



Rules 2-2.12, 2-2.31(f), and 2-2.41 requiring submission of a Letter of Intent and an ACERP; as an affirmative defense, it contended that strict and complete daily compliance with the regulations (including preparation and filing of an ACERP) was not technologically feasible since the available pollution control equipment had not yet been proven to be effectively adaptable to its installation. Subsequently, the Agency amended its complaint alleging additional Ringelmann violations and the failure to obtain an installation permit in accordance with Rule 2-3.110 and Section 9(b) of the Act. Incinerator stipulated that no installation permit had been applied for or obtained.

On May 27, 1971, Incinerator requested a variance for six months from this Board. During this period, Incinerator proposes to limit the waste material it receives to residential garbage and refuse, to complete installation of a wet scrubber baffle system on one of its two units, to institute an intensive engineering study to determine the most suitable control apparatus in order to meet applicable standards, and to seek permit approval from the Agency for installation of this control equipment on at least the second of its two units. The Agency recommended that the variance be denied. In the alternative, it recommended that any grant of the variance be conditioned upon Incinerator 1) completing installation of control equipment within six months which would bring the plant into complete compliance with the Act and applicable Rules, 2) conducting stack tests upon completion of the project, and 3) posting a performance bond and paying an appropriate monetary penalty. The enforcement and variance hearings were ordered consolidated for hearing purposes.

[Incinerator's Operations and Facilities]

Since 1958, Incinerator has operated a municipal refuse incinerator near Cicero. The 500 ton per day plant was constructed for approximately \$2.5 million and employs about 25 people. Private scavengers, the City of Chicago, the Village of Stickney, and the Town of Cicero dispose of refuse of the Cicero facility. At present, refuse from the municipalities comprises approximately 90% of the plant capacity. The incinerator operates seven days a week.

Refuse received at the plant arrives in trucks and is brought into the tipping area. The trucks dump the material into a pit where it is picked up by a crane and placed in a charging hopper. The refuse is then drawn across two sets of drying grates, and then over an ignition grate where air is induced under it. It then passes into the rotary kiln where it is burned. From the rotary kiln emissions pass through a spray chamber and out the stack. The

two rotary kiln incinerators are rated at a capacity of 250 tons per day each; this rate of tonnage is based upon a 20% moisture content. No fuel is used to supplement the burning operation in the kilns. The kilns share a mutual stack, but have separate baffle and spray scrubbing chambers.

The efficiency of the incinerator is relative to the temperature achieved in the combustion chamber. If an adequate temperature is not maintained, complete combustion will not occur. Normally, a temperature of 1,200° to 1,400° is also necessary to control odor. Incinerator has installed several thermocouples in the gas stream to measure temperature and transmit this information to a recorder device which measures smoke density conditions. These thermocouples tend to become covered with slag forms and particulate matter and are not regularly serviced. This has necessitated the operator maintaining a visual check of the burning operation in order to maintain its efficiency.

Since April 1, 1971, Incinerator has restricted the type of waste it will accept to domestic garbage and industrial paper wastes.

#### [Contaminant Control Methods]

As of this date, Incinerator has no adequate control devices on its stack. In 1968, Incinerator designed baffle walls for its gas stream and has since added more sprays to aid in the dispersion of the water. In its application for a variance, Incinerator proposes to reduce its emissions by installing a Detrick-Jens ("D-J") type wet scrubber system and to perform subsequent stack tests to determine efficiency. This installation would be completed within three months time. The D-J control equipment could be subsequently incorporated into a Venturi type scrubber or electrostatic precipitator if such were shown to be necessary. In a six-month period, Incinerator would seek operational data and test results of adaptable control equipment. It would then furnish the Board with recommendations from its consulting engineers; if a permit were granted by the Agency, Incinerator would proceed with installation as soon as construction would permit. In the interim, Incinerator proposes to continue in effect its embargo on wastes other than domestic garbage and industrial paper refuse.

#### [The Issues]

The issues presented in this case are as follows: Whether Incinerator's operations violate Section 9(a) of the Environmental Protection Act; whether the particulate emissions from its stack violate Rule 3-3.232 of the Rules and Regulations Governing the Control of Air Pollution; whether Incinerator has violated Rule 3-3.232 by the emission of smoke denser than Ringlemann No. 2;

whether Incinerator's admitted failure to file a Letter of Intent and an ACERP is overcome by the alleged lack of technological feasibility; and whether Incinerator's request for a six-month variance should be granted.

