

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

**AIR QUALITY MONITORING**  
**March 2018**  
**Monthly Report**

**Prepared by:**

**West Central Airshed Society**  
**Drayton Valley, Alberta**

April 18, 2018

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

Dear Mr. Whitney:

**Monthly Ambient Air Quality Monitoring Report for March 2018  
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 Gary Redmond, Executive Director of West Central Airshed Society.

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

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

There was one 1-hour TRS Exceedence and one 1-hour H<sub>2</sub>S of the AAAQO recorded in March.

**2. Operational times less than 90 percent:**

All analyzers and meteorological equipment returned operational times greater than 90%.

**3. Monitoring Notes:**

**AMS 906 (Hinton)**

All analyzers and meteorological sensors returned uptimes of 100% for the month of March.

If additional information is required, please call (587) 499-4900.

Sincerely,



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
	2018	March

**TOTAL EMISSIONS FOR MONTH (IN TONNES)**

POLLUTANT	INCINERATOR STACK	FLARE	MISCELLANEOUS
SO <sub>2</sub>			

**"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 <sub>2</sub>						

**STATIC AMBIENT MONITORING**

PARAMETER	NO. OF STATIONS	PEAK READING	AVG. OF NETWORK	NO. OF STATIONS OVER GUIDELINES
T.S.				
H <sub>2</sub> 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	0.015	1	0.002	0
PM <sub>2.5</sub>	906	100.0	68.3 µg/m <sup>3</sup>	1	25.69 µg/m <sup>3</sup>	0
H <sub>2</sub> S	906	100.0	0.014	0	0.002	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  
MARCH 2018**

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													March 2018		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)	36	708	100.0	0.9	0.0	15.0	0.2	0.3	0.4	1.0	2.0	1	0	0.002	
SO <sub>2</sub> (ppb)	36	708	100.0	0.5	0.0	10.3	0.0	0.1	0.1	0.4	1.5	0	-	0.003	
H <sub>2</sub> S (ppb)	36	708	100.0	0.9	0.0	14.0	0.0	0.1	0.8	1.0	1.7	1	0	0.002	
O <sub>3</sub> (ppb)	36	708	100.0	29.1	0.4	59.5	3.9	14.8	33.6	41.8	46.1	0	-	0.046	
NO (ppb)	38	706	100.0	5.3	0.0	78.0	0.2	0.6	1.4	4.5	16.9	-	-	-	
NO <sub>2</sub> (ppb)	38	706	100.0	11.2	0.3	41.8	2.7	4.5	8.0	15.0	26.9	0	0	0.022	
NO <sub>x</sub> (ppb)	38	706	100.0	16.6	0.2	118.7	3.5	5.4	9.7	19.1	44.0	-	-	-	
Particulate Matter 2.5 microns (µm <sup>3</sup> )	0	744	100.0	8.7	0.3	68.3	2.1	3.4	6.0	10.3	17.6	0	0	25.69 ug/m3	
Wind Speed (kph)	0	744	100.0	3.8	0.0	16.9	0.5	1.1	2.7	6.0	8.7	-	-	-	
Temperature (°C)	0	744	100.0	-3.0	-25.8	13.3	-12.0	-7.5	-1.9	2.0	5.4	-	-	-	
Relative Humidity (%)	0	744	100.0	63.3	9.9	98.6	26.3	45.4	70.5	80.2	88.8	-	-	-	
Std Dev Wind Direction (deg)	0	744	100.0	46.2	17.7	102.0	25.4	30.8	40.3	58.1	80.5	-	-	-	
Std Dev Wind Speed (kph)	0	744	100.0	2.5	0.2	8.4	1.0	1.3	1.9	3.5	4.8	-	-	-	



**WCAS - Hinton**  
**Summary of Hourly Averages**

**Total Reduced Sulphur (TRS) - ppb**  
**March 2018**

Maximum Value: 14.65 ppb on Mar 11 10:00		Maximum Daily Average: 2.17 ppb on Mar 11		Hours in Service: 744																																													
Minimum Value: 0 ppb on Mar 15 20:00		Minimum Daily Average: 0.23 ppb on Mar 2		Hours of Data: 708																																													
Maximum Diurnal Average: 1.90 ppb at hour 10		Minimum Diurnal Average: 0.44 ppb at hour 16		Hours of Missing Data: 36																																													
Monthly Average: 0.905 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.2 Q <sub>1</sub> = 0.3 Median = 0.4 Q <sub>3</sub> = 1.0 P <sub>90</sub> = 2.0 P <sub>99</sub> = 6.1		Hours of Calibration: 36																																													
				Percent Operational Time: 100.0																																													
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Mar	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.27	0.39																							
2-Mar	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.23	0.31																							
3-Mar	0	0	0	Z	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.26	0.52																							
4-Mar	0	1	1	Z	5	3	2	2	4	6	2	2	1	1	1	0	0	0	0	1	1	0	2	3	1.64	5.78																							
5-Mar	1	1	4	Z	1	3	4	2	4	4	6	3	2	3	1	0	0	0	0	0	0	0	0	0	1.81	6.31																							
6-Mar	0	0	0	Z	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	1	1	0.46	1.42																							
7-Mar	1	1	1	Z	0	0	0	0	0	1	1	3	3	1	1	0	0	0	0	0	0	0	1	1	0.78	3.45																							
8-Mar	0	1	1	Z	3	2	1	1	1	3	1	1	1	1	1	1	0	0	0	0	0	1	1	1	0.93	2.77																							
9-Mar	0	0	0	Z	2	6	3	3	2	2	2	0	0	0	1	0	0	0	0	2	2	5	4	1	1.74	6.11																							
10-Mar	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.47	1.49																							
11-Mar	1	1	2	Z	2	1	2	1	8	15	2	2	2	2	1	0	0	1	1	1	1	1	1	2	2.17	14.65																							
12-Mar	1	1	1	Z	1	1	1	0	2	2	2	1	0	0	1	1	1	1	1	1	1	2	1	1	1.08	2.37																							
13-Mar	1	1	1	Z	2	2	2	4	10	6	3	3	2	1	0	0	0	0	0	0	0	0	1	0	1.81	10.44																							
14-Mar	0	1	1	Z	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0.64	1.09																							
15-Mar	0	0	0	Z	1	0	0	3	4	4	5	7	1	C	C	C	C	C	0	0	2	3	3	3	2.15	7.16																							
16-Mar	3	3	1	Z	1	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	0.86	3.31																							
17-Mar	0	0	0	Z	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	3	1	1	0	0	0.67	2.68																							
18-Mar	0	0	0	Z	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	0	1	1	1	1	0.51	1.09																							
19-Mar	1	1	2	Z	3	1	1	1	3	1	2	0	0	0	0	1	1	2	2	4	1	1	1	0	1.38	3.99																							
20-Mar	0	1	3	Z	3	2	2	2	1	1	1	1	1	1	1	1	2	2	2	3	0	0	0	0	1.34	3.39																							
21-Mar	0	0	0	Z	1	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.52	1.71																							
22-Mar	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.35	0.45																							
23-Mar	0	0	0	Z	1	1	1	2	2	3	0	0	0	1	0	0	1	2	1	0	2	10	6	4	1.73	9.97																							
24-Mar	2	1	1	Z	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	0	0	0	0	0	0.75	2.01																							
25-Mar	0	1	0	Z	1	0	1	0	1	1	1	1	0	0	0	1	1	0	0	0	1	1	1	1	0.61	1.37																							
26-Mar	2	2	2	Z	1	1	2	1	1	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0.66	1.96																							
27-Mar	0	0	0	Z	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.28	1.32																							
28-Mar	0	0	0	Z	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	0	1	2	0.63	1.96																							
29-Mar	1	1	1	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.41	0.94																							
30-Mar	0	0	0	Z	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.36	0.56																							
31-Mar	1	1	1	Z	1	1	1	1	2	2	3	1	1	1	0	0	0	0	0	0	0	1	0	0	0.82	3.12																							
																								0.72	0.65	0.87	--	1.16	1.04	0.99	1.03	1.73	1.90	1.27	1.15	0.80	0.70	0.48	0.44	0.48	0.50	0.47	0.69	0.67	1.12	0.97	0.93	Diurnal Average	
																								3.31	2.93	3.50	--	5.41	6.11	4.30	3.85	10.44	14.65	6.31	7.16	3.45	3.07	1.03	1.33	2.27	1.91	2.33	3.99	2.36	9.97	5.68	4.29	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 (SO<sub>2</sub>) - ppb**  
**March 2018**

Maximum Value: 10.28 ppb on Mar 26 03:00		Maximum Daily Average: 3.01 ppb on Mar 26		Hours in Service: 744																																													
Minimum Value: 0.0 ppb on Mar 4 09:00		Minimum Daily Average: 0.02 ppb on Mar 22		Hours of Data: 708																																													
Maximum Diurnal Average: 1.26 ppb at hour 14		Minimum Diurnal Average: 0.18 ppb at hour 8		Hours of Missing Data: 36																																													
Monthly Average: 0.535 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.1 Q <sub>3</sub> = 0.4 P <sub>90</sub> = 1.5 P <sub>99</sub> = 5.5		Hours of Calibration: 36																																													
				Percent Operational Time: 100.0																																													
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Mar	0.5	0.5	0.5	Z	0.5	0.5	0.6	0.4	0.3	0.2	0.2	0.3	0.4	0.3	0.3	0.4	0.4	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.34	0.58																							
2-Mar	0.1	0.1	0.0	Z	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.4	0.3	0.3	0.5	0.5	0.5	0.20	0.55																							
3-Mar	0.5	0.4	0.4	Z	0.4	0.4	0.3	0.3	0.3	0.3	0.4	0.4	0.3	0.5	0.6	0.4	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.33	0.57																							
4-Mar	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.3	3.0	6.4	4.0	1.3	1.5	1.0	0.3	0.2	0.1	0.0	0.0	0.82	6.37																							
5-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	2.1	3.0	2.4	0.3	0.7	0.3	0.1	0.1	0.1	0.1	0.2	0.44	2.99																							
6-Mar	0.1	0.1	0.1	Z	0.1	0.1	0.0	0.1	0.1	0.1	0.1	1.3	1.8	1.4	0.3	0.2	0.3	0.8	0.3	0.4	0.2	0.0	0.1	0.3	0.37	1.78																							
7-Mar	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.9	3.7	4.6	2.9	0.3	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.3	0.67	4.56																							
8-Mar	0.1	0.2	0.2	Z	0.2	0.2	0.3	0.2	0.4	0.3	0.2	0.2	0.3	1.0	1.6	2.7	2.4	1.1	0.5	0.4	0.3	0.3	0.2	0.1	0.59	2.66																							
9-Mar	0.1	0.0	0.1	Z	0.2	0.1	0.1	0.2	0.1	0.2	0.4	0.2	0.1	0.3	2.8	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.4	0.1	0.27	2.80																							
10-Mar	0.1	0.0	0.1	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.4	0.3	0.4	0.14	0.42																							
11-Mar	0.3	0.2	0.3	Z	0.2	0.2	0.1	0.1	0.2	0.3	1.7	4.0	5.3	3.5	4.7	0.1	0.2	1.0	0.4	0.3	0.4	0.3	0.3	0.2	1.06	5.34																							
12-Mar	0.2	0.2	0.3	Z	0.3	0.0	0.1	0.0	0.5	0.7	3.1	0.9	0.1	0.0	1.1	3.3	1.5	0.4	0.3	0.4	0.3	0.6	0.3	0.3	0.66	3.28																							
13-Mar	0.3	0.2	0.2	Z	0.1	0.4	0.2	0.4	0.2	0.2	0.2	3.4	4.9	7.9	3.0	0.3	0.4	0.3	0.5	0.4	0.3	0.3	0.2	0.1	1.06	7.90																							
14-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.2	0.2	0.1	0.4	1.4	4.7	3.4	3.1	2.0	1.7	1.6	1.3	1.4	1.1	0.7	0.7	1.4	1.2	1.16	4.70																							
15-Mar	1.2	1.1	0.9	Z	0.5	0.5	0.4	0.4	0.4	0.4	0.5	0.5	0.6	C	C	C	C	C	0.1	0.0	0.1	0.1	0.1	0.0	0.44	1.25																							
16-Mar	0.1	0.1	0.1	Z	0.1	0.1	0.1	0.1	0.2	0.3	0.8	1.8	1.1	0.7	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.28	1.84																							
17-Mar	0.1	0.0	0.0	Z	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.5	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.05	0.46																							
18-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.3	0.3	0.1	0.06	0.29																							
19-Mar	0.2	0.2	0.2	Z	0.1	0.0	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.6	0.3	0.7	1.1	2.7	0.3	0.1	0.1	0.2	0.2	0.0	0.34	2.66																							
20-Mar	0.1	0.0	0.0	Z	0.2	0.1	0.0	0.1	0.1	0.5	1.4	1.0	3.2	2.1	3.6	3.0	2.0	2.6	1.9	0.7	0.0	0.0	0.1	0.0	0.98	3.58																							
21-Mar	0.0	0.0	0.0	Z	0.0	0.1	0.2	0.4	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.08	0.38																							
22-Mar	0.1	0.2	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.02	0.16																							
23-Mar	0.0	0.0	0.0	Z	0.0	0.1	0.0	0.1	0.1	0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.05	0.19																							
24-Mar	0.1	0.0	0.0	Z	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.5	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.09	0.54																							
25-Mar	0.0	0.0	0.0	Z	0.0	0.0	0.1	0.0	0.1	2.5	5.0	3.9	1.5	2.1	0.3	3.4	3.1	0.6	1.3	2.0	2.5	3.2	4.8	5.5	1.83	5.48																							
26-Mar	7.6	6.3	10.3	Z	3.1	5.5	4.1	1.6	4.1	3.1	1.8	3.4	4.4	0.9	1.4	3.6	3.1	3.5	0.5	0.3	0.2	0.2	0.1	0.1	3.01	10.28																							
27-Mar	0.2	0.1	0.7	Z	2.4	1.0	0.4	0.3	0.2	0.2	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.29	2.36																							
28-Mar	0.1	0.1	0.0	Z	0.0	0.0	0.1	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.08	0.86																							
29-Mar	0.1	0.2	0.2	Z	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.4	0.4	0.3	0.1	0.1	0.1	0.1	0.4	0.7	0.7	0.7	0.5	0.23	0.69																							
30-Mar	0.3	0.3	0.3	Z	0.3	0.2	0.3	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.16	0.30																							
31-Mar	0.1	0.1	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.0	0.9	5.7	1.8	1.1	0.6	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.49	5.69																							
																								0.42	0.35	0.50	--	0.29	0.32	0.27	0.18	0.26	0.37	0.63	1.14	1.21	1.26	1.19	0.86	0.69	0.60	0.34	0.28	0.25	0.29	0.35	0.34	Diurnal Average	
																								7.61	6.32	10.28	--	3.14	5.54	4.06	1.56	4.08	3.12	5.01	5.69	5.34	7.90	6.37	4.04	3.12	3.51	1.94	2.04	2.48	3.19	4.82	5.48	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**

**Hydrogen Sulphide (H2S) - ppb**  
**March 2018**

Maximum Value: 13.82 ppb on Mar 11 10:00		Maximum Daily Average: 2.00 ppb on Mar 15		Hours in Service: 744																						
Minimum Value: 0 ppb on Mar 1 01:00		Minimum Daily Average: 0.00 ppb on Mar 2		Hours of Data: 708																						
Maximum Diurnal Average: 1.74 ppb at hour 10		Minimum Diurnal Average: 0.49 ppb at hour 16		Hours of Missing Data: 36																						
Monthly Average: 0.858 ppb		Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.0 Q <sub>1</sub> = 0.1 Median = 0.8 Q <sub>3</sub> = 1.0 P <sub>90</sub> = 1.7 P <sub>99</sub> = 5.4		Hours of Calibration: 36																						
				Percent Operational Time: 100.0																						
Day	Hourly Period Ending At																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0.04
2-Mar	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
3-Mar	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01	0.11
4-Mar	0	0	0	Z	5	2	1	1	3	5	1	1	0	0	0	0	0	0	0	0	0	0	2	3	1.15	4.87
5-Mar	1	0	3	Z	1	2	3	1	4	3	5	2	1	3	1	0	0	0	0	0	0	0	0	0	1.29	5.01
6-Mar	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.09	0.47
7-Mar	0	0	0	Z	0	0	0	0	0	0	0	3	2	1	0	0	0	0	0	0	0	0	0	0	0.28	2.61
8-Mar	0	0	1	Z	2	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0.27	1.78
9-Mar	0	0	0	Z	2	6	2	2	1	1	1	0	0	0	0	0	0	0	0	1	2	5	3	1	1.18	5.58
10-Mar	0	0	0	Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0.12	0.75
11-Mar	1	0	1	Z	1	1	2	1	8	14	2	1	1	1	0	0	0	0	0	0	0	0	0	1	1.57	13.82
12-Mar	1	0	0	Z	1	0	0	0	1	2	1	0	0	0	0	1	0	0	0	0	0	1	0	0	0.46	1.87
13-Mar	0	1	1	Z	1	1	1	3	10	5	2	2	1	0	0	0	0	0	0	0	0	0	0	0	1.23	9.68
14-Mar	0	0	0	Z	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0.17	0.56
15-Mar	0	0	0	Z	0	0	0	2	4	4	4	6	0	C	C	C	C	C	1	1	3	4	4	3	2.00	6.34
16-Mar	3	3	1	Z	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1.21	3.50
17-Mar	1	1	1	Z	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	3	1	1	1	1.03	3.00
18-Mar	1	1	1	Z	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.87	1.10
19-Mar	1	1	2	Z	3	2	2	2	3	1	2	1	1	1	1	1	1	2	2	4	2	1	1	1	1.59	3.85
20-Mar	1	1	3	Z	3	2	2	2	1	2	1	1	1	1	1	1	2	2	2	3	1	1	1	1	1.51	3.43
21-Mar	1	1	1	Z	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.88	1.33
22-Mar	1	1	1	Z	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.78	0.87
23-Mar	1	1	1	Z	1	1	1	2	3	4	1	1	1	1	1	1	2	1	1	2	9	6	4	1	1.96	9.26
24-Mar	2	1	1	Z	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1.08	2.20
25-Mar	1	1	1	Z	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.82	1.40
26-Mar	2	1	2	Z	1	1	1	1	1	1	0	1	1	1	0	1	1	1	0	0	0	0	0	0	0.78	1.66
27-Mar	0	0	0	Z	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	0.63	1.13
28-Mar	1	1	1	Z	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1.07	2.40
29-Mar	1	1	1	Z	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.91	1.31
30-Mar	1	1	1	Z	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.81	0.88
31-Mar	1	1	1	Z	1	1	1	1	2	2	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1.11	2.75
																								Diurnal Average		
																								Diurnal Maximum		
0.69 0.63 0.80 -- 0.99 0.95 0.89 0.92 1.63 1.74 1.14 1.05 0.74 0.70 0.50 0.49 0.51 0.52 0.53 0.72 0.68 1.06 0.93 0.89																										
3.50 3.16 3.43 -- 4.62 5.58 3.49 2.83 9.68 13.82 5.01 6.34 2.42 2.55 1.07 1.27 2.29 1.98 2.49 3.85 3.03 9.26 5.52 4.19																										
Z - zerospan C - Calibration																										
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 10 ppb 24-hr 3 ppb																										





**WCAS - Hinton**  
**Summary of Hourly Averages**

**Ozone (O<sub>3</sub>) - ppb**  
**March 2018**

Maximum Value: 59.52 ppb on Mar 14 16:00		Maximum Daily Average: 45.95 ppb on Mar 22		Hours in Service: 744																																													
Minimum Value: 0.4 ppb on Mar 19 03:00		Minimum Daily Average: 16.12 ppb on Mar 8		Hours of Data: 708																																													
Maximum Diurnal Average: 44.18 ppb at hour 16		Minimum Diurnal Average: 17.17 ppb at hour 5		Hours of Missing Data: 36																																													
Monthly Average: 29.088 ppb		Percentiles: P <sub>1</sub> = 0.6 P <sub>10</sub> = 3.9 Q <sub>1</sub> = 14.8 Median = 33.6 O <sub>3</sub> = 41.8 P <sub>90</sub> = 46.1 P <sub>99</sub> = 54.3		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-Mar	38.5	37.9	35.9	Z	35.0	30.5	29.1	30.9	32.3	31.7	33.9	36.0	35.3	37.4	38.6	41.3	40.7	41.6	42.4	41.5	41.6	41.2	42.0	43.0	37.31	43.00																							
2-Mar	42.5	42.1	41.4	Z	40.7	39.7	40.0	37.9	36.7	39.6	39.4	39.3	38.7	36.3	37.5	37.1	37.0	34.3	34.2	33.4	34.1	34.6	34.9	34.5	37.65	42.51																							
3-Mar	35.6	35.5	36.1	Z	29.2	26.2	27.7	20.0	6.6	17.7	28.9	31.0	32.1	33.8	32.9	33.3	35.9	33.7	31.4	26.4	28.9	25.8	9.2	11.0	27.33	36.12																							
4-Mar	11.9	12.1	11.1	Z	13.4	13.4	2.1	8.9	13.2	22.6	28.9	30.5	32.8	37.6	39.5	40.5	39.9	35.8	17.3	5.9	5.0	2.5	12.8	13.9	19.64	40.53																							
5-Mar	13.3	15.3	13.0	Z	10.5	5.5	1.5	2.9	6.7	8.9	16.6	25.7	36.5	37.3	39.7	39.6	38.0	38.4	37.6	31.7	23.8	29.3	30.1	30.3	23.15	39.69																							
6-Mar	28.7	32.3	28.6	Z	21.4	14.6	18.5	19.8	17.8	27.3	30.4	32.8	35.7	37.9	40.4	40.5	39.9	35.1	33.5	32.1	9.5	7.2	2.4	0.7	25.53	40.48																							
7-Mar	0.7	3.0	6.0	Z	7.7	9.1	13.3	7.3	11.6	15.0	23.9	38.0	39.0	43.1	47.2	44.8	44.8	43.0	37.8	25.0	17.6	22.8	10.0	1.6	22.27	47.19																							
8-Mar	2.5	1.3	1.1	Z	0.6	0.6	1.0	1.3	3.6	9.0	11.3	14.8	29.1	33.6	39.0	40.9	39.4	34.8	25.2	27.2	25.9	12.7	6.9	9.0	16.12	40.90																							
9-Mar	11.5	4.2	3.5	Z	0.8	0.5	0.4	1.0	4.8	7.1	8.6	40.0	43.3	43.8	42.9	53.6	54.6	54.0	51.4	32.9	16.9	34.1	6.4	15.6	23.12	54.59																							
10-Mar	34.6	42.9	45.4	Z	45.4	44.7	43.8	43.4	44.2	44.6	45.0	47.2	49.9	51.8	54.1	54.3	54.5	53.8	48.6	31.5	9.3	3.1	4.0	2.3	39.05	54.50																							
11-Mar	1.7	3.1	4.0	Z	4.6	15.8	16.0	18.1	13.3	28.8	45.4	49.2	51.7	54.6	54.2	54.4	54.2	52.5	32.5	7.0	4.4	1.3	1.3	5.1	24.92	54.57																							
12-Mar	1.1	1.6	1.2	Z	1.5	18.3	20.4	31.0	38.4	41.9	45.3	48.4	51.3	51.9	50.4	48.2	48.7	48.9	31.5	3.3	1.1	1.0	2.0	1.2	25.59	51.92																							
13-Mar	0.9	1.6	1.7	Z	5.4	1.5	0.7	1.0	10.8	23.0	37.3	42.8	51.7	47.5	47.2	53.1	51.6	53.9	48.5	35.9	29.5	31.9	24.9	24.6	27.27	53.89																							
14-Mar	26.3	13.5	4.0	Z	6.0	1.7	1.4	1.5	8.2	28.6	33.8	41.9	47.9	52.1	55.4	59.5	57.5	52.5	53.0	52.6	52.0	44.0	37.9	34.0	33.27	59.52																							
15-Mar	35.4	34.4	33.9	Z	23.7	24.5	16.3	9.1	5.8	5.4	11.6	17.6	38.6	C	C	C	C	C	22.4	23.9	17.5	12.4	8.1	5.6	19.25	38.64																							
16-Mar	8.1	12.8	19.5	Z	23.1	25.9	28.7	27.3	24.5	31.9	34.9	35.7	39.8	39.0	35.1	39.3	38.6	34.0	28.4	28.4	14.7	10.9	9.4	5.6	1.3	24.72	39.83																						
17-Mar	0.8	2.2	2.3	Z	3.6	10.6	12.7	6.2	5.1	11.3	18.5	24.2	35.0	37.7	30.3	33.1	29.7	29.0	22.2	16.3	12.0	14.8	37.2	31.9	18.55	37.74																							
18-Mar	24.7	21.6	35.7	Z	22.0	22.6	10.4	9.0	11.0	18.8	24.1	31.1	33.6	38.2	39.8	41.0	39.9	38.8	33.6	21.2	7.8	1.3	0.7	2.4	23.01	41.02																							
19-Mar	0.6	0.9	0.4	Z	0.9	0.5	0.5	1.2	11.7	35.0	38.1	42.9	44.1	45.7	46.2	46.0	45.1	40.7	42.7	37.7	26.7	4.3	2.3	31.6	23.73	46.22																							
20-Mar	31.5	14.0	6.6	Z	1.9	1.1	2.3	2.3	6.4	24.1	41.6	44.1	42.5	43.4	42.6	42.2	39.3	39.1	37.5	37.3	36.3	36.0	29.1	16.0	26.84	44.10																							
21-Mar	16.3	14.8	12.6	Z	3.3	1.3	1.5	1.3	12.2	23.5	31.3	42.4	43.8	42.1	39.0	39.1	40.4	41.6	38.4	38.0	36.2	37.4	39.9	43.2	27.81	43.80																							
22-Mar	42.9	46.7	47.3	Z	51.2	51.3	49.6	49.4	48.4	49.5	47.9	45.6	48.2	45.3	43.4	39.7	40.3	41.3	43.9	45.1	46.4	44.9	44.3	44.5	45.95	51.34																							
23-Mar	44.6	43.0	39.3	Z	18.2	5.4	7.8	4.7	12.7	39.3	46.6	46.7	46.6	45.9	48.0	47.5	46.9	46.0	45.3	36.3	31.0	29.4	21.0	16.8	33.43	47.98																							
24-Mar	37.7	31.0	24.9	Z	14.7	18.6	11.8	12.3	20.1	28.8	44.9	45.9	45.2	46.1	47.0	47.3	45.9	37.3	35.6	34.1	29.3	26.7	30.6	29.4	32.39	47.28																							
25-Mar	25.6	21.8	20.4	Z	10.2	10.1	5.8	9.3	9.6	26.0	41.3	42.0	44.1	44.7	45.3	44.0	43.7	44.5	43.7	43.3	41.5	39.6	38.9	36.8	31.84	45.29																							
26-Mar	35.6	34.6	30.7	Z	37.1	35.9	34.5	35.1	38.3	41.4	42.2	41.8	42.0	44.4	43.6	41.6	40.6	39.4	37.2	33.8	32.4	32.5	33.2	31.9	37.38	44.35																							
27-Mar	30.7	28.8	25.1	Z	34.3	32.9	36.7	37.2	37.5	36.0	36.3	37.7	37.7	39.0	42.4	46.6	47.8	48.3	46.4	35.1	30.7	22.4	24.3	24.5	35.58	48.35																							
28-Mar	23.8	18.7	10.8	Z	1.8	5.3	10.2	13.9	22.5	43.1	45.7	46.1	46.3	45.7	45.4	43.3	42.7	43.3	43.3	43.0	39.9	35.4	29.6	33.2	31.87	46.29																							
29-Mar	31.9	24.4	9.9	Z	26.1	33.0	32.5	31.8	36.1	39.5	41.5	43.0	44.6	46.4	44.6	43.7	44.4	45.4	44.3	38.7	35.1	32.9	31.9	34.1	36.35	46.36																							
30-Mar	35.8	35.9	35.8	Z	31.3	35.4	38.6	40.9	41.3	41.5	41.5	42.1	42.6	43.3	43.7	44.2	42.5	41.8	42.8	43.3	41.4	28.6	35.9	33.6	39.28	44.15																							
31-Mar	21.0	11.3	5.9	Z	6.6	19.2	22.3	20.9	20.8	29.9	35.0	39.3	41.8	43.3	45.0	45.6	45.7	45.2	41.1	42.0	31.0	22.4	22.2	19.0	29.40	45.74																							
																								22.49	20.75	19.16	--	17.17	17.93	17.35	17.32	19.75	28.09	33.93	38.25	41.65	42.96	43.34	44.18	43.67	42.27	37.86	31.30	25.99	23.29	21.28	21.36	Diurnal Average	
																								44.59	46.66	47.27	--	51.23	51.34	49.56	49.40	48.37	49.51	47.94	49.16	51.74	54.57	55.40	59.52	57.47	53.97	52.99	52.59	51.96	44.85	44.26	44.47	Diurnal Maximum	
Z - zerospan      C - Calibration																																																	
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 82.5 ppb      24-hr -- ppb																																																	



