

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

**AIR QUALITY MONITORING**  
**April 2017**  
**Monthly Report**

**Prepared by:**

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

























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

**Nitrogen Oxide (NO) - ppb**  
**April 2017**

Maximum Value: 26.29 ppb on Apr 6 09:00      Maximum Daily Average: 4.63 ppb on Apr 6 Minimum Value: 0.0 ppb on Apr 1 01:00      Minimum Daily Average: 0.12 ppb on Apr 15 Maximum Diurnal Average: 5.56 ppb at hour 7      Minimum Diurnal Average: 0.36 ppb at hour 20 Monthly Average: 1.639 ppb      Percentiles: P <sub>1</sub> = 0.0 P <sub>10</sub> = 0.1 Q <sub>1</sub> = 0.2 Median = 0.7 Q <sub>3</sub> = 1.6 P <sub>90</sub> = 4.3 P <sub>99</sub> = 11.3																								Hours in Service:	720																								
																								Hours of Data:	683																								
																								Hours of Missing Data:	37																								
																								Hours of Calibration:	36																								
																								Percent Operational Time:	99.9																								
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Apr	0.0	0.0	0.2	Z	0.7	1.4	0.7	0.2	0.5	0.7	0.8	1.2	0.1	0.7	0.5	0.4	0.6	0.2	0.1	0.1	0.3	0.5	1.8	0.3	0.51	1.80																							
2-Apr	1.6	0.1	0.7	Z	0.3	0.2	5.3	5.1	2.7	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.75	5.31																							
3-Apr	0.0	0.0	0.0	Z	0.2	0.3	3.7	6.1	2.3	1.8	1.4	0.7	0.2	0.8	0.9	1.2	0.5	0.4	0.2	0.1	0.1	1.1	1.5	1.2	1.08	6.15																							
4-Apr	4.4	8.8	22.8	Z	12.8	2.0	19.2	1.1	0.6	1.1	0.6	0.4	0.6	0.9	0.9	0.5	0.5	0.5	0.3	0.3	2.3	2.9	1.9	0.6	3.74	22.82																							
5-Apr	5.3	5.4	1.8	Z	1.4	1.6	0.9	2.5	1.4	2.5	1.2	1.2	2.8	0.9	0.2	0.5	0.3	0.4	0.2	0.1	1.6	1.6	0.5	3.7	1.66	5.38																							
6-Apr	1.4	7.9	3.7	Z	10.3	7.0	6.0	20.7	26.3	4.8	0.8	0.8	0.4	0.5	0.6	0.8	0.5	0.3	0.5	0.3	1.7	4.4	2.5	4.3	4.63	26.29																							
7-Apr	8.1	2.9	2.5	Z	7.9	17.6	19.9	6.0	9.7	3.9	2.4	1.7	1.9	1.7	1.8	0.8	0.3	0.8	0.3	0.7	0.8	0.6	0.2	0.4	4.04	19.91																							
8-Apr	0.7	0.9	1.0	Z	4.4	11.4	9.2	6.0	1.7	1.5	1.0	1.2	1.1	1.1	0.8	0.8	0.8	0.4	0.6	0.3	0.3	0.3	0.2	0.2	1.99	11.42																							
9-Apr	0.2	0.6	0.7	Z	6.0	12.5	8.9	6.3	3.3	3.6	2.0	1.5	0.4	0.3	0.3	0.5	0.7	0.7	0.3	0.1	1.4	0.1	0.6	0.1	2.22	12.47																							
10-Apr	0.0	0.1	7.2	Z	1.0	4.5	2.2	2.6	4.7	8.9	8.5	5.3	2.9	3.1	1.2	1.7	2.2	2.1	0.3	0.6	0.1	0.1	0.1	0.2	2.60	8.91																							
11-Apr	0.0	0.1	0.0	Z	3.3	2.1	0.8	0.9	1.2	1.2	1.7	1.6	0.8	1.0	0.7	0.4	0.3	0.6	0.8	1.0	1.3	0.6	0.3	2.6	1.02	3.31																							
12-Apr	1.1	1.2	3.1	Z	0.7	1.1	2.9	3.4	1.6	1.4	1.4	1.2	1.7	2.1	0.9	1.7	1.4	1.2	0.5	0.1	0.3	0.2	0.0	0.0	1.27	3.38																							
13-Apr	0.0	0.0	0.0	Z	0.0	0.6	1.0	0.9	1.5	1.4	1.9	2.6	2.2	2.3	3.1	1.5	2.2	0.8	0.4	0.4	0.6	0.3	0.6	1.5	1.13	3.12																							
14-Apr	0.4	1.0	1.2	Z	0.8	0.9	4.3	8.6	4.3	5.1	1.0	0.3	0.3	0.2	0.1	0.1	0.5	0.3	0.2	0.1	0.1	0.1	0.1	0.5	1.33	8.60																							
15-Apr	0.2	0.2	0.1	Z	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.4	0.6	0.1	0.1	0.1	0.0	0.12	0.63																							
16-Apr	0.9	0.3	1.3	Z	2.0	1.4	3.5	4.7	1.8	1.9	0.7	0.6	0.6	0.5	0.7	0.6	0.5	0.4	0.3	0.5	0.5	0.1	0.4	0.6	1.08	4.74																							
17-Apr	0.2	0.0	0.1	Z	0.2	1.5	7.8	6.6	2.6	1.4	1.5	1.1	1.3	1.1	0.9	0.9	1.0	0.4	0.2	0.4	0.1	0.1	0.1	0.1	1.29	7.84																							
18-Apr	0.1	0.0	0.0	Z	1.2	0.5	2.2	C	C	C	C	C	C	1.4	2.4	1.1	1.2	1.0	0.5	0.6	0.2	0.2	0.2	0.2	--	2.44																							
19-Apr	0.2	0.8	0.2	Z	4.4	6.6	11.5	8.1	6.4	5.0	4.6	1.7	1.6	0.5	0.5	0.6	0.6	0.6	0.4	0.3	0.6	0.4	0.5	0.7	2.47	11.55																							
20-Apr	0.2	0.2	0.5	Z	10.3	12.5	10.3	0.9	0.6	3.3	2.2	1.6	1.4	0.3	0.3	0.2	0.2	1.2	0.8	0.0	0.0	0.0	0.1	0.1	2.06	12.52																							
21-Apr	0.0	0.1	0.0	Z	3.3	9.5	6.8	0.4	1.4	3.0	1.3	0.9	1.3	0.5	0.7	0.3	0.5	0.1	0.2	0.4	0.1	0.3	0.2	0.3	1.38	9.51																							
22-Apr	0.2	0.1	0.1	Z	1.3	0.7	1.1	1.0	1.9	0.9	0.9	0.7	0.8	1.5	0.7	0.6	0.8	0.4	0.4	0.3	0.2	0.1	0.1	0.1	0.65	1.93																							
23-Apr	0.2	0.1	0.0	Z	0.2	0.3	0.7	0.9	1.4	1.1	1.3	1.4	1.2	1.0	1.2	1.1	1.3	1.5	0.5	0.6	0.5	0.3	0.2	0.1	0.73	1.55																							
24-Apr	0.2	0.1	0.1	Z	0.6	1.1	2.4	4.0	PF	5.3	3.3	2.9	1.4	1.0	1.8	0.9	2.1	0.8	0.1	0.2	0.5	0.2	0.1	0.0	1.33	5.27																							
25-Apr	0.1	0.7	2.4	Z	1.5	1.6	3.7	4.0	2.4	1.0	0.7	0.4	1.1	0.9	0.6	0.7	1.2	0.9	1.0	0.7	0.3	0.1	0.1	0.1	1.15	3.95																							
26-Apr	0.0	2.1	0.4	Z	0.8	0.7	6.4	4.1	1.2	1.6	1.0	1.5	1.3	1.3	1.3	1.1	1.2	0.7	0.6	0.3	0.7	0.8	0.6	0.1	1.30	6.42																							
27-Apr	0.1	0.7	0.2	Z	7.1	3.9	11.2	6.9	2.9	3.6	1.9	1.3	1.3	0.7	0.7	0.7	0.4	2.1	1.1	0.9	0.4	0.2	0.0	0.0	2.10	11.18																							
28-Apr	0.1	0.0	0.0	Z	0.0	0.7	1.9	2.2	3.6	2.9	2.0	1.9	1.7	0.8	1.4	1.2	0.6	0.5	0.3	0.2	0.5	0.1	0.2	1.2	1.05	3.56																							
29-Apr	0.5	2.4	3.4	Z	7.8	9.5	10.1	9.3	0.9	0.5	0.9	1.1	0.7	0.8	0.6	0.7	0.6	0.3	0.2	0.2	0.2	0.2	0.0	0.0	2.22	10.12																							
30-Apr	0.1	0.1	0.0	Z	0.8	2.9	2.3	2.1	0.5	0.3	0.2	1.3	0.2	9.0	1.9	0.6	0.9	1.1	0.3	0.1	1.0	1.6	1.3	0.5	1.26	8.96																							
																								0.88	1.23	1.80	--	3.04	3.90	5.56	4.33	3.20	2.41	1.64	1.32	1.08	1.24	0.94	0.75	0.81	0.70	0.40	0.36	0.56	0.59	0.48	0.66	Diurnal Average	
																								8.07	8.77	22.82	--	12.85	17.61	19.91	20.69	26.29	8.91	8.49	5.25	2.93	8.96	3.12	1.71	2.24	2.11	1.09	1.03	2.30	4.35	2.50	4.30	Diurnal Maximum	
Z - zerospan      C - Calibration      PF - Power Failure																																																	
Alberta Ambient Air Quality Objectives (AAQO): 1-hr --- ppb      24-hr --- ppb																																																	



