

ILLINOIS POLLUTION CONTROL BOARD
October 29, 1992

VILLAGE OF MATTESON,)	
)	
Complainant,)	
)	
v.)	PCB 90-146
)	(Enforcement)
WORLD MUSIC THEATRE)	
JAM PRODUCTIONS, LTD. and)	
DISCOVERY SOUTH GROUP, LTD.,)	
)	
Respondents.)	

ORDER OF THE BOARD (by B. Forcade):

On October 5, 1992, respondents (Theatre) filed a "Motion To Strike Portions of Complainant's Reply Brief". On October 9, 1992, the Village of Matteson (Matteson) filed its response along with a "Motion to Strike Portions of Respondents' Brief" and a "Motion to Reopen Evidentiary Hearings". Theatre filed responses to these motions on October 16, 1992.

Theatre requests that a portion of complainant's reply brief be stricken because it is outside the record and not limited to matters in reply. Theatre objects to Matteson's reference to another legal proceeding. Theatre also objects to portions of complainant's reply brief that assertively advocate a position that was not presented in final briefs.

Matteson notes that its reference to the other legal proceeding was in reply to Theatre's unsupported claim that if there was any noise problem, it is demonstrably over. Matteson claims that its reply brief accurately conveys information of an event that occurred after the completion of hearing. Matteson further contends that no new arguments were presented in its reply brief.

The Board grants the motion to strike the portion of complainant's brief referencing other proceedings. This proceeding was not addressed at hearing and contains factual assertions rather than legal argument. While Matteson's characterization of the proceeding may be accurate, Theatre was not allowed an opportunity to address the matter. The Board denies the motion to strike portions of the brief that allegedly contain a new position. The Board does not find any new arguments raised in the reply brief.

Matteson in its motion to strike portions of the respondent's brief seeks to strike information contained in a footnote concerning improvements made to the berm of the theater between the 1990 and 1991 season. Matteson contends that this information has not been previously included in the record and is

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undocumented.

Theatre concedes that the cost of the project was not entered into the record but evidence of the scope of the project was included in the record. Theatre suggests that Matteson's motion is a direct response to Theatre's motion to strike portions of complainant's brief. Theatre characterizes the motion as being untimely and superfluous.

The Board grants the motion to strike but only as to the costs of the project. There is evidence in the record concerning the modification to the theater but there is no reference to the cost of the project.

Matteson further requests that evidentiary hearings be held to address the issue of residents' complaints during the 1992 season. The noise allegations focus on an event that occurred after the date of the last hearing in this matter. Matteson holds that additional hearings are required due to Theatre's contention that the problem has been solved. Matteson notes that any meaningful disposition should respond to the current status of noise violations.

Theatre notes that Matteson was given the opportunity to enter evidence on the 1992 season during the last set of hearings. Theatre characterizes Matteson's request as an attempt to correct inadequacies in the record. Theatre contends that it will be prejudiced by the hearings, due to the cost and a reduction in time for Theatre to prepare the theater for the 1993 season in compliance with the Board's final order.

The Board grants the motion to reopen evidentiary hearings. The Board believes that additional hearings are warranted in this matter. However, the Board does agree with Theatre's position that additional delays may jeopardize the ability of Theatre to make any necessary changes for compliance. In order to avoid delay the hearing officer is instructed to complete all hearings by December 18, 1992 and limit the focus of the hearing to the matters discussed in this order. Either party may present evidence on the issues which were stricken from the final briefs as being outside the record in this matter.

The Board will allow the record to be reopened regarding noise impacts, but only to the extent of receiving testimony regarding the impact after July 27, 1992, the date of the last hearing in this matter. In addition to focusing on noise complaints during this later period, the Board instructs the parties to focus on providing comments on an order which the Board is considering, and which is recited at the end of this order. Such comments will assist the Board in adopting the most effective, but least intrusive method to monitor the sound and control the sound level at the source. The Board believes that focusing on the remedy at this time will assist Theatre in achieving full compliance during the 1993 season. Lastly, the

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Board again requests comment on which SLUCM class best describes Theatre activities. For additional information on SLUCM, see Tex v. Coggeshall (October 29, 1992) PCB 90-182, p. 4-7.

Based on the record before the Board, it is evident that there continues to be a noise disturbance from the Theatre, at least through the first part of the 1992 season. While Theatre continues to contend that any noise problem has been alleviated, it has not presented evidence to support this contention. There is limited evidence on the improvements that have been made to the theater and no explanation of the effect any improvements have had in controlling the sound level.

