

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

AIR QUALITY MONITORING
April 2016
Monthly Report

Prepared by:

West Central Airshed Society
Drayton Valley, Alberta





May 16th, 2016

Hinton Pulp
A Division of West Fraser Mills Ltd.
Mr. Phil Whitney
760 Switzer Drive
Hinton, Alberta
T7V 1V7

Dear Mr. Whitney:

**Monthly Ambient Air Quality Monitoring Report for April 2016
For Hinton Pulp – A Division of West Fraser Mills Ltd.**

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

Network Station is AMS 906 Hinton
Identified as:

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

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

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

There were 6 reading occurrences in April 2016 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 214.2 µg/m³, occurring April 18th. There were no readings in April 2016 in excess of the twenty–four hour average guidelines as indicated in Air Monitoring Directive Section III.A.3. (a) for H₂S. The maximum 24-hour average reading was 25.03 µg/m³,

2. Operational times less than 90 percent:

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

3. Monitoring Notes:

AMS 906 (Hinton)

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

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

Sincerely,



Robert Scotten
Executive Director



Patrick Andersen
Environmental Specialist

Forest Products Industry Monthly Report Summary

Hinton
Plant Name/Location

Hinton Pulp - A Division of West Fraser Mills Ltd.
Company

License Number	Report Date	
	Year	Month
	2016	April

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	0.007	0	0.001	0
PM _{2.5}	906	100.0	214.2 µg/m ³	6	25.03 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
APRIL 2016**

Operations and Data Collection by:
West Central Airshed Society
Drayton Valley, Alberta

QA/QC, Data Validation and Reporting by:
West Central Airshed Society
Drayton Valley, Alberta

Summary Report

Continuous air quality/meteorological monitoring measurements

West Central Airshed Society

Hinton Pulp / Hinton Station 906													April 2016		24 Hour Average Max (ppm)
Parameter	Calibration Hours	Number of Data	Percent Uptime	Mean	Min	Max	Percentile					Exceedences			
							P10	Q1	Median	Q3	P90	1-hour	24-hour		
TRS (ppb)	37	683	100.0	0.6	0.0	7.0	0.1	0.2	0.3	0.7	1.5	0	0	0.001	
SO ₂ (ppb)	37	683	100.0	0.4	0.0	5.2	0.0	0.0	0.1	0.3	0.9	0	-	0.002	
O ₃ (ppb)	36	684	100.0	29.2	0.0	57.5	6.1	16.7	31.5	41.7	47.6	0	0	0.041	
NO (ppb)	35	685	100.0	1.7	0.0	32.8	0.1	0.2	0.6	1.4	4.3	-	-	-	
NO ₂ (ppb)	35	685	100.0	6.1	0.1	26.0	1.8	3.2	4.7	8.1	12.4	0	0	0.009	
NO _x (ppb)	35	685	100.0	7.8	0.1	48.7	2.1	3.8	5.6	9.7	15.9	-	-	-	
Particulate Matter 2.5 microns (µm ³)	7	713	100.0	11.8	0.4	214.2	3.9	5.3	7.2	11.7	22.7	6	0	25.03 ug/m3	
Wind Speed (kph)	0	720	100.0	4.1	0.0	16.6	0.6	1.4	3.3	6.0	8.7	-	-	-	
Temperature (°C)	0	720	100.0	8.2	-4.5	25.3	-0.1	3.5	7.6	12.6	16.4	-	-	-	
Relative Humidity (%)	0	720	100.0	48.5	7.9	91.6	16.8	26.8	49.0	67.8	81.3	-	-	-	
Std Dev Wind Direction (deg)	0	720	100.0	50.3	11.7	118.1	26.5	34.1	44.3	65.4	85.2	-	-	-	
Std Dev Wind Speed (kph)	0	720	100.0	2.8	0.1	10.0	1.1	1.5	2.4	3.7	5.0	-	-	-	



WCAS - Hinton
Summary of Hourly Averages

Total Reduced Sulphur (TRS) - ppb
April 2016

Maximum Value: 7.23 ppb on Apr 3 09:00		Maximum Daily Average: 1.35 ppb on Apr 14		Hours in Service: 720																																													
Minimum Value: 0 ppb on Apr 14 14:00		Minimum Daily Average: 0.20 ppb on Apr 20		Hours of Data: 683																																													
Maximum Diurnal Average: 1.77 ppb at hour 9		Minimum Diurnal Average: 0.29 ppb at hour 15		Hours of Missing Data: 37																																													
Monthly Average: 0.639 ppb		Percentiles: P ₁ = 0.1 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.3 Q ₃ = 0.7 P ₉₀ = 1.5 P ₉₉ = 5.6		Hours of Calibration: 37																																													
				Percent Operational Time: 100.0																																													
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Apr	1	2	3	Z	3	3	2	1	1	2	2	0	0	0	0	0	0	0	1	1	0	2	1	1	1.27	3.30																							
2-Apr	1	1	1	Z	1	1	0	1	1	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0.52	1.43																							
3-Apr	0	0	1	Z	1	1	1	1	7	5	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0.96	7.23																							
4-Apr	0	0	0	Z	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0.31	0.77																							
5-Apr	0	1	1	Z	1	1	1	1	1	2	1	0	1	0	1	1	1	1	1	1	1	1	1	0	0.91	1.80																							
6-Apr	1	1	3	Z	1	1	1	4	2	0	2	1	0	0	0	0	0	0	0	1	2	1	0	0	1.04	3.88																							
7-Apr	0	0	0	Z	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0.40	1.04																							
8-Apr	0	0	0	Z	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	1	0.33	0.90																							
9-Apr	0	1	4	Z	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.47	3.85																							
10-Apr	0	0	0	Z	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0.31	1.70																							
11-Apr	0	0	0	Z	1	1	2	2	3	3	2	0	1	1	0	1	0	0	2	2	1	2	0	0	1.01	2.96																							
12-Apr	0	0	1	Z	1	1	1	2	6	3	4	2	1	0	1	1	0	0	0	0	1	1	3	1	1.29	6.16																							
13-Apr	0	0	0	Z	0	6	7	C	C	C	C	C	C	C	0	0	0	0	2	1	0	0	0	1	--	6.81																							
14-Apr	4	7	4	Z	5	2	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.35	6.80																							
15-Apr	0	0	0	Z	0	0	1	4	3	2	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0.70	3.60																							
16-Apr	0	0	0	Z	1	1	0	1	3	3	2	2	1	0	0	1	1	2	1	1	1	0	0	0	0.92	3.25																							
17-Apr	1	3	0	Z	0	0	0	0	0	1	2	1	0	0	0	0	0	0	1	2	0	0	0	0	0.65	2.74																							
18-Apr	0	0	0	Z	1	1	0	0	1	1	1	0	0	1	0	0	1	2	1	1	2	1	1	0	0.74	2.09																							
19-Apr	0	0	0	Z	0	1	1	1	3	2	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0.70	2.73																							
20-Apr	0	0	0	Z	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.20	0.63																							
21-Apr	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.24	0.39																							
22-Apr	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.25	0.36																							
23-Apr	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.21	0.31																							
24-Apr	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.26	0.41																							
25-Apr	0	0	1	Z	1	0	1	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0.44	1.05																							
26-Apr	0	0	1	Z	1	0	2	4	6	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.78	5.74																							
27-Apr	0	0	0	Z	0	0	2	6	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.74	5.72																							
28-Apr	0	0	0	Z	2	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.38	2.45																							
29-Apr	0	0	0	Z	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0.30	0.87																							
30-Apr	0	0	0	Z	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0.44	1.44																							
																								0.46	0.66	0.80	--	0.84	0.79	0.98	1.32	1.77	1.20	0.83	0.42	0.35	0.31	0.29	0.35	0.34	0.37	0.48	0.48	0.45	0.48	0.43	0.32	Diurnal Average	
																								4.22	6.80	4.48	--	4.97	5.66	6.81	5.72	7.23	4.74	4.29	1.64	1.25	1.05	0.89	1.44	1.41	2.09	2.21	1.91	2.09	2.27	2.51	1.44	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
April 2016

Maximum Value: 5.25 ppb on Apr 5 16:00		Maximum Daily Average: 1.92 ppb on Apr 5		Hours in Service: 720																																													
Minimum Value: 0.0 ppb on Apr 2 05:00		Minimum Daily Average: 0.00 ppb on Apr 9		Hours of Data: 683																																													
Maximum Diurnal Average: 0.70 ppb at hour 11		Minimum Diurnal Average: 0.07 ppb at hour 5		Hours of Missing Data: 37																																													
Monthly Average: 0.354 ppb		Percentiles: P ₁ = 0.0 P ₁₀ = 0.0 Q ₁ = 0.0 Median = 0.1 Q ₃ = 0.3 P ₉₀ = 0.9 P ₉₉ = 3.7		Hours of Calibration: 37																																													
				Percent Operational Time: 100.0																																													
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Apr	0.2	0.3	0.2	Z	0.2	0.1	0.4	0.2	0.2	0.3	0.7	0.3	0.2	0.2	0.6	0.7	0.6	0.1	1.1	0.6	0.1	0.1	0.1	0.1	0.33	1.09																							
2-Apr	0.1	0.0	0.1	Z	0.0	0.0	0.0	0.1	0.3	1.4	2.6	0.6	2.0	0.1	1.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.38	2.62																							
3-Apr	0.1	0.1	0.1	Z	0.0	0.0	0.1	0.0	0.1	0.3	0.9	3.8	3.0	2.2	0.6	1.1	0.7	1.2	0.4	0.1	0.0	0.0	0.0	0.0	0.64	3.84																							
4-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.5	1.3	1.2	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.23	1.50																							
5-Apr	0.1	0.1	0.1	Z	0.1	0.2	0.3	0.2	0.1	1.4	2.9	1.2	2.9	2.1	4.4	5.2	4.4	3.5	4.3	4.4	1.6	3.2	1.1	0.2	1.92	5.25																							
6-Apr	0.1	0.1	0.0	Z	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.03	0.21																							
7-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.7	0.7	0.3	0.8	0.8	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.20	0.81																							
8-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0	1.6	1.8	1.0	1.6	2.5	3.9	1.4	0.0	0.0	0.0	0.0	0.0	0.61	3.87																							
9-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00																							
10-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.8	1.4	0.9	0.2	0.0	0.0	0.0	0.1	0.1	0.4	0.1	0.1	0.2	0.2	0.3	0.21	1.39																							
11-Apr	0.1	0.1	0.2	Z	0.1	0.1	0.2	0.2	0.2	0.4	1.2	0.6	1.8	1.4	0.6	0.2	0.1	0.1	1.5	0.7	0.2	0.2	0.2	0.1	0.46	1.82																							
12-Apr	0.2	0.2	0.2	Z	0.1	0.2	0.2	0.3	0.3	0.3	1.3	0.4	0.4	0.9	2.7	3.4	0.6	0.0	0.7	0.7	0.4	2.9	0.9	1.1	0.79	3.39																							
13-Apr	0.4	0.0	0.0	Z	0.0	0.0	0.0	C	C	C	C	C	C	C	0.8	0.2	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0	--	0.84																							
14-Apr	0.0	0.1	0.1	Z	0.1	0.2	0.1	0.2	0.2	0.3	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.13	0.29																							
15-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.3	0.5	0.7	0.8	0.4	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.4	0.1	0.0	0.0	0.26	0.79																							
16-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.1	0.3	0.2	0.3	0.1	0.1	0.2	0.2	0.0	0.3	1.2	0.7	0.3	0.0	0.0	0.0	0.19	1.23																							
17-Apr	0.3	0.2	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.2	0.8	0.4	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.17	0.81																							
18-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.9	1.5	0.0	0.6	0.7	1.3	1.6	1.9	1.6	0.4	1.5	0.1	0.57	1.94																							
19-Apr	0.2	0.0	0.1	Z	0.1	0.1	0.2	0.2	0.3	0.3	1.9	1.3	1.0	1.1	0.4	1.6	1.3	0.4	0.1	0.1	0.1	0.2	0.2	0.1	0.50	1.87																							
20-Apr	0.2	0.1	0.2	Z	0.1	0.2	0.1	0.2	0.1	0.4	0.3	0.3	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.2	0.2	0.3	0.9	1.3	0.35	1.26																							
21-Apr	0.7	0.4	0.3	Z	0.2	0.2	0.2	0.5	0.6	0.6	0.7	0.7	0.7	0.9	1.0	0.9	0.7	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.46	0.96																							
22-Apr	0.2	0.2	0.3	Z	0.2	0.2	0.2	0.4	0.3	0.2	0.3	0.4	0.4	0.5	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.5	0.5	0.3	0.30	0.54																							
23-Apr	0.2	0.2	0.3	Z	0.2	0.2	0.2	0.1	0.3	0.2	0.2	0.3	0.3	0.5	0.6	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.2	0.2	0.30	0.61																							
24-Apr	0.2	0.2	0.2	Z	0.3	0.3	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.15	0.33																							
25-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.16																							
26-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.1	0.3	0.6	1.0	0.9	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.19	1.02																							
27-Apr	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.7	4.8	1.1	0.1	0.2	0.2	0.1	0.2	0.1	0.3	0.3	0.1	0.1	0.0	0.1	0.1	0.38	4.80																							
28-Apr	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.2	0.3	0.8	0.6	0.4	0.5	0.4	0.3	0.3	0.6	0.7	0.5	0.5	0.5	0.4	0.3	0.2	0.37	0.81																							
29-Apr	0.2	0.2	0.1	Z	0.1	0.1	0.2	0.2	0.2	0.4	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.13	0.36																							
30-Apr	0.1	0.1	0.1	Z	0.0	0.1	0.0	0.0	0.0	0.4	0.7	0.8	0.1	0.1	0.1	0.1	0.1	1.0	0.4	0.0	0.0	0.0	0.0	0.0	0.18	0.97																							
																								0.13	0.10	0.09	--	0.07	0.08	0.10	0.12	0.18	0.55	0.70	0.56	0.69	0.63	0.61	0.67	0.53	0.53	0.54	0.39	0.23	0.32	0.23	0.15	Diurnal Average	
																								0.68	0.38	0.28	--	0.30	0.33	0.36	0.53	0.65	4.80	2.90	3.84	3.00	2.20	4.43	5.25	4.39	3.87	4.31	4.36	1.64	3.25	1.53	1.26	Diurnal Maximum	
Z - zerospan C - Calibration																																																	
Alberta Ambient Air Quality Objectives (AAQO): 1-hr 172 ppb 24-hr 48 ppb																																																	



WCAS - Hinton
Summary of Hourly Averages

Ozone (O₃) - ppb
April 2016

Maximum Value: 57.50 ppb on Apr 20 15:00		Maximum Daily Average: 40.87 ppb on Apr 16		Hours in Service:	720																																												
Minimum Value: 0.0 ppb on Apr 5 05:00		Minimum Daily Average: 16.72 ppb on Apr 25		Hours of Data:	684																																												
Maximum Diurnal Average: 43.17 ppb at hour 16		Minimum Diurnal Average: 9.07 ppb at hour 7		Hours of Missing Data:	36																																												
Monthly Average: 29.232 ppb		Percentiles: P ₁ = 0.3 P ₁₀ = 6.1 Q ₁ = 16.7 Median = 31.5 Q ₃ = 41.7 P ₉₀ = 47.6 P ₉₉ = 53.0		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-Apr	2.3	1.4	7.1	Z	1.1	2.5	0.7	4.3	13.8	25.2	29.5	35.3	39.7	39.9	40.2	40.0	40.0	41.0	38.7	35.2	31.7	25.3	8.7	5.4	22.13	40.97																							
2-Apr	4.4	5.5	22.0	Z	26.1	22.8	14.2	8.9	28.6	35.6	36.5	37.7	35.4	39.2	39.3	44.5	44.4	43.8	43.4	43.0	44.6	34.5	23.9	22.3	30.46	44.56																							
3-Apr	20.1	10.5	5.1	Z	4.8	3.2	1.6	9.1	17.4	28.5	40.7	45.3	47.0	48.1	49.9	50.1	50.4	50.6	48.9	40.7	26.2	33.4	29.1	21.9	29.69	50.63																							
4-Apr	21.4	25.1	25.7	Z	27.2	21.9	15.8	14.3	21.3	23.7	25.9	28.6	28.0	29.1	25.6	22.1	21.2	24.4	32.5	23.1	32.1	18.9	9.5	1.6	22.57	32.52																							
5-Apr	0.3	0.4	0.4	Z	0.0	0.1	0.5	2.5	17.8	34.3	36.2	42.4	40.7	41.7	38.0	35.4	37.4	38.8	35.3	33.7	36.4	33.4	35.4	34.4	25.02	42.41																							
6-Apr	32.0	31.7	31.0	Z	16.0	18.8	26.5	16.6	39.1	49.7	49.9	50.9	52.0	53.5	54.1	52.9	51.8	51.1	49.7	46.7	40.1	15.6	10.2	12.2	37.05	54.11																							
7-Apr	10.2	10.7	10.1	Z	8.2	6.4	1.8	3.8	5.3	26.7	39.2	42.4	42.0	42.7	44.6	45.0	45.1	46.0	45.5	40.1	22.6	17.1	16.4	15.7	25.55	46.05																							
8-Apr	18.0	23.8	23.4	Z	9.4	7.6	8.3	11.5	16.1	21.0	26.4	38.6	40.8	46.3	49.3	49.6	50.5	48.3	49.7	47.9	40.4	40.5	40.4	37.6	32.42	50.47																							
9-Apr	35.8	27.7	24.1	Z	14.7	27.9	32.3	25.2	27.4	34.8	37.9	38.4	37.8	36.8	38.0	40.6	40.5	39.8	38.8	37.1	35.5	31.8	22.9	20.2	32.43	40.61																							
10-Apr	14.6	11.6	6.4	Z	2.8	0.7	2.4	10.6	16.9	24.2	37.4	38.3	40.8	41.8	41.6	42.4	43.5	44.2	43.6	40.7	38.8	36.1	32.6	27.1	27.79	44.21																							
11-Apr	18.4	12.8	10.9	Z	4.2	5.7	5.9	9.3	18.7	29.8	38.5	39.5	42.3	42.4	43.4	38.3	40.6	40.9	38.9	37.8	35.9	23.0	16.3	15.5	26.47	43.42																							
12-Apr	11.6	6.7	2.3	Z	0.2	0.4	1.0	2.3	4.5	17.7	30.1	35.9	39.0	41.6	47.6	51.2	52.1	50.5	49.1	48.3	46.1	40.2	40.0	38.0	28.55	52.13																							
13-Apr	33.2	18.1	13.1	Z	7.4	6.8	5.0	C	C	C	C	C	51.5	C	52.0	52.1	51.9	51.1	47.9	48.4	38.3	23.8	13.7	17.2	--	52.09																							
14-Apr	16.7	15.5	12.4	Z	10.9	2.1	3.9	6.9	22.2	36.1	43.6	45.2	46.7	48.6	48.8	49.4	49.9	49.1	49.3	45.5	40.6	33.2	29.9	34.0	32.19	49.94																							
15-Apr	27.4	14.6	10.7	Z	2.4	0.7	5.8	7.5	18.6	29.4	36.9	45.4	49.9	50.7	50.7	51.2	50.6	49.9	49.3	46.1	46.9	45.4	46.9	44.8	33.98	51.17																							
16-Apr	40.8	41.5	41.2	Z	32.1	18.8	7.0	20.9	29.0	37.2	46.3	49.8	50.8	50.4	51.2	52.3	52.3	50.5	44.9	46.8	48.2	41.1	41.7	45.5	40.87	52.29																							
17-Apr	45.1	40.6	27.0	Z	14.8	13.9	11.5	12.1	14.7	25.8	40.8	44.0	42.3	39.7	39.3	38.7	38.3	37.6	44.1	35.3	28.8	21.3	13.5	8.3	29.45	45.06																							
18-Apr	9.1	8.1	6.9	Z	16.6	15.9	17.2	20.6	28.1	31.6	36.1	40.5	43.4	41.3	42.1	42.5	43.1	42.3	43.1	41.4	40.7	45.9	39.0	35.8	31.80	45.95																							
19-Apr	43.4	42.4	41.5	Z	25.6	19.7	4.3	6.3	16.6	36.4	43.7	44.9	46.7	46.8	47.7	46.0	46.0	46.7	47.1	46.6	43.0	41.5	39.4	34.2	37.24	47.71																							
20-Apr	28.1	22.7	22.8	Z	13.9	9.2	11.3	14.5	27.1	40.5	43.7	48.0	52.5	55.5	57.5	56.8	53.7	53.1	52.0	45.5	41.4	39.4	36.2	34.0	37.37	57.50																							
21-Apr	34.2	24.1	20.2	Z	10.6	9.7	12.1	22.7	25.2	26.2	27.9	31.1	32.0	35.0	38.2	39.1	33.8	26.6	18.2	16.7	9.7	2.9	3.9	2.4	21.85	39.09																							
22-Apr	4.7	12.2	15.2	Z	5.2	6.6	8.8	20.4	24.2	28.0	29.7	31.7	33.6	35.4	38.3	39.7	39.6	39.0	37.5	37.0	37.9	35.2	31.5	30.6	27.04	39.66																							
23-Apr	30.3	28.0	26.3	Z	22.9	24.6	25.0	25.2	26.6	26.8	27.4	26.5	29.3	33.0	37.5	40.2	42.2	44.3	42.7	40.6	39.1	33.8	30.1	27.4	31.73	44.27																							
24-Apr	26.0	25.2	24.0	Z	22.1	21.8	19.7	20.2	19.7	19.2	19.6	20.7	22.3	23.9	26.2	27.2	26.1	25.7	23.1	21.3	17.5	14.8	13.6	11.9	21.38	27.16																							
25-Apr	11.1	5.6	6.6	Z	3.4	2.3	2.2	1.7	4.3	14.5	22.1	25.5	26.5	27.1	27.6	28.9	26.1	23.5	21.1	25.3	25.1	19.0	13.0	22.1	16.72	28.88																							
26-Apr	31.8	21.7	14.1	Z	1.7	0.9	2.5	5.8	11.3	27.5	43.1	43.8	43.7	44.4	44.5	45.0	44.7	46.2	41.8	33.5	22.0	14.4	13.7	13.9	26.61	46.23																							
27-Apr	11.6	10.6	6.2	Z	2.2	1.9	3.0	6.1	17.7	25.2	30.9	40.2	41.6	43.7	43.3	42.1	41.4	45.7	45.1	35.1	28.8	39.8	45.0	43.9	28.31	45.73																							
28-Apr	38.8	27.0	18.7	Z	3.9	1.4	3.4	9.7	24.9	36.3	37.7	36.3	42.3	44.2	45.0	44.1	42.2	42.7	43.7	44.7	46.0	43.0	38.5	30.9	32.41	46.04																							
29-Apr	24.5	16.1	10.1	Z	3.5	3.3	4.0	5.9	10.5	21.8	36.7	40.7	44.7	40.8	42.1	41.1	41.3	37.8	29.3	23.5	20.6	24.1	31.2	28.8	25.32	44.65																							
30-Apr	26.9	27.3	25.0	Z	19.2	14.6	14.7	12.8	19.1	32.2	37.7	38.8	39.9	40.2	43.3	46.8	48.5	49.0	50.5	49.3	39.9	32.2	14.5	10.5	31.87	50.47																							
																								22.42	18.97	17.01	--	11.10	9.74	9.07	11.65	19.54	29.17	35.59	38.84	40.84	41.51	42.90	43.17	42.98	42.67	41.49	38.57	34.83	30.02	26.02	24.27	Diurnal Average	
																								45.06	42.36	41.48	--	32.05	27.91	32.25	25.21	39.12	49.70	49.92	50.88	52.53	55.47	57.50	56.76	53.71	53.13	52.01	49.32	48.20	45.95	46.88	45.47	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
April 2016

