

ILLINOIS POLLUTION CONTROL BOARD  
September 11, 1986

FRITZ ENTERPRISES, INC., )  
 )  
 Petitioner, )  
 )  
 vs. ) PCB 86-76  
 )  
 ILLINOIS ENVIRONMENTAL )  
 PROTECTION AGENCY, )  
 )  
 Respondent. )

ANDREW H. PERELLIS AND DIXIE L. LASWELL [GESSLER, WEXLER, FLYNN, LASWELL AND FLEISCHMANN, LTD.] APPEARED ON BEHALF OF PETITIONER, AND

JAMES ARCHIER, ASSISTANT ATTORNEY GENERAL, AND JOSEPH PODLEWSKI APPEARED ON BEHALF OF RESPONDENT.

OPINION OF THE BOARD (by J. Anderson):

This Opinion supports the Order adopted by the Board on August 28, 1986 reversing the denial of the air operating permit here at issue.

This matter comes before the Board upon a May 23, 1986, permit appeal filed by Fritz Enterprises, Inc. (Fritz). Fritz requests that the Board reverse the May 8, 1986, decision of the Illinois Environmental Protection Agency (Agency) denying Fritz's application for renewal of an operating permit for its Newell automobile shredder. Hearings were held on July 23 and 24, 1986 at which testimony and exhibits were presented. Members of the public were also present. Briefs were filed by the parties on August 11, 1986.

The Facility

Fritz owns and operates a scrap metal yard in Riverdale, Illinois. As part of its business, Fritz operates an automobile shredder which is capable of shredding used automobiles and purchased scrap metal products such as appliances. Initially, purchased scrap iron and automobiles are inspected to insure that explosive materials are removed. Large cranes then move the material onto the feed conveyor which conveys the material to the feed roll. The feed roll crushes the material and feeds it into the shredder mill which contains a series of hammers which pulls, shears, beats and grinds the material up. The material is then conveyed via a chute to various air cleaning systems and finally to a magnetic separator which separates out unwanted portions of

the material, such as ground-up tires and insulation. The resulting scrap is then conveyed to a stockpile. (R. p. 42-43, 225-226).

The shredder operates in conjunction with an air pollution control system which consists of a dry scrubbing and wet scrubbing system. (R. p. 45). The air system cleans the shredded material at various points throughout the process and vents this effluent to the dry scrubbing system in which the large particles dropout. The effluent is transported to the wet scrubbing system which cleans out other residual particulate matter. The effluent is then exhausted to the atmosphere through an inverted stack which resembles an upside down letter "J" with an outlet approximately 25 feet above the ground. (R. p. 45-46, 266; also see Pet. Ex. 5,6,7).

Fritz has also implemented a program designed to control fugitive emissions from its facility. Water sprays have been installed within the shredder mill to control dust from various conveyor belts and conveyor transfer points, and belts have been routed to discharge into chutes or enclosed bins to further minimize flying debris. (R. p. 72-73).

#### Evidentiary Issues

While the permit chronology is set forth in more detail later in this Opinion, a brief summary is necessary prior to discussion of the evidentiary disputes.

In the summer of 1984, Fritz submitted a permit renewal application to the Agency. In March, 1985, the Agency notified Fritz that it was deferring action on the renewal application pending receipt of additional information (R. p. 47). This information was received by the Agency in February, 1986 and included an updated renewal application reflecting certain modifications to the shredder operations and an operating program to reduce fugitive emissions at the entire Fritz facility. In addition, a stack test was performed to measure the mass emission levels from the shredder in July, 1985 and the Agency conducted an on-site investigation on May 6, 1986 at which an opacity reading was taken of emissions from Fritz' stack.

On May 8, 1986 the Agency notified Fritz that, based on its review of the permit application, the permit was being denied because Section 9 of the Environmental Protection Act and 35 Ill. Adm. Code 212.123 and 212.301 might be violated. The following reasons were specified for the denial:

1. During an Agency inspection on May 6, 1986 emissions from the shredder control system were observed to exceed 30 percent opacity for more than 8 minutes in a 60

minute period and also exceeded 60 percent opacity. This opacity level is in violation of Section 212.123.