**WCAS - Hinton**  
**Eight Hour Running Averages**

**Ozone (O<sub>3</sub>) - ppb**  
**March 2018**

Maximum Value: 54.32 ppb on Mar 14 21:00		Maximum Daily Average: 45.24 ppb on Mar 22		Hours in Service: 744																																													
Minimum Value: 0.7 ppb on Mar 19 08:00		Minimum Daily Average: 15.64 ppb on Mar 8		Hours of Data: 736																																													
Maximum Diurnal Average: 41.94 ppb at hour 19		Minimum Diurnal Average: 18.49 ppb at hour 9		Hours of Missing Data: 8																																													
Monthly Average: 28.729 ppb		Percentiles: P <sub>1</sub> = 1.4 P <sub>10</sub> = 8.9 Q <sub>1</sub> = 19.0 Median = 31.0 O <sub>3</sub> = 39.2 P <sub>90</sub> = 43.8 P <sub>99</sub> = 50.9		Hours of Calibration: 8																																													
				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-Mar	24.6	23.9	26.7	29.8	33.9	36.1	35.2	34.0	33.1	32.2	31.9	32.4	32.4	33.3	34.5	35.8	36.8	38.1	39.1	39.8	40.6	41.1	41.5	41.7	34.53	41.74																							
2-Mar	42.0	42.0	41.9	42.0	41.8	41.6	41.3	40.6	39.8	39.4	39.1	39.2	38.9	38.5	38.2	38.1	38.1	37.5	36.8	36.1	35.5	35.3	35.0	34.6	38.89	42.03																							
3-Mar	34.5	34.6	34.8	35.0	34.4	33.1	32.1	30.0	25.9	23.4	22.3	23.4	23.8	24.7	25.4	27.0	30.7	32.7	33.0	32.4	32.0	31.0	28.1	25.3	29.56	35.04																							
4-Mar	22.3	19.6	17.1	15.7	13.5	11.7	10.7	10.4	10.6	12.1	14.6	16.6	19.0	22.1	26.8	30.7	34.1	35.7	34.2	31.2	27.7	23.3	20.0	16.6	20.68	35.69																							
5-Mar	13.3	10.8	10.2	10.8	11.6	12.1	10.5	8.9	7.9	7.0	7.5	9.8	13.0	17.0	21.8	26.4	30.3	34.0	36.6	37.3	35.8	34.8	33.6	32.4	19.72	37.34																							
6-Mar	31.2	30.5	29.4	29.0	28.7	26.6	24.9	23.4	21.9	21.2	21.4	22.8	24.6	27.5	30.3	32.8	35.6	36.6	37.0	36.9	33.6	29.8	25.0	20.0	28.36	36.97																							
7-Mar	15.2	11.1	7.7	4.2	3.9	4.2	5.8	6.7	8.3	10.0	12.6	15.7	19.6	23.9	28.1	32.8	37.0	40.5	42.2	40.6	37.9	35.4	30.7	25.3	20.81	42.22																							
8-Mar	20.0	14.8	10.2	8.1	5.7	2.5	1.2	1.2	1.3	2.5	3.9	5.3	8.8	13.0	17.7	22.7	27.1	30.4	32.1	33.6	33.3	30.6	26.6	22.7	15.64	33.65																							
9-Mar	19.2	15.3	12.6	10.5	7.0	5.2	4.3	3.1	2.2	2.6	3.3	7.9	13.2	18.6	23.9	30.5	36.7	42.6	47.9	47.1	43.8	42.5	38.0	33.2	21.31	47.94																							
10-Mar	30.7	29.3	28.6	28.0	32.0	33.6	38.9	42.9	44.3	44.5	44.4	44.8	45.3	46.2	47.5	48.9	50.2	51.3	51.8	49.8	44.7	38.7	32.4	25.9	40.61	51.77																							
11-Mar	19.3	12.9	7.4	3.9	3.2	5.1	6.8	9.0	10.7	14.4	20.3	23.9	29.8	34.6	39.4	44.0	49.1	52.0	50.4	45.1	39.2	32.6	25.9	19.8	24.95	52.03																							
12-Mar	13.1	6.8	2.9	2.3	1.9	4.3	7.0	10.7	16.1	21.8	28.1	30.6	36.9	41.1	44.8	47.0	48.2	49.1	47.4	41.8	35.5	29.1	23.1	17.2	25.28	49.13																							
13-Mar	11.2	5.3	1.6	1.4	2.0	1.9	1.8	3.2	6.3	11.4	15.3	21.1	26.8	32.7	39.2	44.3	48.1	49.5	48.7	45.9	44.0	41.2	37.6	22.61	49.54																								
14-Mar	34.5	29.4	23.8	22.1	18.8	14.4	11.1	7.8	5.2	7.3	11.6	15.4	20.6	26.9	33.7	40.9	47.1	50.1	52.5	53.8	54.3	53.3	51.1	47.9	30.57	54.32																							
15-Mar	45.2	42.9	40.5	38.8	34.8	32.0	28.9	25.4	21.1	17.0	13.8	14.3	16.1	14.9	14.7	C	C	C	C	C	C	C	C	15.0	--	45.17																							
16-Mar	14.0	13.8	13.5	12.0	12.8	14.7	17.7	20.8	23.1	25.8	28.0	29.0	31.1	32.7	33.5	35.0	36.8	37.1	36.3	33.6	30.0	26.3	22.6	17.9	24.92	37.07																							
17-Mar	13.2	9.2	5.9	4.7	3.6	3.8	4.8	5.5	6.1	7.4	9.7	11.5	15.5	18.8	21.0	24.4	27.5	29.7	30.1	29.1	26.3	23.4	24.3	24.1	15.82	30.14																							
18-Mar	23.5	22.6	24.3	25.4	26.8	28.0	24.1	20.9	18.9	18.5	16.8	18.6	20.1	22.0	25.7	29.7	33.3	35.8	37.0	35.8	32.5	27.9	23.0	18.2	25.40	37.01																							
19-Mar	13.3	8.6	4.4	2.0	1.0	0.9	0.9	0.7	2.3	7.2	12.6	16.3	21.7	27.4	33.1	38.7	42.9	43.6	44.2	43.5	41.4	36.2	30.7	28.9	20.94	44.17																							
20-Mar	27.2	23.9	19.3	16.7	13.2	12.7	12.7	8.5	5.0	6.4	11.4	15.5	20.6	25.9	30.9	35.9	40.0	41.9	41.3	40.5	39.7	38.8	37.1	33.8	24.95	41.86																							
21-Mar	30.9	27.9	24.8	23.0	18.3	13.3	9.4	7.3	6.7	8.0	10.6	14.6	19.7	24.8	29.5	34.2	37.7	40.0	40.9	40.3	39.4	38.8	38.9	39.4	25.75	40.86																							
22-Mar	39.7	40.3	41.4	41.9	44.1	46.1	47.5	48.3	49.1	49.5	49.6	49.1	48.7	48.0	47.2	46.0	45.0	43.9	43.4	43.4	43.2	43.1	43.2	43.8	45.24	49.62																							
23-Mar	44.4	44.6	44.0	43.8	39.8	34.2	29.0	23.3	18.7	18.2	19.2	22.7	26.2	31.3	36.3	41.7	45.9	46.8	46.6	45.3	43.4	41.3	37.9	34.1	35.77	46.79																							
24-Mar	32.9	31.0	28.5	27.4	25.0	23.5	22.2	21.6	19.0	18.7	21.6	24.6	28.4	31.9	36.3	40.7	43.9	45.0	43.8	42.3	40.3	37.9	35.8	33.6	31.50	44.95																							
25-Mar	31.1	29.1	27.2	26.3	23.5	21.2	17.6	14.8	12.5	13.1	16.1	19.3	23.5	27.9	32.8	37.1	41.4	43.7	44.0	44.2	43.8	43.2	42.4	41.5	29.88	44.17																							
26-Mar	40.5	39.3	37.6	36.8	36.2	35.7	35.0	34.8	35.2	36.1	37.8	38.3	38.9	40.0	41.1	41.9	42.2	42.0	41.3	40.3	39.1	37.6	36.3	35.1	38.30	42.20																							
27-Mar	33.9	32.6	31.1	30.7	30.9	31.0	31.5	32.2	33.2	34.2	35.9	36.1	36.5	37.3	38.0	39.2	40.4	42.0	43.2	42.9	42.0	40.0	37.7	34.9	36.13	43.23																							
28-Mar	31.9	28.2	23.8	22.2	18.0	15.6	13.6	12.1	11.9	15.4	20.4	23.6	29.1	34.2	38.6	42.3	44.8	44.8	44.5	44.1	43.3	42.0	40.1	38.8	30.14	44.81																							
29-Mar	37.5	35.1	30.9	29.2	27.2	26.9	27.3	27.1	27.7	29.9	34.4	35.4	37.7	39.4	40.9	42.4	43.4	44.2	44.5	44.0	42.8	41.1	39.6	38.4	36.13	44.54																							
30-Mar	37.3	36.1	35.0	34.5	34.0	34.3	35.3	36.2	37.0	37.8	38.6	39.1	40.5	41.4	42.1	42.5	42.6	42.7	42.9	43.0	42.9	41.0	40.1	38.7	38.99	43.00																							
31-Mar	36.1	32.2	27.6	25.4	20.4	19.1	17.1	15.3	15.3	17.9	22.1	24.2	28.6	31.7	34.5	37.6	40.7	42.6	43.4	43.7	42.4	39.7	36.9	33.6	30.34	43.71																							
																								27.86	25.29	23.06	22.05	20.91	20.18	19.55	18.88	18.49	19.54	21.65	23.72	26.78	29.80	32.93	36.86	39.79	41.47	41.94	41.01	39.08	36.66	33.96	30.65	Diurnal Average	
																								45.17	44.56	43.99	43.83	44.08	46.07	47.45	48.33	49.12	49.53	49.62	49.11	48.73	47.97	47.51	48.88	50.17	52.03	52.48	53.81	54.32	53.30	51.11	47.92	Diurnal Maximum	
C - Calibration																																																	



**WCAS - Hinton**  
**Summary of Hourly Averages**

**Nitrogen Oxide (NO) - ppb**  
**March 2018**

<b>Maximum Value: 77.99 ppb on Mar 12 22:00</b>		<b>Maximum Daily Average: 16.25 ppb on Mar 8</b>		<b>Hours in Service: 744</b>																							
<b>Minimum Value: 0.0 ppb on Mar 27 18:00</b>		<b>Minimum Daily Average: 0.59 ppb on Mar 22</b>		<b>Hours of Data: 706</b>																							
<b>Maximum Diurnal Average: 10.56 ppb at hour 8</b>		<b>Minimum Diurnal Average: 0.98 ppb at hour 18</b>		<b>Hours of Missing Data: 38</b>																							
<b>Monthly Average: 5.276 ppb</b>		<b>Percentiles: P<sub>1</sub> = 0.0 P<sub>10</sub> = 0.2 Q<sub>1</sub> = 0.6 Median = 1.4 Q<sub>3</sub> = 4.5 P<sub>90</sub> = 16.9 P<sub>99</sub> = 41.8</b>		<b>Hours of Calibration: 38</b>																							
<b>Percent Operational Time: 100.0</b>																											
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-Mar	0.0	0.1	0.6	Z	0.6	1.3	2.8	1.3	1.7	1.4	2.4	2.1	2.9	2.2	2.0	1.6	1.5	1.8	1.4	0.8	0.5	0.5	0.5	0.2	1.31	2.92	
2-Mar	0.2	0.2	0.3	Z	0.2	0.5	0.9	1.1	1.2	1.1	1.4	2.0	1.7	2.6	2.8	2.6	1.9	3.0	2.4	0.9	0.9	1.0	0.2	0.1	1.27	2.95	
3-Mar	0.1	0.2	0.1	Z	0.2	0.5	0.4	2.9	15.4	7.1	2.5	1.3	1.3	1.9	3.9	3.0	0.9	1.1	0.4	0.5	0.2	0.1	1.1	1.1	2.02	15.44	
4-Mar	0.3	0.9	1.5	Z	0.4	2.3	10.7	1.6	4.7	3.2	3.3	3.5	4.0	2.5	2.6	1.8	0.8	1.7	14.2	25.3	16.5	11.0	0.4	0.1	4.93	25.33	
5-Mar	0.2	0.2	0.2	Z	0.3	1.0	5.4	6.3	16.5	39.5	34.2	17.8	4.7	4.5	2.9	2.3	2.0	1.7	1.1	1.0	1.5	0.6	1.2	0.5	6.32	39.50	
6-Mar	0.7	0.5	0.0	Z	2.9	6.1	2.4	4.2	6.6	3.6	4.9	5.3	3.8	2.5	1.4	1.6	1.5	2.3	1.5	2.0	16.3	11.1	31.4	47.9	6.99	47.86	
7-Mar	33.1	11.9	7.9	Z	4.2	2.8	1.6	5.2	10.0	22.6	16.4	7.5	9.9	5.3	1.2	1.5	1.1	1.7	2.0	3.7	5.3	8.1	13.2	22.6	8.64	33.10	
8-Mar	8.1	15.6	13.2	Z	25.9	27.0	41.9	28.4	52.5	40.9	22.5	23.8	8.5	5.6	3.3	2.6	3.3	3.2	3.7	4.2	2.5	7.3	22.7	6.9	16.25	52.49	
9-Mar	0.6	5.5	5.9	Z	18.0	14.4	18.8	25.9	9.8	29.3	47.5	4.3	1.3	1.1	3.0	0.3	0.2	0.3	0.3	8.3	3.8	0.2	26.8	12.4	10.35	47.49	
10-Mar	0.4	0.0	0.0	Z	0.2	0.5	0.4	0.6	0.6	0.8	1.1	0.8	0.9	3.9	1.1	1.1	0.8	0.6	0.7	1.6	7.2	33.7	17.8	29.0	4.50	33.68	
11-Mar	21.1	11.5	31.8	Z	18.2	1.7	2.1	0.7	12.9	6.0	1.4	1.9	2.1	1.6	2.0	1.0	1.0	0.5	9.2	12.0	23.4	29.4	21.1	11.7	9.75	31.80	
12-Mar	23.1	19.1	24.2	Z	25.4	5.3	6.6	0.1	0.7	1.4	1.6	1.6	1.1	1.4	1.7	1.9	0.7	0.2	6.7	25.8	36.0	78.0	37.4	34.4	14.54	77.99	
13-Mar	33.1	20.7	23.4	Z	19.3	52.6	36.0	55.8	26.5	12.2	5.9	5.5	3.1	3.0	2.4	0.7	1.8	0.7	0.3	1.8	3.7	3.2	9.7	2.0	14.06	55.78	
14-Mar	2.2	5.1	8.2	Z	10.5	15.9	35.7	33.2	23.3	7.8	7.1	4.5	2.9	3.1	2.2	1.8	1.3	1.0	0.3	0.3	0.4	1.9	1.8	0.4	7.42	35.68	
15-Mar	0.2	0.3	0.5	Z	2.1	1.0	1.9	12.8	12.6	22.3	15.8	14.4	1.5	C	C	C	C	C	C	C	0.1	0.3	1.4	1.7	--	22.33	
16-Mar	0.5	0.1	0.2	Z	1.6	1.4	1.1	2.3	4.4	3.2	2.7	1.9	1.2	0.6	3.0	1.3	1.9	1.1	0.8	3.5	3.3	4.9	7.9	13.1	2.69	13.10	
17-Mar	5.6	4.5	6.0	Z	8.4	2.2	3.2	4.5	10.1	4.2	1.9	2.2	1.6	0.6	0.6	1.1	2.0	1.3	0.4	0.1	0.6	2.3	1.6	0.3	2.84	10.06	
18-Mar	0.3	0.1	0.9	Z	1.4	0.8	3.6	3.1	6.1	6.3	3.1	1.9	1.2	0.9	0.6	0.7	0.5	0.5	0.4	0.8	16.5	31.1	31.5	6.7	5.17	31.47	
19-Mar	26.7	26.8	19.6	Z	5.9	8.9	20.2	14.6	6.9	2.1	1.6	1.3	1.3	1.2	1.1	1.0	1.1	0.8	0.4	0.2	2.9	30.8	20.4	2.1	8.59	30.83	
20-Mar	1.3	2.2	3.3	Z	31.3	30.8	17.2	20.7	14.4	5.7	1.4	1.1	1.8	1.4	1.5	1.0	0.7	0.6	0.3	0.1	0.6	0.5	3.0	2.8	6.24	31.25	
21-Mar	4.7	2.9	1.0	Z	11.6	19.6	41.1	60.0	9.7	3.6	2.8	1.2	1.1	1.3	1.4	1.2	0.8	0.3	0.3	0.1	0.3	0.3	0.2	0.0	7.19	60.05	
22-Mar	0.5	0.8	0.2	Z	1.2	0.2	0.9	1.7	0.5	0.3	0.4	0.8	0.6	0.6	0.5	0.7	0.6	0.5	0.2	0.3	0.5	0.8	0.3	0.4	0.59	1.74	
23-Mar	0.9	1.1	0.4	Z	3.3	10.9	7.2	23.0	13.3	1.5	1.0	1.3	1.2	1.2	1.0	1.1	0.8	0.4	1.4	1.5	0.3	0.4	0.5	2.1	3.29	22.96	
24-Mar	0.1	0.8	1.7	Z	8.2	2.1	6.4	4.6	6.4	6.2	0.7	0.8	1.0	0.9	0.7	0.7	1.1	1.1	0.6	0.5	1.6	2.0	1.2	0.7	2.18	8.20	
25-Mar	2.4	6.2	0.5	Z	4.9	4.2	6.8	5.3	9.1	3.7	1.4	1.6	0.8	0.6	0.4	0.7	1.0	0.5	0.4	0.3	0.2	0.2	0.4	0.6	2.27	9.07	
26-Mar	0.3	0.5	0.9	Z	0.2	0.3	0.2	0.7	1.8	1.7	1.5	2.3	2.4	0.9	1.0	1.3	0.8	0.7	0.4	0.4	0.4	0.7	0.4	1.2	0.91	2.37	
27-Mar	1.2	1.0	1.4	Z	0.7	0.9	0.3	0.2	0.2	1.1	1.4	0.8	1.1	1.2	0.7	0.1	0.1	0.0	0.0	0.0	0.2	1.9	0.2	1.0	0.69	1.92	
28-Mar	1.2	1.0	1.7	Z	8.6	2.3	1.6	1.3	2.3	0.3	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.94	8.57	
29-Mar	0.1	3.0	11.4	Z	0.7	0.7	3.3	1.8	0.6	1.4	0.9	0.9	1.4	1.2	1.0	0.9	0.9	0.4	0.5	0.4	0.8	0.8	0.5	0.6	1.48	11.37	
30-Mar	0.7	0.6	0.7	Z	3.0	0.2	0.8	0.6	0.2	0.6	0.7	1.6	1.1	0.7	0.5	0.8	0.7	0.9	0.5	0.2	0.2	1.1	0.2	0.5	0.75	3.02	
31-Mar	3.4	10.3	18.9	Z	5.1	0.6	0.2	2.7	10.6	8.7	6.6	3.5	3.5	3.4	1.8	1.2	1.4	0.7	0.9	0.4	3.1	2.3	0.7	0.4	3.94	18.85	
		5.58	4.97	6.02	--	7.24	7.06	9.08	10.56	9.40	8.06	6.33	3.86	2.29	1.93	1.60	1.26	1.11	0.98	1.72	3.24	4.83	8.60	8.24	6.57	Diurnal Average	
		33.10	26.77	31.80	--	31.25	52.59	41.87	60.05	52.49	40.88	47.49	23.80	9.86	5.65	3.91	3.02	3.26	3.23	14.20	25.79	36.04	77.99	37.36	47.86	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 (NO<sub>2</sub>) - ppb**  
**March 2018**