Maximum Value: 32.83 ppb on Apr 5 07:00																								Maximum Daily Average: 5.98 ppb on Apr 5																								Hours in Service: 720	
Minimum Value: 0.0 ppb on Apr 2 17:00																								Minimum Daily Average: 0.30 ppb on Apr 9																								Hours of Data: 685	
Maximum Diurnal Average: 7.11 ppb at hour 7																								Minimum Diurnal Average: 0.31 ppb at hour 21																								Hours of Missing Data: 35	
Monthly Average: 1.705 ppb																								Percentiles: P ₁ = 0.0 P ₁₀ = 0.1 Q ₁ = 0.2 Median = 0.6 Q ₃ = 1.4 P ₉₀ = 4.3 P ₉₉ = 20.4																								Hours of Calibration: 35	
																								Percent Operational Time: 100.0																									
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Apr	3.1	7.3	0.7	Z	3.2	4.5	32.4	4.2	3.2	1.1	2.1	0.8	0.9	0.9	0.8	0.8	0.7	0.3	0.2	0.1	0.1	0.1	6.2	1.6	3.28	32.42																							
2-Apr	0.9	1.8	0.1	Z	0.1	1.2	5.8	10.0	1.4	0.9	0.9	0.4	1.1	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.9	0.5	1.21	10.03																							
3-Apr	0.4	3.1	6.8	Z	1.8	7.2	12.5	4.6	7.3	6.5	1.6	1.7	1.1	0.8	0.4	0.4	0.4	0.3	0.2	0.1	2.1	0.9	0.5	0.5	2.65	12.47																							
4-Apr	0.4	0.3	0.1	Z	0.4	0.6	1.0	1.1	1.2	1.5	1.7	2.1	1.3	1.4	1.6	1.2	1.4	0.3	0.8	0.2	0.1	0.5	0.8	2.6	0.98	2.60																							
5-Apr	6.0	5.8	4.4	Z	19.7	22.8	32.8	25.4	5.2	1.5	1.9	0.8	1.9	1.2	1.9	1.5	1.4	1.0	0.9	0.5	0.2	0.3	0.1	0.0	5.98	32.83																							
6-Apr	0.0	0.1	0.0	Z	1.5	0.4	0.4	11.3	0.8	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.4	2.3	1.4	0.4	0.86	11.27																							
7-Apr	0.6	0.4	0.8	Z	1.0	2.4	10.7	9.2	12.7	2.3	0.6	0.8	1.0	0.8	0.8	0.8	0.6	0.5	0.2	0.2	1.0	1.7	1.5	0.2	2.20	12.74																							
8-Apr	0.8	0.3	0.1	Z	1.1	4.9	2.7	3.7	3.6	3.7	4.3	2.5	1.4	1.1	0.7	0.8	0.9	1.3	0.3	0.1	0.1	0.2	0.1	0.2	1.52	4.90																							
9-Apr	0.0	1.1	0.3	Z	2.0	0.5	0.1	1.2	0.8	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.30	1.98																							
10-Apr	0.3	0.7	1.6	Z	13.1	5.8	5.3	2.0	1.7	3.6	2.0	0.8	0.5	0.2	0.2	0.2	0.6	1.0	0.2	0.1	0.2	0.3	0.1	0.3	1.78	13.09																							
11-Apr	0.2	2.8	0.2	Z	0.5	0.3	3.9	5.9	3.6	2.5	2.0	0.9	1.3	0.5	0.4	0.2	0.1	0.1	0.7	0.2	0.1	2.0	1.1	0.6	1.31	5.95																							
12-Apr	0.6	1.0	1.5	Z	10.1	19.5	21.0	23.0	22.6	10.8	4.1	1.6	0.6	1.0	1.0	1.3	0.4	0.2	0.2	0.1	0.0	0.3	0.1	0.4	5.28	23.03																							
13-Apr	0.8	0.6	0.8	Z	2.6	3.8	6.1	C	C	C	C	C	0.5	0.0	0.4	0.3	0.2	0.1	0.0	0.0	0.6	0.9	0.7	0.2	1.03	6.11																							
14-Apr	0.0	0.0	0.2	Z	0.3	7.0	9.4	10.7	5.0	2.0	0.6	0.3	0.3	0.1	0.4	0.4	0.4	0.6	0.4	0.6	0.0	0.5	0.1	0.2	1.73	10.71																							
15-Apr	0.3	0.3	0.8	Z	4.3	11.6	3.0	17.9	9.1	3.6	2.4	1.6	0.9	0.8	0.6	0.6	0.6	0.3	0.2	0.1	0.1	0.1	0.1	0.1	2.58	17.88																							
16-Apr	0.1	0.2	0.2	Z	0.1	1.2	5.2	2.1	1.5	1.3	1.0	0.5	0.2	0.3	0.1	0.2	0.1	0.2	0.4	0.2	0.1	0.7	0.4	0.1	0.71	5.25																							
17-Apr	0.0	0.1	0.3	Z	0.7	0.5	1.7	1.5	3.5	2.0	1.0	1.0	0.6	0.8	0.4	0.2	0.1	0.2	0.2	0.3	0.5	0.3	0.6	1.1	0.77	3.54																							
18-Apr	0.3	0.5	2.2	Z	0.3	0.3	0.3	0.8	0.8	1.2	1.2	0.5	0.7	0.9	0.2	1.2	0.6	0.6	0.8	0.6	0.5	0.3	1.2	0.3	0.70	2.17																							
19-Apr	0.3	0.2	0.5	Z	0.8	1.0	15.4	15.2	8.8	3.6	1.7	1.5	1.0	1.0	0.8	1.2	1.1	0.4	0.2	0.2	0.4	0.3	0.2	0.3	2.45	15.39																							
20-Apr	0.5	0.2	0.1	Z	0.1	2.6	6.3	7.1	3.2	0.9	0.7	0.5	0.4	0.3	0.8	0.5	0.8	0.3	0.2	0.1	0.1	0.1	0.2	0.1	1.13	7.11																							
21-Apr	0.1	0.2	0.1	Z	1.3	1.1	3.3	2.1	2.0	2.5	2.6	1.4	1.4	1.5	1.1	0.9	1.0	0.9	0.5	1.4	0.8	2.4	1.0	1.0	1.32	3.26																							
22-Apr	0.8	0.3	0.3	Z	3.4	3.2	6.7	2.1	1.4	1.0	1.5	1.7	1.1	0.8	0.9	1.0	0.9	0.4	0.2	0.2	0.3	0.2	0.3	0.1	1.26	6.73																							
23-Apr	0.1	0.6	0.1	Z	0.4	0.5	0.6	0.7	1.2	1.0	0.9	1.4	1.1	0.8	1.0	0.9	0.8	0.4	0.4	0.3	0.2	0.2	0.1	0.1	0.59	1.44																							
24-Apr	0.1	0.1	0.2	Z	0.2	0.9	0.7	0.7	0.6	1.5	1.0	1.2	1.2	0.9	0.7	0.6	1.1	0.3	0.4	0.3	0.2	0.1	0.1	0.1	0.57	1.53																							
25-Apr	0.1	0.0	0.0	Z	0.8	0.5	1.7	5.9	4.8	3.6	0.5	0.3	0.7	1.5	1.4	0.8	1.1	0.3	1.0	0.9	0.1	0.2	0.1	0.1	1.15	5.90																							
26-Apr	0.3	0.0	0.1	Z	5.0	8.1	4.6	2.4	6.3	3.8	0.5	0.5	0.5	0.5	1.0	0.8	0.8	0.2	0.1	0.8	0.4	0.5	0.2	0.1	1.63	8.09																							
27-Apr	0.4	0.0	0.1	Z	0.9	1.3	6.1	13.6	8.0	4.4	2.3	1.1	0.7	0.8	1.5	1.0	0.5	0.7	0.8	0.8	0.5	0.4	0.0	0.0	2.00	13.60																							
28-Apr	0.5	0.3	0.5	Z	5.9	9.9	8.8	11.6	4.1	2.0	1.1	1.8	0.9	0.7	1.1	0.5	1.2	0.7	0.6	0.5	0.3	0.0	0.1	0.0	2.31	11.58																							
29-Apr	0.1	0.3	0.1	Z	1.5	1.2	4.5	6.4	5.6	2.9	0.8	0.7	0.3	1.0	1.1	0.8	0.6	0.2	0.5	0.4	0.1	0.2	0.1	0.2	1.29	6.41																							
30-Apr	0.1	0.1	0.2	Z	0.2	0.5	0.3	0.8	1.0	1.1	1.4	0.7	0.6	0.7	0.5	0.2	0.3	0.4	0.2	0.0	0.0	0.1	0.5	0.2	0.44	1.44																							
																								0.61	0.95	0.78	--	2.77	4.18	7.11	7.01	4.52	2.52	1.47	1.00	0.80	0.72	0.75	0.65	0.62	0.40	0.37	0.32	0.31	0.58	0.63	0.39	Diurnal Average	
																								6.03	7.34	6.75	--	19.69	22.84	32.83	25.44	22.57	10.85	4.33	2.46	1.90	1.54	1.87	1.49	1.44	1.30	0.95	1.44	2.06	2.44	6.19	2.60	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
April 2016

Maximum Value: 26.03 ppb on Apr 6 22:00		Maximum Daily Average: 8.58 ppb on Apr 21		Hours in Service: 720																																													
Minimum Value: 0.1 ppb on Apr 9 12:00		Minimum Daily Average: 2.65 ppb on Apr 9		Hours of Data: 685																																													
Maximum Diurnal Average: 11.01 ppb at hour 6		Minimum Diurnal Average: 2.86 ppb at hour 14		Hours of Missing Data: 35																																													
Monthly Average: 6.095 ppb		Percentiles: P ₁ = 0.2 P ₁₀ = 1.8 Q ₁ = 3.2 Median = 4.7 Q ₃ = 8.1 P ₉₀ = 12.4 P ₉₉ = 20.4		Hours of Calibration: 35																																													
				Percent Operational Time: 100.0																																													
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Apr	14.9	14.5	8.9	Z	12.6	13.8	16.5	5.9	4.3	3.1	4.9	1.8	1.6	1.8	1.9	2.0	2.3	1.5	3.8	5.5	6.2	6.9	14.5	13.9	7.08	16.49																							
2-Apr	11.1	12.2	4.6	Z	2.9	4.0	9.3	14.5	4.3	2.8	4.3	2.2	4.3	0.3	1.6	0.2	0.3	0.4	0.2	0.2	0.2	8.4	14.2	9.7	4.88	14.55																							
3-Apr	8.2	14.2	20.5	Z	14.9	17.3	18.7	9.9	12.4	14.9	4.3	4.5	3.1	2.2	1.2	1.6	1.6	1.9	2.3	5.5	12.8	7.2	6.8	8.1	8.42	20.51																							
4-Apr	8.6	6.9	5.5	Z	5.0	8.3	10.9	9.0	6.3	5.5	4.8	5.1	4.3	3.9	4.0	5.3	6.5	3.8	6.5	4.3	2.3	7.4	4.2	8.4	5.94	10.88																							
5-Apr	5.7	6.5	5.2	Z	8.7	12.1	15.0	12.7	5.5	5.7	7.7	2.8	5.3	3.6	7.6	10.3	7.0	5.8	8.4	9.7	4.7	7.3	1.9	0.6	6.95	14.96																							
6-Apr	1.0	1.7	0.9	Z	11.7	15.8	11.7	23.9	4.8	0.6	0.5	0.4	0.4	0.3	0.4	0.3	0.2	0.2	0.2	0.2	4.2	26.0	19.7	11.2	5.93	26.03																							
7-Apr	11.2	7.5	5.1	Z	7.7	8.6	14.5	11.4	11.1	5.5	2.6	1.6	2.3	2.2	2.1	2.6	2.4	2.6	2.7	5.1	13.3	11.0	10.6	7.1	6.56	14.48																							
8-Apr	7.0	6.9	6.2	Z	9.2	9.6	8.3	8.1	8.1	7.8	7.9	4.0	5.4	3.2	2.5	3.8	4.4	5.9	2.4	0.4	0.7	1.4	0.6	0.7	4.98	9.56																							
9-Apr	1.3	8.6	6.1	Z	11.5	3.5	1.5	8.9	5.9	1.4	0.2	0.1	0.1	0.3	0.2	0.2	0.3	0.3	0.3	0.4	0.7	2.9	3.2	2.8	2.65	11.50																							
10-Apr	2.8	4.7	7.4	Z	11.6	12.7	10.3	4.4	4.0	6.5	5.1	3.3	1.3	0.8	0.7	0.8	1.1	1.6	1.4	1.6	2.2	2.8	3.3	5.7	4.18	12.67																							
11-Apr	9.3	12.5	10.2	Z	11.5	9.0	8.9	9.4	6.5	5.9	6.8	3.0	5.0	3.4	2.7	1.3	0.5	0.8	6.5	2.7	3.4	12.4	14.0	10.6	6.79	14.03																							
12-Apr	10.9	9.5	11.3	Z	12.3	12.0	11.1	11.5	15.9	12.9	13.1	7.1	3.3	3.5	4.2	4.8	1.7	1.2	3.0	3.0	3.5	9.4	6.2	7.6	7.79	15.94																							
13-Apr	8.1	11.1	11.3	Z	14.5	16.4	17.7	C	C	C	C	C	1.9	0.8	2.5	2.7	2.5	2.5	3.0	1.6	9.1	15.7	19.1	11.7	8.45	19.13																							
14-Apr	10.0	11.2	16.1	Z	15.7	23.2	21.7	16.6	11.0	5.8	2.9	2.3	1.8	1.4	2.1	1.9	2.1	2.7	2.3	4.6	4.4	8.1	6.7	4.6	7.79	23.25																							
15-Apr	7.9	11.6	12.4	Z	15.7	20.1	10.2	17.2	13.4	8.8	7.2	5.2	3.1	2.8	3.1	3.4	4.2	4.1	4.4	5.8	5.1	5.5	3.6	4.3	7.80	20.13																							
16-Apr	4.5	4.8	4.3	Z	5.5	9.9	13.5	6.8	5.7	4.6	3.4	2.6	1.5	2.0	1.8	1.9	1.8	2.5	8.7	7.5	5.3	8.2	7.5	4.5	5.18	13.54																							
17-Apr	6.4	4.6	5.0	Z	8.0	6.5	10.1	8.4	8.7	7.5	5.8	5.1	2.5	2.9	2.4	2.0	1.9	2.2	3.8	6.1	9.6	5.7	6.1	10.8	5.74	10.76																							
18-Apr	6.2	5.7	7.3	Z	6.0	5.9	4.1	4.1	3.5	4.1	4.0	2.4	3.1	4.8	2.4	4.9	6.6	9.4	10.4	12.6	11.2	5.2	11.0	7.0	6.18	12.64																							
19-Apr	3.8	3.9	5.3	Z	11.8	16.5	21.2	20.9	19.6	12.2	6.1	5.9	4.4	4.7	4.1	6.1	6.7	4.4	3.6	3.6	5.3	5.6	4.9	5.9	8.11	21.24																							
20-Apr	9.1	10.5	7.9	Z	12.4	17.5	16.6	19.4	10.4	5.1	4.6	3.8	3.7	3.8	4.7	4.5	4.9	4.0	4.1	4.2	4.6	4.9	5.6	5.9	7.49	19.36																							
21-Apr	4.7	9.9	8.4	Z	16.5	17.0	14.0	7.1	6.2	6.4	6.3	5.7	6.2	6.0	5.7	5.7	6.9	6.5	5.5	8.4	11.6	14.2	9.8	8.8	8.58	17.00																							
22-Apr	7.0	6.1	6.6	Z	13.2	14.0	13.7	7.0	5.0	4.0	3.8	3.8	3.3	3.3	3.2	3.1	3.5	2.8	3.1	3.5	3.5	4.6	6.2	4.6	5.60	13.97																							
23-Apr	3.8	4.8	4.4	Z	5.8	4.7	4.5	4.2	3.6	3.7	3.2	3.3	3.3	3.0	3.0	3.2	3.3	3.2	3.7	3.6	3.1	3.5	3.7	3.7	3.75	5.75																							
24-Apr	4.1	4.3	4.5	Z	4.1	4.0	5.4	4.5	3.9	4.2	3.8	3.2	3.2	3.0	3.0	3.4	4.0	3.5	4.1	4.3	4.1	3.7	3.5	3.6	3.88	5.44																							
25-Apr	3.7	4.6	3.8	Z	7.2	6.2	5.7	5.6	5.6	5.3	2.0	1.6	2.1	3.7	3.3	2.7	3.9	3.0	2.8	2.7	2.2	3.0	3.3	2.0	3.74	7.24																							
26-Apr	4.6	3.0	3.7	Z	6.8	6.3	4.9	4.1	7.1	7.2	2.6	2.7	3.0	3.3	4.5	4.1	4.2	2.9	3.2	7.6	11.5	10.7	8.4	6.2	5.33	11.47																							
27-Apr	5.6	2.7	4.0	Z	3.3	6.3	6.6	10.5	13.8	8.9	4.9	3.4	3.3	3.4	3.9	4.5	4.3	4.1	4.9	9.5	11.2	7.4	3.1	3.5	5.79	13.77																							
28-Apr	6.0	10.6	12.9	Z	16.4	17.3	11.6	11.2	8.3	5.8	4.7	5.8	5.1	4.2	4.6	4.2	5.1	4.1	4.4	4.6	3.9	3.2	4.8	6.9	7.20	17.32																							
29-Apr	8.6	9.6	7.4	Z	7.0	6.5	6.4	8.5	8.6	6.8	4.3	4.4	3.3	4.6	4.6	4.6	4.3	3.7	7.4	7.4	3.4	4.4	3.7	4.2	5.80	9.56																							
30-Apr	4.5	4.6	4.7	Z	4.5	5.6	4.1	4.7	4.1	3.0	3.8	2.7	1.9	2.3	2.3	2.2	2.6	4.1	3.5	4.0	6.6	9.1	14.7	10.3	4.78	14.67																							
																								6.68	7.65	7.40	--	9.80	11.01	10.96	10.01	7.84	6.07	4.68	3.44	3.11	2.86	3.01	3.28	3.37	3.19	4.02	4.67	5.66	7.53	7.50	6.49	Diurnal Average	
																								14.91	14.52	20.51	--	16.50	23.25	21.66	23.89	19.62	14.91	13.06	7.12	6.17	6.05	7.62	10.26	6.96	9.44	10.45	12.64	13.31	26.03	19.72	13.86	Diurnal Maximum	
Z - zerospan C - Calibration																																																	
Alberta Ambient Air Quality Objectives (AAQO): 1-hr 159 ppb 24-hr 106 ppb																																																	



