

ILLINOIS POLLUTION CONTROL BOARD
February 14, 1973

ENVIRONMENTAL PROTECTION AGENCY)
)
 V.) #72-62, 262
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 RELIANCE QUARRY, INC.)

LARRY R. EATON, ASST. ATTORNEY GENERAL, ON BEHALF OF ENVIRONMENTAL PROTECTION AGENCY
BENJAMIN B. ALLEN, OF SMITH & ALLEN, ON BEHALF OF RESPONDENT AND COUNTER PETITIONER

OPINION AND ORDER OF THE BOARD (BY SAMUEL T. LAWTON, JR.):

Complaint was filed by the Agency against respondent Reliance Quarry, Inc. ("Reliance") on February 17, 1972, alleging that since July 1, 1970, continuing through the date of complaint and particularly on or about August 24, 1971, and August 26, 1971, Reliance had operated its facilities so as to "cause, threaten or allow the discharge or emission of dust and other contaminants into the environment so as to cause or tend to cause air pollution" in violation of Section 9 (a) of the Environmental Protection Act and Rule 2-2.11 of the Rules and Regulations governing the control of air pollution, effective pursuant to Section 49(c) of the Act. [Ill. Rev. Stats., Chapter 111 1/2, Sections 1001 et seq.] Subsequently, on June 26, 1972, Reliance requested a variance to allow reasonable time in which to correct the alleged violation. Respondent-petitioner waived disposition within 90 days (R. 290).

Reliance is the owner and operator of a limestone quarry that has been in continuous operation since 1904 (R. 50, 259). The quarry and related equipment are located within the municipal limits of the City of Alton and Madison County. Testimony indicates that the operation is carried on with blasting, followed by crushing and screening the limestone (R. 150). Trucks and heavy equipment are used by Reliance to transport the limestone from one operation to the next and ultimately for sale and distribution (R. 151, 260 et seq.). Dust emitted during these operations is the subject of the complaint.

The area surrounding the quarry was not as highly residential at the outset of the operation as it is presently (R. 262). The site is now substantially surrounded by homes. There is evidence that respondent has expanded its operation recently by eliminating the wooded areas on its property which separated the quarry operation from some residential areas (R. 46, 51, 94, 236). The woods acted as a natural barrier, preventing the spread of limestone dust, which is the subject of this complaint. Testimony establishes violation of the Act. Witnesses identified the emission sources as the crushing machines, limestone storage piles and trucking operations. (R.150, 163, 323).

More citizens seemed to be affected by the trucking operation when respondent increased the number of entrances to the site (R. 16, 17, 28, 36, 103, 195). A lesser number believe that they were affected primarily by the rock crushing procedure (R. 61, 63, 125). Citizens testified that Reliance was lax in wetting down the limestone dust which accumulated on the roads and was emitted from the trucks as they were operating. Sometimes the emissions were heavy enough to be quite noticeable and reduced visibility "like fog" (R. 20, 65, 81, 102, 105, 114). This was the source of continuing citizen concern. Testimony indicated that in certain cases citizens experience difficulty breathing because of the emissions or that the emissions aggravated an already existing respiratory ailment (R. 18, 109). However, the primary impact of the emission was on enjoyment of property. Many testified that the limestone dust destroyed vegetation (R. 17, 25, 35, 38, 80) gardens or crops (R. 64, 191), while others indicated that the limestone caused damage to their automobiles' finish (R. 17, 90, 108) or to their laundry (R. 88, 105, 108). The continued presence of the dust necessitated inordinately frequent cleaning both inside and outside their residences (R. 80-1, 93, 107, 191). The emissions prevented the enjoyment of yards and outdoor furniture because the accumulation of presence of dust during the times of leisure activity (R. 16, 35, 108).

By Agency calculation, respondent's emissions appear not to comply with Rule 2-2.11. For a process rate of 150 tons per hour (R. 168) the Agency calculates emissions for an uncontrolled plant of 230 pounds per hour (Complaintant Exhibit 4) compared to an allowable emission of 55.4 pounds per hour according to the Rule. Certain factors make the judgement on compliance only an estimation. The first is that the emission factors used are from Table 8-19 of AP-42 (Exhibit 5) and are given only an average rating in terms of accuracy. Secondly, calculations are based on uncontrolled processes whereas the Agency knew spray nozzles or water was applied to trucks before dumping into the primary crusher (R. 252), to the hammermill (R. 229), and to the transfer point (R. 255). In regard to the efficiency of the water sprays in reducing dust we do not have specific figures. But if we assume a 40% efficiency, as was done by respondent's counsel, we would still arrive at emissions of 144 pounds per hour (Complaintant Exhibit 6) versus the allowable 55 pounds per hour. In addition, an outside consultant hired by respondent stated that based on dust he observed emitting from the hammermill, if the water spray were 10% efficient, it would be "damned good." (R. 342).