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

**Nitrogen Dioxide (NO<sub>2</sub>) - ppb**  
**April 2017**

Maximum Value: 29.36 ppb on Apr 4 07:00																				Maximum Daily Average: 12.15 ppb on Apr 4					Hours in Service: 720																								
Minimum Value: 0.3 ppb on Apr 2 16:00																				Minimum Daily Average: 1.50 ppb on Apr 15					Hours of Data: 683																								
Maximum Diurnal Average: 9.53 ppb at hour 7																				Minimum Diurnal Average: 2.49 ppb at hour 15					Hours of Missing Data: 37																								
Monthly Average: 5.248 ppb																				Percentiles: P <sub>1</sub> = 0.3 P <sub>10</sub> = 1.5 Q <sub>1</sub> = 2.3 Median = 4.0 Q <sub>3</sub> = 6.6 P <sub>90</sub> = 10.5 P <sub>99</sub> = 21.2					Hours of Calibration: 36																								
																									Percent Operational Time: 99.9																								
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Apr	4.6	4.2	1.9	Z	5.1	5.3	5.1	3.2	5.8	4.5	3.3	3.8	0.8	2.5	2.3	3.0	4.5	2.9	0.5	1.2	5.0	8.5	20.3	4.8	4.47	20.27																							
2-Apr	8.5	5.7	10.9	Z	7.9	7.0	15.8	17.6	11.1	1.1	0.6	0.4	0.3	0.4	0.3	0.3	0.4	0.3	0.3	1.6	5.0	4.9	2.6	5.2	4.71	17.65																							
3-Apr	1.5	3.0	3.4	Z	3.7	4.1	11.4	18.4	7.4	5.7	3.9	1.7	0.9	2.5	2.3	3.1	2.0	1.6	1.7	2.2	2.2	4.0	21.1	19.4	5.52	21.11																							
4-Apr	21.6	25.4	26.6	Z	23.0	13.2	29.4	9.1	3.9	3.1	2.2	1.7	1.9	3.0	3.4	1.9	2.5	4.4	4.0	6.1	18.6	27.3	25.8	21.6	12.15	29.36																							
5-Apr	21.4	15.5	9.2	Z	9.4	10.6	10.2	11.7	13.8	11.0	4.8	5.6	10.1	3.9	1.4	4.4	2.4	3.1	1.6	3.0	16.4	10.6	6.6	15.7	8.80	21.39																							
6-Apr	16.7	18.7	13.1	Z	19.4	14.2	17.5	21.0	21.1	14.2	5.5	3.2	2.3	2.3	2.8	3.8	4.2	4.4	3.6	6.5	15.6	19.6	13.3	11.2	11.05	21.08																							
7-Apr	8.8	7.7	8.3	Z	9.1	10.1	9.9	4.3	10.1	7.3	6.9	5.2	6.8	6.7	5.8	4.9	3.8	3.9	4.1	5.1	4.6	4.8	4.8	7.4	6.54	10.11																							
8-Apr	6.8	8.7	8.7	Z	12.1	9.1	10.4	8.2	5.0	4.2	2.5	2.7	2.3	2.1	1.8	2.2	2.5	2.7	3.4	2.9	3.0	4.0	2.2	2.1	4.76	12.15																							
9-Apr	2.1	7.3	4.9	Z	9.6	10.0	6.2	6.9	5.6	8.8	6.3	3.8	1.4	1.3	1.7	1.2	2.6	2.9	2.8	2.3	10.2	4.1	4.5	6.0	4.90	10.16																							
10-Apr	4.4	5.5	6.8	Z	7.4	12.6	9.9	9.6	13.7	12.0	11.2	6.3	4.5	5.7	3.9	4.2	7.5	7.9	3.5	7.6	5.6	3.5	1.9	3.3	6.89	13.69																							
11-Apr	2.6	6.9	5.6	Z	12.2	9.7	10.6	8.2	8.0	5.3	4.9	3.4	2.1	2.3	2.1	1.6	1.4	3.2	6.7	7.4	12.0	7.0	5.3	10.8	6.06	12.23																							
12-Apr	7.4	8.5	12.1	Z	6.0	5.5	6.5	5.9	4.9	4.8	4.3	4.6	5.0	6.2	4.8	4.9	5.3	5.4	4.0	3.9	4.6	4.1	2.1	1.5	5.31	12.07																							
13-Apr	1.4	1.6	1.6	Z	1.6	4.1	7.2	5.6	5.1	4.9	5.5	6.9	7.2	5.8	6.2	5.8	6.9	4.9	4.5	5.5	5.9	4.6	5.0	5.7	4.93	7.16																							
14-Apr	4.7	5.2	7.8	Z	7.5	12.4	15.2	13.3	8.1	6.1	1.7	1.0	0.9	0.7	0.7	0.6	1.5	1.1	1.4	1.2	1.7	2.3	1.8	1.9	4.30	15.24																							
15-Apr	2.6	1.6	1.3	Z	0.7	0.7	0.7	0.8	0.6	0.8	0.7	0.6	0.6	0.7	0.8	0.7	0.7	0.9	2.6	4.7	2.8	3.8	4.0	1.2	1.50	4.73																							
16-Apr	2.6	3.9	6.4	Z	5.4	4.7	3.5	3.9	2.4	3.6	1.6	1.4	1.9	1.6	1.6	1.9	1.3	1.3	1.7	4.3	3.1	3.6	3.9	6.3	3.12	6.36																							
17-Apr	4.4	2.3	3.3	Z	4.9	5.6	12.6	13.3	8.8	5.0	4.5	3.9	3.7	2.6	2.3	2.9	4.6	4.0	3.2	2.6	1.9	2.8	3.5	3.3	4.60	13.27																							
18-Apr	3.1	2.9	1.7	Z	5.2	7.5	8.7	C	C	C	C	C	C	3.1	4.0	3.3	3.9	4.3	3.9	4.0	3.4	3.3	3.2	3.1	--	8.67																							
19-Apr	3.0	4.0	6.3	Z	10.0	9.4	7.0	6.7	6.9	8.6	10.7	5.1	4.2	1.7	1.5	2.2	3.1	3.6	4.0	2.4	14.1	11.9	9.5	10.0	6.35	14.11																							
20-Apr	6.7	8.0	7.8	Z	14.9	15.0	12.2	3.9	2.3	8.8	6.9	5.9	2.4	1.2	1.2	1.0	1.9	3.2	2.8	1.3	1.5	2.8	5.2	4.9	5.30	15.05																							
21-Apr	3.6	5.6	5.3	Z	6.9	13.0	9.6	3.1	3.9	6.3	3.4	2.6	3.6	1.5	2.3	1.3	2.2	0.6	1.2	2.1	2.3	6.7	7.5	4.1	4.28	12.98																							
22-Apr	4.3	4.1	4.8	Z	6.8	8.7	6.4	5.1	5.0	4.5	3.7	3.0	2.9	3.3	2.7	2.6	3.3	2.2	2.7	2.8	3.3	2.3	2.4	3.2	3.92	8.68																							
23-Apr	3.0	2.7	2.5	Z	3.8	3.1	3.3	4.1	3.2	2.8	2.7	2.6	2.1	2.0	2.5	3.2	4.1	4.4	4.1	4.8	4.6	4.8	4.3	4.4	3.44	4.85																							
24-Apr	4.5	3.9	3.2	Z	4.1	7.0	6.8	6.8	PF	4.8	3.5	3.2	2.1	1.7	2.8	2.2	3.4	2.1	0.8	1.2	3.0	1.8	1.8	2.0	3.30	7.01																							
25-Apr	4.8	8.1	10.0	Z	12.1	15.8	8.4	5.6	3.4	2.2	2.3	1.8	2.0	1.4	1.4	1.2	2.4	2.3	2.1	2.6	2.4	1.7	2.4	2.1	4.29	15.79																							
26-Apr	2.5	4.9	2.8	Z	5.2	4.9	10.1	4.7	1.9	1.7	1.3	1.8	1.9	2.2	1.9	2.1	2.5	2.3	2.5	2.5	3.9	6.9	3.9	3.2	3.37	10.09																							
27-Apr	4.7	5.6	5.2	Z	12.7	12.1	10.4	9.8	6.4	5.6	4.0	3.6	3.0	1.8	2.2	2.5	3.0	7.7	6.2	6.6	4.6	6.5	4.5	3.2	5.74	12.74																							
28-Apr	4.1	4.3	2.5	Z	5.0	8.4	8.1	6.6	6.3	6.1	4.7	3.6	4.0	1.6	2.9	2.7	3.2	1.9	1.8	2.0	2.6	1.4	6.3	9.7	4.35	9.74																							
29-Apr	3.7	3.6	4.0	Z	4.8	6.4	4.2	6.5	2.1	1.4	2.3	2.9	1.7	2.0	1.8	2.5	2.1	1.6	1.9	3.9	5.2	6.4	4.1	5.3	3.50	6.49																							
30-Apr	3.4	2.7	3.4	Z	6.8	15.5	8.8	9.3	3.6	1.2	1.0	1.6	1.3	7.8	3.7	1.9	3.1	3.8	1.9	1.6	9.4	14.7	10.8	10.2	5.54	15.47																							
																								5.78	6.40	6.38	--	8.11	8.86	9.53	8.05	6.45	5.40	4.03	3.24	2.89	2.72	2.49	2.54	3.07	3.17	2.84	3.53	5.94	6.36	6.48	6.42	Diurnal Average	
																								21.58	25.40	26.61	--	22.97	15.79	29.36	21.01	21.08	14.19	11.20	6.85	10.08	7.77	6.19	5.81	7.47	7.93	6.67	7.57	18.63	27.28	25.83	21.64	Diurnal Maximum	
Z - zerospan																								C - Calibration				PF - Power Failure																					
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**  
**April 2017**

Maximum Value: 49.64 ppb on Apr 4 03:00		Maximum Daily Average: 16.01 ppb on Apr 4		Hours in Service: 720																							
Minimum Value: 0.4 ppb on Apr 2 16:00		Minimum Daily Average: 1.63 ppb on Apr 15		Hours of Data: 683																							
Maximum Diurnal Average: 15.18 ppb at hour 7		Minimum Diurnal Average: 3.28 ppb at hour 19		Hours of Missing Data: 37																							
Monthly Average: 6.932 ppb		Percentiles: P <sub>1</sub> = 0.5 P <sub>10</sub> = 1.8 Q <sub>1</sub> = 3.0 Median = 4.8 Q <sub>3</sub> = 8.4 P <sub>90</sub> = 15.6 P <sub>99</sub> = 29.1		Hours of Calibration: 36																							
				Percent Operational Time: 99.9																							
Day	Hourly Period Ending At																								Daily Average	Daily Maximum	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1-Apr	4.6	4.2	2.1	Z	5.8	6.8	5.8	3.5	6.4	5.3	4.1	5.0	0.8	3.2	2.8	3.3	5.1	3.2	0.6	1.3	5.3	9.0	22.3	5.1	5.04	22.29	
2-Apr	10.2	5.9	11.8	Z	8.3	7.4	21.3	22.9	13.9	1.2	0.7	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.4	1.7	5.2	5.0	2.7	5.3	5.51	22.89	
3-Apr	1.5	3.0	3.4	Z	3.9	4.5	15.2	24.7	9.9	7.6	5.4	2.4	1.2	3.3	3.2	4.4	2.5	2.0	1.9	2.4	2.3	5.1	22.8	20.8	6.67	24.72	
4-Apr	26.2	34.4	49.6	Z	36.1	15.3	48.8	10.3	4.5	4.3	2.8	2.1	2.5	3.9	4.4	2.4	3.0	5.0	4.4	6.5	21.1	30.4	28.0	22.4	16.01	49.64	
5-Apr	26.9	21.0	11.1	Z	10.9	12.4	11.2	14.4	15.3	13.6	6.1	6.8	13.0	4.9	1.6	5.0	2.7	3.6	1.9	3.2	18.1	12.3	7.2	19.5	10.55	26.91	
6-Apr	18.3	26.8	17.0	Z	30.0	21.4	23.7	41.9	47.5	19.2	6.4	4.0	2.8	2.8	3.4	4.7	4.7	4.7	4.2	6.8	17.4	24.2	15.9	15.6	15.79	47.54	
7-Apr	16.9	10.7	11.0	Z	17.1	27.8	30.0	10.3	19.9	11.3	9.4	7.0	8.8	8.4	7.7	5.8	4.2	4.7	4.4	5.9	5.5	5.4	5.0	7.9	10.66	29.95	
8-Apr	7.6	9.7	9.7	Z	16.7	20.6	19.7	14.3	6.8	5.8	3.6	4.0	3.4	3.2	2.6	3.1	3.3	3.1	4.0	3.2	3.3	4.3	2.4	2.3	6.81	20.65	
9-Apr	2.3	8.1	5.7	Z	15.7	22.6	15.2	13.3	9.0	12.5	8.4	5.3	1.8	1.6	2.0	1.7	3.3	3.6	3.2	2.4	11.7	4.2	5.1	6.1	7.17	22.63	
10-Apr	4.5	5.7	13.2	Z	8.5	17.2	12.2	12.3	18.6	21.0	19.8	11.7	7.5	8.8	5.2	6.0	9.8	10.1	3.8	8.2	5.8	3.6	1.9	3.5	9.52	21.04	
11-Apr	2.7	7.1	5.7	Z	15.7	11.9	11.4	9.2	9.3	6.6	6.7	5.0	2.9	3.4	2.8	2.0	1.7	3.8	7.5	8.6	13.4	7.7	5.8	13.5	7.14	15.66	
12-Apr	8.5	9.8	15.3	Z	6.7	6.7	9.4	9.4	6.6	6.3	5.8	5.8	6.8	8.4	5.7	6.7	6.8	6.7	4.6	4.2	4.9	4.4	2.1	1.5	6.65	15.28	
13-Apr	1.4	1.6	1.6	Z	1.6	4.8	8.2	6.6	6.7	6.3	7.4	9.6	9.4	8.3	9.4	7.4	9.1	5.8	5.0	6.0	6.6	5.0	5.7	7.2	6.12	9.57	
14-Apr	5.2	6.3	9.1	Z	8.3	13.4	19.7	22.1	12.5	11.3	2.6	1.4	1.1	0.9	0.8	0.8	2.0	1.4	1.6	1.3	1.9	2.4	2.0	2.4	5.68	22.11	
15-Apr	2.7	1.8	1.4	Z	0.7	0.8	0.7	0.8	0.7	0.9	0.7	0.7	0.8	0.9	1.0	0.8	0.8	1.0	3.0	5.4	2.9	3.9	4.1	1.2	1.63	5.43	
16-Apr	3.5	4.2	7.7	Z	7.5	6.2	7.1	8.7	4.2	5.5	2.3	1.9	2.5	2.2	2.3	2.5	1.9	1.7	2.0	4.9	3.6	3.8	4.3	7.0	4.24	8.68	
17-Apr	4.6	2.3	3.5	Z	5.1	7.1	20.6	20.1	11.5	6.5	6.1	5.0	5.1	3.7	3.2	3.9	5.7	4.4	3.4	3.0	2.0	3.0	3.7	3.5	5.96	20.55	
18-Apr	3.2	3.0	1.7	Z	6.5	8.1	11.0	C	C	C	C	C	C	4.6	6.4	4.5	5.1	5.3	4.4	4.6	3.6	3.5	3.4	3.3	--	11.05	
19-Apr	3.2	4.8	6.5	Z	14.5	16.1	18.6	14.8	13.3	13.6	15.3	6.9	5.9	2.3	2.0	2.8	3.8	4.2	4.4	2.7	14.8	12.3	10.1	10.8	8.86	18.61	
20-Apr	7.0	8.2	8.3	Z	25.2	27.6	22.5	4.9	2.9	12.1	9.1	7.6	3.9	1.5	1.4	1.1	2.1	4.4	3.6	1.3	1.5	2.9	5.4	5.0	7.38	27.62	
21-Apr	3.7	5.7	5.3	Z	10.2	22.6	16.4	3.6	5.3	9.4	4.8	3.5	4.8	2.0	3.0	1.7	2.8	0.7	1.4	2.5	2.4	7.0	7.7	4.4	5.69	22.55	
22-Apr	4.6	4.2	5.0	Z	8.2	9.4	7.6	6.1	7.0	5.5	4.7	3.6	3.7	4.8	3.4	3.2	4.1	2.7	3.1	3.1	3.5	2.4	2.5	3.3	4.60	9.45	
23-Apr	3.2	2.8	2.6	Z	4.0	3.4	3.9	5.1	4.7	3.9	4.0	4.0	3.2	3.0	3.7	4.3	5.5	6.0	4.7	5.4	5.0	5.2	4.5	4.6	4.20	6.03	
24-Apr	4.8	4.0	3.3	Z	4.7	8.2	9.2	10.8	PF	10.1	6.9	6.2	3.5	2.7	4.6	3.1	5.5	2.9	0.9	1.4	3.5	2.1	1.9	2.0	4.64	10.80	
25-Apr	5.0	8.9	12.4	Z	13.6	17.5	12.1	9.6	5.9	3.2	3.0	2.3	3.2	2.3	2.1	1.9	3.6	3.3	3.2	3.3	2.7	1.8	2.5	2.2	5.45	17.47	
26-Apr	2.5	7.0	3.3	Z	6.0	5.6	16.6	8.8	3.2	3.3	2.3	3.4	3.1	3.5	3.2	3.1	3.7	3.0	3.0	2.9	4.6	7.7	4.5	3.2	4.68	16.55	
27-Apr	4.8	6.4	5.4	Z	19.9	16.0	21.6	16.7	9.4	9.3	5.9	4.9	4.3	2.5	2.9	3.2	3.4	9.9	7.3	7.5	4.9	6.8	4.6	3.2	7.86	21.63	
28-Apr	4.3	4.3	2.5	Z	5.0	9.1	10.0	8.9	9.9	9.0	6.7	5.6	5.7	2.5	4.3	3.9	3.8	2.5	2.2	2.3	3.1	1.5	6.6	11.0	5.42	10.97	
29-Apr	4.2	6.0	7.5	Z	12.6	16.0	14.4	15.8	3.1	1.9	3.2	4.0	2.4	2.9	2.4	3.2	2.8	1.9	2.1	4.1	5.4	6.6	4.1	5.4	5.73	15.96	
30-Apr	3.4	2.8	3.4	Z	7.6	18.4	11.1	11.4	4.1	1.6	1.2	3.0	1.5	16.7	5.7	2.5	4.0	4.9	2.1	1.8	10.4	16.3	12.1	10.7	6.82	18.41	
		6.71	7.68	8.21	--	11.22	12.83	15.18	12.45	9.71	7.87	5.71	4.59	4.00	3.98	3.46	3.31	3.91	3.89	3.28	3.93	6.55	7.00	7.02	7.14	Diurnal Average	
		26.91	34.43	49.64	--	36.05	27.82	48.80	41.90	47.54	21.04	19.81	11.67	13.02	16.72	9.39	7.38	9.78	10.13	7.54	8.56	21.11	30.41	28.01	22.45	Diurnal Maximum	
Z - zerspan		C - Calibration		PF - Power Failure																							
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>**  
**April 2017**

