

ILLINOIS POLLUTION CONTROL BOARD

May 23, 1974

ENVIRONMENTAL PROTECTION AGENCY,	)	
	)	
Complainant,	)	
	)	
vs.	)	PCB 73-330
	)	
OZITE CORPORATION,	)	
	)	
Respondent.	)	

James K. Jenks, Assistant Attorney General for the EPA  
John R. Sloan, Attorney for Respondent

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

Ozite Corporation owns and operates a carpet manufacturing facility located at 1755 North Butterfield Road, Libertyville, Lake County, Illinois. Of specific interest in this proceeding is that portion of the manufacturing process involving the preparation, application and curing of a latex foam type material that is applied on a continuous basis to a moving roll of carpet.

In its Amended Complaint, the Environmental Protection Agency charges that emissions from the latex foam curing oven contain odorous contaminants of sufficient quantity, duration and characteristics so as to cause air pollution in violation of Section 9(a) of the Environmental Protection Act. Ozite was charged with installation of air pollution control devices (specifically, a carbon filtration system and an ozonator) in December 1971 without an Agency permit in violation of Section 9(b) of the Act and Rule 3-2.100 of the Rules and Regulations Governing the Control of Air Pollution and with operating an existing emission source since July 1, 1973 without an Agency operating permit in violation of Section 9(b) of the Act and Rule 103(b) (2) of the Air Pollution Control Regulations.

On September 6, 1973 Respondent filed a Special and Limited Appearance, Motion to Dismiss Count II, Demand for Jury and an Answer to Complaint. Our Order of September 13, 1973 denied

the Special and Limited Appearance, struck the Jury Demand and ordered the Motion to Dismiss Count II taken with the case.

In the September 13, 1973 Order, the Board advised Ozite that the issue of monetary penalty was pending before the Illinois Supreme Court on a certificate of importance and, until the Supreme Court decided that issue, the Board would continue to levy monetary penalties in order to achieve uniformity in application of the law on a statewide basis.

Respondent then filed a second Motion to Dismiss Count II of the Complaint, which for reasons clearly explained, was denied by the Board on October 4, 1973. Ozite responded on November 2, 1973 with another Special and Limited Appearance, a Motion to Strike and a Motion to Dismiss Counts II and III of the Amended Complaint. The Special and Limited Appearance and Motion to Strike were denied by Board Order on November 5, 1973 citing reasons expressed in the September 13, 1973 Order. The Motion to Dismiss was again ordered taken with the case.

We reaffirm all previous denials today. On March 29, 1974 the Illinois Supreme Court decided in City of Waukegan vs. The Pollution Control Board, that this Board has authority to impose monetary penalties. The Court said:

". . . the Act obviously contemplates a specialized statewide and uniform program of environmental control and enforcement. The Legislature considered this to be more readily brought about if the responsibility of imposing penalties was placed on the same authority that conducted hearings and determined violations. The Board is to conduct hearings and, if violations are found, appropriately it is to impose penalties. The Legislature may confer those powers upon an administrative agency that are reasonably necessary to accomplish the legislative purpose of the Agency . . . and we consider that it was appropriate to give the Board the authority to impose monetary penalties. There are adequate standards provided and safeguards imposed on the power given the Board to impose these penalties. The granting of this authority does not constitute an unconstitutional delegation of judicial power."

In its Motion to Dismiss Count II of the Amended Complaint, Ozite argues that the equipment installed at the Libertyville plant was exempt from any permit requirement since the Rules and Regulations contained no provisions relating to control of odors.

Section 9(b) of the Illinois Environmental Protection Act provides: "No person shall: construct, install, or operate any equipment, facility, vehicle, vessel, or aircraft capable of causing or contributing to air pollution or designed to prevent air pollution, of any type designated by Board Regulations, without a permit granted by the Agency, or in violation of any condition imposed by such permit." Section 3-2.110 of the Rules and Regulations, in effect during December 1971, stated that a permit shall be required "for installation or construction of new equipment capable of emitting air contaminants into the atmosphere and any new equipment intended for eliminating, reducing or controlling emission of air contaminants". Air contaminants are defined in the Rules and Regulations as: "Particulate matter, dust, fumes, gas, mist, smoke or vapor, or any combination thereof."

Respondent argues that the word "odor" is conspicuously absent from the definition of air contaminants contained in the old Rule, and therefore odor control devices are excluded from the permit requirement. In its Response to the Motion to Dismiss the EPA states "an odor is merely the characterization of an individual olfactory response to the presence in the atmosphere of any particulate matter, dust, fumes, mist, smoke or vapor; all of which were specifically included in the definition of air contaminants contained in Section 1 of the Rules."

In EPA vs. Mystic Tape, PCB 72-180, Mystic was charged with violations similar to those alleged in this proceeding. As in the instant case, Mystic defended on the ground that the Regulation did not specifically require installation of odor abatement equipment. In Mystic, the Board ruled that Mystic was required, pursuant to Rule 3-2.110, to secure an installation permit prior to installation of the odor control equipment.