2. During the Agency inspection of May 6, 1986 fugitive particulate matter emissions were observed from various transfer points in the operation. Water sprays for control of particulate emissions indicated in the permit application were not evident to the Agency inspectors.

As stated by the First District Appellate in IEPA v. PCB and Alburn, Inc., 118 Ill. App.3d 772, 455 N.E. 2d 188, 194, (1983), when reviewing the denial of air construction and operating permits:

"The sole question before the Board in a review of the Agency's denial of a permit is whether the petitioner can prove that its permit application as submitted to the Agency establishes that the facility will not cause a violation of the Act...The Board may not be persuaded by new material not before the Agency that the permit should be granted." (Emphasis in original, citations omitted.)

Both Fritz and the Agency argue that certain testimony and exhibits proffered at hearing cannot properly be considered by the Board consistent with this constraint.

At the Board hearing, Fritz presented the testimony of two witnesses. The first witness was Fritz' environmental consultant, Mary Jo Williams, M. J. Williams and Associates. Ms. Williams prepared Fritz' permit applications and was present both at the July, 1985 mass emission stack test and at the May 6, 1986 Agency inspection at which the opacity reading was taken. The other witness was Edward Petersen, a test engineer and certified smoke reader with the environmental testing and consulting firm, Mostardi and Platt. Mr. Petersen visited the Fritz facility once, on June 16, 1986, and presented testimony and exhibits concerning the USEPA-approved method of taking opacity readings generally (Pet. Exh. 3-4), and specifically as applied to the configuration of Fritz' inverted stack on June 16, 1986 (Pet. Exh. 5,6,7-photos). (Notes taken by Mr. Petersen during this visit were entered by the Agency as Res. Exh. 1).

The Agency presented the testimony of three witnesses, all Agency employees. Wayne Motney, the permit analyst who made the determination to deny the Fritz permit, testified as to the information on which he based the denial, including memoranda and inspection reports prepared by other Agency employees. Cezary Krzymowski, an Agency engineer and certified smoke reader who took the May 6, 1986 opacity reading, presented testimony concerning his observations that day. Over objection, and by way

of offer of proof, Mr. Krzymowski also presented conclusions derived from his review of, and calculations concerning, the July, 1985 mass emissions stack test data (R. p. 250-252.) Edward Osowski, environmental protection specialist, who was present at the May 6, 1986 inspection with Mr. Krzymowski, testified concerning his observations that day and the memorandum he authored concerning that inspection.

First, the Agency moved to strike all the testimony and exhibits produced by Fritz's expert witness, Mr. Edward Petersen. The Agency argues that the testimony and exhibits presented were based on observations taken after the date of the permit decision. The Agency cites Land and Lakes Company v. Illinois Environmental Protection Agency and White Fence Farm, Inc., 47 PCB 019, May 13, 1982, for the proposition that an applicant may not introduce material not in the Agency's record unless to challenge the completeness of the record as filed. The Agency contends, therefore, that since the testimony of Fritz' expert is clearly outside the Agency's record, that it should not be considered by the Board. (Ag. Brief p. 10).

While the Petersen testimony and exhibits are not among those materials which the Agency has certified as its record, the Board is persuaded by Fritz' arguments, whose thrust is that the record is not complete within the meaning of White Fence. In that decision, the Board noted that (in addition to the application, the correspondence with the applicant, and the denial) the "record is also to include any facts material and relevant to the Agency's decision, which existed at the time of the decision" 47 PCB at p. 20. Needless to say, the methodology to be employed in taking opacity readings, as well as the physical configuration of Fritz' shredder operation and stack, were within the Agency's institutional knowledge at the time of permit denial; the testimony of Mr. Krzymowski is that both were taken into account when he made the opacity reading whose validity Fritz disputes. While Mr. Petersen's observations were made, and photos of the site were taken, after the date of the permit denial, the Agency did not present evidence that either the methodology or the site configuration testified to by Mr. Petersen had been modified since the time of the May 6, 1986 inspection. The Petersen testimony and exhibits provide, then, a more complete description for the Board of the context in which the disputed Agency opacity reading was taken. The results of any opacity readings taken on June 18 could not be considered by the Board for proof of the proposition that, regardless of any non-compliance by Fritz on May 6, that compliance had been achieved by June 18 and that the permit should issue: this is the type of error which caused reversal of the Board's finding in Alburn. However, the Board finds that it may properly consider the testimony of Fritz' smoke reader concerning opacity reading methods as applied to Fritz facility, generally, when weighing

the testimony of the Agency's employees concerning specific readings taken on a specific day.

