

ILLINOIS POLLUTION CONTROL BOARD
July 13, 2015

IN THE MATTER OF:)
)
PROPOSAL OF CLIFFORD-JACOBS) R14-22
FORGING COMPANY FOR AN) (Rulemaking - Noise)
AMENDMENT TO THE SITE-SPECIFIC)
RULE AT 35 ILL. ADM. CODE 901.119)

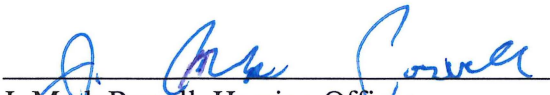
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STATE OF ILLINOIS
Pollution Control Board

HEARING OFFICER ORDER

On June 30, 2015, Wilber Heights residents Mark and Linda Kates filed a public comment (PC 5) signed by 24 other Wilber Heights residents. The residents' comment objects on a number of grounds to the Board's proposed amendments to the site-specific operational level applicable to Clifford-Jacobs Forging Company (Clifford-Jacobs), the proponent in this rulemaking. The comment generally asserts that Wilber Heights residents lacked adequate notice of Clifford-Jacobs' proposal; that sound emissions from Clifford-Jacobs' forging operation are more "pronounced" and prolonged than noise from any other source in the vicinity; that applicable zoning laws allow limited modification and improvement of Wilber Heights residences; that the land classification of Wilber Heights residential structures should remain Class A for purposes of the noise regulations even if the structures cease being used as residences; and that Clifford-Jacobs has not demonstrated an "economic need" to extend its allowable hours of operation as requested. PC 5 at 1-4.

Clifford-Jacobs is directed to file a public comment responsive to the residents' public comment. In addition to addressing the issues raised in the residents' comment, Clifford-Jacobs is directed, in the same filing, to respond to the Board's questions posed in Attachment A to this order. Clifford-Jacobs must file its comment with the Clerk of the Board no later than August 12, 2015. To that extent only, the public comment period is re-opened. Clifford-Jacobs' comment may be filed through the Clerk's Office On-Line (COOL) on the Board's website at www.ipcb.state.il.us.

IT IS SO ORDERED.



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Attachment A to Hearing Officer Order of July 13, 2015

1. Beginning on page 3 of the letter from Mark and Linda Kates (Kates letter) (PC 5), it is alleged that Clifford-Jacobs does not operate a second shift; that it has laid off people who had worked on the second shift; and that it has recently laid off an additional seven employees. Please address these assertions. Further, please provide information on the:
 - a. Current number of employees working with the forging equipment in building 4, including those trained to run the hammers, and discuss the extent to which this does or tends to vary annually; and
 - b. Number of hammer-trained employees that currently work on each shift.
2. Several Clifford-Jacobs' witnesses testified that Wilbur Heights has several potentially significant noise sources in its vicinity in addition to Clifford-Jacobs' facility, including a concrete plant, a railroad, a recycling center, a trucking company, and a fire station. *See, e.g.*, Tr. at 68-69. The Kates letter does not deny that other such noise sources exist, but asserts that "no noise within the area is more pronounced than the sonic boom generated by Clifford-Jacobs." PC 5 at 3. Please discuss the comparative differences in noise (A-weighted decibel) levels and attenuation in Wilber Heights from each of these sources as well as that produced by Clifford-Jacobs.
3. The Kates letter suggests that Clifford-Jacobs has not justified extending its current site-specific operational level overnight in lieu of complying with the default limit under 35 Ill. Adm. Code 901.105(c). PC 5 at 3. If, as proposed, Clifford-Jacobs were allowed to operate from 11 p.m. to 6 a.m., Monday through Saturday, but the default nighttime limit of 53.5 dB (A-weighted Leq) rather than the limit proposed at first notice were imposed on such operations, how would this affect future forging operations? How would future operations be affected if instead a limit of 58.5 dB (A-weighted Leq) were imposed on operations from 11 p.m. to 6 a.m.?
4. The Kates letter also asserts that Clifford-Jacobs' need for the relief it seeks is "not in any sense immediate" and is not adequately supported. PC 5 at 3. Clifford-Jacobs has stated that the greatest number of hammers used during one shift over the past decade was 6 during the first shift and 3 during the second shift, in 2011 and 2012. *See, e.g.*, Tr. at 47. Of the three largest hammers (25,000 lbs, 20,000 lbs, and 12,000 lbs), what is the greatest number of these that have been in operation in the past decade at the same time, on the first shift, and on the second shift?
5. On page 3 of the Kates letter, it states that the Kates' home is approximately one block south of Clifford-Jacobs' forging facility, and that "[n]o other noise generates a pulse that shakes the foundation of the house." PC 5 at 1, 3. In addition, the public comment of

