.817550	0.999970
	C _i vs C _c	Current	1.000000	0.000033	0.999970
NO ₂	R _c vs C _c	Previous	100.834600	23.679870	0.999991
		Current	100.024800	7.102906	0.999995
	C _i vs C _c	Current	1.000000	0.000000	0.999995
NO _x	R _c vs C _c	Previous	100.205900	1.748458	0.999991
		Current	100.036600	-50.798340	0.999957
	C _i vs C _c	Current	1.000000	0.000030	0.999957

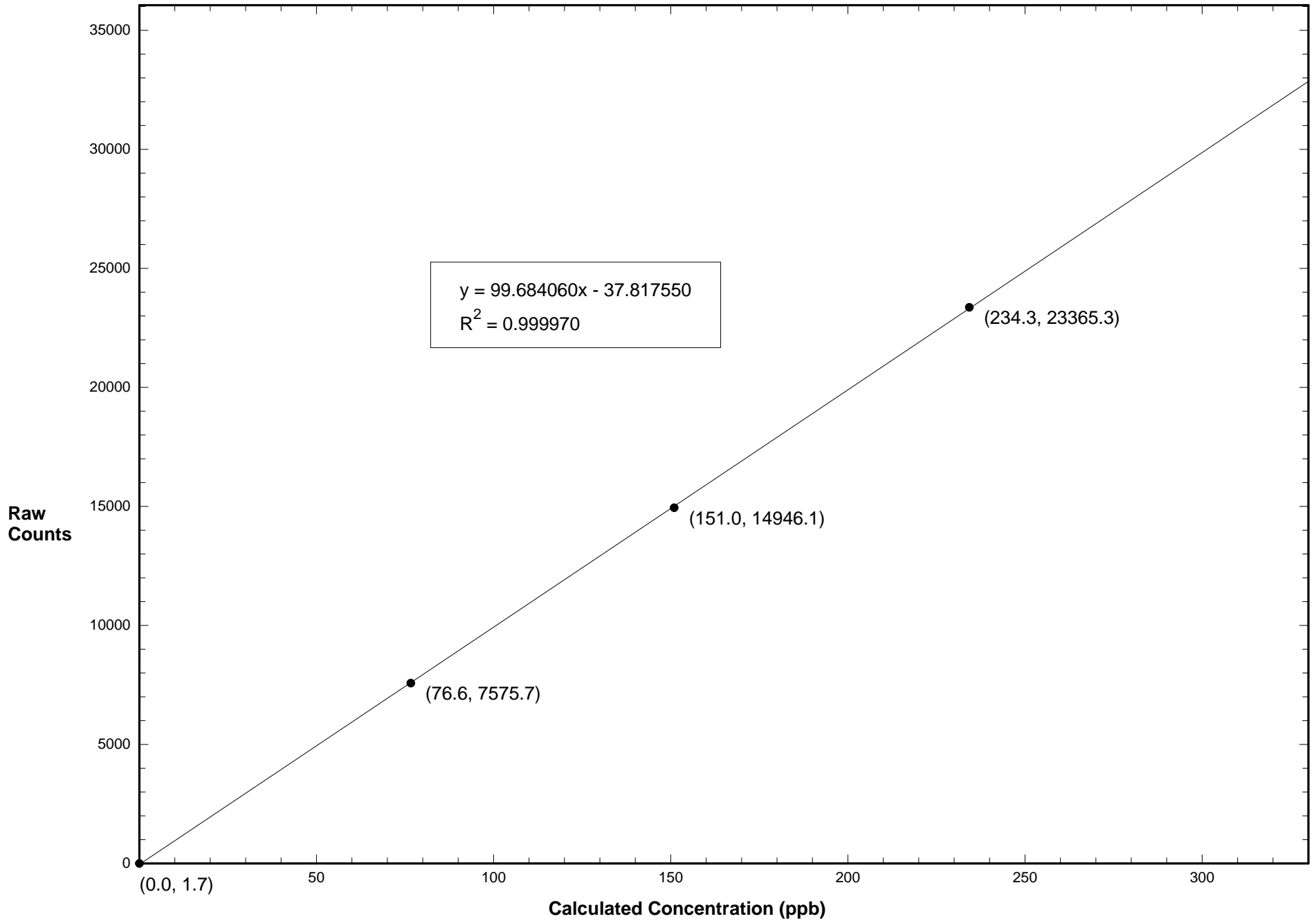
Comments:

Calibration Data Summary (Page 2)

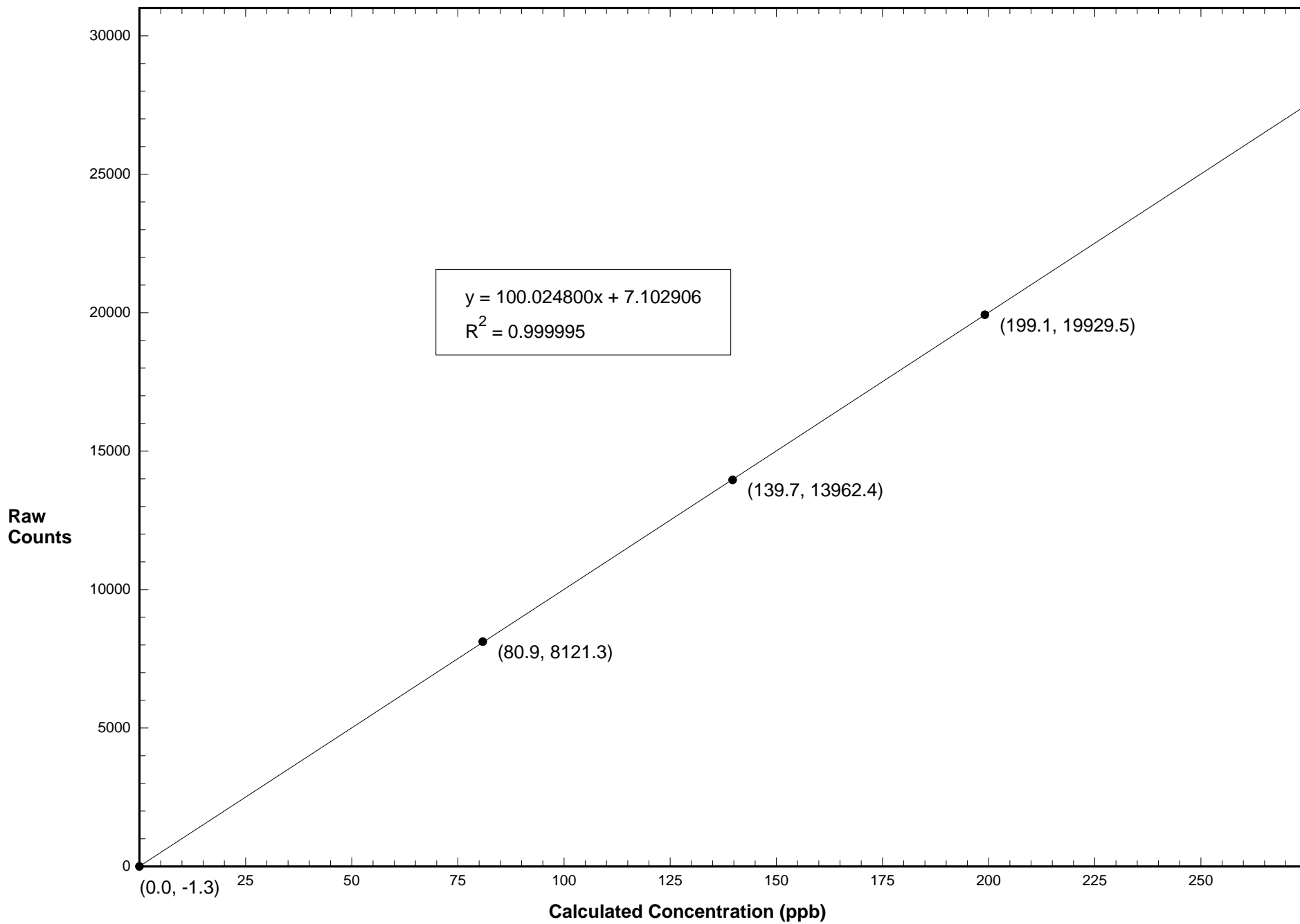
July 24, 2015 - Station 906

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		
0.09770	5.157	234.3	23365.3	234.8	0.998		
0.06180	5.096	151.0	14946.1	150.3	1.004		
0.03100	5.067	76.6	7575.7	76.4	1.003		
0.00000	5.000	0.0	1.7	0.4			
NO Calibration					Average Correction Factor:	1.002	
0.09770	5.157	234.3	23444.2	234.9	0.997		
0.06180	5.096	151.0	14979.0	150.2	1.005		
0.03100	5.067	76.6	7575.8	76.2	1.005		
0.00000	5.000	0.0	0.7	0.5			
NO _x Calibration					Average Correction Factor:	1.002	
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
234.4	3475.5	35.2	199.1	19929.5	199.2	1.000	1.000
234.4	9398.2	94.7	139.7	13962.4	139.5	1.001	0.999
234.4	15263.4	153.5	80.9	8121.3	81.1	0.997	1.003
			0.0	-1.3	-0.1		
						Average Correction Factor:	0.999
NO ₂ Gas Phase Titration						Average Converter Efficiency:	1.001
Parameter	Correction Factor (Previous)	Correction Factor: (Current)	Percent Change of Correction Factor				
NO	1.001	0.998	-0.3				
NO ₂	0.998	1.000	0.2				
NO _x	1.000	0.997	-0.3				

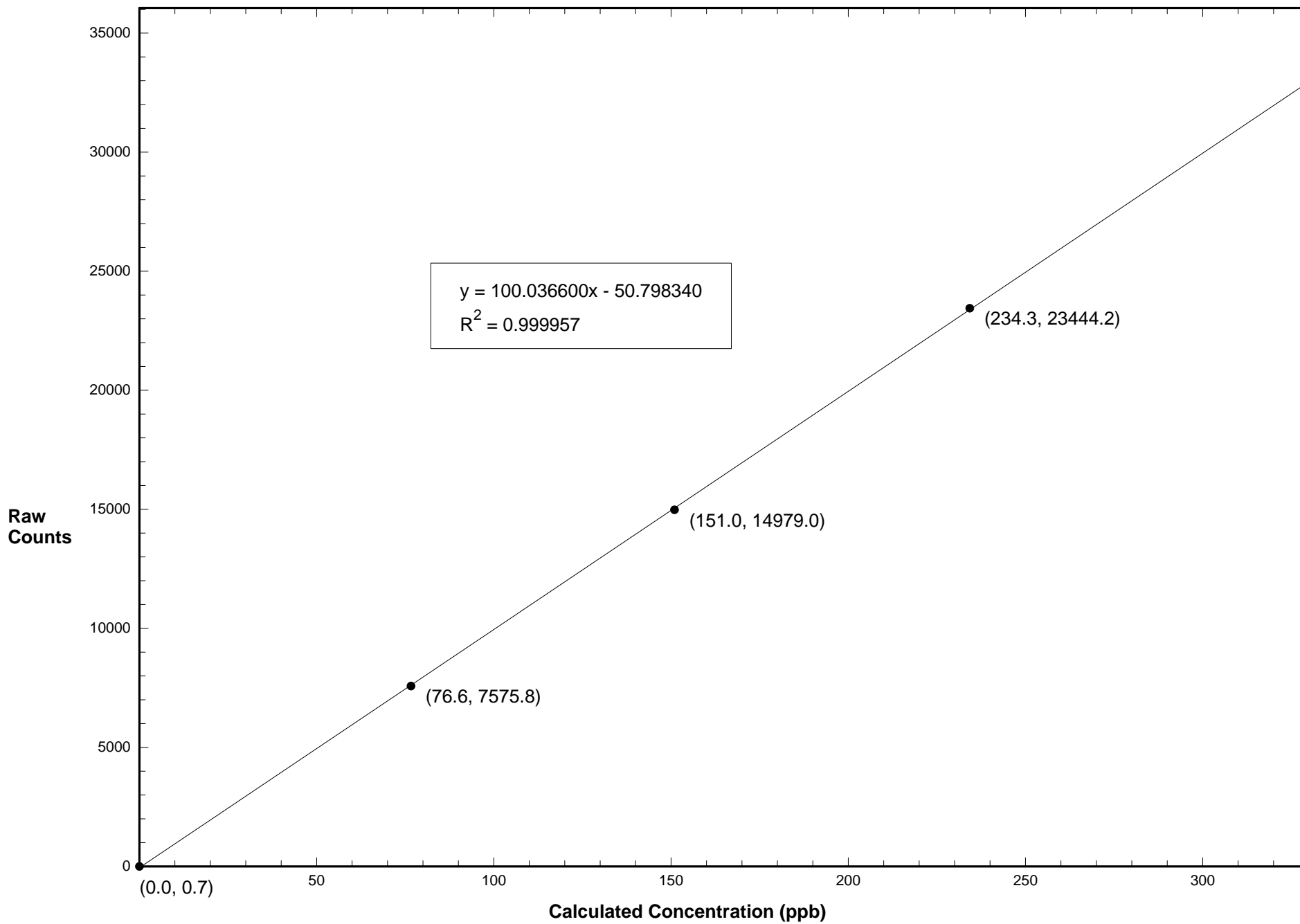
Station 906 NO July 24, 2015: Linear Regression