The record reflects that there are three ways of reducing the noise impact from Theatre: (1) turn down the volume at the source, (2) make physical changes to the Theatre, or (3) employ some combination of the prior two options. The testimony regarding physical changes to the theater does not show any significant reduction to the impact of the noise at the receiving property and does not show these changes to be cost effective. (Tr. 7/27/92, at 14 - 16, 107.) As a result, the present record does not support an order containing mandated physical changes to the theater.

Upon reviewing the recommendations in the report and the testimony of the experts, the Board believes that the most viable option to control the sound is to reduce the volume at the source. The Board is considering an order which will establish octave band sound pressure levels which Theatre must meet at all locations surrounding the facility, on the basis of L_{eq} averaging over a period of five minutes. The Board is also considering a mandate that Theatre establish monitoring stations at two locations to allow for feedback on sound impacts and to record data for evaluating compliance.

The Board believes that Theatre can control the sound level and reduce the adjacent noise impact by operating the entire sound system at an appropriate level. The Board further believes that operation of the theater at a reasonable sound level will not substantially interfere with the operation of the theater or the ability of the theatre to hold concerts similar to the types of concerts that have been conducted at the theater in previous seasons. This is supported by the number of concerts held at the Theatre for which the record does not include any noise complaints. Concerts producing no noise complaints have included all types of music. A quick review of the concerts producing noise complaints does not show that any particular type of music greatly predominates. The Board's belief is further supported by the number of other outdoor concerts that are held at other venues with limited problems. The major difference that the Board foresees in the operation of the theater is a reduction in

the sound level and implementation of a mechanism to monitor and control the impact of the sound from the theater on the surrounding community.

The record shows that feedback mechanisms exist to allow near real-time sound control at the source based upon the impact such sound is having at selected receptor sites. The record so far implies that certain frequencies of sound are more likely to be causing adverse impacts to the surrounding communities. (Tr. 7/27/92, at 45 - 50.) Therefore, it may be possible to ultimately craft an order which sets more stringent limits on only a few frequencies and less stringent limits on other frequencies. This approach will allow Theatre to have a specific goal to work towards, and will provide notice to those who wish to perform at Theatre of what precise sound impact levels they will be expected to achieve, well in advance of any performance. Consequently, the Board will present an order that it is considering for this matter. At hearing the parties are expected to provide comments on the specifics of such order, i.e., whether it is workable and whether it provides a preliminary framework for reduction of sound impacts to reasonable levels at the selected receptor sites. Any such final order would also consider a mandate to cease and desist from violations of 35 Ill. Adm. Code 900.102 and from the modified numerical limitations imposed in the order.

Matters of Concern

Sound Monitoring

The Board's regulations at 35 Ill. Adm. Code 900.103 require that all sound measurements with the exception of impulsive sound, presented to the Board be taken on the basis of L_{eq} averaging over a period of 1 hour (1 hour L_{eq}). Procedures for sound measurement are found at 35 Ill. Adm. Code 951.100 et. seq. (1985). Due to the character of the sound from the theater it appears the use of the one hour average is inappropriate. It is a common practice for groups to perform for forty minutes, take a twenty minute break and return for another forty minutes. Each song will last for a few minutes and there is dead time between songs. During any given performance, there are periods where there is no sound or the sound is minimal. Averaging segments where there is excess noise with segments where there is no noise provides an inadequate measurement of the noise level in this particular proceeding.

Due to the pattern of noise emission from the theater, use of a shorter averaging period may be appropriate. Matteson's sound consultant recommended using an averaging period in the range of 1 to 5 minutes. Mr. Zak of the Illinois Environmental Protection Agency recommended using a much shorter time period in

the range of 10 seconds. The Board is considering the use of a five minute averaging period (5 minute L_{eq}) comprised of sound data measured in 10 second blocks (i.e. the 5 minute L_{eq} will be determined by averaging 30 10-second measurements on an energy basis) to provide accurate and meaningful data. Such process would need to employ good sound measurement techniques. (Tr. 7/27/92, at 37, 141, 35 Ill. Adm. Code 951.100 et. seq.) The parties are requested to address the use of a five minute time averaging period composed of 10 second data blocks.

