



HINTON PULP
A DIVISION OF WEST FRASER MILLS LIMITED
Continuous Ambient Air Quality
Monitoring Program
Annual Summary for 2015

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

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



February 11th, 2016

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

Dear Mr. Whitney:

Re: Annual Ambient Air Quality Monitoring Report. January – December 2015.
For Hinton Pulp – A Division of West Fraser Mills Ltd.

The West Central Airshed Society (WCAS) presents the 2015 Annual Report containing ambient air quality and meteorological information from the following site:

Network Station is AMS 906 Hinton
Identified as:

The following is a list of the reported ambient air and meteorological parameters measured at the site location:

AMS 906 (Hinton)

TRS, SO₂, O₃ NO_x, Particulate Matter (2.5 microns), Wind Speed and Direction, Relative Humidity, and External Temperature.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Patrick Andersen".

Patrick Andersen
Environmental Specialist

Summary Report

Continuous air quality/meteorological monitoring measurements

West Central Airshed Society

Hinton Pulp / Hinton Station 906												January to December 2015		24 Hour Average Maximum (ppm)
Parameter	Calibration Hours	Number of Data	Percent Uptime	Mean	Min	Max	Percentile					Exceedences		24 Hour Average Maximum (ppm)
							P10	Q1	Median	Q3	P90	1-hour	24-hour	
TRS (ppb)	440	8316	100.0	1.4	0.0	38.0	0.1	0.2	0.5	1.5	3.4	110	22	0.010
SO ₂ (ppb)	439	8317	100.0	0.5	0.0	88.6	0.0	0.0	0.1	0.3	1.2	0	-	0.009
O ₃ (ppb)	443	8313	100.0	23.8	0.0	76.1	2.2	9.0	23.3	35.6	45.1	0	0	0.056
NO (ppb)	442	8308	99.9	4.7	0.0	174.5	0.1	0.4	1.2	3.5	11.6	-	-	-
NO ₂ (ppb)	442	8308	99.9	7.3	0.0	54.2	1.7	2.8	5.1	9.8	15.9	0	0	0.027
NO _x (ppb)	442	8308	99.9	11.9	0.0	220.9	2.0	3.6	6.7	13.7	26.4	-	-	-
Particulate Matter 2.5 microns (µ/m ³)	29	8709	99.8	9.3	0.0	260.7	2.9	4.4	6.9	11.0	17.1	25	6	59.35 µg/m ³
Wind Speed (kph)	0	8692	99.2	3.4	0.0	17.6	0.5	1.1	2.4	4.9	7.8	-	-	-
Temperature (°C)	0	8756	100.0	4.8	-33.0	34.5	-9.8	-1.8	5.2	12.2	18.8	-	-	-
Relative Humidity (%)	0	8756	100.0	60.8	5.8	92.6	27.0	41.1	66.2	81.0	88.3	-	-	-
Std Dev Wind Direction (deg)	0	8692	99.2	52.2	0.2	115.0	27.5	35.6	47.8	66.6	85.9	-	-	-
Std Dev Wind Speed (kph)	0	8692	99.2	2.6	0.0	11.0	1.0	1.3	2.1	3.3	5.0	-	-	-

Hinton Pulp
A Division of West Fraser Mills Limited
Frequency Distribution Charts
Monthly Averages
Year 2015

West Central Airshed Society - Hinton (AMS 906)
 Annual Summary for 2015
 TRS (ppb)