[Violation of Section 9(a) of the Act]

Section 9(a) of the Act states as follows:

"No person shall cause or threaten or allow the discharge or emission of any contaminant into the environment in any state so as to cause or tend to cause air pollution in Illinois, either alone or in combination with contaminants from other sources, or so as to violate regulations or standards adopted by the Board under this Act."

Air Pollution is defined as follows:

"Air Pollution is the presence in the atmosphere of one or more contaminants in sufficient quantities and of such characteristics and duration as to be injurious to human, plant, or animal life, to health, or to property, or to unreasonably interfere with the enjoyment of life or property."

Numerous nearby residents appeared at the hearing and testified to the frequent inundation of particulate matter which their property, sidewalks, homes received from Incinerator's operations. They also described the foul odor which floated their way from the plant.

Michael Longo, Chief Investigator for Air Pollution Control for Cicero, cited numerous occasions when he personally viewed excessive emissions and also recalled the various complaints which he, as a municipal official, had received over the years. On November 2, 1967, Longo observed heavy black smoke being emitted. Upon the receipt of several complaints on September 20, 1968, he called Incinerator and was informed that the burning of several tires had caused heavy black emissions. On November 8, 1970, he saw heavy black smoke being emitted once again and identified some as being pieces of burnt rags. As recently as May 1, 1971, he witnessed dense black smoke being emitted.

Several nearby residents of Cicero established that the plant definitely constitutes a nuisance to their neighborhood. John Marone, a Cicero police officer, indicated that he often found soot and burnt pieces of rubbish in his yard and had, in fact, done so on the morning of the hearing. Fly ash often covers the patio,

swimming pool, and lawn of the Robert Beilfusses. This fly ash looks like burnt paper in sizes ranging up to larger than a silver dollar. Richard Pope, who lives two blocks northwest of the plant, finds that odors drift toward his house when the wind is from the southeast. He has walked from his house to the incinerator and watched the fly ash come down. Barbara Grill described a sweet sickening odor which emanates from the plant. Anthony Kovanic owns a motel several blocks north of Incinerator. He conducted his own investigation and isolated the source of the emissions which were covering his motel every night to Incinerator. He finds the emissions heavier at night and on weekends. He must arise every morning at 5:30 a.m. to remove the fly ash from the walkways of his motel; since it is so thick, he has to wash down the motel exterior at least four times a week. He spends \$1,000 a month for rug cleaning supplies; at another motel which he owned rugs were shampooed semi-annually, here he must do it almost every day. The continued operation of the Incinerator plant with its frequent, almost daily, shower of particulate matter and the accompanying odors, constitutes nothing short of a nuisance to the neighborhood. All this testimony conclusively establishes that the emissions from the Incinerator operation "interfere with the enjoyment of life or property" of those who live near the plant.

The sole question to be determined, then, is whether such interference is "unreasonable" as required in the definition of air pollution in the Act. This Board has previously held that air contaminant emissions are "unreasonable" within the meaning of the Act when there is proof that there is an interference with life or property and that economically reasonable technology exists to control the contaminant emissions. (Moody v. Flintkote, PCB 70-36, 71-67, and Holmes Brothers v. Merlan Inc., PCB 71-39. Both elements have been proved in this case. The interference is documented in the record, some of which has been detailed in the opinion. In the instant case, the testimony firmly established that control technology for such particulate emissions has been in existence since 1968. In 1966, Incinerator first became concerned about controlling emissions from the plant. After receiving several complaints from the Town of Cicero in 1967, Incinerator in 1968 designed baffle walls for the area of the gas stream exit. Yet complaints about emissions have continued unabated and Incinerator has made no further installation of control equipment since 1968. Expert witnesses for Incinerator indicated that since 1967 control equipment has been available which would significantly minimize, if not totally eliminate, the nuisance emissions from the plants. For example, an incinerator in Tampa, using a medium energy wet scrubber installed in 1967 has achieved an average emission level of .16 grains per standard cubic foot (scf). The

Illinois standard, using the ASME measurement method, is .2 grains/scf. (See Rules 3-3.232, 3-3.113). The City of New York 73rd Street installation has a Venturi scrubber -- a control device which has been available for many years. With recently installed electrostatic precipitators, the Chicago Northwest Incinerator is presently in compliance. Using a cyclone which it installed in 1970, the Atlanta incinerator can presently meet the .2 standard. The history of such installations across the country amply illustrate that control equipment, though possibly insufficient to meet the .2 Illinois standard, has long been on the market to at least control the nuisance level. We find that Incinerator has been incredibly dilatory in seeking to correct its nuisance problem.