<b>Maximum Value: 41.78 ppb on Mar 10 22:00</b>		<b>Maximum Daily Average: 22.47 ppb on Mar 8</b>		<b>Hours in Service: 744</b>																																												
<b>Minimum Value: 0.3 ppb on Mar 27 18:00</b>		<b>Minimum Daily Average: 4.32 ppb on Mar 27</b>		<b>Hours of Data: 706</b>																																												
<b>Maximum Diurnal Average: 17.33 ppb at hour 23</b>		<b>Minimum Diurnal Average: 4.10 ppb at hour 16</b>		<b>Hours of Missing Data: 38</b>																																												
<b>Monthly Average: 11.194 ppb</b>		<b>Percentiles: P<sub>1</sub> = 0.4 P<sub>10</sub> = 2.7 Q<sub>1</sub> = 4.5 Median = 8.0 Q<sub>3</sub> = 15.0 P<sub>90</sub> = 26.9 P<sub>99</sub> = 38.8</b>		<b>Hours of Calibration: 38</b>																																												
				<b>Percent Operational Time: 100.0</b>																																												
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-Mar	4.9	5.1	6.9	Z	7.2	11.7	13.1	10.9	9.9	11.1	9.6	8.6	10.5	8.7	8.0	6.3	6.3	6.3	6.0	5.5	4.7	4.0	4.3	3.1	7.51	13.05																						
2-Mar	2.8	3.3	3.8	Z	3.4	4.3	4.8	6.6	7.3	4.2	4.5	4.7	4.8	6.7	5.5	6.3	5.5	8.6	8.0	8.8	7.3	6.8	5.7	5.8	5.63	8.80																						
3-Mar	4.5	4.4	3.6	Z	9.9	12.5	8.7	14.7	27.9	17.4	7.3	5.1	4.0	3.7	6.4	5.0	3.5	5.0	5.7	9.6	6.3	7.2	22.1	15.3	9.11	27.88																						
4-Mar	13.6	11.3	13.5	Z	12.2	10.4	25.0	17.2	14.7	7.3	5.1	5.3	5.2	3.8	4.1	3.5	2.8	6.7	25.6	35.7	32.9	33.3	15.3	11.6	13.74	35.69																						
5-Mar	11.0	8.2	11.7	Z	13.4	19.1	24.6	22.0	20.2	23.2	21.9	14.6	7.4	6.9	4.9	4.7	5.8	4.7	5.3	9.9	15.8	10.3	10.3	8.9	12.38	24.56																						
6-Mar	9.9	6.0	5.4	Z	12.9	18.2	12.5	11.8	17.3	8.2	7.0	6.1	5.4	3.6	2.4	3.0	3.9	8.8	9.8	10.6	31.3	29.0	35.1	36.9	12.85	36.92																						
7-Mar	33.0	27.2	23.9	Z	18.5	17.2	13.6	19.6	16.4	19.4	16.8	11.8	14.8	9.6	3.2	4.5	4.0	5.5	9.6	19.8	25.4	22.5	35.0	38.8	17.83	38.85																						
8-Mar	34.8	34.2	31.6	Z	29.5	26.6	25.8	25.3	27.2	26.1	23.7	24.3	15.8	14.9	9.2	8.8	9.0	11.2	18.7	16.1	15.8	28.5	33.6	26.2	22.47	34.84																						
9-Mar	21.9	27.4	26.4	Z	25.5	25.4	25.4	27.7	23.3	24.5	27.0	5.1	2.7	1.9	4.5	1.1	1.0	1.1	1.5	18.6	32.8	10.5	39.2	32.0	17.68	39.18																						
10-Mar	15.0	6.1	3.4	Z	2.8	3.3	3.9	3.6	2.8	2.5	2.9	2.0	2.0	3.2	2.3	2.5	2.7	2.8	6.5	17.9	35.3	41.8	37.2	39.0	10.50	41.78																						
11-Mar	37.2	29.2	31.3	Z	25.9	15.8	13.8	10.7	19.2	12.8	4.1	4.9	5.3	4.6	5.0	2.9	3.9	5.0	25.3	39.7	40.3	38.3	35.3	30.4	19.18	40.29																						
12-Mar	33.4	29.8	29.5	Z	33.0	19.9	20.5	9.6	6.1	5.4	4.5	3.9	2.4	2.8	4.3	6.0	3.1	2.6	22.4	41.3	37.7	40.4	33.0	31.6	18.40	41.30																						
13-Mar	33.7	31.5	33.1	Z	29.6	36.5	27.9	33.3	21.3	18.2	11.9	9.9	8.5	8.1	6.6	3.3	6.0	4.2	7.7	17.5	25.6	26.7	28.9	19.7	19.56	36.47																						
14-Mar	19.4	27.6	36.1	Z	30.2	31.0	29.3	28.7	24.8	15.7	14.6	10.3	8.6	10.3	10.2	10.1	10.9	11.4	12.1	13.6	12.0	12.9	14.4	16.2	17.86	36.10																						
15-Mar	13.9	13.6	12.4	Z	18.9	17.6	22.9	29.2	29.3	31.7	25.8	26.2	7.4	C	C	C	C	C	C	C	10.5	10.2	12.3	20.0	--	31.67																						
16-Mar	13.3	10.5	9.5	Z	11.7	10.2	8.5	11.6	13.8	9.6	9.0	7.3	4.0	2.3	6.4	4.3	6.1	6.2	8.6	14.2	12.4	10.5	11.4	9.8	9.18	14.24																						
17-Mar	6.1	4.9	5.2	Z	4.2	4.6	7.2	9.4	10.2	8.0	6.8	8.8	8.2	4.7	4.6	5.5	8.7	8.8	6.0	7.2	4.6	10.1	7.7	7.2	6.90	10.19																						
18-Mar	4.9	5.3	4.7	Z	8.4	6.7	12.6	12.2	9.2	11.6	7.6	6.9	4.5	3.6	3.4	2.9	2.3	2.8	4.0	9.2	18.7	28.0	24.4	16.3	9.13	28.03																						
19-Mar	16.8	15.1	13.2	Z	7.7	7.7	9.5	8.9	8.4	5.9	4.4	3.2	2.7	2.6	3.1	3.8	4.6	8.4	4.1	6.7	14.5	35.1	30.4	9.1	9.82	35.07																						
20-Mar	10.3	23.2	21.1	Z	22.2	22.5	18.4	16.9	14.0	9.3	5.6	3.5	5.0	4.5	6.0	5.9	6.5	8.4	8.8	7.1	7.7	5.9	10.9	14.0	11.21	23.20																						
21-Mar	12.8	10.5	11.2	Z	15.7	17.3	18.9	21.7	9.2	6.5	5.1	2.1	2.7	3.3	4.5	4.7	4.0	3.1	3.5	3.9	5.4	4.6	4.1	3.4	7.75	21.71																						
22-Mar	4.5	3.9	4.4	Z	4.5	3.9	5.8	5.1	4.6	3.8	5.4	5.9	5.0	5.9	5.4	7.4	6.1	5.6	5.2	5.1	4.9	6.1	5.3	4.9	5.16	7.37																						
23-Mar	5.5	7.3	6.7	Z	19.5	32.6	25.6	29.7	20.2	4.9	2.8	3.2	2.9	3.5	2.6	2.9	3.5	2.7	3.7	9.5	13.1	10.6	14.3	17.2	10.64	32.58																						
24-Mar	6.2	5.8	9.7	Z	15.3	10.4	16.2	13.4	10.8	10.3	2.4	2.3	2.9	2.0	2.0	2.0	3.2	4.0	4.8	5.5	8.9	11.1	6.9	6.2	7.05	16.17																						
25-Mar	9.1	12.8	9.4	Z	16.1	12.9	18.4	14.0	13.8	11.3	6.3	5.6	3.4	2.7	1.7	3.0	3.4	2.5	3.3	4.1	5.4	8.1	8.6	8.9	8.04	18.40																						
26-Mar	12.2	12.0	17.0	Z	9.0	12.6	11.7	10.3	8.1	5.2	4.2	5.2	4.9	2.0	3.0	5.0	5.6	5.6	3.3	4.2	4.2	3.9	3.2	4.4	6.82	16.99																						
27-Mar	4.9	5.4	9.7	Z	8.3	9.2	3.6	2.5	1.2	3.4	3.7	2.7	3.2	2.7	1.8	0.4	0.3	0.3	0.6	3.8	6.1	12.3	6.8	6.6	4.32	12.35																						
28-Mar	7.6	10.9	16.1	Z	22.9	18.8	16.4	13.5	10.1	1.7	0.4	0.5	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	1.5	5.3	7.6	3.6	6.11	22.93																						
29-Mar	8.6	15.1	25.9	Z	10.9	5.7	8.8	8.0	4.5	3.8	2.5	2.1	3.1	3.3	2.7	2.5	2.6	2.1	3.1	6.4	8.4	9.7	9.8	7.9	6.84	25.90																						
30-Mar	6.1	6.4	5.7	Z	9.5	6.3	5.1	4.0	2.1	2.5	2.2	2.6	1.9	1.6	1.3	1.7	1.9	2.6	2.3	2.3	4.1	17.6	7.4	8.5	4.60	17.65																						
31-Mar	19.4	27.5	33.9	Z	29.5	13.0	8.1	10.1	14.3	10.2	7.7	4.9	4.7	4.7	3.2	2.5	3.4	3.2	6.4	6.0	15.0	21.4	16.8	15.5	12.24	33.92																						
																								Diurnal Average	Diurnal Maximum																							
																								14.11	14.25	15.36	--	15.75	14.96	15.05	14.92	13.62	10.83	8.48	6.75	5.31	4.62	4.30	4.10	4.37	5.03	7.74	12.00	15.12	16.86	17.33	15.46	Diurnal Average
																								37.16	34.17	36.10	--	32.97	36.47	29.33	33.34	29.31	31.67	27.02	26.15	15.85	14.91	10.23	10.14	10.93	11.44	25.58	41.30	40.29	41.78	39.18	39.02	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<sub>x</sub>) - ppb**  
**March 2018**

Maximum Value: 118.65 ppb on Mar 12 22:00		Maximum Daily Average: 38.85 ppb on Mar 8		Hours in Service: 744																																													
Minimum Value: 0.2 ppb on Mar 27 18:00		Minimum Daily Average: 5.06 ppb on Mar 27		Hours of Data: 706																																													
Maximum Diurnal Average: 25.68 ppb at hour 23		Minimum Diurnal Average: 5.40 ppb at hour 16		Hours of Missing Data: 38																																													
Monthly Average: 16.557 ppb		Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 3.5 Q <sub>1</sub> = 5.4 Median = 9.7 Q <sub>3</sub> = 19.1 P <sub>90</sub> = 44.0 P <sub>99</sub> = 74.7		Hours of Calibration: 38																																													
				Percent Operational Time: 100.0																																													
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Mar	4.9	5.2	7.5	Z	7.8	13.0	16.0	12.3	11.6	12.6	12.1	10.9	13.5	11.0	10.1	8.0	7.8	8.1	7.3	6.3	5.2	4.5	4.7	3.3	8.86	15.98																							
2-Mar	2.9	3.4	4.1	Z	3.6	4.9	5.6	7.7	8.6	5.2	6.0	6.7	6.6	9.3	8.4	9.0	7.5	11.6	10.4	9.7	8.2	7.8	5.9	5.9	6.92	11.64																							
3-Mar	4.6	4.6	3.7	Z	10.2	13.0	9.1	17.7	43.4	24.5	9.8	6.4	5.3	5.6	10.3	8.0	4.4	6.1	6.1	10.1	6.5	7.3	23.2	16.5	11.15	43.40																							
4-Mar	13.9	12.3	15.1	Z	12.6	12.8	35.8	18.8	19.5	10.6	8.5	8.9	9.2	6.4	6.7	5.3	3.7	8.4	39.9	61.2	49.6	44.4	15.7	11.8	18.74	61.19																							
5-Mar	11.3	8.4	12.0	Z	13.8	20.2	30.0	28.4	36.8	62.9	56.3	32.5	12.2	11.5	7.9	7.0	7.8	6.4	6.4	10.9	17.4	11.0	11.6	9.4	18.79	62.89																							
6-Mar	10.7	6.6	5.5	Z	15.9	24.4	15.0	16.1	24.0	11.9	12.0	11.6	9.3	6.2	3.8	4.6	5.5	11.2	11.4	12.7	47.7	40.2	66.8	85.1	19.93	85.06																							
7-Mar	66.4	39.3	32.0	Z	22.8	20.1	15.4	24.9	26.5	42.1	33.3	19.3	24.8	14.9	4.5	6.0	5.1	7.2	11.6	23.6	30.8	30.7	48.3	61.8	26.57	66.36																							
8-Mar	43.1	49.9	44.9	Z	55.5	53.8	67.9	53.9	79.9	67.2	46.4	48.2	24.4	20.7	12.6	11.4	12.4	14.5	22.5	20.4	18.4	35.9	56.4	33.2	38.85	79.87																							
9-Mar	22.6	33.0	32.4	Z	43.7	39.9	44.4	53.7	33.2	53.9	74.7	9.4	4.0	3.1	7.5	1.5	1.2	1.4	1.8	27.0	36.7	10.7	66.1	44.5	28.10	74.71																							
10-Mar	15.5	6.1	3.4	Z	3.0	3.7	4.2	4.2	3.4	3.3	3.9	2.7	2.9	7.0	3.4	3.6	3.5	3.3	7.2	19.5	42.6	75.6	55.1	68.2	15.01	75.63																							
11-Mar	58.4	40.8	63.2	Z	44.3	17.5	15.9	11.4	32.2	18.9	5.5	6.8	7.4	6.2	7.0	3.9	4.9	5.4	34.6	51.9	63.8	67.9	56.6	42.2	28.99	67.94																							
12-Mar	56.7	49.0	53.8	Z	58.6	25.2	27.1	9.7	6.8	6.9	6.1	5.4	3.6	4.2	6.1	8.0	3.8	2.7	29.2	67.4	74.0	118.7	70.6	66.2	33.02	118.65																							
13-Mar	67.0	52.3	56.6	Z	49.0	89.2	64.1	89.3	48.0	30.5	17.9	15.5	11.6	11.2	9.1	4.0	7.8	4.9	8.0	19.4	29.4	30.0	38.8	21.9	33.72	89.31																							
14-Mar	21.8	32.8	44.4	Z	40.8	47.0	65.2	62.1	48.2	23.7	21.8	15.0	11.6	13.5	12.6	12.1	12.4	12.6	12.5	14.0	12.5	14.9	16.3	16.8	25.41	65.21																							
15-Mar	14.2	14.0	12.9	Z	21.2	19.0	25.3	42.8	42.7	55.1	42.6	41.7	10.3	C	C	C	C	C	C	C	10.0	9.9	13.2	21.4	--	55.05																							
16-Mar	13.6	10.5	9.7	Z	13.4	11.8	9.7	14.1	18.3	13.0	11.8	9.2	5.2	2.9	9.5	5.6	8.1	7.4	9.5	17.9	15.8	15.5	19.5	23.1	11.96	23.05																							
17-Mar	11.9	9.5	11.3	Z	12.7	6.8	10.5	14.1	20.4	12.4	8.8	11.1	9.9	5.3	5.2	6.7	10.8	10.2	6.5	7.3	5.1	12.5	9.4	7.5	9.82	20.41																							
18-Mar	5.2	5.4	5.7	Z	9.9	7.5	16.3	15.5	15.4	18.0	10.8	8.9	5.7	4.5	4.1	3.6	2.8	3.3	4.4	10.0	35.4	59.5	56.2	23.2	14.40	59.47																							
19-Mar	43.7	42.1	33.0	Z	13.7	16.8	29.9	23.6	15.4	8.0	6.0	4.5	4.0	3.8	4.2	4.8	5.7	9.3	4.6	7.0	17.6	66.3	51.1	11.3	18.54	66.33																							
20-Mar	11.7	25.6	24.5	Z	53.7	53.5	35.8	37.9	28.6	15.2	7.1	4.6	6.9	5.9	7.6	6.9	7.2	9.1	9.2	7.3	8.4	6.5	14.0	17.0	17.58	53.72																							
21-Mar	17.6	13.6	12.3	Z	27.5	37.1	60.3	82.1	19.1	10.1	8.0	3.3	3.8	4.6	6.0	5.9	4.9	3.5	3.8	4.1	5.7	4.9	4.3	3.5	15.04	82.11																							
22-Mar	5.1	4.8	4.6	Z	5.8	4.2	6.7	7.0	5.2	4.2	5.8	6.8	5.7	6.6	6.0	8.2	6.8	6.1	5.4	5.5	5.5	7.0	5.6	5.3	5.81	8.15																							
23-Mar	6.4	8.6	7.1	Z	23.1	43.8	33.0	53.0	33.7	6.4	3.9	4.6	4.2	4.7	3.6	4.0	4.3	3.2	5.2	11.2	13.6	11.1	14.9	19.4	14.04	53.03																							
24-Mar	6.4	6.7	11.5	Z	23.7	12.7	22.7	18.1	17.4	16.7	3.1	3.1	3.9	2.9	2.7	2.8	4.4	5.1	5.4	6.0	10.6	13.2	8.2	7.0	9.31	23.69																							
25-Mar	11.6	19.1	10.1	Z	21.2	17.2	25.4	19.5	23.0	15.1	7.8	7.2	4.3	3.4	2.0	3.8	4.4	3.0	3.7	4.4	5.7	8.3	9.1	9.6	10.39	25.39																							
26-Mar	12.6	12.6	18.1	Z	9.3	12.9	12.0	11.1	10.0	7.0	5.8	7.6	7.3	2.9	4.0	6.3	6.5	6.4	3.8	4.6	4.7	4.6	3.6	5.7	7.80	18.07																							
27-Mar	6.1	6.5	11.3	Z	9.2	10.2	3.9	2.8	1.4	4.5	5.2	3.5	4.4	3.9	2.6	0.5	0.5	0.2	0.5	3.8	6.3	14.4	7.2	7.7	5.06	14.43																							
28-Mar	8.9	12.1	18.0	Z	31.7	21.3	18.2	15.1	12.5	2.1	0.5	0.6	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	1.6	5.5	7.8	3.7	7.12	31.72																							
29-Mar	8.7	18.2	37.5	Z	11.6	6.4	12.2	9.9	5.0	5.2	3.4	3.0	4.4	4.6	3.6	3.4	3.4	2.6	3.5	6.8	9.2	10.6	10.4	8.6	8.37	37.51																							
30-Mar	6.8	7.1	6.5	Z	12.5	6.5	5.9	4.6	2.4	3.1	2.9	4.2	2.9	2.4	1.8	2.5	2.6	3.5	2.8	2.5	4.4	18.9	7.7	9.0	5.37	18.87																							
31-Mar	22.9	38.0	53.2	Z	34.9	13.8	8.3	12.9	25.1	19.0	14.5	8.5	8.2	8.2	5.1	3.8	4.9	4.0	7.3	6.5	18.3	23.9	17.7	16.2	16.32	53.19																							
																								19.78	19.29	21.48	--	23.12	22.14	24.26	25.63	23.15	19.01	14.91	10.70	7.68	6.59	5.94	5.40	5.52	6.04	9.50	15.32	20.02	25.56	25.68	22.12	Diurnal Average	
																								66.99	52.31	63.24	--	58.60	89.23	67.87	89.31	79.87	67.19	74.71	48.23	24.77	20.65	12.62	12.12	12.40	14.50	39.89	67.36	73.96	118.65	70.58	85.06	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<sub>2.5</sub>) - µg/m<sup>3</sup>**  
**March 2018**

Maximum Value: 68.28 µg/m <sup>3</sup> on Mar 7 12:00      Maximum Daily Average: 25.69 µg/m <sup>3</sup> on Mar 14																				Hours in Service: 744 Hours of Data: 744						
Minimum Value: 0.3 µg/m <sup>3</sup> on Mar 23 11:00      Minimum Daily Average: 3.35 µg/m <sup>3</sup> on Mar 24 Maximum Diurnal Average: 10.80 µg/m <sup>3</sup> at hour 23      Minimum Diurnal Average: 5.05 µg/m <sup>3</sup> at hour 18 Monthly Average: 8.683 µg/m <sup>3</sup> Percentiles: P <sub>1</sub> = 0.9 P <sub>10</sub> = 2.1 Q <sub>1</sub> = 3.4 Median = 6.0 Q <sub>3</sub> = 10.3 P <sub>90</sub> = 17.6 P <sub>99</sub> = 47.4																				Hours of Missing Data: 0 Hours of Calibration: 0 Percent Operational Time: 100.0						
Day	Hourly Period Ending At																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	2.5	3.3	3.1	3.5	3.8	4.6	4.8	4.4	3.4	4.6	4.6	4.6	3.0	3.5	3.4	3.0	4.0	3.9	3.0	3.1	3.7	4.9	4.0	3.2	3.75	4.92
2-Mar	3.1	3.6	4.0	3.7	3.4	3.2	3.1	2.7	3.0	2.8	5.0	6.7	5.2	3.1	3.4	3.2	3.5	4.3	5.2	4.5	4.2	11.1	9.8	6.4	4.51	11.12
3-Mar	12.4	5.4	5.8	3.9	3.7	4.2	4.5	9.6	13.9	7.3	3.6	3.1	2.4	2.4	3.3	3.2	2.4	3.4	3.0	2.6	2.2	2.4	4.3	3.3	4.67	13.94
4-Mar	5.8	6.4	7.0	7.3	8.7	5.3	5.6	4.8	8.4	4.9	10.4	10.5	11.2	11.7	18.1	14.7	9.4	11.6	17.4	19.4	13.3	17.7	7.7	6.4	10.16	19.40
5-Mar	5.8	5.1	6.9	6.8	6.9	7.3	7.6	6.1	7.0	14.9	36.9	12.8	11.2	8.0	6.1	4.2	4.5	3.8	7.0	4.2	7.6	6.4	8.4	7.4	8.46	36.94
6-Mar	6.7	5.2	5.0	5.1	9.1	8.5	8.1	5.1	5.7	3.7	5.0	16.0	21.1	7.8	3.7	3.6	4.4	7.2	10.6	8.6	10.0	17.7	35.4	13.9	9.46	35.40
7-Mar	10.3	4.0	6.7	3.8	4.7	6.0	6.7	6.4	10.1	10.6	9.6	68.3	35.3	12.2	2.2	3.8	2.1	2.1	1.8	5.2	4.5	3.5	4.7	6.6	9.64	68.28
8-Mar	6.4	10.9	7.0	13.7	10.1	6.2	7.8	11.8	13.9	18.7	9.4	9.5	8.6	13.4	10.7	10.4	7.6	5.8	4.2	7.0	7.7	7.3	17.0	8.2	9.71	18.68
9-Mar	7.8	8.8	9.0	10.8	11.8	10.8	14.7	15.8	14.4	17.2	21.1	4.5	2.6	1.7	3.5	1.6	1.7	1.7	1.8	10.4	7.6	3.2	13.2	21.9	9.05	21.91
10-Mar	3.7	1.9	2.4	2.1	1.8	1.6	1.6	1.5	1.6	1.7	1.9	2.0	2.0	2.0	2.0	2.0	2.7	2.7	3.7	8.5	28.1	11.7	14.0	20.6	5.16	28.11
11-Mar	7.3	5.2	7.2	2.8	3.8	2.4	2.2	2.1	4.0	5.0	2.8	4.9	6.3	5.5	6.4	3.4	3.7	4.3	6.6	16.0	32.6	15.7	7.7	5.3	6.79	32.58
12-Mar	6.8	6.4	13.2	13.3	7.5	2.5	2.5	1.7	1.8	1.9	2.1	2.3	2.0	1.9	2.5	4.8	3.2	2.7	12.2	37.8	10.2	8.6	21.3	16.7	7.74	37.77
13-Mar	13.6	5.9	7.1	6.1	4.8	4.9	3.9	5.5	3.6	4.7	6.1	6.4	14.2	10.5	6.7	3.7	6.0	5.4	5.6	10.1	11.2	14.0	8.4	17.4	7.75	17.41
14-Mar	14.9	18.1	18.2	35.2	24.3	27.0	17.5	15.6	23.1	20.6	16.6	10.2	10.5	16.3	20.8	25.5	22.1	17.7	29.7	40.6	44.7	53.2	49.1	45.2	25.69	53.21
15-Mar	40.0	41.0	41.1	42.1	41.6	40.4	40.7	44.4	52.4	53.2	52.1	34.0	2.2	2.6	0.9	2.4	3.0	1.6	2.2	2.4	7.6	6.6	4.7	9.3	23.68	53.17
16-Mar	5.8	4.6	2.8	1.9	2.2	1.5	1.3	1.7	1.9	4.3	10.0	11.5	4.9	2.5	1.5	1.8	2.0	2.3	3.2	5.6	5.4	7.1	12.8	10.2	4.53	12.82
17-Mar	5.8	10.4	9.8	8.1	8.1	9.4	11.8	13.1	13.1	12.2	11.4	19.3	20.9	11.0	9.6	9.2	10.3	9.9	10.7	16.3	12.9	16.8	8.6	8.8	11.57	20.89
18-Mar	8.6	8.4	7.8	8.5	10.7	27.9	18.3	16.5	6.5	7.5	9.1	10.8	8.5	8.4	10.2	9.1	7.6	7.3	7.8	9.5	15.0	25.8	17.0	11.7	11.60	27.88
19-Mar	11.7	19.0	11.2	9.0	9.1	8.7	8.9	7.9	6.8	5.1	6.5	4.2	4.0	3.8	3.8	4.4	5.2	8.1	4.1	5.7	10.1	19.9	15.5	3.3	8.17	19.91
20-Mar	3.8	7.2	7.2	10.6	11.4	8.0	11.1	12.8	11.7	9.1	5.5	4.0	5.5	4.4	6.0	5.4	5.6	7.8	8.2	5.9	3.0	1.7	13.5	6.0	7.31	13.53
21-Mar	8.4	6.5	5.0	3.4	4.4	22.7	24.2	17.0	3.3	2.4	2.0	1.5	2.5	3.7	2.9	3.1	2.9	2.6	2.6	2.9	4.0	4.4	4.4	6.0	5.95	24.18
22-Mar	8.5	12.2	20.1	25.7	33.9	30.3	25.7	22.3	19.5	25.9	22.4	14.4	19.4	15.9	10.2	10.0	11.5	10.9	10.6	12.0	12.4	10.9	9.0	7.9	16.74	33.90
23-Mar	5.4	5.3	6.1	7.4	8.4	10.9	9.8	17.7	13.4	1.9	0.3	0.5	0.8	0.9	0.9	1.2	1.1	0.8	1.6	5.0	2.7	3.7	2.8	5.7	4.76	17.74
24-Mar	1.4	1.4	2.4	4.0	3.6	2.8	4.5	5.2	4.8	5.8	1.2	1.2	1.2	1.1	1.2	1.4	1.6	3.6	3.6	3.9	6.2	7.3	5.4	5.6	3.35	7.31
25-Mar	7.5	8.1	7.6	10.7	8.5	8.5	9.3	8.1	8.9	7.0	5.4	4.9	3.0	3.2	2.2	3.2	3.9	2.6	3.3	3.9	5.4	6.7	9.3	10.0	6.30	10.68
26-Mar	13.9	12.4	18.5	8.1	8.5	12.9	12.8	11.7	10.6	8.3	6.5	9.6	8.9	5.3	4.3	6.2	6.4	6.7	5.6	4.3	4.5	4.3	3.9	4.0	8.26	18.52
27-Mar	5.1	5.9	9.9	9.6	5.7	3.6	1.5	1.2	0.7	1.6	3.4	2.5	2.9	3.0	3.4	3.3	2.8	2.1	2.0	4.9	5.3	5.6	4.8	7.0	4.08	9.87
28-Mar	6.1	7.1	8.5	8.7	12.4	10.6	7.3	5.2	3.0	1.7	0.9	1.0	1.1	1.2	1.3	2.3	2.0	1.5	0.9	0.8	1.0	3.0	3.7	2.7	3.91	12.35
29-Mar	4.6	10.2	14.3	12.0	6.6	1.6	2.5	3.1	5.0	3.2	2.7	2.3	3.2	3.3	4.7	4.0	4.5	3.7	4.7	5.3	6.3	7.9	6.4	6.7	5.36	14.26
30-Mar	7.0	7.7	8.2	9.3	8.2	8.4	8.5	10.4	7.0	9.2	8.2	29.0	65.7	63.5	33.8	24.9	4.0	3.3	3.1	2.7	2.6	3.3	2.4	3.4	13.90	65.66
31-Mar	3.2	23.0	6.2	4.7	4.9	2.2	2.2	3.9	17.6	22.3	12.3	5.4	5.1	5.3	5.2	5.2	6.1	5.3	3.7	2.7	5.4	8.5	5.5	5.9	7.15	23.01
8.19 9.06 9.32 9.74 9.43 9.83 9.39 9.52 9.69 9.66 9.52 10.25 9.53 7.70 6.29 5.94 5.08 5.05 6.11 8.76 9.59 10.36 10.80 9.57																								Diurnal Average		
40.01 41.04 41.06 42.09 41.57 40.43 40.67 44.44 52.38 53.17 52.11 68.28 65.66 63.49 33.79 25.46 22.05 17.70 29.66 40.59 44.65 53.21 49.12 45.20																								Diurnal Maximum		
Alberta Ambient Air Quality Objectives (AAAQO): 1-hr 80 ul/m <sup>3</sup> 24-hr 30 ul/m <sup>3</sup>																										