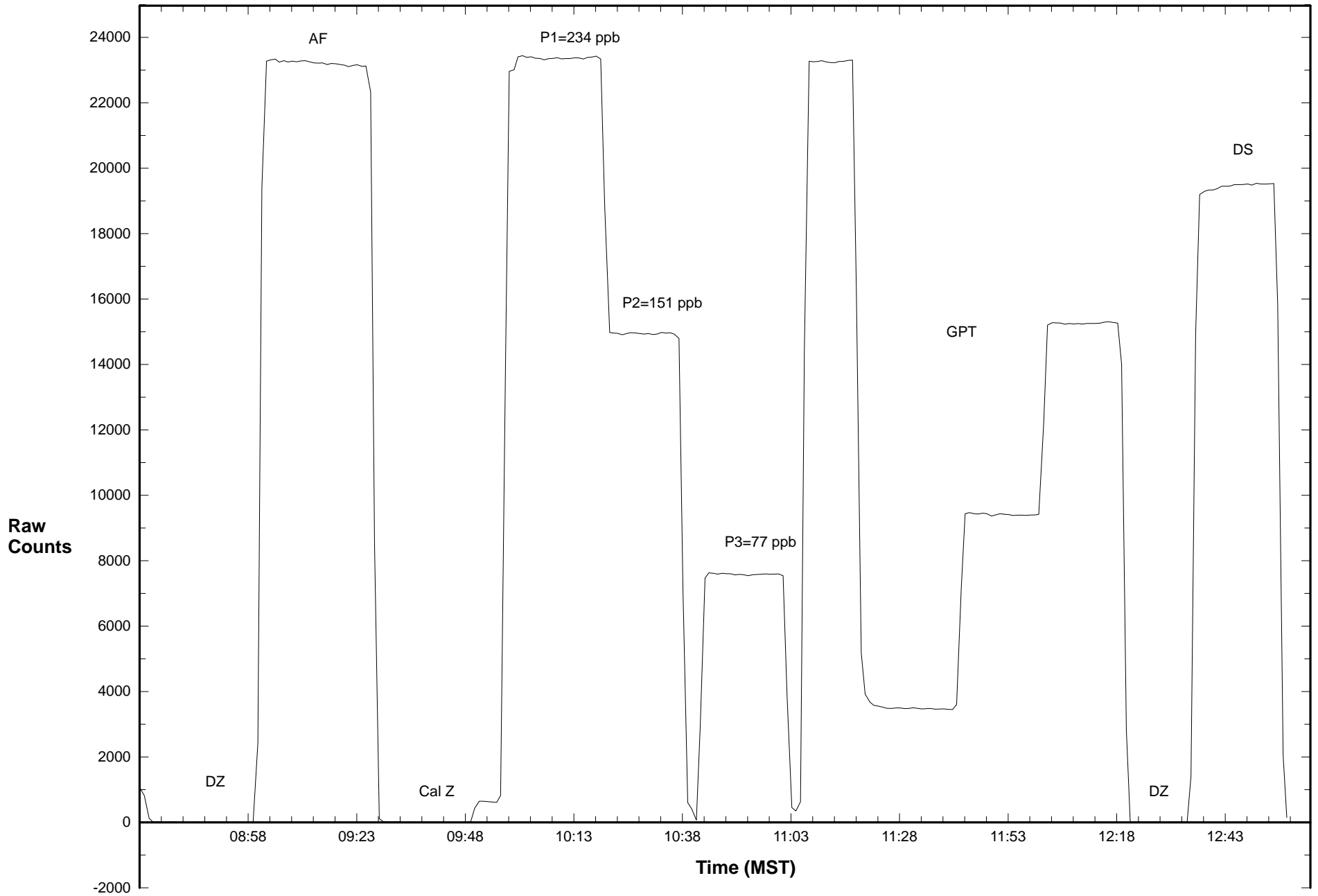
Station 906 NO2 July 24, 2015: Linear Regression



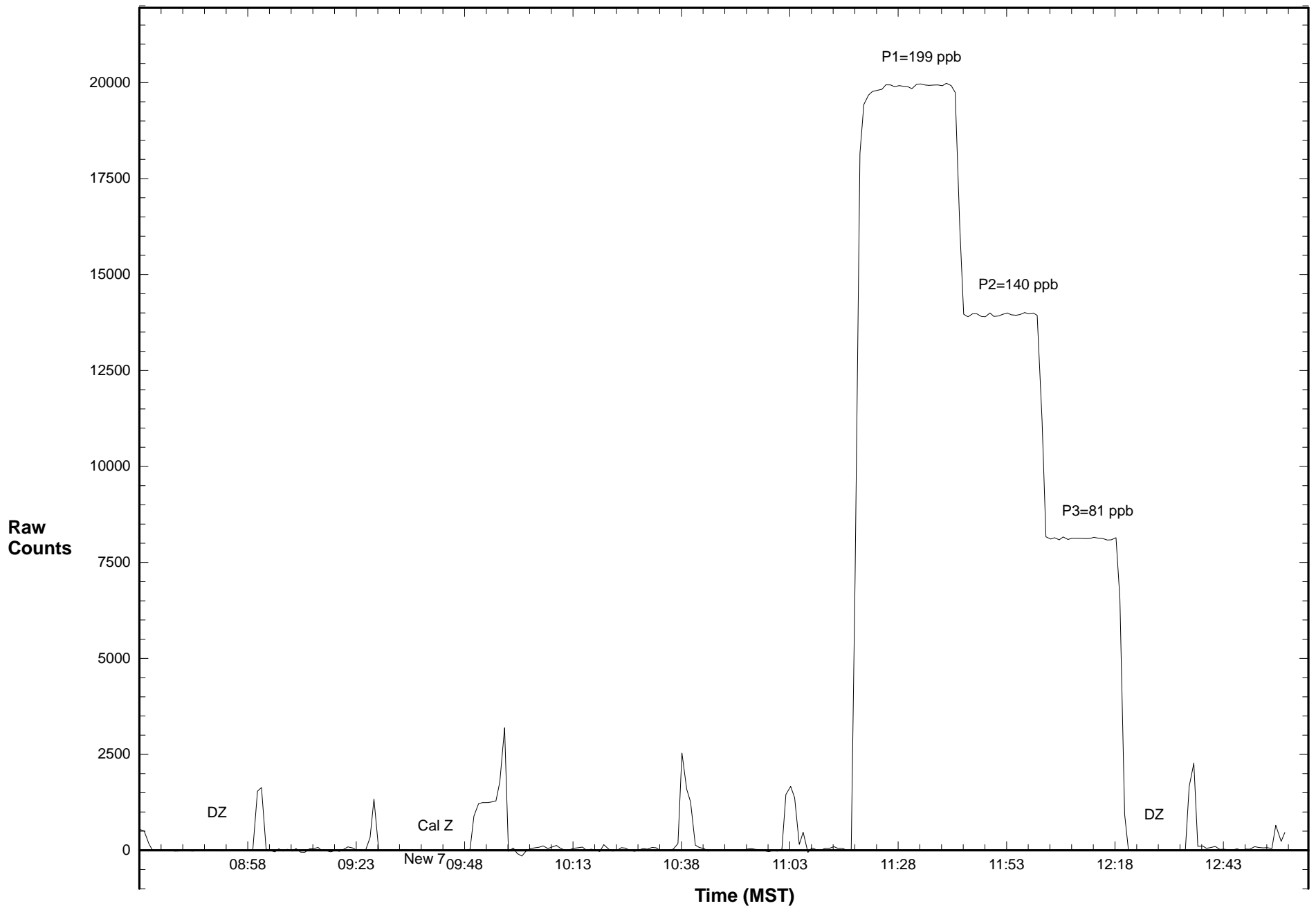
Station 906 NOX July 24, 2015: Linear Regression



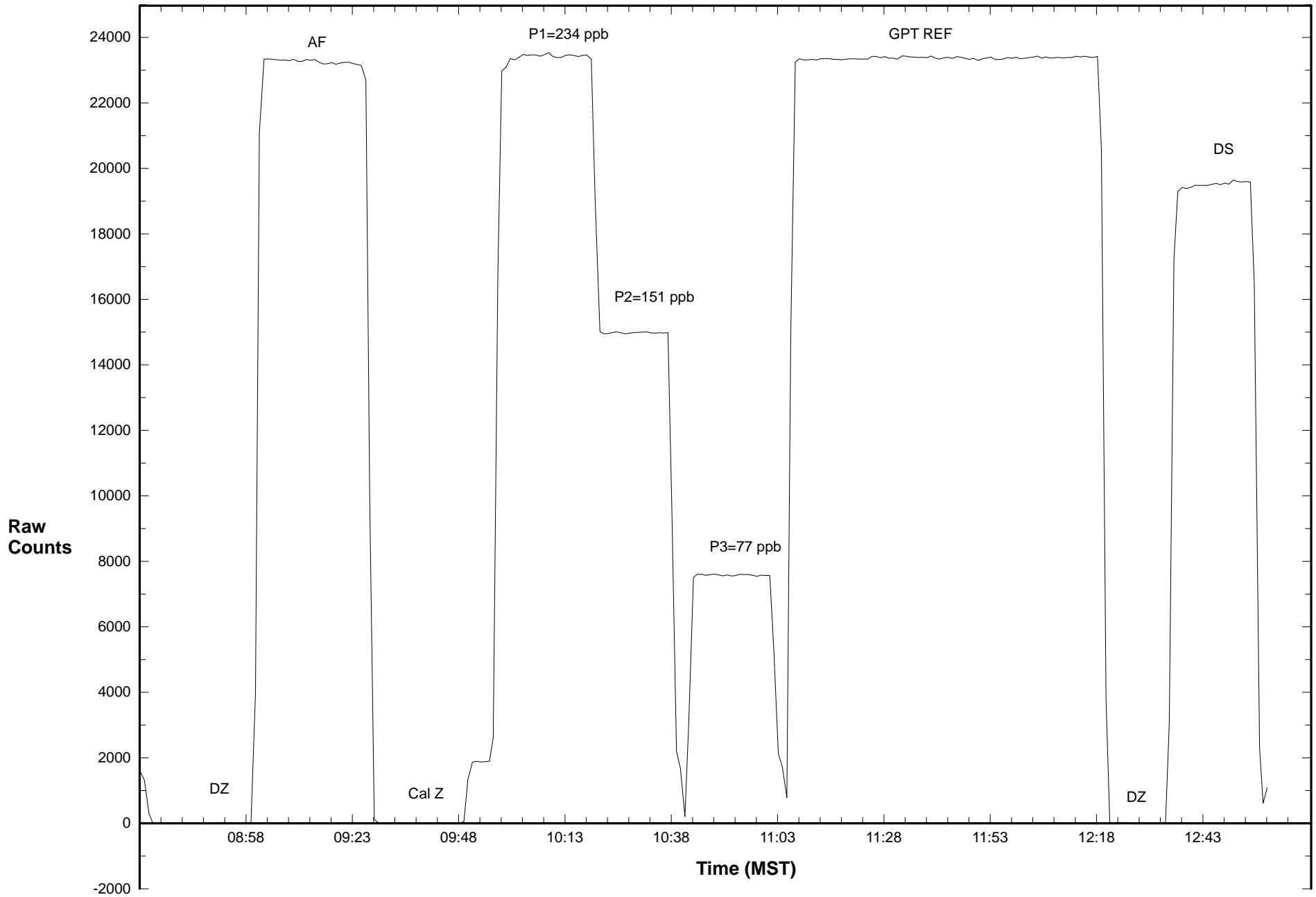
Station 906 NO July 24, 2015: Calibration Graph



Station 906 NO2 July 24, 2015: Calibration Graph



Station 906 NOX July 24, 2015: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: July 24, 2015

Parameter: O₃

Instrument: Teco 49i

Serial Number: 1150790050

Previous Calibration Date: July 1, 2015

Calibration: Routine

Calibration Equipment: 2B Technologies 306 sn#145 Barometric Pressure: 26.41" Hg

Calibration Method: Certified Ozone Generator

Temperature: 22.0° C

Technician: J. McClintock

Instrument Settings	Background	Coefficient	Monitoring Range
Previous	-0.7	1.011	500 ppb
Current	0.2	1.002	500 ppb

Final Zero: 1.5 ppb

Final Span: 448.2 ppb

As Found Correction Factor: 0.990

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	23995.2	398.8	0.996
3.000	252.0	14996.7	250.1	1.008
3.000	103.0	5972.1	101.0	1.020
3.000	0.0	-4.5	2.2	

Results of Linear Regression

R _c vs C _c	Slope	Intercept	R ²
Previous	60.260640	3.140000	1.000000
Current	60.522900	-138.430400	0.999825
C _i vs C _c			
Current	1.000000	-0.000033	0.999825

