



October 17, 2023

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

RE: Environmental Sound Monitoring – Wolfsgart 2023

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 outdoor event season. Sound monitoring was performed using 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 SLM microphone was fitted with a windscreen to minimize wind disturbance. The SLM was calibrated to a 114 decibel (dB) tone prior to and following the sound monitoring event.

One SLM was deployed overnight for each the Wolfsgart event held at CVE on July 27th through July 30th with three nights of overnight monitoring. A single SLM was used to monitor each night of the event and the SLM was placed along the eastern boundary fence line approximately 50 feet south of the Green Gate entrance. The Wolfsgart event was an overnight camping event with activities held throughout the evening primarily in the parking and RV camping areas at the fairgrounds. The weather for each night of the event was fair to cloudy skies with calm to light winds out of the north and west up to 10 mph. The temperatures ranged from the high 70's to the high 50's. Sound monitoring began at approximately 8:00 pm each evening and concluded the following morning at 8:00 am. The sound monitoring data is presented in the attached charts and a summary of the monitoring data is provided below.

The maximum hourly average sound level from 8 pm to midnight, which correlates to Hours 1 through 4 and Hour 12, was 78 dBA with the maximum 5-minute average sound level defined at 83 dBA. Hour 5 maximum hourly decibel level was 55dBA with a 5-minute maximum of 65 dBA. Hours 6 through 11, 1 am to 7 am, were limited to a 50 dBA hourly average with 60 dBA. The table below presents the Thursday night SLM property line hourly average sound data, the maximum sound levels and the time duration of sound levels above maximum allowable sound level in minutes.

	Hour											
	1	2	3	4	5	6	7	8	9	10	11	12
Hourly Average (dBA)	51.0	52.2	51.2	45.7	43.9	44.1	44.5	44.3	45.3	46.3	49.6	49.3
Max Sound Level (dBA)	66.2	64.6	56.2	55.0	48.0	47.3	49.5	50.9	59.1	56.8	62.8	64.3
Time Above Max Level (min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	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 sound limit is defined as a sustained maximum five-minute average in the established sound criteria limits.

The Friday night monitoring data is presented in the following table:

	Hour											
	1	2	3	4	5	6	7	8	9	10	11	12
Hourly Average (dBA)	51.3	53.6	55.8	52.9	51.9	59.2	48.8	48.3	48.7	49.0	48.0	45.4
Max Sound Level (dBA)	66.5	64.0	65.9	61.2	62.3	56.2	52.5	49.9	51.8	58.4	57.4	54.2
Time Above Max Level (min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Again, 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 also not exceeded per the definition of Max Sound Level along the east property boundary throughout the Friday night into Saturday morning.

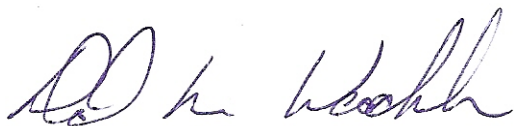
The Saturday night monitoring data is presented in the following table:

	Hour											
	1	2	3	4	5	6	7	8	9	10	11	12
Hourly Average (dBA)	53.7	52.7	51.4	48.5	43.7	44.0	43.9	43.1	43.5	43.9	45.1	47.6
Max Sound Level (dBA)	64.4	61.2	56.0	55.9	52.2	60.8	61.3	47.6	56.2	51.9	54.3	56.5
Time Above Max Level (min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

As with the other overnight data, the sound level data presented above indicates the hourly average sound limits were not exceeded at any time during the monitoring event. The maximum sound level was also not exceeded per the definition of Max Sound Level along the east property boundary throughout the Saturday night into Sunday morning event.

The sound level data is presented in attached charts for the SLM used during the Wolfsgart monitoring event held on July 27th through July 30th, 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.