Even today in its variance request, the company only requests a variance to install a pilot unit on one of its two units, and that not until three months hence. Incinerator first became concerned with stack emissions in 1968 when it installed baffle walls in the gas stream. At this time, Incinerator contacted International Incinerator, the manufacturer of the Cicero facility. From 1967 to 1970, the manufacturer made no recommendation to Incinerator due to the enormity of the problem and its economic aspects, but rather merely "held (Incinerator's) hand and helped them look at the thing." In early 1970, the Incinerator plant manager took a trip to Dayton, Ohio to inspect the incineration facility there. As a result of this trip, Incinerator hired the Dayton engineering firm to prepare an interim program in order to eliminate the complaints. The firm prepared and completed plans for the wet baffle scrubber system in late 1970 or early 1971. Incinerator also awarded a \$5,000 contract to Dow Chemical for a feasibility study. Dow suggested that Incinerator investigate a high energy Venturi scrubber with a recycle system for the water. Dow proposed that Incinerator install a pilot Venturi scrubber unit costing \$30- to \$40,000. But, since Dow could furnish no warranty or guarantee on the installation, Incinerator was reluctant to pursue their proposal program. This was now mid-1971 and Incinerator contacted the City of Chicago to inquire into the operation of the Overtron unit at their facilities. They have since hired three consultants to help make the economic and technical feasibility study; they concurred in the recommendation for the D-J scrubber system as a method to abate the nuisance problem. Thus, to date, Incinerator has nothing but generalized plans for compliance. Testimony established that the D-J system became available in 1967, though it has acquired increased sophistication over the years. This system, when installed, will eliminate the nuisance, though it might not meet the new codes. (Ex. 32, 33). Incinerator's own delaying tactics have stalled the installation of new equipment and have therefore made its interference with the life and property of its neighbors unreasonable.

A penalty in the amount of \$20,000 shall be imposed upon Incinerator for the air pollution which it has inflicted upon its neighbors in violation of the state statutes. A cease and desist order shall be issued against Incinerator which order shall require the cessation of operations at the Cicero plant within ten days of the entry of the order until adequate control devices are installed to control the nuisance violation. A continued nuisance shall not be allowed when adequate control equipment is and has long been available. Incinerator shall not be permitted to operate its facility until it has made adequate showing to the Agency that the nuisance control equipment is installed and ready for operation and that Incinerator has determined the control method which it intends to employ to meet the applicable Illinois standard.

We are not unmindful of the hardship which such a cease and desist order may impose upon Incinerator, but this is a self-imposed hardship brought about by the company's own dilatoriness. We have granted a ten-day breathing period over which the company may phase its close-down operation and in which the municipalities presently using the facility may search out other means of disposal. We are not convinced by the record that an unreasonable hardship will be imposed upon the municipalities; there are at present several land disposal sites and incinerators within the Chicago metropolitan area available to service their needs in the interim. Further, Incinerator estimates the installation time for a unit such as the Detrick-Jens wet baffle system will take about three months. Incinerator presently has \$200,000 to \$250,000 available to make the outlay for control equipment. There will also be a hardship imposed upon the twenty-five employees of Incinerator. Though some may be involved in the installation work, others will undoubtedly be laid off until the facility abates its nuisance. We are dealing in this case with a virtually uncontrolled nuisance where control techniques are available and capable of being installed within three months. The brevity of this installation time with a consequent short lay-off and the nuisance character of the emissions convince this Board that any hardship imposed upon the employees is worth it in this case. We point out again that the hardship on Incinerator is one that it has imposed upon itself due to its dilatoriness. Thus, the employees may also look to their management for the source of their hardship. Incinerator points out that the incinerator was in place and in operation when all of the complaining residents purchased their homes and that the facility is located in what would be generally described as an industrial area. Under Section 33(c) (iii) of the Environmental Protection Act, the Board is directed to take into consideration the "suitability or unsuitability of the

pollution source to the area in which it is located, including the question of priority of location in the area involved." About thirty of the homes in the area were built when the incinerator was constructed. Just because an area can be characterized as chiefly industrial and Incinerator may have been there before some of the individual complainants purchased their homes, does not entitle the facility to create a nuisance for its neighbors.