WCAS - Hinton
Summary of Hourly Averages

NOx (NO_x) - ppb
April 2016

Maximum Value: 48.67 ppb on Apr 1 07:00		Maximum Daily Average: 13.02 ppb on Apr 12		Hours in Service: 720																													
Minimum Value: 0.1 ppb on Apr 9 13:00		Minimum Daily Average: 2.93 ppb on Apr 9		Hours of Data: 685																													
Maximum Diurnal Average: 18.01 ppb at hour 7		Minimum Diurnal Average: 3.57 ppb at hour 14		Hours of Missing Data: 35																													
Monthly Average: 7.779 ppb		Percentiles: P ₁ = 0.2 P ₁₀ = 2.1 Q ₁ = 3.8 Median = 5.6 Q ₃ = 9.7 P ₉₀ = 15.9 P ₉₉ = 34.7		Hours of Calibration: 35																													
				Percent Operational Time: 100.0																													
Day	Hourly Period Ending At																								Daily Average	Daily Maximum							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24									
1-Apr	18.0	21.8	9.6	Z	15.7	18.3	48.7	10.0	7.5	4.2	7.0	2.6	2.5	2.7	2.7	2.8	3.1	1.8	4.0	5.6	6.2	7.0	20.7	15.5	10.34	48.67							
2-Apr	12.0	14.0	4.7	Z	3.0	5.3	15.0	24.5	5.7	3.7	5.2	2.6	5.3	0.3	2.1	0.2	0.3	0.4	0.2	0.2	0.2	9.6	15.0	10.2	6.07	24.50							
3-Apr	8.6	17.2	27.2	Z	16.6	24.3	31.0	14.5	19.6	21.3	5.9	6.1	4.2	2.9	1.5	2.0	1.9	2.1	2.4	5.6	14.8	8.1	7.3	8.6	11.04	31.04							
4-Apr	9.0	7.1	5.5	Z	5.4	8.8	11.8	10.1	7.4	7.0	6.5	7.2	5.6	5.3	5.6	6.5	7.9	4.1	7.3	4.5	2.4	7.9	4.9	11.0	6.91	11.79							
5-Apr	11.7	12.2	9.6	Z	28.2	34.8	47.6	38.0	10.6	7.2	9.6	3.6	7.2	4.8	9.5	11.7	8.4	6.8	9.3	10.2	4.9	7.6	2.0	0.6	12.87	47.56							
6-Apr	1.0	1.8	0.9	Z	13.2	16.2	12.0	35.0	5.6	0.7	0.6	0.4	0.5	0.4	0.5	0.3	0.3	0.3	0.3	0.3	4.6	28.3	21.1	11.5	6.77	35.04							
7-Apr	11.8	7.9	5.9	Z	8.7	10.9	25.1	20.6	23.7	7.7	3.2	2.3	3.3	2.9	2.9	3.4	3.0	3.1	2.9	5.4	14.2	12.7	12.1	7.3	8.73	25.06							
8-Apr	7.8	7.2	6.3	Z	10.3	14.4	11.0	11.7	11.6	11.5	12.2	6.4	6.8	4.2	3.2	4.6	5.3	7.2	2.8	0.4	0.8	1.6	0.6	0.9	6.47	14.41							
9-Apr	1.3	9.7	6.4	Z	13.4	4.0	1.6	10.1	6.8	1.6	0.2	0.1	0.1	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.6	2.9	3.2	3.1	2.93	13.44							
10-Apr	3.1	5.3	9.0	Z	24.6	18.5	15.6	6.4	5.7	10.1	7.0	4.1	1.8	1.0	0.9	1.0	1.8	2.5	1.6	1.8	2.4	3.1	3.3	6.0	5.94	24.59							
11-Apr	9.5	15.2	10.3	Z	11.9	9.3	12.8	15.2	10.0	8.4	8.8	3.9	6.3	3.9	3.1	1.5	0.6	0.9	7.2	2.8	3.5	14.3	15.1	11.2	8.08	15.25							
12-Apr	11.5	10.5	12.7	Z	22.4	31.4	31.9	34.4	38.4	23.7	17.1	8.7	4.0	4.5	5.2	6.1	2.1	1.4	3.3	3.1	3.5	9.7	6.3	7.9	13.02	38.37							
13-Apr	8.8	11.6	12.1	Z	17.0	20.2	23.8	C	C	C	C	C	2.4	0.7	3.0	3.1	2.7	2.6	3.0	1.5	9.7	16.5	19.8	11.8	9.47	23.84							
14-Apr	10.1	11.2	16.3	Z	16.0	30.2	31.0	27.2	15.9	7.8	3.6	2.6	2.1	1.5	2.5	2.2	2.4	3.3	2.7	5.2	4.4	8.5	6.8	4.8	9.49	30.99							
15-Apr	8.2	11.9	13.2	Z	20.0	31.6	13.3	34.9	22.5	12.4	9.5	6.8	3.9	3.7	3.7	4.0	4.7	4.4	4.6	5.8	5.1	5.6	3.7	4.4	10.35	34.94							
16-Apr	4.6	5.0	4.5	Z	5.5	11.1	18.7	8.8	7.2	5.9	4.4	3.1	1.7	2.3	1.9	2.1	2.0	2.6	9.0	7.7	5.4	8.9	7.9	4.6	5.87	18.74							
17-Apr	6.4	4.7	5.2	Z	8.6	7.0	11.7	10.0	12.2	9.5	6.7	6.1	3.1	3.7	2.8	2.2	2.1	2.3	4.0	6.3	10.1	6.0	6.7	11.8	6.48	12.18							
18-Apr	6.5	6.2	9.4	Z	6.3	6.1	4.4	4.9	4.4	5.3	5.2	3.0	3.8	5.7	2.6	6.1	7.1	10.0	11.3	13.2	11.6	5.5	12.2	7.3	6.87	13.18							
19-Apr	4.1	4.2	5.8	Z	12.6	17.4	36.5	35.9	28.4	15.8	7.8	7.4	5.4	5.8	4.9	7.3	7.8	4.8	3.8	3.8	5.7	5.9	5.1	6.2	10.54	36.50							
20-Apr	9.6	10.7	8.0	Z	12.5	20.0	22.8	26.4	13.6	6.0	5.3	4.3	4.2	4.1	5.5	4.9	5.7	4.2	4.3	4.4	4.6	5.0	5.8	6.0	8.60	26.42							
21-Apr	4.7	10.0	8.4	Z	17.7	18.1	17.2	9.2	8.2	8.9	8.9	7.1	7.5	7.6	6.8	6.6	7.8	7.3	6.0	9.8	12.3	16.6	10.8	9.7	9.89	18.09							
22-Apr	7.7	6.4	6.9	Z	16.6	17.2	20.4	9.1	6.4	4.9	5.3	5.4	4.4	4.2	4.1	4.2	4.3	3.3	3.3	3.7	3.8	4.7	6.4	4.7	6.85	20.39							
23-Apr	3.9	5.4	4.5	Z	6.2	5.2	5.0	4.8	4.7	4.7	4.1	4.7	4.4	3.8	4.0	4.0	4.1	3.6	4.1	3.9	3.3	3.7	3.8	3.8	4.34	6.16							
24-Apr	4.2	4.3	4.7	Z	4.3	4.8	6.1	5.1	4.5	5.7	4.8	4.3	4.4	4.0	3.8	4.0	5.2	3.8	4.5	4.6	4.3	3.8	3.6	3.6	4.44	6.10							
25-Apr	3.8	4.7	3.8	Z	8.0	6.7	7.4	11.5	10.4	8.8	2.5	1.9	2.8	5.2	4.8	3.5	5.0	3.2	3.7	3.6	2.3	3.2	3.4	2.1	4.88	11.50							
26-Apr	4.8	3.0	3.8	Z	11.8	14.4	9.5	6.5	13.3	11.0	3.2	3.2	3.5	3.8	5.5	4.9	5.0	3.1	3.3	8.4	11.8	11.2	8.5	6.2	6.94	14.37							
27-Apr	6.0	2.7	4.1	Z	4.2	7.6	12.7	24.0	21.8	13.3	7.3	4.6	4.0	4.3	5.3	5.5	4.8	4.8	5.7	10.3	11.6	7.8	3.2	3.6	7.78	24.01							
28-Apr	6.5	10.8	13.3	Z	22.2	27.1	20.3	22.7	12.3	7.8	5.8	7.6	6.0	4.9	5.7	4.8	6.3	4.8	4.9	5.1	4.2	3.2	4.8	6.9	9.49	27.13							
29-Apr	8.6	9.8	7.5	Z	8.4	7.7	10.8	14.9	14.1	9.6	5.1	5.1	3.6	5.6	5.7	5.4	5.0	3.9	7.8	7.7	3.5	4.5	3.8	4.4	7.07	14.86							
30-Apr	4.6	4.7	4.9	Z	4.7	6.1	4.5	5.4	5.1	4.1	5.2	3.4	2.5	3.0	2.8	2.4	3.0	4.6	3.7	4.1	6.6	9.1	15.2	10.4	5.21	15.18							
		7.27	8.57	8.15	--	12.54	15.15	18.01	16.97	12.33	8.57	6.14	4.43	3.91	3.57	3.76	3.92	3.99	3.59	4.38	4.98	5.95	8.08	8.11	6.86	Diurnal Average							
		17.95	21.81	27.18	--	28.25	34.76	48.67	37.98	38.37	23.69	17.08	8.66	7.53	7.58	9.47	11.73	8.39	9.98	11.26	13.18	14.80	28.29	21.10	15.47	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
April 2016

Maximum Value: 214.20 µg/m ³ on Apr 18 01:00 Maximum Daily Average: 25.03 µg/m ³ on Apr 18																						Hours in Service: 720 Hours of Data: 713				
Minimum Value: 0.4 µg/m ³ on Apr 25 12:00 Minimum Daily Average: 4.64 µg/m ³ on Apr 25 Maximum Diurnal Average: 21.77 µg/m ³ at hour 8 Minimum Diurnal Average: 5.95 µg/m ³ at hour 13 Monthly Average: 11.760 µg/m ³ Percentiles: P ₁ = 1.9 P ₁₀ = 3.9 Q ₁ = 5.3 Median = 7.2 Q ₃ = 11.7 P ₉₀ = 22.7 P ₉₉ = 69.1																						Hours of Missing Data: 7 Hours of Calibration: 7 Percent Operational Time: 100.0				
Day	Hourly Period Ending At																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Apr	27.9	30.3	10.1	6.7	5.6	8.0	32.1	26.0	10.6	5.7	9.2	3.9	2.8	4.2	4.3	4.9	6.0	5.3	9.4	11.7	7.1	59.9	156.2	115.8	23.49	156.24
2-Apr	64.7	41.7	27.4	4.3	11.3	29.8	32.1	44.8	14.6	10.7	12.3	8.0	9.6	5.5	6.9	5.8	6.8	5.8	6.8	10.9	6.4	19.9	15.6	15.3	17.38	64.69
3-Apr	22.6	19.9	25.6	18.1	24.9	37.4	22.6	20.7	26.3	21.0	2.5	4.8	5.3	3.5	2.7	3.4	5.1	4.1	5.3	8.7	11.7	7.2	12.5	9.0	13.54	37.39
4-Apr	10.5	14.3	7.8	6.6	5.5	7.1	7.8	17.5	6.8	5.4	7.5	12.0	7.6	7.5	7.0	7.6	11.6	10.4	5.1	5.2	1.9	5.9	3.1	4.4	7.77	17.51
5-Apr	2.5	2.7	2.2	3.1	4.7	2.4	5.9	8.4	7.0	5.0	10.2	6.8	7.9	6.6	10.8	14.2	12.4	10.1	10.4	11.4	5.7	8.6	5.1	2.9	6.96	14.21
6-Apr	4.8	4.8	3.3	4.6	8.1	9.2	8.7	16.1	7.3	3.1	3.9	4.0	4.1	4.5	4.8	6.4	6.6	7.2	5.9	5.9	9.4	17.2	16.7	12.0	7.45	17.19
7-Apr	14.3	28.6	25.7	12.5	10.6	11.7	15.4	20.1	20.6	16.4	5.7	3.8	4.7	5.7	4.0	6.0	5.3	4.4	4.9	8.2	42.5	17.4	30.8	10.7	13.75	42.45
8-Apr	9.3	6.4	4.6	12.3	10.8	10.4	7.7	8.3	9.2	8.2	11.4	7.4	8.8	8.3	5.1	6.9	8.7	24.1	18.4	16.0	7.0	3.0	2.1	2.9	9.05	24.09
9-Apr	2.8	8.0	8.0	18.0	17.9	4.8	3.1	6.9	8.3	4.9	3.4	3.4	4.4	4.8	5.3	5.8	4.8	3.5	5.4	7.0	7.7	6.6	17.3	26.6	7.87	26.58
10-Apr	22.4	9.2	5.7	28.2	9.3	36.7	22.0	4.7	4.8	16.8	15.6	5.3	2.8	2.4	2.7	2.2	2.8	3.6	4.7	4.7	4.8	4.3	5.8	10.4	9.66	36.66
11-Apr	9.6	11.6	13.0	14.9	13.1	17.2	9.9	12.7	10.6	15.1	17.7	3.5	7.5	10.3	9.4	7.6	2.7	3.0	6.1	4.8	4.8	14.1	12.2	4.3	9.83	17.66
12-Apr	5.2	24.7	26.4	24.9	19.1	25.2	29.8	25.6	32.7	32.1	32.9	10.9	7.7	9.7	6.6	13.6	5.6	3.6	4.5	4.9	5.8	8.5	9.5	11.2	15.86	32.86
13-Apr	8.2	23.5	42.1	14.3	28.9	16.7	52.1	C	C	C	C	C	C	C	2.2	2.4	3.2	3.8	4.0	7.5	15.1	46.1	113.8	73.7	--	113.84
14-Apr	14.3	13.2	14.2	9.4	15.3	23.1	68.6	72.4	29.3	8.3	2.9	3.2	4.0	4.4	4.6	4.9	5.7	5.9	5.4	7.0	7.9	12.5	22.1	6.4	15.20	72.43
15-Apr	6.7	5.8	9.9	18.8	28.0	18.6	15.6	21.8	34.7	16.8	16.4	8.1	6.9	6.7	6.7	7.7	7.6	7.5	8.5	8.9	9.8	8.3	6.7	6.6	12.22	34.68
16-Apr	12.0	8.9	6.3	7.1	20.5	27.3	41.1	32.3	13.5	6.4	6.1	4.9	7.0	7.5	10.4	10.8	10.1	6.2	9.3	8.2	7.6	19.9	14.0	6.7	12.68	41.07
17-Apr	7.6	11.6	10.8	9.7	22.8	19.5	17.8	23.5	21.7	23.7	22.9	15.6	4.1	4.8	5.5	6.0	7.8	9.6	54.5	33.5	12.9	71.9	88.3	47.2	23.05	88.34
18-Apr	214.2	76.5	26.2	14.4	18.8	26.4	29.3	39.1	9.5	10.3	8.1	3.3	4.7	8.9	11.3	5.3	6.8	10.5	14.2	15.8	17.1	7.0	14.6	8.4	25.03	214.20
19-Apr	6.6	6.0	6.3	7.3	22.1	10.7	70.9	124.7	56.7	22.9	9.8	16.3	9.3	9.7	7.5	11.6	9.3	10.4	8.4	10.2	14.9	10.6	9.1	11.6	20.12	124.74
20-Apr	12.9	8.4	11.7	9.3	14.5	25.6	61.3	27.8	20.4	10.0	9.5	10.3	11.7	12.6	15.0	13.5	13.0	12.4	12.8	11.7	11.7	14.6	9.9	8.1	15.36	61.29
21-Apr	5.9	5.3	5.9	5.3	6.7	10.4	9.2	9.6	10.1	9.5	7.2	8.2	8.9	9.9	9.7	10.9	12.6	7.9	9.6	7.8	10.8	11.7	8.1	8.0	8.72	12.58
22-Apr	6.3	5.8	5.0	5.6	5.4	5.0	5.9	4.2	6.8	6.6	8.0	7.9	7.0	7.6	6.4	6.6	6.5	7.0	6.5	7.0	6.0	7.4	7.7	6.6	6.44	8.03
23-Apr	5.2	4.7	5.4	4.2	6.3	5.8	5.1	4.5	5.6	6.7	7.6	6.3	6.7	6.6	7.0	6.9	7.1	6.0	6.7	6.8	7.2	6.2	6.8	5.8	6.13	7.57
24-Apr	5.7	5.3	5.2	4.8	6.6	7.0	7.1	7.1	6.7	7.2	7.2	8.0	7.0	6.6	6.1	5.8	5.6	5.7	7.6	7.1	6.6	6.3	5.2	6.43	8.01	
25-Apr	6.6	6.7	6.8	6.9	7.3	5.6	6.1	7.9	7.7	4.1	1.9	0.4	1.9	5.4	1.4	4.5	6.1	3.1	3.7	3.7	2.9	3.8	4.0	2.8	4.64	7.89
26-Apr	2.8	3.4	2.2	3.3	4.6	4.8	5.0	4.7	14.7	10.8	1.7	1.6	4.7	4.5	5.3	5.6	5.5	4.6	5.5	7.0	8.9	8.3	7.3	6.9	5.56	14.67
27-Apr	5.9	5.5	5.6	6.8	6.1	4.7	9.0	15.0	27.6	12.2	6.4	2.7	3.9	3.7	4.8	5.3	5.4	4.2	5.6	8.5	10.0	7.3	6.1	6.4	7.44	27.59
28-Apr	6.5	7.2	6.0	10.9	7.2	8.4	11.8	10.1	9.2	6.7	6.6	6.6	5.0	5.3	5.6	5.9	7.1	6.3	5.7	5.3	4.8	4.0	3.9	4.1	6.68	11.83
29-Apr	4.7	4.5	6.5	6.2	7.2	5.5	8.1	9.4	11.0	11.0	3.4	4.2	2.3	6.9	6.7	4.7	4.2	8.0	6.8	5.7	6.0	5.9	4.0	4.8	6.15	10.98
30-Apr	4.9	5.4	5.4	4.5	4.7	6.2	4.8	5.5	5.1	1.6	4.0	5.0	3.3	3.5	2.6	3.0	2.9	4.6	3.5	4.8	8.7	11.7	17.1	17.7	5.85	17.66
																								Diurnal Average		
																								Diurnal Maximum		
17.78 13.66 11.38 10.10 12.46 14.37 20.86 21.77 15.50 10.99 9.03 6.40 5.95 6.49 6.29 6.87 6.84 6.97 8.78 8.88 9.48 14.54 21.23 15.42																								Diurnal Average		
214.20 76.52 42.06 28.20 28.92 37.39 70.86 124.74 56.68 32.06 32.86 16.29 11.65 12.62 15.03 14.21 13.01 24.09 54.48 33.51 42.45 71.89 156.24 115.83																								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: April 13, 2016

Parameter: NO/NO₂/NO_x

Instrument: Teco 42i

Serial Number: CM13040041

Previous Calibration Date: March 19,2015

Calibration: Routine

Calibration Equipment: SABIO 2010 sn# 05200311

Barometric Pressure: 26.53" Hg

Calibration Method: Standard Gas Dilution/ GPT

Cylinder ID: FF 9469

Temperature: 21.7° 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	5.6	5.9	na	0.913	1.008	1.000	200 ppb
Current	5.8	6.0	na	0.913	0.999	1.000	200 ppb

NO	Final Zero: 0.0 ppb	Final Span: 147.3 ppb	As Found Correction Factor: 1.016
NO ₂	Final Zero: 0.3 ppb	Final Span: 0.2 ppb	As Found Correction Factor: 0.992
NO _x	Final Zero: 0.0 ppb	Final Span: 147.2 ppb	As Found Correction Factor: 1.014

Results of Linear Regression			Slope	Intercept	R ²
NO	R _c vs C _c	Previous	148.535100	48.041070	0.999919
		Current	150.176800	15.322850	0.999997
	C _i vs C _c	Current	1.000000	-0.000001	0.999998
NO ₂	R _c vs C _c	Previous	149.304600	-23.687120	0.999919
		Current	150.477600	-44.782180	0.999965
	C _i vs C _c	Current	1.000000	0.000000	0.999965
NO _x	R _c vs C _c	Previous	149.672700	41.316640	0.999919
		Current	150.335700	6.985573	0.999999
	C _i vs C _c	Current	1.000000	-0.000021	1.000000