Average Correction Factor: 1.008

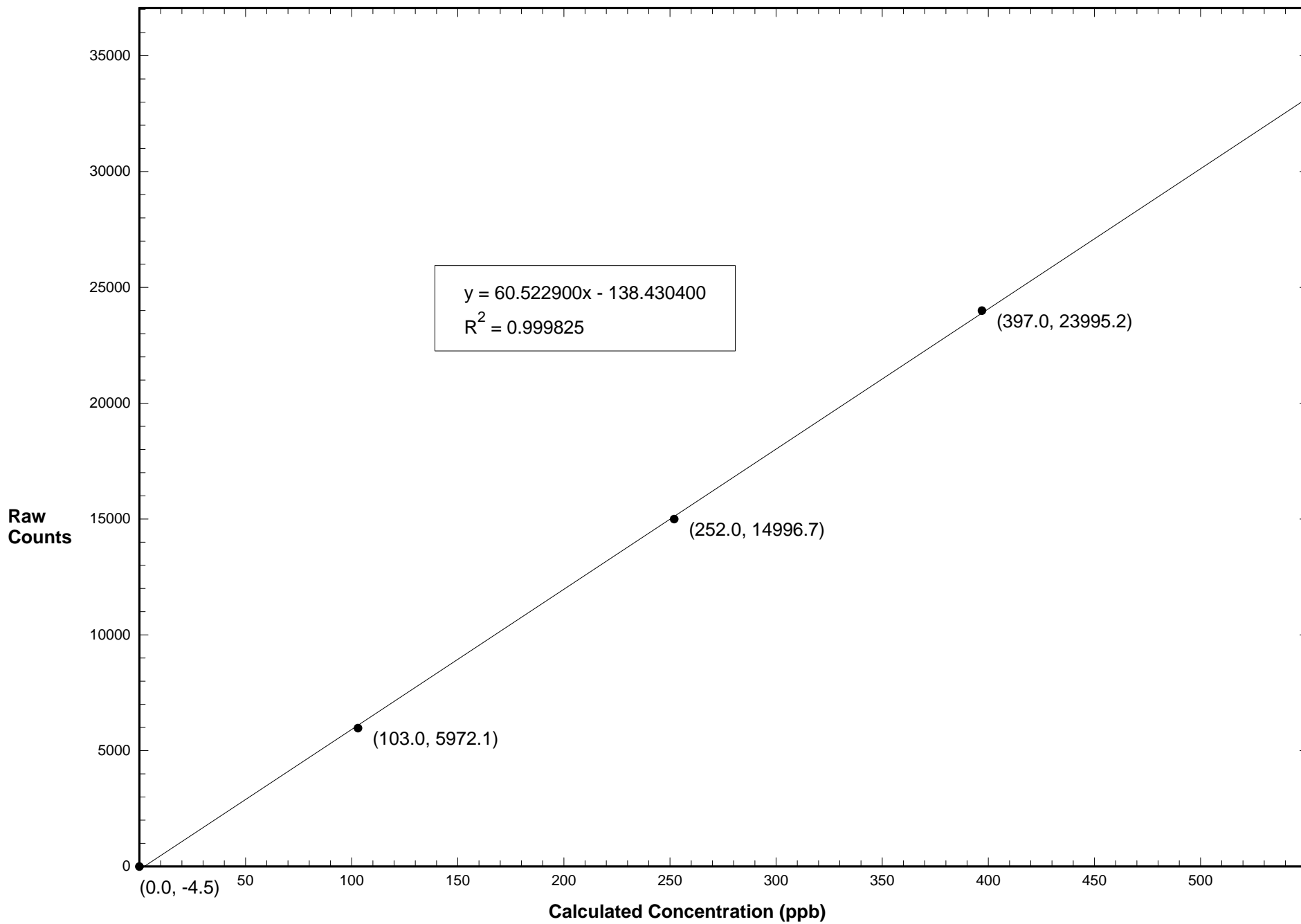
Previous Correction Factor: 1.000

Current Correction Factor: 0.996

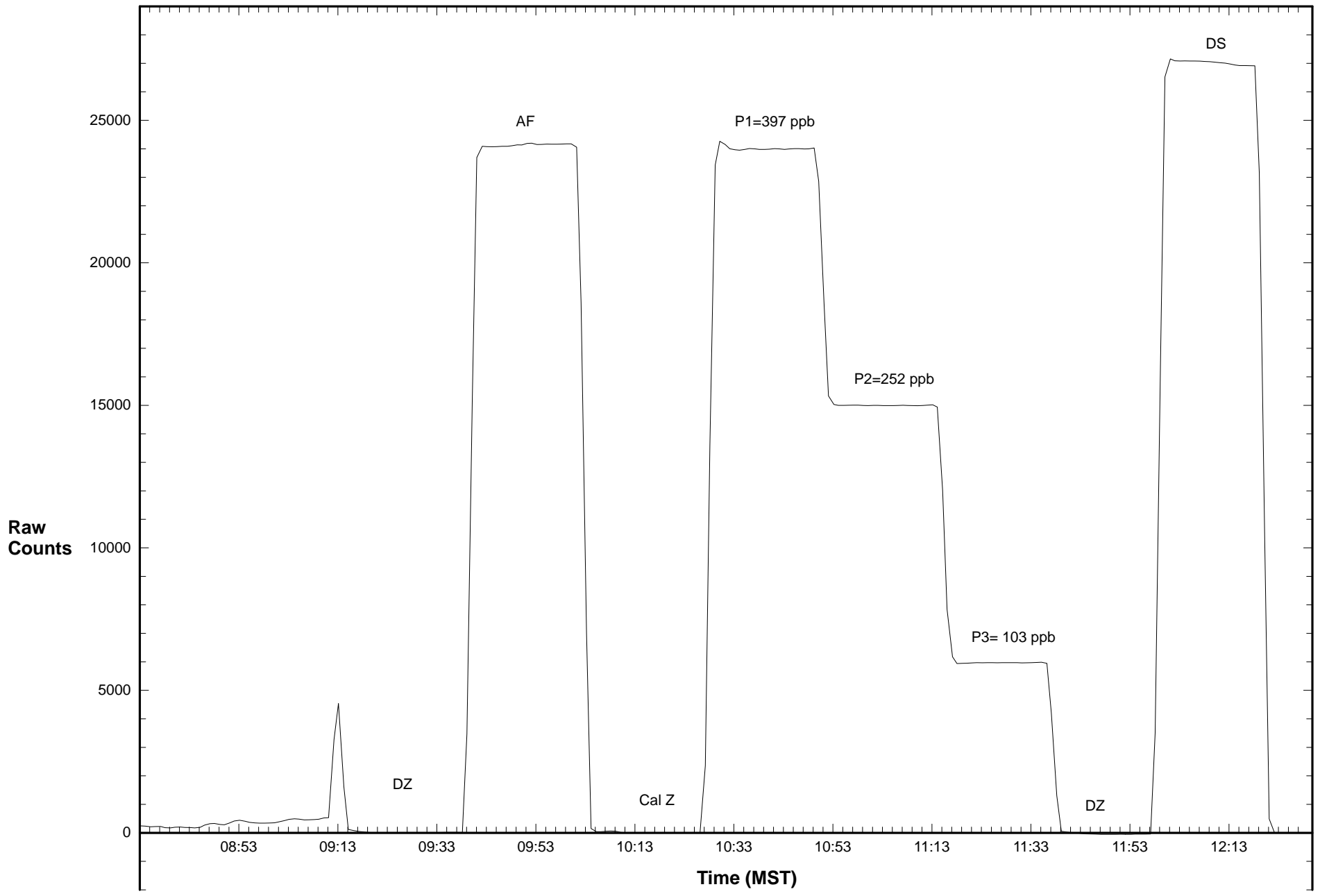
Percent Change of Correction Factor: -0.4

Comments:

Station 906 O3 July 24, 2015: Linear Regression



Station 906 O3 July 24, 2015: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton
 Calibration Date: July 24, 2015
 Parameter: SO₂

Instrument: Teco 43i	Serial Number: CM 12499009	Previous Calibration Date: June 23,2015
Calibration: Routine	Calibration Equipment: SABIO 2010 sn# 05200311	Barometric Pressure: 26.42" Hg
Calibration Method: Standard Gas Dilution	Cylinder ID: FF 9469	Temperature: 22.0° C
Cylinder Concentration: 6.2 ppb SO ₂	In Service: Jan. 14,2015	Technician: J. McClintock

Instrument Settings	SO ₂ bkg ppb	SO ₂ Coefficient	Monitoring Range
Previous	26.4	0.993	200 ppb
Current	25.9	0.952	200 ppb

Final Zero: 0.4 ppm Final Span: 86.2 ppm As Found Correction Factor: 0.966

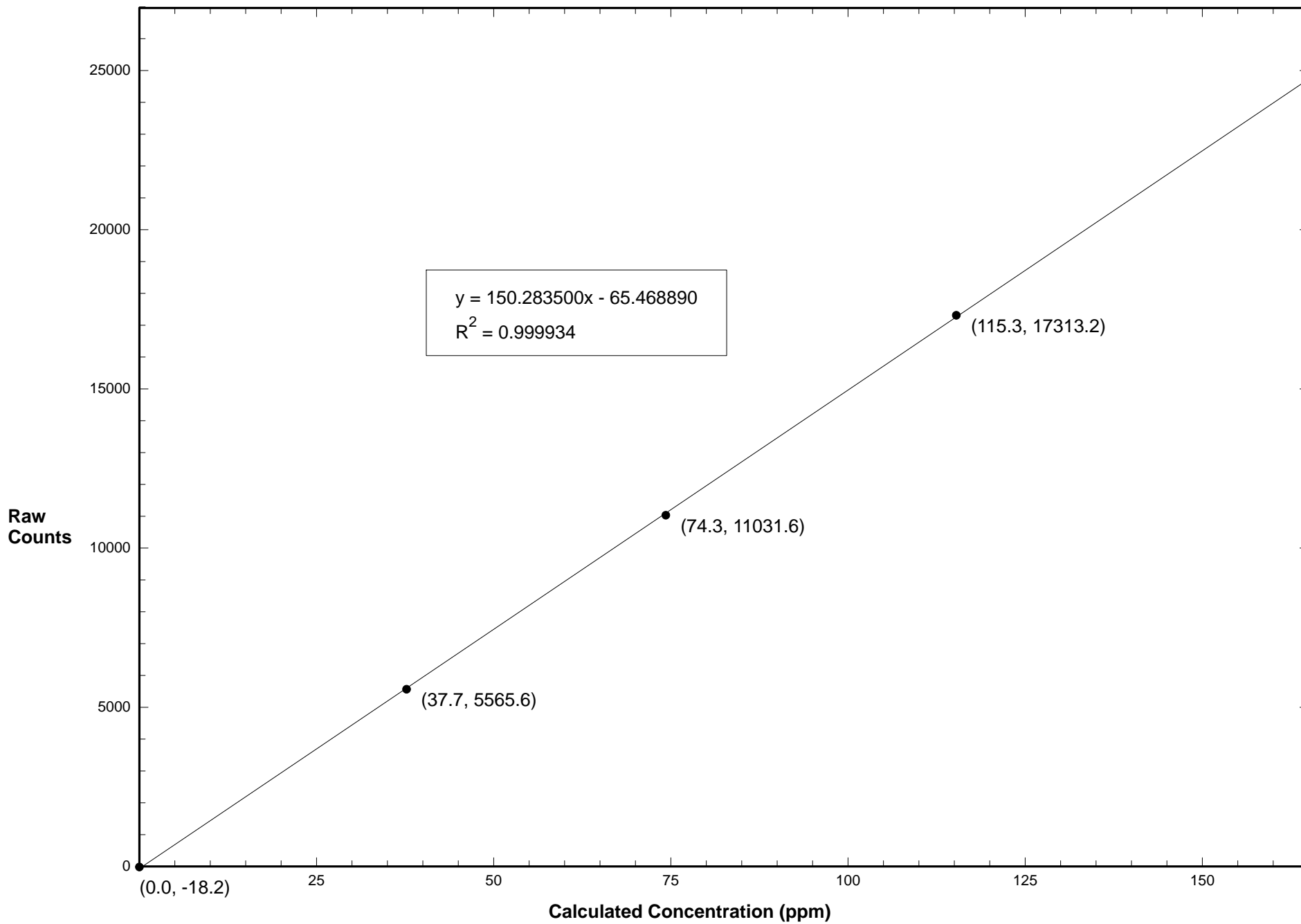
SO ₂ Flow Rate (LPM)	Dilution Flow Rate (LPM)	Calculated Concentration C _c (ppm)	Raw Count Output R _c	Indicated Concentration C _i (ppm)	Correction Factor C _c /C _i
0.0977	5.157	115.3	17313.2	115.6	0.997
0.0618	5.096	74.3	11031.6	73.8	1.006
0.0310	5.067	37.7	5565.6	37.5	1.006
0.0000	5.000	0.0	-18.2	0.3	

Results of Linear Regression			
R _c vs C _c	Slope	Intercept	R ²
Previous	150.263300	3.080014	0.999984
Current	150.283500	-65.468890	0.999934
C _i vs C _c			
Current	1.000000	-0.000015	0.999934

