



## MONTHLY REPORT SUMMARY

Stoney Trail #1

Lafarge Canada Inc.

Name/Location

Company

March 2016

Monitoring Period

Continuous Ambient Monitoring				
Parameter	% Time Operational	Average	Maximum	Number of Hours above Industrial Standards
Sound dB A	100%	43	54	0
PM2.5 $\mu\text{g}/\text{m}^3$	100%	5.4	10.6	0
TSP $\mu\text{g}/\text{m}^3$	100%	33.2	67.2	0
Wind Speed km/h	100%	11	36	-
Precipitation mm	100%	-	2.0	-
Trailer Temperature	100%	4	18	-

Sound level is analyzed only for wind speed less than 11 km/h and precipitation less than 3 mm/hour

### COMMENTS:

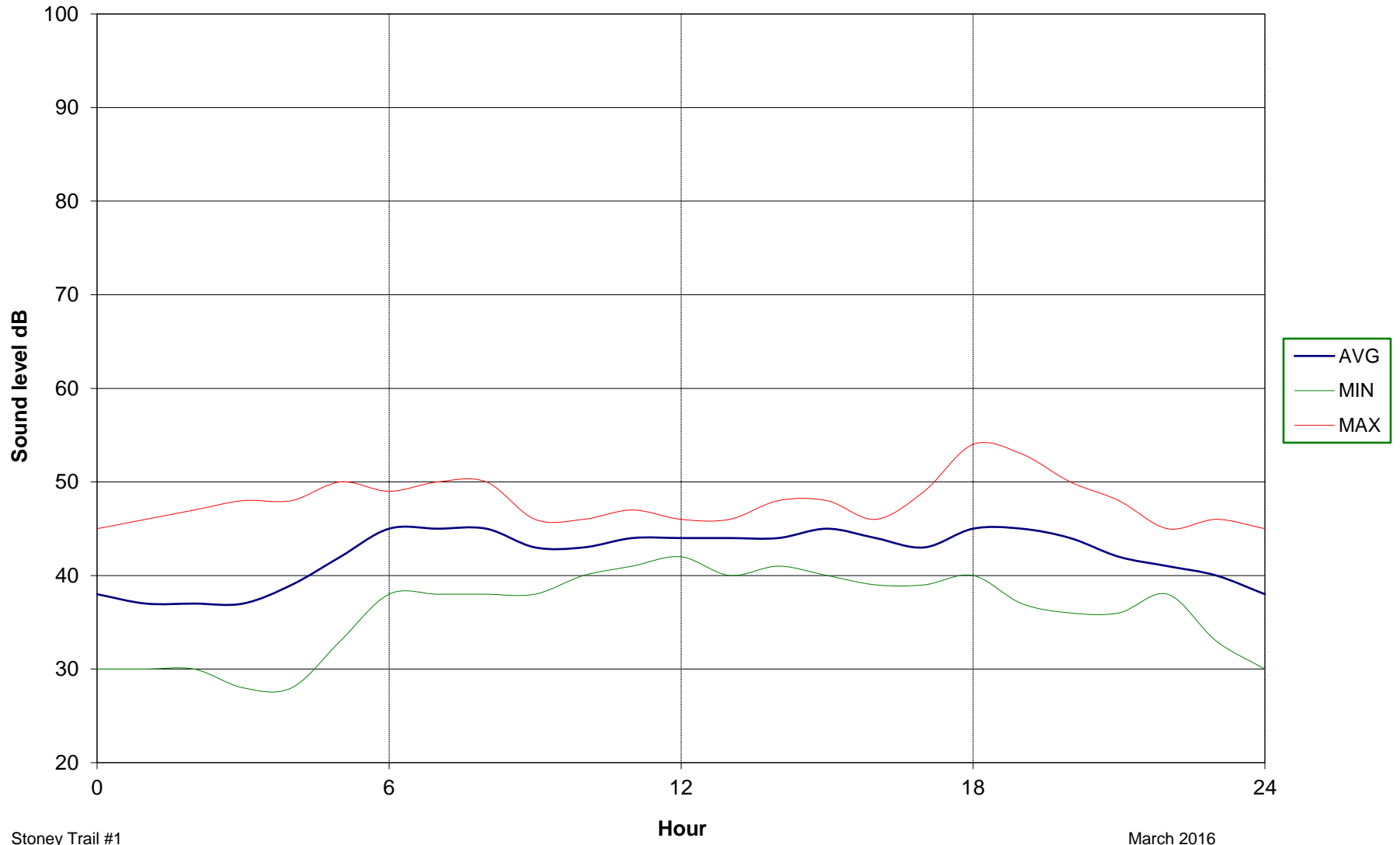
The regulation for industrial areas is 85 dB A any time.