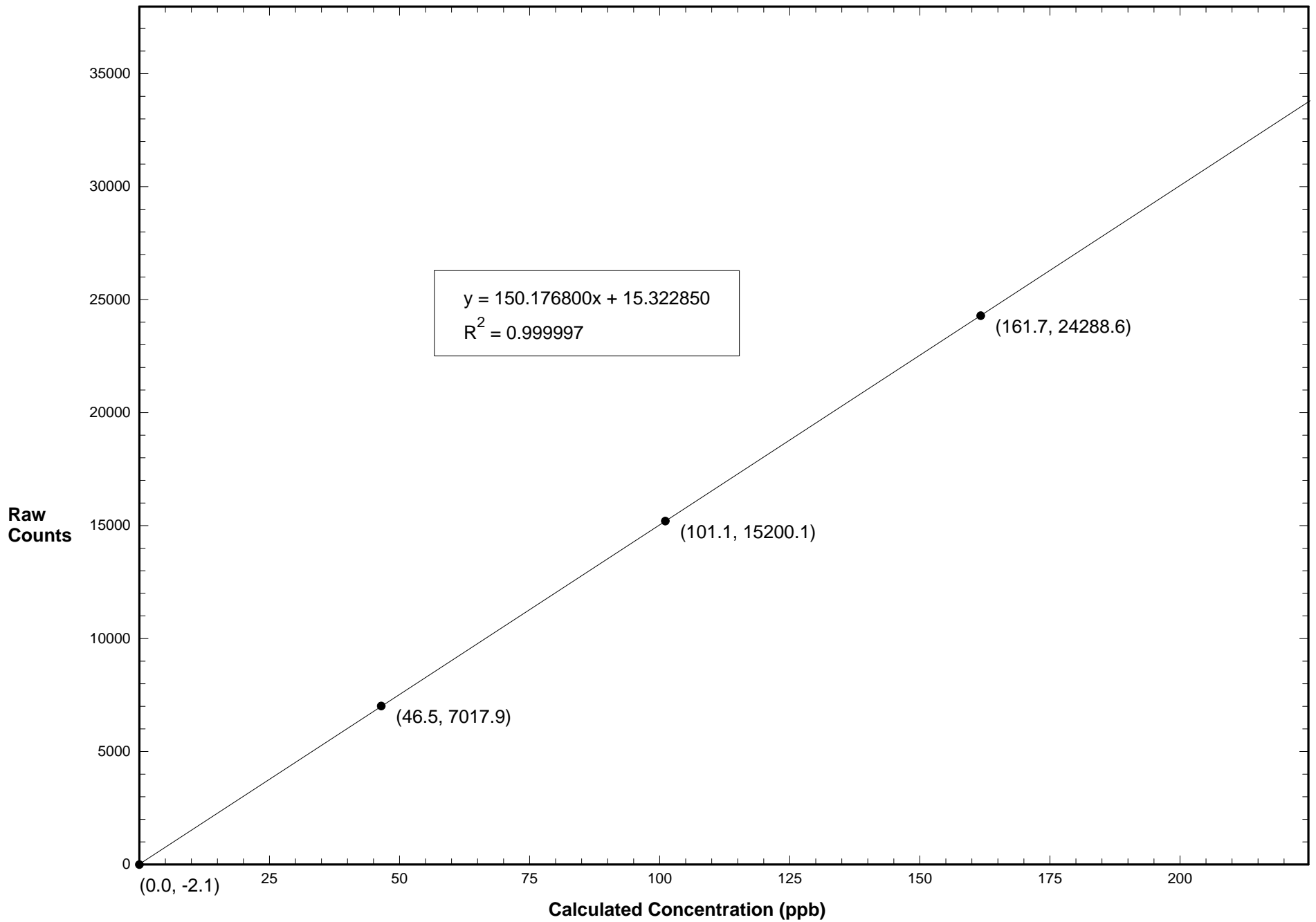
Comments:

Calibration Data Summary (Page 2)

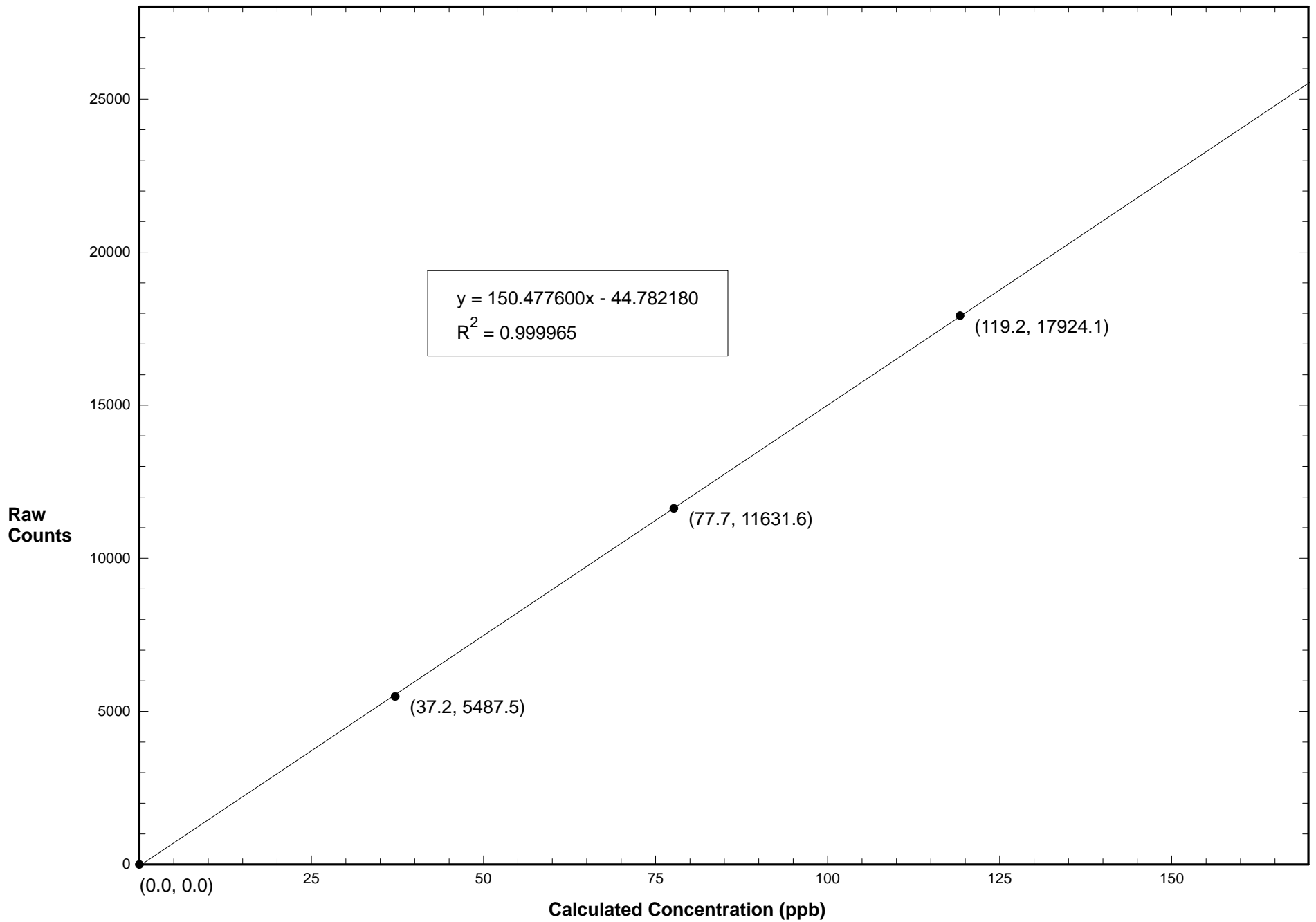
April 13, 2016 - Station 906

NO Flow Rate (LPM)	Dilution Flow Rate (LPM)	Calculated Concentration C_c (ppb)	Raw Count Output R_c	Indicated Concentration C_i (ppb)	Correction Factor C_c/C_i		
0.06600	5.077	161.7	24288.6	161.6	1.000		
0.04100	5.070	101.1	15200.1	101.1	1.000		
0.01870	5.050	46.5	7017.9	46.6	0.997		
0.00000	5.000	0.0	-2.1	-0.1			
NO Calibration					Average Correction Factor:	0.999	
0.06600	5.077	161.7	24313.8	161.7	1.000		
0.04100	5.070	101.1	15199.5	101.1	1.000		
0.01870	5.050	46.5	7007.8	46.6	0.998		
0.00000	5.000	0.0	-0.8	-0.1			
NO _x Calibration					Average Correction Factor:	0.999	
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
159.4	6042.2	40.1	119.2	17924.1	119.4	0.999	1.001
159.4	12287.9	81.7	77.7	11631.6	77.6	1.001	0.999
159.4	18368.9	122.2	37.2	5487.5	36.8	1.011	0.989
			0.0	0.0	0.3		
					Average Correction Factor:	1.003	
NO ₂ Gas Phase Titration					Average Converter Efficiency: 0.997		
Parameter	Correction Factor (Previous)	Correction Factor: (Current)	Percent Change of Correction Factor				
NO	0.997	1.000	0.3				
NO ₂	1.001	0.999	-0.2				
NO _x	0.997	1.000	0.3				

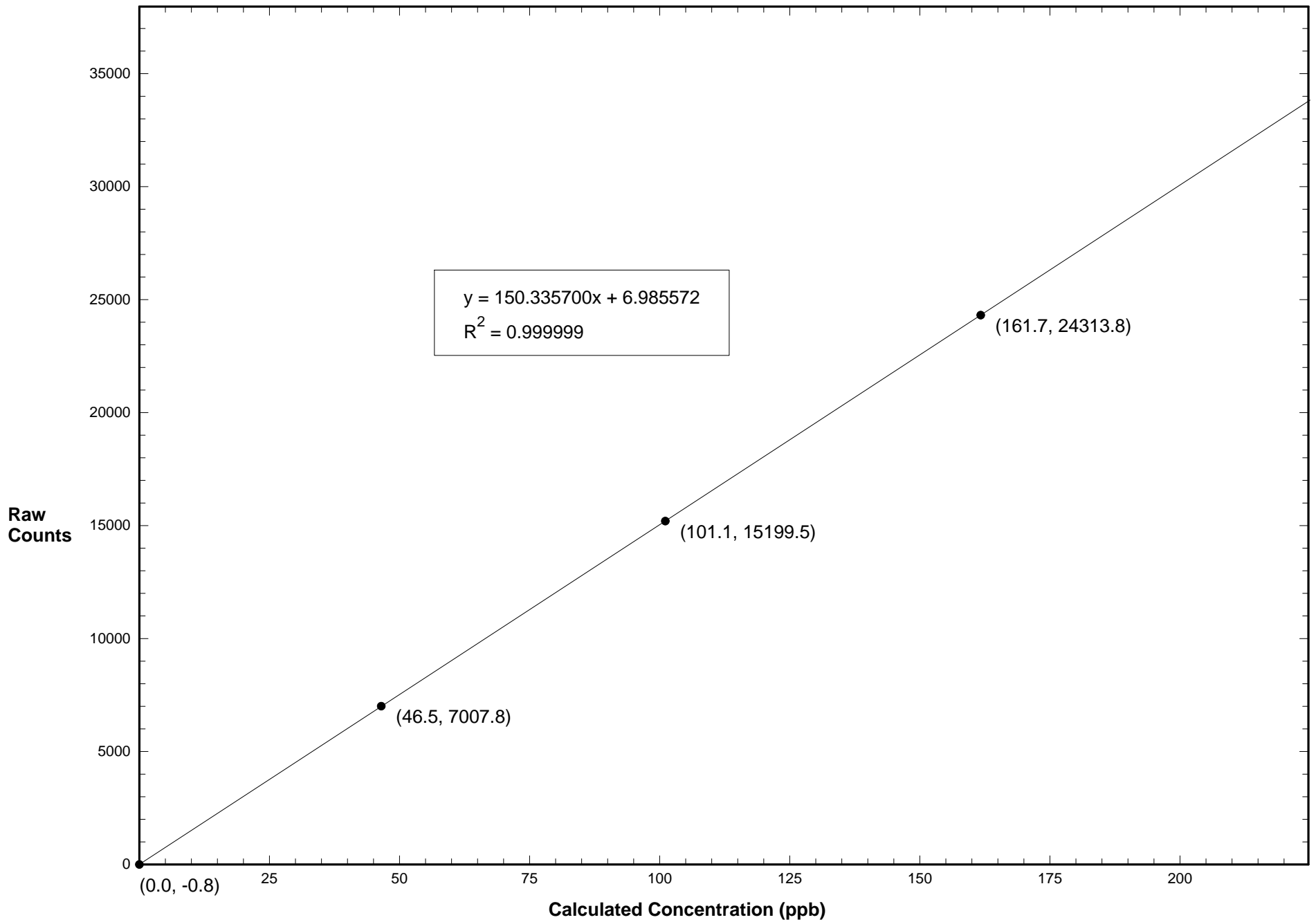
Station 906 NO April 13, 2016: Linear Regression



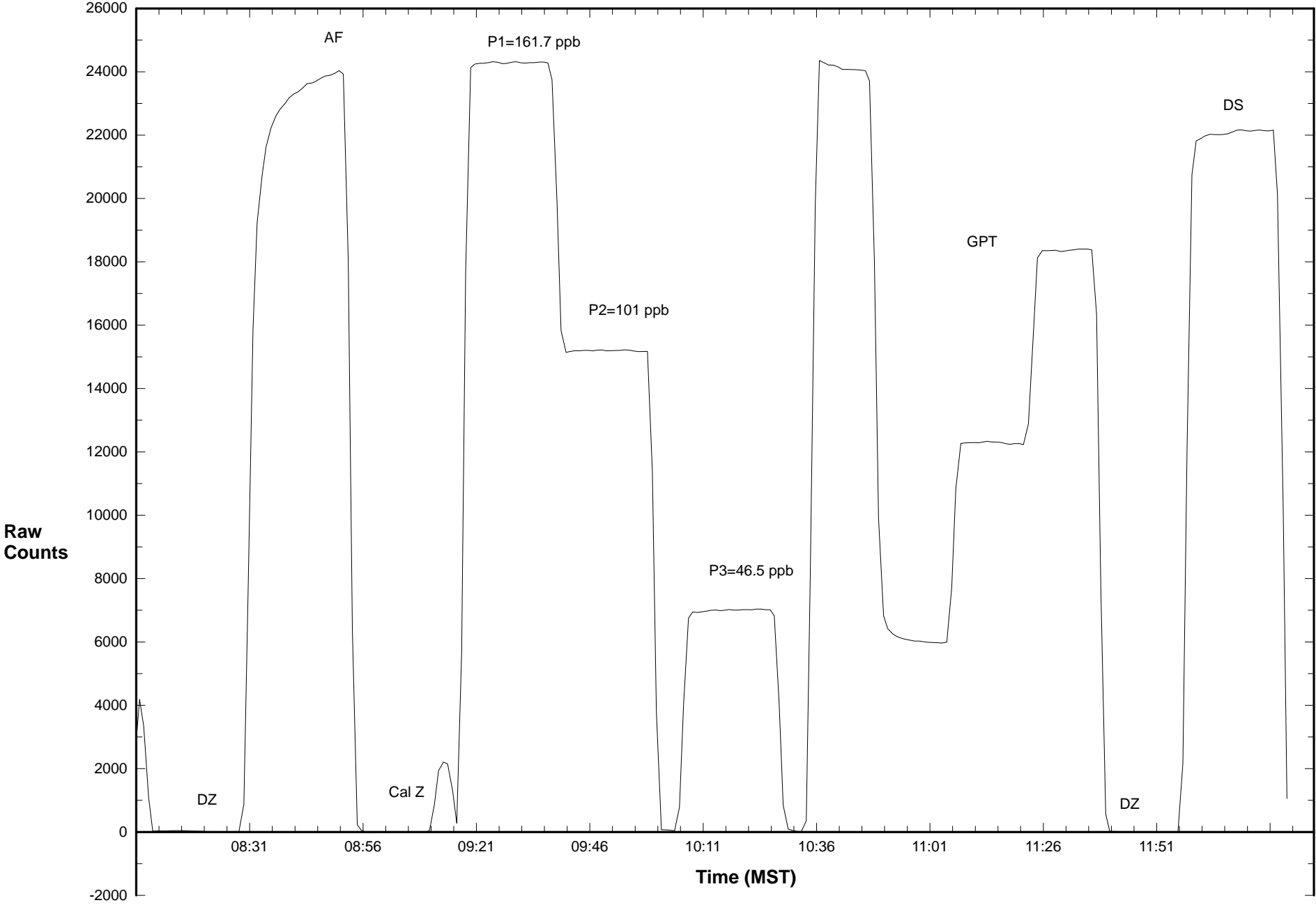
Station 906 NO2 April 13, 2016: Linear Regression



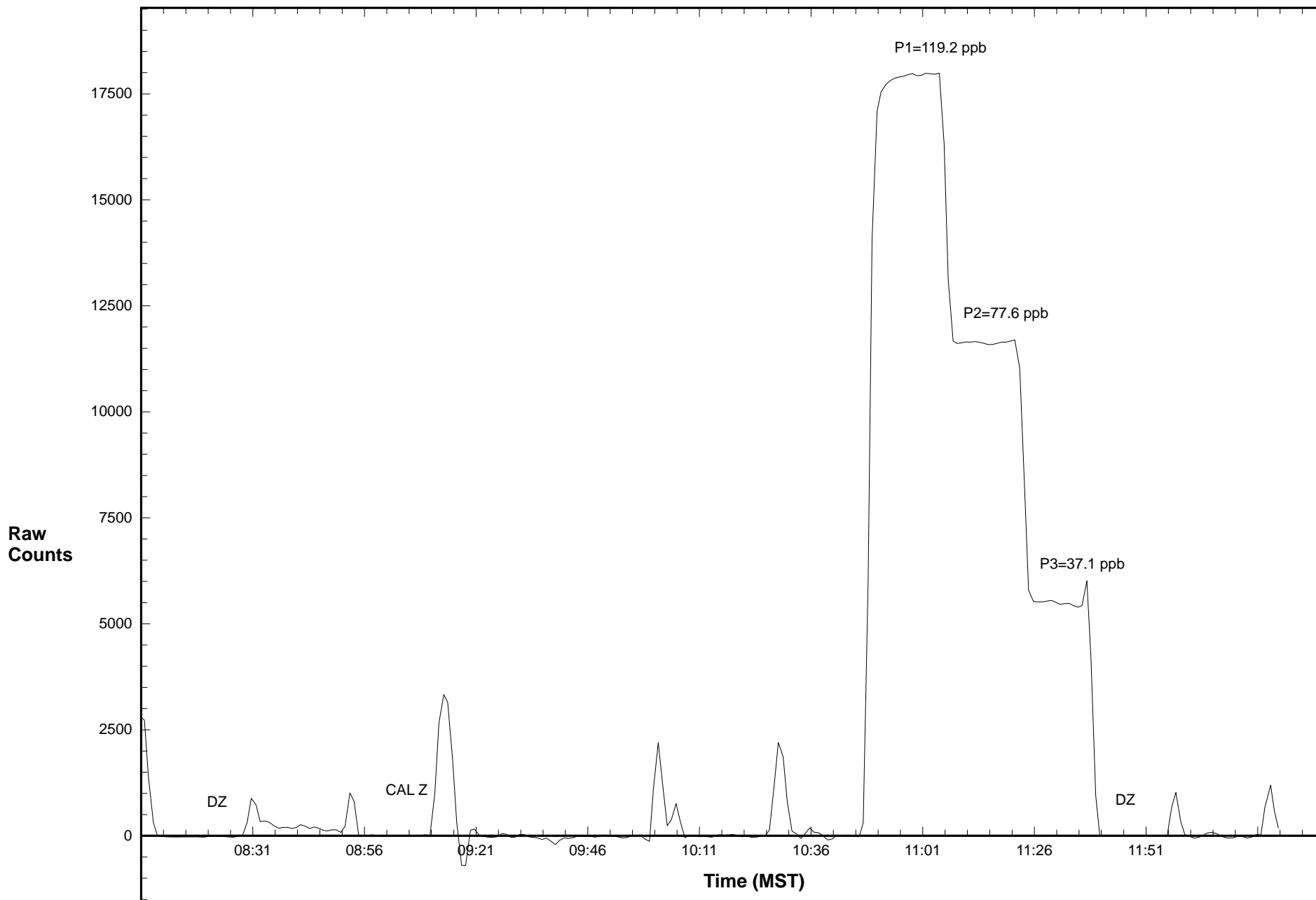
Station 906 NOX April 13, 2016: Linear Regression



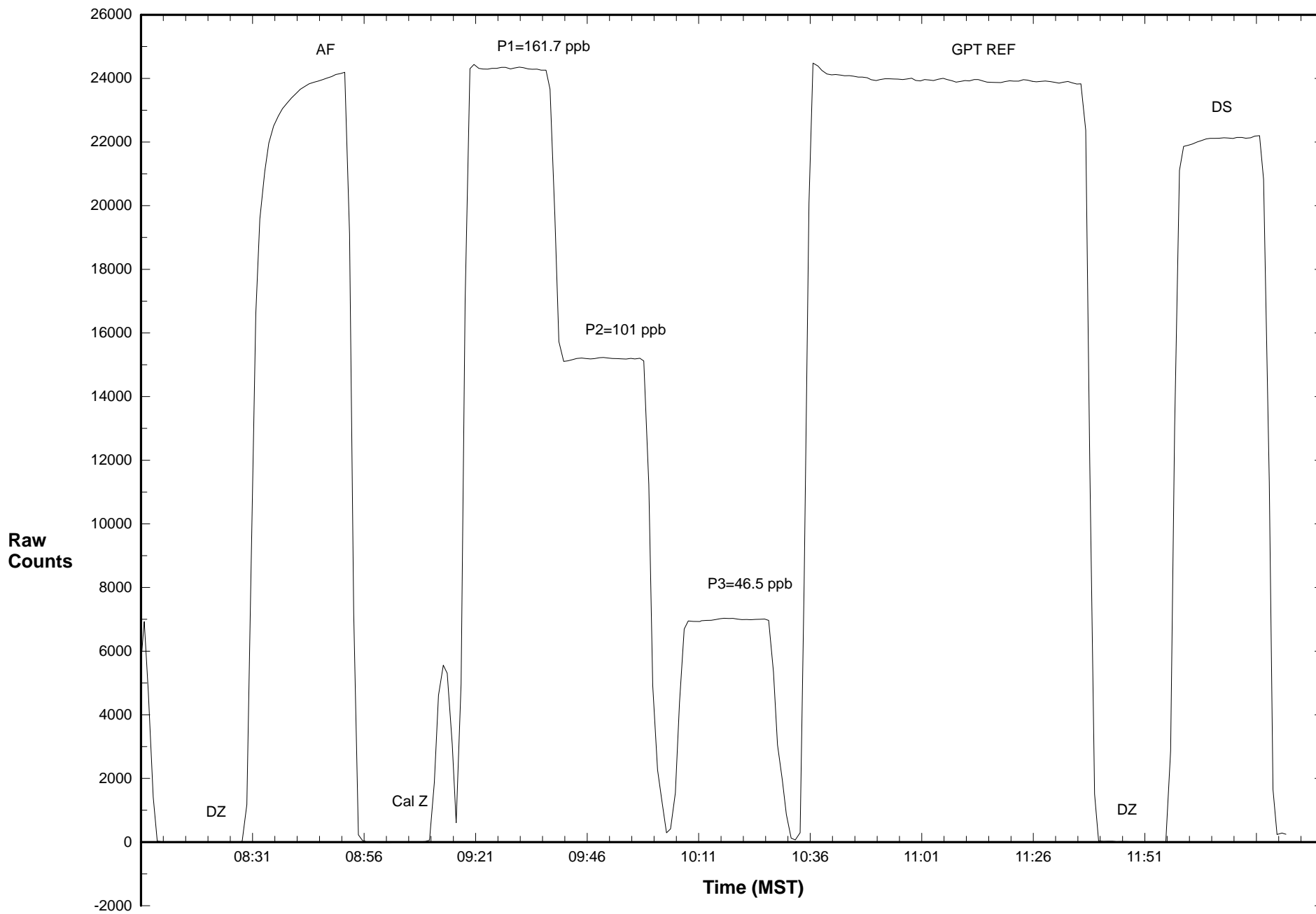
Station 906 NO April 13, 2016: Calibration Graph