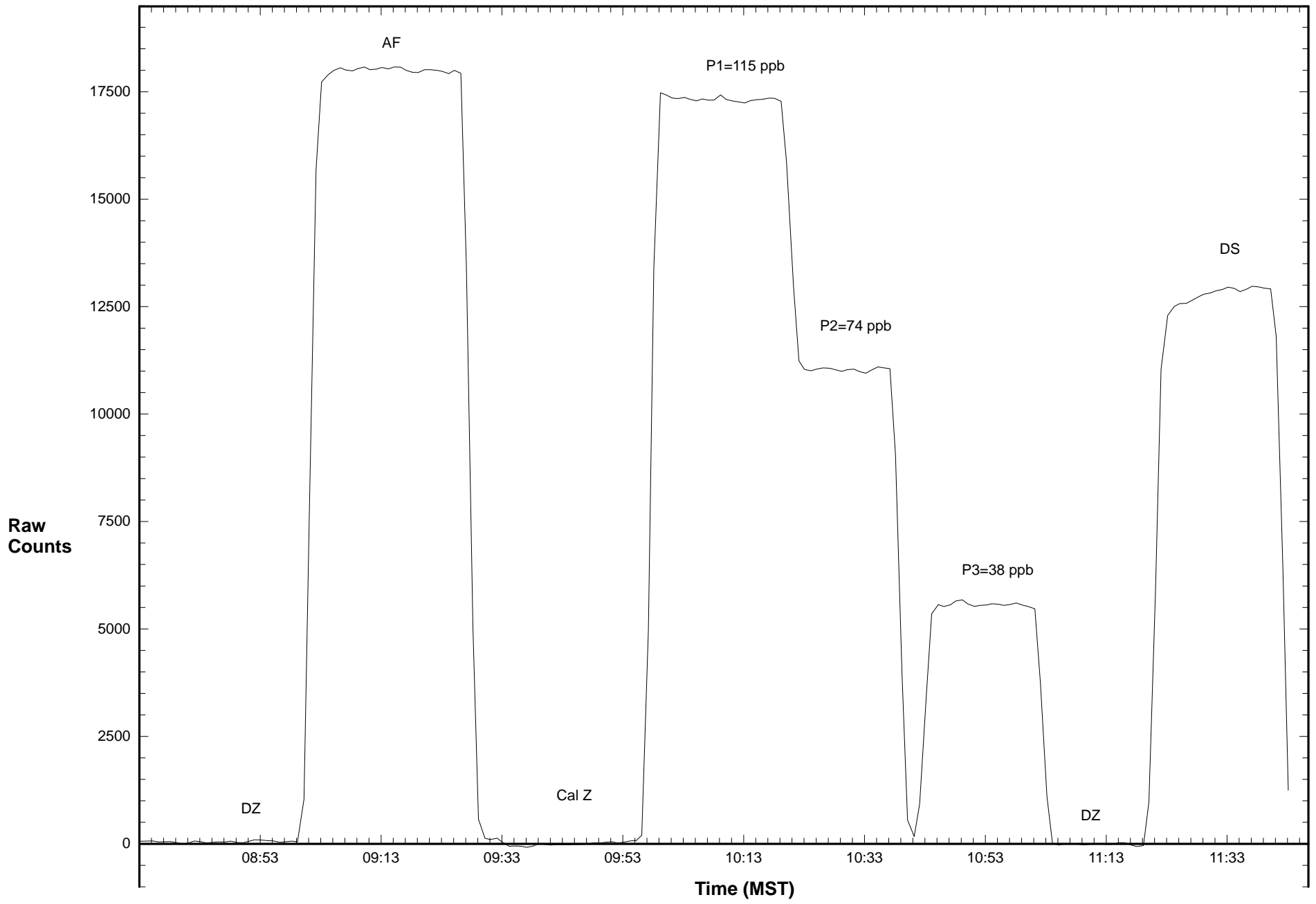
Average Correction Factor: 1.003
 Previous Correction Factor: 1.000
 Current Correction Factor: 0.997
 Percent Change of Correction Factor: -0.3

Comments:

Station 906 SO2 July 24, 2015: Linear Regression



Station 906 SO2 July 24, 2015: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton
 Calibration Date: July 24, 2015
 Parameter: TRS

Instrument: Teco 43C	Serial Number: 43CTL - 60324 - 326	Previous Calibration Date: June 23,2015
Calibration: Routine	Calibration Equipment: SABIO 2010 sn# 05200311	Barometric Pressure: 26.46" Hg
Calibration Method: Standard Gas Dilution	Permeation Device ID: SV14360, 4.89 ppm H2S	Temperature: 22.0° 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	1.65	0.726	100 ppb
Current	3.13	1.049	100 ppb

Final Zero: -0.3 ppb Final Span: 86.6 ppb As Found Correction Factor: 1.077

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
0.076	72.1	21677.6	72.3	0.998
0.047	44.6	13321.7	44.5	1.001
0.021	20.2	5913.9	19.9	1.016
0.000	0.0	-4.8	0.3	

Results of Linear Regression			
R _c vs C _c	Slope	Intercept	R ²
Previous	300.715000	-143.487000	0.999799
Current	301.116400	-82.983530	0.999933
C _i vs C _c			
Current	1.000000	0.000004	0.999933

Average Correction Factor: 1.005

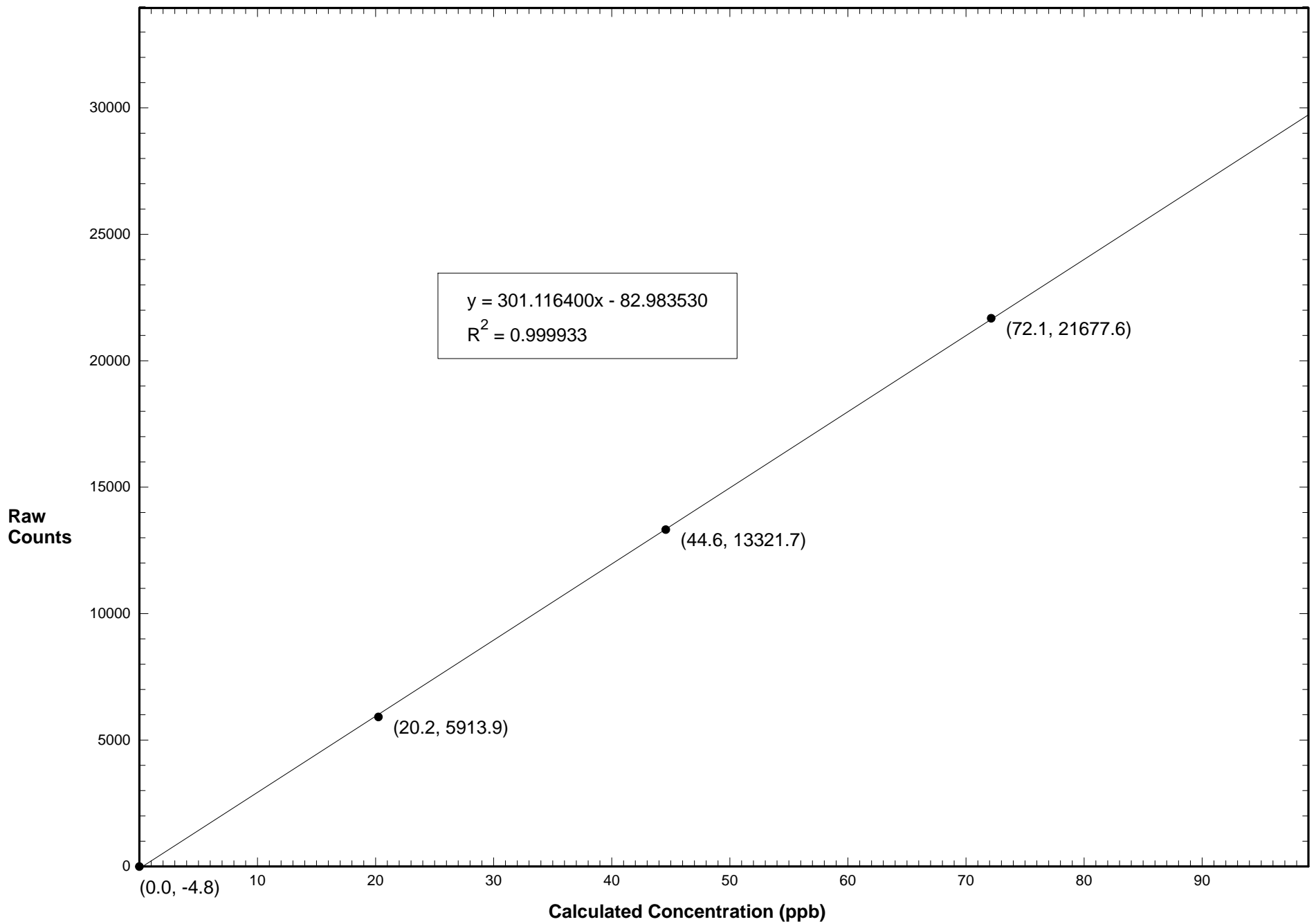
Previous Correction Factor: 0.995

Current Correction Factor: 0.998

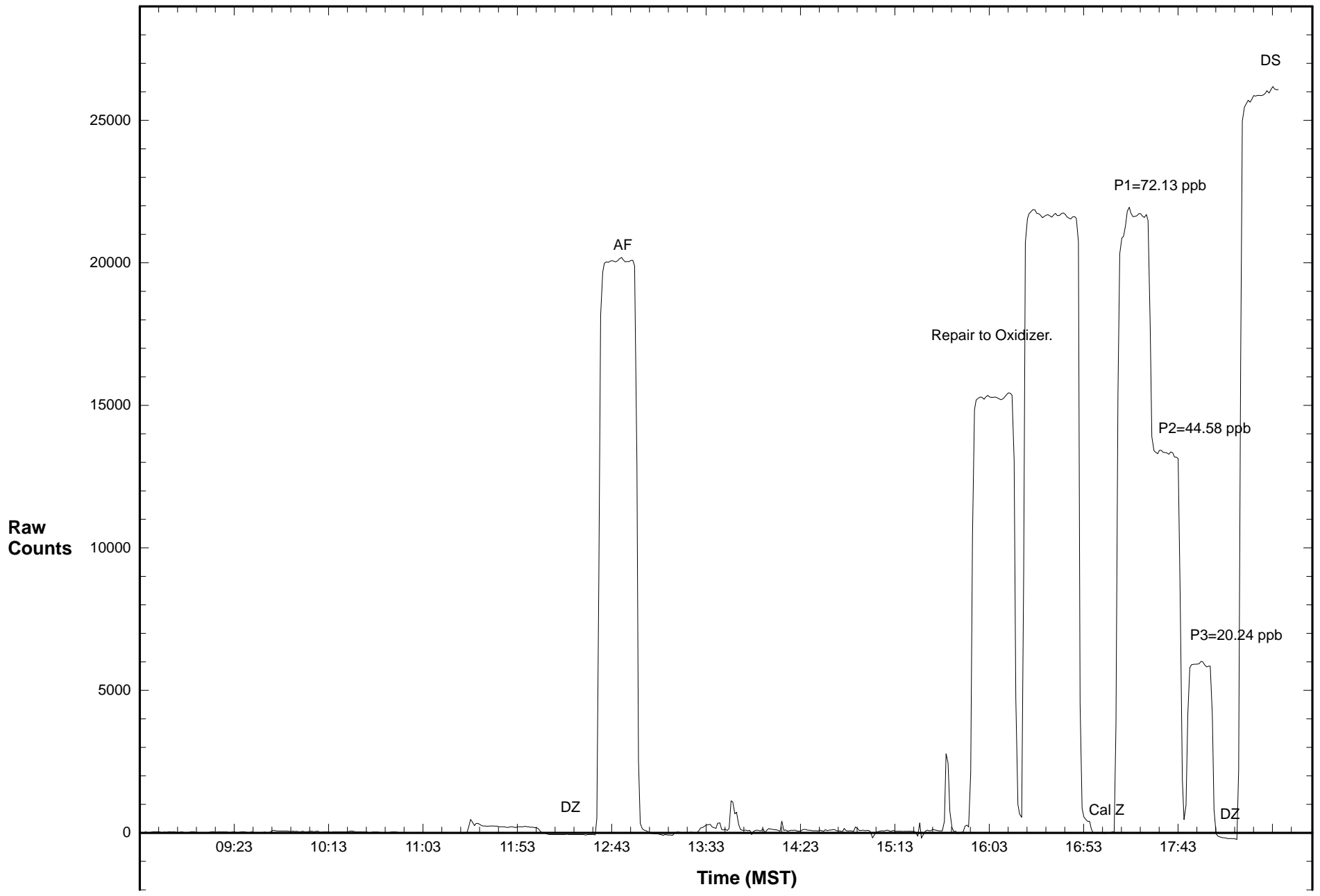
Percent Change of Correction Factor: 0.3

Comments: Pressurized Thermal Oxidizer after doing the AF .