The PM2.5 Standard is 30  $\mu\text{g}/\text{m}^3$  for the day.

The TSP Objective is 100  $\mu\text{g}/\text{m}^3$  for the day.

One 24 hour sample of PM2.5 and TSP is taken every 6<sup>th</sup> day following the federal NAPS schedule.

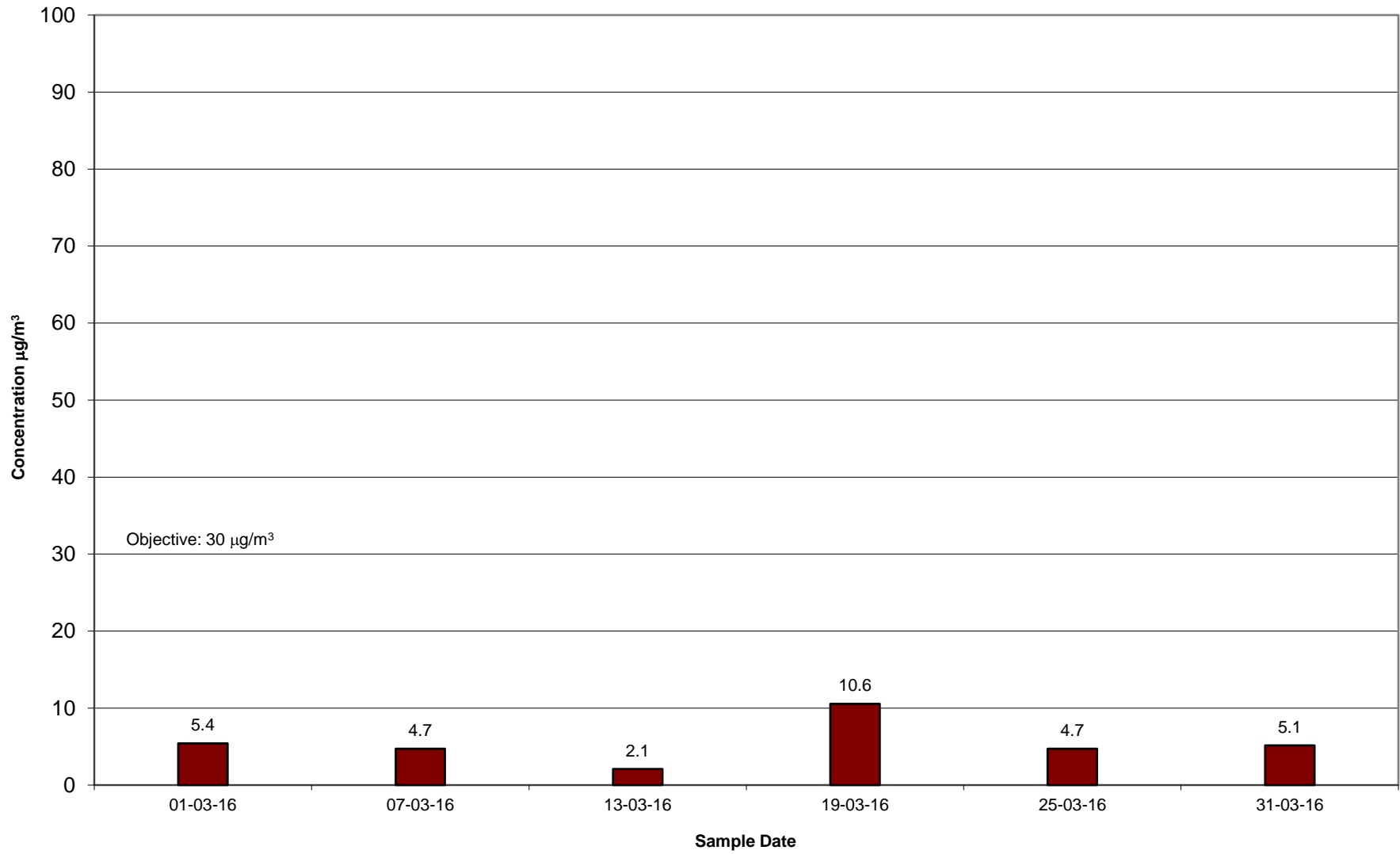
# Sound Level by Hour of the Day



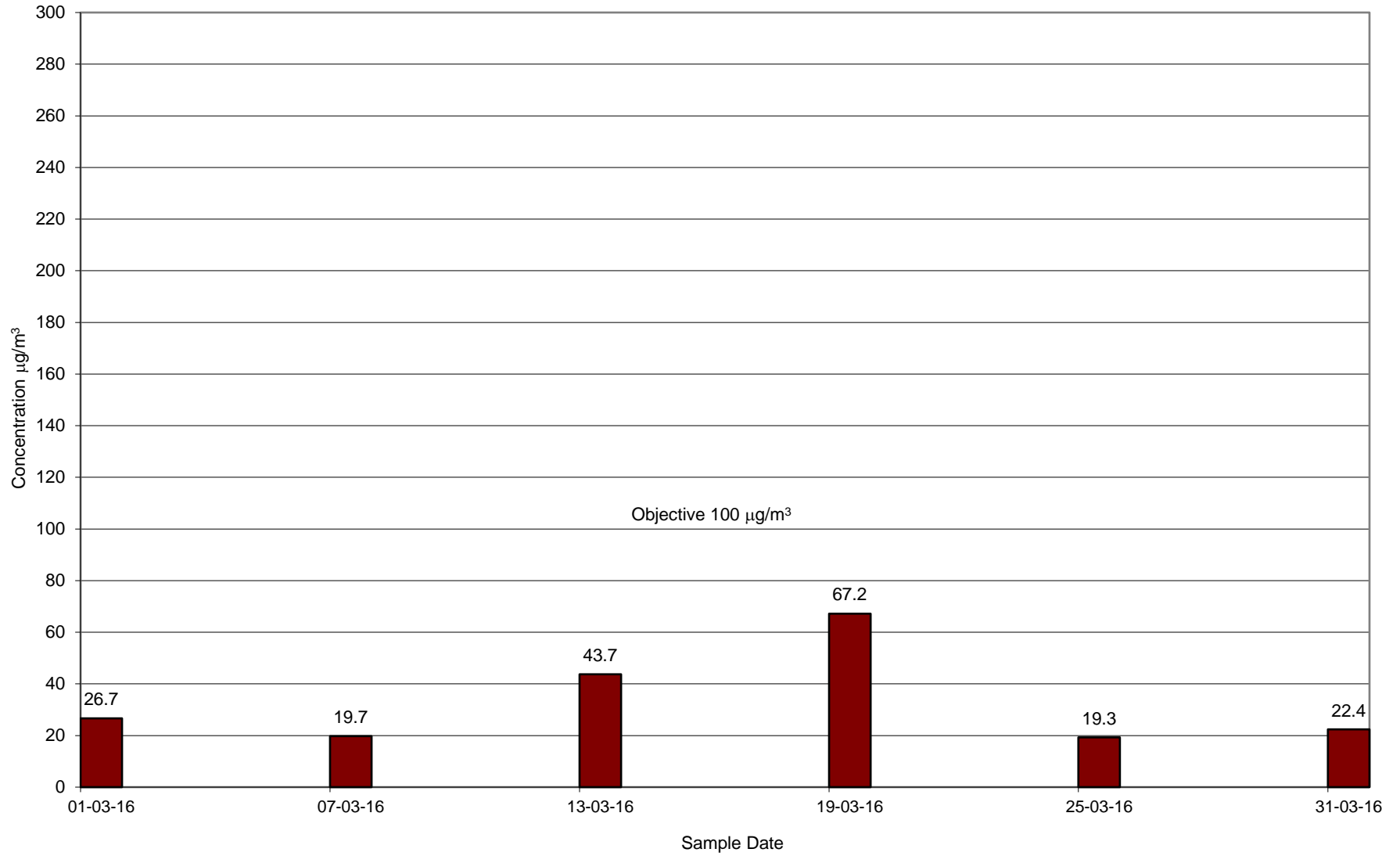
Stoney Trail #1

March 2016

PM2.5 at Lafarge Stoney Trail #1 March 2016

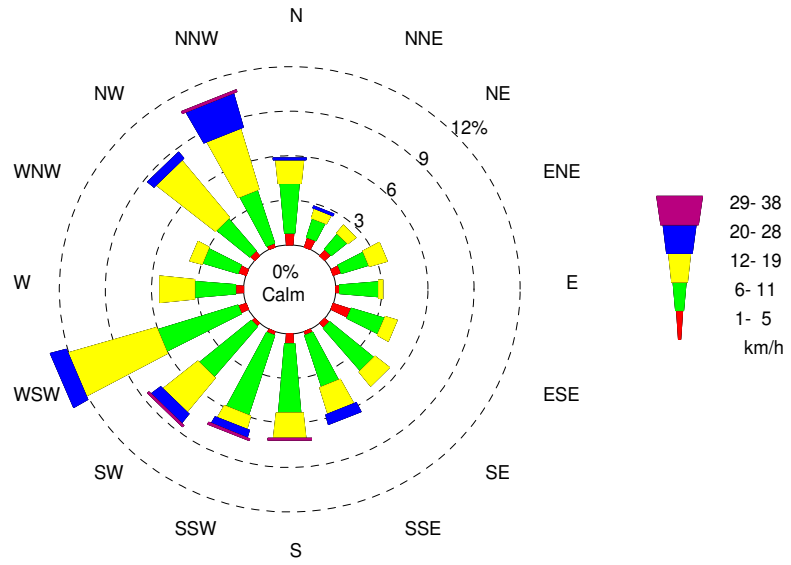


TSP at Lafarge Stoney Trail #1 March 2016



Wind rose for MAR 2016  
Stoney Trail 1

Bar length is proportional to frequency of winds from its direction



SOUND LEVEL [dBA] Leg 1 hour  
 Lafarge Canada Inc.  
 Stoney Trail 1  
 STATION 620  
 MAR 2016