On appeal, the First District Appellate Court set aside inter alia the Board's finding on the permit issue. In doing so, the court stated: "In view of our basic conclusions in the case, we consider that this part of the Board's Order falls for lack of any foundation as to determination of standards. We further believe that a careful reading of Section 9(b), quoted above, discloses that it applies only to the construction, installation or operation of any equipment of any type designated by Board

Regulations. Since there have been no regulations promulgated by the Board covering the type of equipment installed here, this part of the Board's Order must fall for that reason also." The Appellate Court decision is subject to review and is not yet final.

We do not believe the Legislature intended Section 9(b) to have the meaning attached to it by the Court in Mystic.

The Board interprets Section 9(b) to mean that once the Board designates a particular species of solid, liquid, gaseous matter, odor or form of energy as a "contaminant" capable of causing or contributing to air pollution [as that term is defined in Section 3(b)], then the construction, installation or operation of any equipment, facility, vehicle, vessel or aircraft capable of emitting that "contaminant" into the Illinois atmosphere or designed to prevent emission of that "contaminant", shall not take place without a permit granted by the Agency or in violation of any condition imposed by such permit.

The Appellate Court interpretation would virtually destroy the legislatively imposed duties of the Board and the Agency. It would require the Board and the Agency to spend all their efforts, time and financial capabilities in the impossible pursuit of a set of regulations which would establish a particular piece of control equipment or control system for each particular "contaminant" for which standards have been set. The folly of this type of bureaucratic paper shuffling would be that each new set of regulations specifying particular equipment would be obsolete at the moment of issuance. Pollution control is not static. It is so dynamic that even the experts have difficulty in keeping abreast of the rapidity of change.

Title 7 of the Act provides the rules by which this Board must abide in adopting, amending or repealing substantive regulations. Under the Appellate Court interpretation, the Board would be required, in attempting to keep such regulations current, to be in a continual state of regulatory hearings and to be continually formulating inherently obsolete control equipment specifications. Such a process would cause the collapse of the entire Illinois environmental protection program.

We do not believe it was the intent of the Legislature to saddle the Board with the obligation to adopt Regulations which specify pollution control equipment. The infinite number of

variables (i.e. type contaminant, concentration, flow rate, temperature, emission source configuration, etc.) to be considered in assessing every source of emission in Illinois requires not a strict set of equipment specifications but rather a case by case determination for effective control. This determination is now available through the Agency's various permit sections with the additional safeguard of appeal to the Board in the event a permit is denied.

The Agency has filed a Petition for Leave to Appeal the Mystic decision. That Petition is now pending in the Illinois Supreme Court. If the Supreme Court grants leave to Appeal, the final decision on the Mystic issues will still be months away. Pending a decision in Mystic, the Board will continue to operate within the constraints of the Act as we believe the Legislature intended. Finally, we would point out that the Appellate decision in Mystic is technically not applicable in the instant case because a different Appellate District is involved.

Section 3-2.110 of the Rules and Regulations when read in conjunction with the definition of "air contaminants" provides that a permit was required for any equipment capable of emitting or intended for the control of particulate matter, fumes, gas, mist, smoke or vapor. Odorous materials may be present in the gaseous or vapor state apart from any other material or as an adsorbed or absorbed contaminant on particulate matter or in liquid droplets. An odor is merely a physiological response in an individual's olfactory region to a stimulus (odorant). But more important to the permit issue, is the recognized fact that an odorant must be in the gaseous or vapor state to be detected by the human olfactory system. (Quantitative Odor Measurement, John L. Mills et al., Journal of the Air Pollution Control Association, Vol. 13, No. 10, October, 1963, p. 467) An odor indicates the presence of a gas or vapor within the definition of air contaminants (as that term is defined in the Rules and Regulations) whether or not the word odor is specifically contained therein.

For the reasons thus given the Board is of the opinion that Ozite was required under Section 9(b) of the Act and Rule 3-2.110 of the Rules and Regulations to secure an installation permit and accordingly, Respondent's Motion for Dismissal of Count II is denied.

Ozite next moves for dismissal of the charges in Count III of the Amended Complaint. This motion is also based on the argument that the Board has not adopted regulations concerning odor equipment and therefore Ozite is not required to obtain an operating permit for odor control equipment.

In the Amended Complaint, the Agency alleges that Respondent has violated both Section 9(b) of the Act and Rule 103(b)(2) of the current Regulations. It has already been noted that 9(b) requires an operating permit for operation of equipment "capable of causing or contributing to air pollution or designed to prevent air pollution, of any type designated by Board Regulations". Air pollution is defined by the Regulations in Rule 101 as: "The presence in the atmosphere of one or more air contaminants in sufficient quantity 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". Air contaminant is defined as "any solid, liquid or gaseous matter, any odor or any form of energy that is capable of being released into the atmosphere from an emission source". (Rule 101) The Regulation designates gaseous matter and odor as a type of air pollution. Since Respondent is capable of emitting gaseous matter and odor in sufficient quantities and of such characteristics as to unreasonably interfere with the enjoyment of life or property we find that Section 9(b) is applicable and Ozite was required to obtain an operating permit.

