



February 2, 2018

Wes Markus
BLV Group
10511, 15th St. S.E.
Calgary, Alberta
T2H 2H5

Re: Noise Monitoring for BLV Group – Stoney Trail #1

Dear Wes Markus;

Attached are results of the monitoring for the period November 2017 for noise, TSP and PM2.5 particulates. A B&K model 2236 meter was used for noise, and the Aerometrics Minivol model 5.0 for particulates. Winds were measured with a R.M. Young Model 5103 anemometer. Precipitation was recorded with a Texas Instruments model TE25M rain gauge.

Noise monitoring with a portable setup was started on November 13th. As a result data recovery was 59% for sound.

November 15th and 27th data were found to be invalid. November 27th TSP data was higher than PM2.5 data due to low flow issue. Data recovery was 60% for TSP during the monitoring period. Data recovery for all other parameters was 100% during the monitoring period.

There was no exceedance for the sound level.

There was 1 exceedance of the Alberta Air Quality Objective for TSP and 1 exceedance for PM2.5 respectively.

Please call if there are any questions regarding the results.

Yours truly,

PROMET ENVIRONMENTAL GROUP LTD.

A handwritten signature in black ink, appearing to read "Bill Murray". The signature is fluid and cursive, with a long horizontal stroke at the end.

Dr. William (Bill) Murray
President

WM/NO
Cc: Travis Coates
Enc.



MONTHLY REPORT SUMMARY

Stoney Trail #1

BLV Group

Name/Location

Company

November 2017

Monitoring Period

Continuous Ambient Monitoring				
Parameter	% Time Operational	Average	Maximum	Number of Hours above Industrial Standards
Sound dB A	59%	53	64	0
PM2.5 $\mu\text{g}/\text{m}^3$	100%	24.2	93.5	1
TSP $\mu\text{g}/\text{m}^3$	60%	73.7	113.2	1
Wind Speed km/h	100%	16	56	-
Precipitation mm	100%	-	0.5	-
Trailer Temperature	100%	16	20	-

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

COMMENTS:

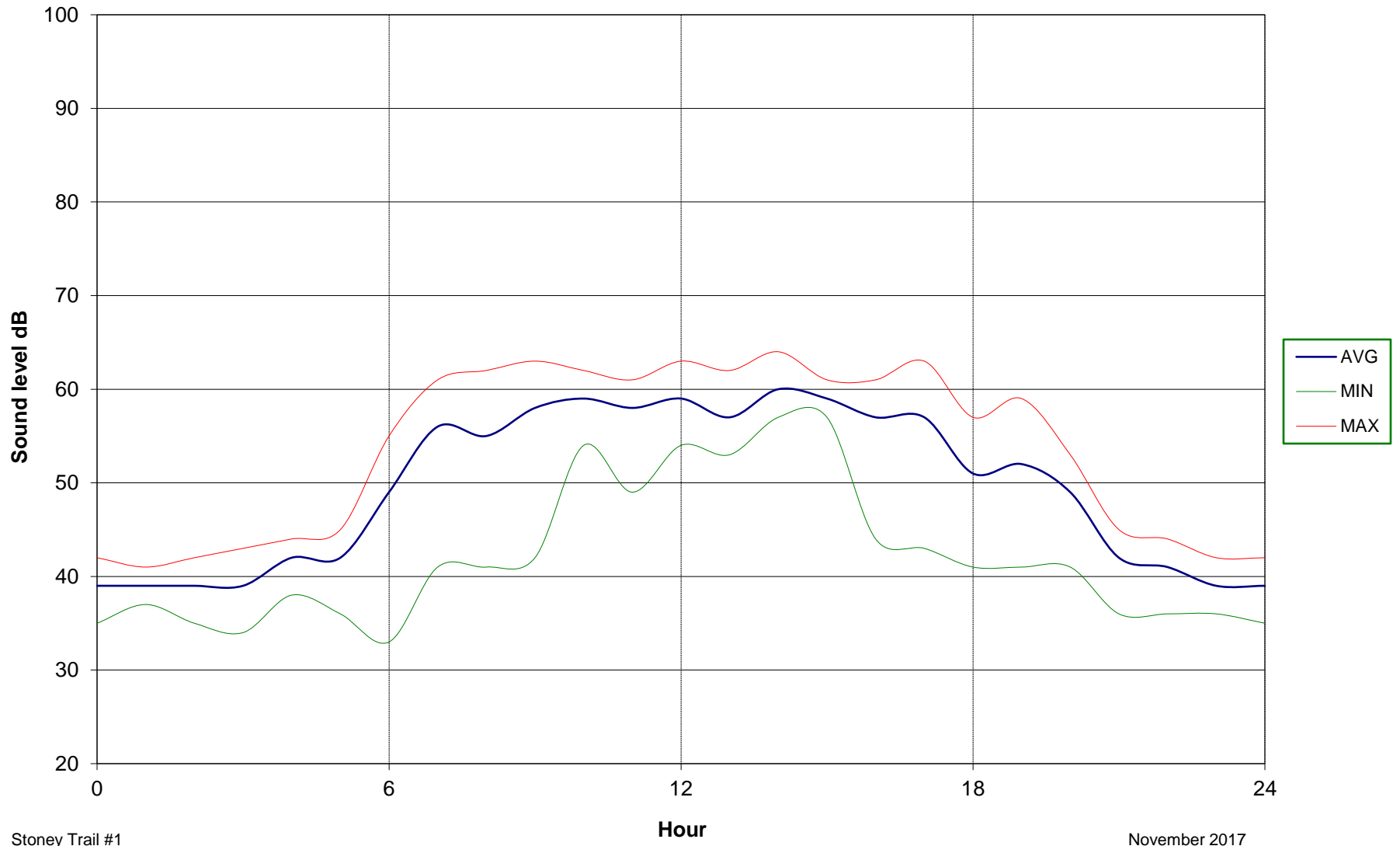
The regulation for industrial areas is 85 dB A any time.