Day	Hour																								Avg	
	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			39	40			39	44	47	46	46	43		44			43	44	45	46	47	46	47	45	46	45
2	44	46	45	42	35	35	41	44	44	43	45	42	42	42				45	45							43
3		43	47				49	48	49	44		C								46	44	46	44	44	44	46
4	41			48	48	43	44	43	45	44	40	43	43	45				43	43	41	41	42	44	41	40	43
5		40	42	35		36	40	41	44	45	46			44						43	45				39	42
6	38	33	33	34	35	35	39	44	41	38	42				41	40	43		43	45						40
7	36	34	35	32	35	36	42	49	45			43	45	44	42		44	43		43	43					42
8												47	44	44	43	44	44	41	43	42	42	40	40	40	40	41
9	35	31	30	32																	43	43				41
10	45	45		42	46	49	48	50	50	46											45	42	41	39	40	41
11	38																				43	41	39	40	39	40
12	37	39	36	38	36	38	40	41	43	42	40	41	44	44	43					45	42			42	40	41
13	39		37							45										40	41	42	42	40	39	40
14	34	32	32	35	38															41	42	42	41	37	39	40
15	34	32	33		38			46								46	46	43	45	46	44	40	42	34	42	42
16												42						43								42
17							43													45	44	43	39	40	36	42
18	32	33	31	34	37	42	48	46	44	44	44	45	45	45	47				54	53	46				45	
19						42			44	42	40	42	43	43	43	43		39	40	37	36	36	38	41	41	
20									42	41	42	44	44	44	45	44				40	37	36	41	41	38	43
21	41	35	34	36	40	49	47	47												43		45	38	42	34	42
22	30	31	31	29	35	40	42	44	40	44	42	43	44	46	48	48	46	49	51		50	46	41	46	44	
23	42	38	45	43	43	50	49	50	49	46	43	45	46	45						43				37	45	
24	35	37	34	31	40	43	45	45	44	44															41	
25	45	34	33	34	33	41	42	45	46	45	42	44	45	42	45	45	41	42	40	43	43	40	39	37	42	
26	34	39	31	28		42	43	41	43	43	45	45	43	46	45	45	41				42	38	38	36	41	
27	33	30	32	32	28	33	38	38	38	38	41	41	44	44	40	44	43	39	40	41	41	42	41		39	
28																					43	43				43
29		31	32	35	36							44	44	46	45	46	45	44	45	45	45	45	42	33	43	
30	30	32	31	33	36		46		47											44	46	39			41	
31					36	42	49	45	43	42	42					48	44	45	44	47				38	44	
AVG	38	37	37	37	39	42	45	45	45	43	43	44	44	44	44	45	44	43	45	45	44	42	41	40	40	
MAX	45	46	47	48	48	50	49	50	50	46	46	47	46	46	48	48	46	49	54	53	50	48	45	46	46	
MIN	30	30	30	28	28	33	38	38	38	38	40	41	42	40	41	40	39	39	40	37	36	36	38	33	33	

\*\*\* SOUND DATA REPORTED ONLY FOR WIND SPEED < 11.5 KM/H \*\*\*

Percent of time operational: 100  
 Monthly Average: 43  
 Median: 42.5  
 Monthly Maximum: 54  
 Monthly Minimum: 28  
 M - missing data  
 C - Calibration  
 \*\*\* No Exceedances of Guideline \*\*\*

SOUND METER CALIBRATIONS

DATE	TIME	STANDARD	RESPONSE	ERROR
MAR 3, 2016	11	94.0	93.6	-.4

ABSTRACT OF THE WIND  
Lafarge Canada Inc.  
Stoney Trail 1  
STATION 620  
MAR 2016