Respondent-petitioner admitted that it had no idea as to the level of emissions that it was "putting out." (R. 183). Testimony of Reliance indicated that they were aware of citizens complaints but had undertaken no program until the filing of this complaint. Reliance then requested a variance in order to allow them time to bring their operation into compliance without having to shut down. The company subsequently attempted to formulate a system that would control limestone dust emissions. At the first hearing they suggested a water scrubber, cyclone system to be installed to their hammermill and several months later changed this proposal to a bag house system. They have stated that the project can be completed within 90 days. (R. 274,314).

The program as outlined will have a high probability of compliance, particularly if all options for dust removal are taken. The basic program involves entrainment (using a hood) of particles smaller than 1/32 of an inch from the hammermill discharge conveyor (R. 324). After being captured the particles are removed from the air in a bag house that has an efficiency of removal of 99% (R. 318). The basic system has enough reserve in terms of blower capacity to also entrain dust, using separate duct systems, from the transfer point (R. 333) and perhaps even from the primary crusher. There is also reserve capacity if the hood system as designed does not entrain the desirable quantity of dust and must be expanded.

The basic system will cost in the range of \$20,000.00 to \$25,000.00 and take three months to install (R. 368). For this system to operate at its best efficiency the water sprays on the primary crusher, hammermill and transfer point would not be used. Simply having the dust collector on the hammermill exit conveyor would eliminate dust emissions from the hammermill and screening plus recrushing and rescreening processes, and thus it is estimated that more than 90% of the emissions would be collected by the filter system. The resulting emissions according to the AP-42 emission factors would then be reduced to 23 pounds per hour compared to an allowable 55 pounds per hour.

The company was aware of the dust emissions far in advance of the time that the complaint was filed (R. 61-74, 112, 230-1, 234, 246, 273). They had instituted some procedures for wetting down the areas, including roadways and storage piles, where emissions were a particular problem, but testimony shows that they did not follow this procedure conscientiously (R. 68, 154). This was a question of whether the situation had improved during the period in question; most witnesses believed it had not (R. 19, 36, 60, 78, 135).

We find that the company violated the Act and Regulations by causing and threatening to cause air pollution. We find it inexcusable that the company made no attempt prior to the filing of the complaint to assess its emissions problems and bring them into compliance. The company also has been lax in following its own operation procedures (R. 63, 68, 156, 159, 242-43). Their method of operation has resulted in significant emissions of limestone dust which have been not only discomfoting but somewhat destructive. We find that the respondent's violations are mitigated only by its localized effect and present desire to bring the quarry into compliance. For the violations we assess a penalty in the amount of \$3,000.

Reliance has stated that it plans to implement abatement procedures at all points of its process where emissions problems do exist including the storage piles, transfer operations, primary crusher and hammermill (R. 253, 304). Reliance has indicated its willingness to post a performance bond (R. 267). Respondent-petitioner shall submit, for approval, a program of abatement to the Agency and the Board within 35 days from date of this order. Reliance will post a bond in the amount of \$20,000.00 to insure the completion of the program. The program shall be completed within 120 days from its approval by the Agency.

IT IS THE ORDER of the Pollution Control Board that:

1. Respondent is found to be in violation of Section 9 (a) of the Act and Rule 2-2.11 of the Rules and Regulations. Penalty in the amount of \$3,000 is assessed for the aforesaid violation. Payment shall be made within 35 days of the date of this Order, by check or money order payable to Fiscal Services Division, Environmental Protection Agency, 2200 Churchill Drive, Springfield, Illinois 62706;
2. Within 35 days from the date hereof, Reliance shall submit to the Board and the Agency, a program for the abatement of air pollution and nuisance as demonstrated by the record in this proceeding. This program shall be completed within 120 days from the date of approval by the Agency.
3. Respondent shall post with the Environmental Protection Agency within 35 days from the date of this Order a bond or other security in the amount of \$20,000.00, in form satisfactory to the Agency, which shall be forfeited in the event the completion deadline provided in paragraph 2 of this Order is not met. The bond shall be mailed to Fiscal Services Division, Environmental Protection Agency, 2200 Churchill Drive, Springfield, Illinois 62706.

I, Christan Moffett, Clerk of the Illinois Pollution Control Board, certify that the above Opinion and Order was adopted on the 14th day of February, 1973, by a vote of 3 to 0.