[The Particulate Regulations -- Violation]

The Agency alleged that Incinerator was in violation of Rule 3-3.232 of the Rules and Regulations Governing the Control of Air Pollution. For the type of Incinerator at this facility the standard allowable emission rate in the State of Illinois is .2 grains/scf adjusted to 50% excess air. (See Rules 3-3.232(a), 2-2.11). Using the U.S. Environmental Protection Agency's document, the Compilation of Air Pollution Emission Factors and a study document from the 1968 National Incinerator Conference, an Agency Environmental Control Engineer estimated that the emissions from the Cicero facility would be .66 grains of dust/scf collected to 50% excess air. This is more than three times in excess of the Illinois standard. This .66 rate was computed using a 75% efficiency rating on the present baffle installations at Incinerator, rather than the 30-60% rating granted them by the federal document. Thus, emissions may actually be in excess of .66 grains/scf. Expert witnesses for Incinerator claimed that an emission rate cannot be determined for incinerators using the federal documents, but that a stack test must be run. As we have held previously in EPA v. Lindgren Foundry, PCB 70-1, the Agency is entitled in the absence of stack test data supplied by the affected operation to rely upon the Compilation of Air Pollution Emission Factors or other such similarly accepted documents in establishing a prima facie proof of a violation. The opposing party is then entitled to dispute the accuracy of such data by reference to other more conclusive studies, see EPA v. Norfolk and Western Railway Co., PCB 70-41, or by conducting its own stack tests. Incinerator did neither in the instant case. The documents which Incinerator did reference do not show the basis of the federal documents to be incorrect or that more accurate determinations were available in the literature. Thus, Incinerator must be judged to have violated the applicable Illinois standard.



[Permit, Ringelmann, and ACERP Violations]

Incinerator has stipulated to the fact that no permits were obtained for any equipment installed. In 1968, Incinerator installed a refractory baffle system to the spray chamber; in 1970, monitoring equipment was installed. We believe that the evidence established that this equipment was installed in an attempt to reduce and monitor emissions and thus fall within the classification in Rule 3-2.110 as equipment "intended for eliminating, reducing, or controlling emissions of air contaminants." The baffle system was installed in 1968 to counter air pollution complaints from Cicero. The plant manager for Incinerator referred to other installations where the control method was "a wet baffle spray chamber," like Incinerator's.

Incinerator also has stipulated to its failure to file a Letter of Intent or an Air Contaminant Emission Reduction Program. It raises an affirmative defense, however, that such filing was technologically unfeasible since the available pollution control equipment had not yet been proven to be adaptable to this or similar installations. The plant manager stated that he did not think that Incinerator had sufficiently formulated its plans so as to file with the Air Pollution Control Board or the Agency. The plans were subject to change almost constantly, he indicated. This defense misreads the intent of the ACERP program -- to place the violating facility on a prospective program of compliance. Quite often this has involved a research and development program by the affected company or a commitment to an industry-wide effort. Compliance dates were frequently far into the future (and sometimes too far) in order to allow the technology to catch up with the existing standards. Incinerator's failure to file has only encouraged its lax approach toward compliance. It apparently has made no effort aimed at achieving any advanced technology in the industry, nor has it spent any sums to the present directed toward compliance at its own plant. A \$5,000 penalty shall be imposed upon Incinerator for its failure to comply with the ACERP filing requirements in the Rules and Regulations Governing the Control of Air Pollution.

The Agency has also charged that Incinerator has violated the Ringelmann regulation contained in Rule 3-3.232:

"No new incinerator shall emit or produce smoke the appearance, density or shade of which is No. 2 or darker on the Ringelmann Chart except that during an operational breakdown or while cleaning air pollution control equipment smoke may be emitted of an appearance, or density of No. 2 or darker on the Ringelmann Chart for a period or periods aggregating not more than three (3) minutes in any observed sixty (60) minute period.

William Zenisek, an Agency engineer trained to read smoke without chart, testified that he witnessed dense smoke emissions in excess of Ringelmann No. 2 between 8:00 and 8:07 a.m. September 30, 1970. On March 4, 1971, he observed emissions to go from No. 4 to No. 2 Ringelmann between 4:55 and 5:00 p.m. After 5:00 p.m. the emissions decreased to below No. 2. Both violations extended for a period in excess of the three minutes allowed under the Rules. Tom Rosenbaum, the Office of the Attorney General, is also qualified to read by visual observation and witnessed Incinerator's stack on June 14, 1971, between 5:45 and 6:00 p.m.; he observed No. 3.5 to 4 Ringelmann for the fifteen-minute period. Though the Board finds more acceptable Ringelmann readings taken and simultaneously recorded, we believe that these two witnesses by their training are able to determine Ringelmann readings when there is such an apparent gross violation. Further, their testimony as to density was corroborated by that of Longo, Cicero's Air Pollution Control Inspector. Thus, Incinerator is found to have violated the applicable Ringelmann standard.