# Calibration Data Summary

## West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton  
 Calibration Date: March 15, 2018  
 Parameter: H<sub>2</sub>S

Instrument: Teco 45C	Serial Number: 45C-71671-369	Previous Calibration Date: February 21, 2018
Calibration: Routine	Calibration Equipment: Sabio 2010 SN 05200311	Barometric Pressure: 26.57" Hg
Calibration Method: Standard Gas Dilution	Permeation Device ID: DT0014794, 10.5 ppm H <sub>2</sub> S	Temperature: 26.8° C
Permeation Rate: 0 ng/min	In Service: 10/21/2016 EXP 10/4/2019	Technician: L. Burns

Instrument Settings	H <sub>2</sub> S bkg ppb	H <sub>2</sub> S Coefficient	Monitoring Range
Previous	20.4	1.410	100 ppb
Current	19.1	1.346	100 ppb

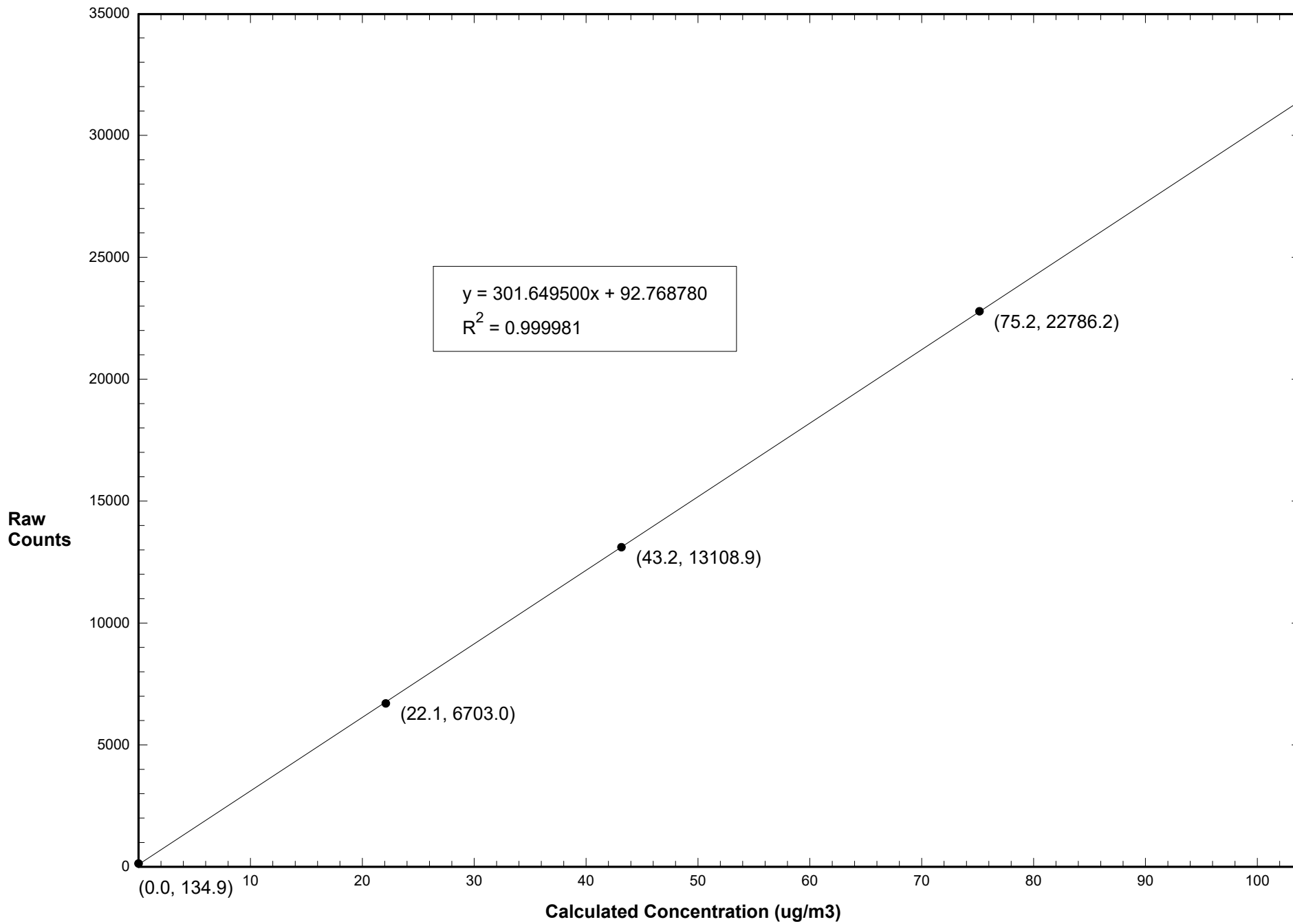
Final Zero: -0.1 ug/m<sup>3</sup>      Final Span: 44.1 ug/m<sup>3</sup>      As Found Correction Factor: 0.962

Calibration System Flow Rate (LPM)	Calculated Concentration C <sub>c</sub> (ug/m <sup>3</sup> )	Raw Count Output R <sub>c</sub>	Indicated Concentration C <sub>i</sub> (ug/m <sup>3</sup> )	Correction Factor C <sub>c</sub> /C <sub>i</sub>
0.036	75.2	22786.2	75.2	0.999
0.021	43.2	13108.9	43.1	1.000
0.011	22.1	6703.0	21.9	1.009
0.000	0.0	134.9	0.1	

Results of Linear Regression				Average Correction Factor:	1.003
R <sub>c</sub> vs C <sub>c</sub>	Slope	Intercept	R <sup>2</sup>	Previous Correction Factor:	1.001
Previous	297.995100	105.186400	0.999829	Current Correction Factor:	0.999
Current	301.649500	92.768780	0.999981	Percent Change of Correction Factor:	-0.2
C <sub>i</sub> vs C <sub>c</sub>					
Current	1.000000	-0.000001	0.999981		

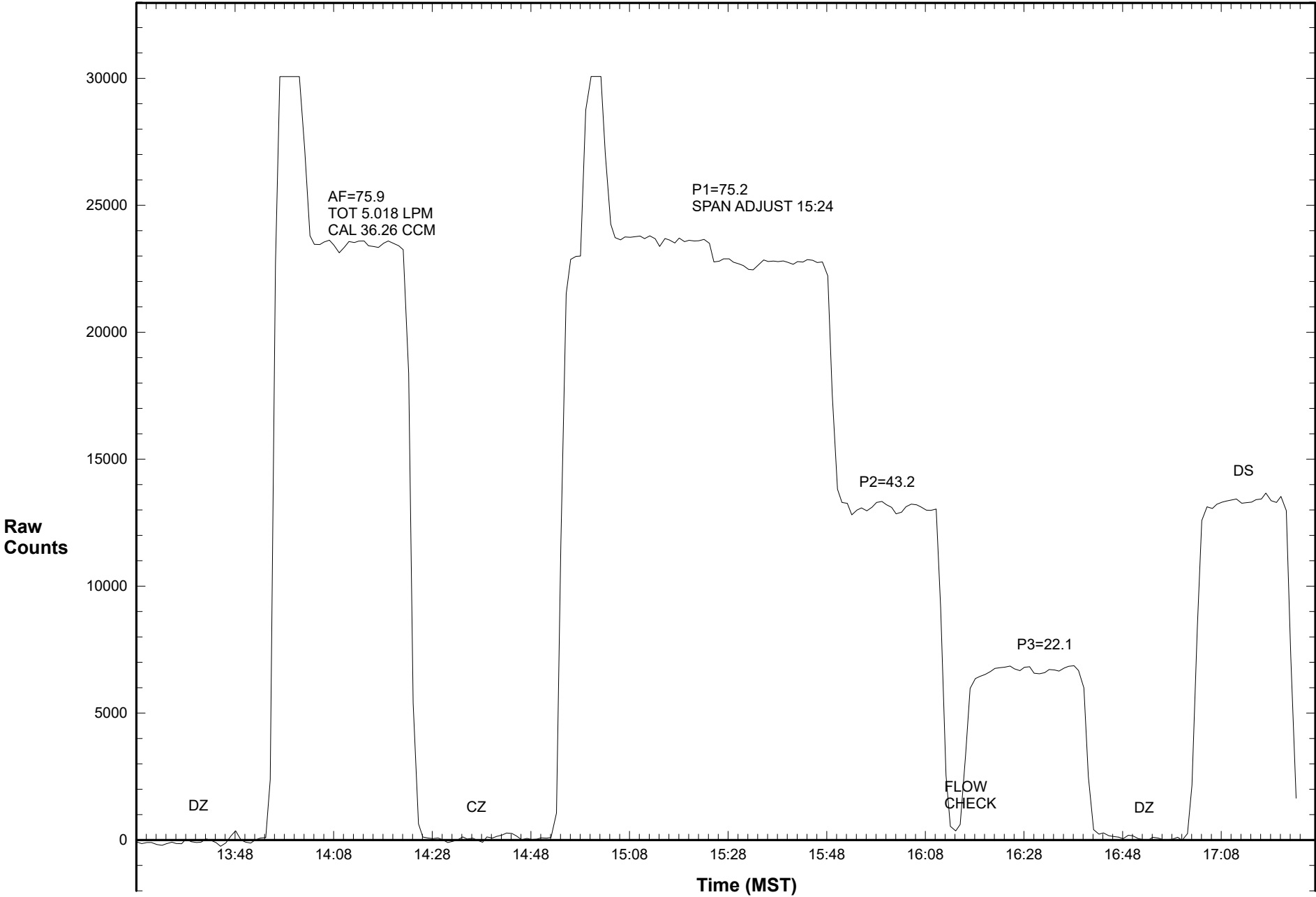
Comments: SAMPLE FLOW = 0.442 LPM

### Station 906 H2S March 15, 2018: Linear Regression





# Station 906 H2S March 15, 2018: Calibration Graph



# Calibration Data Summary

## West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: March 15, 2018

Parameter: NO/NO<sub>2</sub>/NO<sub>x</sub>

Instrument: Teco 42i

Serial Number: 0905034788

Previous Calibration Date: February 21, 2018

Calibration: Routine

Calibration Equipment: Sabio 2010 SN 08600312

Barometric Pressure: 26.57" Hg

Calibration Method: Standard Gas Dilution/GPT

Cylinder ID: EX0012529

Temperature: 26.8° C

Cylinder Concentration: 27.4 ppm NO/27.5 ppm NO<sub>x</sub>

In Service: 12/6/2017 EXP 10/25/2020

Technician: L. Burns

Instrument Settings	NO bkg ppb	NO <sub>x</sub> bkg ppb	Pre-reactor bkg ppb	NO Coefficient	NO <sub>x</sub> Coefficient	NO <sub>2</sub> Coefficient	Monitoring Range
Previous	14.4	15.0	NA	1.315	0.994	0.995	500 ppb
Current	15.3	15.6	NA	1.383	0.993	0.995	500 ppb

NO	Final Zero: -0.8 ppb	Final Span: 157.3 ppb	As Found Correction Factor: 1.051
NO <sub>2</sub>	Final Zero: -0.1 ppb	Final Span: 0.4 ppb	As Found Correction Factor: NA
NO <sub>x</sub>	Final Zero: 2.0 ppb	Final Span: 158.2 ppb	As Found Correction Factor: 1.046

Results of Linear Regression			Slope	Intercept	R <sup>2</sup>
NO	R <sub>c</sub> vs C <sub>c</sub>	Previous	60.015050	59.887960	0.999965
		Current	60.193680	53.769890	0.999959
	C <sub>i</sub> vs C <sub>c</sub>	Current	1.000000	-0.000039	0.999959
NO <sub>2</sub>	R <sub>c</sub> vs C <sub>c</sub>	Previous	59.973580	191.312700	0.999965
		Current	60.463470	15.338280	0.999998
	C <sub>i</sub> vs C <sub>c</sub>	Current	1.000000	0.000000	0.999998
NO <sub>x</sub>	R <sub>c</sub> vs C <sub>c</sub>	Previous	59.984380	52.668790	0.999965
		Current	60.135770	44.755330	0.999960
	C <sub>i</sub> vs C <sub>c</sub>	Current	1.000000	-0.000044	0.999960

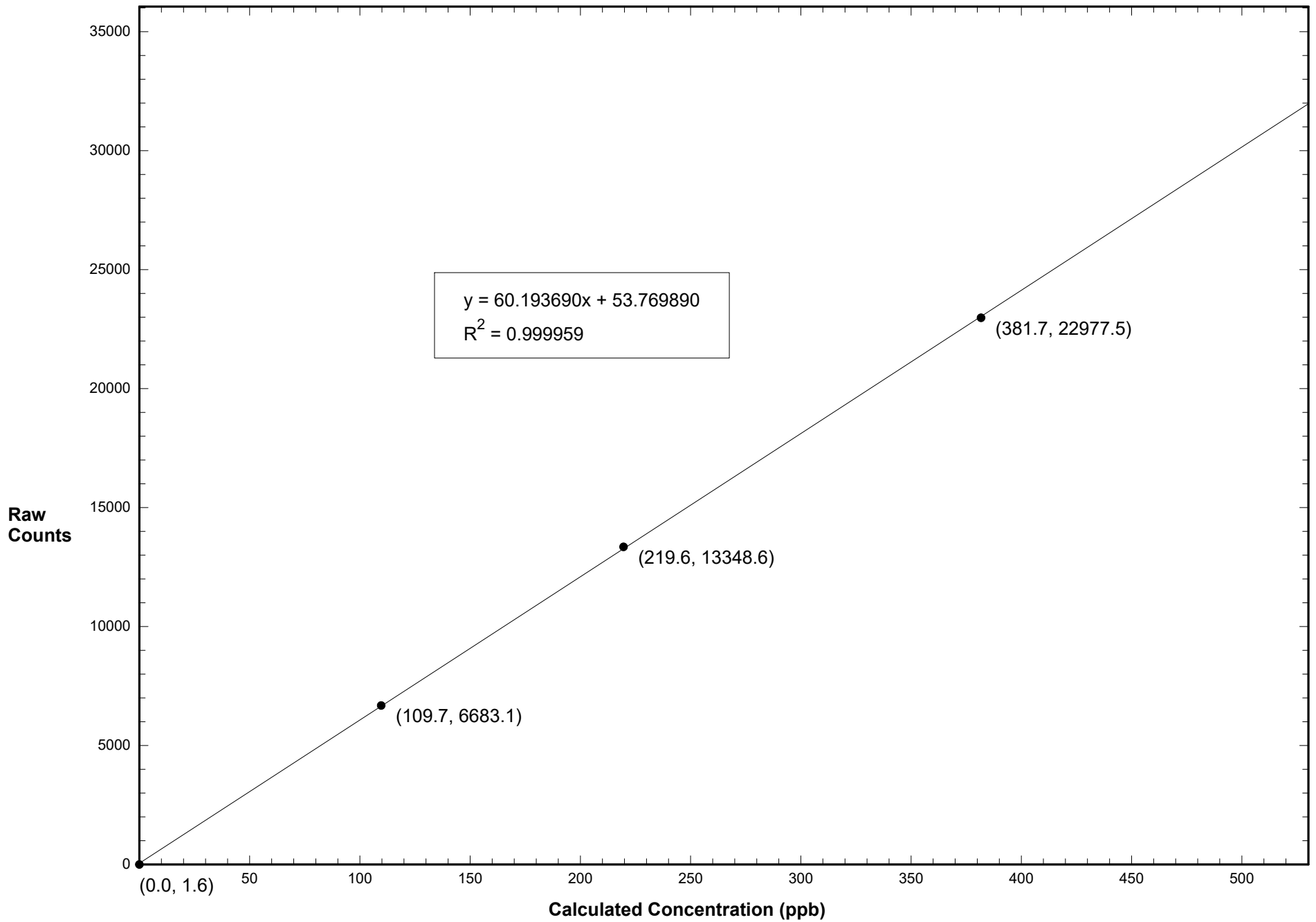
Comments: SAMPLE FLOW = 0.460 LPM

**Calibration Data Summary (Page 2)**

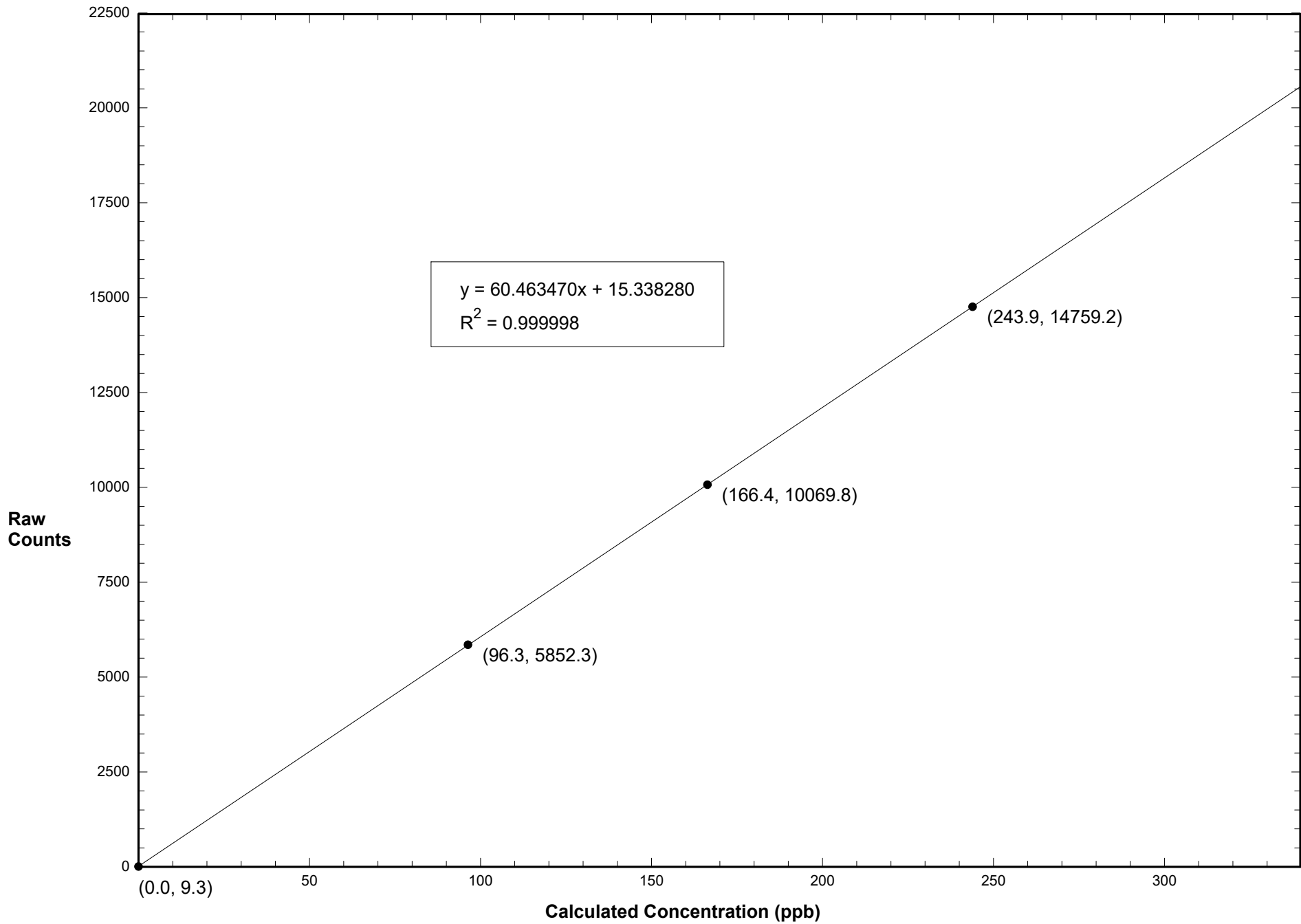
March 15, 2018 - Station 906

NO Flow Rate (LPM)	Dilution Flow Rate (LPM)	Calculated Concentration C <sub>c</sub> (ppb)	Raw Count Output R <sub>c</sub>	Indicated Concentration C <sub>i</sub> (ppb)	Correction Factor C <sub>c</sub> /C <sub>i</sub>		
0.07058	4.996	381.7	22977.5	380.8	1.002		
0.04038	4.998	219.6	13348.6	220.9	0.994		
0.02009	4.999	109.7	6683.1	110.1	0.996		
0.00000	5.000	0.0	1.6	-0.9			
NO Calibration				Average Correction Factor: 0.997			
0.07058	4.996	383.1	23030.7	382.2	1.002		
0.04038	4.998	220.4	13379.4	221.7	0.994		
0.02009	4.999	110.1	6681.2	110.4	0.997		
0.00000	5.000	0.0	-1.7	-0.8			
NO <sub>x</sub> Calibration				Average Correction Factor: 0.998			
Reference Concentration NO (ppb)	Raw Count Output NO	Calculated Concentration NO (ppb)	Calculated Concentration NO <sub>2</sub> , C <sub>c</sub> (ppb)	Raw Count Output R <sub>c</sub>	Indicated Concentration C <sub>i</sub> (ppb)	Correction Factor C <sub>c</sub> /C <sub>i</sub>	Converter Efficiency C <sub>i</sub> /C <sub>c</sub>
384.7	8528.1	140.8	243.9	14759.2	243.8	1.000	1.000
384.7	13194.9	218.3	166.4	10069.8	166.3	1.000	1.000
384.7	17409.3	288.3	96.3	5852.3	96.5	0.998	1.002
			0.0	9.3	-0.1		
						Average Correction Factor: 0.999	
NO <sub>2</sub> Gas Phase Titration						Average Converter Efficiency: 1.001	
Parameter	Correction Factor (Previous)	Correction Factor: (Current)	Percent Change of Correction Factor				
NO	1.001	1.002	0.1				
NO <sub>2</sub>	1.007	1.000	-0.7				
NO <sub>x</sub>	1.002	1.002	0.0				