HOUR DAY	ALL TIMES ARE L.S.T.					SPEED [km/h]												ANEMOMETER HEIGHT 10 m										MEAN SPD	MAX VEL	PREV DIR	MISS OBS
	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	SSW	SSW	SW	WSW	WSW	WNW	NW	N	CLM	SSW	SSE	SE	SE	SSE	SSE	SE	SE	ESE	E	E	ESE	ESE	E	E	10	16	SVL	0			
2	E	E	ENE	NNE	NE	N	NNW	NNW	NNW	NNW	NNW	N	NE	NE	ENE	ENE	ESE	ESE	ESE	SE	SSE	SSE	SSE	SSE	11	21	SSE	0			
3	S	S	S	S	S	S	SSW	SSW	SSW	SSW	SSW	SW	WSW	SW	SW	WSW	WSW	WSW	WSW	WSW	WNW	NNE	ENE	E	14	26	S	0			
4	S	S	SSE	SSE	SSE	S	S	S	S	S	S	SSE	S	S	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SSE	S	9	13	S	0			
5	S	SW	SW	S	SSW	SSW	SSW	S	S	S	SSE	SSE	SE	SE	SSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	12	22	SVL	0				
6	WNW	W	WSW	SSE	ENE	ESE	ESE	ESE	ESE	ESE	ESE	ESE	SE	SE	SSW	SSE	SSE	SSE	S	WSW	WSW	WSW	WSW	12	22	ESE	0				
7	WNW	NNW	WNW	W	W	WSW	WSW	WSW	WSW	WSW	WSW	S	SSE	SSE	SE	SE	SSW	W	W	WSW	WSW	WSW	WSW	9	17	WSW	0				
8	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	ENE	ENE	SSE	SSE	SSE	11	16	WSW	0				
9	SSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	S	SSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	11	17	WSW	0				
10	SE	SSE	SSE	SE	SE	SSE	SSE	SSE	SE	S	SSW	S	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	10	15	SSW	0				
11	SW	WSW	WSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SE	ESE	SE	ESE	ESE	SE	SE	ESE	SE	SE	ESE	17	36	SE	0				
12	ESE	SSE	SSE	S	S	S	SSW	SSW	S	SW	WSW	SSW	S	SSE	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	13	19	SSW	0				
13	SSW	S	SSW	WSW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	10	21	SSW	0				
14	WNW	SW	WSW	WSW	WSW	WSW	WSW	W	WNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	13	23	SSW	0				
15	SSW	SW	W	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	11	19	NW	0				
16	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	11	18	W	0				
17	NW	NNW	NNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	15	18	NNW	0				
18	NW	NW	NNW	NNW	W	NNW	WSW	W	WSW	N	W	NW	N	E	ENE	ENE	E	ESE	ESE	SE	SE	SSE	SSE	15	25	W	0				
19	SSE	SSE	SSE	S	S	S	SSW	SSW	SSW	SSW	SSE	SSE	SE	SE	SE	ESE	E	E	ESE	CLM	CLM	WSW	W	10	25	SSE	0				
20	WSW	WSW	WSW	WSW	WSW	WSW	WSW	W	WNW	NW	N	NNE	E	ENE	E	ENE	ENE	ENE	ENE	ENE	ENE	ENE	ENE	10	22	SVL	0				
21	NE	NE	NE	NNE	NNE	NNE	NNE	N	N	NNW	NNW	NNW	N	N	N	NNE	NNE	NNE	NNE	NNE	NNE	NNE	N	9	16	N	0				
22	N	N	N	N	N	NNE	N	NNW	NNW	N	NNE	ENE	NE	ENE	ENE	ESE	E	E	ESE	ESE	SE	SE	10	16	N	0					
23	S	S	SSW	SW	NW	NW	NNW	NNE	NE	ENE	E	E	SE	SE	SE	SSE	SSW	SSW	SSW	SSW	SSW	SSW	10	15	SSW	0					
24	SW	SW	SW	WSW	WSW	WSW	NNW	N	NNE	NE	ENE	NE	NE	NNE	N	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	13	23	NNW	0				
25	N	NNW	W	SW	WNW	WSW	SSW	SSW	SW	SSW	WSW	N	N	WSW	N	NNE	ENE	ESE	SE	SE	S	S	SSW	7	10	N	0				
26	WSW	WSW	WSW	WSW	WSW	WSW	WSW	NW	NNW	NW	WSW	SSW	SSW	S	S	SE	SSE	SSE	SE	SSE	SSE	S	WSW	9	14	WSW	0				
27	SW	WSW	WSW	WSW	WSW	WSW	WSW	SW	SSW	SSE	SE	ESE	ESE	SSE	E	ENE	NE	NE	W	WSW	WNW	WNW	9	15	WSW	0					
28	NW	NW	NW	NW	NW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	18	32	NW	0				
29	NW	NNW	NNW	NNW	NW	NW	NW	NNW	NNW	NNW	NNW	NNW	NE	N	ENE	ENE	ENE	ENE	S	SSW	SW	11	16	NW	0						
30	WSW	W	WNW	WNW	W	NW	WNW	WNW	W	NW	WNW	WNW	NW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	16	26	NW	0				
31	NNW	NNW	NNW	NW	NNW	NNW	NNW	N	NNW	NNW	NNW	NNW	N	ENE	E	SE	SSE	S	S	SSW	12	21	NNW	0							