Station 906 TRS July 24, 2015: Linear Regression



Station 906 TRS July 24, 2015: Calibration Graph



WEST CENTRAL AIRSHED SOCIETY

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

**AMS 906
HINTON
JULY 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
July 2015

Maximum Value: 34.46 C on Jul 9 18:00		Maximum Daily Average: 23.72 C on Jul 9		Hours in Service: 744																							
Minimum Value: 4.6 C on Jul 28 05:00		Minimum Daily Average: 11.49 C on Jul 16		Hours of Data: 744																							
Maximum Diurnal Average: 22.83 C at hour 16		Minimum Diurnal Average: 9.13 C at hour 6		Hours of Missing Data: 0																							
Monthly Average: 16.745 C		Percentiles: P₁ = 6.2 P₁₀ = 9.2 Q₁ = 12.0 Median = 16.3 Q₃ = 20.9 P₉₀ = 24.8 P₉₉ = 31.9		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-Jul	12.7	12.7	12.8	12.5	12.5	12.5	13.3	14.4	15.6	16.5	17.8	20.9	21.9	21.2	18.8	22.6	23.2	25.4	23.6	21.2	20.2	17.8	16.6	15.4	17.59	25.40	
2-Jul	14.3	13.2	12.5	11.5	10.8	10.7	12.8	16.6	19.5	22.2	24.1	26.2	27.2	28.1	28.7	29.6	29.7	30.7	30.6	29.0	26.7	22.2	19.3	16.9	21.38	30.68	
3-Jul	14.8	13.4	11.8	11.0	10.3	10.5	13.2	18.5	21.3	20.4	21.4	22.4	23.2	24.8	25.6	26.9	28.0	28.0	26.6	24.9	23.6	21.2	18.7	16.7	19.88	28.04	
4-Jul	15.0	12.6	11.0	9.7	8.5	8.5	10.4	13.8	17.0	18.4	19.3	16.8	14.8	15.3	16.3	17.3	18.2	17.6	16.5	16.1	14.5	12.8	12.0	11.6	14.33	19.29	
5-Jul	11.0	10.8	10.2	9.1	9.4	9.3	10.1	12.1	14.3	15.0	16.0	17.0	17.7	17.6	17.7	18.3	18.5	18.5	18.1	17.1	15.9	14.7	13.7	12.9	14.38	18.54	
6-Jul	12.3	10.4	8.2	6.6	5.4	5.1	7.3	11.5	14.3	17.4	20.0	22.0	23.3	23.1	23.1	22.4	23.6	24.0	22.4	21.7	19.5	16.4	14.2	12.7	16.11	24.00	
7-Jul	10.7	9.3	8.3	7.5	7.2	8.0	9.4	11.5	13.9	15.7	17.1	18.7	20.0	21.9	23.5	24.2	24.9	24.8	21.4	18.7	17.4	15.3	13.8	12.0	15.62	24.88	
8-Jul	10.5	9.9	9.3	9.0	8.8	9.7	12.5	16.0	18.8	22.2	24.9	27.6	29.3	30.5	31.5	32.1	32.0	30.3	30.2	28.3	25.5	23.9	22.4	19.7	21.46	32.10	
9-Jul	16.8	14.7	13.3	12.2	11.4	11.6	13.9	18.8	22.3	25.1	28.0	30.0	30.6	31.9	32.5	32.6	34.1	34.5	33.2	30.5	27.9	24.2	21.0	18.2	23.72	34.46	
10-Jul	16.0	13.9	12.3	11.2	10.2	10.3	12.5	15.9	19.8	22.6	25.7	29.0	30.1	30.9	30.7	28.5	27.4	19.8	18.4	18.4	18.7	18.1	17.3	16.6	19.77	30.88	
11-Jul	15.5	14.7	13.8	13.1	12.2	12.0	12.7	14.7	18.3	20.8	23.0	25.1	28.0	29.5	30.2	29.9	26.6	26.3	24.6	23.3	22.1	20.3	18.8	17.8	20.55	30.24	
12-Jul	17.4	17.0	15.5	14.7	15.0	15.0	15.6	16.1	16.7	16.7	17.7	20.6	24.1	26.1	26.2	26.2	24.3	24.1	21.6	20.5	19.1	18.0	17.3	16.5	19.24	26.20	
13-Jul	15.1	14.1	12.9	11.7	10.9	10.2	11.1	14.2	18.0	20.2	23.0	23.4	23.9	24.3	21.0	17.4	19.8	20.4	19.5	19.3	15.9	13.7	12.1	11.4	16.82	24.34	
14-Jul	11.0	10.3	9.6	9.1	8.4	8.5	9.7	12.7	15.3	17.9	20.4	21.6	21.5	22.6	23.5	23.9	23.5	22.0	21.6	20.4	19.2	18.2	16.7	16.1	16.82	23.87	
15-Jul	15.4	13.4	11.1	9.4	8.1	7.4	9.4	10.8	14.0	17.2	15.9	18.6	19.5	22.1	21.0	20.9	20.9	15.6	14.5	13.9	12.0	10.3	9.9	9.9	14.22	22.11	
16-Jul	9.5	9.6	8.8	8.1	7.3	7.6	8.5	9.4	11.1	14.4	15.2	15.3	15.8	15.0	12.8	14.9	14.6	13.5	12.7	10.1	9.3	9.7	11.2	11.0	11.49	15.84	
17-Jul	11.2	11.5	11.7	11.1	11.0	11.5	11.9	13.1	14.2	15.0	16.1	16.2	17.7	17.8	18.2	19.3	19.8	19.7	20.0	19.6	17.4	15.9	14.8	14.4	15.38	19.95	
18-Jul	13.8	12.6	10.4	8.8	8.1	8.4	11.5	12.6	16.0	19.4	21.5	22.6	23.5	24.5	24.7	24.4	24.8	23.9	23.4	22.9	21.7	20.2	19.3	18.7	18.23	24.79	
19-Jul	18.4	16.8	16.1	14.6	13.4	13.5	14.2	15.9	18.1	19.9	20.9	22.4	23.6	24.5	24.8	24.9	24.7	23.7	22.9	22.0	20.2	19.3	17.9	16.8	19.57	24.91	
20-Jul	15.1	13.2	12.0	11.7	11.3	10.7	12.0	16.4	18.8	20.7	22.5	23.2	24.9	26.5	26.0	24.0	19.4	17.3	16.9	17.4	16.2	15.4	14.7	14.8	17.54	26.55	
21-Jul	13.2	13.2	12.4	12.1	11.7	10.5	10.6	11.5	13.7	16.0	18.1	18.5	18.2	18.1	17.3	18.0	19.2	19.9	19.9	17.5	16.2	13.8	12.2	10.6	15.09	19.89	
22-Jul	9.1	8.0	6.8	6.2	5.7	5.6	6.7	8.3	11.4	15.0	15.5	17.6	19.0	17.4	14.2	14.9	14.1	12.7	14.2	13.0	11.8	11.0	10.3	9.8	11.59	19.00	
23-Jul	9.1	8.6	7.7	7.0	6.6	6.9	7.6	8.7	11.4	15.3	18.4	19.1	15.0	16.9	19.4	20.6	19.8	19.4	18.6	17.4	16.9	15.6	14.4	12.4	13.86	20.63	
24-Jul	10.9	9.5	8.2	7.2	6.8	7.2	7.9	10.6	15.0	18.6	21.0	22.0	22.3	21.5	22.3	20.7	20.8	22.0	20.7	19.1	18.2	16.1	13.9	13.1	15.66	22.31	
25-Jul	12.4	12.5	12.1	11.0	9.6	9.8	10.1	12.6	13.3	14.5	15.3	16.3	17.5	17.0	17.4	15.0	13.4	13.5	14.4	13.3	12.0	11.7	10.8	9.7	13.14	17.53	
26-Jul	9.1	8.3	6.6	6.3	6.4	6.8	7.5	9.7	13.6	15.0	17.1	17.2	18.0	18.1	19.2	18.3	20.1	19.0	17.6	16.0	14.7	12.4	11.6	10.5	13.31	20.15	
27-Jul	9.6	8.6	7.6	6.9	6.5	6.2	7.4	10.8	13.5	15.1	17.2	18.3	19.5	20.7	20.6	20.6	22.2	21.8	21.0	18.9	17.8	16.4	14.8	13.2	14.79	22.21	
28-Jul	10.6	8.7	7.1	5.6	4.6	5.0	6.3	8.7	11.7	17.2	20.1	20.9	21.4	22.0	21.2	22.2	23.0	22.3	20.3	19.7	18.4	17.4	15.1	13.4	15.11	22.96	
29-Jul	12.9	11.2	10.2	10.3	10.1	9.7	10.0	11.3	14.6	19.1	15.9	18.2	20.7	21.1	22.2	22.8	22.7	22.4	21.3	20.0	18.3	16.2	13.8	13.8	16.20	22.79	
30-Jul	13.8	14.3	13.2	11.1	9.4	7.7	9.8	13.6	16.0	19.3	21.5	23.3	25.1	23.6	25.1	25.5	25.5	24.6	24.0	22.3	20.1	17.2	15.0	13.0	18.08	25.50	
31-Jul	11.3	9.9	8.8	7.9	7.3	6.6	8.2	12.4	17.1	19.5	21.0	24.7	25.7	27.2	27.9	29.2	28.7	26.8	24.7	23.3	20.1	17.4	15.8	14.8	18.17	29.20	
		12.85	11.83	10.71	9.81	9.20	9.13	10.46	13.02	15.76	18.14	19.73	21.15	22.03	22.64	22.70	22.83	22.82	22.08	21.14	19.87	18.30	16.54	15.14	14.01	Diurnal Average	
		18.39	16.96	16.15	14.75	15.03	15.58	18.85	22.34	25.12	28.02	29.97	30.59	31.88	32.51	32.56	34.05	34.46	33.22	30.50	27.88	24.19	22.35	19.69	Diurnal Maximum		



WCAS - Hinton
Summary of Hourly Averages

Wind Speed (WS) - kph
July 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	3.9	4.2	3.6	2.0	1.6	2.0	1.4	2.0	5.6	3.7	2.8	3.0	5.4	2.9	8.4	2.5	2.3	1.6	3.1	0.9	1.5	1.2	0.8	2.6	2.61	8.45
Dir	SW	SW	SW	SW	WSW	SW	W	WSW	SW	SW	WSW	SW	W	SSW	WSW	WSW	W	SW	W	E	SW	SSW	SSW	SW	SSW	
2 Spd	1.0	0.2	0.5	1.2	1.5	1.8	1.6	2.0	2.4	1.8	1.7	2.4	6.0	5.6	2.4	3.4	4.1	1.3	1.5	5.9	3.6	0.8	1.6	0.6	1.78	6.04
Dir	S	N	NW	SW	WSW	W	WNW	WNW	WNW	W	WSW	W	SSW	SSW	S	SSW	S	N	WSW	SW	SW	SSE	WSW	W	SW	SSW
3 Spd	0.3	0.5	0.5	1.0	0.7	1.3	0.7	1.2	0.9	0.3	0.4	1.1	2.0	4.0	3.5	4.3	5.0	4.0	3.6	3.6	2.6	3.0	1.2	0.4	0.99	4.97
Dir	WSW	SW	ENE	SW	WNW	W	SSW	NW	N	NW	W	N	E	ESE	SE	NE	E	N	NNE	NE	NE	NNE	ENE	WSW	NE	E
4 Spd	1.7	0.7	0.3	0.9	0.7	2.5	1.5	1.2	0.6	3.4	2.3	5.2	4.8	1.0	0.9	4.3	2.5	5.3	3.1	1.8	2.7	1.0	3.0	2.4	0.72	5.34
Dir	SW	S	SW	WSW	E	SSW	W	WNW	ENE	ESE	ENE	N	ENE	NNW	ENE	SSW	WSW	NNW	N	N	NNW	WNW	NW	NW	NNW	NNW
5 Spd	0.7	0.3	0.2	0.8	2.1	1.2	0.9	1.2	2.1	5.4	4.2	5.7	3.9	1.7	2.9	3.9	4.1	6.5	3.9	4.0	2.7	3.2	2.1	1.4	1.98	6.50
Dir	W	SW	SW	SW	SW	W	SW	S	ENE	ENE	ENE	E	ESE	NNE	ENE	ENE	E	ESE	ENE	ENE	ENE	E	E	S	E	ESE
6 Spd	1.4	0.2	0.3	0.5	0.2	0.3	1.4	1.0	1.2	1.6	2.7	2.6	2.7	1.4	2.7	0.4	3.6	3.0	3.3	3.5	1.0	0.4	0.4	2.3	0.90	3.59
Dir	S	NNE	N	N	N	NNW	NNW	ENE	NW	NE	ENE	E	E	NE	NE	NW	N	N	NNW	N	NNE	ENE	S	SSW	NNE	N
7 Spd	1.0	0.5	0.7	0.3	0.3	0.4	0.3	0.6	1.1	2.9	1.3	1.3	2.9	1.6	2.1	4.6	4.0	5.2	14.0	2.4	1.5	0.8	1.7	1.0	1.06	13.99
Dir	ESE	ENE	SE	WNW	NE	N	N	E	W	SW	NW	E	SSW	E	E	ESE	E	SE	SSW	W	WSW	WSW	SW	WSW	S	SSW
8 Spd	0.7	0.1	0.2	0.3	0.8	1.5	2.1	2.8	4.0	7.9	13.5	15.1	13.9	12.9	8.7	4.6	5.0	3.8	1.7	0.9	1.5	2.6	1.1	0.5	3.37	15.14
Dir	WSW	SE	ESE	NW	NW	NW	W	W	SW	SSW	SSW	SSW	SW	SW	SW	WSW	WNW	NW	WNW	NW	E	ENE	ENE	SSE	SW	SSW
9 Spd	0.7	0.2	0.3	0.9	1.0	1.5	1.0	1.8	2.5	2.9	5.5	5.7	6.6	2.8	3.6	2.1	2.5	2.8	1.7	4.6	4.2	2.9	0.4	1.6	1.07	6.62
Dir	S	W	NNE	WSW	W	W	W	WNW	W	SW	SSW	SSW	SSW	SW	WSW	WSW	W	WNW	N	ENE	NE	ENE	NNW	SSW	WSW	SSW
10 Spd	0.8	0.3	0.5	0.7	0.5	0.6	0.4	1.0	1.1	0.7	1.8	5.8	10.1	9.7	11.7	10.7	6.2	1.2	2.1	0.3	0.4	1.6	1.7	4.9	2.24	11.66
Dir	E	N	N	ENE	NE	NE	WNW	W	SW	W	NE	E	ESE	E	ESE	ESE	S	SSW	NE	ESE	SSW	SW	ESE	SSW	ESE	ESE
11 Spd	0.9	0.1	1.7	0.6	0.3	0.4	0.8	0.9	1.3	1.4	1.7	0.4	1.9	1.3	1.6	5.0	6.9	7.8	4.9	3.7	5.6	1.2	2.1	0.7	1.41	7.80
Dir	SE	ESE	SW	E	E	SW	ENE	NE	NE	N	NNE	NNW	NE	E	N	N	E	E	ESE	E	SSE	NNW	E	WSW	E	E
12 Spd	4.2	2.8	1.0	0.2	1.0	1.5	0.2	0.8	1.9	0.6	1.1	1.7	6.9	5.6	6.5	4.9	3.6	4.2	2.8	2.3	1.4	0.8	1.9	2.1	1.38	6.91
Dir	SW	WSW	WNW	WSW	E	NNE	NNE	W	W	NW	WNW	NW	SW	SW	SW	WSW	N	NNW	NNW	N	SSW	WSW	SW	WSW	WSW	SW
13 Spd	2.1	1.0	2.0	1.7	0.9	0.2	1.1	1.5	2.8	4.0	3.0	5.5	1.3	1.8	1.1	2.5	3.7	4.3	3.6	4.9	1.9	4.7	1.4	1.0	0.72	5.48
Dir	SW	WSW	SW	SW	SSW	W	W	W	WSW	SW	WSW	S	SW	SSW	SSW	NE	NE	ENE	NE	SE	ESE	SE	NNE	S	S	S
14 Spd	2.7	2.9	2.3	1.4	0.6	1.8	0.4	1.4	1.9	3.3	1.2	1.7	2.8	2.6	1.5	1.5	1.4	4.8	4.0	2.8	3.0	2.7	1.0	2.4	0.05	4.83
Dir	SW	SW	SSW	WSW	W	SW	N	NE	NW	SSW	NW	WNW	W	SW	WSW	ENE	NNE	ENE	ENE	NE	ENE	NNE	SE	ESE	NNE	ENE
15 Spd	4.4	0.8	0.4	1.5	0.9	1.1	0.4	0.7	1.0	0.8	2.4	3.3	4.5	9.8	3.1	1.5	1.5	2.5	0.6	1.7	1.7	2.7	0.3	0.7	1.12	9.76
Dir	ESE	NNE	NNW	W	W	NW	NNW	NNW	NNW	W	W	SW	SSW	SW	WSW	NW	W	WNW	WSW	N	S	SSE	WNW	SW	WSW	SW
16 Spd	0.8	2.1	1.3	1.0	0.2	0.5	0.8	2.7	4.2	2.7	2.4	2.7	4.8	3.0	2.0	3.1	4.7	3.8	3.6	7.1	5.3	5.0	5.6	3.2	2.24	7.12
Dir	W	SW	SW	WSW	NW	W	NW	SW	SW	WSW	WNW	NW	NW	WNW	NW	NW	NNW	NW	WNW	SW	SW	SW	SW	WSW	W	SW
17 Spd	2.8	2.1	2.1	0.6	1.5	1.9	2.5	2.4	1.6	2.8	2.9	3.5	2.9	2.2	2.5	2.4	0.8	2.1	2.2	0.9	0.6	0.5	0.8	1.7	1.43	3.51
Dir	WSW	WNW	W	SW	WSW	WSW	W	WSW	NNW	NNW	NW	NNW	NNW	NW	NW	NW	NW	SSW	SW	NW	WSW	ENE	SW	WSW	WNW	NNW
18 Spd	1.9	2.7	1.0	1.8	1.2	1.8	6.0	6.6	3.6	10.0	11.4	11.9	13.2	12.8	12.0	12.9	12.9	4.6	3.8	2.4	0.8	0.4	0.2	0.7	5.36	13.18
Dir	W	WSW	W	WNW	WNW	W	SW	SW	WSW	SSW	SW	SW	SW	SW	SW	SW	SW	WSW	WNW	W	W	NW	NNW	SSW	SW	SW
19 Spd	4.9	3.0	2.2	2.0	2.1	1.2	0.9	0.8	2.5	3.7	3.6	1.3	2.0	2.8	2.8	1.2	2.6	2.0	5.5	4.7	2.0	4.0	1.3	0.5	1.40	5.47
Dir	ENE	ENE	NE	SE	SW	WSW	WSW	W	WSW	SSW	SE	ENE	SSE	E	ENE	NE	ENE	NE	ENE	ENE	ENE	ENE	E	ENE	E	ENE
20 Spd	0.6	0.6	0.6	0.8	1.2	0.9	0.9	1.4	3.5	5.8	4.4	3.0	3.0	2.9	3.9	3.5	1.5	3.3	2.0	3.1	1.6	0.4	0.9	2.1	1.27	5.84
Dir	ESE	E	E	N	WSW	WNW	WNW	NE	ENE	ESE	E	NE	NE	NNE	ENE	ESE	NE	SW	NE	E	NE	NNE	SW	S	ENE	ESE
21 Spd	1.8	2.4	1.6	3.9	0.5	0.9	1.2	3.6	2.2	2.5	3.3	8.0	2.8	5.7	3.1	1.7	5.4	7.9	7.1	0.7	2.4	0.6	1.1	1.4	1.19	8.05
Dir	SW	SW	SSW	SW	SSE	WSW	W	SSW	WSW	SSW	ESE	ESE	E	NE	ENE	SW	SW	SW	SW	ENE	ENE	ENE	ENE	ENE	S	ESE
22 Spd	0.3	0.3	0.6	0.2	1.7	1.5	0.7	0.7	0.6	1.6	2.0	2.7	8.3	2.6	2.1	2.6	2.2	1.7	0.8	1.4	1.2	0.1	1.0	1.8	0.27	8.33
Dir	NNE	W	N	SSE	SSW	W	SSE	NNW	SSW	NW	WSW	SSW	SW	E	NNE	ESE	NE	SSE	NNW	N	E	SSE	SW	NE	SSW	SW