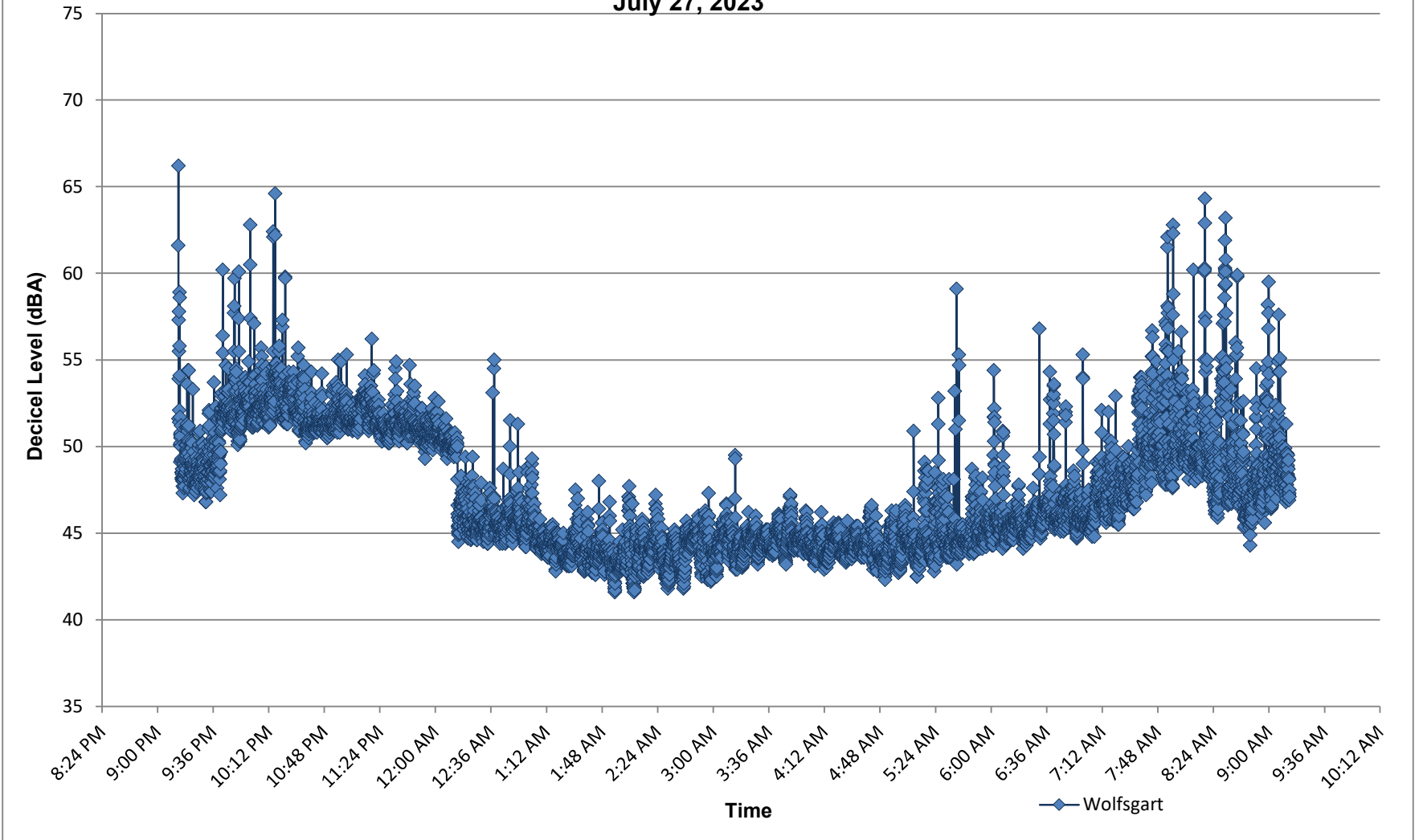
Best regards,



Principal

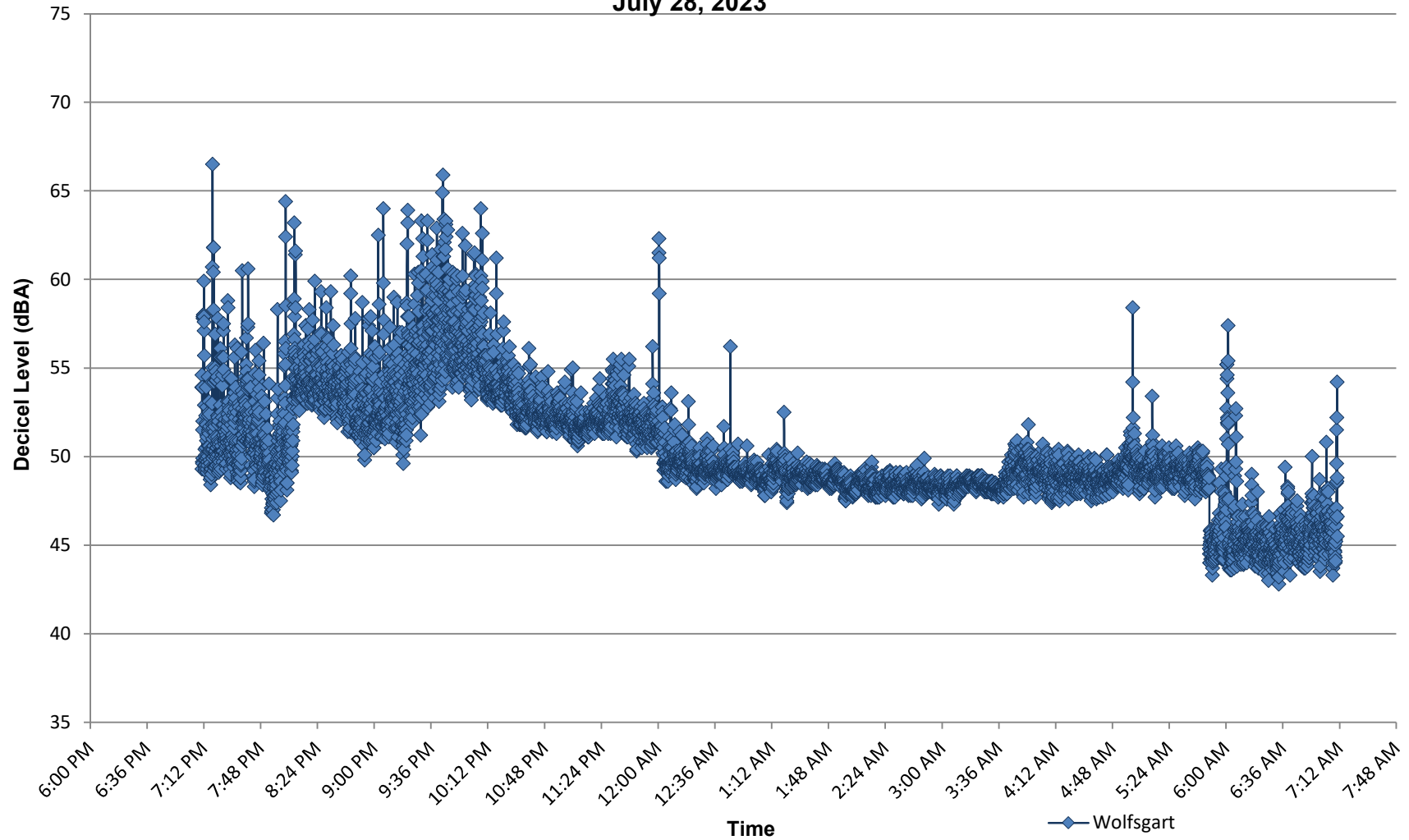
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**Champlain Valley Exposition
Wolfsgart - East Boundary Noise Monitoring
July 27, 2023**