Therefore, the Agency's motion to strike is denied.

Fritz, for its part, moves to strike Respondent's Exhibit 1, which are Mr. Petersen's notes concerning his June 18 observations (R. p. 191). This document was introduced into evidence by the Agency during its cross-examination of Mr. Petersen for the purpose of impeaching Mr. Petersen's statement that it is "very difficult or impossible to read visible emissions from the Fritz shredder" (R. p. 170-171). The portion of the document the Agency believes is contrary to the statement at hearing appears on the last page, in which Mr. Petersen has made recommendations as to how to properly read emissions from the Fritz stack (R. 183-184). Fritz' objections are that it was improper trial technique for the Agency to enter a document used for impeachment into evidence at all, but that it was particularly improper to do so during cross-examination of a witness whom the Agency did not call as a direct witness; that the best evidence of Petersen's testimony was the testimony itself; and that the document did not contain anything which the witness had not independently testified to and that it was not used to refresh his recollection (R. p. 174-175, 187). The Board finds that Fritz' objections are well-founded, and strikes this exhibit from the record. In so doing, however, the Board notes that the document's admission was consistent with 35 Ill. Adm. Code 103.204(a), and that the Board considers any error harmless given the consistency of the document with Petersen's testimony and his explanation of the context in which he made the concluding recommendation.

Finally, the Agency seeks reversal of a Hearing Officer ruling which barred the testimony of Mr. Krzymowski relating to his evaluation of the stack test data of July 18, 1985, and moves for admission of the testimony which was entered into the record as an offer of proof. (See generally R. p. 232-252 and esp. 250-252.) The Hearing Officer barred the testimony based on Rule 220(B) of the Illinois Supreme Court which states in pertinent part:

"in order to insure a fair and equitable preparation for trial by all parties, the identity of an expert who is retained to render an opinion at trial on behalf of the party must be disclosed by that party either within 90 days after the substance of the expert opinion first becomes known to that party or his counsel, or if the substance of the expert's opinion is then known at the first pre-trial conference in the case, whichever is later. . . Failure to leave the disclosure required by this rule or to comply with the disclosure

contemplated herein will result in disqualification of the expert as a witness."

The Hearing Officer found that to allow the Agency's expert testimony on the evaluation of the stack test data would result in surprise and prejudice to Fritz and, therefore, such testimony was barred. (R. p. 249).

The Hearing Officer's ruling barring Mr. Krzymowski's testimony is reversed, and the evidence is admitted. The Board looks to the Rules of the Supreme Court for guidance, and often will apply a rule where reasonable in light of the circumstances under which it is sought to be applied. However, the Board does not automatically apply such judicial rules where they are incompatible with the requirements of the Environmental Protection Act. In this case, there are two such incompatibilities. First, at all times pertinent hereto, Section 40(a)(2) of the Act required that a hearing be held and decision be rendered by the Board within 90 days of the filing of this permit appeal, upon penalty of issuance of the permit by default.\* It is accordingly not feasible for the Board to apply a 90 day expert identification rule to a situation in which discovery hearing, and decision must all take place within 90 days.

Second, the Board does not consider Mr. Krzymowski to be an "expert who is retained to render an opinion at trial" within the purpose of the rule. All Agency employees who have been involved in the permit decisions for a particular facility are "experts" concerning some or all of the Agency's record. Once they are identified as Agency witnesses prior to hearing, as was Mr. Krzymowski here, there should be no "surprise" that the employee is presenting testimony in his field of expertise: the Agency record.