Maximum Value: 47.07 µg/m <sup>3</sup> on Apr 6 08:00		Maximum Daily Average: 16.20 µg/m <sup>3</sup> on Apr 4		Hours in Service: 720																																													
Minimum Value: 0.2 µg/m <sup>3</sup> on Apr 15 10:00		Minimum Daily Average: 1.01 µg/m <sup>3</sup> on Apr 15		Hours of Data: 719																																													
Maximum Diurnal Average: 7.80 µg/m <sup>3</sup> at hour 7		Minimum Diurnal Average: 3.11 µg/m <sup>3</sup> at hour 16		Hours of Missing Data: 1																																													
Monthly Average: 5.394 µg/m <sup>3</sup>		Percentiles: P <sub>1</sub> = 0.4 P <sub>10</sub> = 1.2 Q <sub>1</sub> = 2.1 Median = 3.7 Q <sub>3</sub> = 6.3 P <sub>90</sub> = 11.2 P <sub>99</sub> = 29.3		Hours of Calibration: 0																																													
				Percent Operational Time: 99.9																																													
Day	Hourly Period Ending At																								Daily Average	Daily Maximum																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																									
1-Apr	6.4	7.6	3.0	2.0	3.5	4.0	2.6	2.4	5.7	3.1	3.5	5.1	0.9	1.5	0.8	2.6	3.9	4.5	0.8	1.8	4.1	4.8	9.2	2.7	3.61	9.18																							
2-Apr	5.2	6.6	4.3	4.7	5.1	7.0	12.0	6.8	6.1	1.1	1.6	1.4	1.7	1.1	2.1	1.9	4.0	2.0	1.4	2.1	2.4	4.7	2.2	4.7	3.84	11.95																							
3-Apr	1.1	2.8	1.8	1.1	1.9	2.0	9.6	13.8	7.7	9.9	8.0	4.6	2.6	5.5	4.4	5.5	4.5	4.5	3.9	3.7	4.4	14.8	21.1	16.7	6.50	21.05																							
4-Apr	43.9	34.6	27.9	40.2	43.0	25.9	24.8	11.6	4.0	4.2	3.3	3.2	3.7	5.7	5.8	3.6	4.8	7.5	7.0	8.0	17.3	21.0	19.7	18.2	16.20	43.88																							
5-Apr	17.4	21.2	12.6	8.4	9.8	8.6	10.8	10.7	9.8	11.8	4.6	7.6	23.8	6.8	2.5	5.1	3.9	3.7	2.1	4.1	19.1	6.9	6.8	8.3	9.44	23.78																							
6-Apr	10.7	23.1	24.5	31.4	31.2	23.6	28.8	47.1	37.4	19.7	4.2	2.0	1.9	2.2	3.0	4.2	2.6	2.9	2.5	2.9	10.7	16.0	8.4	6.9	14.50	47.07																							
7-Apr	4.1	8.8	16.5	10.6	11.8	11.1	13.0	5.5	7.8	7.4	2.8	2.8	4.2	5.0	4.7	3.3	2.4	2.0	2.1	2.7	2.8	3.6	4.2	4.5	5.99	16.49																							
8-Apr	5.0	7.5	8.2	6.1	5.5	4.0	5.1	5.3	2.3	1.3	0.8	1.1	1.3	1.3	1.6	1.7	2.3	2.0	1.8	2.1	2.4	2.4	1.5	2.4	3.12	8.16																							
9-Apr	2.7	3.5	3.6	5.6	5.8	7.2	5.7	7.0	7.6	13.4	10.5	5.0	1.8	1.5	1.8	1.1	1.9	3.8	2.9	1.9	13.0	5.7	7.0	5.6	5.24	13.41																							
10-Apr	3.6	2.3	1.6	2.1	5.5	7.8	5.0	3.3	5.2	6.0	3.4	2.0	1.3	2.0	1.0	1.1	3.0	2.7	1.5	2.9	2.0	1.4	1.3	2.8	2.94	7.82																							
11-Apr	2.5	4.9	1.8	3.3	6.6	8.3	5.0	4.3	5.7	5.2	5.7	6.1	4.9	2.9	1.6	1.8	1.7	6.1	9.2	9.9	11.2	4.4	2.5	3.1	4.95	11.21																							
12-Apr	2.7	2.8	5.9	5.9	3.5	4.8	3.5	5.0	7.4	7.5	8.7	7.6	7.3	6.7	6.4	5.7	3.7	3.9	3.0	3.8	4.5	3.5	2.3	2.0	4.92	8.66																							
13-Apr	1.4	0.8	0.6	0.5	0.9	1.5	1.8	3.2	1.9	1.6	1.7	1.1	2.2	1.9	1.6	2.1	2.6	2.9	2.2	1.2	1.0	1.5	1.1	1.0	1.59	3.17																							
14-Apr	0.7	0.5	0.7	0.4	0.9	2.7	6.1	5.3	3.6	3.9	0.9	0.5	0.5	0.5	0.5	0.7	1.7	0.9	1.2	1.0	1.2	1.7	1.4	1.2	1.62	6.06																							
15-Apr	1.0	1.5	1.0	1.2	0.5	0.5	0.3	0.2	0.2	0.2	0.3	0.5	0.5	0.5	0.6	0.5	0.6	0.8	2.0	1.8	2.1	3.0	3.0	1.7	1.01	3.02																							
16-Apr	3.5	5.1	6.5	8.2	8.0	5.0	4.3	3.5	4.5	2.9	1.5	1.6	1.5	2.2	2.1	1.6	1.6	1.8	2.4	18.7	11.0	6.8	6.0	5.4	4.82	18.66																							
17-Apr	4.8	3.2	3.8	4.3	4.2	11.8	9.2	4.5	3.7	4.7	4.6	3.7	4.4	5.1	5.0	6.2	7.3	5.2	4.3	4.5	6.0	6.8	9.6	11.1	5.76	11.85																							
18-Apr	13.1	12.4	0.9	0.4	1.1	1.0	1.2	0.6	0.6	0.9	1.3	1.5	2.0	2.8	2.9	3.1	3.8	3.4	3.7	4.1	4.8	7.1	6.8	5.3	3.54	13.10																							
19-Apr	4.4	9.7	6.2	5.9	8.0	9.8	10.7	12.8	17.4	20.7	16.1	4.2	4.4	1.9	3.1	6.3	5.0	5.4	5.8	5.6	10.1	14.3	14.5	13.7	8.99	20.67																							
20-Apr	15.2	10.2	11.5	8.5	11.3	20.6	9.8	5.0	4.3	12.9	7.9	6.8	4.7	3.6	4.1	3.2	4.1	5.0	3.9	2.7	2.6	3.3	5.1	3.5	7.07	20.62																							
21-Apr	2.4	2.2	3.4	3.9	6.2	9.2	9.8	5.7	9.9	12.3	4.7	3.2	3.7	2.6	2.7	2.8	3.4	1.4	1.5	2.4	2.4	5.2	8.3	4.0	4.72	12.33																							
22-Apr	4.3	5.0	6.3	6.8	7.8	9.3	13.3	13.0	16.8	16.8	11.9	9.9	8.8	4.3	2.5	1.2	0.8	0.5	0.5	1.0	2.4	1.7	1.5	1.9	6.18	16.75																							
23-Apr	1.9	2.0	1.8	1.9	2.1	1.9	1.9	1.8	1.8	1.9	2.2	1.8	1.9	2.1	2.8	2.9	3.2	3.6	4.0	3.1	4.0	5.7	3.9	3.6	2.66	5.72																							
24-Apr	3.5	4.5	4.2	3.8	3.2	3.5	3.4	3.3	PF	2.5	3.0	2.2	1.1	1.6	1.4	1.5	1.1	0.9	0.9	0.9	1.4	1.7	2.0	1.8	2.32	4.49																							
25-Apr	3.5	3.0	6.1	22.1	7.4	4.3	3.4	1.9	1.8	2.0	2.8	2.1	3.2	2.6	2.8	2.8	5.6	5.6	5.4	3.8	3.8	2.2	3.7	2.1	4.33	22.11																							
26-Apr	2.7	2.6	2.6	2.6	4.3	4.5	5.7	4.1	3.0	3.6	4.7	5.8	10.4	16.6	12.3	10.8	15.5	11.9	7.7	8.0	7.9	9.3	7.0	6.4	7.08	16.59																							
27-Apr	6.4	8.0	8.9	9.5	12.8	11.0	11.6	14.8	12.3	11.5	6.3	4.4	2.5	1.2	10.5	2.6	2.2	5.3	4.4	4.5	3.8	6.2	5.4	4.7	7.12	14.82																							
28-Apr	4.8	3.7	3.2	3.0	3.1	5.0	5.1	4.9	6.1	7.8	5.7	5.9	4.9	3.7	2.7	2.0	2.7	2.2	2.3	2.8	3.3	2.5	4.5	12.5	4.34	12.47																							
29-Apr	4.6	3.7	6.9	3.3	3.9	4.7	5.2	10.2	1.8	1.9	2.3	2.4	1.7	2.0	1.9	2.5	2.3	1.9	2.2	2.3	4.0	3.7	2.5	3.1	3.37	10.18																							
30-Apr	2.4	1.7	2.3	2.3	6.5	7.6	5.5	5.3	2.7	1.0	1.2	1.7	1.5	3.6	3.9	2.7	2.8	4.3	2.6	1.7	5.8	13.3	6.5	5.9	3.94	13.27																							
																								6.19	6.84	6.28	7.01	7.51	7.61	7.80	7.43	6.87	6.65	4.53	3.60	3.84	3.37	3.31	3.11	3.50	3.63	3.17	3.87	5.72	6.17	5.96	5.54	Diurnal Average	
																								43.88	34.59	27.92	40.21	43.05	25.92	28.75	47.07	37.42	20.67	16.06	9.88	23.78	16.59	12.26	10.76	15.52	11.88	9.19	18.66	19.14	20.97	21.05	18.18	Diurnal Maximum	
PF - Power Failure																																																	
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: April 18, 2017

Parameter: H<sub>2</sub>S

Instrument: TECO 45C

Serial Number: 5600312

Previous Calibration Date: March 15, 2017

Calibration: Routine

Calibration Equipment: Sabio 2010 sn 05200311

Barometric Pressure: 26.61" Hg

Calibration Method: Standard Gas Dilution

Permeation Device ID: DT0014794 / 10.50 ppm H<sub>2</sub>S Temperature: 22.9° C

Permeation Rate: 0 ng/min

In Service: 10/21/2016 EXP 10/04/2019

Technician: J.McClintock

### Instrument Settings

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

H<sub>2</sub>S Coefficient

Monitoring Range

Previous

18.8

1.375

200 ppb

Current

18.5

1.339

200 ppb

Final Zero: 0.2 ug/m<sup>3</sup>

Final Span: 120.5 ug/m<sup>3</sup>

As Found Correction Factor: 0.983

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>

0.046	79.3	11953.1	79.4	0.998
0.031	53.2	7993.3	53.2	1.001
0.016	27.0	4014.7	26.8	1.009
0.000	0.0	2.2	0.2	

### Results of Linear Regression

R <sub>c</sub> vs C <sub>c</sub>	Slope	Intercept	R <sup>2</sup>
Previous	150.802500	14.934440	0.999983
Current	150.818200	-26.378530	0.999966
C <sub>i</sub> vs C <sub>c</sub>			
Current	1.000000	0.000011	0.999965