Station 906 NO2 April 13, 2016: Calibration Graph



Station 906 NOX April 13, 2016: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton
 Calibration Date: April 13, 2016
 Parameter: O₃

Instrument: Teco 49i

Serial Number: 1150790050

Previous Calibration Date: March 19,2015

Calibration: Routine

Calibration Equipment: 2B Technologies 306 sn#145 Barometric Pressure: 26.53" Hg

Calibration Method: Certified Ozone Generator

Temperature: 21.7° C

Technician: J. McClintock

Instrument Settings	Background	Coefficient	Monitoring Range
Previous	0.2	1.032	500 ppb
Current	-0.4	1.011	500 ppb

Final Zero: -0.6 ppb

Final Span: 357.3 ppb

As Found Correction Factor: 0.971

Calibration System Flow Rate (LPM)	Calculated Concentration C _c (ppb)	Raw Count Output R _c	Indicated Concentration C _i (ppb)	Correction Factor C _c /C _i
3.000	409.0	24566.2	408.5	1.001
3.000	256.0	15449.4	256.7	0.997
3.000	102.0	6162.1	102.2	0.998
3.000	0.0	0.8	-0.4	

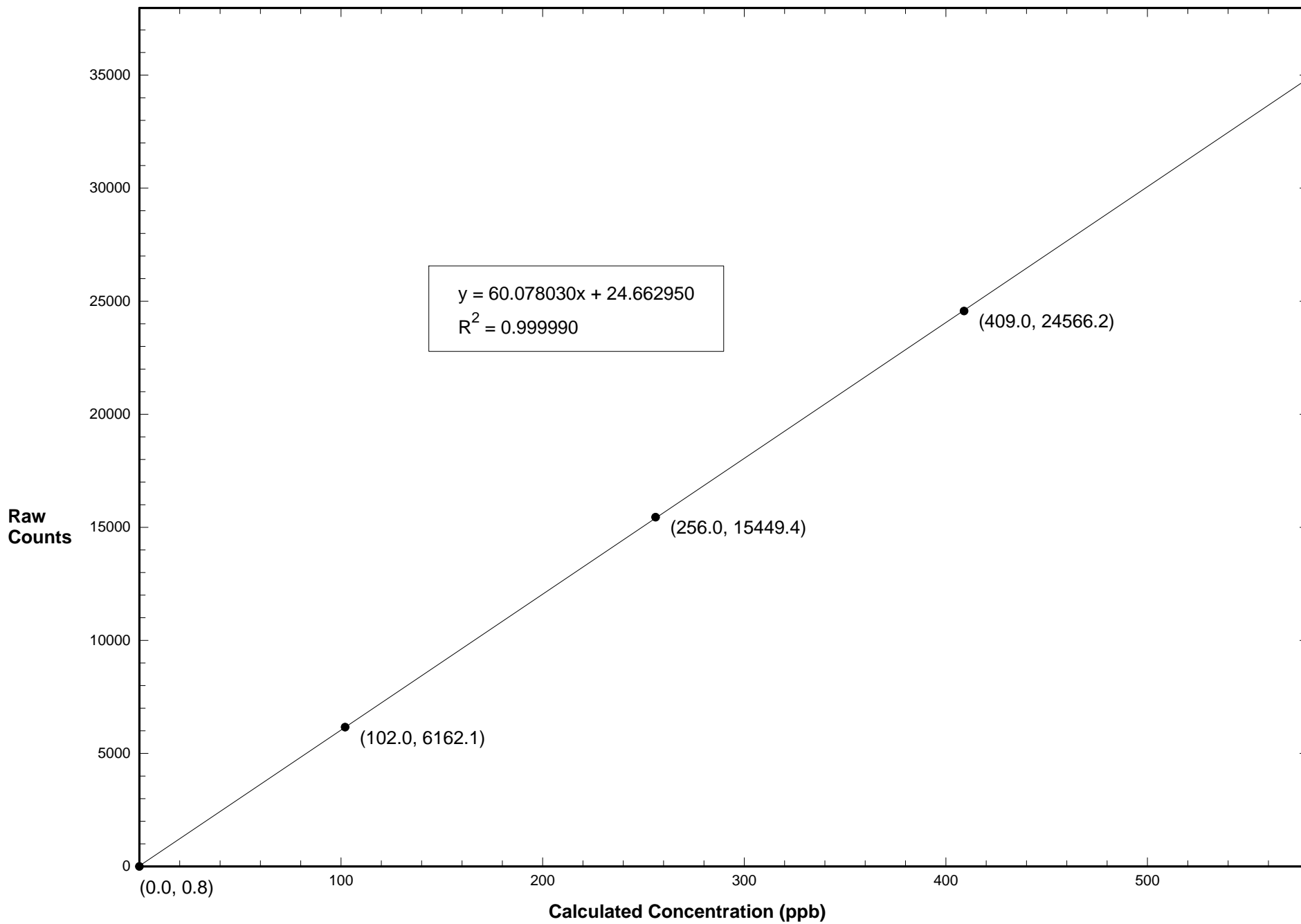
Results of Linear Regression

R _c vs C _c	Slope	Intercept	R ²
Previous	60.002850	67.963290	0.999956
Current	60.078040	24.662950	0.999990
C _i vs C _c			
Current	1.000000	-0.000039	0.999990

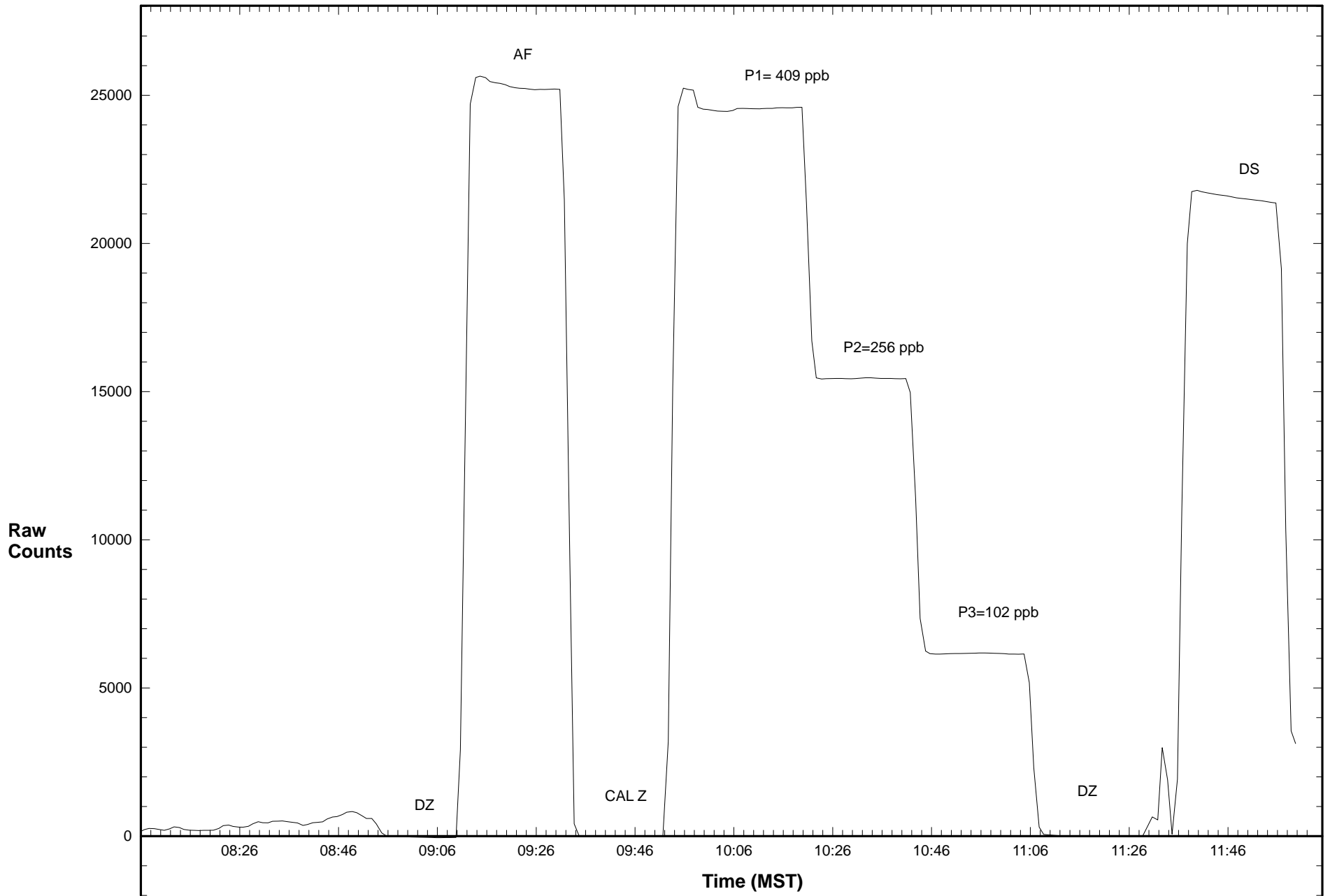
Average Correction Factor: 0.999
 Previous Correction Factor: 1.002
 Current Correction Factor: 1.001
 Percent Change of Correction Factor: -0.1

Comments:

Station 906 O3 April 13, 2016: Linear Regression



Station 906 O3 April 13, 2016: Calibration Graph



Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton
 Calibration Date: April 13, 2016
 Parameter: SO₂

Instrument: Teco 43i	Serial Number: CM 12499009	Previous Calibration Date: March 19,2015
Calibration: Routine	Calibration Equipment: SABIO 2010 sn# 05200311	Barometric Pressure: 26.53" Hg
Calibration Method: Standard Gas Dilution	Cylinder ID: FF 9469	Temperature: 21.7° 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	25.3	1.002	100 ppb
Current	26.1	1.007	100 ppb

Final Zero: 0.3 ppm Final Span: 66.7 ppm As Found Correction Factor: 1.043

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
0.0660	5.077	79.6	24042.8	79.9	0.996
0.0410	5.070	49.7	14786.8	49.4	1.007
0.0187	5.050	22.9	6636.2	22.5	1.018
0.0000	5.000	0.0	-51.3	0.4	

Results of Linear Regression			
R _c vs C _c	Slope	Intercept	R ²
Previous	300.036200	30.883620	0.999992
Current	303.113100	-177.858400	0.999836
C _i vs C _c			
Current	1.000000	0.000000	0.999836

Average Correction Factor: 1.007

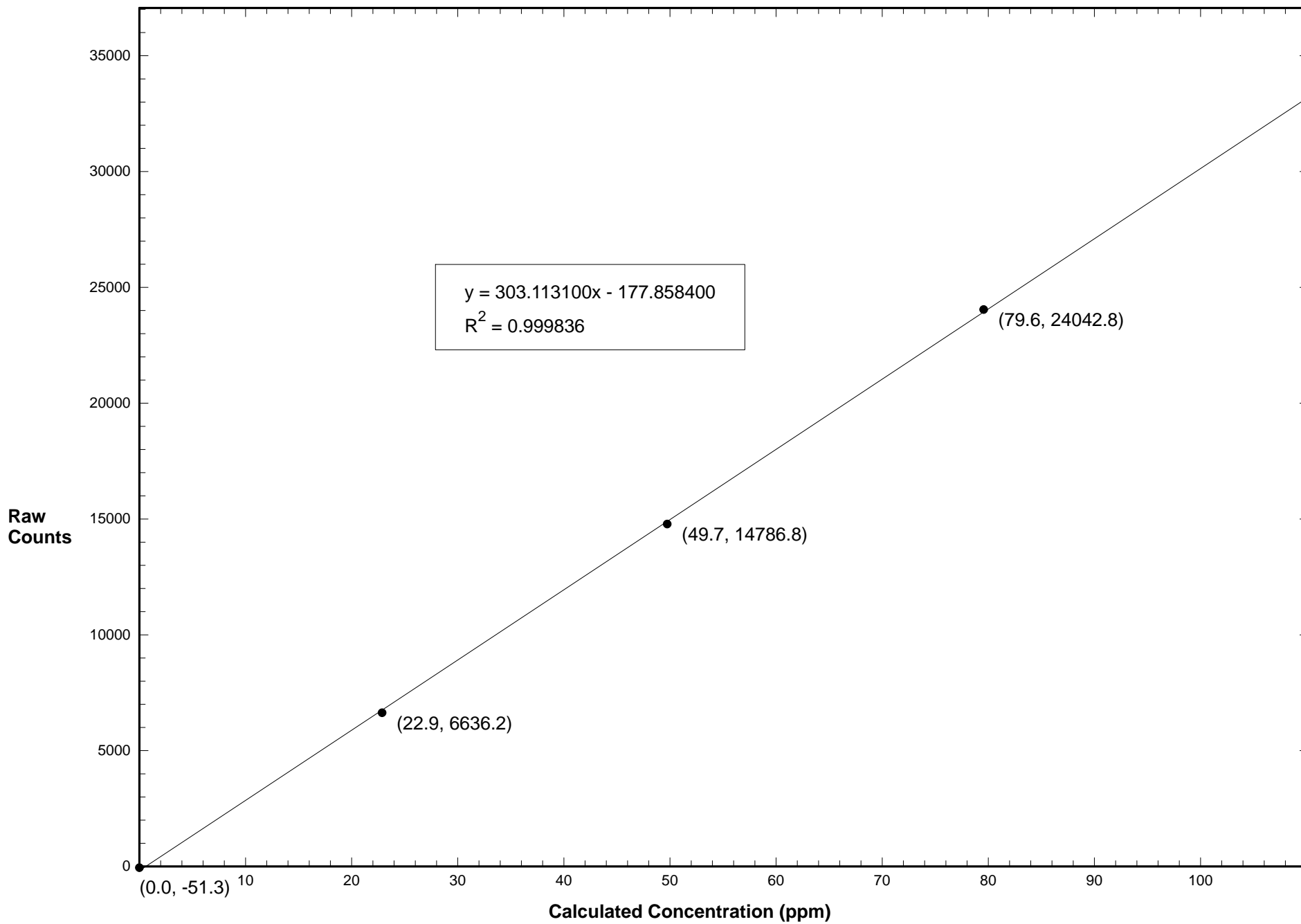
Previous Correction Factor: 0.999

Current Correction Factor: 0.996

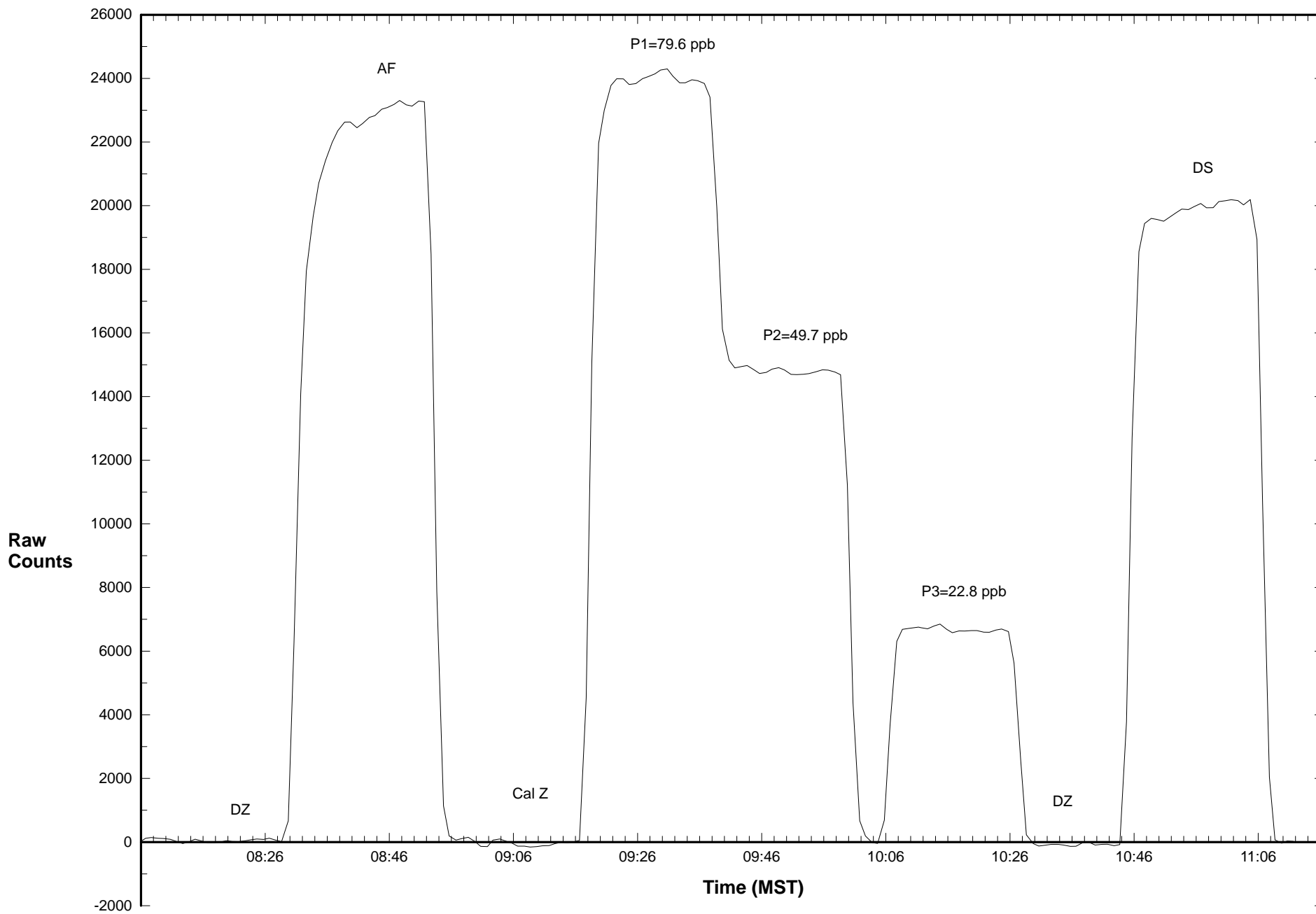
Percent Change of Correction Factor: -0.3

Comments:

Station 906 SO2 April 13, 2016: Linear Regression



Station 906 SO2 April 13, 2016: Calibration Graph



	<u>Station</u>		<u>Audit Transfer Standard</u>
Date:	April 13/2016	Make/Model:	Delta Cal
Station Name:	Hinton	Serial Number:	623
Location:	.Hinton	Cell s/n:	na
Operator:	WCAS		

	<u>Sampler</u>		<u>Set-up and current Sampler readings</u>
Make/Model	RP Teom	F-Main Set Pt (l/min)	3.00
Unit #	PM-10	F-Aux Set Pt (l/min)	13.67
Control unit s/n	140 ab 246720306	Filter Load (%)	30/18
Transducer s/n	140 ab 246720306	K _O Factor	14229
		Temp (°C)	13.8
		Press (ATM)	881

Conversion from mm Hg or " Hg to ATM (Atmospheres)
 ATM = (mm Hg) X (1.316 X 10⁻³) or ATM = ("Hg) X (3.34207 X 10⁻²)

Note: Tolerances are noted as BOLD in Brackets
Audit

Zero flow			
	Pump Off		Pump On (Time to reach set points)
F-Main (l/min)	0.11		(45-60 Sec) 20
F-Aux (l/min)	0.08		(45-60 Sec) 48
Temperature/Pressure			
Measured Temp (± 2 °C)	13.0	Δ°C	0.8
Measured Press (± 1.5% ATM)	881	Δ% ATM	1.0
Flow Audit			
Indicated Main/Aux Flow (l/min)	3.00 / 13.67	Δ% from Set-pt	(± 2%) 0 / 0
Total Flow = Main + Aux (l/min)	16.67	(± 2%)	0
Measured Total Flow (l/min)	16.92	(± 1.0 l/min. (5.65%))	0.25 l/min
Measured Main Flow (l/min)	2.96	(± 0.2 l/min. (6.25%))	0.04 l/min
Leak Check		Actual leakage = Pump On – Pump Off	
Main (< 0.15 l/min)	0.17	0.06	
Aux (< 0.65 l/min)	0.21	0.13	
K_O Factor			
Measured	_____		
K _O % Difference (± 2.5%)	_____		

