

ILLINOIS POLLUTION CONTROL BOARD
December 20, 1984

IN THE MATTER OF:)
)
PETITION OF MOLINE FORGE) R83-33
FOR A SITE-SPECIFIC)
OPERATIONAL LEVEL PURSUANT)
TO 35 ILL. ADM. CODE)
901.105(d))

ADOPTED RULE. FINAL OPINION AND ORDER.

OPINION AND ORDER OF THE BOARD (by J. Marlin):

In its Proposed Opinion and Order of August 2, 1984, the Board proposed to adopt a new rule, 35 Ill. Adm. Code 901.114. First notice of this proposal was published at 8 Ill. Reg. 15274, on August 24, 1984. The Administrative Code Unit submitted a comment on September 10, 1984, concerning Illinois Register first notice format. No other comments were received. The Board made a non-substantive change in the wording of the proposed rule.

By order of the Board dated October 10, 1984, the proposed rule was submitted to the Joint Committee on Administrative Rules ("JCAR"). JCAR second notice review commenced on October 22, 1984. JCAR issued a Certification of No Objection to this rulemaking on November 8, 1984, ending the second notice period.

This rulemaking was initiated on November 23, 1983, when Moline Forge petitioned for a site-specific operational level for its forging shop as an alternative to compliance with the noise limits contained in 35 Ill. Adm. Code 901.105 (old Rule 206 of Chapter 8). The Illinois Environmental Protection Agency ("Agency") filed its response on January 24, 1984. A public hearing was held in Peoria, Illinois on March 12, 1984. No members of the public or press attended. This hearing was scheduled with three other similar forging noise cases involving central Illinois shops in order to conserve the time and funds of all the parties involved. A negative declaration was filed by the Illinois Department of Energy & Natural Resources on April 27, 1984. The Economic and Technical Advisory Committee concurred on July 18, 1984.

The Board appreciates the contribution of Kevin F. Duerinck who assisted in drafting this Opinion.

Section 901.105(d) allows an existing forging shop to petition the Board for a site-specific operational plan which will limit noise emissions from the shop. Petitioner must demonstrate that it is technically and economically infeasible for its shop to meet the numerical limits. Petitioner must also propose measures to reduce impulsive noise where possible and assess the consequential health and welfare impacts on the surrounding community.

Moline Forge is located at 4101 Fourth Avenue, Moline, Illinois. Its complex covers two square blocks. To the north are railroad tracks, residences and the Mississippi River. To the east and south are commercial and then residential property. To the west is scattered residential, commercial and industrial property. Significant noise sources in the area other than trains include trucks using Highway 92 just south of the forge.

All the property surrounding the forge when it was built in 1918 was vacant or used for farmland. The forge shop itself is marked as building X on Exhibit B to the petition. The building is 265 feet long, 120 feet wide and 55 feet high. It produces mainly forgings for the agricultural industry. The forge shop contains nine forging hammers weighing 2,500 to 8,000 pounds apiece and nine furnaces. The heat from the furnaces, 2200° to 2350° F, raises the temperature of the shop to 120° to 130° F. Windows and roll-open doors draw fresh air into the building and a new open roof system with two fans draws warm air out. When the outside temperature is over 100° F, the work force is composed of volunteers because temperatures inside are extremely hot.

The forging hammers current operate from 6:00 a.m. to 2:30 p.m. five days per week. Historically, at peak capacity the hammers have operated two shifts from October 1 through April 30, from 6:00 a.m. until 11:00 p.m., five days per week, with occasional work on Saturday from 5:00 a.m. until 3:30 p.m.; and one shift from May 1 through September 30, from 6:00 a.m. until 3:30 p.m. five days per week with occasional work on Saturday from 6:00 a.m. until 3:30 p.m. At peak capacity 85 to 90 people were employed compared with the current 65 people. Moline Forge requests that it be allowed to operate its nine hammers six days per week, from 6:00 a.m. until 11:00 p.m. Monday through Friday and from 6:00 a.m. until 3:30 p.m. on Saturday (Petition at 10).

Production decreased from 1980 through 1982 as will be shown by the table below. This resulted in less hammer blows and less impulsive noise. The decline is expected to level off in 1983. (Petition at 5).