For these reasons, the Board finds that Supreme Court Rule 220(B) should not be applied in this case to bar admission of Mr. Krzymowski's testimony. The Board believes that any surprise or prejudice that resulted from such testimony was adequately cured by cross-examination of the witness concerning the offer of proof. The testimony appearing at R. p. 250-251, and 256-257 is admitted.

#### Permit Chronology.

In March, 1985, following Fritz's application for permit renewal in the summer of 1984, the Agency requested that Fritz submit additional information concerning modification to the

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\* P.A. 84-1320, effective September 4, 1986, amends the Act to require decision within 120 days of filing.

shredder and an operating program to reduce facility-wide fugitive emissions. The Agency's regional office also advised Fritz that an actual stack test to measure mass emissions from the shredder would be necessary prior to further action on the permit.

Although Fritz asserted that its facility was not subject to the regulatory requirement for a fugitive emission operating program, it submitted such a program as a "good-faith effort", and the Agency approved it in January, 1986 (R. 49-51, J. Ex. 9).

In response to the mass emissions data request, Fritz utilized data from the equipment manufacturer and also, with the Agency in attendance, conducted an on-site test on July 18, 1985. The average of three runs were 6.2 lbs./hr., which was well within the allowable limit of 17.5 lbs./hr., and which correlated well with the manufacturer's anticipated efficiencies. (R. 54-59, J. Ex. 9). During the tests, the Agency observed opacities exceeding 30% (J. Ex. 10).

On February 3, 1986, Fritz submitted the above information as well as a description of the shredder process in a supplemental renewal application. (J. Ex. 9).

On March 27, 1986, following an internal Agency review that included a finding that the stack tests were satisfactory, the Agency informed Fritz's technical consultant, Ms. Williams, that the permit application was complete (R. 60,61 J. Ex. 7, Pet. Ex. 2). Ms. Williams also testified that Mr. Motney of the Agency told her that the Agency would further delay processing until the "enforcement action was further along" [apparently referring to IEPA v. Fritz Enterprises, Inc., PCB 86-7, filed 1-8-86]. (R. 62)

On April 2, 1986, the Agency notified Fritz that it wished to inspect its facility on the following day. On April 3, 1986, after Fritz advised the Agency to make its request through legal counsel because of the pending enforcement action, Edward Osowski and another Agency inspector made a "drive-by", off-site inspection of the Fritz facility. Mr. Osowski on that day in a memorandum recommended permit denial based on the drive-by observation. However, Mr. Motney of the Agency testified that this memorandum was not used as a basis for permit denial because it was not objective: Mr. Osowski later could not definitively state that the emissions were excessive during the drive-by due to an incorrect sun angle. However, Mr. Motney also testified that he did not reject the recommendation, but rather discussed the possibility of getting more definitive information. (R. 205-208, J. Ex. 5).

An on-site inspection subsequently was arranged on May 6, 1986. Present were Mr. Osowski and Mr. Krzymowski of the Agency, as well as Ms. Williams and other Fritz representatives. Ms.

Williams testified that Fritz was surprised when Mr. Krzymowski, who had not been present during the July 18, 1985 stack emissions test, proceeded to take opacity readings since the Agency a) had never expressed concern about opacity, b) had already observed opacities in excess of 30%, and c) the actual emissions stack testing insisted upon by the Agency had recently been completed. Ms. Williams also testified that Mr. Krzymowski knew a wet scrubber system was involved (without de-misters), as well as the presence of cooling sprays in the shredder operation. (R. 67, 68, 226). Two days later, on May 8, 1986, the Agency denied the permit, giving reasons that were based on events that occurred during this inspection. As aforementioned, the bases for the permit denial were violation of opacity rules and potential failure to have water sprays in operation.

### Opacity

In summary, Fritz argues that the Agency's decision to deny the permit on the basis of the May 6 opacity test was improper because 1) the test was not performed in a scientifically valid manner using approved methodologies, with the result that the opacity reading was not accurate 2) even assuming the opacity reading was accurate, an opacity violation cannot serve as the basis for permit denial if mass emission limitations are being met and Fritz was given no opportunity to prove that it was in fact meeting these limits on May 6.