MEAN  
SPEED 10 11 10 10 11 10 11 10 10 12 12 13 14 13 14 13 14 12 11 10 10 10 11 10 11 11 36 WSW 0  
NOTE: Missing data represented by M; no clear prevailing direction represented by SVL; calm winds represented by CALM WS UPTIME 100 % WD UPTIME 100 %

Date of Last Calibration 060221 Make and Model of Instrument: RM Young5103

FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION  
Lafarge Canada Inc.  
Stoney Trail 1  
STATION 620  
MAR 2016

SPEED [km/h]	WIND DIRECTION																TOTAL	PCT								
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW										
< .5																									3	0
1- 5	6	5	4	4	2	9	3	2	5	2	2	4	4	4	3	2	61	8								
6- 11	25	10	10	14	19	17	28	27	35	42	33	41	20	18	21	28	388	52								
12- 19	12	5	5	9	2	6	9	14	13	7	22	45	17	6	37	32	241	32								
20- 28	1	1	0	0	0	0	0	5	0	4	6	8	0	0	4	18	47	6								
29- 38	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	4	1								
TOTAL	44	21	19	27	23	32	40	48	54	56	64	98	41	28	65	81	744	100								
PERCENT	6	3	3	4	3	4	5	6	7	8	9	13	6	4	9	11										
AVERAGE	10	9	9	9	8	8	10	12	10	11	12	12	11	10	13	15	11									

PRECIPITATION [mm]  
Lafarge Canada Inc.  
Stoney Trail 1  
STATION 620  
MAR 2016

Day	Hour																								Tot	
	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	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
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	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
6	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
7	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
8	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
9	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
10	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
11	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
12	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
13	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
14	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
15	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
16	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
17	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
18	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
19	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
20	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
21	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
22	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
23	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
24	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
25	0	0	0	0	0	0	0	0	0	2.0	1.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.8
26	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
27	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
28	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
29	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
30	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
31	0	.8	0	0	.4	0	0	.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.8
TOTL	0	.8	0	0	.4	0	0	.3	0	2.0	1.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MAX	0	.8	0	0	.4	0	0	.3	0	2.0	1.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of time operational: 100  
Monthly Total: 6 Maximum in an hour: 2.0  
Year to Date: 10 M - missing data



TRAILER TEMPERATURE  
Lafarge Canada Inc.  
Stoney Trail 1  
STATION 620  
MAR 2016