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 6th day following the federal NAPS schedule.

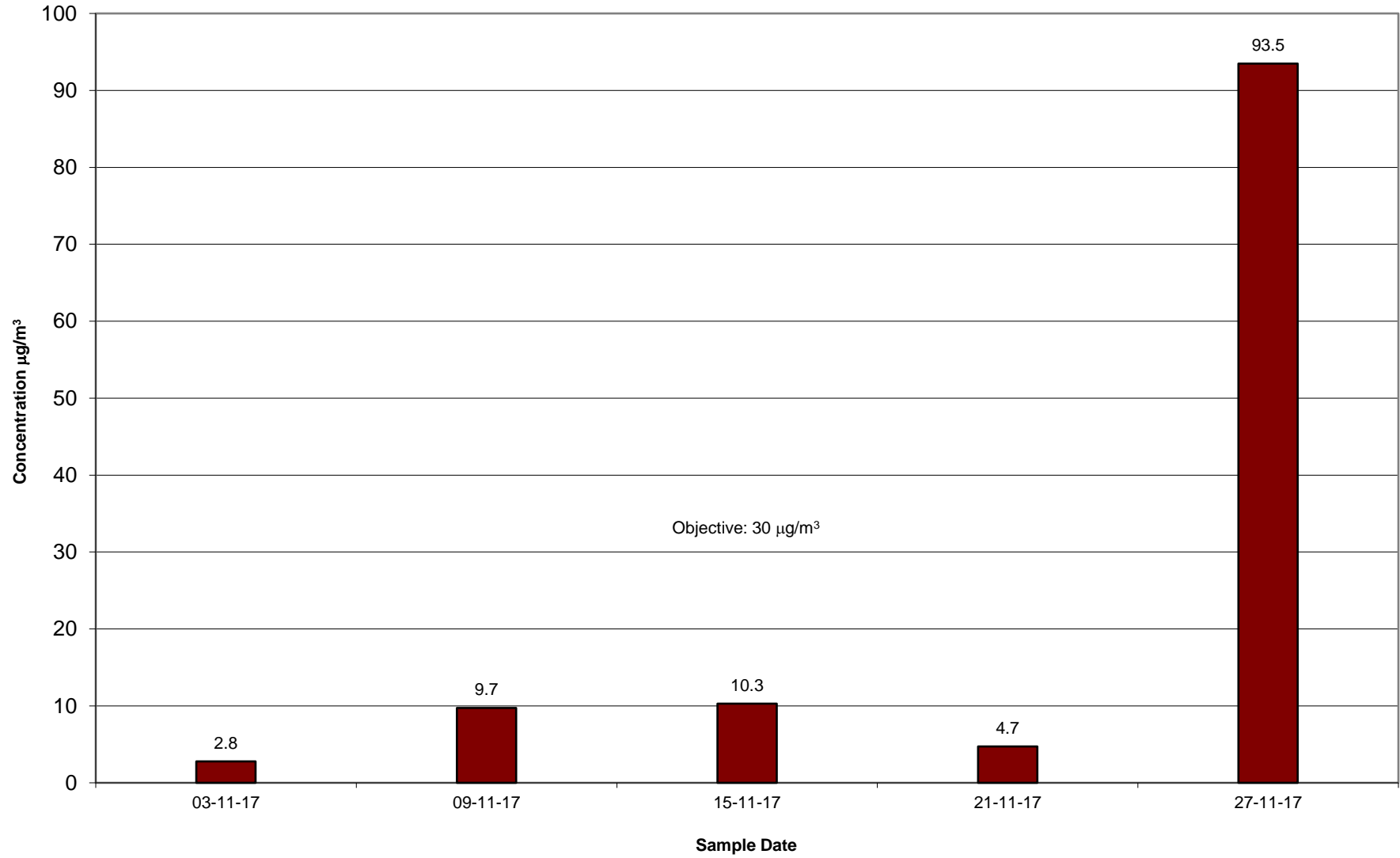
Sound Level by Hour of the Day



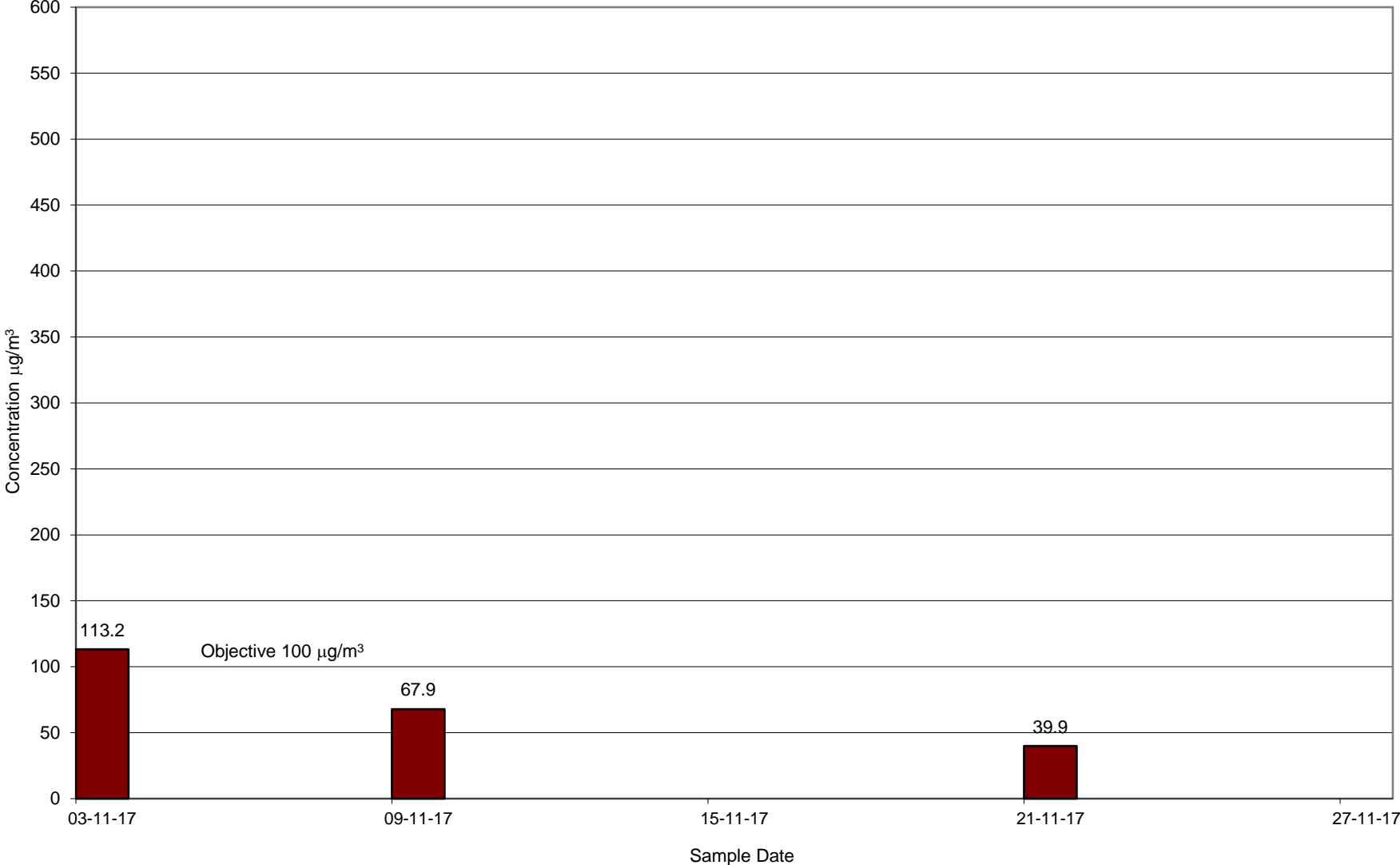
Stoney Trail #1

November 2017

PM2.5 at BLV Group Stoney Trail #1 November 2017

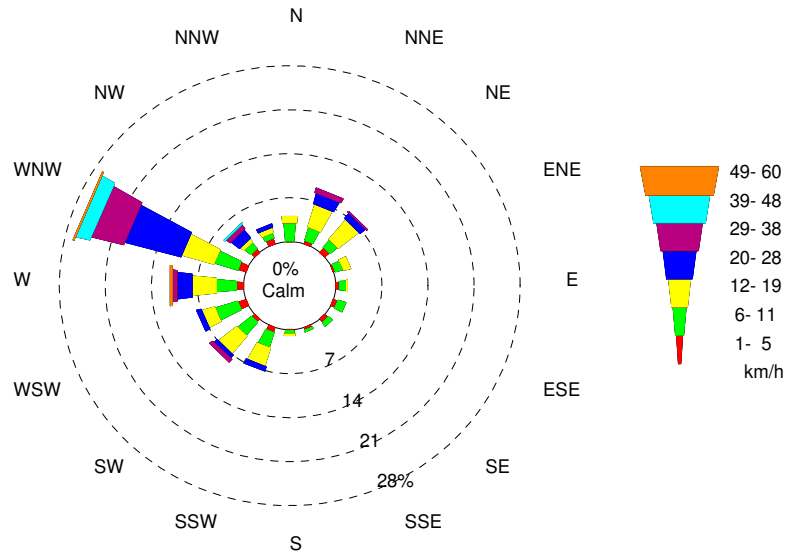


TSP at BLV Group Stoney Trail #1 November 2017



Wind rose for NOV 2017
Stoney Trail 1

Bar length is proportional to frequency of winds from its direction



SOUND LEVEL [dBA] Leq 1 hour
 BLV Group
 Stoney Trail 1
 STATION 620
 NOV 2017

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																				C					M					M																																								
2																									M																																													
3																									M																																													
4	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M																																													
5	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M																																													
6																									M																																													
7																									M																																													
8	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M																																													
9	M	M																				M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M																															
10																									M																																													
11	M	M	M																				M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M																																
12	M																									M																																												
13	M	M	M	M	M	M	33	53	M	M																				M																																								
14																									51	54	54	54	57	58	58																44	40	38	52																				
15																									41	40	38	44	42	55	56	56	57	58	58																				46	45	44	36	51											
16	41	40	38																				55	56	59	60	60	58	60	51																				53	44	42	42	54																
17	39	41	42	43	42	41																				41	42																				61	63	55	52	53	44	42	42	54															
18																									M																																													
19																									M																																													
20																									M																																													
21	35	37																				52	61	62	62	59																				60	60	60	57	54	45	36	36	37	57															
22	42																									59																				53																				48	41	41	38	47
23																									M																																													
24																									M																																													
25																									M																																													
26	36	37	35	34	38	36	40	41																				57	59	44	43	41	41																				42	42			43													
27																									M																																													
28																									M																																													
29																									M																																													
30																									M																																													
AVG	39	39	39	39	42	42	49	56	55	58	59	58	59	57	60	59	57	57	51	52	49	42	41	39	39																																													
MAX	42	41	42	43	44	45	55	61	62	63	62	61	63	62	64	61	61	63	57	59	53	45	44	42	42																																													
MIN	35	37	35	34	38	36	33	41	41	42	54	49	54	53	57	57	44	43	41	41	41	36	36	36																																														

