



September 22, 2021

Robin Pierce
Development Director
Village of Essex Junction
2 Lincoln Street
Essex Junction, Vermont 05452

RE: Environmental Sound Monitoring – Nathaniel Rateliff Concert

Dear Mr. Pierce;

Vermont Air Testing Services (VATS) was retained by the Village 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 2021 summer concert season. Sound monitoring was performed using one Quest Technologies Sound Pro DL Type II integrating/logging sound level meters (SLM) setup to collect broadband sound level readings. The second meter used for the sound monitoring at this event was a Quest Technologies Sound Pro SE capable of measuring sound levels and providing hourly averages. The Quest SE SLM does not have datalogging capabilities. The two SLMs used for the monitoring were configured to measure the sound pressure levels in the broadband or A-weighted scale. The Quest DL SLM was configured to also log average sound pressure levels every 5 seconds. Both meter's microphones were fitted with a windscreen to minimize wind disturbance. Each meter was calibrated to a 114 decibel (dB) tone prior to the monitoring event and the calibration was checked following the sound monitoring event.

Two SLMs were deployed for the Nathaniel Rateliff Concert event held in the Midway area at the CVE facility on July 28, 2021. Both the east and west fence-line boundaries were monitored for sound levels. The east boundary meter was located approximately 200 feet south of the Green Gate along the fence line, behind the Midway stage. The west boundary meter was located along the fence-line behind the Blue Ribbon Pavilion building. The concert was a nearly 4-hour event beginning at 6:30 on the Midway stage, which was oriented to the western property line. Both SLMs began collected sound data throughout the event. The Quest DL II SLM was deployed along the east boundary and due to technical issues, the data from 6:30 pm until 7:50 was lost. The Quest SE SLM was deployed along the westside property line and hourly average data was collected beginning with 7:00 pm hour.

The weather throughout the event was fair skies with light winds out of the north up to 6 mph with temperatures ranging from the mid 70's at the beginning to high 60's by the conclusion of the show. Sound monitoring along the eastern boundary collected data from 7:50 pm to the end of the show at 10:30 pm. The western boundary sound monitoring began at approximately 7:00 pm on July 28th. The sound monitoring data is presented for both meters in the attached charts and a summary of the monitoring data is provided below.

The maximum allowable hourly average sound level is established at 78 dBA with the maximum 5-minute average sound level set at 83 dBA. The table below presents the SLM east property line hourly

average sound data, the maximum measured sound levels, and the time duration of sound levels above maximum allowable sound level in minutes.

Table 1: East Property Line Data

	Hour 1	Hour 2	Hour 3
Hourly Average (dBA)	65.9	64.9	65.0
Max Sound Level (dBA)	79.9	74.3	76.0
Time Above Max Level (min)	0.0	0.0	0.0

The data presented above indicates the hourly average sound limits were not exceeded at any time during the concert event. The maximum sound level was not exceeded along the east property boundary throughout the event. The maximum sound limit is defined as a sustained maximum five-minute average in the established sound criteria limits (83 dBA).

The west property line sound monitoring data was collected as hourly averages only and is presented below.

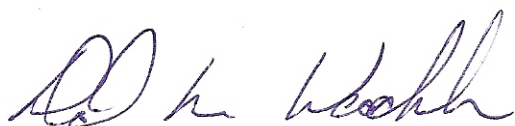
Table 2: West Property Line Data

	Hour 1	Hour 2	Hour 3
Hourly Average (dBA)	60.4	64.3	64.4

The data listed above indicates the west side property line sound levels were all below the 78 dBA average limit during the concert monitoring event. The maximum sound levels were not evaluated due to the lack of data logging of the Quest SE SLM.

The eastern boundary sound level data is presented in the attached chart for the SLM used during the Nathaniel Rateliff Concert event held on July 28, 2021. 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 Noise Indemnification Agreement between the Champlain Valley Exposition and the Village of Essex Junction.