In addition, Ozite was required to obtain an operating permit under the provisions of Rule 103(b)(2) of the Air Pollution Control Regulations. Rule 103(b)(2) states: "No person shall cause or allow the operation of any existing emission source or any existing air pollution control equipment without first obtaining an Operating Permit from the Agency no later than the date shown in the following schedule:...". Under Rule 101 of the Regulations an emission source is defined as "any equipment or facility of a type capable of emitting specified air contaminants to the atmosphere". A specified air contaminant is "any air contaminant as to which this Chapter contains emission standards or other specific limitations". (Rule 101)

Those air contaminants for which the Board has "specified" standards and limitations include smoke, particulate matter, sulfur dioxide, sulfuric acid mist, organic materials, carbon monoxide, nitrogen oxide, asbestos and odors from inedible rendering processes.

We find from the record that Ozite's equipment was "capable" of emitting smoke as defined in the Regulations and therefore we find that Respondent was required under the provisions of Rule 103(b)(2) to obtain an operating permit. Smoke is defined as "small gas borne particles resulting from incomplete combustion, consisting predominantly but not exclusively of carbon, ash and

other combustible material, that form a visible plume in the air". (Rule 201)

Our finding that Respondent was capable of emitting smoke to the atmosphere is principally based upon testimony of Respondent's employees. Evelyn L. Burdick, an Ozite employee, testified that she had noticed an ammonia type odor within the plant "all the time" when she first began working at the plant (R. 495). She observed a haze within the plant which caused her eyes to water and burn and made breathing difficult (R. 503). She indicated that other employees had similar reactions to the haze and she felt that these reactions created a big problem among the employees (R. 504). This ultimately led the union to present a petition to Ozite management (R. 512).

William McGowan, an Ozite employee, testified that a "sort of smoky haze" was released into the plant up to three times per day prior to installation of a carbon filtration control system. McGowan stated that the haze developed whenever the oven malfunctioned due to mechanical problems. Doors along the length of the oven had to be opened quickly to release excess heat to prevent the carpets from shrinking. (R. 565) He testified that pieces of "foam or something" dropped into the oven probably were responsible for the smoky haze that caused his eyes to water and his nose to burn. He stated that smoke or fumes released into the plant during an oven malfunction was the same smoke or fumes normally exhausted through the plant's vents (R. 566).

It is our conclusion that a furnace which has been observed to emit "smoky haze" into the interior of a plant is "capable" of emitting this same smoky haze to the atmosphere if its emissions are ducted to the atmosphere without control equipment. The carbon adsorption system was equipment intended to reduce or control the emission of a specified air contaminant (smoke) to the atmosphere. We therefore find that Ozite was required to obtain an operating permit under the provisions of Rule 103(b)(2)

Before reviewing substantive matters of this case relating to alleged air pollution, it is necessary for purposes of clarification that we comment on the agreement of counsel pertaining to testimony of witnesses. Near the close of the record in the first of three hearings, counsel stipulated that all subsequent witnesses would be allowed to testify as to their observations up to the actual date of testimony. (R. 165) At that time the Agency had not filed its Amended Complaint and, pursuant to the time constraints of the original Complaint, a violation could only be shown for the period December 8, 1971 to August 8, 1973. Subsequently, on October 4, 1973 the Agency filed its Amended Complaint to which Ozite did not object. The Amended Complaint alleged pollution from on or about April 1, 1971

continuing every day of operation to the filing of the Amended Complaint.

In order to prepare an orderly and understandable opinion pursuant to these legal maneuvers, the Board will accept the testimony on these terms:

1. All testimony taken to page 165 of the record on September 28, 1973 relating to violations of Section 9(a) of the Act will be applicable only to violations which allegedly occurred between December 8, 1971 and August 8, 1973;
2. After page 165 of the September 28, 1973 record, testimony will be considered for the period of December 8, 1971 to September 28, 1973;
3. The testimony taken on October 26, 1973 and November 3, 1973 will be considered as applicable to the period April 1, 1971 to October 4, 1973, the last date of violation alleged by the Agency. Testimony covering the period October 4, 1973 to November 3, 1973 will not be considered as proof of a violation since none was alleged for that period.

Ozite's manufacturing plant is located at the extreme northwest corner of the Village of Libertyville. It is bounded on the east by Butterfield Road, on the south by railroad tracks, on the west by open fields and on the north by Peterson Road. Three residences are located along a section of Butterfield Road east of the plant.

Ozite's chief engineer, William H. Kiley testified that operations at the manufacturing plant commenced in late 1969 or early 1970 (R. 202). The foam oven was not installed until April 1971 (R. 207). The foam compound, consisting of styrene-butadiene rubber latex, frothing soaps, and oil antioxidant, a powder antioxidant, alkalis, dispersents, mineral fillers, wax, zinc oxide, sulfur, zinc mercatobenzo-thiozole, zinc diethyl-dithio-carbonate and carbon black preground color (R. 211-212), is mixed in two tanks on the foam oven platform. After mixing, the liquid foam mixture is pumped to an oscillating hose or tube that spreads the liquid foam on the back of the carpet to a depth controlled by a "doctor bar". The coated carpet then enters the curing oven which "vulcanizes" the foam at a temperature of about 220° F.



