

ILLINOIS POLLUTION CONTROL BOARD
May 15, 1975

QUALITY READY MIX CONCRETE COMPANY,)
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 Petitioner,))
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 vs.)) PCB 75-73
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ENVIRONMENTAL PROTECTION AGENCY,))
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 Respondent.))

OPINION AND ORDER OF THE BOARD (by Mr. Henss):

Quality Ready Mix Concrete Company seeks variance to operate an air curtain destructor in the disposal of approximately 20,000 cubic yards of unsalvageable wood materials. Without specifying the Regulation from which variance is sought, Petitioner states that it requires the variance for about 90 days.

Petitioner has contracted with the Chicago Northwestern Transportation Company to dispose of waste wood and waste cargo materials which accumulate from the dismantling of about 2,000 railroad cars. The dismantling program is being conducted in the East Clinton, Illinois railroad yard near Fulton, Illinois.

In the dismantling program, Chicago Northwestern removes an average of 12 cubic yards of unpainted, untreated lumber per railroad car from about 30 cars per day. Petitioner is able to salvage about 15% of the clean lumber leaving some 10 cubic yards per car that must be disposed of. Another 1 1/2 cubic yards of waste cargo, wood chips and sawdust per car is separated from the clean lumber and hauled away separately.

Petitioner states that it can dispose of the waste by hauling to a county landfill 17 miles away at a cost of over \$1,000 per day or by burning with aid of an air curtain destructor. A sketch submitted with the Petition for Variance indicates that the nearest residence is located about 1500 feet to the east of the proposed burning site. A chemical plant is shown to be about 2000 feet to the northeast.

An Agency investigator visiting the site in February 1975 observed an accumulation of wood approximately 30 feet high, 50 feet wide and 1 mile long located on railroad property. The investigator was informed that Petitioner intends to use Model

200 Kutrieb air curtain destructor which has a rated design capacity of 12-15 tons per hour. Petitioner plans to burn at the rate of about 10 tons per hour. Typical emissions from the burning fo clean wood waste with an air curtain des-
tructor are as follows*:

Particulate matter	4.6 pounds per ton
hydrocarbons	0.2 pounds per ton
nitrogen dioxide	4.0 pounds per ton

*The Effects of Operating Variables and Refuse Types on the Emissions From a Pilot-Scale Trench Incinerator. Proceedings before the Incinerator Division of ASME, 1968, by J.O. Burckle, et al.

Petitioner told the Agency that it is paid a disposal rate of \$27.00 per car. This rate will possibly change since Petitioner and Chicago Northwestern are renegotiating the contract to accomodate certain increased costs. At the current rate of \$27 per car Petitioner stands to lose money each day if it disposes of the wood waste by landfilling.

The Agency "assumes" that Petitioner seeks a variance from Rule 203(e)(2) of the Air Pollution Control Regulations. (Particulate Emission Standards for Incinerators) While it is obvious Petitioner cannot qualify for an Agency permit under Rule 504(a)(4), it is questionable whether Rule 203(e)(2) is the applicable Rule as the Agency assumes.

When the Board adopted the Open Burning Regulations, R70-11, recognition was given to evidence showing that an air curtain destructor could substantially reduce emissions from open burning. Rule 404(a)(4) allowed the Agency to issue permits for the burning of landscape waste where such burning was to be conducted with the aid of an air curtain destructor and other conditions were satisfied. [Note: With the adoption of certain amendments in November 1972, R72-11, the Open Burning Regulations became Chapter 5 of the Air Pollution Control Regulations, e.g. Rule 404(a) became Rule 504(a)]

In Nickle Brothers Tree Service vs. EPA, PCB 71-392, the Board granted a variance from the "Open Burning Regulations" in order to allow Nickle Brothers to burn approximately 120 tons of waste building lumber with the aid of an air curtain destructor. In so doing, the Board opened the door to possible extension of the Open Burning Regulations to include a permit provision for the burning of clean wood waste with an air curtain destructor in addition to landscape waste disposal.

It is interesting to review the history of open burning regulations and applicable definitions. In the Rules and Regulations Governing the Control of Air Pollution, Rule 2-1.1

prohibited the practice of open burning by salvage operations. Open burning was defined as "any burning of combustible materials wherein the products of combustion are emitted directly into the open air without passing through a stack or chimney". In comparison, the Rules defined an incinerator as "combustion apparatus designed for high temperature operation in which solid, semi-solids, liquid or gaseous combustible waste are ignited and burned efficiently and from which the solid residues contain little or no combustible material".

With the adoption of the Environmental Protection Act in 1970 came a new definition for open burning: "Open burning is the combustion of any matter in the open or in an open dump" [Environmental Protection Act, Section 3(h)]. Open burning was defined by Rule 401(e) of the Open Burning Regulations, R70-11, as "the combustion of any matter in such a way that the products of the combustion are emitted to the open air without originating in or passing through equipment for which a permit could be issued under Section 9(b) of the Act".