Comments: _____

Auditor/s: J. McClintock _____

Calibration Data Summary

West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton
 Calibration Date: April 13, 2016
 Parameter: TRS

Instrument: Teco 43C	Serial Number: 43CTL - 60324 - 326	Previous Calibration Date: March 19,2015
Calibration: Routine	Calibration Equipment: SABIO 2010 sn# 05200311	Barometric Pressure: 26.53" Hg
Calibration Method: Standard Gas Dilution	Permeation Device ID: SV14360, 4.89 ppm H2S	Temperature: 25.0° C
Permeation Rate: 0 ng/min	In Service: Feb 5,2013	Technician: J. McClintock

Instrument Settings	Zero Pot	Span Pot	Monitoring Range
Previous	1.967	0.811	100 ppb
Current	1.81	0.797	100 ppb

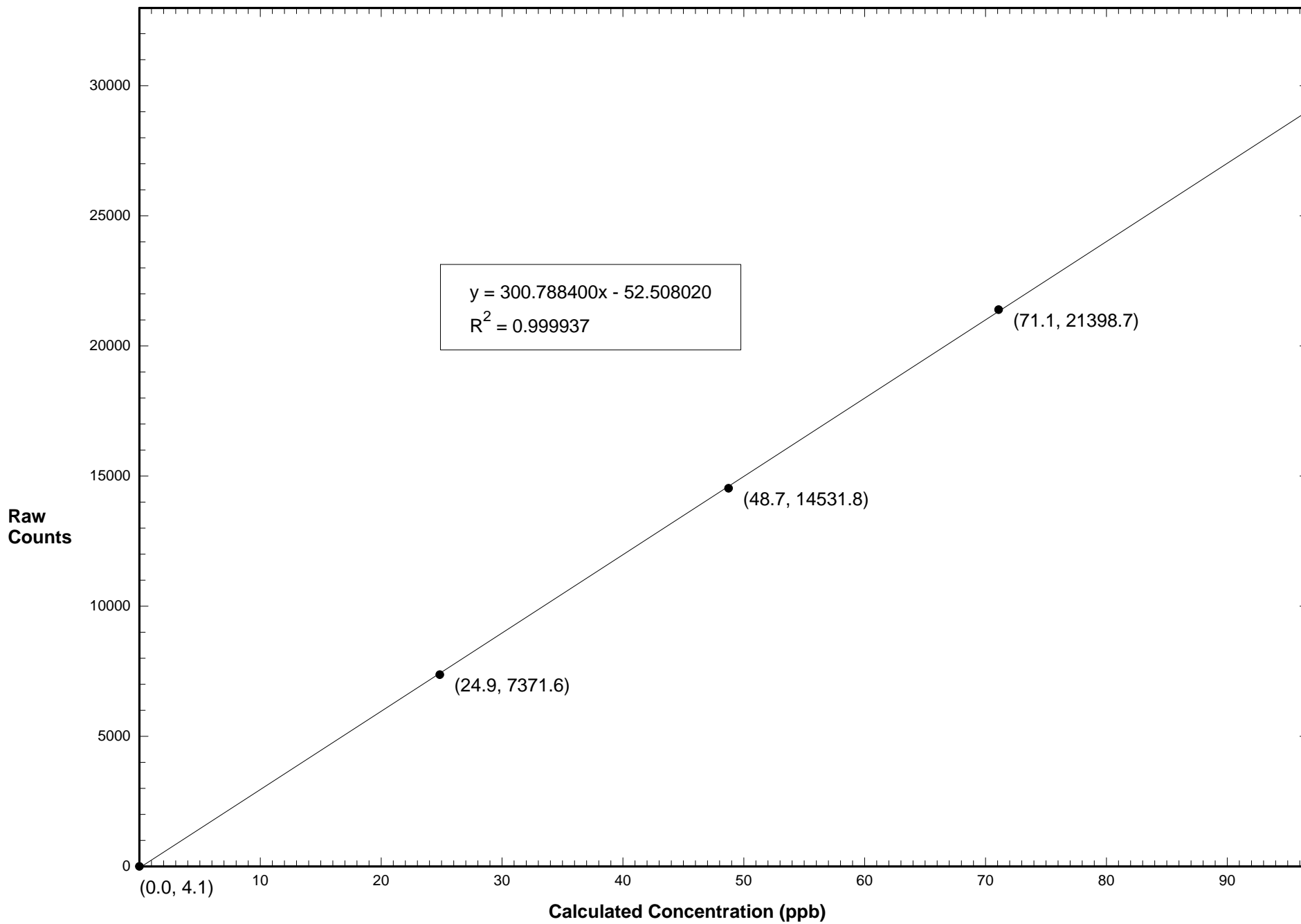
Final Zero: 0.2 ppb Final Span: 68.9 ppb As Found Correction Factor: 1.018

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	71.1	21398.7	71.3	0.997
0.051	48.7	14531.8	48.5	1.005
0.026	24.9	7371.6	24.7	1.007
0.000	0.0	4.1	0.2	

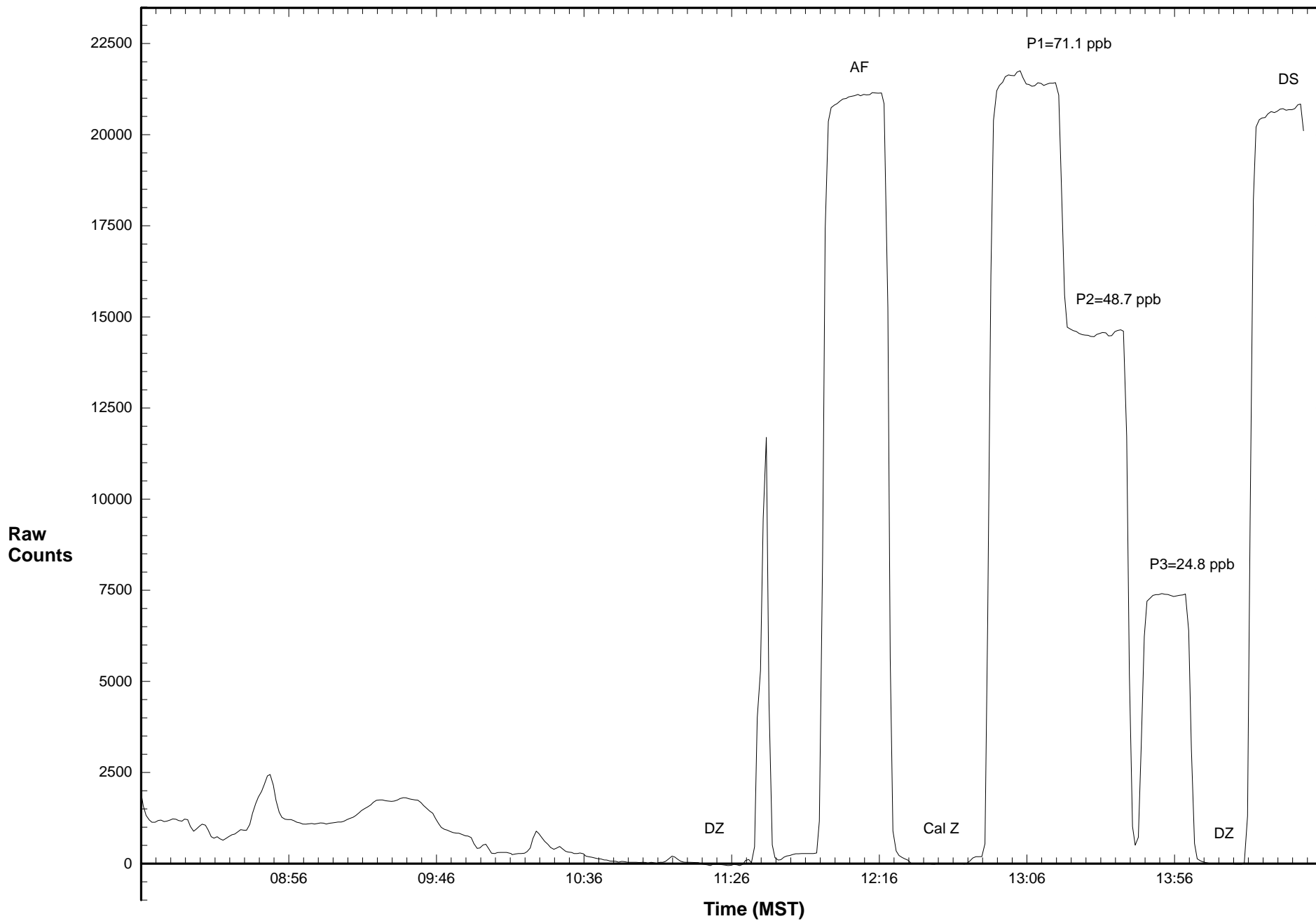
Results of Linear Regression				Average Correction Factor:	1.003
R _c vs C _c	Slope	Intercept	R ²	Previous Correction Factor:	1.002
Previous	302.570500	22.564190	0.999970	Current Correction Factor:	0.997
Current	300.788400	-52.508020	0.999937	Percent Change of Correction Factor:	-0.5
C _i vs C _c					
Current	1.000000	-0.000005	0.999936		

Comments:

Station 906 TRS April 13, 2016: Linear Regression



Station 906 TRS April 13, 2016: Calibration Graph



WEST CENTRAL AIRSHED SOCIETY

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

**AMS 906
HINTON
APRIL 2016**

Operations and Data Collection by:
West Central Airshed Society
Drayton Valley, Alberta

QA/QC, Data Validation and Reporting by:
West Central Airshed Society
Drayton Valley, Alberta



WCAS - Hinton
Summary of Hourly Averages

External Temperature (ET) - C
April 2016

Maximum Value: 25.34 C on Apr 19 17:00		Maximum Daily Average: 17.67 C on Apr 19		Hours in Service: 720																							
Minimum Value: -4.5 C on Apr 15 07:00		Minimum Daily Average: 3.84 C on Apr 14		Hours of Data: 720																							
Maximum Diurnal Average: 15.12 C at hour 16		Minimum Diurnal Average: 0.67 C at hour 7		Hours of Missing Data: 0																							
Monthly Average: 8.165 C		Percentiles: P₁ = -3.5 P₁₀ = -0.1 Q₁ = 3.5 Median = 7.6 Q₃ = 12.6 P₉₀ = 16.4 P₉₉ = 24.4		Hours of Calibration: 0																							
				Percent Operational Time: 100.0																							
Day	Hourly Period Ending At																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	2.0	0.7	0.1	-0.7	-1.0	-0.9	-1.5	-1.5	3.6	8.3	12.4	15.4	16.9	18.5	19.5	20.2	20.5	19.9	18.3	15.8	13.4	9.8	5.9	3.5	9.12	20.49	
2-Apr	1.9	1.8	5.8	8.2	7.1	4.3	3.0	3.5	11.6	15.9	15.6	15.7	16.7	16.4	16.9	15.9	15.6	14.4	13.1	10.8	9.0	7.9	5.9	3.4	10.02	16.91	
3-Apr	1.7	0.0	-1.2	-2.4	-2.7	-3.1	-3.6	-2.4	2.0	6.4	10.8	12.0	13.4	14.8	15.7	16.0	16.4	16.1	14.6	12.1	8.6	7.2	5.6	3.0	6.71	16.37	
4-Apr	2.1	2.5	2.3	2.6	2.4	1.7	0.9	1.3	2.1	3.1	4.8	7.4	9.2	10.7	12.4	10.5	8.8	6.4	5.4	5.0	4.2	4.2	3.2	1.7	4.80	12.44	
5-Apr	0.1	-0.6	-1.3	-2.0	-2.6	-3.0	-3.2	-1.7	1.9	6.6	7.4	8.2	8.8	9.4	8.9	8.5	8.8	8.8	8.2	7.7	7.4	7.5	7.0	6.2	4.45	9.39	
6-Apr	5.1	5.6	5.3	4.6	3.8	4.9	5.1	5.3	8.1	9.9	11.8	12.8	13.2	13.6	13.6	13.3	12.8	12.4	11.1	8.4	5.9	4.4	1.8	0.0	8.04	13.61	
7-Apr	-0.4	-0.3	-0.3	0.0	0.0	0.0	0.7	1.7	4.2	8.4	12.4	14.6	15.9	16.8	17.4	18.2	18.5	18.0	17.0	14.9	10.9	8.4	7.3	5.3	8.74	18.50	
8-Apr	4.6	4.2	3.3	1.6	0.6	0.3	0.1	0.8	2.7	6.0	12.3	16.4	20.3	22.3	22.6	22.0	20.7	19.9	17.4	12.1	6.9	7.5	7.1	6.0	9.90	22.58	
9-Apr	5.2	4.4	3.2	4.5	4.6	4.7	5.5	5.9	7.0	8.6	9.8	9.8	10.1	9.6	10.3	9.9	8.6	9.3	8.1	6.3	5.2	5.3	4.3	3.4	6.82	10.29	
10-Apr	2.6	0.8	-0.2	0.3	-1.4	-2.0	-1.4	-0.7	0.9	4.1	6.7	7.0	9.7	10.6	11.6	12.1	12.4	11.6	10.8	8.4	6.7	5.2	3.6	2.1	5.06	12.38	
11-Apr	-0.2	-1.5	-2.5	-3.2	-3.5	-3.9	-3.5	-1.5	2.2	7.6	11.5	13.5	15.5	15.0	12.9	10.4	11.9	12.5	12.6	10.4	9.4	7.6	4.6	2.5	5.86	15.54	
12-Apr	0.9	-0.7	-1.8	-2.2	-2.7	-3.0	-2.9	-1.3	1.2	5.5	8.3	9.4	10.6	12.8	15.0	15.6	13.8	12.8	11.8	10.7	9.3	8.2	7.5	6.8	6.06	15.59	
13-Apr	5.6	3.0	1.7	0.2	-1.4	-1.8	-1.9	-0.4	5.4	7.9	10.0	11.1	11.2	11.4	12.3	11.5	11.0	11.2	10.1	9.2	6.8	3.9	1.6	-0.3	5.81	12.31	
14-Apr	-1.5	-2.1	-1.6	-2.3	-3.1	-3.7	-3.4	-2.1	0.6	4.5	6.5	7.3	8.4	9.1	10.3	10.2	10.7	10.0	9.5	8.4	5.3	4.3	3.5	3.4	3.84	10.68	
15-Apr	1.8	-1.0	-2.4	-3.2	-3.8	-4.4	-4.5	-0.9	1.7	5.3	9.2	12.6	14.2	15.1	15.9	16.0	14.4	13.7	12.8	11.6	10.7	9.4	8.5	7.9	6.70	15.95	
16-Apr	7.4	7.3	6.7	6.2	4.6	2.5	1.6	4.9	7.4	10.2	12.6	13.7	15.0	15.9	16.8	17.5	16.8	14.5	13.5	12.9	12.4	11.1	10.8	10.5	10.53	17.48	
17-Apr	10.4	9.8	5.9	4.5	3.8	3.7	3.7	4.5	7.0	10.6	13.9	16.2	18.4	20.3	21.4	22.5	22.5	22.1	20.6	18.3	16.1	12.0	8.4	6.8	12.64	22.51	
18-Apr	5.0	3.7	3.2	4.3	5.4	4.1	4.1	7.3	11.7	14.6	18.0	21.5	24.3	24.9	24.8	24.8	24.4	23.6	24.0	22.8	20.4	19.6	18.5	15.0	15.40	24.94	
19-Apr	16.7	16.3	16.4	14.8	11.4	10.2	7.2	8.4	12.2	18.4	21.1	22.0	22.6	23.9	24.4	25.3	25.3	24.5	22.4	20.2	17.7	16.5	14.3	11.9	17.67	25.34	
20-Apr	9.2	6.3	4.2	2.1	0.4	-1.0	-0.7	3.0	6.7	10.3	12.6	13.7	14.9	15.7	17.0	17.8	18.2	18.1	17.0	14.4	11.5	10.0	8.7	7.3	9.89	18.19	
21-Apr	5.7	3.8	1.6	0.7	-0.3	-1.5	-1.1	1.6	4.1	6.6	9.3	11.9	12.6	14.3	14.7	13.4	11.3	8.2	8.0	8.1	6.6	5.8	5.4	4.3	6.46	14.73	
22-Apr	3.8	4.2	4.2	3.1	2.5	2.1	2.2	3.6	5.3	6.6	6.9	8.7	10.1	11.2	12.4	13.1	12.9	11.8	10.1	9.3	8.8	7.1	6.0	4.0	7.08	13.09	
23-Apr	3.2	3.0	2.8	2.6	2.2	2.1	2.0	2.7	4.2	4.9	6.7	9.3	11.7	13.5	14.7	15.9	16.4	15.8	14.8	12.7	10.7	8.4	6.5	5.6	8.01	16.39	
24-Apr	4.6	3.9	3.3	2.9	2.5	2.4	2.7	3.0	3.5	4.0	4.2	5.9	6.7	8.4	9.0	8.2	7.7	7.1	6.6	5.8	4.5	4.0	3.6	3.5	4.92	8.96	
25-Apr	3.3	3.3	3.4	3.5	3.7	3.5	3.6	4.2	5.1	6.5	8.7	9.7	10.5	9.6	9.2	10.8	10.9	10.6	10.1	9.4	7.7	7.1	5.9	5.3	6.90	10.91	
26-Apr	5.3	3.6	2.3	1.6	1.4	1.0	1.2	2.0	5.3	8.4	10.7	11.4	12.6	12.8	13.5	15.0	14.8	15.8	14.0	11.6	8.6	5.7	4.8	4.7	7.84	15.81	
27-Apr	4.5	3.8	2.3	0.5	-0.9	-1.7	-1.0	3.1	6.6	9.7	13.1	15.5	16.8	16.0	15.8	15.4	15.8	15.8	15.6	13.8	11.0	10.3	8.9	7.8	9.11	16.83	
28-Apr	6.4	4.6	2.8	0.7	-0.3	-1.6	-1.1	2.4	6.1	8.6	11.5	14.3	16.1	16.0	15.9	15.8	15.8	16.5	16.2	14.9	13.8	12.4	10.7	8.5	9.47	16.53	
29-Apr	6.2	4.0	2.2	0.9	0.6	0.3	0.9	2.8	5.0	9.4	11.8	13.5	13.8	12.7	11.7	11.2	10.9	9.9	8.3	7.9	7.3	6.8	6.7	6.3	7.12	13.82	
30-Apr	6.3	6.2	6.1	5.8	5.7	5.3	5.4	5.8	7.3	9.3	10.5	12.0	12.2	13.9	14.6	16.5	17.0	17.1	16.4	15.4	12.5	8.8	6.1	3.5	9.98	17.08	
		4.31	3.35	2.59	2.01	1.31	0.72	0.67	2.17	5.08	8.21	10.70	12.42	13.76	14.51	15.04	15.12	14.85	14.28	13.27	11.65	9.64	8.21	6.76	5.33	Diurnal Average	
		16.73	16.31	16.37	14.85	11.44	10.17	7.23	8.37	12.20	18.38	21.08	22.04	24.28	24.94	24.75	25.30	25.34	24.46	23.97	22.75	20.41	19.61	18.48	14.99	Diurnal Maximum	



