

ILLINOIS POLLUTION CONTROL BOARD
December 6, 1984

IN THE MATTER OF:)
)
C.S. NORCROSS & SONS CO.) R83-31
PETITION FOR A SITE-SPECIFIC)
OPERATIONAL LEVEL PURSUANT)
TO 35 ILL. ADM. CODE 901.105(d))

PROPOSED RULE. FIRST NOTICE.

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

On November 18, 1983 C.S. Norcross & Sons Co. (CSN) 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. 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. Additional economic information requested by the Illinois Department of Energy and Natural Resources (DENR) was submitted on July 29, 1984. A negative declaration was filed by the DENR on September 28, 1984. The Economic and Technical Advisory Committee concurred on November 1, 1984.

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.

CSN is located at the intersection of Davis and Dean Streets, Bushnell, Illinois. Its complex covers two square blocks. To the north are residences and to the east another forging facility, a railroad line, commercial buildings and some residences. To the south is manufacturing and a few residences. The remainder of CSN's facilities are to the west.

All the property surrounding the forge when it was built in 1906 was largely vacant with only a few residences. The forge shop itself is marked as department C on Exhibit B to The Board acknowledges the work of Kevin F. Duerinck, hearing officer and administrative assistant for this rulemaking.

the petition. The building is 116 feet long, 88 feet wide, and 22 feet high. CSN produces forgings for the agricultural and trucking industry. The forge shop contains twelve forging hammers weighing 800 to 5,000 pounds apiece and thirteen furnaces. The 2200°F heat from the furnaces raises the temperature of the shop appreciably. Grade level openings on the west and south walls draw fresh air into the building and the six fans on the roof draw warm air out.

The forging hammers currently operate from 7:00 a.m. to 1:00 a.m., six days per week. Historically, at peak capacity the hammers have been operated during three shifts (24 hours). At peak capacity 170 people were employed compared with the current 120 people. CSN requests that it be allowed to operate its twelve hammers up to six days per week, from 7:00 a.m. to 1:00 a.m. Monday through Saturday (Petition at 9).

Production at CSN has declined recently as is shown by the table below. This decline resulted in less hammer blows and less impulsive noise. The production decline is expected to continue during 1983.

	<u>Total forgings on hammers</u>	<u>No. of blows/yr.</u>	<u>Tonnage of all forgings</u>
1980	2,848,000	28,480,000	5,000
1981	3,778,000	37,780,000	6,600
1982	970,000	9,700,000	1,700

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 45 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 will vary depending on wind velocity and direction. CSN received a few noise complaints when it operated three shifts. One was from 1974, another from 1976.

Various measures have been proposed to reduce the sound levels at CSN. The addition of more fans and silencers to the present roof is infeasible because the roof will not accept the added weight (Exh. D to Petition). All other measures are similarly technically or economically infeasible. The forge shop is surrounded by either easements or public rights-of-way, making it impossible to install noise control structures. To implement the recommended measures, \$261,600 would have to be spent. A CSN representative stated that this would force CSN to shutdown (R. 10).

CSN has tried to control excessive noise at its forge shop. A building on the north side of Davis Street was built as a barrier between CSN and residences. In addition, a noise absorbent material has been sprayed on the forge shop walls. While this has been somewhat effective, the incidence of fire has increased. This material absorbs an oil mist from the forging operation, which may then ignite from sparks from the hammers. The noise levels were measured with these abatement measures already in place.

The Board proposes granting CSN's site-specific operational level for twelve hammers, 7:00 a.m. to 1:00 a.m., Monday through Saturday. CSN's noise consultant does not foresee any adverse health effects from 70 Leq (R. 14). 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 CSN and its witnesses. CSN 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 below will be incorporated into 35 Ill. Adm. Code 901.120. CSN will be required to comply upon filing of the plan with the Secretary of State.

ORDER

35 Ill. Adm. Code 901.120 shall read as follows:

Section 901.120 C.S. Norcross Operational Level

C.S. Norcross & Sons Company and future owners of the forging facility located at the intersection of Davis and Dean Streets, Bushnell, Illinois, shall comply with the following site-specific operational level:

- a) Operate no more than twelve forging hammers at any one time; and
- b) Operate its forging hammers only between the hours of 7:00 a.m. and 1:00 a.m. Monday through Saturday.

35 Ill. Adm. Code 901.120 is directed to First Notice.

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk fo the Illinois Pollution Control Board, hereby certify that the above Proposed Opinion and Order was adopted on the 6th day of December, 1984 by a vote of 6-0.

Dorothy M. Gunn
Dorothy M. Gunn, Clerk
Illinois Pollution Control Board