WCAS - Hinton
Summary of Hourly Averages

Wind Speed (WS) - kph
July 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	0.2	1.1	0.6	0.2	0.9	0.4	0.8	1.4	1.0	1.6	1.5	2.8	6.2	5.0	5.0	4.3	3.0	4.1	2.4	1.2	1.7	0.7	0.6	1.2	1.04	6.22	
Dir	ESE	WSW	SSE	WNW	W	NW	N	SSE	W	NW	WSW	WSW	ENE	NE	NE	ENE	E	ENE	NNE	NE	WNW	SW	ENE	NE	NE	ENE	
24 Spd	1.3	1.3	1.0	0.3	1.0	2.1	1.6	1.6	2.1	2.0	2.3	1.9	3.6	1.4	1.0	5.5	7.7	5.8	4.5	3.6	2.9	1.5	1.3	2.0	0.73	7.69	
Dir	ENE	ENE	ENE	NE	NE	ENE	ENE	NE	ENE	SSE	ENE	SW	SSW	WNW	WSW	SW	SW	WSW	WSW	WSW	W	NNE	ENE	NE	SW	SW	
25 Spd	1.7	2.2	3.1	5.3	1.8	1.1	0.5	0.5	1.8	1.4	1.2	1.6	2.2	7.6	6.6	2.8	0.2	2.1	1.7	0.6	0.3	2.7	2.6	2.8	1.57	7.59	
Dir	ENE	S	SW	SSW	SE	SSW	N	N	SSE	WSW	WSW	S	S	SSW	S	N	WNW	SW	WNW	WNW	NW	SSW	SW	SW	SSW	SSW	
26 Spd	6.5	3.5	0.3	1.2	0.5	0.8	0.7	1.4	1.8	2.5	3.1	2.6	1.3	2.0	1.8	0.3	0.8	2.1	11.4	3.3	2.3	7.3	9.2	3.1	1.80	11.37	
Dir	SSW	SW	WNW	SW	SSE	WSW	WSW	WNW	WNW	SW	SW	NE	SSW	WNW	E	S	SSE	ESE	SE	ESE	SSW	SW	SW	SW	SSW	SE	
27 Spd	0.6	1.7	1.5	0.7	0.4	1.0	1.2	1.9	7.7	8.4	7.9	8.0	7.8	3.8	1.7	3.4	2.4	0.8	0.8	0.6	1.8	2.1	2.0	1.6	1.60	8.37	
Dir	ESE	SW	SW	WNW	WNW	SW	WSW	W	SSW	SSW	SSW	SSW	SSW	SW	NNE	ENE	ENE	ENE	NW	N	E	NE	NNE	S	SSW	SSW	
28 Spd	1.2	2.8	1.5	0.5	0.3	0.2	0.8	0.6	0.8	2.1	6.6	4.1	6.0	3.3	2.4	2.5	3.5	4.3	2.3	0.9	2.0	0.5	0.8	0.3	1.38	6.56	
Dir	SW	SSW	SSW	SSE	NE	SSW	NW	NW	W	WSW	SW	WSW	SW	WSW	NW	NNW	WNW	NW	NNW	N	WNW	NE	ESE	SSW	W	SW	
29 Spd	0.9	0.9	0.7	0.2	0.5	0.5	0.5	0.3	1.8	1.4	3.2	3.2	8.5	5.0	4.5	5.9	6.0	5.0	5.4	2.9	1.8	0.9	2.2	2.0	1.45	8.55	
Dir	S	SSW	E	NNE	E	ENE	E	ENE	ENE	ENE	WNW	WSW	SW	WSW	WNW	WNW	NW	WNW	NW	NW	NNW	S	E	ESE	WNW	SW	
30 Spd	2.0	3.3	3.3	1.7	3.8	0.4	0.4	0.8	1.0	2.1	4.6	3.6	2.6	5.6	3.7	3.6	4.3	2.7	5.5	2.3	1.1	1.1	1.1	0.3	0.84	5.64	
Dir	NE	S	SW	SW	SSW	NNE	ESE	ESE	NW	SW	SSW	SW	WSW	ENE	ENE	ENE	E	ENE	ENE	ENE	NE	E	ENE	E	ESE	ENE	
31 Spd	0.1	0.1	0.2	0.8	0.3	0.2	0.3	1.5	2.0	3.5	3.8	0.6	3.9	5.6	5.2	3.3	2.9	5.0	2.5	3.6	0.7	0.5	0.7	1.2	0.98	5.64	
Dir	ESE	NNE	NNW	W	WSW	NNW	NNW	NW	W	SW	SW	SSW	NE	ENE	E	ENE	NNE	NE	NE	ENE	NNE	ENE	ENE	NE	NE	ENE	
Spd	0.75	0.89	0.61	0.76	0.50	0.60	0.63	0.74	1.05	1.65	1.72	1.51	2.45	1.27	0.80	0.27	0.09	0.42	0.26	0.64	0.36	0.41	0.40	0.78	Diurnal Average		
Dir	S	SW	SW	SW	SW	W	W	W	WSW	SW	SW	SSW	SSW	SSW	S	S	WNW	N	NNE	NE	E	SE	S	SSW	Diurnal Maximum		
Spd	6.55	4.19	3.57	5.31	3.83	2.46	5.99	6.60	7.75	10.00	13.51	15.14	13.89	12.91	12.02	12.95	12.87	7.90	13.99	7.12	5.59	7.33	9.15	4.87	Diurnal Maximum		
Dir	198.54	222.96	220.86	204.46	200.65	201.10	226.91	223.04	201.45	210.90	205.62	210.65	214.13	216.72	226.37	223.29	224.74	226.05	203.65	224.64	153.08	218.24	215.71	192.38	Diurnal Maximum		
Maximum Speed Value: 15.1 kph on Jul 8 12:00																		Minimum Speed Value: 0.1 kph on Jul 31 02:00						Hours in Service:		744	
Maximum Daily Speed Average: 5.36 kph on Jul 18																		Minimum Daily Speed Average: 0.05 kph on Jul 6						Hours of Data:		744	
Maximum Diurnal Speed Average: 2.45 kph at hour 13																		Minimum Diurnal Speed Average: 0.09 kph at hour 17						Hours of Missing Data:		0	
Monthly Average Velocity: 0.606 kph 213.46 deg																		Speed Percentiles: P ₁ = 0.2 P ₁₀ = 0.5 Q ₁ = 0.9 Median = 1.9 Q ₃ = 3.3 P ₉₀ = 5.4 P ₉₉ = 12.9						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	55	2	0	0	0	0	57																				
NorthEast	98	7	0	0	0	0	105																				
East	92	12	1	0	0	0	105																				
SouthEast	30	4	1	0	0	0	35																				
South	48	9	0	0	0	0	57																				
SouthWest	136	35	12	0	0	0	183																				
West	114	1	0	0	0	0	115																				
NorthWest	84	3	0	0	0	0	87																				
Total	657	73	14	0	0	0	744																				