WCAS - Hinton
Summary of Hourly Averages

Wind Speed (WS) - kph
April 2016

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1 Spd	1.0	0.5	1.3	2.1	1.7	1.3	0.5	0.8	2.0	3.3	3.7	6.2	11.0	10.7	9.7	7.8	9.6	11.6	7.7	4.4	3.7	2.1	0.4	0.5	3.99	11.60	
Dir	SW	SSW	WSW	W	W	WSW	WSW	W	WNW	WNW	WSW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	W	NNE	NE	SW	SW	
2 Spd	0.4	0.4	3.3	5.2	4.6	1.8	0.5	0.9	3.5	9.2	13.0	11.8	6.0	7.1	5.9	8.4	8.9	10.4	6.8	4.3	4.5	1.0	2.4	2.0	4.01	12.98	
Dir	E	WNW	W	SW	SW	W	NW	NW	SW	SW	SW	SW	WSW	WNW	WNW	WNW	WNW	NW	NW	NW	NW	SSE	SSW	SSE	W	SW	
3 Spd	0.9	0.8	0.3	0.2	1.2	0.4	0.9	0.5	1.4	2.2	0.3	3.0	3.3	3.1	0.5	1.3	2.3	3.8	7.8	2.2	3.2	3.0	2.8	2.0	1.00	7.81	
Dir	SSE	SSE	WSW	NE	SW	SSE	ENE	WSW	SSW	WSW	NNE	S	S	SW	NNE	ESE	SE	SW	SW	SW	E	ESE	E	ENE	S	SW	
4 Spd	2.5	3.0	3.6	5.2	4.4	3.1	1.2	0.8	2.3	1.8	0.9	3.5	2.7	4.3	5.7	6.4	6.2	1.5	3.1	2.3	0.9	1.9	0.7	0.1	2.18	6.44	
Dir	ENE	ENE	ENE	ENE	ENE	E	ENE	NE	ENE	ENE	NNW	ENE	NNE	ENE	NE	NE	ENE	NW	S	N	WNW	SW	SSW	SE	ENE	NE	
5 Spd	0.3	0.4	0.3	0.2	0.1	0.8	0.7	1.9	1.0	4.8	9.5	14.1	12.2	14.8	12.5	9.3	11.8	13.7	9.3	11.1	11.5	8.7	3.9	2.5	6.11	14.82	
Dir	W	WSW	S	SSE	ENE	E	ESE	ENE	NW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	W	W	WSW	WSW	
6 Spd	3.3	4.4	2.4	2.0	3.4	6.4	3.7	2.6	4.1	6.8	7.1	6.7	9.6	9.9	9.9	9.1	11.3	8.8	6.0	3.2	1.0	1.5	1.0	0.7	4.60	11.27	
Dir	WSW	WNW	W	SW	S	SW	SW	SW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	W	SW	SE	ENE	W	WNW	
7 Spd	0.6	0.6	0.8	1.0	1.1	0.9	0.7	1.1	0.8	1.3	3.9	11.1	9.7	6.3	11.3	7.9	5.6	7.6	7.6	4.6	0.2	2.7	2.5	2.8	2.49	11.33	
Dir	E	E	NE	ENE	ENE	E	ENE	ENE	NE	NNW	W	SW	SW	SW	SW	SW	SW	SW	SW	SW	N	ENE	NE	ENE	SW	SW	
8 Spd	5.3	3.8	5.2	3.4	1.5	1.8	2.1	4.6	4.6	3.3	0.9	8.0	6.4	9.8	11.6	11.1	12.6	14.6	10.1	13.5	3.8	3.4	5.8	4.7	2.20	14.60	
Dir	ENE	ENE	ENE	NE	NE	ENE	ENE	ENE	ENE	ENE	SSE	SSE	WSW	WSW	SW	SW	SW	WSW	W	NW	NNW	W	NW	WNW	WSW	WSW	
9 Spd	4.1	1.8	0.5	1.4	1.5	3.1	3.5	4.2	0.5	3.3	5.7	7.9	6.8	6.7	6.9	6.3	5.9	6.1	5.6	4.4	1.7	2.5	0.9	0.5	2.92	7.88	
Dir	NW	SSW	W	SSE	ENE	NW	WNW	SW	WNW	N	NNW	NNW	NNW	N	N	N	NNW	N	NNW	NNW	SW	WNW	WNW	WNW	NNW	NNW	
10 Spd	1.3	1.4	1.1	0.7	0.8	0.2	2.0	2.6	0.9	1.6	1.4	1.7	4.1	5.4	6.6	4.8	4.7	8.6	8.1	5.4	5.0	5.3	4.0	2.7	2.73	8.61	
Dir	NNE	ENE	ESE	ENE	ENE	W	ENE	ENE	NE	W	SW	N	ENE	NE	NE	E	ESE	SE	ENE	NE	ENE	ENE	ENE	E	ENE	SE	
11 Spd	1.6	1.1	0.7	0.0	1.0	1.1	2.1	1.1	1.6	2.7	3.3	6.3	5.0	7.2	10.9	3.4	3.7	0.3	5.3	2.1	2.0	2.1	2.3	2.1	2.20	10.86	
Dir	ENE	ENE	WSW	SE	SW	WSW	WSW	W	WNW	WNW	WNW	SW	WSW	WSW	SW	WNW	NNW	ENE	WSW	W	WSW	SSW	SSW	SSW	WSW	SW	
12 Spd	0.8	0.6	0.2	0.6	0.0	0.1	0.3	0.1	0.7	0.4	2.1	4.3	1.0	4.1	3.3	11.6	16.6	14.9	11.2	11.5	6.4	6.3	2.8	3.2	3.73	16.61	
Dir	SSE	ESE	SSE	SW	S	NNW	N	NW	N	NW	SW	SW	WNW	ENE	W	WSW	SW	SW	SW	SW	SW	SW	SW	SW	SW	SW	
13 Spd	2.8	0.9	1.1	0.7	0.8	2.0	1.3	0.6	5.2	9.2	11.7	7.5	4.6	5.3	5.4	8.8	10.0	6.1	3.3	2.3	0.6	0.6	1.1	1.4	3.27	11.73	
Dir	SW	SE	E	SE	SSW	SW	WSW	NE	WSW	WSW	SW	SW	WSW	NNW	WSW	SW	SW	WSW	WSW	WNW	SSE	SSE	SSW	WSW	WSW	WSW	
14 Spd	1.8	1.5	2.3	1.8	1.0	0.3	0.4	0.9	2.4	5.1	4.7	4.5	4.8	4.3	3.7	6.5	4.6	8.1	9.5	5.9	2.4	2.2	1.0	2.3	2.15	9.51	
Dir	SW	WSW	WSW	SW	WSW	S	E	NNE	ENE	ENE	ENE	NE	NE	NE	ENE	ESE	ENE	SE	SE	SE	NE	ESE	E	E	E	SE	
15 Spd	1.4	0.9	0.6	0.2	0.4	0.6	1.4	0.4	1.7	1.4	1.8	6.7	10.9	11.3	6.2	6.9	9.4	7.2	8.5	5.5	8.4	6.9	6.0	7.1	4.29	11.30	
Dir	ESE	E	E	N	ENE	WSW	W	S	NW	W	W	WSW	SW	SW	WSW	WSW	SW	SW	SW	WSW	SW	SW	SW	SW	SW	SW	
16 Spd	3.0	8.1	6.0	2.4	1.3	0.8	0.5	0.2	2.6	3.2	5.7	5.3	5.5	5.3	6.2	5.6	4.9	3.6	5.3	6.7	5.2	0.8	5.3	4.3	3.50	8.13	
Dir	SW	SSW	SW	WSW	WSW	WSW	ENE	W	WNW	W	SW	W	WNW	W	WNW	W	W	W	WSW	SW	SW	SSW	S	SW	WSW	SSW	
17 Spd	4.0	1.0	2.2	2.2	0.5	1.7	1.1	1.5	0.5	1.0	0.9	3.2	5.7	4.4	4.4	4.8	4.2	4.2	2.5	2.3	2.9	1.2	0.6	1.0	1.30	5.66	
Dir	WSW	W	ENE	ENE	NE	ENE	ENE	NE	ENE	SSW	NNE	SW	SW	WSW	WSW	WNW	WNW	WNW	WNW	WSW	SW	W	N	S	W	SW	
18 Spd	0.5	1.7	1.3	0.7	1.6	1.5	1.8	3.2	3.1	3.6	3.6	5.0	6.6	4.2	3.8	4.5	4.8	4.6	8.2	8.2	3.5	5.7	1.6	4.1	2.86	8.25	
Dir	NNW	NW	E	WSW	NW	WNW	NW	WNW	W	W	WSW	SW	SW	WSW	W	SSW	SW	SW	SW	SW	W	SW	SSW	SE	WSW	SW	
19 Spd	8.4	8.8	10.8	6.6	3.0	4.4	0.9	0.5	0.5	2.2	10.1	12.7	12.7	11.3	12.0	7.6	5.8	4.2	4.3	4.7	2.3	4.4	1.6	1.5	4.25	12.72	
Dir	SSE	S	SSW	SSW	WSW	SW	NE	SW	SE	SW	SW	SW	SW	SW	SW	WSW	WSW	W	WNW	NW	ENE	ENE	N	ENE	SW	SW	
20 Spd	1.0	1.3	1.1	0.6	0.2	1.2	0.3	1.1	1.8	5.1	5.3	5.9	4.6	6.0	7.2	7.4	7.5	7.7	8.2	4.8	2.5	5.0	6.1	4.4	3.35	8.18	
Dir	S	S	SSW	E	WSW	E	ESE	ENE	NE	NE	NE	NE	E	ESE	ESE	ESE	E	ENE	ENE	NE	NE	ENE	ENE	ENE	E	ENE	
21 Spd	5.9	2.4	3.8	4.5	3.0	2.2	3.7	7.0	4.8	2.7	5.4	5.9	7.1	7.9	7.9	8.7	6.0	4.7	2.7	2.3	0.7	0.1	1.6	1.2	3.97	8.66	
Dir	ENE	E	ENE	ENE	E	ENE	ENE	ENE	ENE	ENE	NE	NE	NE	NE	NE	ENE	ESE	E	N	ENE	SE	WSW	E	E	ENE	ENE	
22 Spd	1.1	1.6	2.1	1.9	2.1	2.6	1.9	6.4	5.9	5.9	10.3	8.8	8.2	9.4	7.8	9.5	9.6	10.5	7.7	6.0	7.7	6.7	5.3	5.0	5.57	10.53	
Dir	ENE	SE	ESE	SE	ESE	E	ESE	ENE	ENE	ENE	SE	SE	ESE	ESE	E	E	E	E	E	ENE	ENE	E	E	E	NE	E	E



WCAS - Hinton
Summary of Hourly Averages

Wind Speed (WS) - kph
April 2016

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
23 Spd	7.9	6.2	6.5	6.5	5.3	5.6	5.2	4.4	4.2	3.3	4.7	5.3	5.6	6.8	8.6	11.2	11.2	8.2	8.6	9.9	8.6	7.8	8.3	7.2	6.52	11.20	
Dir	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	ENE	E	E	ESE	ESE	ESE	E	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ESE
24 Spd	7.5	7.1	4.3	4.0	3.6	4.7	3.9	3.9	3.9	4.5	5.3	5.6	7.1	7.0	7.3	7.2	6.6	4.0	5.3	4.0	4.0	2.1	2.3	2.5	4.67	7.54	
Dir	ENE	ENE	ESE	ESE	ENE	E	E	ENE	E	ENE	ESE	ENE	ENE	NE	NE	ENE	ENE	NNE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	
25 Spd	1.9	0.4	0.8	0.7	1.4	0.7	1.1	1.5	0.7	2.0	2.2	0.4	1.2	7.0	9.7	4.7	4.1	1.3	2.5	5.5	2.1	1.8	1.6	2.5	0.85	9.67	
Dir	ENE	NNW	WSW	WNW	SW	NW	W	WNW	NNW	E	NNE	NNW	WNW	SW	SW	SW	SW	W	SE	ESE	ENE	ESE	E	ESE	SSW	SW	
26 Spd	3.1	1.5	2.6	1.4	2.5	0.6	0.7	1.7	1.7	1.7	2.0	3.0	1.9	0.9	3.3	0.3	1.6	3.4	4.6	2.0	1.9	1.3	1.2	1.3	0.41	4.56	
Dir	SSE	WSW	WSW	SW	SSW	WSW	W	WNW	WNW	SW	S	SSW	NNE	E	SSW	SW	ESE	NE	ENE	ENE	E	ENE	ENE	ENE	SSE	ENE	
27 Spd	1.5	0.8	0.2	0.3	0.2	0.3	1.5	0.6	0.9	2.4	5.5	7.7	7.8	6.9	9.0	5.3	1.1	7.3	5.5	2.4	2.3	4.2	2.3	3.3	2.50	9.02	
Dir	E	WNW	NE	NW	N	NW	WNW	NNW	NW	NE	ENE	SE	ESE	SE	SE	S	SSE	ESE	SE	E	E	ESE	ENE	E	ESE	SE	
28 Spd	2.9	1.4	1.3	0.9	1.1	0.3	0.3	0.1	3.0	3.6	2.9	5.9	6.7	8.0	8.3	7.5	6.6	7.8	7.6	7.3	10.1	3.0	2.2	3.9	3.70	10.15	
Dir	E	E	ESE	W	SSW	SSW	NE	W	E	ESE	NE	NE	NE	ESE	SE	ESE	ESE	ESE	ESE	ESE	ESE	ENE	E	ENE	E	ESE	
29 Spd	1.0	0.3	0.6	0.5	0.5	0.4	1.4	1.3	1.4	2.7	3.6	1.0	1.1	6.5	9.0	5.7	4.1	3.9	2.0	2.1	1.2	3.9	2.4	3.8	1.05	9.04	
Dir	E	S	WSW	W	WSW	WNW	ENE	NE	NE	E	SSW	SW	NW	E	SE	E	E	ENE	SW	SW	WSW	SW	SW	SSW	SE	SE	
30 Spd	3.7	4.6	5.5	2.9	2.2	3.9	1.3	1.2	1.6	3.0	3.1	3.5	6.3	7.8	7.6	2.4	5.3	5.3	4.6	5.3	1.9	1.0	0.9	0.3	3.32	7.76	
Dir	SW	SW	SW	SW	SW	SW	WSW	WSW	WNW	SW	S	W	SSW	SSW	SSW	W	SW	SW	WSW	SW	WSW	SW	SW	ESE	SW	SSW	
Spd	0.94	0.57	0.67	0.45	0.23	0.15	0.34	0.77	0.60	0.44	1.33	2.18	1.83	1.70	2.39	1.57	1.88	1.88	1.58	0.90	0.33	0.72	0.60	0.82	Diurnal Average		
Dir	ESE	SSE	SSE	SSE	SSE	S	NE	NE	NNE	WNW	SW	SW	SW	SW	SW	SSW	SW	SW	SW	WSW	SSE	SSE	E	ESE	Diurnal Maximum		
Spd	8.36	8.84	10.78	6.60	5.34	6.44	5.24	6.96	5.90	9.18	12.98	14.06	12.72	14.82	12.46	11.61	16.61	14.87	11.23	13.47	11.53	8.70	8.28	7.24	Diurnal Maximum		
Dir	150.08	184.43	204.85	211.29	57.43	231.71	61.72	68.36	58.34	233.60	235.82	240.17	230.51	241.44	244.88	246.20	231.86	229.76	232.39	324.21	239.36	242.23	64.01	62.40	Diurnal Maximum		
Maximum Speed Value: 16.6 kph on Apr 12 17:00		Minimum Speed Value: 0.0 kph on Apr 12 05:00										Hours in Service: 720															
Maximum Daily Speed Average: 6.52 kph on Apr 23		Minimum Daily Speed Average: 0.41 kph on Apr 26										Hours of Data: 720															
Maximum Diurnal Speed Average: 2.39 kph at hour 15		Minimum Diurnal Speed Average: 0.15 kph at hour 6										Hours of Missing Data: 0															
Monthly Average Velocity: 0.673 kph 207.90 deg		Speed Percentiles: P ₁ = 0.1 P ₁₀ = 0.6 Q ₁ = 1.4 Median = 3.3 Q ₃ = 6.0 P ₉₀ = 8.7 P ₉₉ = 13.3										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	19	7	0	0	0	0	26																				
NorthEast	78	34	0	0	0	0	112																				
East	98	47	0	0	0	0	145																				
SouthEast	32	22	2	0	0	0	56																				
South	30	4	0	0	0	0	34																				
SouthWest	85	68	28	0	0	0	181																				
West	89	22	0	0	0	0	111																				
NorthWest	43	10	2	0	0	0	55																				
Total	474	214	32	0	0	0	720																				



WCAS - Hinton
Summary of Hourly Averages

Relative Humidity (RH) - %
April 2016

Maximum Value: 91.58 % on Apr 5 06:00 Maximum Daily Average: 75.76 % on Apr 25 Minimum Value: 7.9 % on Apr 3 18:00 Minimum Daily Average: 23.74 % on Apr 19 Maximum Diurnal Average: 74.78 % at hour 7 Minimum Diurnal Average: 25.66 % at hour 15 Monthly Average: 48.523 % Percentiles: P ₁ = 8.6 P ₁₀ = 16.8 Q ₁ = 26.8 Median = 49.0 Q ₃ = 67.8 P ₉₀ = 81.3 P ₉₉ = 90.9																								Hours in Service:	720																								
																								Hours of Data:	720																								
																								Hours of Missing Data:	0																								
																								Hours of Calibration:	0																								
																								Percent Operational Time:	100.0																								
Day	Hourly Period Ending At																								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-Apr	69.2	73.5	76.6	79.6	83.0	83.3	83.4	84.8	69.3	49.1	35.8	25.8	20.5	18.2	16.5	15.9	14.8	14.1	17.0	20.4	25.6	35.9	49.9	58.2	46.67	84.78																							
2-Apr	64.7	66.6	54.3	45.1	48.7	59.4	63.7	65.2	39.7	26.8	26.5	25.8	24.3	22.6	20.7	19.8	20.4	22.5	25.5	30.9	32.2	35.3	43.4	52.8	39.04	66.62																							
3-Apr	58.6	64.0	69.1	74.3	75.6	77.0	77.7	76.7	63.7	45.3	26.7	21.1	16.9	13.7	10.9	9.5	8.6	7.9	9.4	16.9	25.1	29.6	37.1	46.7	40.09	77.66																							
4-Apr	51.2	52.2	56.5	59.2	63.1	66.2	70.2	71.4	67.6	63.3	55.0	45.6	42.4	39.8	38.1	44.3	50.7	73.0	83.0	86.2	81.2	81.3	87.0	88.3	63.20	88.31																							
5-Apr	89.5	90.6	91.2	91.5	91.6	91.6	91.5	91.4	88.5	52.3	40.6	36.4	33.4	28.2	28.6	30.1	30.8	32.7	36.2	39.0	39.0	39.7	41.7	44.0	57.08	91.58																							
6-Apr	54.0	56.1	59.3	61.9	65.3	58.5	52.9	51.1	36.7	24.2	20.8	18.6	15.9	13.6	12.6	14.1	14.9	17.0	20.6	26.0	32.0	39.0	50.9	58.7	36.43	65.30																							
7-Apr	61.5	64.1	66.9	66.7	66.5	67.8	67.5	67.1	62.2	47.9	33.4	25.6	22.8	21.4	19.5	17.9	16.4	15.5	16.5	20.2	31.5	42.6	47.5	54.3	42.64	67.83																							
8-Apr	59.0	60.3	62.9	69.8	74.4	75.8	76.5	73.6	67.3	55.8	37.4	24.7	19.0	13.7	10.6	11.1	14.0	15.2	20.0	47.5	83.9	72.1	64.8	64.6	48.91	83.91																							
9-Apr	59.4	57.4	61.3	55.9	58.8	56.5	52.1	51.0	49.8	41.3	36.7	36.8	37.6	41.9	41.6	43.0	49.7	44.0	46.3	53.7	59.1	59.8	66.5	70.1	51.25	70.06																							
10-Apr	72.9	77.5	79.5	77.2	79.9	84.0	83.9	79.5	69.1	58.1	47.3	40.7	31.5	29.1	27.5	25.4	24.1	25.6	27.5	35.3	41.0	44.6	49.7	54.8	52.73	84.01																							
11-Apr	63.1	68.8	73.2	75.8	78.1	79.8	80.2	75.0	62.1	44.7	32.4	25.3	21.2	23.7	36.0	56.7	51.5	44.9	37.2	42.9	46.0	52.1	61.3	67.6	54.15	80.18																							
12-Apr	72.9	78.4	82.8	84.8	85.5	86.5	87.1	86.2	82.0	61.9	50.5	43.2	39.0	31.5	20.1	14.2	15.3	16.1	19.2	21.8	25.3	28.1	30.3	32.0	49.77	87.07																							
13-Apr	37.4	50.8	58.7	66.0	70.3	71.7	73.2	68.0	46.5	26.9	19.2	16.5	15.1	16.3	10.3	10.2	10.7	11.9	16.1	18.5	23.2	33.4	44.2	50.3	36.06	73.16																							
14-Apr	57.2	59.6	57.9	60.6	63.3	67.3	68.3	66.1	55.2	48.4	45.0	40.0	35.3	30.3	26.5	25.3	24.2	26.3	28.0	31.0	43.5	48.1	52.3	50.8	46.27	68.32																							
15-Apr	55.8	66.5	72.4	76.4	78.7	80.0	82.2	71.6	61.3	48.9	36.4	22.7	16.8	15.4	14.4	13.5	14.7	17.2	20.1	23.9	30.1	40.7	45.2	49.6	43.95	82.21																							
16-Apr	52.8	55.8	59.1	62.4	69.0	75.1	78.2	65.4	59.2	45.9	27.8	22.1	20.0	19.1	17.9	16.5	16.5	20.5	21.5	21.3	22.5	26.5	27.0	27.9	38.74	78.18																							
17-Apr	29.1	34.6	48.9	54.4	60.2	63.2	63.8	63.0	56.7	44.7	35.5	27.2	22.6	19.7	18.1	16.9	16.8	16.9	20.1	24.0	27.5	41.8	55.0	59.9	38.35	63.76																							
18-Apr	65.6	70.0	71.0	66.9	61.2	67.1	66.4	56.8	41.2	31.2	23.4	16.3	10.4	9.7	10.2	9.2	8.7	8.7	7.9	8.5	12.0	13.3	16.8	23.5	32.33	71.02																							
19-Apr	20.9	22.3	22.4	25.8	35.7	41.1	53.8	55.5	44.5	25.4	16.6	14.0	12.6	10.1	9.4	8.7	8.4	9.1	10.4	13.6	18.9	25.5	29.4	35.7	23.74	55.46																							
20-Apr	43.3	48.1	52.3	58.6	62.1	65.8	64.9	49.8	36.6	21.8	18.0	15.3	13.1	12.4	11.9	12.5	12.4	13.1	15.0	20.0	25.5	27.9	34.9	38.0	32.22	65.80																							
21-Apr	42.8	49.7	57.8	61.7	65.0	69.4	70.5	59.0	50.3	43.0	37.1	31.3	30.6	27.7	26.8	28.7	44.0	71.8	78.8	71.1	77.3	81.1	81.8	83.1	55.85	83.10																							
22-Apr	84.3	77.5	71.0	73.7	74.4	73.1	71.0	63.6	57.8	50.9	48.6	43.8	39.9	38.2	35.9	34.8	36.2	40.5	46.0	47.5	47.1	56.8	63.6	76.3	56.35	84.27																							
23-Apr	78.0	75.8	73.9	74.1	74.7	74.1	73.4	70.9	65.0	63.2	59.2	52.2	45.6	42.0	39.1	36.0	34.0	34.2	36.3	39.4	42.5	49.5	57.4	62.1	56.36	78.01																							
24-Apr	65.3	67.4	69.2	70.9	72.9	74.5	74.2	73.7	72.2	71.0	70.7	63.8	60.3	54.2	52.4	55.0	57.5	60.5	63.0	67.6	81.8	86.4	87.9	88.9	69.22	88.86																							
25-Apr	89.3	89.6	89.9	90.1	90.3	90.3	90.6	90.8	91.0	87.1	70.0	62.5	57.5	61.4	64.7	56.4	58.0	61.1	65.2	65.5	68.8	73.1	77.9	77.3	75.76	90.98																							
26-Apr	69.8	77.4	82.1	85.2	86.1	86.4	87.3	86.6	73.9	51.7	28.7	26.1	25.1	24.0	22.0	19.6	19.9	18.7	24.5	32.6	46.1	59.5	64.8	66.5	52.69	87.27																							
27-Apr	68.4	72.0	77.1	83.1	86.1	87.8	87.8	76.0	59.3	45.0	36.5	26.4	24.2	22.7	23.0	24.2	25.1	23.0	23.5	30.3	39.8	38.1	40.6	45.0	48.53	87.80																							
28-Apr	51.9	59.2	66.7	77.0	79.2	83.3	85.2	71.8	58.1	49.0	40.5	35.2	29.5	28.9	27.7	27.8	29.3	28.0	27.3	30.9	37.8	43.0	48.6	55.9	48.83	85.22																							
29-Apr	64.1	72.3	77.9	82.2	84.3	85.0	84.3	78.5	70.8	54.1	41.1	34.8	29.9	42.0	50.0	57.4	56.9	67.8	81.6	84.4	87.4	87.8	81.4	82.6	68.27	87.78																							
30-Apr	82.3	81.6	80.5	79.1	80.2	82.7	81.7	83.5	76.6	54.6	40.0	37.6	36.5	32.1	27.0	21.4	18.0	16.5	15.2	15.1	23.3	31.7	48.5	59.5	50.22	83.49																							
																								61.14	64.64	67.42	69.66	72.14	74.14	74.78	70.79	61.14	47.79	37.91	31.91	28.32	26.78	25.66	25.87	26.75	29.13	31.96	36.19	42.57	47.48	52.91	57.49	Diurnal Average	
																								89.49	90.55	91.17	91.45	91.57	91.58	91.52	91.43	90.98	87.06	70.74	63.82	60.32	61.36	64.74	57.38	57.98	73.02	83.01	86.15	87.43	87.78	87.94	88.86	Diurnal Maximum	