[Incinerator's Variance]

Incinerator, as was previously indicated in this opinion, filed a petition for variance with the Board. No date is given for final compliance under this variance.

We then face the issue of whether the variance should be granted. The Environmental Protection Act states that a variance shall be granted to a petitioner if he proves that compliance with the Act, the rules and regulations promulgated thereunder, or an order of the Board creates an "arbitrary and unreasonable hardship." (Section 35) We have previously held that in determining whether such a hardship exists, we will balance the benefits and detriments to the public against the benefits and detriments to the petitioner. This is not an equal balance. The Board will look to the benefits to the public as being the strongest of factors. After review of the evidence as presented, we feel that the variance in this case should be denied.

Under the variance petition as stated, Incinerator requests permission to continue its gross violation of the law for at least the next three months. No control unit will be installed until after that time -- and that will be a pilot unit on one of the kilns. The detriment to the public in this case consists of a continuing nuisance. This condition must cease and we believe that the public benefit in this case sufficiently outweighs any detriment that petitioner would suffer as a result of the shutdown of its facilities. Installation of control equipment to abate the nuisance can be completed within three months; funds are available in sufficient amounts to incinerator to complete the installation.

As regards compliance with the existing rules and regulations, Incinerator in essence really has no plan other than to conduct a study of its emissions and possible control methods. We are satisfied by the record that several control methods do exist and are presently in operation on plants meeting the Illinois standard. Control technology is available now in the form of a high-energy wet scrubber. Though certain technical and water treatment problems may await final solution, we do not view them as a roadblock to the installation of proper equipment. Delay has gone on long enough while the petitioner dawdles and others in the industry do his work for him. Before Incinerator will be allowed to operate its facility, it will be required to present to the Board and the Agency a variance petition designed to bring the facility into compliance with the applicable Illinois standard.

The above constitutes the Board's findings of fact and conclusions of law.

#### O R D E R

1. Within ten days from the entry of this order, Incinerator shall cease and desist from the operation of its facility in Cicero, Illinois. Operation of the facility shall not commence until Incinerator has installed and has ready for operation either the Detrick-Jens wet baffle system or another comparable control device approved by the Agency, and until it has filed the variance petition required under paragraph 3 of this order, and until it is in compliance with paragraph 4 of this order. The control device installed must adequately abate the nuisance pollution as described in the opinion.

2. In the event that Incinerator decides to proceed with the installation of the equipment provided for in paragraph 1 of this order, it shall post a performance bond in the amount of \$200,000 when it seeks approval from the Agency for the equipment provided in paragraph 1. This sum, in the form of a bond or other adequate security satisfactory to the Agency, shall be forfeited to the State of Illinois should Incinerator operate its facility in violation of paragraph 1 of this order. Upon completion of the installation of the equipment referred to in paragraph 1, this performance bond shall be remitted.

3. Before Incinerator may commence operation of the facility after shutdown, it shall submit to the Agency and the Board a supplemental petition for a variance. Such petition shall contain a firm program for bringing the facility into compliance with the existing Illinois standards. Upon the filing of such program, the Board shall authorize a further hearing on the variance petition and shall enter such further order as it deems necessary under the circumstances.

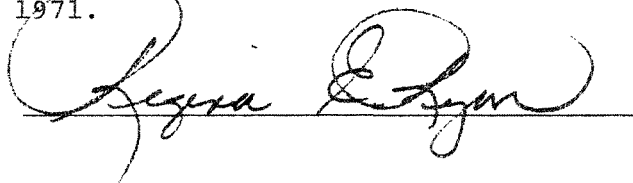
4. Even after compliance with the preceding paragraphs of this order, Incinerator shall not operate its facility unless the thermocouple devices in the gas stream are operating adequately and properly transmitting information to the recorder device.

5. Even after compliance with the preceding paragraphs of this order, and until Incinerator has installed and has in operation equipment which will bring it into compliance with the applicable Illinois standard, it shall not accept for incineration refuse other than domestic garbage or industrial paper wastes. Nor shall the amount of wastes incinerated ever exceed 500 tons per day at 20% moisture content.

6. In the event that Incinerator decides to proceed with the installation of the equipment provided for in paragraph 1 of this order, it shall file monthly progress reports with the Agency.

7. Incinerator shall pay a penalty to the State of Illinois in the amount of \$25,000.

I, Regina E. Ryan, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above Opinion and Order on the 30 day of September, 1971.

A handwritten signature in cursive script, reading "Regina E. Ryan", is written over a horizontal line.