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

Percent of time operational: 59 M - missing data C - Calibration
 Monthly Average: 53 Monthly Maximum: 64 Monthly Minimum: 33
 Averages are computed only when time operational > 75%
 Median: 50.8
 *** No Exceedances of Guideline ***

SOUND METER CALIBRATIONS				
DATE	TIME	STANDARD	RESPONSE	ERROR
NOV 1, 2017	8	94.0	93.3	-.7

ABSTRACT OF THE WIND
 BLV Group
 Stoney Trail 1
 STATION 620
 NOV 2017

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					25
1	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NE	NE	NE	NE	ENE	ENE	ENE	ENE	ENE	ENE	NE	NE	NE	NNE	0			
2	28	33	32	31	32	29	26	22	20	19	21	25	21	23	20	15	15	14	13	11	14	19	23	25	22	33	0		
3	NNE	NNE	NE	NE	NE	NNE	NE	ENE	NE	NE	NE	NE	ENE	NE	NE	NE	NE	NE	NE	NE	NE	NNE	NNE	NNE	NNE	0			
4	22	22	21	20	15	16	12	12	13	15	17	19	19	19	19	18	19	17	17	18	18	19	18	18	18	18	0		
5	NE	NE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	0		
6	19	20	16	15	16	17	18	17	19	19	21	22	24	23	20	19	18	15	12	11	10	8	10	8	17	24	0		
7	N	N	N	N	N	N	NNE	NNE	NNE	NNE	NE	ENE	ENE	E	E	E	SE	SSE	WSW	W	W	NW	NNW	NNW	NNW	NNW	0		
8	11	10	7	10	10	8	8	11	10	9	8	9	8	7	5	4	4	4	4	6	7	6	6	6	7	11	0		
9	N	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	0	
10	5	8	9	10	9	5	4	8	12	15	16	15	12	14	13	12	11	9	8	7	7	8	10	14	10	16	0		
11	NNW	N	N	N	N	N	N	N	N	N	N	N	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	NNE	0	
12	12	11	11	8	5	5	5	7	13	13	17	16	20	17	16	16	14	15	18	27	24	23	21	21	15	27	0		
13	NNW	NNW	NNW	NW	NW	NW	NW	WSW	SSW	SSW	S	SE	SE	SE	ESE	ESE	ESE	ESE	ESE	ESE	SE	ESE	ESE	ESE	ESE	ESE	0		
14	19	20	19	15	12	5	4	5	3	5	5	5	5	5	7	7	9	8	6	5	5	4	4	5	7	8	20	0	
15	ESE	ESE	ESE	E	SE	W	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	WSW	0	
16	7	7	6	6	2	3	8	8	6	9	10	10	8	9	9	4	7	4	5	4	5	5	10	8	7	10	0		
17	SSW	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	0	
18	7	11	13	16	20	18	24	29	33	30	27	24	25	28	23	25	30	13	14	12	11	11	13	11	20	33	0		
19	NNE	NE	NNE	N	N	NNE	NE	NNE	NNW	N	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	0	
20	15	17	17	16	19	14	9	6	5	4	4	4	7	13	15	14	14	6	6	4	5	3	7	7	10	19	0		
21	WSW	WSW	W	WNW	WNW	WNW	WNW	WNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	NNW	0	
22	7	9	9	13	15	13	7	9	10	9	9	9	11	10	10	7	6	7	5	4	11	14	11	9	9	15	0		
23	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	0	
24	9	14	16	13	11	12	14	18	10	6	6	7	8	11	10	11	11	4	4	6	6	7	6	8	10	18	0		
25	WSW	WSW	W	NW	NW	NW	NW	WSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	0	
26	7	4	5	6	6	5	5	3	4	6	15	18	20	13	15	17	15	18	19	21	27	20	20	21	13	27	0		
27	WNW	NNW	NNE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	0	