WCAS - Hinton
Summary of Hourly Standard Deviations

Wind Speed (WS) - kph
April 2016

Maximum Value: 9.98 kph on Apr 8 18:00		Maximum Daily Average: 4.84 kph on Apr 5		Hours in Service: 720																						
Minimum Value: 0.1 kph on Apr 11 04:00		Minimum Daily Average: 1.98 kph on Apr 26		Hours of Data: 720																						
Maximum Diurnal Average: 4.68 kph at hour 15		Minimum Diurnal Average: 1.41 kph at hour 4		Hours of Missing Data: 0																						
Monthly Average: 2.823 kph		Percentiles: P ₁ = 0.6 P ₁₀ = 1.1 Q ₁ = 1.5 Median = 2.4 Q ₃ = 3.7 P ₉₀ = 5.0 P ₉₉ = 8.4		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-Apr	1.3	1.1	1.2	1.4	1.2	1.2	1.3	1.2	1.5	1.7	3.1	4.0	4.2	4.9	4.9	4.7	5.9	6.1	6.2	3.2	2.2	1.4	1.0	0.9	2.73	6.17
2-Apr	0.9	1.1	2.2	3.1	3.7	1.6	1.5	1.5	3.4	6.0	7.1	6.3	5.4	3.6	4.1	4.0	4.2	4.7	3.6	2.3	2.1	2.1	1.5	1.6	3.23	7.07
3-Apr	1.6	1.1	0.7	1.1	1.6	1.3	1.2	1.6	1.5	1.8	2.0	2.5	3.3	3.4	3.2	2.3	2.9	3.6	4.1	2.7	1.6	1.8	1.5	1.3	2.08	4.12
4-Apr	1.7	1.8	2.0	2.0	1.4	1.1	1.2	1.1	1.6	1.7	1.4	2.3	2.0	2.7	3.2	3.5	3.7	2.3	2.5	3.5	3.5	1.8	1.3	1.1	2.09	3.65
5-Apr	1.1	1.3	0.9	1.1	1.2	1.2	1.2	1.5	2.1	4.9	7.3	8.8	8.6	9.7	8.9	7.5	8.5	8.3	7.2	7.1	6.4	6.3	3.2	2.2	4.84	9.66
6-Apr	2.2	2.4	2.1	2.1	2.7	2.7	2.6	1.9	3.4	4.1	4.9	4.8	5.8	5.3	5.7	5.9	5.8	5.2	3.9	2.6	1.3	1.5	1.5	1.2	3.40	5.93
7-Apr	1.3	1.2	1.1	1.2	1.5	1.4	1.2	1.4	1.2	1.4	3.8	6.2	6.1	4.8	5.3	5.6	4.1	4.0	3.3	3.0	0.8	2.7	2.6	1.7	2.80	6.20
8-Apr	2.4	2.8	2.4	1.4	1.4	1.9	2.3	2.4	2.3	2.1	3.1	3.8	6.3	7.0	7.5	7.6	7.9	10.0	8.2	7.6	3.2	3.0	4.7	3.2	4.35	9.98
9-Apr	2.7	1.9	1.5	1.5	1.5	2.5	2.3	1.8	1.4	2.6	3.6	4.6	4.1	4.5	4.9	4.7	4.9	4.2	4.0	2.8	1.9	1.4	1.3	1.0	2.81	4.94
10-Apr	1.2	1.0	1.2	1.1	1.1	0.8	1.8	1.4	1.3	1.9	2.0	2.1	3.4	3.3	3.7	4.1	3.7	3.6	3.6	3.6	2.9	2.9	2.5	1.5	2.33	4.11
11-Apr	1.0	0.9	0.9	0.1	1.0	1.1	1.2	1.2	1.4	1.9	2.3	3.7	3.8	6.3	7.3	3.2	3.0	1.9	4.9	2.0	2.0	1.8	1.4	1.5	2.32	7.27
12-Apr	1.5	1.2	1.0	1.2	0.2	0.7	0.4	1.0	1.0	1.1	1.9	2.3	1.6	2.2	5.1	9.2	8.9	7.8	6.4	5.6	4.4	3.6	3.3	2.7	3.09	9.23
13-Apr	2.7	1.6	1.7	1.4	1.4	1.5	1.9	1.3	6.3	6.5	5.9	5.4	4.4	3.0	4.7	5.6	5.5	5.0	4.2	2.7	1.6	1.6	1.5	1.5	3.30	6.48
14-Apr	1.6	1.2	1.8	1.8	1.2	0.9	0.9	1.1	1.5	2.6	2.7	2.8	3.1	3.2	3.3	4.2	3.7	3.0	3.4	3.6	1.2	1.3	1.6	2.5	2.25	4.20
15-Apr	1.8	1.5	1.1	0.4	0.6	0.8	1.1	1.0	1.5	1.7	2.4	4.9	6.8	7.1	5.8	6.1	5.8	5.8	5.0	4.6	5.2	5.3	3.5	3.6	3.48	7.13
16-Apr	3.1	3.1	3.2	1.9	1.4	1.5	1.2	0.9	2.0	2.4	4.6	4.0	3.6	4.7	3.9	4.2	3.5	3.8	4.6	3.6	3.0	1.9	2.7	2.5	2.97	4.72
17-Apr	3.6	1.9	1.6	1.4	1.4	1.6	1.6	1.5	1.3	2.0	1.6	3.3	4.1	3.7	3.8	3.1	2.9	2.5	2.4	2.5	1.8	1.6	1.0	1.4	2.23	4.08
18-Apr	1.1	1.6	1.2	1.8	2.0	1.4	1.2	1.4	2.2	2.4	2.7	3.7	4.5	4.3	2.8	3.2	4.9	4.2	6.3	5.8	4.2	3.4	3.1	2.4	2.99	6.31
19-Apr	2.6	2.0	2.3	2.6	1.6	2.4	1.4	1.1	1.1	3.5	6.3	8.3	8.0	7.5	7.3	6.2	5.3	3.9	2.7	2.0	2.4	3.7	1.6	1.5	3.64	8.35
20-Apr	1.7	1.5	1.7	0.8	1.1	1.6	1.4	1.4	1.5	3.4	3.6	3.6	3.9	4.2	4.5	4.1	3.9	3.8	3.5	3.6	2.3	3.2	3.8	3.0	2.79	4.46
21-Apr	2.7	1.2	1.5	1.1	1.2	0.8	1.7	2.4	2.5	2.2	3.1	3.4	4.3	4.5	4.7	4.3	3.9	4.7	1.6	1.7	1.3	1.1	1.4	1.0	2.44	4.75
22-Apr	1.1	1.2	1.3	1.0	1.1	1.0	1.2	3.3	3.1	3.5	3.6	4.0	4.8	5.2	4.4	4.8	4.8	4.6	5.2	4.0	4.0	3.6	3.5	3.1	3.23	5.18
23-Apr	3.0	2.3	2.5	2.2	2.6	2.4	2.4	2.4	3.2	2.2	2.8	3.4	3.2	3.4	4.2	4.6	4.4	4.2	3.8	3.9	3.9	3.8	3.6	3.2	3.23	4.64
24-Apr	3.0	2.5	2.0	1.7	1.6	2.0	1.8	1.9	1.7	2.6	3.3	2.8	3.9	3.9	4.1	3.5	3.5	2.8	2.9	2.5	2.5	1.5	1.7	1.6	2.56	4.14
25-Apr	1.1	0.6	1.1	0.9	1.5	1.1	1.0	1.1	0.9	1.9	2.6	2.0	3.3	4.3	4.0	3.4	2.8	1.7	3.0	2.8	2.0	1.7	1.4	2.4	2.03	4.27
26-Apr	1.5	1.5	1.2	1.3	1.6	1.1	1.0	1.4	1.8	2.1	2.4	3.3	3.1	2.4	3.1	2.7	2.4	3.4	2.8	2.2	1.2	1.1	1.5	1.4	1.98	3.35
27-Apr	1.3	0.8	0.6	0.5	0.3	0.4	1.2	1.1	1.3	2.2	4.0	3.8	4.4	4.2	3.7	3.7	2.1	3.6	3.0	1.1	1.0	2.4	2.0	2.1	2.12	4.38
28-Apr	1.7	1.8	1.2	1.0	1.2	0.9	0.8	0.9	1.8	2.0	2.3	3.3	4.1	4.2	4.0	4.0	3.7	3.8	3.9	4.1	4.8	2.6	1.8	1.8	2.57	4.84
29-Apr	1.2	0.8	1.0	0.9	1.6	1.1	1.9	1.7	1.9	1.9	2.0	2.4	2.2	3.2	3.3	3.0	2.6	2.8	1.4	1.5	2.1	2.7	2.4	2.8	2.02	3.27
30-Apr	2.1	1.9	2.9	2.1	1.8	2.9	1.6	1.7	1.8	2.5	3.1	3.2	3.9	5.0	5.0	2.9	4.6	4.3	4.1	3.6	1.9	1.1	1.4	0.8	2.77	5.00
																								Diurnal Average		
																								Diurnal Maximum		
																								1.86 1.56 1.58 1.41 1.46 1.43 1.46 1.52 1.98 2.63 3.38 3.97 4.34 4.52 4.68 4.54 4.46 4.31 4.05 3.39 2.63 2.47 2.16 1.95		
																								3.58 3.06 3.22 3.11 3.71 2.94 2.55 3.28 6.28 6.48 7.31 8.84 8.58 9.66 8.88 9.23 8.85 9.98 8.21 7.56 6.36 6.27 4.65 3.59		

,Alberta Ambient Air Quality Objectives (AAAQO): 1-hr --- ul/m³ 24-hr 100 ul/m³



WCAS - Hinton
Summary of Hourly Standard Deviations

Wind Direction (WD) - deg
April 2016

Maximum Value: 118.07 deg on Apr 26 16:00 Maximum Daily Average: 71.52 deg on Apr 3																							Hours in Service: 720 Hours of Data: 720																								
Minimum Value: 11.7 deg on Apr 19 03:00 Minimum Daily Average: 30.74 deg on Apr 23 Maximum Diurnal Average: 57.99 deg at hour 5 Minimum Diurnal Average: 39.31 deg at hour 20 Monthly Average: 50.276 deg Percentiles: P ₁ = 19.5 P ₁₀ = 26.5 Q ₁ = 34.1 Median = 44.3 Q ₃ = 65.4 P ₉₀ = 85.2 P ₉₉ = 104.1																							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-Apr	76.6	87.6	44.6	29.2	33.1	49.2	79.7	58.5	36.3	25.0	42.5	37.8	20.8	26.9	25.9	39.4	35.2	27.3	37.2	38.5	31.7	30.1	79.1	66.7	44.12	87.61																					
2-Apr	68.8	97.9	36.3	35.3	41.8	46.2	89.9	91.0	56.2	37.0	30.6	28.8	49.1	28.9	42.4	27.6	23.7	21.7	25.9	23.1	25.1	76.5	37.0	54.8	45.65	97.87																					
3-Apr	95.8	65.2	90.5	105.2	88.4	95.8	79.7	89.5	71.5	54.3	96.8	74.5	75.6	82.6	102.6	79.8	72.2	56.7	27.5	72.3	35.2	37.7	32.7	34.3	71.52	105.23																					
4-Apr	31.6	25.9	26.1	20.5	20.3	20.1	33.2	48.6	25.6	57.0	81.8	45.7	43.1	50.3	36.9	33.8	35.1	84.5	58.8	96.2	92.6	36.0	95.2	80.8	49.16	96.19																					
5-Apr	102.0	92.6	97.8	100.2	106.5	69.2	72.1	45.3	73.7	55.5	40.7	34.4	41.3	35.6	39.9	45.5	40.3	33.0	45.5	37.9	27.9	36.3	46.3	53.8	57.23	106.53																					
6-Apr	38.9	33.8	51.5	61.0	55.9	21.6	35.3	30.0	46.2	33.9	39.7	41.8	32.6	31.2	30.6	35.4	28.0	31.9	35.0	35.6	73.9	90.3	82.4	81.7	44.94	90.25																					
7-Apr	77.4	83.2	67.3	48.5	63.7	68.3	64.1	47.2	71.9	68.4	51.6	31.2	39.2	43.3	28.7	39.2	44.8	28.4	23.3	23.5	79.9	44.2	66.8	28.4	51.36	83.23																					
8-Apr	22.8	42.2	21.6	26.7	67.3	67.1	76.4	31.0	36.9	48.1	101.7	37.7	52.5	42.0	36.7	40.5	35.8	39.0	48.5	27.2	49.0	56.1	50.6	39.0	45.68	101.65																					
9-Apr	40.4	66.5	92.8	73.5	71.5	52.2	43.4	22.6	77.3	43.4	39.1	34.0	34.5	39.8	39.8	45.1	49.7	44.8	38.2	31.2	50.9	35.3	58.0	90.8	50.62	92.76																					
10-Apr	41.8	42.0	46.5	62.8	59.2	79.3	69.8	21.0	75.2	67.6	91.4	66.7	61.2	45.5	39.1	65.9	62.6	28.0	28.5	34.9	40.0	32.0	43.5	24.8	51.22	91.35																					
11-Apr	25.5	25.2	76.4	84.7	47.4	30.7	30.5	49.4	43.6	49.4	48.9	33.8	44.8	47.6	39.4	51.2	41.8	102.0	51.0	46.0	47.0	63.6	44.7	45.1	48.73	102.02																					
12-Apr	85.7	65.6	100.9	96.2	99.0	85.3	29.0	91.4	87.2	102.7	56.8	30.6	85.6	39.1	78.2	46.1	28.7	27.3	29.1	26.1	34.9	31.2	66.4	54.5	61.56	102.69																					
13-Apr	89.7	101.6	75.2	90.0	71.3	47.2	74.8	72.2	53.6	38.2	28.9	51.8	64.4	38.2	52.1	34.5	31.2	48.0	53.1	59.6	86.2	90.4	93.1	75.2	63.36	101.63																					
14-Apr	35.3	37.9	41.1	39.8	60.4	104.8	83.2	52.4	42.4	36.5	40.5	43.2	41.5	53.8	64.7	44.3	57.1	22.3	22.9	27.7	30.2	35.0	72.8	75.1	48.53	104.78																					
15-Apr	73.9	85.6	59.5	86.9	33.5	51.5	23.6	104.2	57.8	73.7	79.0	45.3	38.3	37.3	54.3	51.5	37.6	43.2	31.8	44.4	33.6	38.4	31.3	23.9	51.66	104.17																					
16-Apr	65.1	20.5	23.9	39.0	48.6	80.0	66.4	85.8	43.2	49.5	50.6	50.9	45.5	53.3	39.2	43.9	44.8	55.8	50.0	29.4	31.9	99.5	40.3	28.4	49.39	99.53																					
17-Apr	41.3	78.5	48.5	36.1	95.6	73.9	81.6	56.9	93.9	80.7	89.4	65.8	48.4	55.0	53.8	42.2	43.4	34.8	49.6	56.7	37.0	71.3	71.2	83.3	62.04	95.64																					
18-Apr	77.2	68.4	43.5	95.4	67.4	54.1	30.4	23.5	40.5	41.6	51.9	50.2	45.9	59.6	41.9	46.5	51.1	49.2	40.5	41.5	64.8	33.7	93.2	32.3	51.85	95.42																					
19-Apr	20.1	16.1	11.7	27.0	33.3	34.8	90.2	75.2	89.5	73.5	37.7	36.3	36.1	42.9	37.7	49.9	53.8	56.2	38.3	21.5	66.2	45.7	50.9	53.3	45.74	90.16																					
20-Apr	101.1	76.5	92.8	68.5	93.2	45.9	91.7	57.6	53.4	42.8	43.7	41.7	55.0	50.6	42.1	43.0	37.4	31.2	23.0	44.3	49.1	39.1	40.2	43.3	54.46	101.06																					
21-Apr	21.1	24.6	19.7	15.6	20.3	18.4	17.9	22.1	35.7	63.5	43.2	37.4	39.4	38.9	38.9	32.2	33.7	65.2	36.6	45.3	74.2	89.1	29.7	24.7	36.98	89.15																					
22-Apr	29.0	45.2	32.9	26.4	27.6	18.0	27.5	25.2	33.6	40.3	25.6	35.4	39.5	35.8	42.9	31.5	32.9	28.5	39.9	37.1	32.2	32.7	42.3	36.3	33.26	45.20																					
23-Apr	21.8	21.5	20.1	20.2	30.6	27.6	26.8	34.6	50.7	45.8	39.3	48.4	43.6	37.3	32.6	27.4	26.3	31.6	25.7	22.5	25.8	26.4	24.2	27.1	30.74	50.73																					
24-Apr	22.5	21.4	32.8	23.3	27.7	28.0	31.7	28.5	32.3	34.4	42.4	36.1	37.5	39.4	38.4	38.3	36.0	45.5	35.3	36.3	33.9	30.3	29.7	24.9	32.77	45.49																					
25-Apr	20.5	32.3	38.6	41.4	49.0	75.5	44.8	32.1	83.0	52.0	71.6	109.5	81.6	45.1	25.7	42.6	43.3	53.1	95.4	27.9	51.3	53.7	52.6	71.3	53.92	109.53																					
26-Apr	45.6	36.3	28.9	57.5	52.0	56.0	70.1	37.0	55.6	78.7	75.1	69.7	85.4	104.3	76.2	118.1	86.9	66.0	35.2	37.5	29.2	46.2	87.4	63.1	62.41	118.07																					
27-Apr	46.7	37.6	72.5	51.2	55.3	22.5	35.2	78.9	76.2	62.0	46.9	36.9	36.9	46.6	26.6	56.2	86.1	32.0	33.5	22.2	19.5	34.1	46.5	42.6	46.03	86.05																					
28-Apr	37.3	60.2	71.6	42.0	83.4	84.1	57.5	98.7	53.1	46.5	57.6	38.3	40.0	44.6	37.5	34.1	34.6	31.2	31.2	31.8	31.4	52.8	52.1	22.5	48.92	98.69																					
29-Apr	68.3	104.0	82.8	99.5	83.6	73.7	56.4	78.1	73.1	57.4	54.9	101.2	84.5	37.2	25.7	38.0	40.3	37.6	49.5	60.9	72.0	39.5	77.6	42.6	64.09	103.95																					
30-Apr	34.2	18.3	31.7	46.9	52.5	29.7	54.1	50.0	48.5	54.3	66.7	60.1	42.3	43.8	49.6	83.0	55.7	48.3	49.6	39.9	35.2	40.0	81.4	92.0	50.33	91.98																					
																							51.93	53.80	52.67	55.03	57.99	53.69	55.57	54.61	57.26	53.79	55.55	48.51	49.53	45.89	44.00	46.89	44.34	43.48	39.65	39.31	46.39	48.90	57.30	50.55	Diurnal Average
																							101.97	103.95	100.88	105.23	106.53	104.78	91.71	104.17	93.86	102.69	101.65	109.53	85.59	104.25	102.58	118.07	86.88	102.02	95.36	96.19	92.65	99.53	95.18	91.98	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
APRIL 2016**