WCAS - Hinton
Summary of Hourly Averages

Relative Humidity (RH) - %
July 2015

Maximum Value: 91.46 % on Jul 23 08:00 Maximum Daily Average: 76.18 % on Jul 22																								Hours in Service:	744	
Minimum Value: 6.8 % on Jul 9 18:00 Minimum Daily Average: 33.78 % on Jul 9																								Hours of Data:	744	
Maximum Diurnal Average: 83.32 % at hour 6 Minimum Diurnal Average: 32.41 % at hour 14																								Hours of Missing Data:	0	
Monthly Average: 55.155 % Percentiles: $P_1 = 10.2$ $P_{10} = 23.4$ $Q_1 = 34.7$ Median = 55.4 $Q_3 = 75.9$ $P_{90} = 86.6$ $P_{99} = 91.0$																								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-Jul	87.9	87.4	86.6	89.1	88.8	88.8	89.0	84.5	78.5	77.6	75.5	60.6	50.6	55.7	65.2	53.1	48.3	37.1	37.2	51.3	57.3	72.2	75.4	76.2	69.74	89.15
2-Jul	79.3	85.1	87.8	89.3	89.9	90.1	86.0	68.3	57.9	48.0	40.9	31.0	23.9	22.4	21.2	19.6	18.8	18.3	15.6	15.2	20.2	33.0	48.4	56.3	48.60	90.14
3-Jul	66.6	72.3	78.4	79.3	83.7	82.4	72.0	54.2	44.5	51.5	49.4	42.8	39.4	32.8	29.5	25.0	13.5	9.3	8.9	10.5	10.6	16.2	23.5	30.5	42.79	83.67
4-Jul	41.1	51.3	60.4	64.9	68.6	67.0	63.0	49.1	36.1	33.1	32.7	40.0	45.8	46.0	45.5	40.9	38.3	37.8	42.4	45.1	51.5	58.5	64.4	67.9	49.64	68.59
5-Jul	73.0	71.2	72.8	78.4	75.8	78.1	76.1	66.4	53.7	51.5	46.5	40.0	34.9	38.4	38.2	35.9	33.7	29.2	35.6	39.9	44.9	48.0	51.0	53.6	52.78	78.41
6-Jul	56.7	66.1	75.7	80.7	84.7	85.4	78.8	61.4	53.0	44.7	35.4	29.2	28.7	29.2	28.1	32.3	21.5	20.3	23.4	24.4	29.1	39.5	48.5	55.5	47.18	85.42
7-Jul	64.7	71.2	74.9	79.0	82.1	81.2	80.1	73.4	65.2	55.6	51.1	45.2	41.6	36.2	29.8	27.4	25.5	24.3	33.0	47.8	56.3	66.8	73.9	78.5	56.86	82.07
8-Jul	81.2	83.0	85.5	84.8	82.7	77.4	68.6	53.7	43.3	31.6	25.1	18.8	15.5	13.4	11.7	10.8	10.2	13.7	15.0	18.8	29.4	30.5	32.6	44.3	40.89	85.47
9-Jul	55.7	64.3	69.5	73.9	75.9	74.5	64.8	48.3	36.6	28.1	21.3	16.1	14.4	12.0	10.1	8.2	7.1	6.8	8.1	11.4	13.2	21.3	28.8	40.4	33.78	75.87
10-Jul	50.3	60.1	66.3	70.6	73.9	75.0	66.6	56.4	42.8	33.6	28.7	22.2	19.7	18.4	18.3	23.4	25.3	65.6	77.2	78.8	78.2	84.1	89.0	84.5	54.54	89.01
11-Jul	88.2	89.3	90.2	90.2	90.7	91.2	91.4	89.9	73.8	63.7	54.7	48.2	30.8	21.9	20.8	25.4	36.1	39.3	41.3	45.2	46.0	54.4	63.8	70.2	60.70	91.37
12-Jul	71.7	75.2	85.7	88.0	86.9	86.7	85.0	84.9	82.9	86.0	82.6	69.1	43.3	30.0	27.1	29.8	41.4	43.0	47.6	48.6	50.5	55.5	59.4	63.6	63.53	87.98
13-Jul	69.7	73.3	77.1	80.5	82.2	85.5	84.9	72.7	55.3	45.8	32.3	24.8	25.3	24.1	43.6	74.6	55.9	49.0	51.5	49.9	65.2	75.6	87.3	89.3	61.47	89.27
14-Jul	89.8	90.1	90.4	90.3	90.7	91.1	90.8	82.2	71.3	52.2	38.5	33.6	32.6	25.9	22.2	20.5	22.3	28.4	29.4	31.4	33.6	33.3	40.2	45.3	53.16	91.07
15-Jul	51.6	62.4	73.2	79.7	82.0	84.1	78.3	74.8	61.1	48.5	59.5	49.6	37.3	27.3	34.6	37.1	34.2	54.9	61.2	65.6	67.8	84.6	88.3	89.1	61.95	89.13
16-Jul	89.7	89.0	89.1	89.7	90.2	90.7	90.8	86.9	71.4	56.6	45.3	46.9	39.3	43.6	63.9	48.5	50.5	51.7	56.9	78.7	83.7	82.9	73.5	77.1	70.28	90.84
17-Jul	75.9	75.3	75.0	81.2	81.8	77.7	75.6	70.6	67.7	66.2	63.0	60.6	54.6	52.3	50.6	46.0	44.8	43.3	40.1	41.1	49.9	60.7	66.7	66.8	61.97	81.76
18-Jul	66.9	69.2	78.2	83.0	85.3	84.3	69.9	63.6	53.8	40.9	35.5	33.5	31.3	29.1	28.9	29.1	27.9	30.4	30.2	32.5	38.6	44.8	48.1	50.1	49.38	85.30
19-Jul	57.0	62.6	57.6	67.1	76.7	73.9	72.5	67.7	48.9	38.4	33.7	29.8	27.0	26.5	26.1	26.1	28.6	32.7	33.1	34.7	43.3	48.1	53.6	58.2	46.82	76.68
20-Jul	65.0	72.0	76.2	75.8	75.9	79.7	75.5	59.6	51.4	48.0	44.6	44.8	36.3	29.4	32.5	47.9	59.2	74.2	81.4	74.1	82.2	87.1	89.4	80.7	64.28	89.35
21-Jul	80.6	79.0	82.8	84.4	84.9	88.7	89.8	87.4	78.4	64.6	51.6	49.8	52.5	58.3	62.3	59.7	41.1	27.7	27.2	40.7	50.9	68.7	76.9	80.7	65.36	89.79
22-Jul	84.5	87.3	88.1	88.7	89.3	89.5	88.9	85.6	70.7	58.2	55.6	45.0	35.0	46.8	77.5	73.0	79.1	81.0	72.2	79.2	85.3	88.2	89.8	90.0	76.18	90.01
23-Jul	90.4	90.5	90.6	90.8	91.0	91.3	91.4	91.5	88.9	70.3	49.0	35.4	59.3	58.1	49.2	38.9	44.7	44.2	50.3	58.9	60.3	66.6	69.4	77.7	68.70	91.46
24-Jul	79.6	83.2	86.5	87.6	88.6	88.5	87.0	78.2	59.8	44.1	37.6	31.7	28.7	34.8	32.7	32.5	29.9	26.9	30.6	35.1	37.4	51.7	66.0	69.8	55.35	88.61
25-Jul	72.9	69.2	65.6	72.6	84.7	83.6	85.2	71.3	65.7	57.4	54.9	48.0	41.0	43.0	36.6	53.3	59.7	66.1	62.4	67.0	75.3	73.7	75.6	77.6	65.10	85.20
26-Jul	77.1	76.0	83.8	86.3	87.2	87.6	86.9	79.4	61.2	50.7	35.7	39.5	31.0	29.2	28.2	30.6	22.4	27.9	35.1	45.4	49.9	58.1	62.4	67.1	55.77	87.60
27-Jul	73.2	76.0	80.8	85.9	87.1	87.8	86.4	71.1	57.1	48.0	35.0	27.5	24.6	22.6	24.5	23.9	20.1	20.7	21.8	29.3	35.7	37.8	42.4	48.9	48.67	87.82
28-Jul	59.4	65.8	71.6	77.7	82.1	83.5	82.0	73.9	62.0	44.4	31.3	30.1	28.0	26.7	30.7	27.8	21.5	21.2	29.2	30.7	32.8	35.7	46.5	56.4	47.96	83.49
29-Jul	59.1	64.5	70.4	72.1	73.5	77.0	77.0	72.9	56.1	40.6	58.7	53.5	29.7	25.7	20.9	17.8	16.8	18.5	20.4	24.9	30.9	38.6	49.2	49.8	46.61	77.03
30-Jul	50.9	49.4	53.6	62.3	67.6	75.0	67.8	52.9	45.7	37.0	28.7	21.2	18.0	23.2	19.7	19.4	18.0	20.9	21.9	28.6	37.1	49.1	57.7	65.8	41.32	74.99
31-Jul	72.5	77.4	80.5	83.7	84.4	86.0	82.2	66.1	47.2	39.3	33.0	25.6	27.1	21.7	19.6	15.7	17.0	19.3	23.2	27.8	39.9	51.1	59.0	63.9	48.47	86.04
																								Diurnal Average		
																								Diurnal Maximum		



WCAS - Hinton
Summary of Hourly Standard Deviations

Wind Speed (WS) - kph
July 2015

Maximum Value: 8.00 kph on Jul 18 17:00		Maximum Daily Average: 3.76 kph on Jul 18		Hours in Service: 744																							
Minimum Value: 0.0 kph on Jul 6 05:00		Minimum Daily Average: 1.70 kph on Jul 6		Hours of Data: 744																							
Maximum Diurnal Average: 3.93 kph at hour 13		Minimum Diurnal Average: 1.28 kph at hour 5		Hours of Missing Data: 0																							
Monthly Average: 2.335 kph		Percentiles: P ₁ = 0.5 P ₁₀ = 1.0 Q ₁ = 1.4 Median = 2.1 Q ₃ = 2.9 P ₉₀ = 4.0 P ₉₉ = 6.8		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-Jul	2.3	2.6	2.5	2.3	1.6	1.9	1.8	2.1	3.8	3.2	2.7	3.1	4.0	3.5	2.8	2.1	2.7	1.8	3.0	1.2	1.7	1.4	1.4	1.5	2.38	4.03	
2-Jul	1.2	0.4	0.6	1.4	1.2	1.3	1.3	1.6	1.8	2.0	2.3	2.6	4.7	4.2	3.5	3.7	4.0	1.8	2.5	3.7	3.0	1.6	1.4	1.0	2.20	4.66	
3-Jul	1.2	1.1	0.9	1.6	1.2	1.3	2.1	1.5	1.2	0.5	1.1	1.4	2.8	2.8	2.8	3.2	3.5	2.9	3.0	2.9	3.0	3.1	1.9	1.3	2.01	3.49	
4-Jul	1.8	1.5	1.4	1.3	1.8	1.8	1.5	1.1	2.1	2.4	2.6	3.9	3.5	1.4	2.6	3.2	2.6	3.9	3.4	2.4	2.3	2.2	1.8	1.6	2.26	3.94	
5-Jul	1.5	1.5	0.9	1.1	1.3	1.4	1.2	1.9	2.2	2.8	3.2	3.2	3.5	2.2	2.3	2.6	2.8	2.4	2.3	2.2	2.1	2.3	2.5	2.6	2.16	3.51	
6-Jul	2.4	0.9	0.5	0.7	0.0	0.1	0.9	1.3	1.4	2.1	1.9	2.5	3.2	2.8	2.7	1.5	2.6	2.5	2.5	2.7	1.5	1.1	1.3	1.6	1.70	3.18	
7-Jul	1.4	0.9	1.3	1.2	1.0	1.1	0.6	1.1	1.8	2.7	2.0	2.2	2.7	2.7	2.8	3.2	3.1	2.9	7.8	2.4	1.7	1.2	1.2	1.2	2.09	7.84	
8-Jul	1.0	0.4	0.5	0.5	1.1	1.0	2.3	2.9	3.4	5.1	5.4	6.8	7.1	7.7	6.4	4.3	3.0	2.5	1.9	1.5	1.3	2.0	2.2	1.7	3.00	7.74	
9-Jul	1.4	0.9	0.9	1.1	1.3	1.3	1.2	1.6	2.2	2.6	3.2	5.7	5.2	4.2	4.0	3.4	2.9	2.5	2.8	3.1	4.1	2.0	0.9	1.6	2.51	5.70	
10-Jul	1.2	0.8	0.9	1.0	1.3	1.0	1.4	1.4	1.7	1.4	2.0	4.4	4.6	4.7	5.1	4.3	5.4	3.4	2.3	1.8	1.2	1.9	2.4	3.6	2.47	5.37	
11-Jul	1.5	0.5	1.9	1.3	1.1	1.4	1.1	1.3	1.4	1.3	1.8	1.7	2.0	2.2	2.8	4.2	4.2	4.4	4.4	3.1	4.0	2.2	2.4	1.2	2.22	4.35	
12-Jul	2.3	2.2	1.2	0.8	1.6	1.5	0.7	1.2	2.0	0.9	1.4	1.4	5.3	4.5	6.0	5.1	3.5	3.4	2.6	3.2	2.6	1.6	1.6	1.5	2.41	5.98	
13-Jul	1.6	1.2	1.7	1.4	1.4	1.0	1.1	1.5	2.7	3.6	2.7	4.4	2.4	2.7	3.1	2.0	2.6	3.2	3.4	4.1	4.5	3.1	1.7	1.8	2.45	4.49	
14-Jul	1.8	1.7	2.1	1.6	0.9	2.1	1.0	1.6	1.3	3.0	2.3	2.6	3.2	2.6	3.0	2.8	2.5	2.5	2.4	2.4	2.6	3.0	1.9	2.9	2.24	3.17	
15-Jul	3.1	1.0	0.7	1.3	1.2	1.0	1.1	0.8	1.2	1.8	2.6	3.1	3.7	6.1	5.0	1.7	2.5	3.6	1.5	2.2	3.6	3.2	1.0	1.8	2.29	6.09	
16-Jul	1.3	1.9	1.9	1.3	1.0	0.9	0.9	2.7	2.9	2.6	2.0	2.1	2.9	2.7	2.3	2.5	2.7	2.5	2.5	4.1	3.9	3.4	3.1	2.8	2.38	4.08	
17-Jul	2.5	2.4	2.4	1.8	2.0	2.3	2.4	2.3	2.6	2.1	2.1	3.1	2.4	1.9	2.5	1.9	1.4	2.9	2.5	1.4	1.0	1.1	1.6	1.6	2.10	3.09	
18-Jul	1.2	1.7	1.1	1.4	1.1	1.5	3.9	3.7	3.2	5.4	6.3	7.0	7.8	7.1	7.8	7.5	8.0	5.3	2.9	2.3	1.6	0.8	0.6	1.3	3.76	8.00	
19-Jul	3.5	2.7	2.2	3.1	2.3	1.4	1.1	1.1	2.4	3.5	2.7	2.3	3.6	3.3	2.9	2.8	2.3	2.0	3.3	2.7	1.9	1.9	1.8	1.0	2.41	3.56	
20-Jul	0.8	1.0	2.0	1.8	2.0	1.4	1.3	1.5	2.6	3.0	3.2	2.7	2.4	2.6	3.2	4.1	3.0	3.1	2.3	2.5	1.8	1.2	1.7	2.1	2.22	4.12	
21-Jul	2.1	2.3	2.0	2.6	1.7	1.2	1.3	2.6	2.3	2.0	2.5	5.2	4.4	3.2	3.1	3.1	5.1	5.3	4.7	2.8	2.8	0.9	1.2	1.2	2.74	5.34	
22-Jul	1.1	1.2	0.9	1.2	1.5	1.2	2.0	1.2	1.5	1.5	2.0	2.6	5.6	4.6	2.2	3.4	2.4	2.5	1.2	1.3	1.6	1.3	1.4	1.9	1.96	5.58	
23-Jul	0.9	1.3	1.3	1.1	1.1	1.0	1.2	1.9	1.3	1.6	2.7	3.8	3.7	3.0	3.1	3.0	2.3	2.2	2.0	1.5	1.9	1.1	1.1	1.1	1.89	3.85	
24-Jul	1.4	1.2	1.2	0.7	1.2	1.9	1.6	1.5	1.8	1.5	1.9	3.0	3.4	1.5	2.9	4.6	5.5	5.6	4.6	3.7	3.4	2.0	1.9	2.0	2.50	5.56	
25-Jul	1.9	2.3	2.5	4.9	1.7	2.2	0.8	0.8	2.2	2.0	1.9	2.3	2.5	4.5	4.1	3.6	2.4	2.6	1.7	0.9	0.4	1.8	2.1	2.5	2.27	4.88	
26-Jul	2.3	2.2	0.7	1.7	1.4	1.3	1.1	1.4	1.7	2.6	3.2	2.7	2.6	2.7	2.7	1.8	2.3	3.8	4.2	3.7	3.1	4.9	4.8	3.8	2.61	4.86	
27-Jul	1.5	1.9	1.6	1.0	0.7	1.1	1.6	1.9	4.0	3.2	4.7	4.8	5.2	4.2	2.2	3.0	2.7	2.2	1.6	1.0	1.7	2.1	2.3	2.9	2.46	5.16	
28-Jul	1.7	2.2	1.6	1.1	0.7	1.1	1.0	0.8	1.4	2.6	5.1	5.0	5.2	3.0	2.3	2.3	3.2	2.8	2.1	2.1	1.9	1.3	1.5	1.1	2.20	5.23	
29-Jul	1.3	1.9	1.0	0.6	0.8	1.0	1.1	0.9	1.9	2.3	3.0	3.7	5.9	5.1	4.0	4.5	3.0	3.6	2.6	2.3	1.8	1.7	1.8	2.0	2.40	5.94	
30-Jul	1.8	2.5	1.9	1.3	1.9	0.8	1.0	1.4	1.3	2.5	4.2	4.4	4.0	3.4	3.0	2.8	2.5	2.8	2.8	1.9	1.3	1.6	1.5	0.7	2.23	4.41	
31-Jul	0.5	0.2	0.6	1.1	0.7	0.3	1.0	1.3	1.9	3.0	3.1	2.6	2.7	3.6	3.1	2.6	2.9	3.6	2.5	2.4	1.0	0.9	1.2	1.6	1.85	3.63	
		1.67	1.51	1.39	1.44	1.28	1.29	1.37	1.60	2.11	2.48	2.83	3.43	3.93	3.57	3.44	3.25	3.22	3.11	2.87	2.43	2.27	1.94	1.78	1.83	Diurnal Average	
		3.51	2.72	2.51	4.88	2.27	2.32	3.94	3.67	3.99	5.38	6.25	6.96	7.82	7.74	7.83	7.46	8.00	5.56	7.84	4.08	4.49	4.86	4.80	3.83	Diurnal Maximum	
,Alberta Ambient Air Quality Objectives (AAAQO): 1-hr --- ul/m ³ 24-hr 100 ul/m ³																											