Month	Number of Data	Mean	Maximum 24-Hour Value	Maximum 1-Hour Value	Operational Time (%)	Number 24-Hour Exceedances**	Number 1-Hour Exceedances*	Percent of Data in each Concentration Range			
								<=3	>3-10	>10-50	>50
January	709	1.4	7.1	28.2	100.0	3	11	88.72	9.73	1.55	0.00
February	639	1.4	5.0	18.4	100.0	5	13	87.64	9.86	2.50	0.00
March	708	1.3	6.1	26.3	100.0	1	6	89.27	9.75	0.99	0.00
April	682	0.9	2.7	10.5	100.0	0	0	93.11	6.74	0.15	0.00
May	705	0.7	2.3	11.1	100.0	0	2	93.05	6.67	0.28	0.00
June	678	0.8	1.7	7.2	99.4	0	0	94.99	5.01	0.00	0.00
July	702	1.3	4.3	38.1	100.0	2	13	89.60	8.40	1.99	0.00
August	708	1.6	4.0	20.3	100.0	2	12	84.32	13.70	1.98	0.00
September	685	1.4	4.9	28.9	100.0	1	7	86.28	12.55	1.17	0.00
October	706	2.0	6.8	22.2	100.0	4	17	79.60	17.99	2.41	0.00
November	685	2.1	9.6	27.1	100.0	3	22	80.73	15.18	4.09	0.00
December	709	1.4	8.5	34.4	100.0	1	7	89.84	9.17	0.99	0.00
Annual	8316	1.4	9.6	38.1	100.0	22	110	88.12	10.38	1.50	0.00

* Hours of TRS above 10 ppb H₂S Hourly Average Guideline.

**Hours of TRS above 3 ppb H₂S Daily Average Guideline.

West Central Airshed Society - Hinton (AMS 906)
 Annual Summary for 2015
 SO2 (ppb)

Month	Number of Data	Mean	Maximum 24-Hour Value	Maximum 1-Hour Value	Operational Time (%)	Number 24-Hour Violations	Number 1-Hour Violations	Percent of Data in each Concentration Range					
								<=0.02	>0.02-0.06	>0.06-0.11	>0.11-0.17	>0.17-0.34	>0.34
January	710	0.5	2.8	9.3	100.0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
February	639	0.2	0.8	3.8	100.0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
March	708	0.7	3.4	10.2	100.0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
April	682	0.4	1.8	6.5	100.0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
May	705	0.2	1.0	7.0	100.0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
June	678	0.2	0.9	5.3	99.4	0	0	100.00	0.00	0.00	0.00	0.00	0.00
July	702	0.4	1.4	6.7	100.0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
August	708	0.7	8.8	88.6	100.0	0	0	99.58	0.28	0.14	0.00	0.00	0.00
September	685	0.5	3.1	11.3	100.0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
October	706	0.5	1.8	10.9	100.0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
November	685	0.8	6.8	56.5	100.0	0	0	99.56	0.44	0.00	0.00	0.00	0.00
December	709	0.5	3.0	7.7	100.0	0	0	100.00	0.00	0.00	0.00	0.00	0.00
Annual	8317	0.5	8.8	88.6	100.0	0	0	99.93	0.06	0.01	0.00	0.00	0.00

West Central Airshed Society - Hinton (AMS 906)
 Annual Summary for 2015
 NO2 (ppb)

Month	Number of Data	Mean	Maximum 24-Hour Value	Maximum 1-Hour Value	Operational Time (%)	Number 24-Hour Violations	Number 1-Hour Violations	Percent of Data in each Concentration Range			
								<=0.05	>0.05-0.11	>0.11-0.21	>0.21
January	708	11.4	23.7	47.0	100.0	0	0	100.00	0	0	0
February	638	11.5	22.4	49.1	100.0	0	0	100.00	0	0	0
March	707	8.8	13.9	32.8	100.0	0	0	100.00	0	0	0
April	682	5.7	10.3	33.1	100.0	0	0	100.00	0	0	0
May	707	4.4	6.2	17.7	100.0	0	0	100.00	0	0	0
June	678	3.9	5.9	17.4	99.4	0	0	100.00	0	0	0
July	708	3.4	6.1	14.3	100.0	0	0	100.00	0	0	0
August	704	4.1	6.8	16.3	100.0	0	0	100.00	0	0	0
September	684	4.5	8.5	22.9	100.0	0	0	100.00	0	0	0
October	702	7.2	15.1	39.4	99.2	0	0	100.00	0	0	0
November	683	10.5	27.2	54.2	100.0	0	0	99.85	0.15	0	0
December	707	11.8	19.6	42.0	100.0	0	0	100.00	0	0	0
Annual	8308	7.3	27.2	54.2	99.9	0	0	99.99	0.01	0	0

