



July 30, 2023

Christopher Yuen
Community Development Director
City of Essex Junction
2 Lincoln Street
Essex Junction, Vermont 05452

RE: Environmental Sound Monitoring – Relay for Life

Dear Mr. Pierce;

Vermont Air Testing Services (VATS) was retained by the City of Essex Junction to perform perimeter environmental sound monitoring at the Champlain Valley Exposition (CVE) for selected outdoor events held at the facility throughout the 2023 summer season. Sound monitoring was performed using a Quest Technologies Sound Pro DL Type II integrating/logging sound level meter (SLM) setup to collect broadband sound level readings. The SLM used for the monitoring was configured to log average sound pressure levels every 5 seconds in the broadband or A-weighted scale. The meter's microphone was fitted with a windscreen to minimize wind disturbance. The meter was calibrated to a 114 decibel (dB) tone prior to and following the noise monitoring event.

One SLM was deployed for the Relay for Life event held at CVE on June 9, 2023, through the early morning of June 10th. A single SLM was used to monitor the event and the SLM was placed on the east side boundary near the fence line adjacent to the access road approximately 50 feet south of the Green Gate entrance. The Relay for Life event was 12-hour continuous event held overnight in the Midway area of the CVE grounds. An event stage and sound system were set up immediately adjacent to the Ware Administration building with the relay participants staged along the pathways throughout the Midway area.

The weather at the start of the event was mostly cloudy skies with light winds out of the northeast up to 9 mph and temperatures in the mid 60's. Throughout the remainder of the event the skies were cloudy with calm winds and the temperatures dropping to the mid 50's.

Sound monitoring began at approximately 6:00 pm on June 9th and continued to 6:00 am the following morning on June 10th. The sound monitoring data is presented in the attached chart and a summary of the monitoring data is provided below.

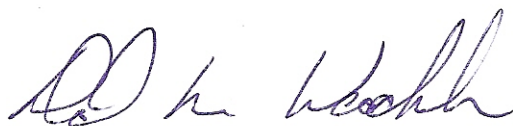
It should be noted that the regulated maximum noise levels change during the course of the event. The maximum hourly average sound level from 6 pm to 12 am was 78 dBA with the maximum 5-minute average sound level defined at 83 dBA, which corresponds to Hours 1 through 6. The allowable sound levels decreased to 55 dBA and 65 dBA, respectively for the midnight hour (Hour 7). The allowable noise levels further decreased to 50 dBA and 60 dBA, respectively, beginning at 1 am until the 6 am time frame (Hours 8 through 12). The table below presents the SLM property line hourly average sound data, the maximum sound levels and the time duration of sound levels above maximum allowable noise level in minutes.

	Hour											
	1	2	3	4	5	6	7	8	9	10	11	12
Hourly Average (dBA)	53.7	54.3	59.7	50.6	58.9	54.2	51.6	49.2	48.6	46.4	49.9	45.5
Max Sound Level (dBA)	66.3	62.7	66.5	63.2	67.3	65.1	66.9	61.5	60.2	60.9	56.6	58.7
Time Above Max Level (min)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.6	0.0	0.0

The data presented above indicates the hourly average sound limits were not exceeded at any time during the monitoring event. The maximum sound level was not exceeded along the east property boundary throughout the event. The maximum noise limit is defined as a sustained maximum five-minute average in the established sound criteria limits.

The sound level data is presented in the attached chart for the SLM used during the Relay for Life monitoring event held on June 9 through June 10, 2023. The sound levels measured throughout the event did not exceed the established sound level criteria without exception. The established sound level criteria used for monitoring outdoor events held at the Champlain Valley Exposition are defined in the Sound Indemnification Agreement between the Champlain Valley Exposition and the City of Essex Junction. In addition, the 12 am through 6 am noise criteria limits are specified in the City of Essex Junction Land Development Code, Chapter 7, Section 718.