Kiley testified that it was possible for odors to be emitted during the preparation of the latex foam mixture (R. 219) and any odors thus emitted would be exhausted to the atmosphere through six roof fans (R. 200).

After commencing the foam oven operation and until the installation of a carbon adsorption system in December 1971, emissions from the oven were vented through five "penthouses", each capable of discharging 18,000 cfm of air (R. 208). The "penthouses" have since been removed and emissions from the oven are exhausted through a duct system to the carbon filtration system (R. 227).

Kiley testified that emissions from the foam oven consisted of 480 lbs./hr. of "moisture vapor" (R. 209, 229). When questioned about the need for control equipment if the plant emissions consisted solely of water vapor, Kiley testified that Ozite had installed the control equipment because of a June 1971 complaint from the Village of Libertyville. He later confirmed that the June 1971 complaint had actually been an order from Libertyville to "cease and desist emitting odors" (R. 252).

Upon receiving the Village of Libertyville Complaint and Order, Kiley testified that Ozite began an investigation to determine if there were any odors, and "we set in motion a program to investigate various sources, to see if the problem could be corrected" (R. 230). Sassafras and wintergreen were used in an effort to mask the odor but continued complaints from "the townspeople and the Village Board" led to the discontinuance of the chemical masking program. Ozite also changed the composition of the foam in order to reduce the number of compounds required but Kiley admitted the complaints continued.

After work by several odor control firms failed to indicate any acceptable control scheme, Ozite employed Universal Oil Products in October 1971 to determine the nature of the odor problem and to make recommendations for a control system. Kiley testified that the UOP report indicated there were chemicals in the emissions but in concentrations too small to permit identification (R. 238). UOP concluded that the plant emissions contained combustible materials for which they recommended incineration (R. 240).

Apparently still not satisfied, Ozite terminated its dealings with UOP and brought in a plant engineer from Ozite's St. John, Quebec plant who, according to Kiley, was a ventilation expert (R. 240). After the Canadian engineer determined the odor problem could be solved by carbon filtration, a Montreal firm was employed to design and install the carbon filtration system. This

system was installed in December 1971 at a cost of \$140,000 (R. 242). Kiley admitted that Ozite did not obtain an installation permit from the Agency prior to installing the carbon filtration system (R. 244).

The carbon filtration system was modified after several months of operation by changing the type carbon used and installing additional capacity in the system. Kiley testified that the additional filtration capacity was installed because Ozite felt that the original installation was "under designed" (R. 247). According to Kiley, an ozonator was installed in June 1973 without Agency permit to "give ourselves a little insurance . . . when the charcoal was getting to a low efficiency . . . the ozonator would pick up any residue, if there were any" (R. 253). Although the ozonator is still in place, it is not being used because of mechanical problems (R. 254).

The record reviewed thus far shows that: 1) emissions from the Ozite plant caused the Village of Libertyville to issue an order requiring Ozite to "cease and desist emitting odors"; 2) Ozite employees were exposed to an ammonia type odor and a smoky haze each time the foam oven malfunctioned and the doors were opened; 3) union employees presented Ozite management with a petition relating to conditions inside the plant created by emissions from the foam oven; 4) the smoky ammonia smelling haze within the plant during an oven malfunction was the same material being emitted through the five "penthouses"; 5) smoky ammonia smelling emissions continued until about December 1971 at which time Ozite installed a carbon filtration system without Agency permit; and 6) Ozite enlarged the capacity of the carbon filtration system and installed an ozonator in June 1973 without an Agency permit.

The record contains substantial testimony of the impact of this odor in the community.

One of the residents, Gordon C. Thomas, testified that he has resided at his present location 1,000 ft. east of the plant since 1957. Thomas first experienced "a strong odor of sulfur" near his home on April 24, 1971 (R. 13, 54). He described the odor as "obnoxious" and one that caused a "biting sensation on the tip of my tongue and in my nostrils" (R. 16).

Thomas said the odor varied in strength but was present every day when the wind was from the west (R. 21). From April 1971 to December 1971 Thomas experienced the odor on his property about three times per week (R. 67). On May 3, 1971 he was told that the plant chemist "wished to reassure me that the odor was not--was a harmless ammonia-type odor" (R. 56). Thomas testified

that a picnic in the summer of 1971 had to be relocated from his property to a park in town when family and guests complained about the obnoxious odor (R. 75). Odors during this period had a "nauseating" effect on Thomas twice (R. 60).

In an effort to keep the odor from his home, Thomas placed storm windows on the west and north sides of his house and on occasion placed a shag carpet against the front door (R. 62, 63).

From December 1971 to August 1972, Thomas estimated he experienced the odor on his property about three times per week (R. 68) and from August 1972 to March 1973, twice a week (R. 44). During this time Thomas was awakened by the odors at night on two occasions (R. 44). He was forced to take his family and leave his property four times "because of the strength of the odor and the repulsiveness of the whole situation" (R. 45). Thomas stated that he experienced the odor on "numerous" occasions during May 1973, and about 20 times from June 1973 to August 1973, during which time the odor duration was about 1 hour (R. 38).