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Helen Pheris states that her residence is half a block from the forging facility and that “[t]he hammers are equal to a small earthquake.” PC 3.

- a. Has Clifford-Jacobs examined the issue of the effects of ground vibrations on nearby residences and other structures?
 - b. Please discuss whether the ground vibrations generated when all 10 currently operational hammers are in operation could “shake the foundation” of a nearby house, and, if so, whether the “pulse” becomes attenuated with increasing distance from Clifford-Jacobs’ facility. Also, please address the same questions with all 14 hammers in simultaneous use.
 - c. Please comment on whether the ground vibrations mentioned in the Kates letter are caused by the sound emanating from the impact of hammers on the material being forged, or by the transfer of mechanical energy from the impact of the hammers to the ground. In addition, discuss whether there are strategies to mitigate any adverse effects that result from ground vibrations related to the operation of the hammers.
 - d. Please comment on whether and how the applicable ANSI standards under 35 Ill. Adm. Code 900.103 address the measurement of sound in the frequency range that would be observed as sound that “shakes the foundation” of nearby homes. (Note. The general provisions for highly-impulsive sound at 35 Ill. Adm. Code 901.104 provide that highly-impulsive sound is to be measured with “fast dynamic characteristic . . . with the procedure of 35 Ill. Adm. Code 900.103” See 35 Ill. Adm. Code 900.103, 901.104, and 901.105(c). The procedures of 35 Ill. Adm. Code 900.103 include several ANSI standards.)
6. Please provide a copy of, or web link to, the amended Champaign County zoning ordinance(s), or sections thereof, relating to Wilber Heights referenced on page 2 of the Kates letter. PC 5 at 2. Also, please specify the date of the last amendment to the pertinent ordinances or sections thereof.
 7. Dr. Schomer opined that if the 11 smaller hammers were in operation at one time, it would increase the noise levels by only 2 dB. See, e.g., Tr. at 111-12. Please clarify the decibel level that would exist at the control point and at the closest residence if only the three largest hammers were in operation at one time, and whether that level would be sufficient to generate a “wave that shakes the foundation of the homes closest to the facility.” PC 5 at 1. In addition, please provide the decibel levels at the control point and at the closest residence for each of the largest hammers separately, if that information is available.

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8. The Kates letter states that the “boom” sound from the forging process “generates a wave that shakes the foundation of homes closest to the facility.” PC 5 at 1. Further, the letter notes, “it is the sonic boom created by these highly impulsive sounds that concerns us regarding any overnight operations.” *Id.* Clifford-Jacobs’ witnesses testified about the company’s past experience concerning the use of exhaust mufflers or silencers to attenuate noise from the hammers. *See, e.g.*, Exh. 8 at 3-4; Tr. 69-70.
 - a. Because Clifford-Jacobs’ attempt to install silencers dates back to the early 1980s, please update the record with more current information on the state of the art on using mufflers and silencers to control sound emissions from impact forging hammers.
 - b. Please comment on whether installation of silencers on steam-driven hammers would reduce the “boom” sound from the hammers mentioned in the Kates letter.