Average Correction Factor: 1.003

Previous Correction Factor: 1.001

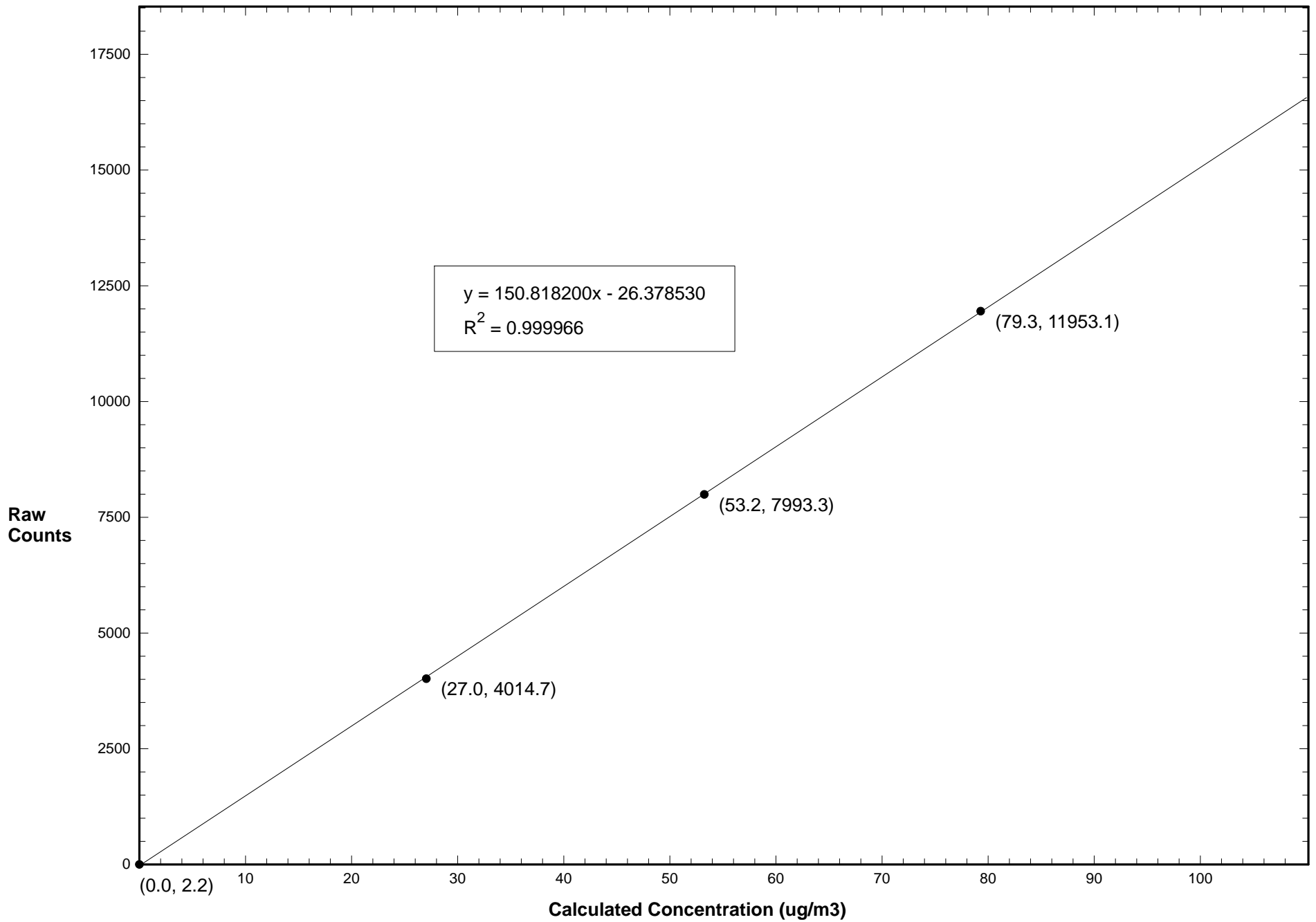
Current Correction Factor: 0.998

Percent Change of  
Correction Factor: -0.3

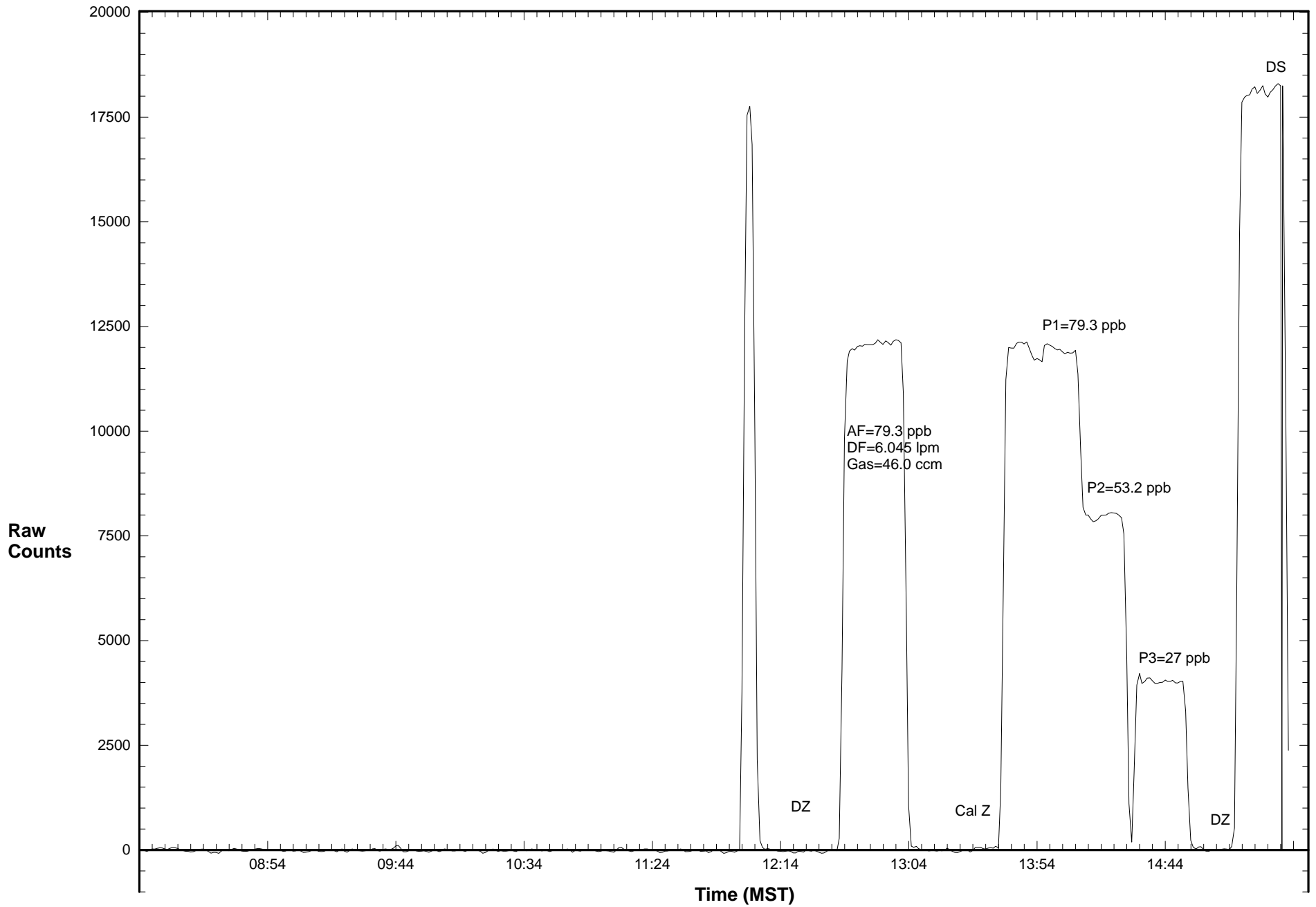
Comments: Sample Flow =0.354 lpm



### Station 906 H2S April 18, 2017: Linear Regression



# Station 906 H2S April 18, 2017: Calibration Graph



# Calibration Data Summary

## West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: April 18, 2017

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

Instrument: Teco 42i

Serial Number: 0905034788

Previous Calibration Date: March 15, 2017

Calibration: Routine

Calibration Equipment: Sabio 2010 sn 05200311

Barometric Pressure: 26.61" Hg

Calibration Method: Standard Gas Dilution/GPT

Cylinder ID: FF27716

Temperature: 22.7° C

Cylinder Concentration: 12.0 ppm NO/NO<sub>x</sub>

In Service: June 2/16: Expiry Jan 20/19

Technician: J.McClintock

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	14.8	15.8	na	1.360	0.990	0.995	200 ppb
Current	14.8	14.9	na	1.352	0.994	0.995	200 ppb

NO	Final Zero: 0.0 ppb	Final Span: 162.6 ppb	As Found Correction Factor: 0.978
NO <sub>2</sub>	Final Zero: 0.0 ppb	Final Span: 0.6 ppb	As Found Correction Factor: NA
NO <sub>x</sub>	Final Zero: 0.0 ppb	Final Span: 162.8 ppb	As Found Correction Factor: 0.979

Results of Linear Regression			Slope	Intercept	R <sup>2</sup>
NO	R <sub>c</sub> vs C <sub>c</sub>	Previous	149.347400	41.905380	0.999997
		Current	149.611000	21.393350	0.999994
	C <sub>i</sub> vs C <sub>c</sub>	Current	1.000000	0.000021	0.999995
NO <sub>2</sub>	R <sub>c</sub> vs C <sub>c</sub>	Previous	150.803000	19.020960	0.999997
		Current	150.234600	15.967030	0.999997
	C <sub>i</sub> vs C <sub>c</sub>	Current	1.000000	0.000013	0.999997
NO <sub>x</sub>	R <sub>c</sub> vs C <sub>c</sub>	Previous	149.571200	27.816390	0.999997
		Current	150.105500	23.797190	0.999995
	C <sub>i</sub> vs C <sub>c</sub>	Current	1.000000	0.000020	0.999994