Thomas testified that he had found the odor "very bothersome" during mid-August 1973 while trying to paint the outside of his house (R. 32). He added that he went into his house to avoid the odor but soon noticed the odor was coming underneath his door (R. 36). Thomas also testified that the odor caused him to suffer "mental anguish" (R. 26) and that he had never witnessed the odor that it did not burn his nostrils (R. 34).

The Hearing Officer, who observed the witnesses and commented on their credibility, reported to us that Thomas appeared more influenced by his interest in the case than by his actual memory of and recitation of facts. We give but little weight to Mr. Thomas' testimony.

Mabel R. Gunter, a 76 year old woman, has resided at the same location on Butterfield Road for 54 years. She testified that she has experienced odors from the Ozite plant "practically ever since they put that factory in there" (R. 126). She described the odor as "really gassey" and stated that it causes her to "want to get away from it . . . you don't want to smell it anymore . . . you just have to go in the house" (R. 129). The odor keeps her "bottled in the house" (R. 128) and forces her to stop working in her flower garden (R. 133). She testified that she experienced the odor at least once per day during August and

September, 1973. According to Mrs. Gunter, her relatives will no longer visit her because of the odor (R. 140).

Mrs. Gunter complained to Ozite officials in 1972 but noticed no improvement in the odor problem whatsoever (R. 137). Mrs. Gunter admitted that she had picketed the Ozite facility since 1972 carrying a sign which read: "Pollution, Ozite real bad. Help, help" (R. 141). She pickets the facility alone and nearly every time she feels "halfway decent" (R. 154). She testified that she intentionally turns the sign so that the words are visible only to Ozite employees and not to anyone passing the facility in an automobile (R. 155). Mrs. Gunter was a credible witness.

Lonnie D. Smith, a Libertyville fireman, testified that he first experienced an odor from the Ozite plant in April 1971. In the summer of 1971 Smith and Gordon Thomas went to the plant where they talked to "Mr. Andrasik" about the odor. Smith testified that Andrasik took the two men into the plant and showed them the equipment that was "the primary cause of any odor". Andrasik reportedly told the two men of Ozite's plan to install odor control equipment (R. 182). Approximately two months later Andrasik and an Ozite engineer went to Smith's residence to again discuss the odor problem. Smith testified that both Ozite representatives admitted detecting a "foreign odor" in front of the Gunter residence. (R. 184). Smith described the odor as a "strong, acidy smelling, nauseating type" odor that burned his nostrils (R. 160). The odor causes severe headaches for Smith, one of which he described as severe enough to force him to leave his property in 1971 (R. 177). Smith testified that the odor forced him from his property four or five times in 1971, twice in 1972 and two or three times in 1973 (R. 174, 177). He detected odors from the plant on about five occasions in August 1973 (R. 169) and four times in September 1973. Smith has never noticed any other odors on his property (R. 190) and has not noticed any decrease in odor intensity since December 1971 (R. 189).

Phyllis Thomas, wife of Gordon Thomas, testified from her own records that recent experiences of odor emission from the Ozite plant had occurred on September 18, 21, 22, 26 and on October 1, 4, 5, 9, 16, 19, 25, 1973. She stated that the odor had been "strong, pungent, disagreeable" during the week of October 15 through 19, 1973. A police officer was called to the Thomas residence on the evening of October 16, 1973 when an odor that started at 11:00 A.M. increased in intensity through the

afternoon. Mrs. Thomas testified that the odor ceased about 1 hour after the officer left their property.

Mrs. Thomas, who also first experienced the odor in April 1971 testified she had experienced the odor two or three times a week from April 1971 through the year 1972 (R. 378, 379). She stated that the odor causes her to feel a tightening in her chest. (R. 380) She testified that the odor forced her family to leave their home (R. 383), prevented her from performing outside activities (R. 380, 381), forced her to retreat to the confines of her home ten times in 1972 (R. 381), and has forced her family and guests inside the home on one occasion in 1972 (R. 378). She stated that there had only been two or three weeks of respite from the odors since 1971 (R. 373) and that she had detected no change in odor intensity subsequent to the December 1971 installation of odor control equipment (R. 385).

Allen H. Schertz, administrator for the Village of Libertyville testified that he initially contacted the Ozite plant in 1971 when he began receiving odor complaints from people living near the plant. Schertz testified that he detected odor from the plant both before (R. 301) and after installation of the odor control equipment, with the most recent detection being in late spring or early summer of 1973 (R. 302). He felt that the cease and desist order issued by the Village played an important role in the subsequent odor control system installation (R. 303). On the other hand, he stated that he did not believe the control system had been effective in eliminating the odor since he could still smell the odor (R. 304) and the frequency of odor complaints had not diminished (R. 314). Schertz testified the odor he detected was not the same as the chemical added to natural gas (R. 318).