West Central Airshed Society - Hinton (AMS 906)
 Annual Summary for 2015
 O3 (ppb)

Month	Number of Data	Mean	Maximum 24-Hour Value	Maximum 1-Hour Value	Operational Time (%)	Number 1-Hour Violations
January	706	22.8	38.8	44.5	100.0	0
February	638	20.3	36.5	48.5	100.0	0
March	708	28.5	43.5	58.9	100.0	0
April	682	34.0	43.9	60.6	100.0	0
May	707	40.3	56.4	76.1	100.0	0
June	678	30.3	46.0	74.7	99.4	0
July	701	22.5	29.4	70.1	100.0	0
August	706	21.0	32.2	50.1	100.0	0
September	685	16.3	30.5	46.5	100.0	0
October	708	16.7	39.4	43.9	100.0	0
November	685	17.6	34.6	41.8	100.0	0
December	709	15.3	35.3	42.2	100.0	0
Annual	8313	23.8	56.4	76.1	100.0	0

West Central Airshed Society - Hinton (AMS 906)
 Annual Summary for 2015
 PM_{2.5} (µg/m³)

Month	Number of Data	Mean	Maximum 24-Hour Value	Maximum 1-Hour Value	Operational Time (%)	Number 24-Hour Violations	Number 1-Hour Violations
January	744	6.9	12.7	35.7	100.0	0	0
February	670	7.4	15.8	34.6	99.7	0	0
March	744	9.1	17.0	53.6	100.0	0	0
April	712	8.9	20.9	121.6	100.0	0	1
May	744	14.5	69.4	199.0	100.0	2	12
June	715	14.4	52.8	260.7	99.4	3	9
July	729	9.9	23.3	78.8	98.9	0	0
August	738	9.8	31.1	63.4	100.0	1	0
September	717	6.8	13.8	45.7	99.6	0	0
October	737	9.8	24.7	96.9	100.0	0	3
November	719	6.2	10.1	25.4	99.9	0	0
December	740	7.6	15.7	31.7	99.5	0	0
Annual	8709	9.3	69.4	260.7	99.8	6	25

Hinton Pulp
A Division of West Fraser Mills Limited
Frequency Distribution Charts
Meteorological Measurements
Year 2015

West Central Airshed Society - Hinton (AMS 906)
 Annual Summary for 2015
 Percentage Frequency Distribution of Wind