Day	Hour																								Avg	
	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	-3	-3	-4	-4	-4	-4	-4	-5	-5	-3	2	5	7	8	8	7	7	6	4	2	2	1	1	0	1	
2	-1	-2	-3	-3	-2	-2	-2	-1	-1	0	0	2	3	4	4	3	3	3	2	1	1	1	1	0	0	
3	-1	-1	-1	-1	-2	-2	-3	-3	0	4	8	11	12	12	12	12	12	11	9	6	2	0	-2	-2	4	
4	-2	-2	-2	-2	-2	-2	-3	-2	1	5	7	7	7	11	12	13	14	14	10	6	4	3	1	1	4	
5	1	1	0	0	1	1	1	1	1	3	6	9	12	15	16	17	17	14	11	7	6	5	4	2	6	
6	0	0	1	2	2	2	2	2	3	5	6	6	7	8	9	9	9	8	7	6	7	7	7	5	5	
7	5	3	1	1	1	0	-1	-1	2	6	9	12	14	14	14	13	12	12	10	8	6	5	4	3	6	
8	2	1	1	0	0	1	1	1	3	6	8	10	11	12	11	9	8	6	4	1	-1	-2	-2	-2	4	
9	-3	-3	-3	-3	-3	-2	-1	0	1	3	6	9	10	11	10	10	11	10	7	4	1	0	-1	-1	3	
10	-1	-1	-1	-1	-2	-2	-1	-1	1	7	12	15	15	15	14	14	14	13	9	6	4	3	2	2	6	
11	1	1	1	1	1	1	1	1	4	6	9	11	12	14	14	14	13	12	10	8	7	5	3	2	6	
12	2	2	2	2	2	2	2	2	3	5	7	9	12	15	18	17	15	13	11	9	8	8	7	6	8	
13	3	1	1	1	2	1	1	1	3	6	8	9	9	10	10	11	11	9	7	5	4	2	0	-2	5	
14	-3	-3	-3	-3	-3	-2	-1	0	1	2	4	5	8	9	8	7	6	5	3	2	1	0	-1	-2	2	
15	-3	-3	-3	-3	-3	-3	-2	-2	-1	0	2	4	6	7	5	8	7	6	4	2	1	0	-1	-1	1	
16	-1	-1	-1	-1	-1	-1	-1	-1	1	3	6	8	8	8	8	7	5	4	3	2	1	0	-1	-2	2	
17	-4	-3	-3	-2	-2	-3	-3	-3	-3	-1	0	2	2	3	3	4	3	3	1	-1	-2	-3	-3	-3	-1	
18	-4	-5	-6	-7	-8	-8	-8	-7	-4	0	2	5	7	8	8	9	9	7	5	1	0	-1	-1	-2	0	
19	-4	-5	-5	-6	-6	-6	-7	-5	-4	0	5	9	12	13	14	16	16	15	12	8	5	3	2	2	3	
20	3	3	3	3	3	3	3	3	6	9	13	15	17	18	18	17	17	15	12	9	7	6	6	5	9	
21	5	4	3	2	2	1	1	1	1	1	2	3	4	6	8	8	6	4	2	1	0	-1	-1	-1	3	
22	-1	-1	-1	-1	-2	-2	-2	-2	-2	-2	0	1	2	5	7	9	10	9	6	2	-1	-2	-4	-4	1	
23	-4	-4	-4	-4	-5	-5	-5	-4	0	3	6	9	11	12	13	13	14	12	10	8	7	6	6	5	4	
24	5	4	4	4	4	4	3	3	4	6	9	10	10	11	11	10	7	5	3	2	3	3	3	2	5	
25	0	-1	-2	-3	-3	-2	-2	-2	0	3	5	8	10	9	9	11	9	7	6	4	1	1	1	0	3	
26	0	0	0	-1	-1	-1	-1	-2	0	3	7	9	10	12	12	12	14	14	14	11	7	5	4	3	1	5
27	0	0	-1	-1	-1	-2	-2	0	3	6	8	11	13	13	12	12	11	11	9	7	6	5	4	3	5	
28	3	3	2	1	1	1	1	1	2	4	7	9	11	10	11	11	11	10	8	6	5	4	4	3	5	
29	3	3	2	1	0	0	0	1	4	8	10	12	14	15	16	17	18	17	15	10	8	7	6	6	8	
30	6	6	7	7	7	7	7	8	8	9	10	11	12	12	12	11	11	10	9	8	8	8	8	8	9	
31	6	5	4	3	3	3	2	3	3	3	4	6	9	11	12	14	13	14	13	9	7	6	5	5	7	
AVG	0	0	0	-1	-1	-1	-1	0	1	4	6	8	10	11	11	11	11	10	8	5	4	3	2	1		
MAX	6	6	7	7	7	7	7	8	8	9	13	15	17	18	18	17	18	17	15	10	8	8	8	8	8	
MIN	-4	-5	-6	-7	-8	-8	-8	-7	-5	-3	0	1	2	3	3	3	3	3	1	-1	-2	-3	-4	-4		

Percent of time operational: 100  
Monthly Average: 4 Monthly Maximum: 18 Monthly Minimum: -8 M - missing data