Stanley Ryba, a Libertyville police officer, testified that he was the officer assigned to investigate the Thomas odor complaint on October 16, 1973. He admitted detecting an odor on that date that was "irritable and unpleasant" but which "did not hurt in any way" (R. 329). Ryba testified that the wind was from the west on that date and that there is nothing immediately west of the Ozite plant "except for fields and grass and a nursery and things" which could have caused the odor (R. 330). After experiencing the odor on the Thomas property he drove "down a driveway to get down into Ozite" where he could not detect the odor (R. 336). He attributed this phenonema to the location of the plant which "sits down off the road" (R. 336).

Ryba admitted that he never detected the odor from Ozite prior to October 16, 1973 although he drove by the plant "a couple dozen

times a day" when he was responsible for patrolling the west side of Libertyville. On at least three occasions he visited the plant in response to emergencies without detecting any odor and he also failed to detect an odor while "running radar" near the plant. Ryba, started as a patrolman on April 23, 1973.

Kathleen Decker has boarded her horse at the Thomas Boarding Stables for the last three years and has ridden the horse from three to five times per week throughout the period. She rides her horse in the general area around the Ozite plant. She testified that she had experienced odor on the average of 70 to 80% of the times she had ridden in 1972 and about 70% of the time in 1973. She described the odor as "what I would imagine sulfur dioxide would smell like" (R. 464). The odor irritates her nose and causes it to run. While riding she can smell the odor all around the plant for a distance of about 1 mile depending on which direction the wind is blowing (R. 475). She smelled the odor on October 16, 1973 at about 6:30 P.M. On that date she found the odor "Obnoxious" and the worst she has smelled in the last three to four months (R. 465).

Steven J. Rosenthal, an Agency engineer testified that he was familiar with the control equipment at the Ozite plant. He based this familiarity on general knowledge of carbon absorption equipment, a review of the installation permit application, a review of Answers to Interrogatories and attendance at a conference with Ozite personnel. Rosenthal stated that he had visited the plant in July 1971 (prior to the installation of control equipment). He testified that he had knowledge of the frequency of complaints about the plant and general knowledge of "what is occurring with this particular situation" (R. 409). On this foundation, Rosenthal testified that the Ozite carbon absorption system was not effective (R. 412).

Rosenthal stated that Ozite could have installed an afterburner to incinerate fumes at the plant. He testified that the afterburner "is perhaps the most common and successfully used type of odor control device" and would have cost Ozite about \$60,000 to install (R. 416, 417).

The Rosenthal reference to having reviewed an installation permit application supports the testimony of William Kiley that Ozite had applied for an installation permit although apparently no permit was issued. Neither party in this case saw fit to introduce a copy of the permit application.

To rebut the testimony of Agency witnesses, Ozite presented testimony of five employees and an engineer who conducted an odor survey. Ozite also claimed that there were other sources of odor in the area. One of the employees, Lewis D. Martino, Ozite's Director of Technical Service, testified that he had traced a "most pungent odor" to a fuel gas storage depot operated by the North Shore Gas Company at the intersection of Peterson Road and Route 45. At this location which is about 1 mile northwest of the Ozite plant, Martino testified that a mercaptan, probably ethyl mercaptan, was added to the gas to identify the material. He stated that the mercaptan additive carries for long distances (R. 605) and that he had detected the odor on Ozite property as recently as "several weeks ago" (R. 601). Martino indicated that the mercaptan additive had an odor of concentrated garlic and dead skunk which causes him to become nauseated when he gets close to the source (R. 650). He stated that he had never made any complaints to the gas company about the odor (R. 648). Martino has also detected a "very pungent odor" at the Ozite plant every two or three months which he attributed to a hatchery and chicken farm located 3.7 miles south of the Ozite plant (R. 608-610).

It was Martino who initiated the Ozite investigation for sources of odor within the plant when complaints from neighbors first started. He testified it was soon learned that it was impossible, with present techniques, to determine the exact composition of the plant emissions. Martino consulted with the chemist who analyzed the emissions and concluded that some sulfur compounds were in the exhaust gasses, probably disulfides (R. 593). He described the material as having a "bad egg" odor which, being very volatile, would dissipate so quickly that it would not be noticed at any "reasonable" distance (R. 594).

In response to complaint from Gordon Thomas, Martino visited the Thomas property before and after installation of the odor control equipment. He testified that there had been occasions when he detected the odor and some when he had not (R. 624). On one visit in the summer of 1973 he detected what he thought to be "a very slight emanation from our plant" (R. 626), which he described as a "disulfide odor". The source of the disulfide odor, according to Martino, was the foam oven (R. 639). Martino testified that he had worked with rubber vulcanization for over 20 years without experiencing any physical sensations from disulfide emissions, even at high concentrations (R. 643). The Hearing Officer gave an adverse report on Martino's credibility as he had on the credibility of Mr. Thomas.

Other Ozite employees testified that odors from the foam oven were detectable near the plant or in the parking lot prior to installation of the control equipment. Evelyn Burdick noticed an "ammonia type" odor on the parking lot almost every day (R. 498). The odorous materials caused her eyes to burn and made breathing difficult for her. Jerry Pillard detected a strong odor like "ammonia household cleaner" on the parking lot before the control equipment was installed. While the employees can still detect occasional odors near the plant, they agreed that the odor problem was significantly reduced in the parking lot after installation of the control equipment.