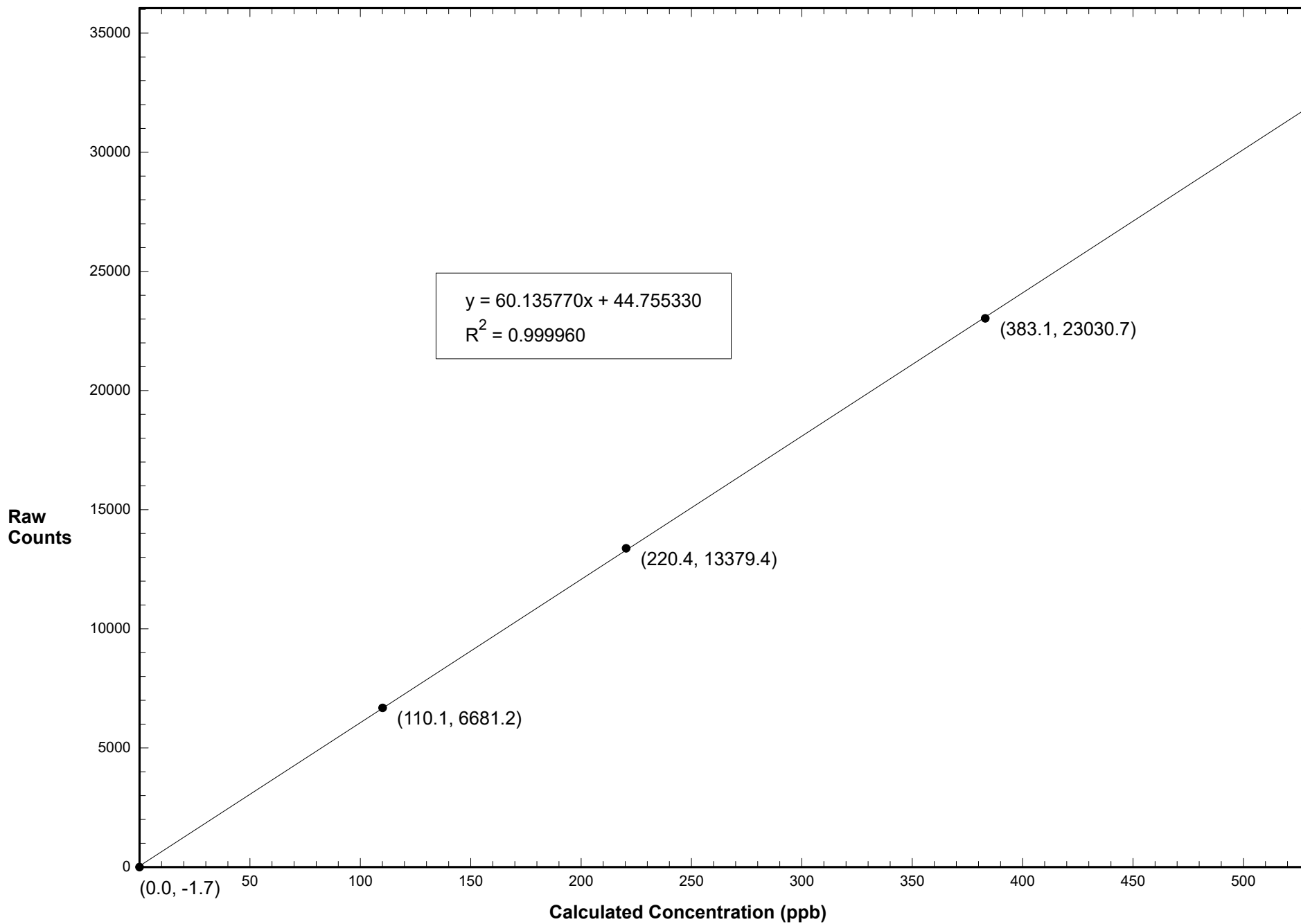
### Station 906 NO March 15, 2018: Linear Regression



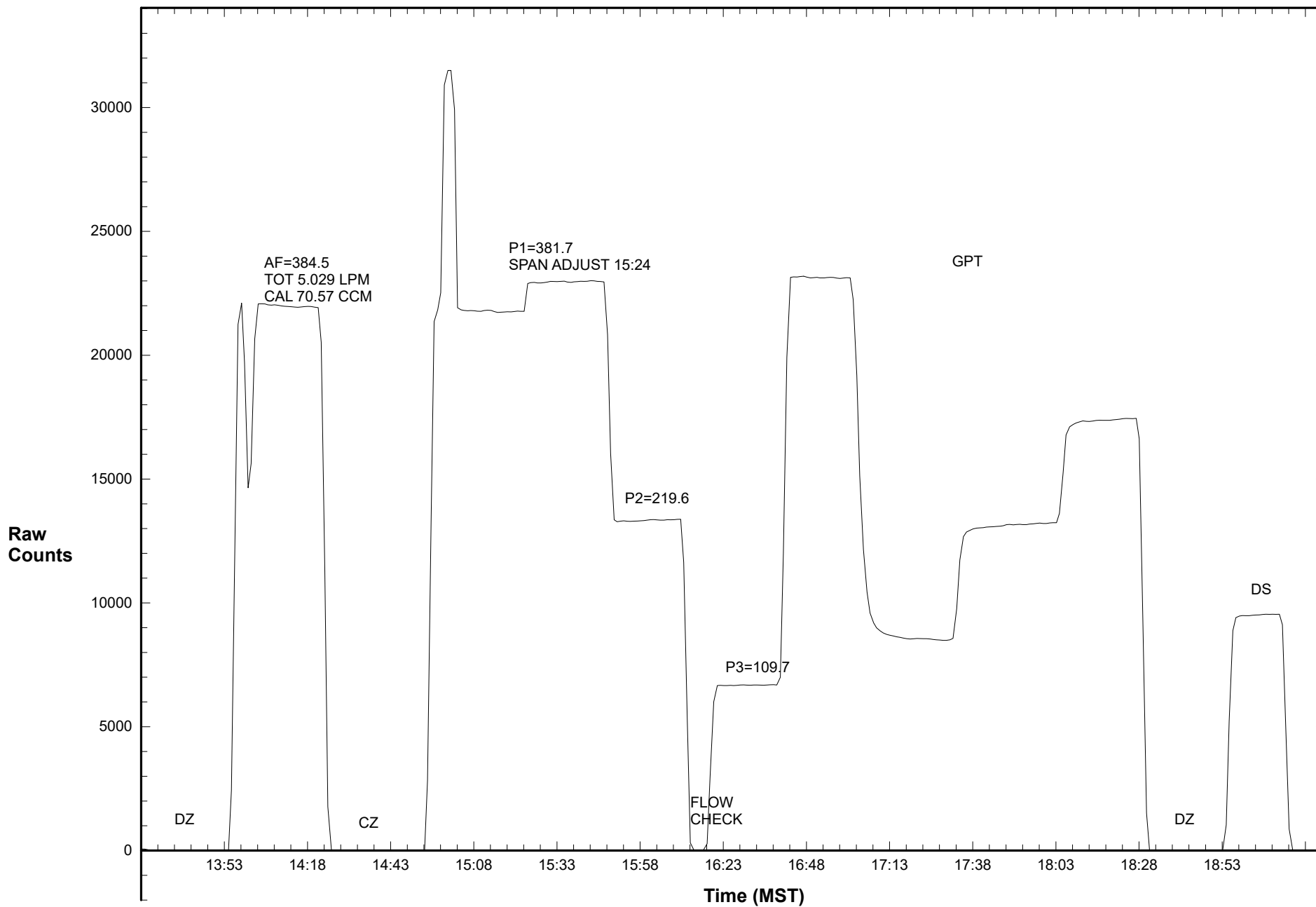
### Station 906 NO2 March 15, 2018: Linear Regression



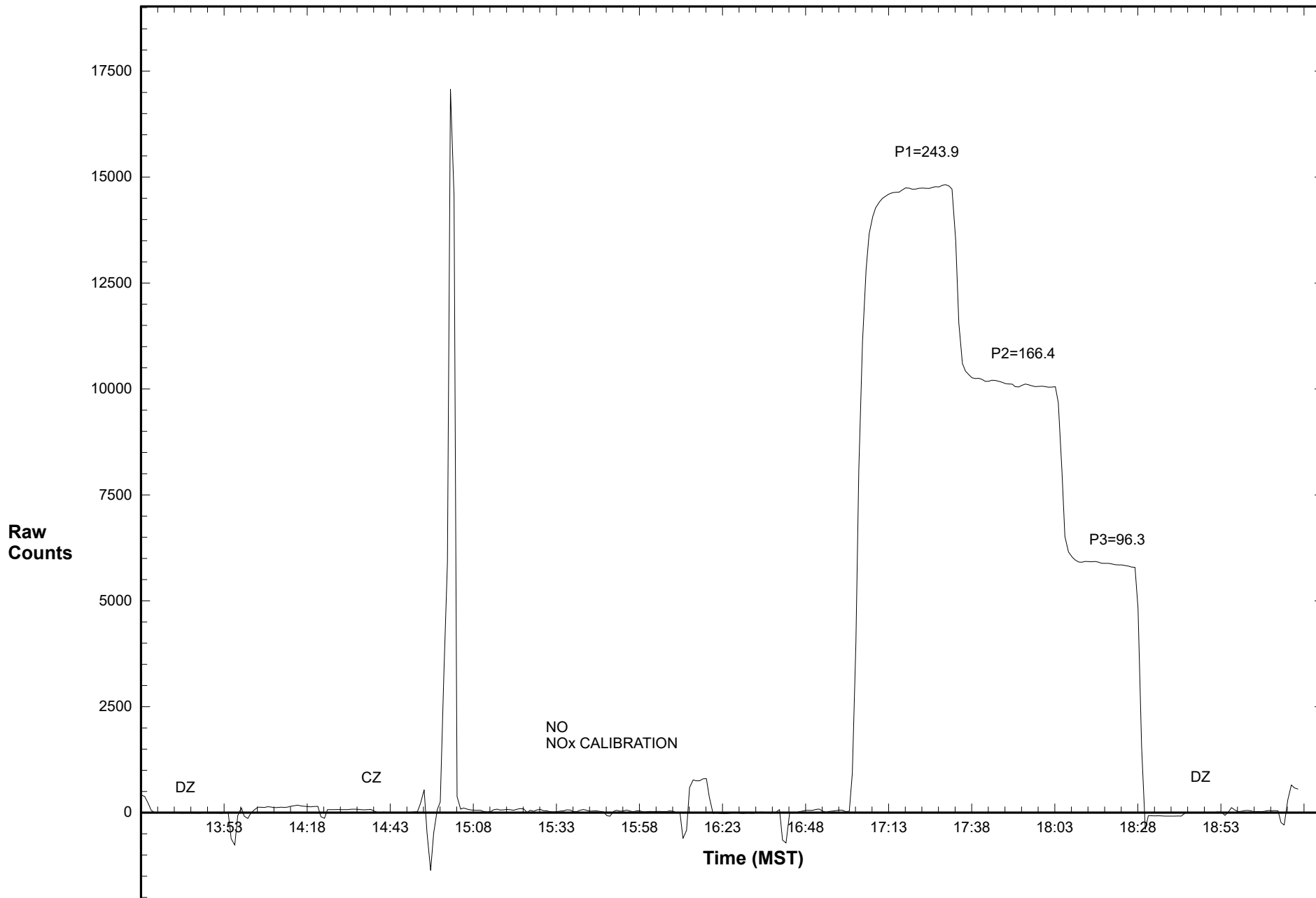
### Station 906 NOX March 15, 2018: Linear Regression



# Station 906 NO March 15, 2018: Calibration Graph

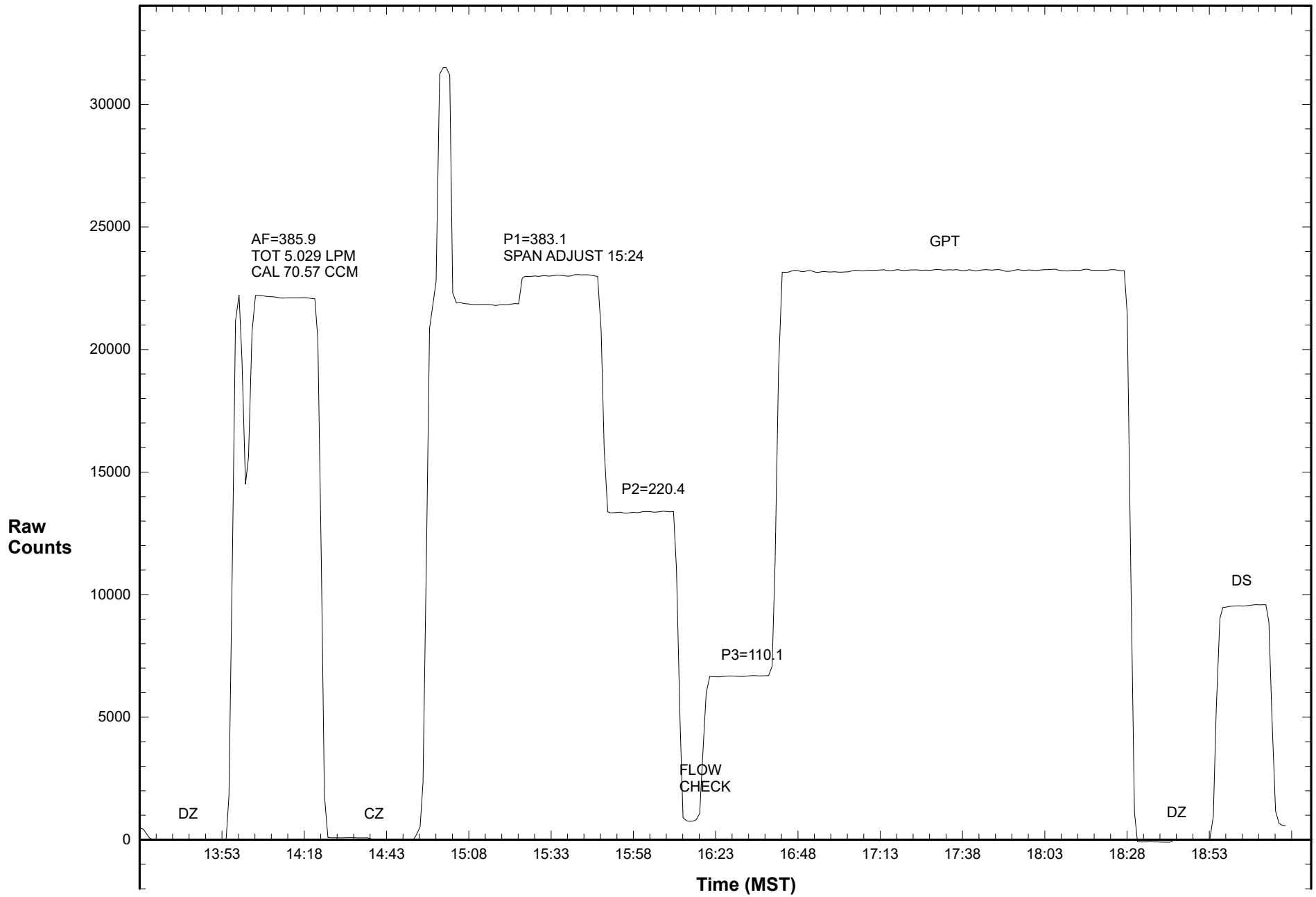


# Station 906 NO2 March 15, 2018: Calibration Graph





# Station 906 NOX March 15, 2018: Calibration Graph



# Calibration Data Summary

## West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: March 15, 2018

Parameter: O<sub>3</sub>

Instrument: Teco 49i

Serial Number: 1150790050

Previous Calibration Date: February 21, 2018

Calibration: Routine

Calibration Equipment: 2B Tech Model 306 SN142

Barometric Pressure: 26.57" Hg

Calibration Method: Certified Ozone Generator

Temperature: 26.8° C

Technician: L. Burns

Instrument Settings	Background	Coefficient	Monitoring Range
Previous	-0.1	1.041	500 ppb
Current	-0.4	1.010	500 ppb

Final Zero: -1.7 ppb

Final Span: 385.2 ppb

As Found Correction Factor: 0.963

Calibration System Flow Rate (LPM)	Calculated Concentration C <sub>c</sub> (ppb)	Raw Count Output R <sub>c</sub>	Indicated Concentration C <sub>i</sub> (ppb)	Correction Factor C <sub>c</sub> /C <sub>i</sub>
3.000	399.0	24032.0	398.0	1.003
3.000	215.0	13103.2	216.1	0.995
3.000	105.0	6523.8	106.6	0.985
3.000	0.0	11.0	-1.7	

### Results of Linear Regression

R <sub>c</sub> vs C <sub>c</sub>	Slope	Intercept	R <sup>2</sup>
Previous	59.863780	63.457190	0.999570
Current	60.098930	114.717900	0.999909
C <sub>i</sub> vs C <sub>c</sub>			
Current	1.000000	0.000006	0.999909

Average Correction Factor: 0.994

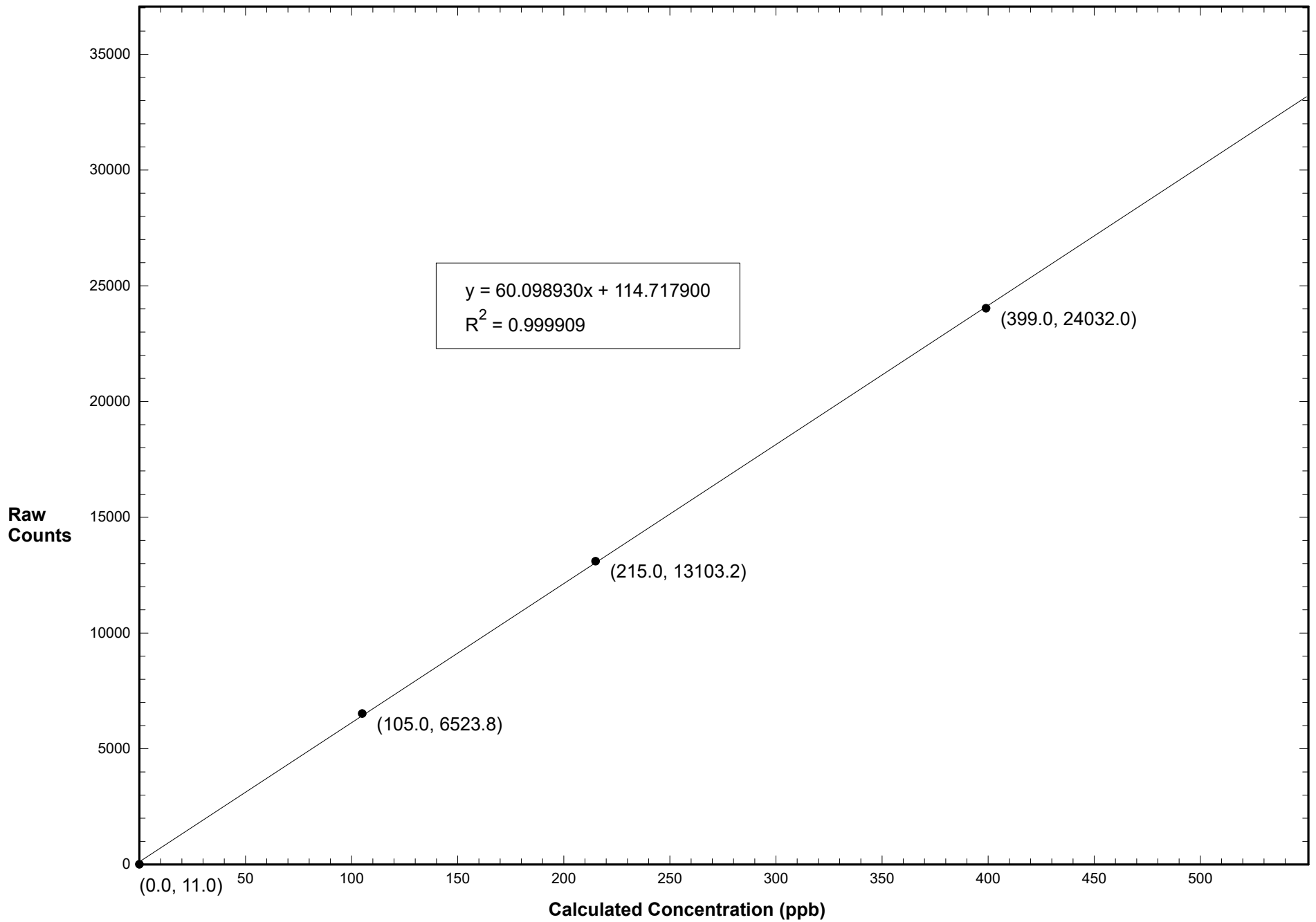
Previous Correction Factor: 1.000

Current Correction Factor: 1.003

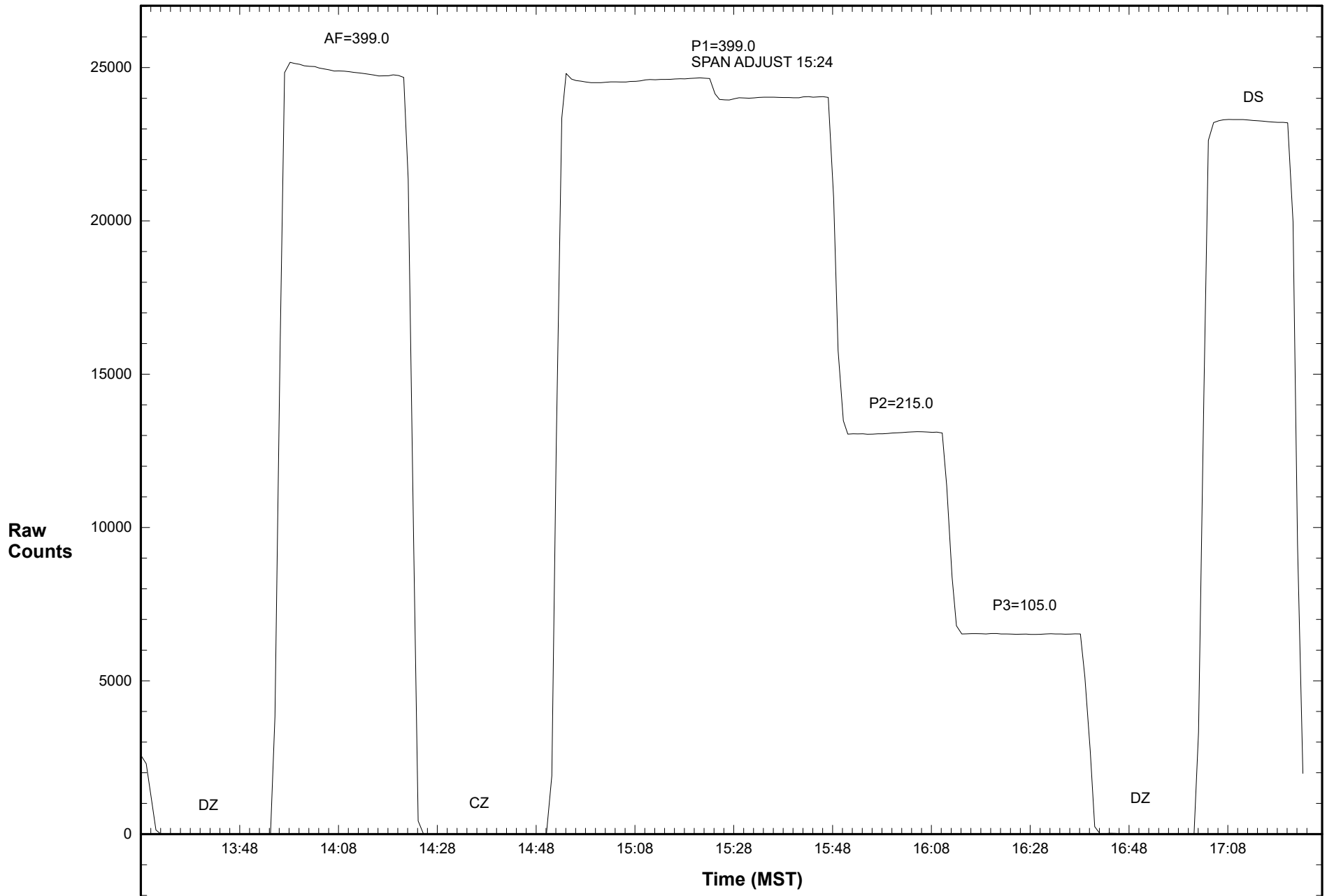
Percent Change of Correction Factor: 0.3

Comments: SAMPLE FLOWS = 0.684 and 0.660 LPM

### Station 906 O3 March 15, 2018: Linear Regression



# Station 906 O3 March 15, 2018: Calibration Graph



# Calibration Data Summary

## West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: March 15, 2018

Parameter: SO<sub>2</sub>

Instrument: TECO 43i

Serial Number: CM12499009

Previous Calibration Date: February 21, 2018

Calibration: Routine

Calibration Equipment: Sabio 2010 SN 08600312

Barometric Pressure: 26.57" Hg

Calibration Method: Standard Gas Dilution

Cylinder ID: EX0012529

Temperature: 26.8° C

Cylinder Concentration: 24.3 ppm SO<sub>2</sub>

In Service: 12/6/2017 EXP 10/25/2020

Technician: L. Burns

Instrument Settings	SO <sub>2</sub> bkg ppb	SO <sub>2</sub> Coefficient	Monitoring Range
Previous	27.2	1.001	500 ppb
Current	28.2	1.010	500 ppb

Final Zero: -0.4 ppm

Final Span: 70.2 ppm

As Found Correction Factor: 1.019

SO <sub>2</sub> Flow Rate (LPM)	Dilution Flow Rate (LPM)	Calculated Concentration C <sub>c</sub> (ppm)	Raw Count Output R <sub>c</sub>	Indicated Concentration C <sub>i</sub> (ppm)	Correction Factor C <sub>c</sub> /C <sub>i</sub>
0.0706	4.996	338.5	20355.7	337.9	1.002
0.0404	4.998	194.8	11805.2	195.8	0.995
0.0201	4.999	97.3	5869.4	97.2	1.001
0.0000	5.000	0.0	1.0	-0.4	