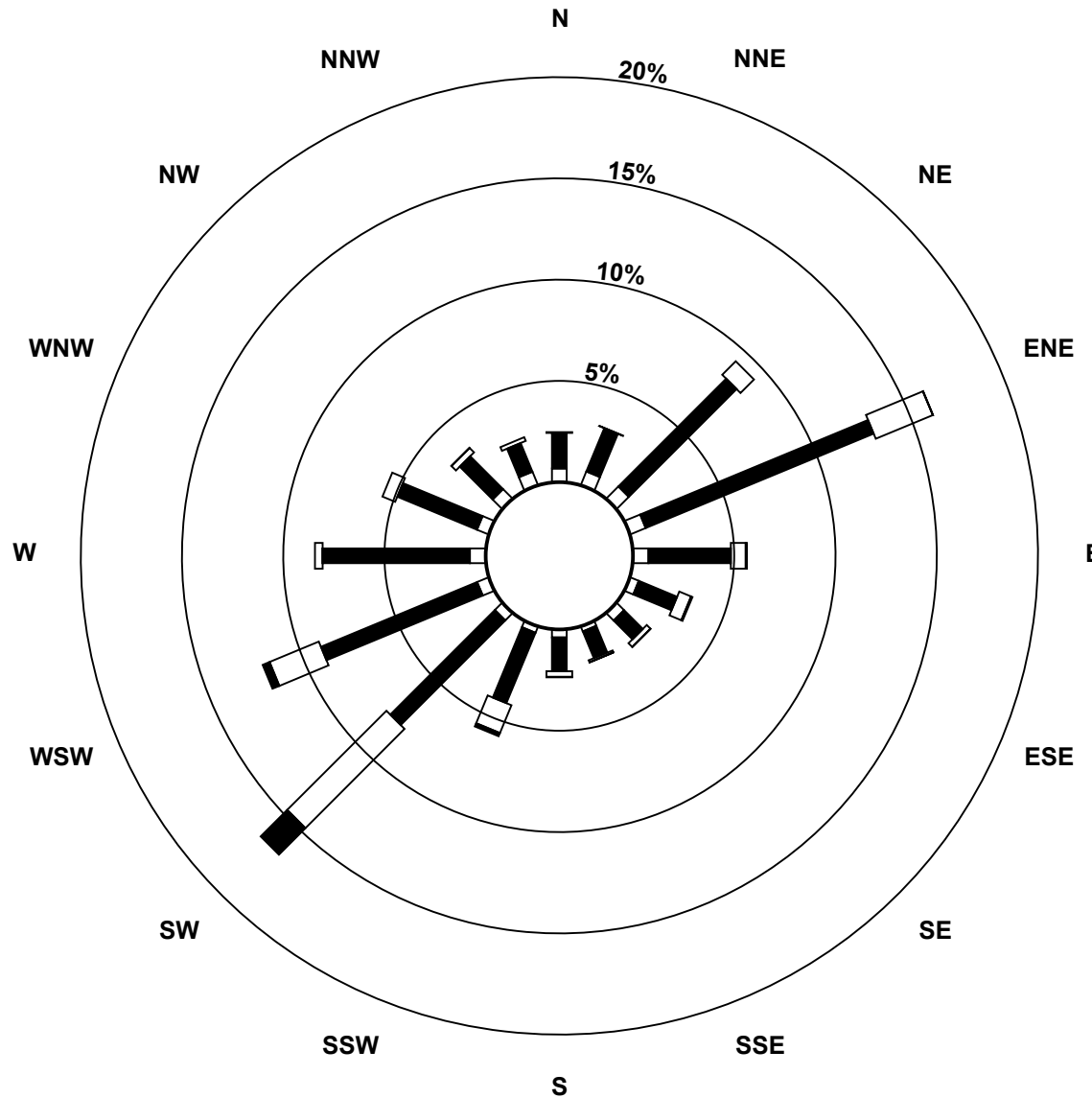
Speed (kph)							
Direction	>1 to 5	>5 to 11	>11 to 19	>19 to 28	>28 to 38	>38	Totals
N	1.52	0.05	0.00	0.00	0.00	0.00	1.57
NNE	2.30	0.02	0.00	0.00	0.00	0.00	2.32
NE	8.36	1.23	0.00	0.00	0.00	0.00	9.59
ENE	13.85	3.99	0.02	0.00	0.00	0.00	17.86
E	3.81	0.96	0.08	0.00	0.00	0.00	4.85
ESE	1.76	0.83	0.09	0.00	0.00	0.00	2.68
SE	1.11	0.33	0.02	0.00	0.00	0.00	1.46
SSE	1.13	0.14	0.02	0.00	0.00	0.00	1.28
S	1.49	0.36	0.03	0.00	0.00	0.00	1.88
SSW	4.08	1.94	0.23	0.00	0.00	0.00	6.25
SW	8.19	9.06	2.42	0.00	0.00	0.00	19.68
WSW	9.17	3.45	0.48	0.00	0.00	0.00	13.10
W	7.75	0.50	0.00	0.00	0.00	0.00	8.25
WNW	4.38	0.89	0.00	0.00	0.00	0.00	5.27
NW	2.08	0.41	0.02	0.00	0.00	0.00	2.50
NNW	1.22	0.26	0.00	0.00	0.00	0.00	1.48
Totals	72.21	24.41	3.39	0.00	0.00	0.00	100.00

Number of Data Values		6642
Hours in Time Period		8760

WCAS - Hinton
Wind Speed Rose



Wind Speed (WS) - kph
2015



Wind Frequency (kph)