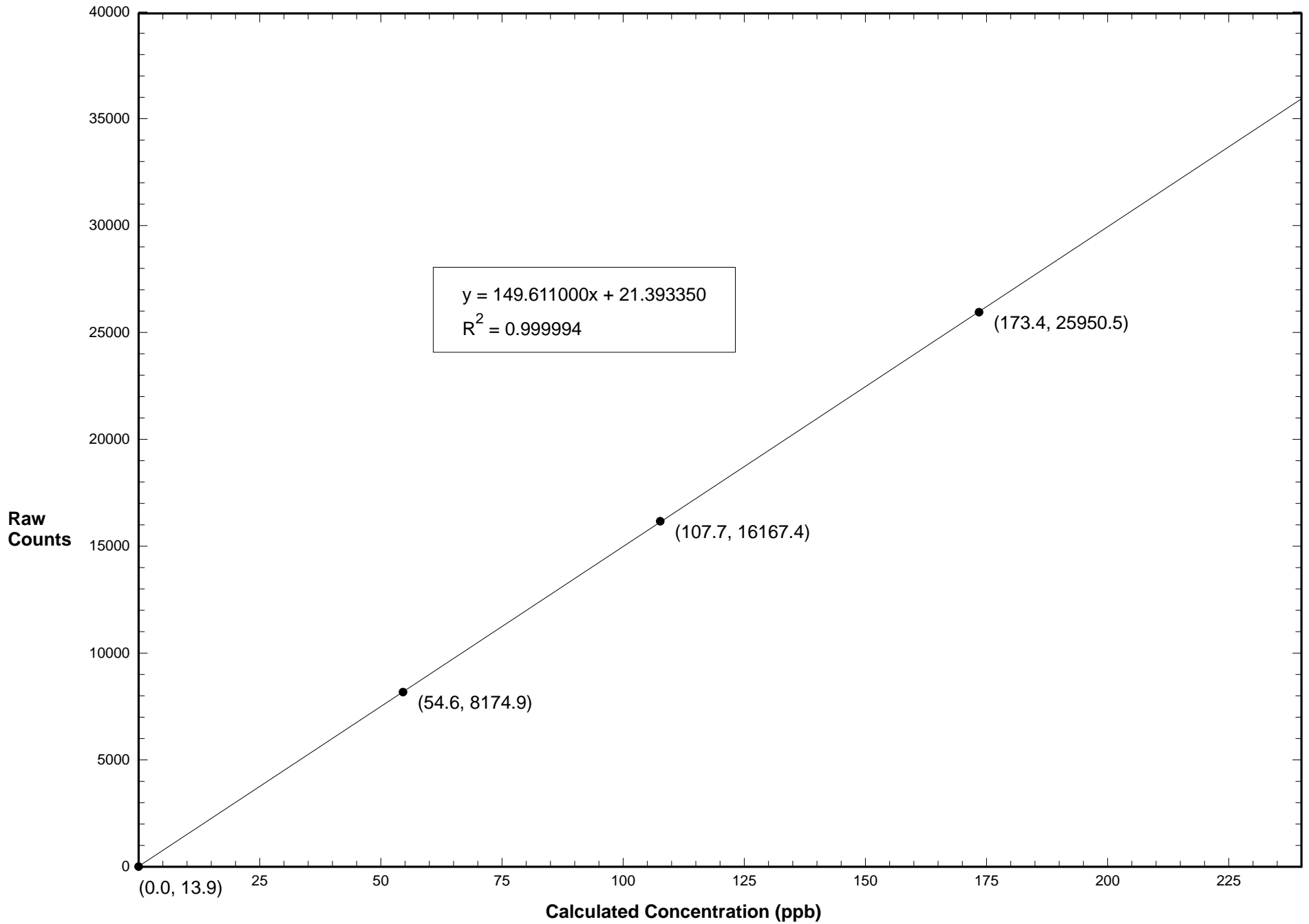
Comments: Sample Flow =0.433 lpm

**Calibration Data Summary (Page 2)**

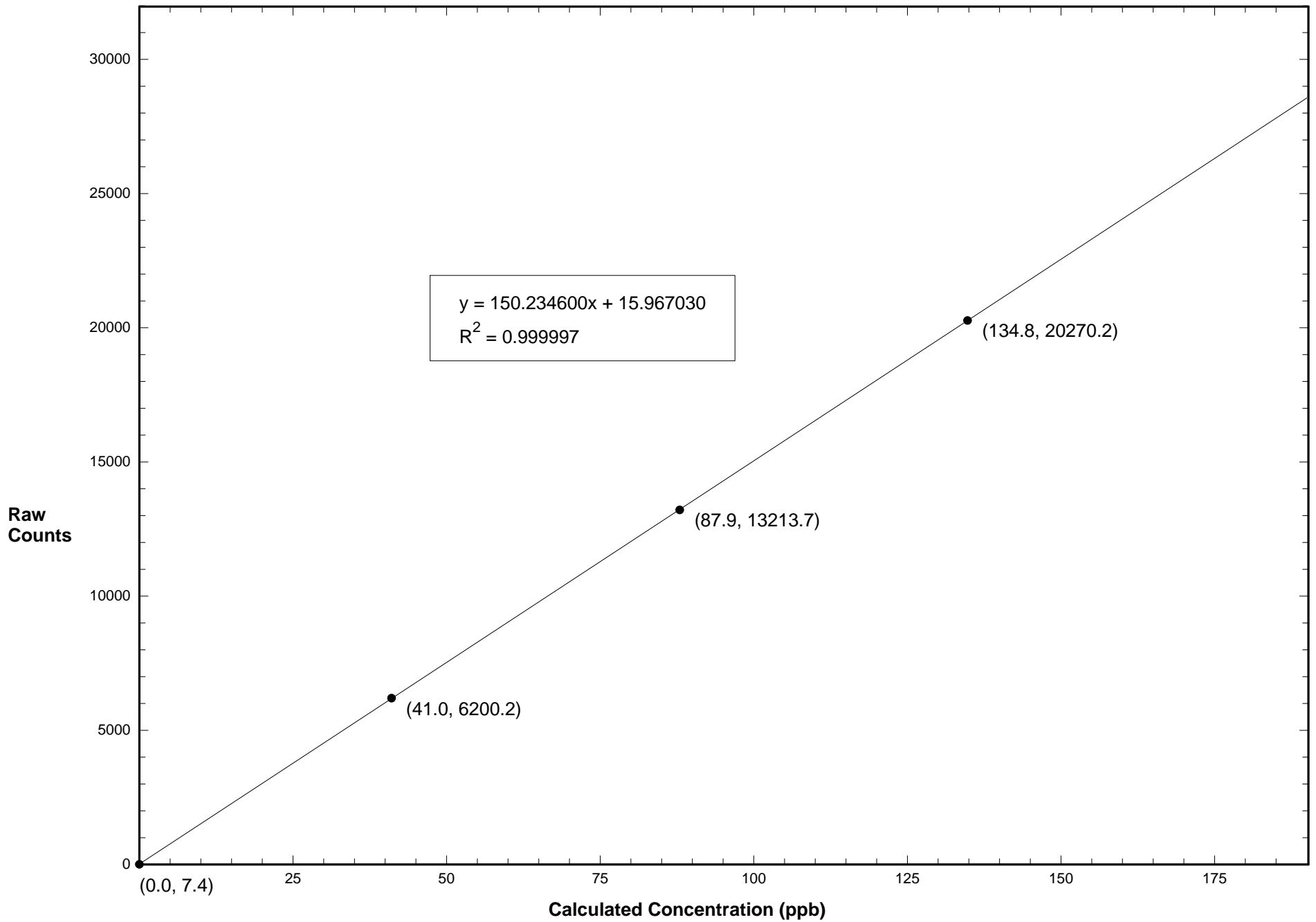
April 18, 2017 - Station 906

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>		
0.06620	4.514	173.4	25950.5	173.3	1.001		
0.04100	4.529	107.7	16167.4	107.9	0.998		
0.02070	4.531	54.6	8174.9	54.5	1.001		
0.00000	4.500	0.0	13.9	-0.1			
NO Calibration					Average Correction Factor:	1.000	
0.06620	4.514	173.4	26036.4	173.3	1.001		
0.04100	4.529	107.7	16219.6	107.9	0.998		
0.02070	4.531	54.6	8218.3	54.6	1.000		
0.00000	4.500	0.0	8.0	-0.1			
NO <sub>x</sub> Calibration					Average Correction Factor:	0.999	
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>
173.2	5768.7	38.4	134.8	20270.2	134.8	1.000	1.000
173.2	12776.7	85.3	87.9	13213.7	87.8	1.001	0.999
173.2	19796.3	132.2	41.0	6200.2	41.2	0.997	1.003
			0.0	7.4	-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	0.999	1.001	0.2				
NO <sub>2</sub>	0.999	1.000	0.1				
NO <sub>x</sub>	0.999	1.001	0.2				

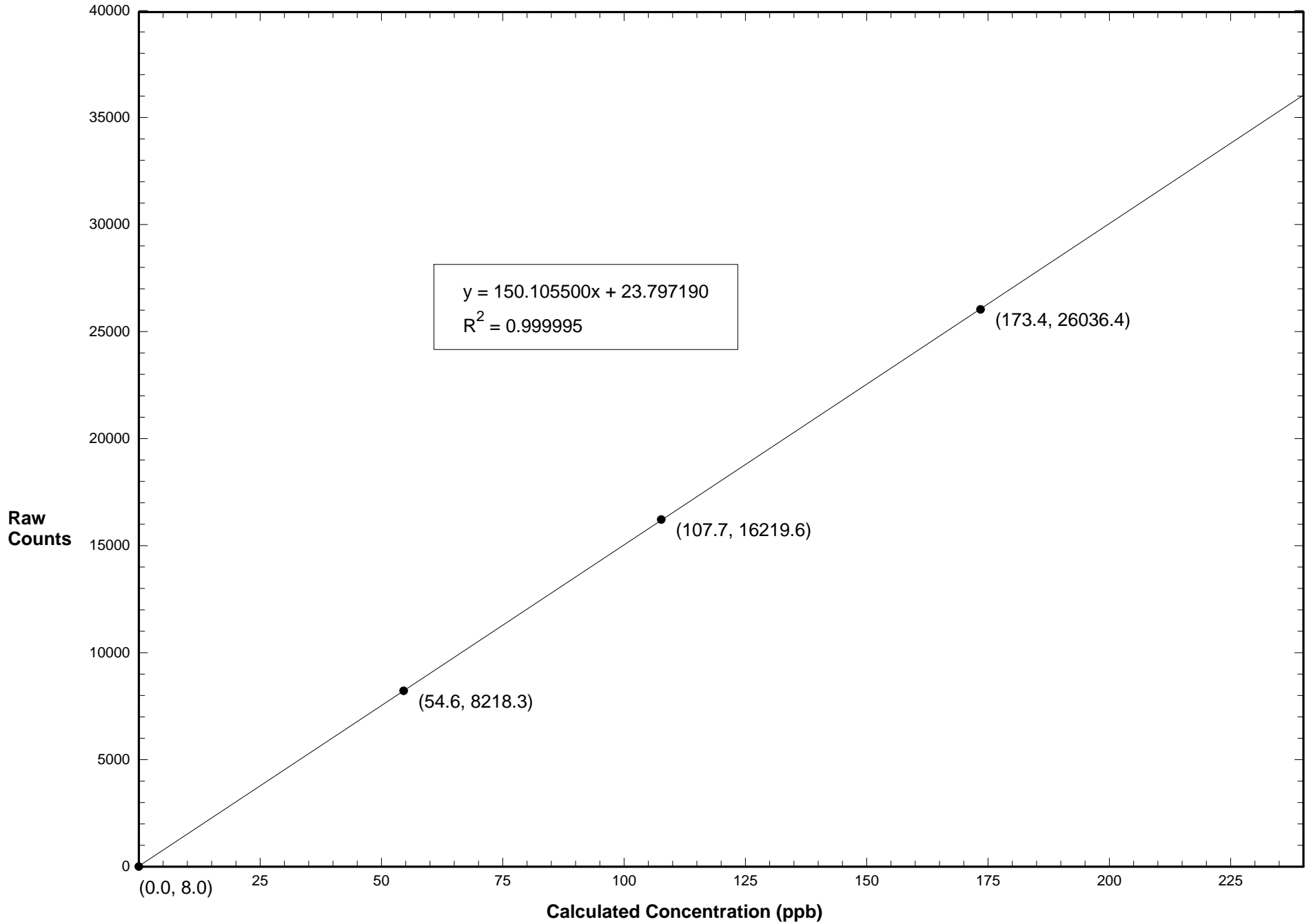
### Station 906 NO April 18, 2017: Linear Regression



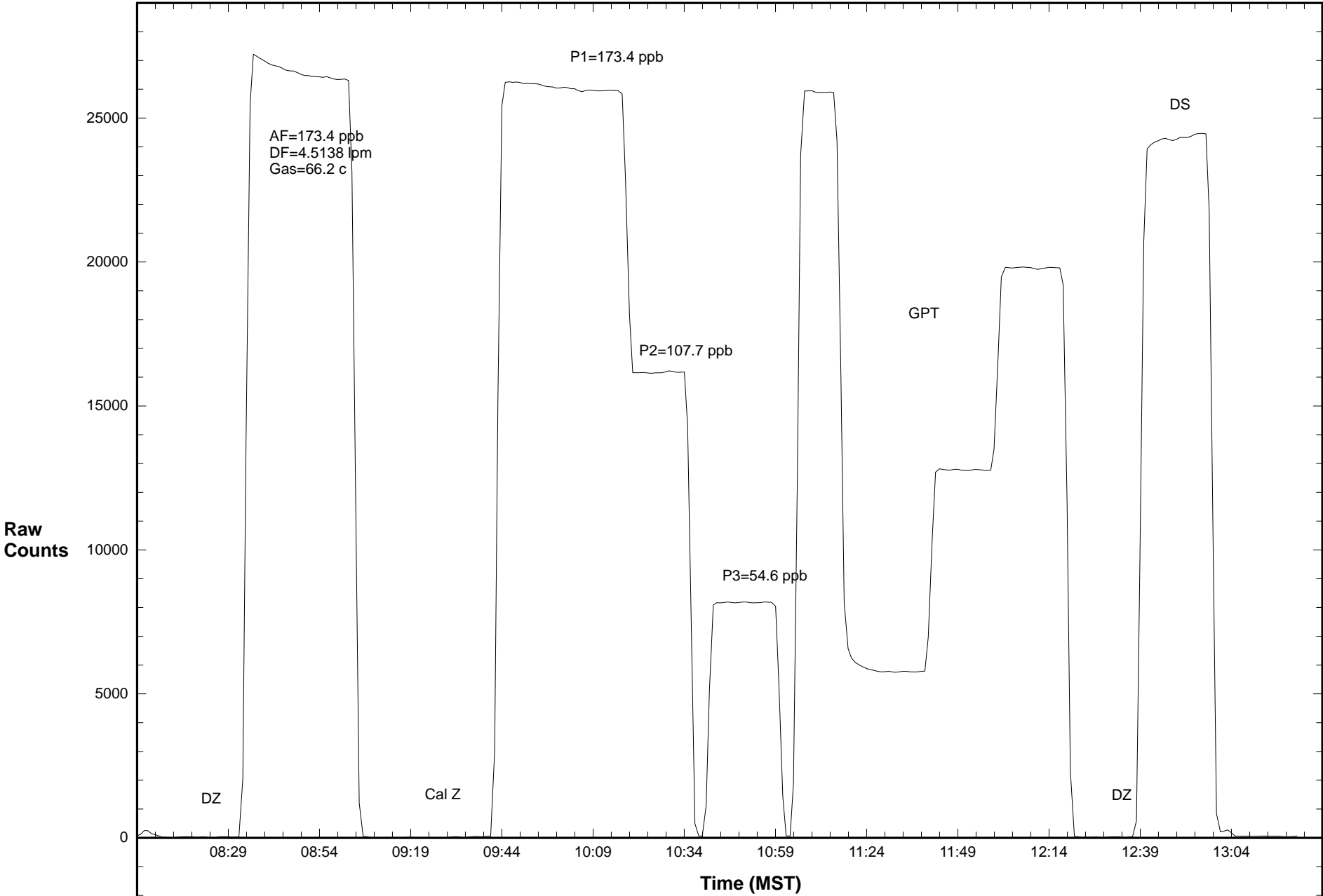
### Station 906 NO2 April 18, 2017: Linear Regression