### Results of Linear Regression

R <sub>c</sub> vs C <sub>c</sub>	Slope	Intercept	R <sup>2</sup>
Previous	60.088620	25.862830	0.999990
Current	60.166570	23.629210	0.999974
C <sub>i</sub> vs C <sub>c</sub>			
Current	1.000000	0.000000	0.999974

Average Correction Factor: 0.999

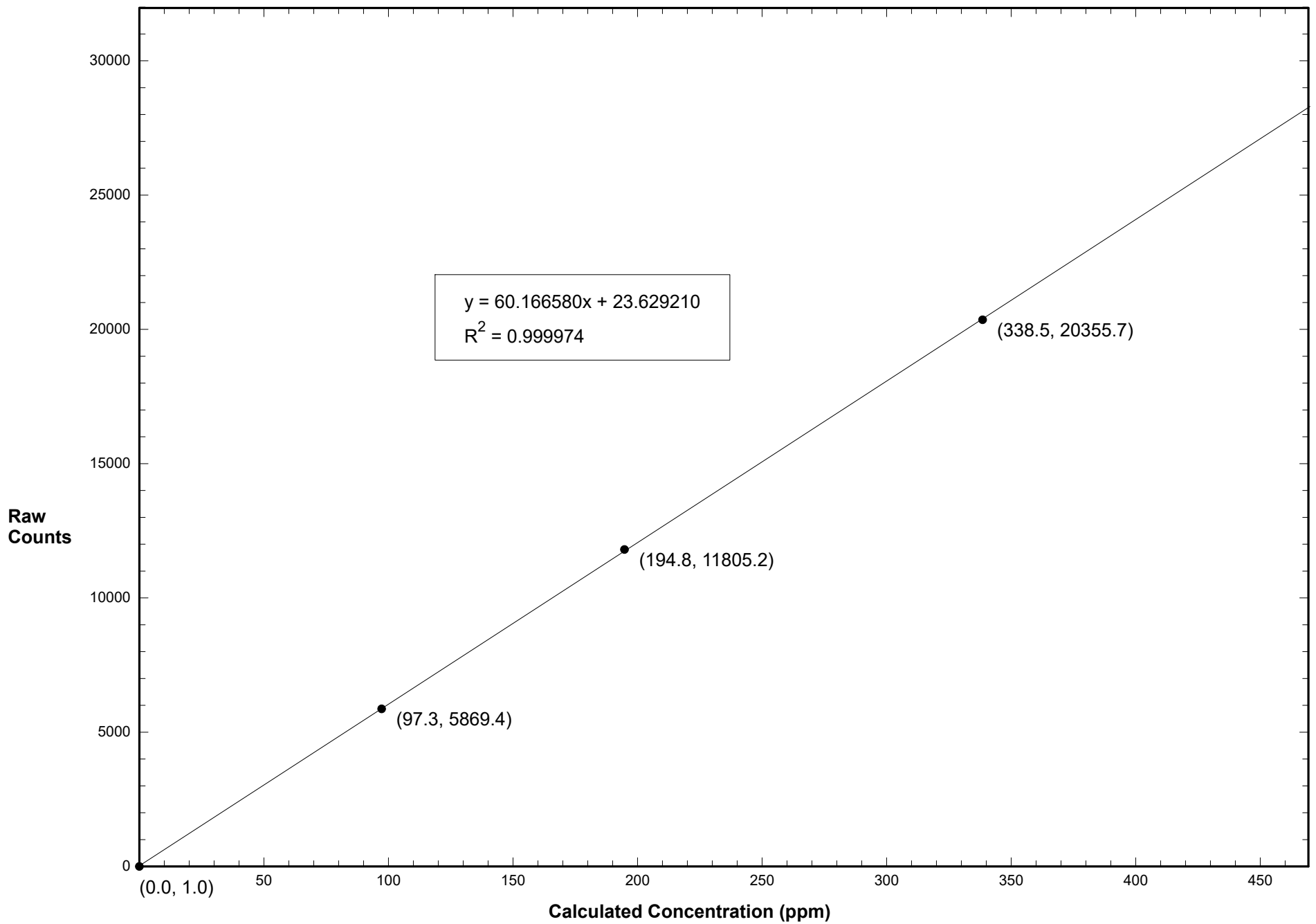
Previous Correction Factor: 1.001

Current Correction Factor: 1.002

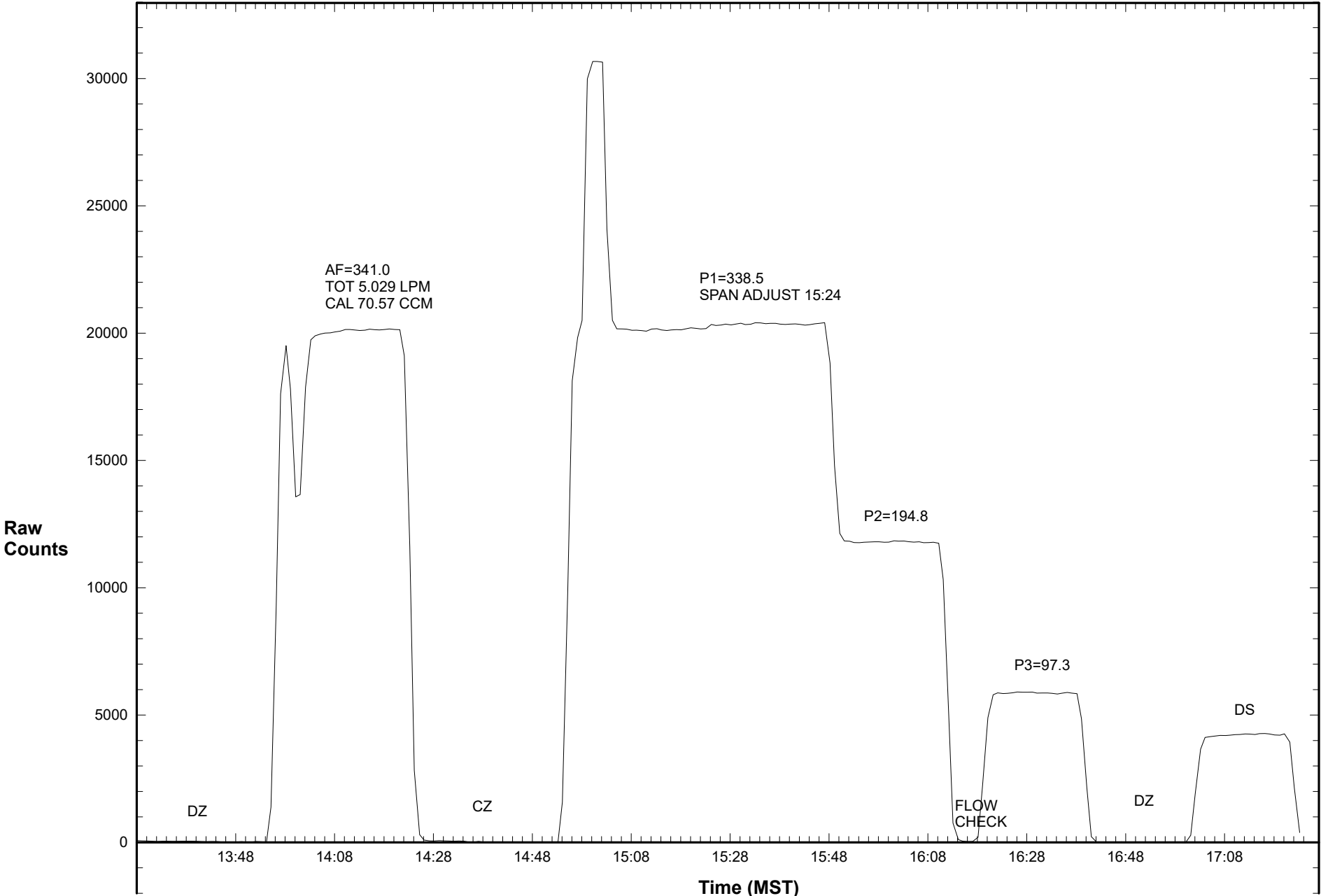
Percent Change of Correction Factor: 0.1

Comments: SAMPLE FLOW = 0.418 LPM

### Station 906 SO2 March 15, 2018: Linear Regression



# Station 906 SO2 March 15, 2018: Calibration Graph



# Calibration Data Summary

## West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: March 15, 2018

Parameter: TRS

Instrument: Teco 43C

Serial Number: 43CTL-60324-326

Previous Calibration Date: February 21, 2018

Calibration: Routine

Calibration Equipment: Sabio 2010 SN 05200311

Barometric Pressure: 26.57" Hg

Calibration Method: Standard Gas Dilution

Permeation Device ID: DT0014794, 10.5 ppm H2S

Temperature: 26.8° C

Permeation Rate: 0 ng/min

In Service: 10/21/2016 EXP 10/4/2019

Technician: L. Burns

### Instrument Settings

H<sub>2</sub>S bkg ppb

H<sub>2</sub>S Coefficient

Monitoring Range

Previous

1.87

0.774

100 ppb

Current

2.08

0.852

100 ppb

Final Zero: -0.4 ppb

Final Span: 66.3 ppb

As Found Correction Factor: 1.071

Calibration  
System Flow  
Rate (LPM)

Calculated  
Concentration  
C<sub>c</sub> (ppb)

Raw Count  
Output  
R<sub>c</sub>

Indicated  
Concentration  
C<sub>i</sub> (ppb)

Correction  
Factor  
C<sub>c</sub>/C<sub>i</sub>

0.036

75.2

22571.0

74.6

1.007

0.021

43.2

13424.7

44.2

0.976

0.011

22.1

6694.8

21.9

1.010

0.000

0.0

16.9

-0.3

### Results of Linear Regression

R<sub>c</sub> vs C<sub>c</sub>

Slope

Intercept

R<sup>2</sup>

Previous

299.835300

-49.292770

0.999961

Current

301.054900

107.243200

0.999484

C<sub>i</sub> vs C<sub>c</sub>

Current

1.000000

-0.000006

0.999484

Average Correction Factor:

0.998

Previous Correction Factor:

0.998

Current Correction Factor:

1.007

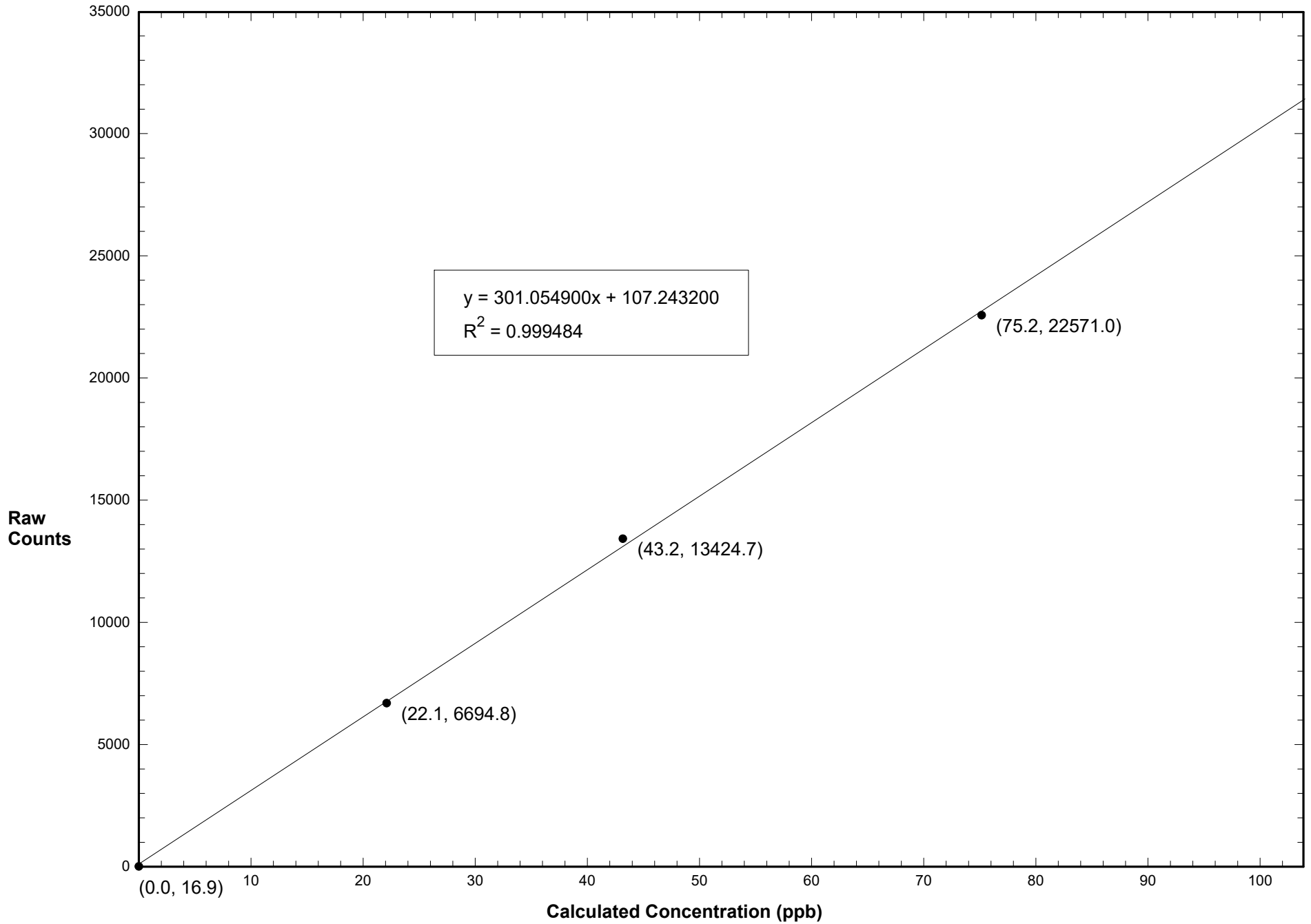
Percent Change of  
Correction Factor:

0.9

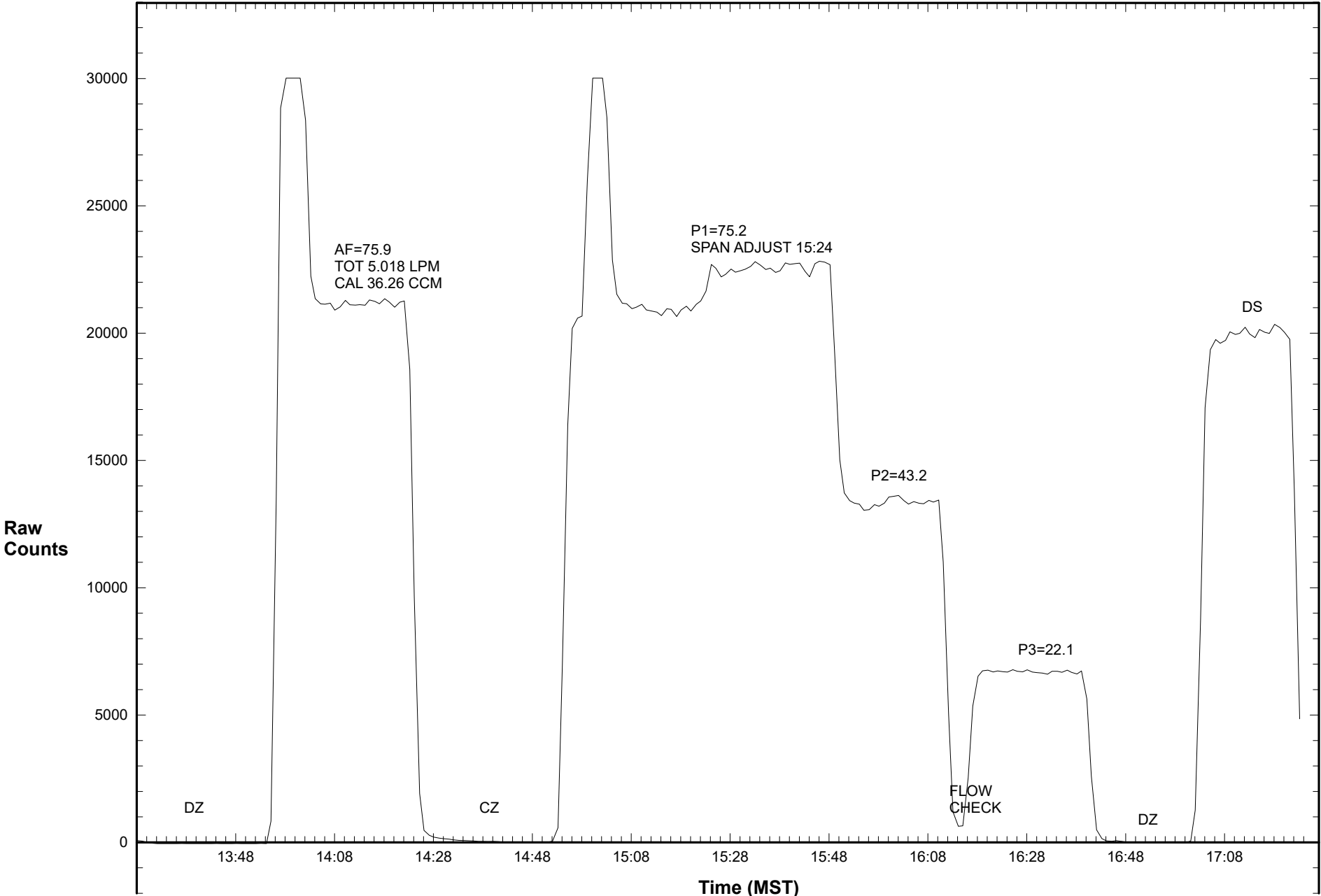
Comments: SAMPLE FLOW = 0.337 LPM



### Station 906 TRS March 15, 2018: Linear Regression



# Station 906 TRS March 15, 2018: Calibration Graph



**WEST CENTRAL AIRSHED SOCIETY**

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

**AMS 906  
HINTON  
MARCH 2018**

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**  
**March 2018**

Maximum Value: 13.35 C on Mar 13 17:00      Maximum Daily Average: 3.77 C on Mar 27 Minimum Value: -25.8 C on Mar 5 08:00      Minimum Daily Average: -15.29 C on Mar 4 Maximum Diurnal Average: 2.59 C at hour 16      Minimum Diurnal Average: -7.74 C at hour 8 Monthly Average: -3.004 C      Percentiles: P <sub>1</sub> = -22.8 P <sub>10</sub> = -12.0 Q <sub>1</sub> = -7.5 Median = -1.9 Q <sub>3</sub> = 2.0 P <sub>90</sub> = 5.4 P <sub>99</sub> = 11.8																								Hours in Service:	744	
																								Hours of Data:	744	
																								Hours of Missing Data:	0	
																								Hours of Calibration:	0	
																								Percent Operational Time:	100.0	
Day	Hourly Period Ending At																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
1-Mar	-4.7	-4.9	-5.2	-5.4	-5.7	-6.0	-5.9	-5.8	-6.2	-6.2	-5.8	-5.4	-5.1	-4.5	-3.6	-3.1	-3.7	-4.2	-4.9	-5.3	-5.6	-6.6	-7.3	-7.9	-5.37	-3.08
2-Mar	-8.5	-9.0	-9.5	-9.8	-10.0	-10.2	-10.6	-11.1	-11.3	-11.2	-10.9	-10.7	-10.9	-10.6	-9.7	-9.4	-9.6	-10.1	-10.7	-10.8	-10.9	-11.1	-11.1	-11.1	-10.35	-8.48
3-Mar	-11.4	-11.6	-11.9	-12.0	-12.2	-12.4	-12.5	-13.1	-13.2	-12.3	-11.4	-11.4	-11.4	-10.6	-10.6	-9.8	-9.6	-10.5	-12.1	-14.0	-14.8	-15.7	-17.9	-18.4	-12.53	-9.64
4-Mar	-19.7	-20.3	-20.2	-21.0	-20.7	-22.0	-22.6	-22.1	-20.4	-18.1	-14.3	-12.6	-10.5	-9.0	-7.8	-6.5	-6.9	-7.0	-8.5	-11.2	-13.7	-15.8	-17.5	-18.5	-15.29	-6.51
5-Mar	-19.8	-20.9	-21.6	-23.0	-23.5	-24.6	-24.9	-25.8	-25.1	-21.2	-15.1	-9.2	-6.3	-4.5	-3.1	-2.6	-2.8	-3.8	-4.8	-5.8	-6.5	-7.0	-7.5	-8.0	-13.22	-2.55
6-Mar	-8.4	-9.0	-9.2	-9.7	-10.0	-10.5	-10.7	-10.9	-10.7	-10.1	-8.9	-6.2	-5.6	-3.4	-2.4	-1.6	-1.2	-1.6	-2.9	-4.3	-7.1	-9.8	-11.2	-12.6	-7.42	-1.20
7-Mar	-14.0	-15.5	-16.4	-16.6	-16.7	-16.9	-16.4	-16.2	-15.7	-12.8	-9.5	-5.2	-1.5	1.5	1.6	0.8	0.8	-0.3	-1.2	-2.1	-3.2	-4.0	-5.9	-8.4	-8.06	1.65
8-Mar	-10.1	-11.7	-13.1	-14.1	-15.0	-16.0	-16.5	-17.5	-16.4	-13.0	-10.7	-8.3	-5.6	-4.5	-3.3	-2.2	-1.0	-0.7	-1.9	-3.1	-4.3	-6.0	-7.7	-8.5	-8.80	-0.69
9-Mar	-9.0	-9.5	-9.8	-11.0	-11.9	-12.1	-11.6	-10.4	-9.0	-6.9	-3.2	2.4	3.3	3.2	4.2	4.5	4.7	3.7	2.0	-0.2	-2.3	-3.7	-5.0	-5.2	-3.86	4.65
10-Mar	-2.7	-2.1	-1.7	-2.0	-2.1	-2.2	-2.7	-3.3	-3.0	-2.2	-1.1	1.4	3.9	5.8	6.6	7.3	8.1	7.9	6.7	2.7	-1.4	-3.2	-4.2	-5.1	0.48	8.10
11-Mar	-6.4	-7.3	-7.7	-7.6	-8.4	-9.2	-10.3	-11.0	-9.4	-3.6	0.6	3.4	5.3	7.9	10.3	11.7	11.9	11.1	9.4	3.4	-0.2	-2.3	-3.5	-4.0	-0.66	11.93
12-Mar	-5.2	-6.4	-7.2	-8.0	-8.3	-7.2	-6.6	-7.1	-3.9	0.5	2.4	5.5	8.0	9.8	12.4	12.8	12.4	11.6	10.3	4.2	0.0	-1.8	-3.2	-4.0	0.88	12.84
13-Mar	-4.8	-5.6	-5.5	-6.3	-6.7	-6.8	-8.1	-8.0	-7.3	-2.4	2.7	6.6	9.2	10.3	12.9	13.3	13.3	13.0	9.3	5.7	3.4	2.3	0.5	-1.9	1.63	13.35
14-Mar	-2.6	-3.7	-4.3	-5.1	-6.0	-6.7	-7.2	-7.7	-5.9	-2.8	0.8	4.3	6.6	8.6	9.3	10.0	9.5	8.4	5.6	2.9	1.0	-0.7	-1.9	-2.1	0.42	10.05
15-Mar	-2.0	-1.9	-1.8	-1.7	-1.7	-1.6	-1.4	-1.0	-0.4	0.4	2.1	4.3	5.4	4.9	3.5	2.8	2.3	2.1	1.8	1.3	0.9	0.5	0.3	0.4	0.81	5.36
16-Mar	0.4	0.5	0.8	0.9	0.9	0.9	0.6	0.6	0.8	1.6	2.7	3.7	4.5	5.1	4.1	4.7	5.1	4.7	3.8	2.8	2.1	1.6	0.9	-0.2	2.24	5.13
17-Mar	-0.9	-1.3	-1.7	-1.7	-1.2	-0.9	-0.7	-0.6	-0.4	0.0	0.8	1.9	2.8	2.9	2.8	2.6	2.4	2.4	1.8	1.0	0.5	0.6	0.2	-0.1	0.56	2.92
18-Mar	-0.2	-0.4	-0.9	-1.2	-1.3	-1.5	-1.8	-1.7	-1.2	-0.5	-0.2	0.3	1.1	1.7	1.7	2.2	2.4	2.6	1.2	-0.4	-1.8	-2.7	-3.4	-3.6	-0.40	2.65
19-Mar	-4.2	-4.9	-5.6	-6.3	-6.8	-7.5	-7.8	-7.8	-5.2	-1.4	1.5	3.2	5.2	6.7	7.4	7.5	7.5	6.5	5.4	4.4	3.2	2.3	1.5	2.0	0.28	7.52
20-Mar	1.8	0.7	-0.2	-0.8	-1.0	-0.8	-1.1	-1.2	-0.2	3.5	5.5	6.6	6.9	6.6	6.6	6.6	6.2	6.0	5.5	4.7	2.8	1.8	0.8	-0.6	2.79	6.95
21-Mar	-1.1	-1.5	-1.5	-1.6	-2.3	-2.7	-2.9	-2.8	-1.5	0.9	3.7	5.6	6.8	6.7	5.8	4.5	4.1	3.1	1.8	1.4	1.2	1.0	0.8	0.8	1.27	6.84
22-Mar	0.8	1.0	0.5	0.1	-0.4	-0.7	-0.9	-1.3	-1.7	-1.8	-1.9	-1.7	-1.5	-1.1	-1.0	-0.9	-0.7	-0.7	-0.9	-1.5	-1.9	-1.9	-1.6	-1.4	-0.96	0.99
23-Mar	-1.1	-1.0	-1.7	-2.0	-2.4	-3.2	-3.0	-3.4	-2.7	1.7	3.9	4.1	4.6	5.0	5.1	5.0	4.5	4.0	3.6	1.7	-0.1	-1.7	-2.4	-3.0	0.65	5.14
24-Mar	-1.2	-2.9	-4.1	-4.8	-6.2	-7.1	-7.9	-8.0	-5.0	-0.2	3.1	3.6	4.3	5.2	5.3	5.7	5.7	2.6	0.8	-0.6	-1.6	-2.3	-2.5	-3.0	-0.89	5.67
25-Mar	-3.6	-4.2	-4.9	-5.3	-5.8	-6.2	-6.5	-6.5	-5.2	-1.1	2.2	2.8	3.0	3.2	3.5	3.7	4.2	3.6	3.2	2.3	1.2	0.8	0.9	0.8	-0.57	4.18
26-Mar	1.0	0.7	0.6	0.2	0.4	0.6	0.0	0.4	2.3	3.3	4.2	5.3	6.6	6.6	6.2	5.9	5.7	5.3	1.1	-0.6	-1.8	-3.0	-3.2	-3.2	1.86	6.60
27-Mar	-3.3	-3.3	-2.4	4.9	4.9	4.7	4.4	4.1	4.0	5.5	7.2	7.2	7.1	7.9	8.4	9.3	8.5	7.9	6.4	2.1	0.1	-1.1	-1.8	-2.0	3.77	9.26
28-Mar	-2.1	-2.0	-2.1	-2.5	-2.9	-2.8	-3.0	-3.0	-1.2	3.6	4.2	3.7	5.4	5.9	6.0	4.8	4.7	5.5	4.3	2.5	1.5	1.0	0.4	-0.3	1.32	5.98
29-Mar	-0.3	-1.4	-2.5	-2.8	-3.4	-4.1	-4.2	-4.4	-3.8	-2.4	-0.7	0.8	2.7	3.7	3.5	2.6	2.7	2.0	0.5	-0.8	-1.8	-2.8	-4.3	-5.5	-1.12	3.74
30-Mar	-6.2	-7.2	-8.0	-8.4	-8.4	-9.1	-10.2	-10.5	-11.0	-10.8	-11.0	-10.7	-10.6	-10.5	-10.4	-10.0	-9.8	-10.2	-10.7	-11.9	-13.0	-13.9	-15.5	-16.5	-10.60	-6.24
31-Mar	-18.0	-19.6	-20.8	-21.8	-22.0	-22.5	-23.0	-23.0	-19.9	-15.7	-12.2	-9.0	-6.6	-4.8	-3.7	-2.2	-1.2	-1.3	-2.6	-3.9	-5.9	-7.9	-9.5	-10.9	-12.00	-1.21
																								Diurnal Average		
																								Diurnal Maximum		