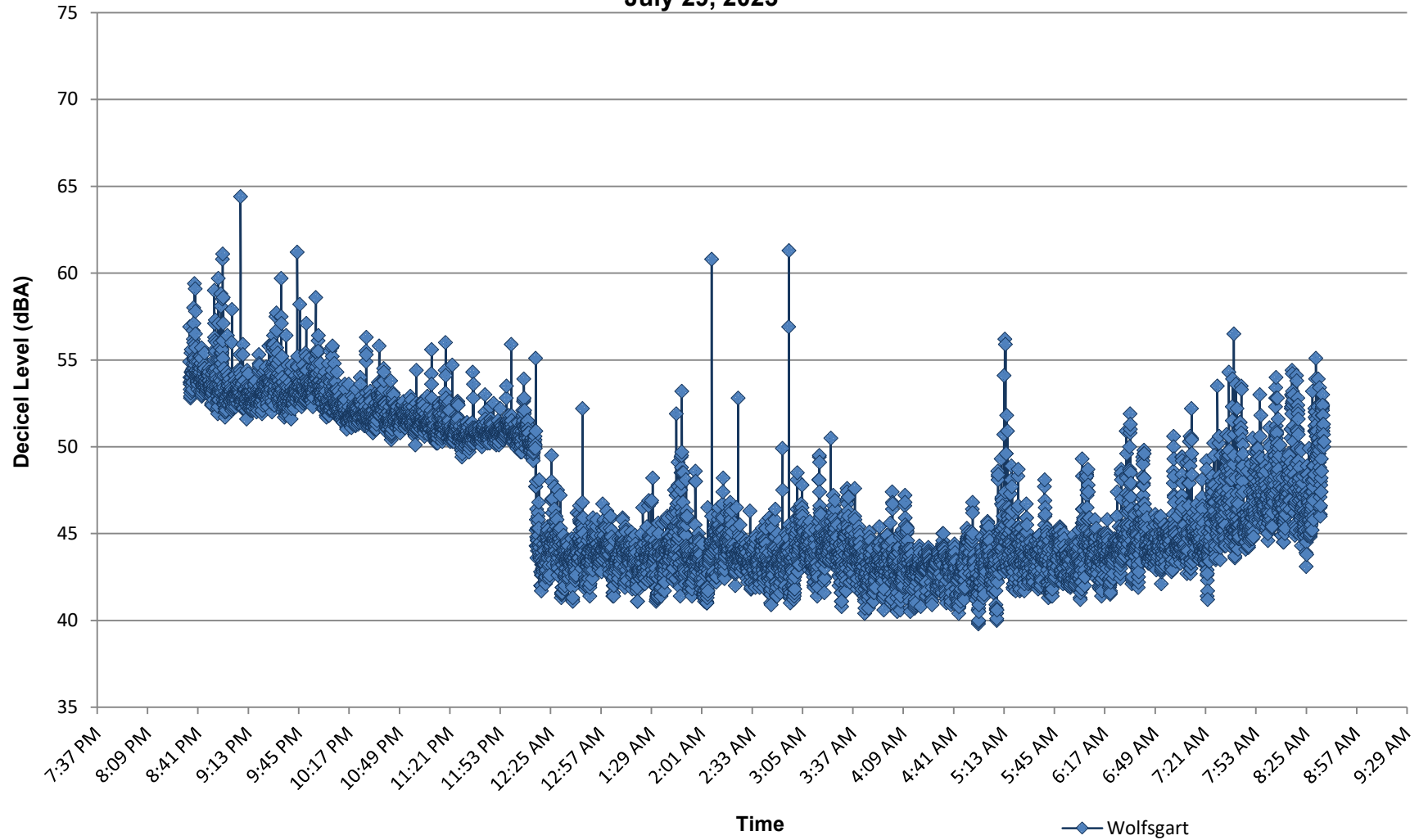
	Hour 1	Hour 2	Hour 3	Hour 4	Hour 5	Hour 6	Hour 7	Hour 8	Hour 9	Hour 10	Hour 11	Hour 12
Hourly Avg	51.0	52.2	51.2	45.7	43.9	44.1	44.5	44.3	45.3	46.3	49.6	49.3
Max Levels	66.2	64.6	56.2	55.0	48.0	47.3	49.5	50.9	59.1	56.8	62.8	64.3
Exceeding Limit (min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Hour 1 to Hour 4, Hour 12				Hour 5	Hour 6 to Hour 11		Hour 1 to Hour 4, Hour 12: 9 pm to 12 am, 7 am to 8 am					
Max Hourly Averages:	78 dBA			55 dBA	50 dBA		Hour 5: 12 am to 1 am					
Max Levels (5 min average):	83 dBA			65 dBA	60 dBA		Hour 6 to Hour 11: 1 am to 7 am					

Champlain Valley Exposition Wolfsgart - East Boundary Noise Monitoring July 28, 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	51.3	53.6	55.8	52.9	51.9	49.2	48.8	48.3	48.7	49.0	48.0	45.4
Max Levels	66.5	64.0	65.9	61.2	62.3	56.2	52.5	49.9	51.8	58.4	57.4	54.2
Exceeding Limit (min)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hour 1 to Hour 4, Hour 12				Hour 5	Hour 6 to Hour 11			Hour 1 to Hour 4, Hour 12: 9 pm to 12 am, 7 am to 8 am				
Max Hourly Averages:	78 dBA			55 dBA	50 dBA			Hour 5: 12 am to 1 am				
Max Levels (5 min average):	83 dBA			65 dBA	60 dBA			Hour 6 to Hour 11: 1 am to 7 am				

Champlain Valley Exposition Wolfsgart - East Boundary Noise Monitoring July 29, 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	52.7	51.4	48.5	43.7	44.0	43.9	43.1	43.5	43.9	45.1	47.6
Max Levels	64.4	61.2	56.0	55.9	52.2	60.8	61.3	47.6	56.2	51.9	54.3	56.5
Exceeding Limit (min)	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Hour 1 to Hour 4, Hour 12				Hour 5	Hour 6 to Hour 11		Hour 1 to Hour 4, Hour 12: 9 pm to 12 am, 7 am to 8 am					
Max Hourly Averages:	78 dBA			55 dBA	50 dBA		Hour 5: 12 am to 1 am					
Max Levels (5 min average):	83 dBA			65 dBA	60 dBA		Hour 6 to Hour 11: 1 am to 7 am					