Ozite's final witness, Dr. William R. Staats, consulting engineer for Polytechnic Inc., testified that he had conducted an odor panel survey at the plant on September 25, 1973. Prior to the panel survey, Dr. Staats visited the plant in order to "make a preliminary judgment as to the odor level". Using a "small dilution device" Dr. Staats determined the odor level in the exhaust stack to be less than 80 odor units per cubic foot (R. 660).

For the odor panel, Dr. Staats engaged the services of nine women selected for him by a market research agency. None had any "acquaintance" with Ozite (R. 662) and all were non-smokers (R. 667). He requested all applicants to avoid perfume or chewing gum on the day of the test and he checked to insure that none had colds or other respiratory ailments.

After being informed by an Ozite employee that the material being processed would be representative of the type material normally releasing the most odor, Dr. Staats withdrew samples from the exhaust stack. He admitted detecting an "acrid, sulfur odor" coming from the stack while collecting his samples (R. 680). He diluted the samples to various concentrations and then tested each panel member's response to the samples. The odor panel survey was conducted in a "training room" in the Ozite administration building. All members of the panel were in the same area where they could observe and hear each other's reactions and comments (R. 689).

Plotting individual responses, Dr. Staats concluded that the plant was emitting 28 odor units per cubic foot (R. 674). Based on this conclusion, Dr. Staats testified that the odor exhausted from the Ozite plant's foam oven would not be detectable beyond the Ozite plant boundary (R. 675).

From the testimony, evidence and arguments comprising the proceedings in this case the Board must now determine three essential facts: 1) are contaminants being released from the Ozite plant; 2) are any contaminants thus released, either alone or in combination with contaminants from other sources, "in



sufficient quantity 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"; and 3) if such proof is shown, has Ozite shown that compliance would impose an arbitrary or unreasonable hardship.

Without a doubt the record clearly shows that odorous emissions from the Ozite plant commenced with the installation and operation of the foam oven. Emissions from the foam oven were vented to the atmosphere through five "penthouses". At times, the emissions became so concentrated near the oven that a smoky haze was visible inside the plant. The odorous haze caused employees' eyes to water and burn and made breathing difficult. This was the material being emitted to the atmosphere.

Complaints, primarily from three of Ozite's nearest neighbors, also resulted in a cease and desist order being served on Ozite by the Village of Libertyville. These neighbors presented testimony that the odor had caused their eyes and nostrils to burn, had caused severe headaches, had caused some breathing difficulties, and had forced them from their homes and property on several occasions. They unanimously testified that the odor was coming from the Ozite plant and that installation of control equipment at the plant had not changed the frequency or intensity of the odor. They have had to cancel outdoor events or move them to another location. One witness, a 76 year old woman, testified that she no longer has visitors at her home because of the odor problem. This same witness testified she now pickets the plant as often as she is able.

In response to the odor complaints Ozite installed a carbon adsorption system in December 1971. The capacity was subsequently doubled and then an ozonator was installed in June 1973 in order to provide additional "insurance".

The odor control equipment apparently stemmed employee complaints about odors inside the plant, but Ozite's neighbors have continued to complain.

Both employees and neighbors testified that the odor is still detectable. The difference in their testimony is that none of the employees except Lewis Martino can now detect the odor beyond plant boundaries. The employees detect the odor on the "parking lot", "near the guard shack" or "near the general perimeter of the building".

Of particular importance in this proceeding was the testimony of Dr. William Staats that Ozite was emitting 28 odor units per cubic foot of exhausted air, a concentration which in his opinion would not be detectable beyond the plant boundaries. The Agency

appeared concerned over the fact that all members of the odor panel were seated in the same room which allowed each member to observe the reaction of other members and overhear their responses to Dr. Staats. Dr. Staats testimony that he presented each panel member "with a series of samples of various dilutions, in random order" and his request to the panel members that they not discuss their test experience with one another until all tests were completed, shows that he considered this possibility and attempted to reduce such influence as much as possible. The odor survey room shown in Figure 81, Air Pollution Engineering Manual, AP-40, 2nd Edition, page 932, depicts several chairs in the "evaluation area" which would indicate that panel members can be in the same room during the test.

Dr. Staats states that he conducted the odor survey using a technique described in an article by John L. Mills, et al., "Quantitative Odor Measurement", Journal of the Air Pollution Control Association, 13 467-75 (1963) October. He very carefully described the exact procedure used for collecting the samples, diluting the samples, and the method of presentation of the samples to panel members. However, he did not say whether or not the evaluation room was air conditioned and odor free, and whether or not the room was devoid of drapes, rugs or other odor adsorptive furnishing. Mills, et al., describes these requirements as essential to any odor survey. However, these apparent discrepancies are not sufficient to discredit the entire Staats report.

We are not impressed by evidence showing the existance of two other possible sources of odor in the area, a natural gas storage area about 1 mile northwest of the plant and a chicken hatchery about 3.7 miles to the south. Allen Schertz, Administrator for the Village of Libertyville, stated that the odor he detected on the highway adjacent to the plant was not the same odor as the "stuff they put in natural gas" (R. 318). The entire record convinces us that the odors complained of did originate at the Ozite plant.