WCAS - Hinton
Summary of Hourly Standard Deviations

Wind Direction (WD) - deg
July 2015

Maximum Value: 114.32 deg on Jul 27 18:00 Maximum Daily Average: 67.32 deg on Jul 15																								Hours in Service:	744	
Minimum Value: 17.7 deg on Jul 26 19:00 Minimum Daily Average: 42.43 deg on Jul 18																								Hours of Data:	744	
Maximum Diurnal Average: 67.81 deg at hour 24 Minimum Diurnal Average: 49.43 deg at hour 19																								Hours of Missing Data:	0	
Monthly Average: 59.654 deg Percentiles: P₁ = 22.4 P₁₀ = 34.7 Q₁ = 43.7 Median = 56.1 Q₃ = 75.1 P₉₀ = 89.6 P₉₉ = 105.5																								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-Jul	31.2	33.2	38.3	38.5	40.6	35.5	40.5	49.9	39.3	46.2	48.3	58.3	47.0	74.8	21.9	48.9	50.9	56.5	49.7	72.4	88.9	69.7	81.4	45.8	50.32	88.90
2-Jul	69.5	69.3	51.2	80.4	37.8	23.8	27.3	39.7	39.3	62.2	68.8	62.1	61.7	63.1	83.9	82.2	77.9	79.0	72.4	33.5	45.3	94.6	53.6	70.8	60.39	94.62
3-Jul	101.3	85.8	61.5	85.7	71.0	40.3	91.2	53.8	59.3	43.7	84.7	62.3	66.9	49.3	68.3	41.9	47.0	46.1	46.3	48.3	58.5	51.8	61.9	93.9	63.37	101.29
4-Jul	46.5	85.5	105.8	79.2	98.9	55.9	39.9	41.6	104.5	55.3	66.2	44.4	40.4	67.7	92.0	58.5	69.4	36.7	63.1	70.9	52.8	98.8	38.6	40.3	64.70	105.77
5-Jul	91.4	89.7	98.5	50.3	36.6	46.8	63.1	80.4	79.6	35.0	52.0	41.6	61.8	72.9	51.7	44.0	39.8	26.8	33.4	32.8	47.4	52.6	79.5	108.3	59.01	108.25
6-Jul	106.2	76.8	78.3	42.3	28.0	21.3	19.9	68.4	66.5	78.1	52.7	67.5	80.7	86.5	53.2	84.4	42.1	42.2	39.5	42.8	48.6	58.4	81.9	35.0	58.40	106.18
7-Jul	83.6	84.2	93.8	99.8	94.9	91.1	81.5	66.0	71.4	65.4	76.0	81.5	66.1	95.1	83.5	48.2	49.3	47.0	23.5	48.1	44.3	42.4	28.1	48.1	67.20	99.77
8-Jul	80.5	74.2	82.2	39.1	22.4	20.1	43.4	51.8	46.6	35.6	22.4	27.3	31.0	36.5	46.7	57.8	39.9	35.3	51.8	59.6	30.5	52.8	101.0	111.3	50.00	111.34
9-Jul	101.9	88.8	77.8	54.9	78.9	32.8	49.2	45.0	47.7	55.7	45.8	66.8	54.5	80.2	66.4	72.8	58.2	48.4	67.1	40.5	51.7	43.7	93.0	73.8	62.32	101.87
10-Jul	71.5	76.1	77.6	62.6	73.6	67.3	101.1	62.2	72.6	79.4	81.9	57.1	32.3	30.3	28.1	21.9	57.1	85.0	65.2	96.3	82.9	73.6	64.8	76.8	66.56	101.13
11-Jul	85.5	105.6	56.8	85.0	99.9	76.1	44.3	47.5	50.4	51.1	63.6	96.8	59.5	92.2	95.4	49.1	39.8	34.5	53.6	56.0	53.8	82.3	68.5	56.7	66.84	105.64
12-Jul	28.5	39.0	41.4	79.7	69.6	32.0	72.6	45.4	41.7	42.8	47.8	39.7	57.6	51.3	55.9	71.8	54.0	45.9	57.7	83.5	91.0	89.8	43.0	34.4	54.84	90.99
13-Jul	23.4	68.4	34.5	39.3	86.2	89.9	27.0	40.9	52.9	55.1	59.9	61.7	89.5	102.8	104.7	48.0	44.1	51.3	55.0	55.6	87.1	46.1	56.4	73.5	60.55	104.66
14-Jul	36.1	28.4	81.6	70.7	41.9	41.8	73.2	49.7	48.5	57.7	91.8	72.5	66.8	59.2	82.2	91.7	85.6	26.9	29.4	50.2	44.6	57.1	87.7	66.1	60.07	91.82
15-Jul	49.5	64.8	69.9	57.1	63.9	36.5	99.0	36.7	61.8	81.5	50.9	63.3	56.0	39.2	85.1	86.1	83.9	89.1	67.9	32.9	96.7	90.4	70.3	83.2	67.32	98.99
16-Jul	66.7	61.7	73.1	50.1	94.3	60.6	30.1	34.5	40.4	55.9	48.4	33.7	37.8	50.6	63.4	51.4	30.4	40.6	42.7	31.7	42.7	41.8	30.3	50.8	48.49	94.27
17-Jul	51.7	64.9	66.3	111.4	82.4	72.7	66.5	55.4	87.8	43.3	41.5	39.8	43.5	46.0	56.4	46.8	61.6	84.4	71.1	53.0	53.3	86.4	78.3	54.3	63.29	111.35
18-Jul	39.8	29.4	31.3	31.1	25.9	27.4	33.9	31.5	53.1	29.3	33.4	36.1	33.6	34.2	38.9	33.8	37.3	57.3	43.2	51.3	53.2	67.7	69.1	96.5	42.43	96.47
19-Jul	40.6	56.4	54.7	85.8	50.6	36.5	48.5	51.2	52.4	60.1	65.0	91.1	94.8	76.8	72.9	92.5	44.2	48.5	35.3	32.4	50.1	24.5	54.0	60.8	57.50	94.80
20-Jul	47.1	54.3	92.8	81.7	77.4	86.2	66.1	43.1	43.8	37.1	56.0	48.5	57.1	55.8	50.1	85.7	100.0	62.9	66.7	50.1	48.9	86.9	62.5	65.3	63.58	100.01
21-Jul	51.7	53.4	68.5	33.4	95.6	58.4	40.7	35.3	49.0	51.2	51.1	39.6	85.9	35.0	72.1	91.3	54.0	41.7	31.8	92.9	55.0	72.0	54.8	46.3	56.69	95.57
22-Jul	83.9	88.5	43.7	99.0	52.4	46.6	91.2	60.3	92.5	40.9	55.8	65.8	41.6	79.9	55.0	66.5	57.6	102.0	70.9	33.4	50.3	92.6	67.3	72.9	67.11	102.04
23-Jul	90.3	50.9	102.0	78.8	62.3	76.0	62.9	78.8	60.3	59.6	77.2	71.8	41.0	35.7	37.4	39.3	38.5	31.3	40.0	48.6	60.7	71.6	97.4	27.8	60.01	101.97
24-Jul	51.2	64.9	52.7	54.1	37.3	55.3	49.9	45.8	53.2	41.5	49.2	94.5	57.0	41.4	77.1	50.0	45.0	53.8	58.3	53.1	60.2	74.1	83.0	63.4	56.92	94.55
25-Jul	65.3	90.8	59.7	58.1	76.8	91.3	49.9	55.7	67.7	70.0	68.2	71.7	75.5	37.0	37.1	81.1	103.3	63.1	51.6	48.8	40.8	53.3	51.1	66.0	63.91	103.26
26-Jul	19.3	38.8	76.1	68.4	93.3	56.7	56.1	47.5	63.2	65.0	67.6	56.3	86.5	76.7	92.2	96.1	94.8	64.9	17.7	59.7	66.1	37.2	26.5	72.2	62.46	96.09
27-Jul	100.4	62.0	53.0	37.4	53.1	52.7	65.7	53.4	33.2	27.5	40.4	46.7	51.0	75.8	68.7	47.7	74.7	114.3	73.4	46.8	42.8	53.3	61.5	99.9	59.81	114.32
28-Jul	80.3	38.2	60.0	91.6	63.8	100.5	57.2	50.9	79.0	63.6	50.1	57.0	52.0	52.1	58.6	49.9	54.9	37.2	43.6	95.6	63.6	93.2	91.1	89.7	65.57	100.53
29-Jul	81.2	78.7	45.0	83.3	50.5	55.0	75.9	85.4	61.3	86.3	56.5	56.1	44.1	58.3	52.1	44.2	33.1	43.1	27.6	39.5	41.8	82.8	48.5	77.7	58.67	86.26
30-Jul	51.6	53.8	30.4	34.1	25.3	75.2	80.6	61.9	76.8	69.9	68.3	79.3	77.6	28.8	44.9	44.7	34.6	53.4	26.4	35.0	42.4	54.5	60.8	89.9	54.18	89.86
31-Jul	80.1	69.3	75.1	38.7	67.8	40.0	83.5	49.1	49.3	48.2	52.5	104.1	41.9	42.2	45.7	72.3	61.7	39.7	56.4	35.7	41.3	34.7	83.7	50.8	56.83	104.12
																								Diurnal Average	64.77	
																								Diurnal Maximum	106.18	
																								Diurnal Average	65.34	
																								Diurnal Maximum	105.64	
																								Diurnal Average	65.61	
																								Diurnal Maximum	105.77	
																								Diurnal Average	111.35	
																								Diurnal Maximum	99.90	
																								Diurnal Average	100.53	
																								Diurnal Maximum	101.13	
																								Diurnal Average	85.44	
																								Diurnal Maximum	104.51	
																								Diurnal Average	86.26	
																								Diurnal Maximum	91.82	
																								Diurnal Average	104.12	
																								Diurnal Maximum	94.80	
																								Diurnal Average	102.75	
																								Diurnal Maximum	104.66	
																								Diurnal Average	96.09	
																								Diurnal Maximum	103.26	
																								Diurnal Average	114.32	
																								Diurnal Maximum	73.42	
																								Diurnal Average	96.26	
																								Diurnal Maximum	96.74	
																								Diurnal Average	98.76	
																								Diurnal Maximum	100.99	
																								Diurnal Average	111.34	
																								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
JULY 2015**