# Station 906 NOX April 18, 2017: Linear Regression

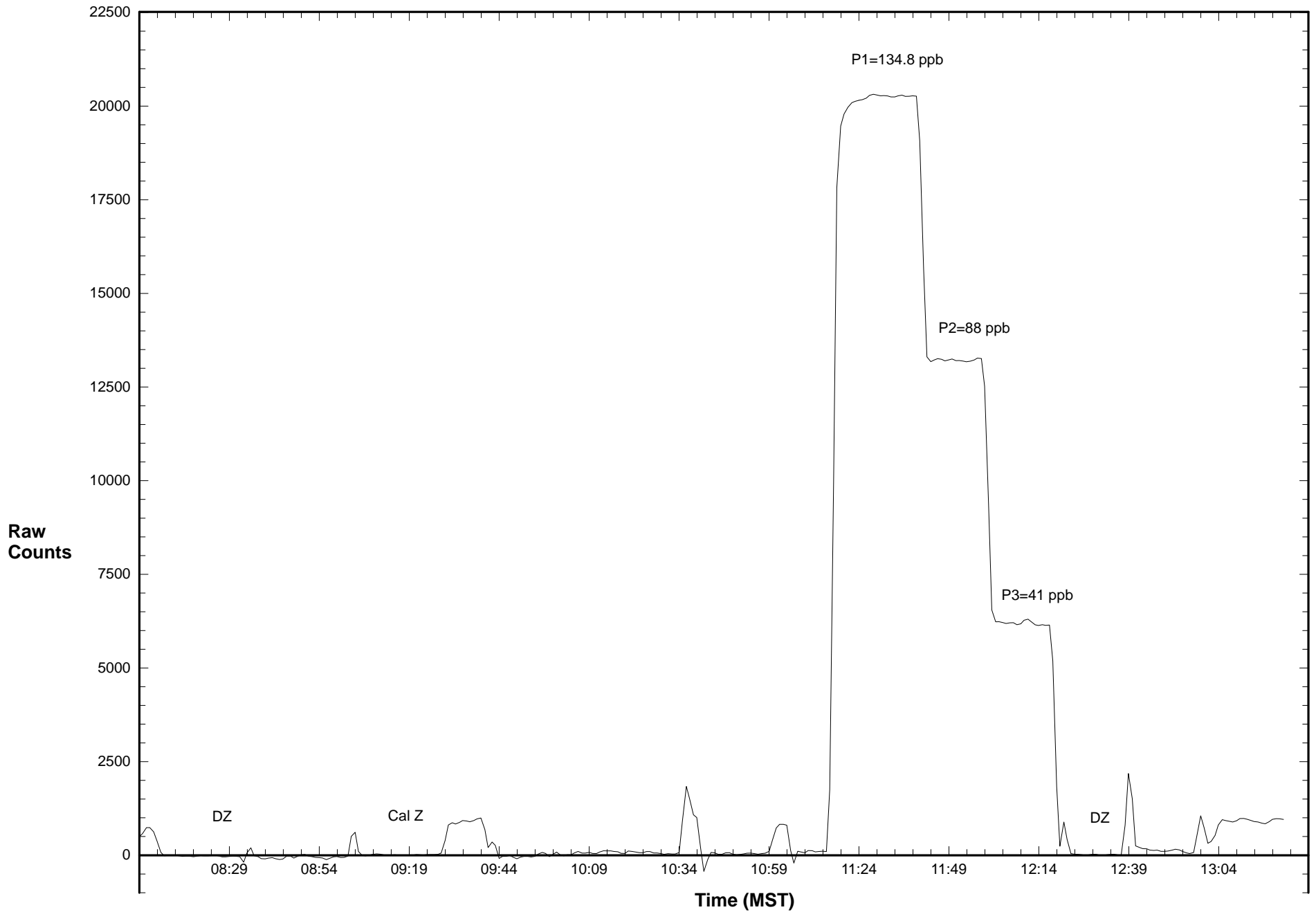


# Station 906 NO April 18, 2017: Calibration Graph

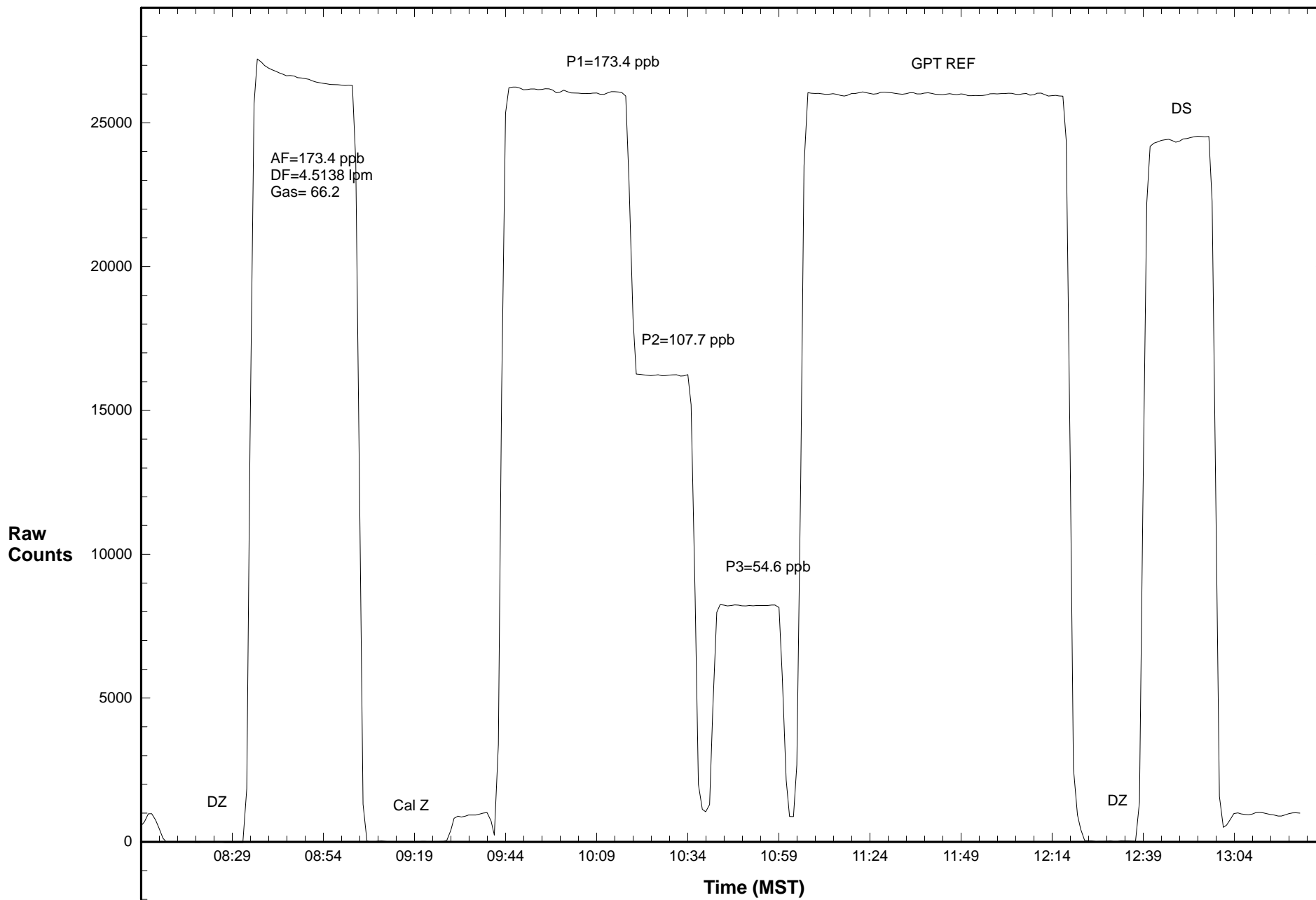




# Station 906 NO2 April 18, 2017: Calibration Graph



# Station 906 NOX April 18, 2017: Calibration Graph



# Calibration Data Summary

## West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: April 18, 2017

Parameter: O<sub>3</sub>

Instrument: Teco 49i

Serial Number: 1150790050

Previous Calibration Date: March 15, 2017

Calibration: Routine

Calibration Equipment: 2B Tech 306 sn#145

Barometric Pressure: 26.61" Hg

Calibration Method: Certified Ozone Generator April 1/16

Temperature: 22.7° C

Technician: J.McClintock

Instrument Settings	Background	Coefficient	Monitoring Range
Previous	-0.1	1.011	500 ppb
Current	-0.1	0.968	500 ppb

Final Zero: -0.7 ppb

Final Span: 354.7 ppb

As Found Correction Factor: 0.948

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	409.0	24573.7	408.3	1.002
3.000	256.0	15488.0	257.1	0.996
3.000	102.0	6167.8	102.1	0.999
3.000	0.0	-3.1	-0.5	

### Results of Linear Regression

R <sub>c</sub> vs C <sub>c</sub>	Slope	Intercept	R <sup>2</sup>
Previous	59.861270	66.511540	0.999958
Current	60.123250	27.966890	0.999978
C <sub>i</sub> vs C <sub>c</sub>			
Current	1.000000	0.000062	0.999977

Average Correction Factor: 0.999

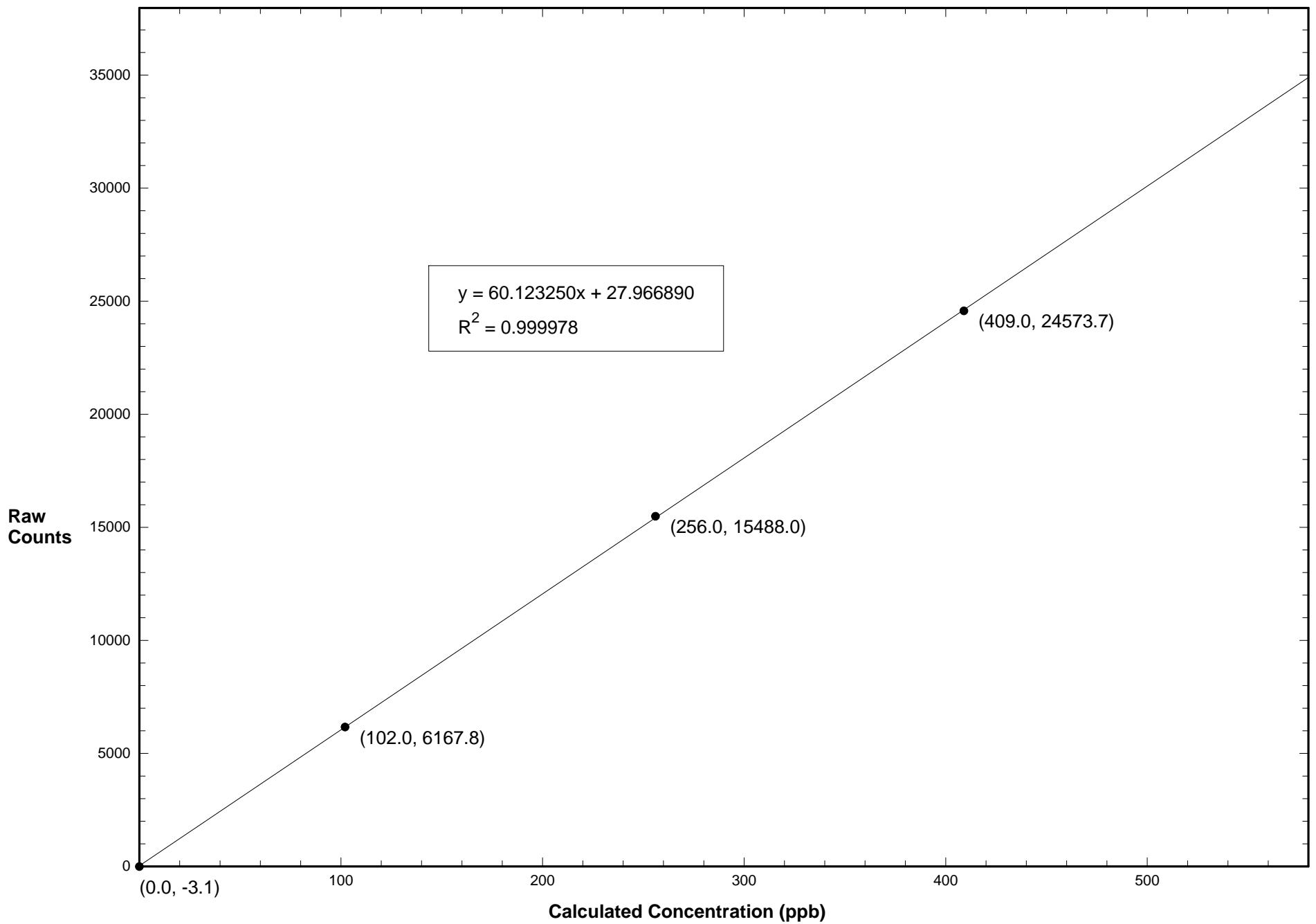
Previous Correction Factor: 1.002

Current Correction Factor: 1.002

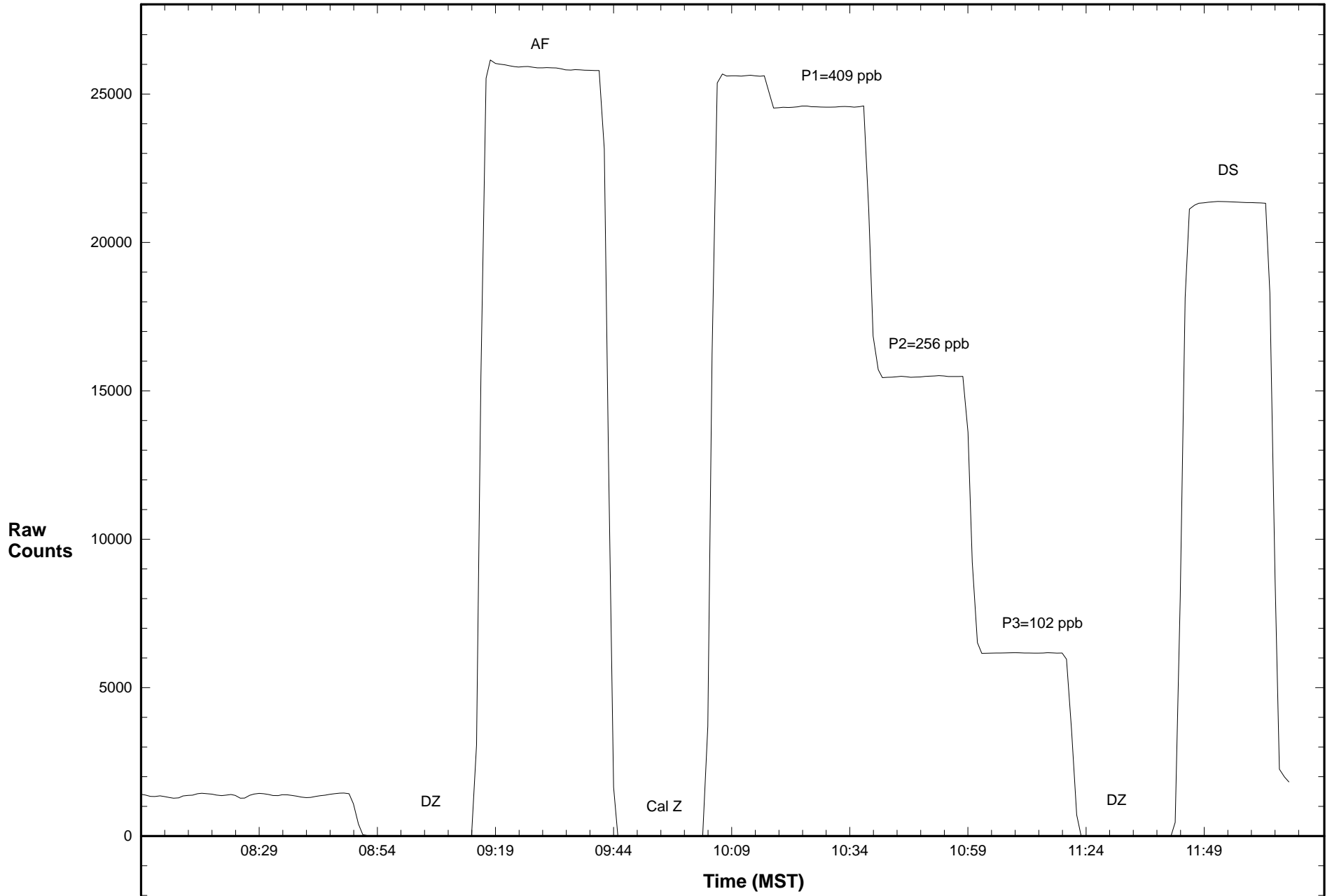
Percent Change of Correction Factor: 0.0

Comments: Sample Flow= 1.226 lpm

### Station 906 O3 April 18, 2017: Linear Regression



# Station 906 O3 April 18, 2017: Calibration Graph



# Calibration Data Summary

## West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: April 18, 2017

Parameter: SO<sub>2</sub>

Instrument: Teco 43i

Serial Number: CM12499009

Previous Calibration Date: March 15, 2017

Calibration: Routine

Calibration Equipment: Sabio 2010 sn 05200311

Barometric Pressure: 26.61" Hg

Calibration Method: Standard Gas Dilution

Cylinder ID: FF27716

Temperature: 22.7° C

Cylinder Concentration: 5.8 ppm SO<sub>2</sub>

In Service: June 2/16: Expiry Jan 20/19

Technician: J.McClintock

Instrument Settings	SO <sub>2</sub> bkg ppb	SO <sub>2</sub> Coefficient	Monitoring Range
Previous	26.5	1.045	100 ppb
Current	26.2	1.013	100 ppb