**WCAS - Hinton**  
**Summary of Hourly Averages**

**Wind Speed (WS) - kph**  
**March 2018**

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	5.2	5.1	4.2	4.2	5.4	3.5	4.2	4.6	5.8	4.2	6.0	5.6	5.2	6.2	4.2	6.5	8.1	9.8	9.9	7.8	6.2	5.8	8.0	7.5	5.91	9.92
Dir	ENE	ENE	ENE	ENE	ENE	E	ENE	ENE	ENE	NE	ENE	NE	NE	NE	NE	ENE	ENE	ENE	ENE	ENE	NE	NE	ENE	ENE	ENE	ENE
2 Spd	6.5	8.1	6.6	7.0	5.5	5.5	7.8	5.1	6.1	8.3	7.6	7.8	8.2	5.2	5.7	6.9	6.6	8.2	7.8	3.8	3.6	4.8	2.9	3.4	6.17	8.26
Dir	NE	ENE	ENE	ENE	NE	NE	ENE	NE	ENE	ENE	ENE	ENE	ENE	NE	NE	ENE	ENE	ENE	ENE	NE	ENE	ENE	ENE	ENE	ENE	ENE
3 Spd	5.5	5.5	5.0	3.6	1.9	1.3	0.4	0.2	0.2	0.5	0.7	2.2	2.2	1.2	2.7	1.6	2.1	1.3	0.7	1.6	1.9	0.5	0.3	0.3	0.77	5.53
Dir	ENE	ENE	ENE	ENE	ENE	NE	ENE	ENE	SSE	WNW	NE	N	N	W	SSW	SW	NNW	NE	N	WSW	WSW	WSW	W	N	NE	ENE
4 Spd	1.4	0.3	1.5	2.6	1.5	0.8	0.1	1.1	1.3	2.2	1.9	2.8	2.6	4.1	2.7	2.3	1.3	0.2	1.3	1.7	1.0	0.5	2.0	1.0	1.19	4.12
Dir	WNW	NNW	W	W	WSW	WNW	WNW	W	W	NW	W	W	WNW	WNW	WNW	NW	NW	ENE	ESE	ESE	NE	NW	W	WNW	WNW	WNW
5 Spd	1.0	1.6	2.5	1.4	1.2	2.3	1.1	1.1	1.1	0.3	1.4	1.5	2.5	2.6	1.2	2.7	5.6	6.8	4.9	4.0	2.1	2.7	3.3	3.0	0.73	6.84
Dir	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	NE	WSW	WSW	WNW	W	W	E	E	E	E	E	ENE	ENE	ENE	ENE	NE	E
6 Spd	3.3	3.8	0.6	0.4	1.5	2.1	2.8	3.2	3.0	4.0	3.0	1.2	3.1	0.7	3.4	3.8	3.5	3.9	3.3	3.2	0.8	1.4	0.6	0.1	1.97	3.98
Dir	ENE	ENE	NNE	ENE	E	E	E	ENE	ENE	ENE	E	SSW	NW	NNW	NE	ENE	ENE	ENE	E	ESE	E	E	E	E	ENE	ENE
7 Spd	0.5	1.1	1.2	0.5	1.3	1.8	1.2	0.8	0.6	1.0	1.4	0.5	1.2	2.0	2.2	4.4	4.5	6.6	3.2	0.9	2.4	2.7	1.3	0.3	1.14	6.62
Dir	ESE	E	E	NE	E	E	ENE	E	N	N	NW	W	S	SW	NW	NE	NE	ENE	E	ENE	E	E	ESE	SW	ENE	ENE
8 Spd	0.6	0.3	0.4	0.2	0.4	0.6	0.9	0.5	0.5	1.3	0.2	0.3	0.2	1.0	1.4	4.1	5.5	6.3	4.8	4.7	4.4	2.6	1.4	1.6	1.65	6.27
Dir	SSW	S	W	WNW	E	NE	E	NE	E	E	NE	SSE	S	SSE	E	ENE	ENE	ENE	ENE	E	E	E	E	E	E	ENE
9 Spd	0.1	0.5	0.5	0.7	1.7	0.2	0.2	1.6	0.4	0.3	1.0	3.1	3.3	3.4	6.9	7.9	7.4	5.7	4.7	1.7	1.8	0.7	0.7	2.0	1.04	7.94
Dir	NNW	NNE	SE	NW	W	WNW	ENE	SE	NE	SE	ESE	E	ESE	W	SW	NW	NW	NW	NW	WSW	WSW	WNW	SE	S	WNW	NW
10 Spd	5.4	6.5	7.1	7.3	7.4	9.4	9.6	9.5	10.4	11.1	10.9	9.1	9.4	8.9	11.7	10.5	7.6	6.0	5.5	1.4	0.2	0.5	0.6	0.0	6.82	11.70
Dir	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	WSW	WSW	SW	WSW	E	SSW	E	SE	WSW	SW
11 Spd	0.9	0.2	1.2	2.6	1.2	1.7	1.4	0.6	1.0	1.2	2.8	2.6	3.9	3.3	3.3	5.8	6.6	4.3	2.8	0.8	0.5	0.2	0.6	1.7	1.64	6.62
Dir	E	NNW	NW	WNW	NW	WNW	WNW	W	W	NW	WNW	WNW	NW	NW	W	SW	SW	WSW	SW	SE	S	N	E	W	W	SW
12 Spd	1.0	0.6	0.2	0.1	0.6	1.2	2.2	2.0	2.4	2.1	3.2	4.2	6.7	11.1	5.4	3.3	2.3	2.4	3.4	1.0	0.3	0.4	0.3	0.3	1.86	11.13
Dir	E	ESE	SSW	ESE	W	NW	NW	WNW	WNW	WNW	WNW	W	SW	SW	WSW	W	W	WSW	SW	S	SSE	S	ESE	E	WSW	SW
13 Spd	0.4	0.4	0.2	0.8	1.4	1.5	0.2	1.3	1.5	0.8	1.3	1.4	1.7	2.3	0.2	7.0	7.0	5.8	2.7	3.2	2.5	1.8	1.7	2.2	1.10	7.00
Dir	ESE	NNE	WNW	N	E	W	NE	WSW	WNW	WSW	SW	SW	SE	SW	NW	ENE	ESE	E	ENE	E	E	E	E	NE	E	ESE
14 Spd	1.6	0.0	0.4	0.8	0.9	0.3	0.3	0.4	1.6	3.9	3.5	5.4	6.0	6.3	5.9	6.1	5.8	5.3	6.8	8.2	8.1	8.8	7.0	4.1	4.04	8.78
Dir	E	ENE	ENE	E	ENE	E	E	ENE	ENE	E	ENE	ENE	ENE	ENE	ENE	NE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE
15 Spd	2.2	1.7	2.4	1.1	1.2	1.2	0.8	1.8	0.5	0.5	0.3	1.9	5.4	4.6	2.7	1.7	3.9	4.3	1.7	3.0	0.4	0.9	0.5	0.8	0.79	5.37
Dir	NE	NE	ENE	E	NE	ENE	WSW	WSW	W	ENE	S	WSW	WSW	WSW	E	WSW	SW	SW	SW	WSW	W	WNW	W	WSW	WSW	WSW
16 Spd	0.6	1.6	2.2	3.2	3.9	5.3	6.2	6.0	5.4	5.0	3.7	3.3	3.5	1.8	4.2	4.1	2.6	3.3	3.1	1.6	2.1	1.7	1.1	0.8	1.19	6.16
Dir	WNW	W	WSW	WSW	WSW	WSW	WSW	SW	SW	WSW	WSW	WSW	WSW	NNW	SE	E	E	ENE	ENE	ENE	ENE	ENE	ESE	E	SW	WSW
17 Spd	1.1	1.5	0.5	1.1	2.7	3.9	2.2	0.3	0.7	0.5	0.6	0.7	0.7	1.9	1.8	2.2	2.5	0.2	0.3	0.7	0.3	2.5	3.8	1.6	1.24	3.93
Dir	NE	ENE	ESE	ENE	E	E	E	NE	NE	NE	WNW	N	NE	NE	ENE	E	ENE	N	W	WNW	NNW	ENE	E	ENE	ENE	E
18 Spd	0.5	0.3	2.7	1.7	1.4	1.0	0.1	0.2	0.1	0.6	1.6	0.4	0.4	0.9	0.6	3.6	2.8	3.0	1.4	1.2	0.9	0.2	0.5	1.2	0.76	3.56
Dir	NE	N	SE	ENE	ENE	ENE	NE	NE	SSE	ENE	E	E	NNE	NW	NNW	ESE	NE	ENE	ENE	E	ENE	SW	WSW	WSW	ENE	ESE
19 Spd	0.3	0.9	0.5	1.0	1.2	0.9	0.7	1.0	1.6	5.4	3.1	7.3	7.9	12.8	9.7	9.0	8.1	4.5	2.6	2.5	0.9	0.8	1.2	1.3	3.17	12.80
Dir	WSW	WSW	WSW	W	W	WNW	NW	NW	NW	W	WNW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	WSW	ENE	SSW	NNE	E	WSW	WSW
20 Spd	1.6	1.3	1.6	0.5	0.9	1.1	0.9	1.2	2.0	1.0	8.8	10.9	6.9	10.1	9.8	7.1	3.1	4.6	3.5	1.3	3.8	2.9	2.8	1.3	2.28	10.88
Dir	WSW	WSW	WSW	ESE	ESE	ENE	E	E	ENE	W	WSW	WSW	WSW	WSW	WSW	WSW	W	WSW	WSW	W	ENE	NE	E	E	WSW	WSW
21 Spd	3.2	2.8	0.9	1.0	0.8	0.2	0.1	0.5	3.4	2.0	5.2	8.5	8.0	9.8	10.9	8.5	10.2	7.6	5.7	5.3	6.0	6.6	6.4	4.8	4.57	10.93
Dir	ENE	ENE	NE	ENE	E	SE	SE	E	ENE	ENE	ENE	ESE	E	ESE	ENE	ENE	ENE	ENE	NE	NE	NE	NNE	NE	NE	ENE	ENE
22 Spd	5.4	7.8	7.5	7.4	10.1	8.7	9.0	9.1	9.1	9.6	7.8	6.1	7.3	6.6	7.7	5.2	4.5	4.8	6.2	6.7	12.3	9.0	4.9	4.6	7.32	12.26
Dir	ENE	ENE	ENE	ENE	ENE	ENE	ENE	E	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	NE	NE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE



**WCAS - Hinton**  
**Summary of Hourly Averages**

**Wind Speed (WS) - kph**  
**March 2018**

Day	Hourly Period Ending At (MST)																								Daily Average	Daily Maximum
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
23 Spd	5.1	2.2	2.8	1.5	0.6	2.5	1.0	2.2	2.1	8.2	12.1	13.4	12.9	9.0	11.2	9.8	4.8	2.2	8.3	3.4	2.3	3.5	0.8	2.4	4.08	13.41
Dir	E	E	ENE	ENE	SE	WSW	WSW	SW	W	W	WSW	WSW	WSW	WSW	SW	WSW	WSW	WSW	SW	SW	WSW	WSW	WSW	SW	WSW	WSW
24 Spd	4.2	1.3	1.1	1.4	4.4	2.2	2.3	0.7	1.4	0.9	5.8	8.9	5.7	5.5	6.8	10.0	6.3	8.1	6.9	6.4	3.7	4.7	6.4	4.0	0.02	9.97
Dir	WSW	NNE	E	E	E	E	E	E	E	SSW	W	WSW	WSW	W	WSW	SW	WSW	ENE	ENE	ENE	NE	ENE	ENE	ENE	ENE	SW
25 Spd	3.5	2.3	0.8	1.1	1.0	1.9	1.2	2.2	2.4	3.1	8.8	8.8	11.1	12.1	12.8	10.3	9.3	10.7	9.1	10.6	8.0	7.3	9.3	5.8	5.00	12.79
Dir	ENE	ENE	NE	ENE	E	NE	ENE	ENE	ENE	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	WSW	WSW	WSW	WSW	W	WSW	WSW
26 Spd	6.1	6.0	5.3	3.0	6.8	8.6	3.8	3.9	8.0	12.3	11.7	12.2	10.9	16.9	15.7	11.0	7.5	4.3	9.7	7.8	5.2	7.0	8.1	6.6	4.53	16.87
Dir	WSW	WSW	WSW	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	WSW	WSW	W	ENE	ENE	NE	ENE	ENE	ENE	WSW	SW
27 Spd	4.4	3.4	2.7	11.1	9.1	8.4	7.4	6.1	4.3	7.1	13.3	11.5	14.4	13.9	9.7	9.8	10.9	8.5	5.1	5.0	3.9	2.4	1.5	1.7	4.85	14.36
Dir	ENE	ENE	NE	WSW	WSW	WSW	WSW	W	W	WSW	WSW	WSW	WSW	WSW	WNW	WNW	WNW	WNW	NW	ENE	ENE	ENE	NE	ENE	W	WSW
28 Spd	2.0	0.8	0.5	1.2	1.5	1.4	1.5	0.9	1.6	4.7	6.6	7.6	6.4	6.5	8.3	6.9	7.0	7.5	6.4	5.0	2.8	2.5	0.9	0.5	3.40	8.28
Dir	ENE	S	NW	SSW	WSW	W	W	NW	NW	W	WNW	WNW	WNW	WNW	WNW	NW	NW	NW	WNW	WNW	W	WSW	W	W	WNW	WNW
29 Spd	2.6	1.8	1.1	0.8	2.9	3.2	5.7	2.0	2.4	3.7	3.8	2.4	2.9	2.1	8.8	11.0	9.2	10.0	10.5	9.8	8.1	7.5	6.8	8.0	4.57	11.02
Dir	WSW	WSW	ENE	ESE	ENE	NE	ENE	NNE	NNE	ENE	ENE	ESE	SSW	N	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE
30 Spd	7.6	6.0	8.1	7.1	3.2	2.7	5.0	3.8	3.7	2.7	3.8	7.1	7.1	6.5	4.8	4.4	4.9	5.1	4.5	3.0	1.1	1.0	0.5	0.7	4.08	8.11
Dir	ENE	ENE	ENE	ENE	NNE	NNE	ENE	ENE	N	NNE	NE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	NE	NNE	NNE	N	WNW	NE	ENE	ENE
31 Spd	1.2	0.4	0.4	0.2	0.4	0.9	1.3	1.8	0.7	0.6	0.5	3.3	1.9	1.1	1.4	0.4	1.1	1.7	3.2	3.7	2.0	1.4	1.8	1.6	0.59	3.70
Dir	ENE	SE	ENE	SW	NNW	NW	NW	NW	NW	WNW	SSW	WNW	NW	NW	NNW	E	NW	ENE	ENE	E	ENE	ENE	E	ENE	NNE	E
Spd	1.21	1.09	0.82	0.30	0.35	0.25	0.33	0.13	0.47	0.78	1.59	2.02	2.07	2.70	1.71	0.49	0.67	1.42	1.63	1.76	2.00	1.90	1.79	1.44	Diurnal Average	
Dir	ENE	ENE	ENE	NE	ENE	NW	NE	NW	NNW	W	W	WSW	WSW	WSW	WSW	W	N	NE	ENE	ENE	ENE	ENE	ENE	ENE	Diurnal Maximum	
Spd	7.55	8.06	8.11	11.14	10.09	9.35	9.56	9.46	10.39	12.26	13.31	13.41	14.36	16.87	15.66	11.02	10.93	10.73	10.47	10.64	12.26	8.97	9.26	7.99	Diurnal Maximum	
Dir	64.39	60.61	68.13	251.21	73.90	241.25	241.95	242.99	244.43	242.29	238.45	249.48	238.71	234.77	235.49	71.62	293.42	234.71	67.50	238.33	77.35	74.71	245.47	65.95		
Maximum Speed Value: 16.9 kph on Mar 26 14:00		Minimum Speed Value: 0.0 kph on Mar 11 00:00																Hours in Service: 744								
Maximum Daily Speed Average: 7.32 kph on Mar 26		Minimum Daily Speed Average: 0.02 kph on Mar 18																Hours of Data: 744								
Maximum Diurnal Speed Average: 2.70 kph at hour 14		Minimum Diurnal Speed Average: 0.13 kph at hour 8																Hours of Missing Data: 0								
Monthly Average Velocity: 0.270 kph 27.601 deg		Speed Percentiles: P <sub>1</sub> = 0.1 P <sub>10</sub> = 0.5 Q <sub>1</sub> = 1.1 Median = 2.7 Q <sub>3</sub> = 6.0 P <sub>90</sub> = 8.7 P <sub>99</sub> = 12.8																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	26	0	0	0	0	0	26																			
NorthEast	98	74	0	0	0	0	172																			
East	148	46	2	0	0	0	196																			
SouthEast	23	0	0	0	0	0	23																			
South	16	0	0	0	0	0	16																			
SouthWest	50	50	18	0	0	0	118																			
West	91	29	4	0	0	0	124																			
NorthWest	57	12	0	0	0	0	69																			
Total	509	211	24	0	0	0	744																			