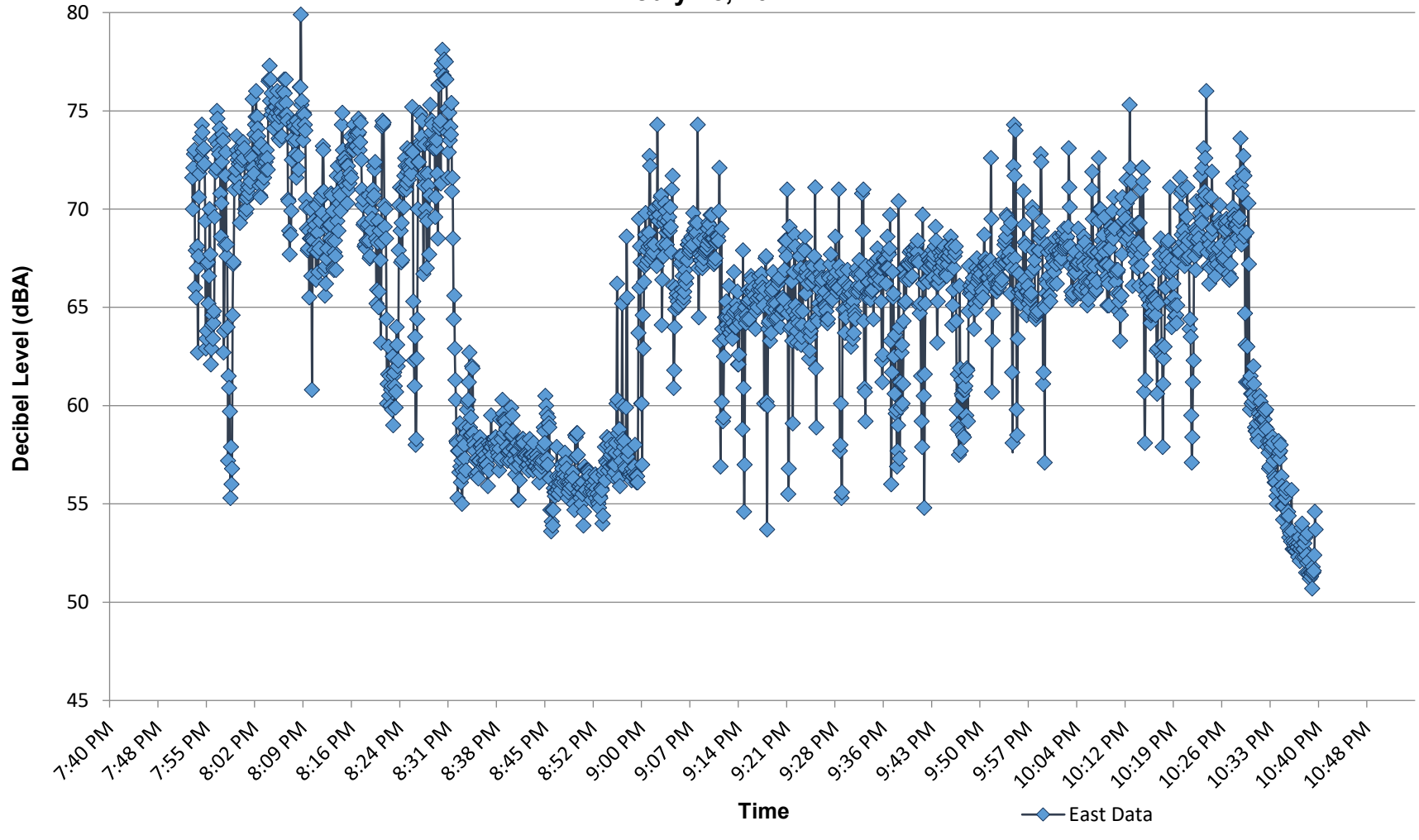
Best regards,



Principal

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**Champlain Valley Exposition
Nathaniel Rateliff Concert - East Boundary Noise Monitoring
July 28, 2021**



	Hour 1	Hour 2	Hour 3
Hourly Avg	65.9	64.9	65.0
Max Levels	79.9	74.3	76.0
Exceeding Limit (min)	0.0	0.0	0.0