Final Zero: -0.2 ppm

Final Span: 72.1 ppm

As Found Correction Factor: 0.980

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>
0.0662	4.514	83.8	25182.2	83.8	1.001
0.0410	4.529	52.0	15677.9	52.1	1.000
0.0207	4.531	26.4	8012.4	26.5	0.996
0.0000	4.500	0.0	59.3	-0.1	

### Results of Linear Regression

R <sub>c</sub> vs C <sub>c</sub>	Slope	Intercept	R <sup>2</sup>
Previous	298.585500	43.503470	0.999956
Current	299.567700	82.162950	0.999995
C <sub>i</sub> vs C <sub>c</sub>			
Current	1.000000	-0.000010	0.999995

Average Correction Factor: 0.999

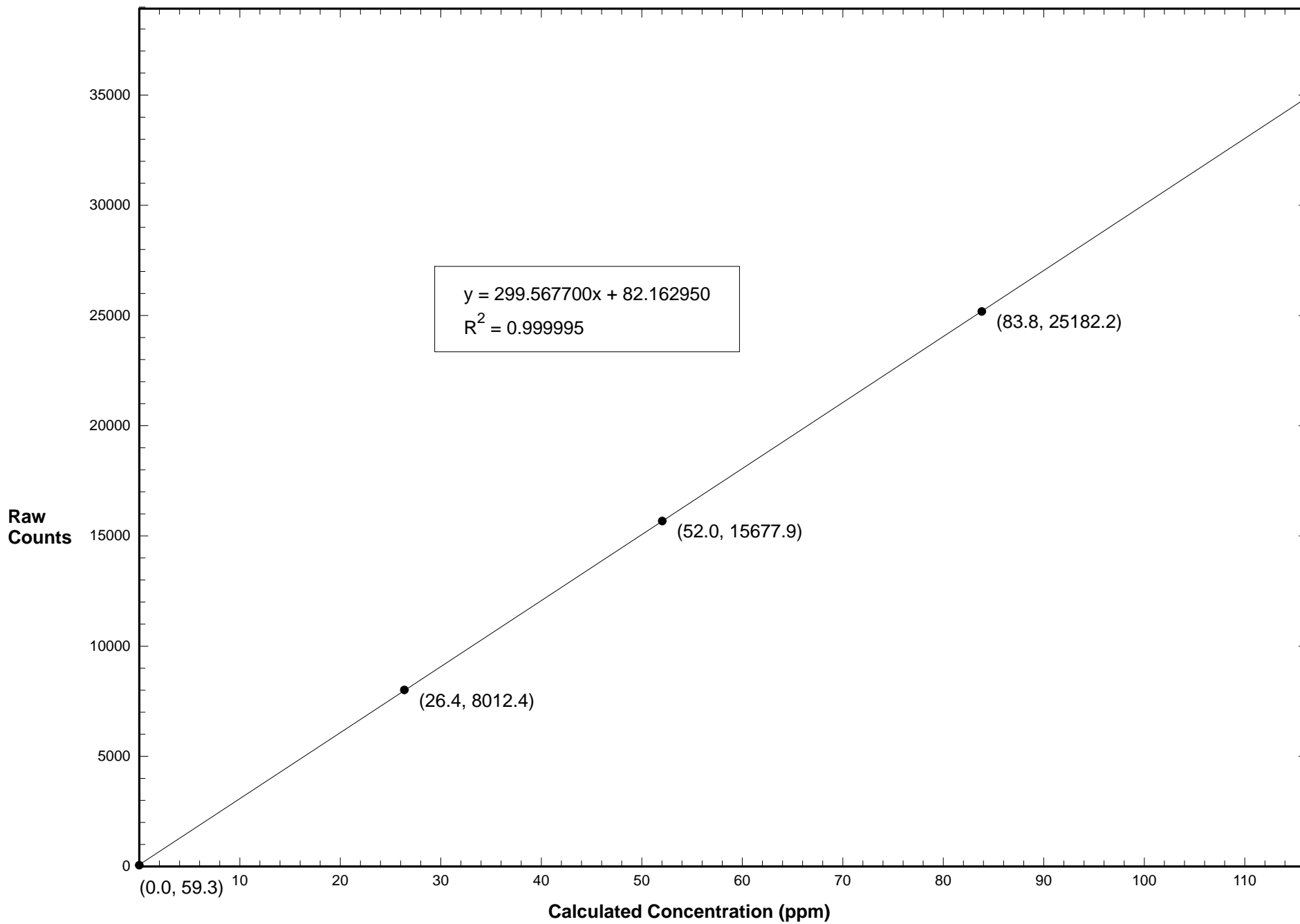
Previous Correction Factor: 0.998

Current Correction Factor: 1.001

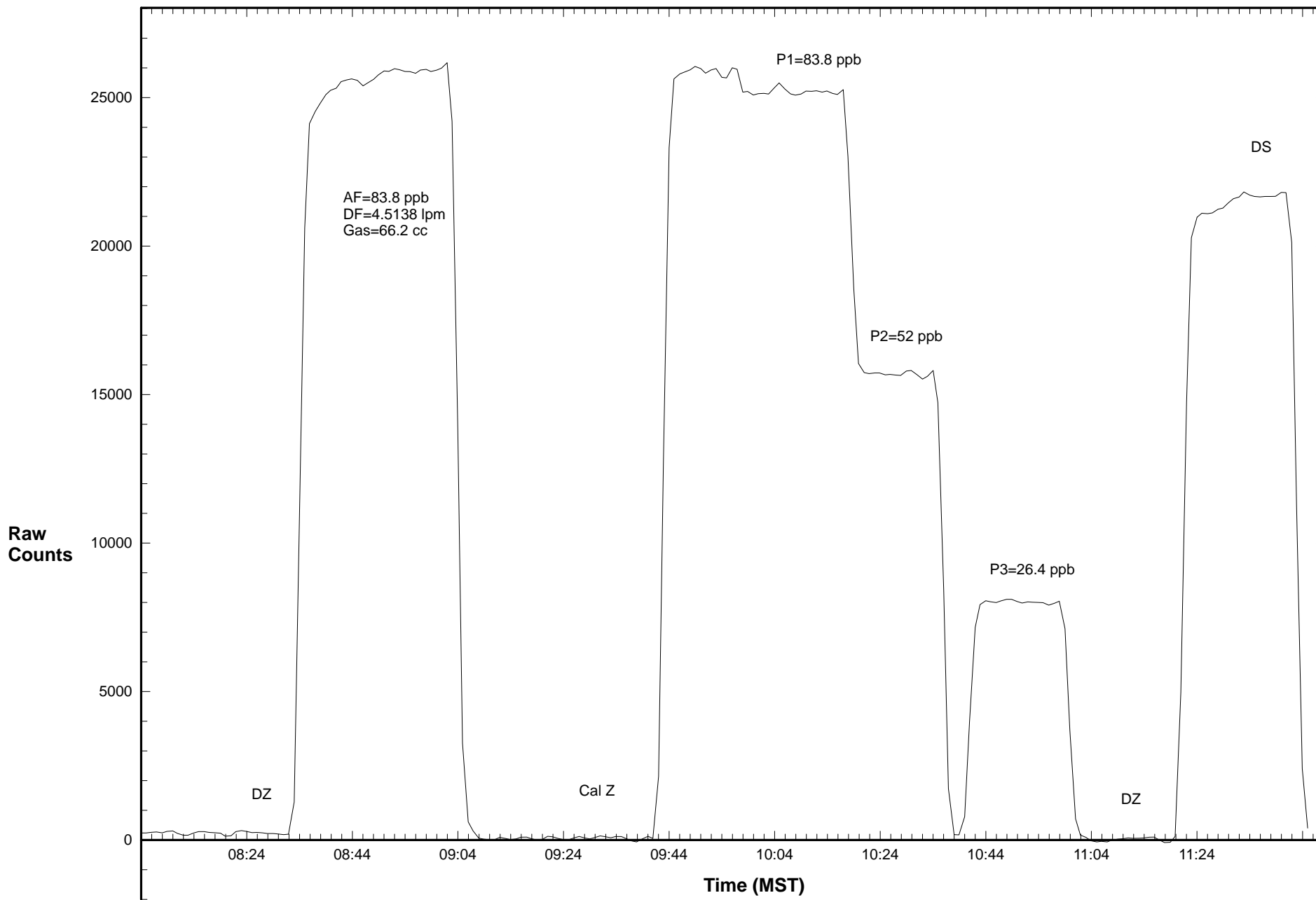
Percent Change of Correction Factor: 0.3

Comments: Sample Flow 0.340 lpm

### Station 906 SO2 April 18, 2017: Linear Regression



# Station 906 SO2 April 18, 2017: Calibration Graph





# Calibration Data Summary

## West Central Airshed Society

Operator: WCAS

Location: Station 906, Hinton

Calibration Date: April 18, 2017

Parameter: TRS

Instrument: Teco 43C

Serial Number: 43CTL-60324-326

Previous Calibration Date: March 15, 2017

Calibration: Routine

Calibration Equipment: Sabio 2010 sn 05200311

Barometric Pressure: 26.61" Hg

Calibration Method: Standard Gas Dilution

Permeation Device ID: DT0014794 / 10.50 ppm H<sub>2</sub>S Temperature: 22.9° C

Permeation Rate: 0 ng/min

In Service: 10/21/2016 EXP 10/04/2019

Technician: J.McClintock

### Instrument Settings

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

H<sub>2</sub>S Coefficient

Monitoring Range

Previous

1.78

0.823

100 ppb

Current

1.85

0.813

100 ppb

Final Zero: 0.0 ppb

Final Span: 66.3 ppb

As Found Correction Factor: 0.988

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>

0.046

79.3

23884.7

79.2

1.001

0.031

53.2

16111.9

53.4

0.997

0.016

27.0

8167.7

27.0

1.000

0.000

0.0

5.2

0.0

### Results of Linear Regression

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

Slope

Intercept

R<sup>2</sup>

Previous

300.910900

61.809410

0.999996

Current

301.354200

19.229640

0.999989

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

Current

1.000000

0.000000

0.999989

Average Correction Factor:

1.000

Previous Correction Factor:

1.000

Current Correction Factor:

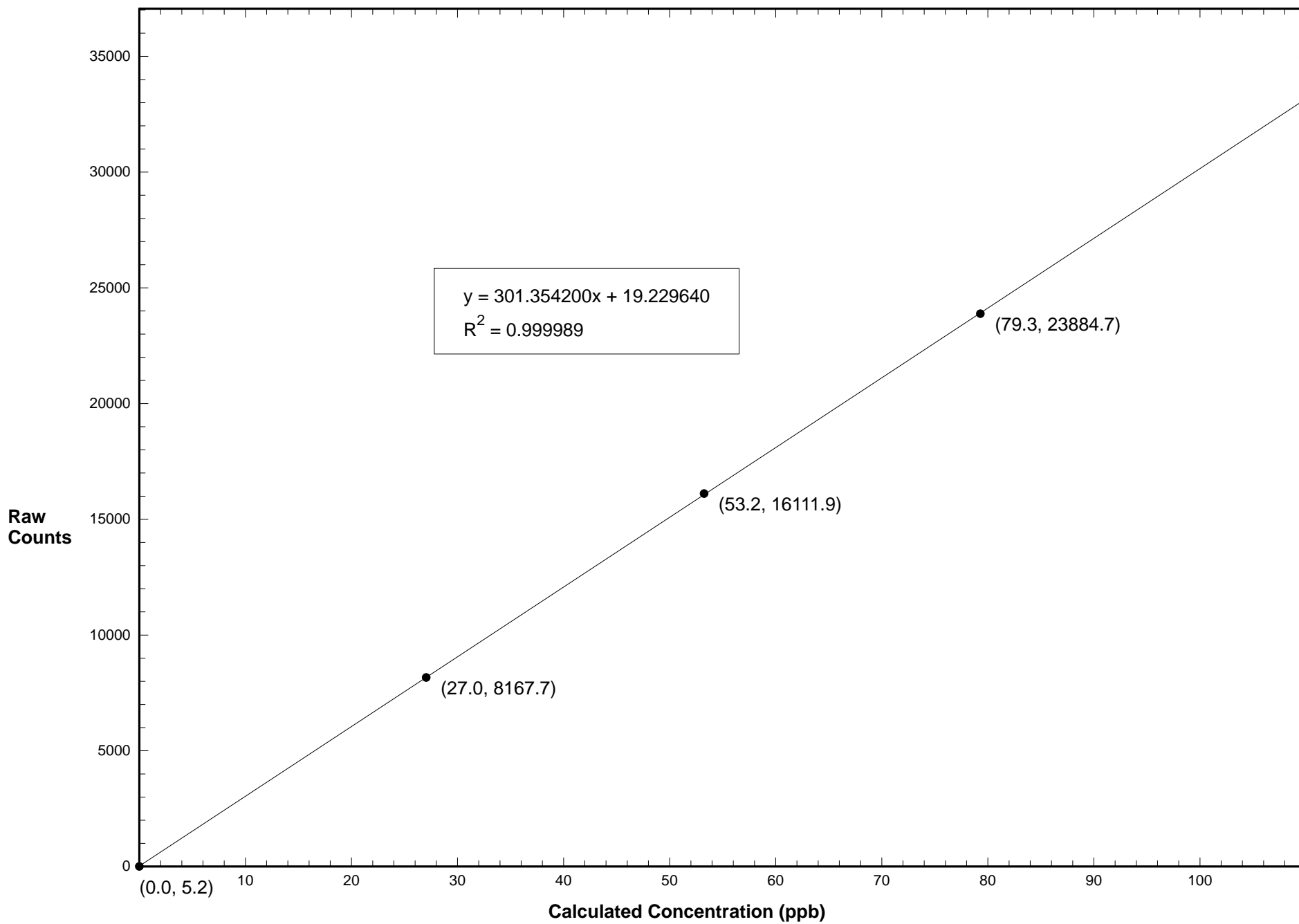
1.001

Percent Change of  
Correction Factor:

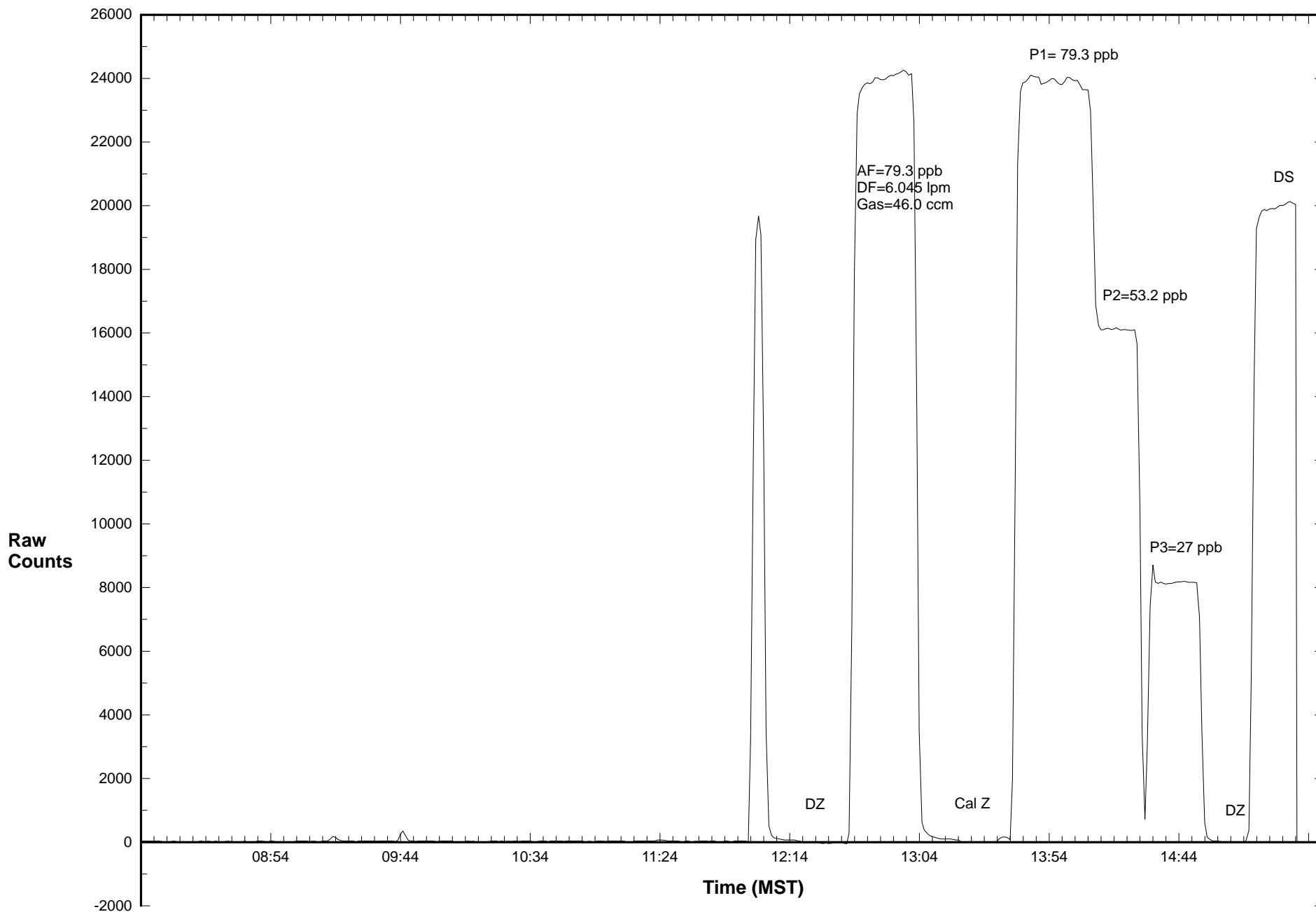
0.1

Comments: Sample Flow =0.335 lpm

### Station 906 TRS April 18, 2017: Linear Regression



# Station 906 TRS April 18, 2017: Calibration Graph



**WEST CENTRAL AIRSHED SOCIETY**

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

**AMS 906  
HINTON  
APRIL 2017**

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

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



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

**External Temperature (ET) - C**  
**April 2017**

<b>Maximum Value: 14.16 C on Apr 5 14:00</b>																								<b>Hours in Service: 720</b>																									
<b>Maximum Daily Average: 6.83 C on Apr 21</b>																								<b>Hours of Data: 719</b>																									
<b>Minimum Value: -6.5 C on Apr 4 07:00</b>																								<b>Hours of Missing Data: 1</b>																									
<b>Minimum Daily Average: -0.14 C on Apr 23</b>																								<b>Hours of Calibration: 0</b>																									
<b>Maximum Diurnal Average: 6.57 C at hour 16</b>																								<b>Percent Operational Time: 99.9</b>																									
<b>Minimum Diurnal Average: -0.76 C at hour 6</b>																																																	
<b>Monthly Average: 2.837 C</b>																																																	
<b>Percentiles: P<sub>1</sub> = -3.7 P<sub>10</sub> = -1.4 Q<sub>1</sub> = 0.2 Median = 1.9 Q<sub>3</sub> = 5.3 P<sub>90</sub> = 8.4 P<sub>99</sub> = 12.9</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-Apr	7.7	7.1	6.8	6.2	6.3	5.3	5.2	5.3	5.8	7.0	9.3	11.1	6.7	5.9	7.1	8.4	8.2	7.9	7.3	5.9	5.4	5.2	3.1	3.4	6.56	11.14																							
2-Apr	2.9	1.2	1.1	0.4	0.1	-0.3	-1.2	0.3	1.4	4.4	6.3	5.4	6.0	7.3	6.0	5.3	5.0	4.4	3.1	1.1	0.9	1.0	1.1	1.2	2.69	7.33																							
3-Apr	0.9	0.5	0.0	0.1	-0.1	-0.1	-0.9	-0.2	1.9	3.2	4.2	5.5	5.5	6.0	6.6	7.1	7.3	6.8	5.9	4.5	1.9	0.4	-1.8	-3.1	2.59	7.27																							
4-Apr	-3.7	-4.3	-5.1	-5.8	-6.3	-6.4	-6.5	-3.5	0.2	2.2	4.4	6.5	7.7	9.0	9.4	10.1	10.0	9.3	8.4	6.8	4.1	1.4	-0.4	-1.6	1.91	10.09																							
5-Apr	-2.3	-2.7	-2.5	-2.2	-1.7	-1.4	-1.3	-1.0	-0.6	2.8	7.8	9.5	12.3	14.2	14.0	13.3	12.6	12.7	11.7	9.7	7.3	7.7	6.4	2.4	5.36	14.16																							
6-Apr	0.9	-0.6	-0.7	-0.7	-0.3	0.0	0.8	1.0	2.2	3.8	5.0	7.3	8.9	10.2	11.0	10.9	10.6	10.0	9.0	6.7	5.4	4.1	2.6	0.8	4.54	10.99																							
7-Apr	-0.4	-1.3	-1.7	-2.1	-2.7	-2.9	-3.0	-2.1	0.0	3.1	5.0	5.5	5.2	5.0	3.9	3.2	2.7	2.8	2.8	2.8	2.7	2.7	2.6	2.4	1.51	5.47																							
8-Apr	2.0	1.9	2.0	1.8	1.2	0.6	0.6	1.1	1.9	3.3	4.4	4.4	5.2	5.9	6.4	5.9	5.6	5.1	4.9	4.3	3.6	3.2	2.8	2.3	3.36	6.35																							
9-Apr	1.9	1.7	1.3	-0.2	-0.5	-0.9	-1.5	-0.4	0.6	2.0	3.9	6.2	7.9	8.3	6.2	3.7	5.3	5.8	3.7	2.1	1.9	1.7	1.7	1.0	2.64	8.34																							
10-Apr	0.5	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.6	1.1	2.5	3.4	3.9	4.2	3.6	3.7	3.4	3.4	3.0	2.4	1.8	1.3	1.0	0.8	1.77	4.21																							
11-Apr	0.8	0.8	0.8	0.7	0.6	0.4	0.4	0.5	0.9	1.5	2.6	4.7	6.1	3.8	4.3	5.2	3.0	3.4	1.9	1.7	0.4	-0.4	-0.7	-1.6	1.74	6.08																							
12-Apr	-1.8	-2.1	-2.5	-2.5	-2.1	-2.0	-2.6	-1.9	-1.2	-0.7	0.0	0.6	1.3	1.3	1.5	2.5	2.3	1.8	1.5	1.4	1.1	1.1	1.0	1.0	-0.04	2.55																							
13-Apr	0.7	0.5	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.6	0.5	0.5	1.0	1.3	0.9	0.8	0.7	0.4	0.2	0.2	0.1	0.0	-0.1	0.46	1.26																							
14-Apr	-0.2	-0.2	-0.3	-0.4	-0.4	-0.2	0.0	0.3	1.1	2.0	3.1	4.3	4.5	4.7	4.7	4.1	3.3	2.7	2.5	2.0	1.3	1.1	1.0	0.7	1.73	4.75																							
15-Apr	0.4	0.6	0.3	0.2	-0.2	-0.1	-0.1	0.1	0.6	0.9	1.7	2.7	3.5	4.2	4.5	5.0	4.6	4.6	4.0	2.4	1.8	1.1	0.8	0.4	1.84	4.97																							
16-Apr	0.3	0.2	-0.3	-0.8	-0.9	-1.2	-1.3	-0.8	0.2	2.4	4.5	6.7	8.7	8.0	7.8	8.9	10.2	9.9	8.8	7.1	5.6	4.5	3.4	2.6	3.94	10.19																							
17-Apr	1.5	0.7	0.5	0.4	-0.1	-0.2	-0.1	0.4	1.5	2.9	4.5	5.4	5.5	6.4	6.8	6.4	5.9	4.9	3.9	3.1	2.5	1.1	0.1	-0.4	2.66	6.85																							
18-Apr	-0.6	-0.8	-1.5	-1.5	-2.0	-2.4	-2.5	-2.3	-1.7	-0.7	0.0	0.5	1.0	1.7	1.7	2.1	2.1	2.1	2.0	1.5	1.2	1.0	0.7	0.6	0.09	2.07																							
19-Apr	0.2	0.1	0.0	-0.1	-0.2	-0.7	-0.6	0.3	2.3	4.5	7.0	9.0	11.2	11.4	12.7	13.0	13.2	11.8	11.2	10.0	7.6	4.0	1.9	0.9	5.45	13.21																							
20-Apr	-0.3	-1.4	-2.2	-2.6	-2.6	-3.0	-2.6	0.4	2.9	6.3	10.0	12.0	12.4	11.8	12.8	12.2	11.3	7.9	7.3	6.6	5.5	4.8	4.5	4.0	4.92	12.84																							
21-Apr	3.4	2.6	2.0	1.3	1.2	0.3	0.0	1.0	2.3	6.4	9.2	10.9	11.4	12.3	13.0	12.8	13.2	13.9	12.2	10.0	8.4	6.8	5.1	4.2	6.83	13.94																							
22-Apr	3.6	3.1	2.0	0.5	1.1	1.8	2.4	2.3	2.1	1.9	1.6	1.5	1.4	0.8	0.0	-0.1	-0.1	-0.2	-0.5	-0.7	-1.1	-1.4	-1.7	-1.9	0.76	3.55																							
23-Apr	-2.0	-2.1	-2.0	-2.0	-2.0	-2.0	-1.8	-1.4	-0.9	-0.5	0.4	1.3	2.3	2.9	2.6	2.7	0.8	0.4	0.2	0.2	0.1	0.1	0.0	-0.3	-0.14	2.87																							
24-Apr	-0.5	-0.8	-1.1	-1.1	-1.2	-1.2	-1.0	-0.6	PF	1.2	2.0	1.9	1.6	1.7	1.9	2.0	1.5	1.8	1.2	0.5	-0.1	-0.9	-1.2	-1.6	0.26	2.02																							
25-Apr	-1.7	-2.4	-2.9	-3.1	-3.5	-3.8	-3.3	-1.9	0.1	0.7	0.5	1.0	1.4	3.1	3.6	4.0	3.8	3.7	3.3	2.7	2.0	1.3	0.5	0.0	0.38	4.04																							
26-Apr	0.1	0.2	-0.1	-0.4	-0.5	-1.0	-1.4	-0.4	1.3	1.6	2.6	3.3	5.0	6.6	7.4	7.3	6.9	7.3	6.3	5.4	4.0	1.9	0.7	-0.4	2.66	7.36																							
27-Apr	-0.9	-1.2	-1.8	-2.5	-2.7	-2.7	-1.3	0.4	1.8	4.0	6.3	6.4	5.4	5.7	8.5	7.8	4.5	4.7	5.1	4.8	3.8	3.5	2.6	2.2	2.68	8.48																							
28-Apr	2.2	2.0	1.3	1.3	1.3	0.8	1.3	3.4	4.9	6.8	6.7	7.9	9.0	7.5	7.4	7.2	6.9	6.3	6.5	5.6	5.1	3.8	2.5	1.3	4.54	8.99																							
29-Apr	0.6	-0.1	-1.2	-1.4	-1.4	-1.7	-1.9	0.6	5.0	6.6	7.7	9.2	10.0	10.9	10.9	11.5	11.5	11.7	10.6	9.7	8.6	7.1	5.8	5.4	5.66	11.67																							
30-Apr	5.4	5.5	4.9	4.3	3.4	1.5	2.0	3.8	5.9	7.9	7.4	7.2	6.1	4.9	7.6	10.1	9.7	7.9	8.4	7.9	6.6	3.6	2.8	1.4	5.68	10.13																							
																								0.71	0.29	-0.07	-0.38	-0.51	-0.76	-0.73	0.19	1.49	2.98	4.37	5.39	5.91	6.22	6.50	6.57	6.21	5.85	5.23	4.28	3.33	2.42	1.63	0.93	Diurnal Average	
																								7.66	7.05	6.79	6.22	6.29	5.30	5.22	5.31	5.94	7.86	9.96	11.97	12.40	14.16	14.00	13.29	13.22	13.94	12.23	10.02	8.56	7.67	6.45	5.39	Diurnal Maximum	
PF - Power Failure																																																	













**WEST CENTRAL AIRSHED SOCIETY**

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

**END OF REPORT  
APRIL 2017**