28	19	18	18	20	15	14	12	12	11	9	7	4	3	4	6	12	12	12	14	16	14	15	16	17	13	20	0		
29	SW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	0	
30	16	11	11	13	10	9	9	9	11	10	10	9	13	17	13	10	12	17	14	13	14	4	3	3	11	17	0		
31	ENE	NNE	NNE	NE	NE	NE	NE	NE	NE	NE	NE	NE	ENE	ESE	SSE	SE	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	0	
32	8	15	18	19	20	19	17	12	13	14	12	9	5	5	4	7	10	10	13	21	10	6	6	5	12	21	0		
33	ENE	NNE	N	N	NNE	NE	NE	NE	NE	NE	NE	NE	NE	NE	M	M	M	M	M	M	M	M	M	M	M	M	M	0	
34	6	4	6	7	8	9	12	12	9	5	4	2	2	3	M	M	M	M	M	M	M	M	M	M	M	M	M	0	
35	W	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	0
36	18	19	22	22	18	17	21	21	24	28	29	33	31	30	29	42	40	35	23	19	19	25	27	29	26	42	0		
37	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	0	
38	30	26	33	32	28	22	41	21	4	4	16	21	21	20	32	53	50	49	48	54	56	45	39	35	32	56	0		
39	WNW	NW	NE	NE	NE	NE	NNW	W	W	ENE	ENE	ENE	ENE	NE	E	E	E	E	E	E	ESE	SE	SSE	SSW	SSW	SSW	SSW	0	
40	33	27	29	32	26	14	5	7	6	4	8	11	12	12	12	11	11	9	7	6	6	5	7	8	13	33	0		
41	SSE	S	S	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	0	
42	8	11	13	17	16	15	15	14	13	11	14	14	13	14	16	15	12	10	14	13	12	8	7	13	17	0			
43	WNW	WNW	NW	WNW	WNW	WNW	NW	NW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	0	
44	10	34	36	41	42	33	22	15	12	17	18	23	13	11	16	15	11	9	7	6	6	6	6	7	17	42	0		
45	WSW	W	W	WSW	W	W	W	WSW	WSW	W	W	W	W	W	E	ENE	WSW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	0	
46	19	37	35	24	21	19	20	17	16	12	18	21	20	19	18	9	7	13	21	25	24	24	23	23	20	37	0		
47	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	0	
48	25	24	25	25	23	27	21	30	17	14	19	18	17	15	21	22	26	20	14	9	14	28	24	37	22	37	0		
49	W	W	WNW	W	WSW	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	W	0	
50	27	21	16	14	13	11	15	20	19	20	15	16	32	37	25	15	8	6	10	10	14	8	11	14	17	37	0		
51	E	SSW	W	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	SSW	0	
52	6	5	3	4	6	4	10	11	16	19	17	13	18	22	23	23	19	21	17	22	22	28	24	27	16	28	0		
53	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	0	
54	24	19	25	22	29	27	25	28	32	25	28	40	41	37	31	27	23	16	7	6	11	14	15	21	24	41	0		
55	W	WNW	WNW	WNW	WNW	WNW	WNW	WSW	WSW	WSW	WSW	SSW	SSE	NNE	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	0	
56	22	25	23	24	23	25	35	12	12	9	9	5	6	8	5	5	25	18	18	23	11	17	29	21	17	35	0		
57	NW	WNW	NW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	0	
58	18	18	20	26	21	21	25	27	25	29	35	35	40	40	41	38	37	39	33	30	36	31	36	36	31	41	0		
59	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	WNW	0	
60	35	40	42	38	45	43	38	38	34	31	32	36	33	33	27	23	21	17	18	19	23	25	29	25	31	45	0		