**WCAS - Hinton**  
**Summary of Hourly Averages**

**Relative Humidity (RH) - %**  
**March 2018**

<b>Maximum Value: 98.59 % on Mar 17 05:00</b> <b>Maximum Daily Average: 90.20 % on Mar 17</b>																						<b>Hours in Service: 744</b> <b>Hours of Data: 744</b>				
<b>Minimum Value: 9.9 % on Mar 13 16:00</b> <b>Minimum Daily Average: 40.68 % on Mar 10</b> <b>Maximum Diurnal Average: 78.24 % at hour 8</b> <b>Minimum Diurnal Average: 42.12 % at hour 16</b> <b>Monthly Average: 63.313 %</b> <b>Percentiles: P<sub>1</sub> = 13.2 P<sub>10</sub> = 26.3 Q<sub>1</sub> = 45.4 Median = 70.5 Q<sub>3</sub> = 80.2 P<sub>90</sub> = 88.8 P<sub>99</sub> = 97.3</b>																						<b>Hours of Missing Data: 0</b> <b>Hours of Calibration: 0</b> <b>Percent Operational Time: 100.0</b>				
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-Mar	46.7	47.0	47.9	48.6	51.4	54.0	53.9	54.2	66.8	75.2	76.9	81.3	78.5	76.3	73.1	75.4	83.9	85.6	84.5	80.8	80.3	85.6	83.1	81.5	69.70	85.64
2-Mar	80.9	77.9	77.7	77.8	79.2	79.2	77.5	79.2	78.6	73.5	69.5	67.8	71.1	77.1	69.4	66.0	70.0	75.6	77.3	78.5	79.1	81.1	81.5	81.5	76.13	81.55
3-Mar	80.7	80.3	80.2	79.9	79.4	81.1	82.5	83.2	83.4	79.4	73.0	72.9	72.5	67.4	68.4	65.5	60.6	67.7	71.7	74.7	75.2	75.8	79.9	80.0	75.65	83.38
4-Mar	79.0	78.1	78.6	78.1	77.9	76.3	75.7	76.4	77.8	78.0	69.8	63.3	57.1	49.0	39.9	39.2	43.9	45.0	52.8	68.2	76.4	80.4	81.6	79.9	67.60	81.65
5-Mar	78.4	77.4	76.7	75.2	74.7	73.8	73.4	72.4	73.5	74.8	72.9	56.5	47.8	42.4	36.4	37.0	42.3	57.9	62.8	68.1	75.5	83.8	84.7	84.4	66.77	84.73
6-Mar	84.3	81.8	83.9	84.3	84.4	84.3	84.5	83.9	82.0	78.5	71.3	59.3	55.8	46.6	43.2	41.2	40.4	43.9	51.6	56.3	66.1	74.7	77.4	80.6	68.33	84.54
7-Mar	82.0	82.5	82.3	81.5	81.5	81.2	80.7	80.8	80.2	71.9	67.5	59.3	46.8	37.5	38.7	50.7	50.6	56.5	62.2	64.5	69.5	70.7	75.8	81.6	68.19	82.52
8-Mar	85.0	85.5	85.6	84.2	82.7	81.6	81.4	80.2	81.4	82.4	79.7	71.9	57.5	53.1	48.8	46.0	45.4	48.6	54.4	57.7	61.4	66.9	73.1	76.0	69.61	85.60
9-Mar	77.2	79.6	80.5	83.6	85.0	85.0	84.7	83.5	83.7	80.0	69.4	47.4	44.3	47.0	42.5	23.7	21.9	24.3	28.1	36.1	47.0	49.5	59.2	58.3	59.23	85.03
10-Mar	45.6	44.8	45.3	47.2	47.3	48.5	49.8	51.6	50.5	46.7	42.6	34.8	26.3	20.4	18.1	17.0	17.1	17.0	20.1	32.2	54.4	63.1	67.1	69.0	40.68	69.00
11-Mar	73.3	75.2	75.1	72.2	73.3	74.9	77.2	77.8	73.9	57.7	36.2	29.6	23.9	19.4	15.1	13.1	12.0	14.5	19.5	43.8	59.6	68.4	71.8	71.5	51.22	77.78
12-Mar	75.8	79.5	81.6	83.4	83.8	75.6	68.3	67.6	54.8	41.4	35.1	24.7	18.0	13.6	10.9	12.8	14.2	14.5	16.3	40.2	58.1	66.4	70.9	73.3	49.20	83.77
13-Mar	76.1	77.1	74.7	76.3	76.2	74.9	80.2	80.2	77.0	58.4	34.5	22.7	16.6	14.3	11.3	9.9	10.5	11.1	19.2	30.0	37.6	39.4	46.0	60.6	46.45	80.22
14-Mar	61.1	68.4	72.9	75.4	77.7	80.7	83.2	83.9	75.3	58.6	47.2	35.5	28.8	25.8	25.1	23.8	24.3	26.4	36.3	45.8	51.9	57.9	62.6	64.6	53.89	83.85
15-Mar	64.5	64.5	65.3	65.7	67.1	68.9	70.6	69.8	72.1	71.4	65.8	64.3	58.3	61.6	76.0	83.8	89.7	91.6	93.3	94.5	95.2	96.2	96.9	97.2	76.85	97.23
16-Mar	97.4	97.7	97.8	97.4	97.0	96.7	97.1	97.3	97.0	94.1	86.7	80.4	74.7	70.1	71.4	66.1	61.5	67.5	73.6	81.1	87.3	90.8	92.6	95.0	86.18	97.75
17-Mar	96.0	97.1	97.9	98.4	98.6	98.3	97.3	96.7	96.8	95.6	90.3	80.8	69.6	69.3	74.6	78.7	81.8	81.5	88.7	93.9	95.9	96.4	95.3	95.5	90.20	98.59
18-Mar	96.5	96.9	95.5	95.1	95.6	95.2	96.0	96.3	95.7	90.5	88.2	85.2	81.3	71.7	69.9	65.7	68.6	67.4	74.6	83.7	93.3	94.6	95.8	95.2	87.01	96.89
19-Mar	94.5	94.5	94.4	95.3	94.8	94.4	94.2	93.6	91.9	70.3	59.2	49.1	42.4	35.2	32.2	31.7	31.5	36.0	40.7	43.5	50.2	58.8	63.4	63.0	64.79	95.28
20-Mar	65.0	71.1	74.6	78.5	80.6	79.9	79.6	81.2	76.1	53.7	37.1	32.2	34.1	33.8	33.7	34.8	38.0	36.1	37.9	43.4	67.6	74.3	78.7	81.9	58.49	81.86
21-Mar	83.5	84.9	84.6	85.3	89.7	92.3	93.7	94.0	90.0	78.0	60.9	48.1	42.4	42.8	54.7	61.1	62.1	67.6	76.1	75.6	76.0	75.5	74.3	73.6	73.62	93.98
22-Mar	72.7	68.7	72.8	73.6	76.6	78.3	79.5	81.7	85.4	84.0	84.5	92.0	80.8	78.8	78.5	79.8	80.7	80.0	78.0	78.6	77.5	77.8	77.9	76.7	78.94	92.02
23-Mar	74.3	73.6	83.6	90.3	92.5	93.2	91.3	92.5	88.9	45.4	25.2	23.3	20.8	20.2	17.6	18.8	21.5	26.3	24.1	32.1	41.7	50.5	57.8	62.7	52.84	93.22
24-Mar	53.2	58.3	62.5	67.0	72.0	74.4	78.1	79.3	65.2	47.3	28.2	24.3	23.5	20.3	16.3	13.4	13.5	36.6	44.1	48.9	53.9	56.1	55.8	59.6	47.99	79.28
25-Mar	62.7	66.1	70.9	73.3	76.2	77.6	78.0	77.7	74.2	52.5	31.1	28.7	26.3	24.5	23.1	23.3	22.2	21.3	22.1	25.3	30.3	32.4	32.5	34.8	45.30	78.02
26-Mar	33.5	36.2	40.0	43.1	42.7	43.1	44.8	42.6	34.9	31.1	29.4	27.2	24.5	23.8	25.6	27.8	31.2	34.9	52.8	61.3	65.4	68.6	68.4	68.8	41.73	68.78
27-Mar	69.1	70.7	69.6	43.1	45.0	47.3	50.2	53.6	55.9	49.7	41.4	42.0	45.0	41.3	33.9	22.9	21.0	22.1	30.3	63.4	71.8	76.5	79.1	79.9	51.04	79.92
28-Mar	79.4	79.7	80.8	82.8	83.6	83.0	79.6	76.2	63.5	28.1	22.2	22.1	20.6	21.0	20.8	23.7	24.1	22.7	25.2	29.4	34.8	35.1	38.7	43.1	46.68	83.63
29-Mar	39.3	43.7	53.6	56.1	67.4	76.7	75.7	76.4	73.2	63.7	54.8	46.3	35.7	29.4	37.2	45.1	45.2	44.3	49.0	54.4	62.1	66.8	77.1	80.5	56.41	80.54
30-Mar	85.2	88.4	91.0	90.7	90.9	88.0	87.0	87.0	85.7	84.1	83.7	81.2	77.4	74.4	72.1	67.3	66.5	65.0	63.3	66.6	70.9	72.1	76.1	75.5	78.75	91.00
31-Mar	79.2	79.3	78.6	77.5	77.2	77.0	76.3	74.7	74.0	66.3	59.3	54.4	45.9	41.8	43.1	40.6	30.9	34.6	45.1	56.6	66.3	75.5	80.3	83.0	63.23	82.95
73.30 74.41 76.02 76.16 77.49 77.91 78.12 78.24 76.11 66.53 57.86 51.89 46.73 43.54 42.62 42.12 42.80 45.94 50.83 58.36 65.56 69.74 72.76 74.48																								Diurnal Average		
97.42 97.75 97.92 98.41 98.59 98.27 97.29 97.29 97.03 95.62 90.32 92.02 81.26 78.85 78.46 83.77 89.67 91.61 93.35 94.46 95.89 96.40 96.88 97.23																								Diurnal Maximum		



**WCAS - Hinton**  
**Summary of Hourly Standard Deviations**

**Wind Speed (WS) - kph**  
**March 2018**

<b>Maximum Value: 8.39 kph on Mar 23 13:00</b> <b>Maximum Daily Average: 5.57 kph on Mar 26</b>																				<b>Hours in Service: 744</b> <b>Hours of Data: 744</b>																													
<b>Minimum Value: 0.2 kph on Mar 18 07:00</b> <b>Minimum Daily Average: 1.13 kph on Mar 18</b> <b>Maximum Diurnal Average: 3.63 kph at hour 15</b> <b>Minimum Diurnal Average: 1.84 kph at hour 8</b> <b>Monthly Average: 2.510 kph</b> <b>Percentiles: P<sub>1</sub> = 0.5 P<sub>10</sub> = 1.0 Q<sub>1</sub> = 1.3 Median = 1.9 Q<sub>3</sub> = 3.5 P<sub>90</sub> = 4.8 P<sub>99</sub> = 7.9</b>																				<b>Hours of Missing Data: 0</b> <b>Hours of Calibration: 0</b> <b>Percent Operational Time: 100.0</b>																													
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-Mar	2.2	2.2	1.7	1.7	2.1	2.0	1.7	2.3	2.7	2.6	2.7	2.9	3.0	3.1	2.8	3.2	4.0	4.0	4.1	4.2	4.1	3.8	4.8	4.6	3.02	4.83																							
2-Mar	4.4	4.6	4.1	4.4	3.7	3.7	4.1	3.5	3.6	3.5	3.4	3.1	3.7	2.9	3.2	3.0	3.3	4.1	3.8	2.7	2.9	1.6	1.3	1.6	3.34	4.60																							
3-Mar	2.0	2.5	1.9	1.4	1.5	1.3	0.7	0.2	0.8	0.9	1.2	1.8	1.8	1.6	1.4	1.3	2.0	2.0	1.0	1.3	1.4	0.9	1.1	0.7	1.37	2.52																							
4-Mar	1.5	0.8	1.2	1.2	1.4	1.0	0.6	1.0	1.3	1.4	1.8	2.5	1.7	1.6	1.2	1.2	0.5	1.3	1.0	1.2	0.9	1.4	1.1	1.25	2.51																								
5-Mar	1.0	1.2	1.4	1.3	1.2	1.2	1.2	1.1	1.1	0.8	1.5	1.5	1.8	1.8	1.9	1.5	2.3	2.9	1.6	1.5	1.6	1.9	1.9	2.0	1.55	2.90																							
6-Mar	2.4	2.4	0.8	0.6	1.2	1.3	1.3	1.3	1.4	1.8	1.7	1.5	1.0	1.7	2.2	2.0	1.8	1.6	2.0	1.8	1.1	1.2	0.9	0.5	1.47	2.41																							
7-Mar	1.1	1.2	1.2	1.4	1.3	1.3	1.3	1.7	1.6	1.1	1.2	1.1	1.5	2.9	2.8	2.6	2.8	3.9	2.4	1.1	1.6	1.7	1.3	1.1	1.71	3.89																							
8-Mar	1.2	0.9	1.0	0.9	0.9	0.9	1.1	0.9	1.0	1.2	0.7	0.7	0.6	1.1	1.2	1.9	2.2	3.1	2.1	2.0	1.9	1.8	1.6	1.4	1.34	3.07																							
9-Mar	0.6	1.0	1.3	0.9	1.0	1.3	1.3	3.2	2.0	2.1	1.3	2.2	2.6	3.2	4.2	3.9	3.4	2.4	2.3	1.2	1.7	1.0	1.2	1.4	1.95	4.21																							
10-Mar	1.6	3.6	4.0	4.0	3.9	4.2	4.8	5.0	5.3	5.2	5.3	5.6	5.1	4.9	5.0	5.0	4.6	3.8	2.7	1.9	0.8	1.0	1.1	1.0	3.71	5.63																							
11-Mar	1.2	1.2	1.3	1.4	1.3	1.3	1.2	1.0	1.3	1.2	1.4	2.0	1.7	1.5	2.6	3.2	2.6	3.1	1.4	1.1	1.3	1.5	1.3	1.5	1.62	3.22																							
12-Mar	1.1	0.9	0.9	0.8	1.1	1.1	1.7	1.3	1.9	1.8	2.1	3.5	3.8	4.2	4.2	3.5	3.2	2.4	1.8	1.3	1.3	1.3	1.2	0.9	1.96	4.20																							
13-Mar	1.1	1.5	1.0	1.3	1.2	1.4	1.0	1.3	1.1	1.4	1.5	1.6	1.6	2.0	2.3	2.6	3.6	2.8	2.3	2.5	2.1	1.9	1.6	1.1	1.74	3.58																							
14-Mar	1.4	1.0	0.8	1.1	1.2	0.8	1.2	1.1	1.5	1.6	1.7	2.5	2.6	2.9	2.8	3.2	2.9	2.7	3.5	3.8	3.3	3.3	2.7	1.9	2.14	3.75																							
15-Mar	1.6	1.4	1.7	1.2	1.3	1.4	1.5	1.9	1.9	1.2	1.2	2.1	3.2	3.4	2.2	1.7	1.8	1.5	1.8	1.9	0.5	0.9	0.8	1.0	1.63	3.38																							
16-Mar	0.8	1.6	2.1	2.4	2.2	1.9	2.2	2.0	2.3	2.5	2.4	2.6	2.7	2.6	2.3	1.7	1.4	1.7	1.8	1.4	1.6	1.5	1.2	0.9	1.91	2.70																							
17-Mar	1.2	1.5	1.1	1.2	2.1	1.9	1.7	0.6	1.0	1.2	0.9	1.1	1.2	1.5	1.5	1.7	2.0	0.8	0.5	1.0	0.9	2.0	1.8	1.8	1.34	2.14																							
18-Mar	0.9	0.5	2.3	1.7	1.4	1.2	0.2	0.2	0.5	1.0	1.2	1.0	0.8	1.1	0.8	2.2	1.7	1.9	1.5	1.0	1.1	0.8	0.7	1.2	1.13	2.35																							
19-Mar	0.4	1.1	0.6	0.9	0.9	0.9	0.9	0.9	1.2	3.5	2.7	3.8	4.7	5.3	5.5	5.1	5.6	3.7	3.2	2.2	1.2	1.4	1.6	2.7	2.51	5.55																							
20-Mar	1.9	1.5	1.6	1.1	1.3	1.4	1.4	1.5	1.5	4.1	5.6	5.7	5.8	5.9	5.3	5.3	3.3	3.4	2.7	2.7	2.3	2.7	1.2	1.3	2.93	5.88																							
21-Mar	1.3	1.5	1.3	1.1	0.9	0.6	0.7	0.7	1.6	1.7	3.1	4.3	4.0	4.6	5.3	4.8	4.4	4.1	3.8	3.7	3.8	4.0	4.1	3.5	2.87	5.27																							
22-Mar	3.6	3.6	3.8	3.7	4.3	3.6	3.9	3.9	3.7	4.0	4.2	3.5	3.3	3.4	4.1	3.1	3.4	3.4	3.9	4.2	4.1	4.5	3.0	2.9	3.70	4.50																							
23-Mar	2.9	2.5	1.8	1.5	1.3	1.8	1.7	2.0	2.0	6.7	6.4	8.4	8.4	7.6	7.4	5.9	3.7	3.0	3.3	2.4	1.6	2.2	2.0	3.2	3.74	8.39																							
24-Mar	3.4	1.8	2.1	2.1	2.4	2.1	1.7	1.7	1.6	3.6	4.8	6.7	4.6	4.4	5.2	5.9	5.7	4.3	4.6	3.3	2.5	2.5	2.1	2.4	3.39	6.74																							
25-Mar	1.6	1.6	0.9	1.0	1.2	1.3	1.2	1.6	1.9	4.6	6.3	6.0	6.2	6.9	6.0	6.6	6.2	5.4	4.8	5.6	5.5	4.8	5.7	5.3	4.09	6.92																							
26-Mar	5.4	4.5	5.0	3.4	6.0	6.4	3.7	3.3	6.4	7.2	7.6	8.3	8.1	7.9	7.8	6.7	6.6	4.7	5.7	4.7	3.4	4.1	3.8	3.0	5.57	8.26																							
27-Mar	2.2	2.1	3.5	8.3	7.8	7.1	6.5	5.2	3.8	5.8	7.1	8.0	8.1	7.5	6.3	5.5	5.3	4.7	4.2	3.7	2.7	2.0	1.5	1.7	5.02	8.26																							
28-Mar	1.8	1.9	1.6	1.8	1.7	1.4	1.5	1.0	1.5	3.8	4.2	4.0	4.2	4.4	4.0	3.6	3.9	3.9	4.0	3.6	2.9	2.6	1.3	0.9	2.73	4.41																							
29-Mar	2.6	2.3	1.4	1.9	3.0	2.3	2.5	1.8	1.7	2.3	2.6	2.5	2.8	2.7	5.9	4.3	4.3	4.2	4.2	3.8	3.4	4.0	3.8	4.1	3.10	5.94																							
30-Mar	3.9	3.8	3.3	3.0	2.4	2.6	2.7	2.4	2.8	2.4	2.8	2.8	3.2	3.0	3.0	2.4	2.3	3.0	2.7	2.5	1.4	1.1	1.0	1.0	2.58	3.95																							
31-Mar	1.1	0.9	0.8	1.1	0.7	0.9	1.1	1.4	1.0	1.2	1.7	2.2	1.6	1.8	2.0	1.8	1.4	1.8	1.7	1.8	1.6	1.4	1.3	1.3	1.40	2.21																							
																								1.91	1.90	1.86	1.92	2.06	1.99	1.87	1.84	2.03	2.69	2.98	3.40	3.40	3.53	3.63	3.43	3.32	3.06	2.80	2.49	2.16	2.14	1.95	1.90	Diurnal Average	
																								5.38	4.60	4.95	8.26	7.81	7.11	6.46	5.20	6.37	7.21	7.64	8.36	8.39	7.91	7.80	6.71	6.57	5.44	5.68	5.64	5.52	4.77	5.66	5.31	Diurnal Maximum	





**WCAS - Hinton**  
**Summary of Hourly Standard Deviations**

**Wind Direction (WD) - deg**  
**March 2018**

<b>Maximum Value: 101.99 deg on Mar 9 10:00</b> <b>Maximum Daily Average: 62.89 deg on Mar 9</b>																						<b>Hours in Service: 744</b> <b>Hours of Data: 744</b>																									
<b>Minimum Value: 17.7 deg on Mar 14 23:00</b> <b>Minimum Daily Average: 28.63 deg on Mar 1</b> <b>Maximum Diurnal Average: 56.07 deg at hour 2</b> <b>Minimum Diurnal Average: 33.76 deg at hour 19</b> <b>Monthly Average: 46.155 deg</b> <b>Percentiles: P<sub>1</sub> = 19.5 P<sub>10</sub> = 25.4 Q<sub>1</sub> = 30.8 Median = 40.3 Q<sub>3</sub> = 58.1 P<sub>90</sub> = 80.5 P<sub>99</sub> = 96.9</b>																						<b>Hours of Missing Data: 0</b> <b>Hours of Calibration: 0</b> <b>Percent Operational Time: 100.0</b>																									
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-Mar	22.2	20.2	21.3	19.8	19.2	28.4	21.6	27.6	27.1	34.7	21.9	30.5	33.7	29.6	40.6	28.9	26.3	21.9	24.8	29.9	41.6	42.6	35.9	36.5	28.63	42.60																					
2-Mar	41.9	33.9	39.6	37.0	42.7	41.4	30.1	39.9	35.3	27.0	24.0	23.7	24.2	35.7	37.1	26.8	29.1	29.4	25.4	45.0	45.2	19.6	18.7	21.5	32.26	45.23																					
3-Mar	19.2	24.8	20.2	18.8	38.3	35.4	43.0	32.1	73.0	52.8	79.1	44.7	51.4	63.0	37.3	60.7	65.6	69.4	56.0	37.6	28.2	72.2	87.1	68.7	49.10	87.14																					
4-Mar	54.0	80.6	62.3	32.2	58.6	65.3	80.4	51.4	36.1	30.2	46.9	44.3	47.0	32.9	31.1	28.9	59.8	83.3	34.3	44.4	44.4	75.7	87.3	34.5	50.3	52.17	87.26																				
5-Mar	55.5	41.3	22.4	42.4	47.5	25.5	55.8	41.8	54.3	66.6	64.8	55.2	48.6	55.5	83.4	38.4	23.8	23.0	20.9	23.2	30.3	38.2	29.4	36.2	42.66	83.41																					
6-Mar	26.0	34.6	28.5	26.7	31.2	32.4	23.5	21.0	29.6	28.0	40.2	60.7	25.4	89.6	49.9	35.8	28.8	25.7	31.0	33.8	71.4	54.7	56.1	74.6	39.96	89.61																					
7-Mar	88.3	58.1	67.4	82.7	63.3	42.9	72.1	90.1	84.9	68.4	52.4	68.6	80.0	74.6	69.9	38.9	38.9	36.8	32.3	43.4	35.6	32.4	39.2	90.9	60.50	90.91																					
8-Mar	86.3	80.1	71.3	97.9	79.2	60.6	58.8	64.1	68.5	43.7	85.1	69.7	72.4	43.6	35.4	23.4	22.8	31.6	27.7	27.0	22.9	43.7	53.4	32.8	54.25	97.89																					
9-Mar	91.1	80.7	84.5	78.9	51.1	92.6	84.0	94.6	98.9	102.0	66.0	50.7	71.7	54.6	43.8	26.6	23.8	25.6	26.2	38.4	28.3	66.9	71.1	57.3	62.89	101.99																					
10-Mar	19.6	32.5	31.6	29.8	30.0	24.3	29.2	30.8	29.0	26.7	26.8	36.1	31.0	33.2	24.3	23.1	33.6	34.1	26.8	77.8	93.4	84.3	64.7	97.8	40.44	97.76																					
11-Mar	49.0	86.3	48.7	26.6	43.4	26.0	34.5	70.7	54.4	51.3	31.5	49.7	29.4	30.0	50.1	28.3	21.6	31.8	26.3	60.5	90.6	87.7	80.5	52.5	48.40	90.56																					
12-Mar	59.9	52.4	85.1	89.1	55.8	31.5	42.8	33.6	40.7	42.6	37.8	47.9	37.9	23.4	45.0	50.9	67.7	56.7	17.8	60.1	95.5	90.2	97.2	86.3	56.17	97.22																					
13-Mar	75.4	94.1	92.4	88.2	70.4	58.5	89.4	66.8	32.5	80.1	60.0	67.1	49.0	60.4	95.0	22.5	30.1	31.1	39.0	39.7	42.7	55.6	33.0	36.9	58.74	94.96																					
14-Mar	43.4	92.7	69.8	61.8	67.7	62.7	81.5	73.3	40.2	23.7	22.1	26.8	23.1	29.0	27.6	33.4	28.6	31.2	29.2	24.6	23.3	20.4	17.7	36.1	41.25	92.67																					
15-Mar	33.0	44.7	43.2	55.7	68.0	60.8	84.1	53.9	88.9	79.2	90.2	68.0	33.6	59.8	42.8	48.4	27.1	22.1	60.8	27.1	37.0	36.7	61.3	34.8	52.55	90.22																					
16-Mar	43.2	37.9	31.0	44.5	29.4	19.9	21.7	19.5	20.0	22.0	32.6	39.1	47.4	72.0	28.7	24.8	29.0	29.8	23.6	32.9	28.2	30.8	44.4	28.3	32.53	71.96																					
17-Mar	29.7	50.7	60.5	43.8	42.1	28.3	33.0	50.9	43.2	74.2	36.1	68.7	83.2	42.1	30.7	32.9	33.9	75.7	33.7	47.0	69.8	63.6	25.1	41.4	47.52	83.18																					
18-Mar	55.0	33.7	50.2	30.3	29.7	40.3	53.3	39.4	83.6	50.3	33.1	87.3	62.2	46.2	62.7	29.6	39.7	35.1	34.4	34.7	70.9	93.0	71.8	35.6	50.09	93.03																					
19-Mar	45.4	62.9	30.0	35.3	31.5	44.4	49.0	26.2	34.2	39.5	48.5	32.1	33.7	24.5	32.3	31.7	41.3	43.4	45.9	42.6	62.2	83.6	92.8	83.2	45.67	92.77																					
20-Mar	67.0	73.0	55.1	68.6	60.9	53.3	50.8	50.4	32.4	90.8	36.9	28.1	51.2	33.3	28.7	43.5	50.5	40.9	41.9	85.5	37.4	43.7	21.8	43.3	49.54	90.82																					
21-Mar	20.8	26.7	60.7	62.7	43.0	99.2	93.5	31.8	39.1	58.1	30.8	31.8	34.7	29.8	31.0	33.5	24.0	34.2	41.2	44.9	42.3	36.1	41.6	46.0	43.23	99.20																					
22-Mar	42.2	30.6	32.9	31.1	25.8	24.5	25.0	24.3	24.8	26.0	31.7	38.1	28.4	31.3	34.6	39.3	48.5	42.2	38.7	39.8	22.2	33.5	43.1	37.8	33.18	48.49																					
23-Mar	38.5	75.3	31.0	44.6	89.9	47.2	85.7	73.2	49.4	48.6	31.8	34.7	35.8	45.1	35.3	36.7	49.0	61.5	21.8	51.6	31.3	26.7	83.4	95.3	50.99	95.33																					
24-Mar	43.8	79.1	84.4	91.5	43.9	70.8	63.2	84.0	54.6	84.4	46.0	41.7	42.8	45.5	46.6	36.6	55.6	30.5	36.4	26.3	40.2	33.0	18.3	33.6	51.37	91.49																					
25-Mar	30.3	39.3	47.6	54.7	50.1	35.0	37.8	26.5	23.3	83.8	40.6	39.2	33.1	31.1	27.7	35.7	40.9	28.4	28.3	28.4	35.4	33.1	35.9	46.1	38.02	83.83																					
26-Mar	49.0	44.9	53.7	47.5	48.3	39.9	53.4	45.9	42.4	32.8	35.2	38.4	43.1	24.8	27.6	34.3	47.4	58.4	33.8	34.7	40.8	35.5	27.2	29.6	40.35	58.40																					
27-Mar	28.2	41.3	77.4	41.9	47.8	50.1	47.1	46.6	46.9	44.9	29.7	37.5	32.4	30.1	40.4	32.4	28.5	31.5	60.2	51.4	38.7	36.7	39.1	39.2	41.67	77.45																					
28-Mar	50.0	98.0	79.8	96.5	59.9	39.0	40.5	31.5	28.7	45.4	34.6	32.8	39.2	39.7	30.4	28.1	26.1	30.0	35.1	34.2	46.6	46.7	46.8	37.7	44.88	97.99																					
29-Mar	45.8	62.8	33.5	92.8	82.3	40.2	28.0	47.0	36.4	34.7	51.9	71.4	74.7	78.5	42.8	25.4	29.5	24.1	22.4	22.0	23.2	30.9	38.1	29.7	44.51	92.82																					
30-Mar	31.4	40.8	25.4	22.3	40.2	50.0	31.9	41.9	40.6	54.2	46.2	28.4	29.0	31.0	45.2	28.2	27.3	33.1	42.7	40.9	49.6	32.1	69.3	57.5	39.13	69.28																					
31-Mar	47.6	84.2	58.6	88.1	65.3	28.7	29.0	29.8	78.0	82.5	94.9	39.4	58.8	89.8	75.7	98.6	61.0	68.4	27.8	32.9	45.2	44.8	30.2	36.2	58.16	98.63																					
																						46.22	56.07	51.63	54.31	50.22	45.14	50.76	47.11	47.46	52.56	45.47	46.21	44.77	45.48	43.02	35.69	37.42	39.38	33.76	40.71	46.64	49.56	48.67	49.47	Diurnal Average	
																						91.10	97.99	92.42	97.89	89.93	99.20	93.46	94.63	98.93	101.99	94.94	87.34	83.18	89.85	94.96	98.63	67.73	83.34	60.79	85.48	95.49	93.03	97.22	97.76	Diurnal Maximum	

**WEST CENTRAL AIRSHED SOCIETY**

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

**END OF REPORT  
MARCH 2018**