Background or Ambient Data

The record shows that meaningful evaluation of noise data depends, to a large extent, on the quality of background or ambient data. (Tr. 7/27/92, at 28.) It further supports the idea that ambient data should not be collected immediately before and after the concert since the traffic noise associated with the concert may corrupt the ambient noise data. The Board is considering a requirement that ambient sound levels at each octave band be collected on nights when no concert is conducted, using the same 5 minute averaging time comprised of sound data measured in 10 second blocks. This would result in an advance determination that the background sound levels for each octave band at a particular time frame, say Tuesday evening from 8:00 p.m. to 9:00 p.m., is an L_{eq} value of X decibels. Data from several nights could be averaged to articulate a background number for each hour. This background number could be used to correct the raw 5 minute L_{eq} recorded on that night at that time during a concert event. If the parties cannot agree on a background data methodology, the Board may establish one.

Location

The record does not suggest locations for the monitoring stations. The parties should focus on which locations would be appropriate and the type of equipment to be located at the monitoring stations. Any such monitoring must be capable of producing an output showing 5 minute (or other interval to be determined) average L_{eq} sound levels on paper or electronic format that can be supplied to complainants and be preserved for future reference.

Sound Level

The Board has not been presented with data that measures the level of the sound which disturbs local residents. The parties should attempt to agree on an allowable sound level for each octave band or address why the levels in 35 Ill. Adm. Code 901.102 (for the appropriate SLUCM class) would not be appropriate.

Draft Order

The Board is considering the following as a final order:

1. Theatre is found to have violated 35 Ill. Adm. Code 900.102 and is ordered to cease and desist from future violations.
2. Theatre is directed to establish sound monitoring at a minimum of two locations, selected by Matteson, using instruments of the character discussed in Public Exhibit 2, which will provide data feedback to the facility for purposes of octave band sound control during concerts. All data shall be collected in accordance to 35 Ill. Adm. Code 951.100 et. seq. Such devices shall maintain a record of all sound data. One copy of such data shall be preserved by Theatre for future use, one copy of such data shall be provided to complainants.

All sound measurements shall be based on L_{eq} averaging as defined in 35 Ill. Adm. Code 900.101, using a reference time of five minutes.

3. Background or ambient data values shall be collected by Theatre on days or evenings when on concert is being conducted during hours when concert would typically occur. Ambient sound data collected during 3 monitoring dates may be averaged to provide an average hourly background ambient at each octave band. This data will be used to establish ambient level for hourly periods when no concert is being performed. Such ambient data shall be used for correcting the sound levels recorded during a concert for the same hourly period. This background will be used for all future concerts during that time period.
4. Theatre shall not cause or allow the emission of sound to any receiving Class A land which exceeds any allowable octave band sound pressure level specified in the following table, when measured using five minute intervals at any point within such receiving Class A land.

Octave Band Center Frequency (Hertz)	Allowable Octave Band Sound Pressure Levels (dB) of Sound Emitted to any Receiving Class A Land	
	Daytime	Nighttime
31.5	72	63
63	71	61
125	65	55
250	64	47
500	51	40

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1000	45	35
2000	39	30
4000	34	25
8000	32	25

Daytime shall consist of the hours between 7:00 am and 10:00 pm, local time. Nighttime hours shall be the hours between 10:00 pm and 7:00 am, local time.

5. Nothing in this order shall prohibit Matteson from conducting its own sound monitoring in accordance with the provisions of this order.

Hearing Requirements

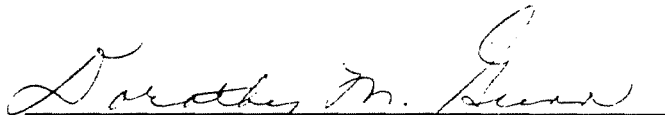
The hearing officer is ordered to set a hearing in this matter to address the above issues. The hearing officer is directed to set this matter for hearing after consultation with the parties. Hearing must be scheduled within 14 days of the date of this order. All hearings on this matter are to be completed on or before December 18, 1992. The record shall be completed with closing arguments on the record; no final briefs will be allowed. The Board will order expedited transcripts of the hearing. The hearing officer shall inform the Clerk of the Board of the time and location of the hearing at least 40 days in advance of the hearing so that public notice of the hearing may be published.

The Board also solicits comments from the Illinois Environmental Protection Agency (Agency) on the draft order which the Board is considering. The Board instructs the Clerk of the Board to forward a copy of this order to Mr. Greg Zak of the Agency.

IT IS SO ORDERED.

Board Member J. Theodore Meyer dissented.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above order was adopted on the 29th day of October, 1992, by a vote of 6-1.


 Dorothy M. Gunn, Clerk
 Illinois Pollution Control Board