MEAN
 SPEED 16 18 18 19 18 16 16 15 14 14 15 16 17 17 17 17 17 15 14 15 15 15 16 16 16 16 56 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
 BLV Group
 Stoney Trail 1
 STATION 620
 NOV 2017

SPEED [km/h]	WIND DIRECTION													TOTAL	PCT
	N	NNE	NE	ENE	E	ESE	SE	S							

PRECIPITATION [mm]
 BLV Group
 Stoney Trail 1
 STATION 620
 NOV 2017

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
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
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
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
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
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
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
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
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
10	0	0	0	0	0	0	0	0	0	0	0	.3	0	0	.2	0	0	0	0	0	0	0	0	0	.5
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
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
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
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
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
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
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	M	M	.5	0	0	0	0	0	0	.5
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
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
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
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
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
23	0	0	0	0	0	0	0	0	0	0	0	.2	0	0	0	0	0	0	0	0	0	0	0	0	.2
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
25	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
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
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
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
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
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
TOTL	0	0	0	0	0	0	0	0	0	.2	.3	0	0	.2	0	0	.5	0	0	0	0	0	0	0	0
MAX	0	0	0	0	0	0	0	0	0	.2	.3	0	0	.2	0	0	.5	0	0	0	0	0	0	0	0

Percent of time operational: 100
 Monthly Total: 1 Maximum in an hour: .5
 Year to Date: 163 M - missing data

TRAILER TEMPERATURE
 BLV Group
 Stoney Trail 1
 STATION 620
 NOV 2017

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

Percent of time operational: 100
 Monthly Average: 16 Monthly Maximum: 20 Monthly Minimum: 7
 M - missing data

MONTHLY ANALYSIS

Due to two low flow issues with the TSP pump this month, our data is incomplete. The PM 2.5 exceedance on November 27, 2017, may have been caused by a few different issues.