The record proves that Ozite has caused air pollution in violation of Section 9(a) of the Act and that such violations have been continuous from April 1971 through at least the fall of 1973. Installation of odor control equipment, even without proper permits and in spite of evidence showing that odors continued to be emitted, will be considered to be a mitigating factor in Ozite's favor.

The fact that Ozite employees cannot smell the odor beyond the plant boundary and the fact that the odor panel showed the emission of only 28 odor units per cubic foot of air in the

exhaust gasses cannot rebut other testimony of the impact of these odors in the neighborhood. The odor permeates the area, causing "severe headaches and burning eyes and nostrils". Friends shy away from visits because of the odor and outdoor activities suffer or are cancelled whenever a northwest wind carries the odor to their property. We find that Ozite's neighbors are victims of air pollution caused by emissions from the foam oven in the Ozite plant.

Having determined that Ozite is causing air pollution, we must refer to the record to determine if adequate control measures can be taken, if such measures would impose an arbitrary and unreasonable hardship on Ozite and exactly what Ozite plans to do about abating the odors.

The carbon adsorption system has not abated the odor problem. The ozonator is not operable and we are not told if Ozite plans to make the device operable again. A four square foot vent remains continuously open in the roof over the foam oven and is a possible source of air pollution that has apparently not been tested (R. 576). In spite of continuing complaints from their neighbors Ozite does not contemplate any additional measures to eliminate the odor problem (R. 272).

Testimony and evidence relating to the composition of the exhaust gasses is virtually nonexistent in the record except for some occasional references to a "disulfide" material. One consulting firm recommended incineration as a means of odor control. Agency Engineer Rosenthal testified that incineration is probably the most common and successfully used method of odor control. He added that Ozite could have installed an incinerator for about \$60,000 as opposed to the \$140,000 expended for the carbon adsorption system.

The Board acknowledges the successful employment of incineration for odor control in many instances. However, further evaluation of the entire control system is needed before deciding on a final odor control program. This evaluation should especially note that a sulfur compound may be one of the main components in the exhaust gasses. Care should be taken that oxidation of the sulfur compounds through incineration does not produce emissions as odorous and possibly more injurious than those now being discharged.

The record shows that Ozite has experienced difficulties with the engineering aspects of its carbon systems particularly in equipment sizing. It is possible that the present carbon system can be more effective if modified. If that possibility is explored and if the ozonator is repaired or replaced and if the open vent over the foam oven is permanently sealed, Ozite might be able to abate its odor problem.

We will require Ozite to cause a thorough evaluation of its present system to be performed by experts. Based on this evaluation, Ozite shall submit a proposed compliance plan to the Agency. Ozite shall also be required to permanently seal the open vent over the foam oven or show cause why the vent should not be sealed. We shall require that such compliance plan be designed to abate the odor problem within six months.

In summary, it is the finding of the Pollution Control Board that Ozite is guilty of all charges specified in the Amended Complaint. After thoroughly considering the mitigating factors in Ozite's favor, we believe that a monetary penalty consisting of a \$2,000 fine for the air pollution violation and a \$1,000 fine for the permit violations is appropriate.

This Opinion constitutes the Board's findings of fact and conclusions of law.

ORDER

It is the Order of the Pollution Control Board that:

1. Ozite Corporation shall pay to the State of Illinois by June 24, 1974 the sum of \$3,000 as a penalty for the violations found in this proceeding. Penalty payment by certified check or money order payable to the State of Illinois shall be made to: Fiscal Services Division, Illinois EPA, 2200 Churchill Road, Springfield, Illinois 62706.
2. Respondent shall apply for and obtain all necessary operating permits for its Libertyville plant.
3. Respondent shall cause a thorough evaluation of its present odor control system to be performed within 30 days of the date of this Order. Such evaluation shall include but is not limited to a thorough investigation of the present carbon adsorption system by an expert(s) in the field of odor control, consideration of the possible replacement of the carbon system with a more effective control system, and a determination of the need for repair or replacement of the ozonator. Respondent shall provide the Environmental Protection Agency with a copy of the evaluation report within 45 days from the date of this Order.

4. Respondent shall within 30 days close and permanently seal the atmospheric vent over the foam oven or show the Board reasonable cause why the vent should not be sealed. If the vent must remain open, Respondent shall insure that all contaminants normally exhausted through that vent are properly treated so as not to cause odorous emissions.
5. Based on the evaluation report required in Part 3 above, Respondent shall submit a compliance plan to the Agency within 60 days of the date of this Order. Such compliance plan shall show that Respondent will achieve compliance with Section 9(a) within six months of the date of this Order.
6. Respondent shall submit bi-monthly progress reports to the Environmental Protection Agency. Said reports shall commence on July 1, 1974 and shall provide details of Respondent's progress toward completion of the evaluation report and compliance plan. Each report shall also contain a list of complaints received relative to odorous emissions, probable cause for the odor or complaint and measures taken in response to each complaint.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify the above Opinion and Order was adopted this 23<sup>RD</sup> day of May, 1974 by a vote of 5 to 0.

Christan L. Moffett