Adoption of Chapter 2 of the Air Pollution Control Regulations brought into play a modification of the word "incinerator". As defined in Rule 201, an incinerator is a "combustion apparatus in which refuse is burned".

In PCB 71-392 the Rule from which variance was granted obviously was Rule 402(a) [now Rule 502(a)] since Chapter 2 of the Air Pollution Control Regulations had not been adopted at the time the variance was granted. Rule 502(a) is a general prohibition against open burning. An extension of this variance (PCB 73-99) failed to specify any particular Rule.

An air curtain destructor was also used for disposal of landscape waste and clean wood waste in M & S Wood and Paper Company vs. EPA, PCB 72-236. Here the Board stated:

"It is not known whether the destructor can comply with the otherwise applicable particulate emission standard for wood incineration of 0.2 grains per standard cubic foot of exhaust gas, PCB Regs., CH. 1 Rule 203(e)(5), so we cannot very well require that standard to be met as the Agency requests; this is precisely why a variance is requested."

Neither the Order in PCB 72-236 nor subsequent renewals of this variance (PCB 73-368, November 15, 1973 and PCB 74-243, September 5, 1974) specified the exact Rule from which the variance was granted. It appears, however, that Rule 203(e)(2) was at issue.

We believe that we should now state specifically which Regulation is applicable to the use of an air curtain destructor for disposal of wood waste other than landscape waste. In deciding that, we must determine whether an air curtain destructor is or is not an incinerator.

As defined in Rule 201 an incinerator is a "combustion apparatus in which refuse is burned" (emphasis supplied). Effective operation of an air curtain destructor requires that the material to be burned be deposited in a pit of specified dimensions. Air generated by the destructor is blown through a plenum chamber and nozzle arrangement as a flat sheet or curtain of air diagonally downward across the pit. The air is deflected by the back wall to the bottom of the pit, across the pit against the material to be burned, and directed finally upward at the front wall until it reaches the underside of the air curtain. Combustion takes place not in the air curtain destructor itself but in a pit adjacent to the destructor.

Thus, by definition, an air curtain destructor is not an incinerator. No combustion takes place in the air curtain destructor. The air curtain destructor is merely a device which aids in the rapid open burning of material and reduces the amount of contaminants emitted from the open burning.

The Board makes this ruling to differentiate between an incinerator specifically designed to burn wood waste (as might be employed by a sawmill, for instance) and the air curtain destructor which is designed to promote more complete destruction of air contaminants generated during open burning. The Board finds that the applicable Rule for the destruction of wood waste other than landscape waste with the aid of an air curtain destructor is Rule 502(a).

The Agency states that one of its representatives observed some uncontrolled burning of wood material by Petitioner in January 1975. It is believed that a warning with respect to this incident prompted Petitioner's decision to seek this variance and to use an air curtain destructor. The Agency recommends grant of variance.

The Board finds that Petitioner has met the requirements for the grant of a short term variance. Landfilling of the wood waste would be economically prohibitive for Petitioner.

Petitioner states that the disposal program should last about 90 calendar days. However, the record does not support any variance extending beyond July 31, 1975. The United States Supreme Court has recently ruled that the states can grant

variances if such variances do not interfere with the attainment or maintenance of national ambient air quality standards (Train, Administrator, Environmental Protection Agency vs. Natural Resources Defense Council, Inc. No. 73-1742). Illinois is required to attain the ambient air standards by July 31, 1975. This Board can grant individual variances beyond that date only if the variances do not interfere with the attainment and subsequent maintenance of national ambient air quality standards. There is no statement, testimony or data in this record which would indicate whether the grant of this variance would interfere with those air quality standards. Therefore, the variance must terminate on July 31, 1975.

If Petitioner chooses to submit a new petition for variance, such petition must address the air quality issue.

This Opinion constitutes the findings of fact and conclusions of law of the Illinois Pollution Control Board.

ORDER

It is the order of the Pollution Control Board that Petitioner Quality Ready Mix Concrete Company be granted variance from Rule 502(a) of the Air Pollution Control Regulations to and including July 31, 1975 in order to dispose of clean wood waste with an air curtain destructor. This variance is subject to the following conditions:

1. Only clean, unpainted and untreated lumber waste shall be incinerated; all other lumber and debris shall be separated prior to burning and disposed of by some other method.
2. An operator must be in attendance at all times when the air curtain destructor is in operation.
3. Feed to the destructor shall be adjusted so as to prevent any visible emissions from the destructor during burning.
4. Material used to promote combustion shall be of no lesser quality than #2 fuel oil.
5. Burning shall be conducted only on days when wind velocity is between 5 and 25 miles per hour.
6. Burning shall be conducted only between the hours of 8 a.m. and 4 p.m. Quantities of material to be burned shall be restricted to an amount which can be consumed within these hours.

7. The burning site shall be provided with adequate fire protection and with such equipment as necessary to control accidental fires.

8. The air curtain destructor shall be operated in accordance with the manufacturer's operating instructions.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order was adopted on the 15th day of May, 1975 by a vote of 5-0


Christan L. Moffett, Clerk
Illinois Pollution Control Board