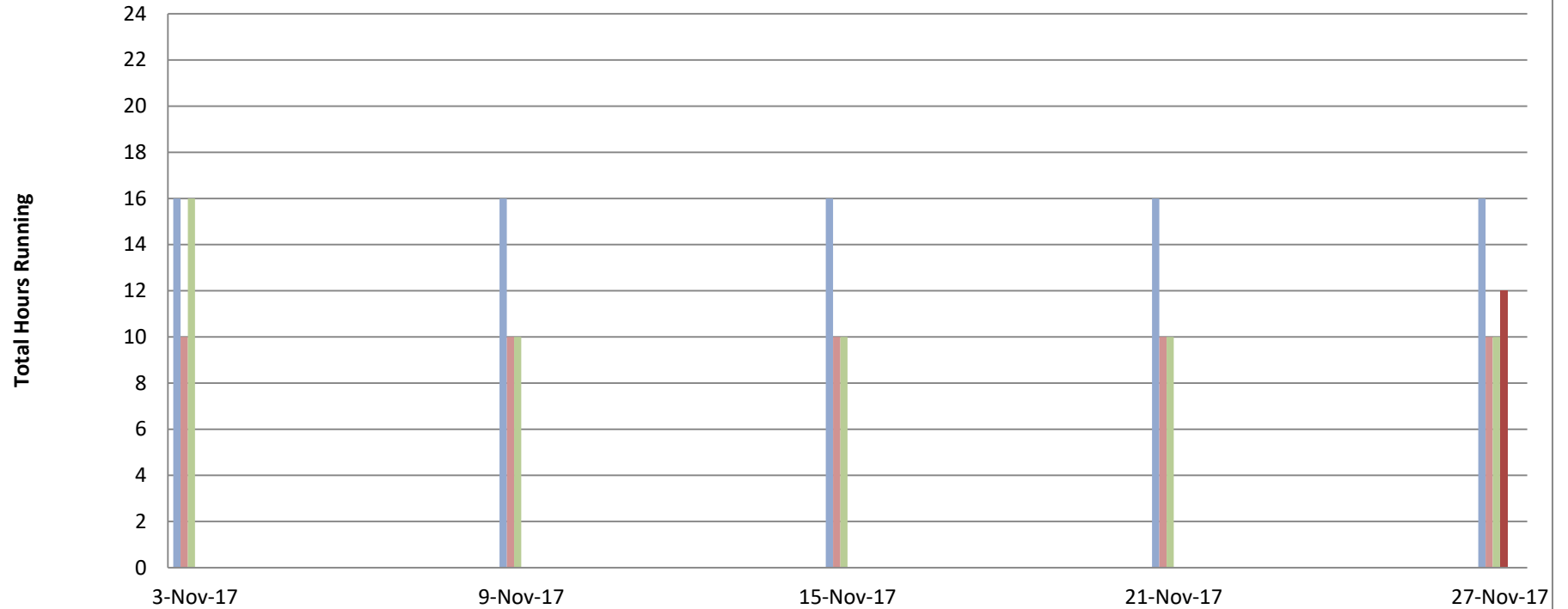
First our Heavy Mobile Equipment was parked right beside the monitors warming up in the mornings; this could have helped in contributing to the exceedance. It was also noted that on the 27th of November there were sustained winds over 25km/hr for much of the nights and into the day. This also could have pushed the PM 2.5 above the guideline. Lastly, we did have stripping operations starting in the East right beside the monitor, but the contractor did have a water truck present.

The roads were being watered daily while operations were running, however it was noted that the roads needed another application of calcium to help with dust control.

To address these issues, calcium was applied throughout the pit in early December, and all equipment was moved away from the monitors.