	<u>Total no. of forgings on hammers</u>	<u>No. of blows/yr.</u>	<u>Tonnage of all forgings</u>
1980	1,015,000	9,642,500	4,060
1981	972,000	9,234,000	3,644
1982	558,000	5,580,000	2,790

Permissible impulsive sound levels for existing forge shops are found in 35 Ill. Adm. Code 901.105. The impulsive sound level emitted to residences (Class A land) cannot exceed 58.5 Leq during the day or 53.5 Leq at night. As to commercial establishments (Class B), the level cannot exceed 64.5 Leq. Based upon actual noise level measurements, Exhibit A to the petition shows that the maximum noise level is 70 Leq. Approximately 418 residences potentially could be exposed to sound levels in excess of 53.5 Leq. The noise level and the number of residences exposed to a certain noise level vary depending on wind velocity and direction. Additionally, the nighttime violations would not occur if there was no nighttime shift, as in the present situation.

Even though there are 418 residences theoretically exposed to the maximum noise level, there have been no noise complaints within the last eight years. When Moline Forge had operated late at night in the summer, it had received three complaints from residents. The complaints terminated once Moline Forge reduced its summer hours.

Various measures have been proposed to reduce the sound levels at Moline Forge. The ETA report prepared in a prior Board proceeding (R76-14) suggested that sound barriers could be installed between the forge shop and Class A residents to reduce the sound levels. The author of this report was and is the sound consultant for Moline Forge herein. He stated at hearing that this report was compiled and suggestions made before he had ever seen the plant (Tr. 33). Upon a tour of the plant he now states that installation of these barriers would impede and in some areas halt the flow of traffic to the forge shop (Exh. E to the petition), thus impairing productivity. He also proposed five measures that would reduce the sound levels from the forge shop by 17dBs (See Response filed 7/29/84), which included rebuilding the side walls with brick or glass block and enclosing the forge shop in a new warehouse. In addition, the forge shop roof will not accept the weight of additional fans and silencers (Exh. D to Petition).

Moline Forge cites a cost of over \$1 million for this project. The president of Moline Forge stated that it would have to shutdown operations if faced with such compliance costs (Tr. 30).

Moline Forge tried to control excessive noise at its forge shop. Warehouse and die storage buildings were built between the forge shop and Class A residences. This did not effectively reduce the noise level, however. Petitioner has continued to support the research conducted by the Forging Industry Education and Research Foundation.

The Board will grant Moline Forge's site-specific operational level for nine hammers, two shifts Monday through Friday and one shift on Saturday. The consultant does not foresee any adverse health effects from 70 Leq (Petition at 32). The Agency states that there would be no danger of hearing loss to area residents (Agency Response at 4).

Although no specific numerical noise level limitations are being imposed, it is assumed that noise levels will approximate those testified to by Moline Forge and its witnesses. Moline Forge should make efforts to lessen noise levels in the future as equipment is replaced and new technology for noise suppression becomes available. In the event that noise levels from the forge shop become excessive, citizens have the right to initiate proceedings to change the rule which accompanies this opinion.

The following operational plan as set out in the attached Order will be incorporated into 35 Ill. Adm. Code 901.114. Moline Forge will be required to comply upon the filing of the rule with the Secretary of State of Illinois.

ORDER

The Board hereby adopts the following rule, to be codified as 35 Ill. Adm. Code 901.114, and instructs the Clerk to file this rule with the Secretary of State:

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE H: NOISE
CHAPTER I: POLLUTION CONTROL BOARD

PART 901
SOUND EMISSION STANDARDS AND LIMITATIONS
FOR PROPERTY LINE-NOISE-SOURCES

Section 901.114 Moline Forge Operational Level

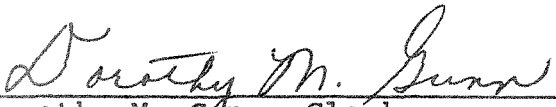
Moline Forge and future owners of the forging facility located at 4101 Fourth Avenue, Moline, Illinois, shall comply with the following site-specific operational level:

- a) Operate no more than nine forging hammers at any one time; and
- b) Operate its forging hammers only between the hours of 6:00 a.m. until 11:00 p.m. Monday through Friday and from 6:00 a.m. until 3:30 p.m. on Saturdays.

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 20th day of December, 1984 by a vote of

5-0.


Dorothy M. Gunn, Clerk
Illinois Pollution Control Board