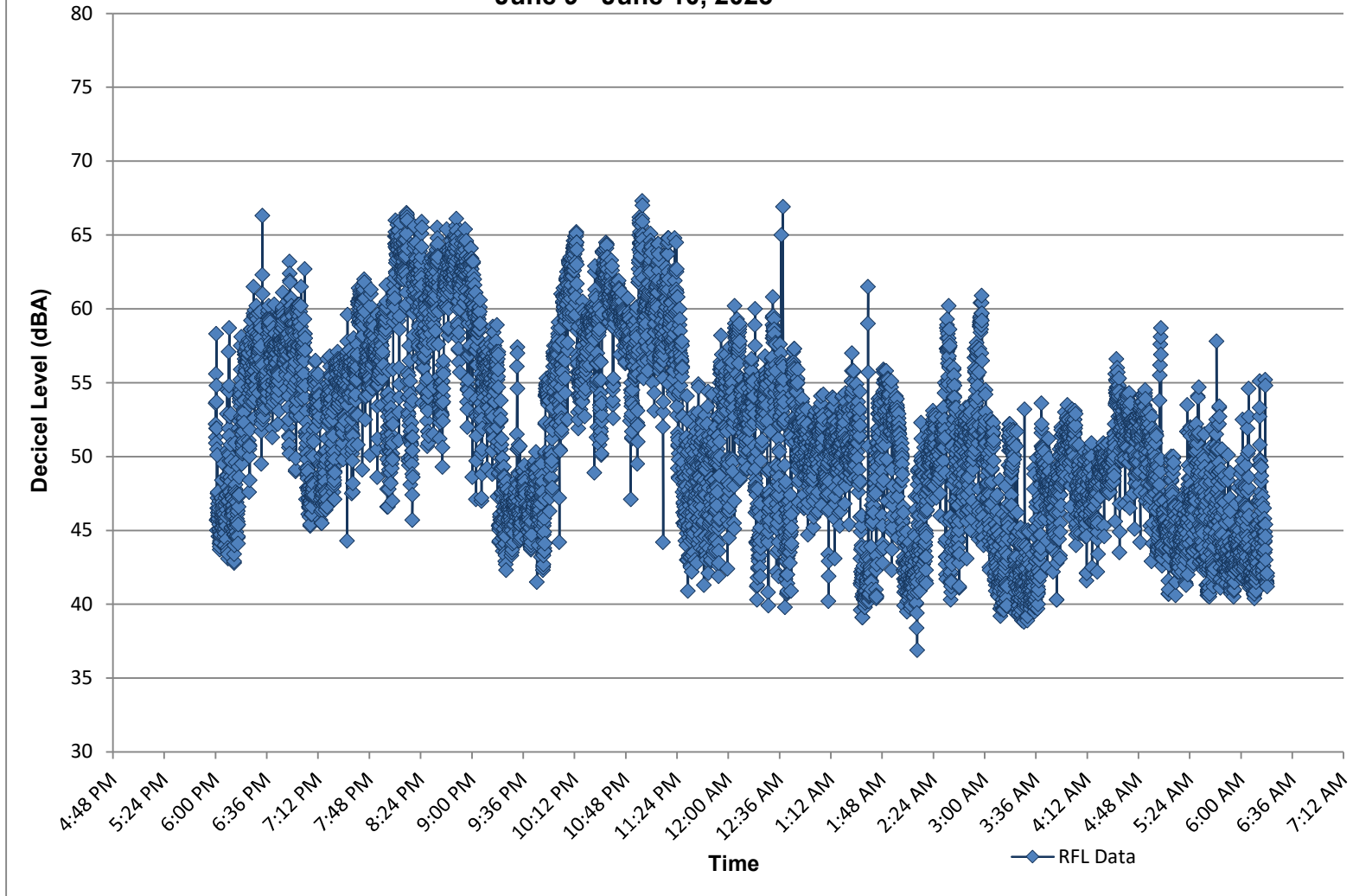
Best regards,



Principal

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**Champlain Valley Exposition
Relay for Life - East Boundary Noise Monitoring
June 9 - June 10, 2023**



	Hour 1	Hour 2	Hour 3	Hour 4	Hour 5	Hour 6	Hour 7	Hour 8	Hour 9	Hour 10	Hour 11	Hour 12
Hourly Avg	53.7	54.3	59.7	50.6	58.9	54.2	51.6	49.2	48.6	46.4	49.9	45.5
Max Levels	66.3	62.7	66.5	63.2	67.3	65.1	66.9	61.5	60.2	60.9	56.6	58.7
Exceeding Limit (min)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.6	0.0	0.0

	Hour 1 to Hour 6	Hour 7	Hour 8 to Hour 12	Hour 1 to Hour 6: 6 pm to 12 am	Hour 7: 12 am to 1 am	Hour 8 to Hour 12: 1 am to 6 am
Max Hourly Averages:	78 dBA	55 dBA	50 dBA			
Max Levels (5 min average):	83 dBA	65 dBA	60 dBA			