STAR OPERATIONS

November 2017 "Run Time Activites"

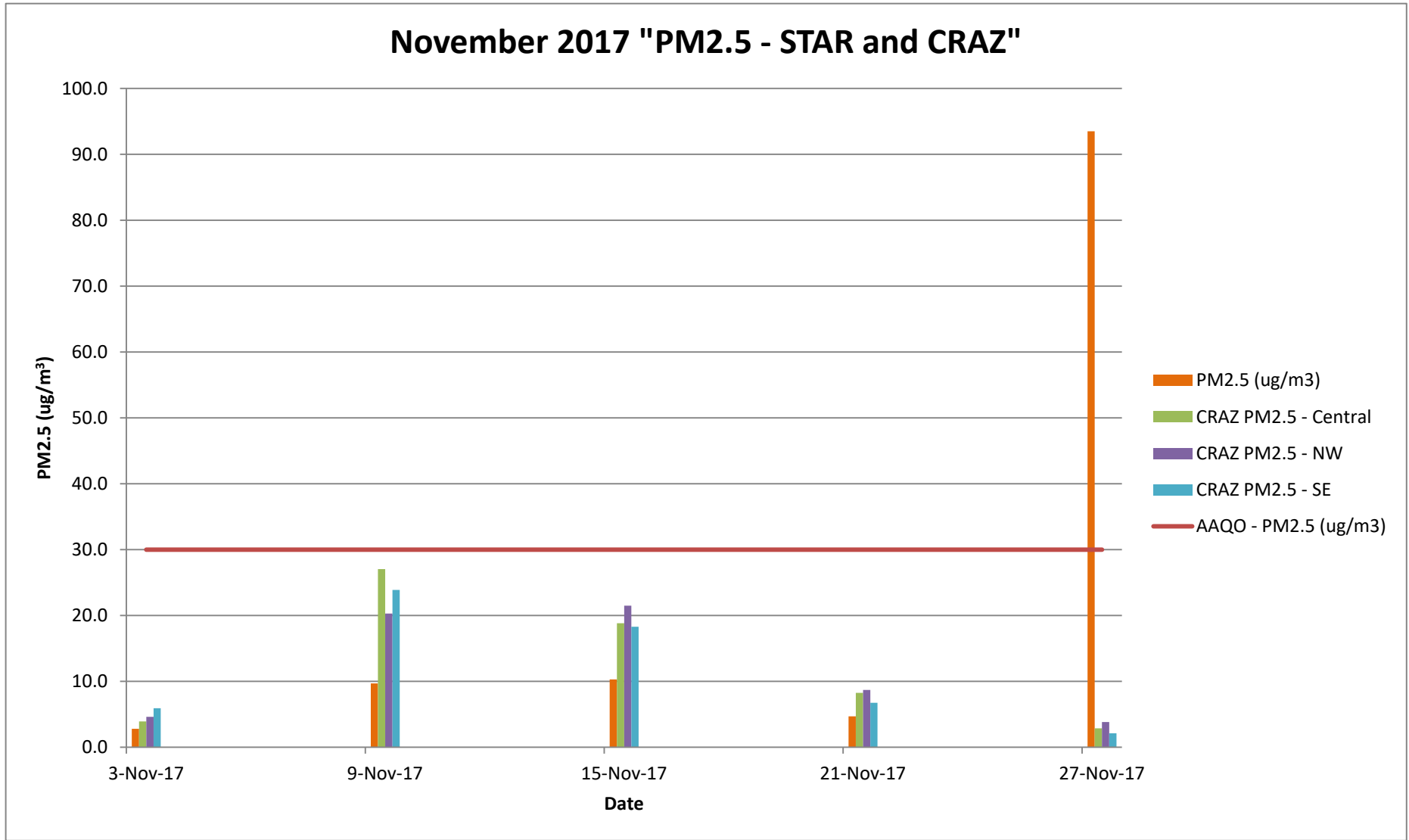


	3-Nov-17	9-Nov-17	15-Nov-17	21-Nov-17	27-Nov-17
West Crusher	16	16	16	16	16
East Crusher	10	10	10	10	10
South Crusher	16	10	10	10	10
Contractor	0	0	0	0	12
Wash Plant	0	0	0	0	0
AT Contractor	0	0	0	0	0

STONEY TRAIL AGGREGATE RESOURCE



STAR & CRAZ



STONEY TRAIL AGGREGATE RESOURCE