For clarity, an explanation follows of the relationship between opacity and particulate matter mass emission limitations, as well as the applicable Board regulations.

Opacity is a measurement of light that is not transmitted through a plume of smoke; such measurements are used as a surrogate indicator as to whether the mass particulate emission limitations are being met, since particulate emissions increase opacity. However, there is no direct correlation between opacity levels and particulate emissions limitations, and any interrelationship becomes suspect if water vapor is contributing to the opacity.

The applicable Board regulations enunciate the opacity standards and exceptions as follows:

#### Section 212.123      Limitations for All Other Sources

- a. No person shall cause or allow the emission of smoke or other particulate matter from any other emission source into the atmosphere of an opacity greater than 30 percent.
- b. Exception: The emission of smoke or other particulate matter from any such emission source may have an opacity



greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such more opaque emissions permitted during any 60 minute period shall occur from only one such emission source located within a 305 m (1000 ft) radius from the center point of any other such emission source owned or operated by such person, and provided further that such more opaque emissions permitted from each such emission source shall be limited to 3 times in any 24 hour period.

Section 212.124      Exceptions

- b. Emissions of water and water vapor. Sections 212.122 and 212.123 shall not apply to emissions of water or water vapor from an emission source.
- c. Compliance with the particulate regulations of this Part a defense. Sections 212.122 and 212.123 shall not apply if it is shown that the emission source was, at the time of such emission, in compliance with the applicable mass emission limitations of this Part.

Additionally, the Board's regulations reference USEPA's specific methodologies, i.e., for conducting opacity tests in order to reduce the imprecision in opacity measurements (see 35 Ill. Adm. Code Part 230, Appendix A).

Reference Method 9 sets forth specific procedures to follow in order to obtain valid readings of opacity attributable to particulates when water or water vapor is present. Essentially, it requires the reader to avoid observations anywhere visible water vapor exists in the plume. If the plume is attached, the reading is to be taken after the condensed water has evaporated; if detached, the reading is taken before the condensed water plume forms. If there is no visible water vapor present, the attached/detached methodology is not relevant.

The essence of the dispute is whether the Agency's opacity reading was a valid reading of particulate matter alone, or an invalid one of particulates and water vapor.

It is not a matter of serious dispute that at the Fritz facility, there are particular difficulties in measuring an opacity plume. The outlet of the inverted "J" stack is only 25 feet above ground. Directly below the stack, at about 8 feet above ground, is an I-beam extension which can deflect the plume, and directly below that at ground level is a partially covered recycle pit, which collects water exiting the stack and from which a visible mist of water, or "ground fog", commonly can arise. Additionally, there are nearby structures that may interfere with a clear view for opacity purposes (R. 120-122,

132). (The photographs in Pet. Ex. 5,6 and 7 visually depict the layout described above).

Mr. Petersen, Fritz's opacity expert, believes that, under these circumstances, and because of the difficulty of discriminating between Fritz's commonly white particulate emissions and white water vapor, proper opacity measurements are extremely difficult, if not impossible, to take in this setting (R. 131). Mr. Krzymowski disputed that contention, but did acknowledge that the location and wind conditions were not ideal for opacity readings. (R. 257-260).

Based on the totality of the evidence presented, the Board finds that the opacity reading was improperly taken, further finding Mr. Krzymowski's testimony concerning the circumstances of that test to be inconsistent and contradictory.

First, Mr. Krzymowski could not consistently state at what point he took his opacity reading. Mr. Krzymowski stated that he took his reading 2-4 feet below the stack outlet, not, as his recording form indicated, at the stack outlet. (R. 271, Pet. Ex. 3, p. 2). Also, after then testifying that he took his readings above the I-beam, he conceded that he had stated in a deposition that his opacity readings were in an area both above and below the I-beam which, as earlier noted, was located only 8 feet above ground. (R. 276, Pet. Ex. 3).

Next, there is the issue as to whether there was condensed (that is, visible) water vapor exiting the stack on May 6. Again, based on Mr. Krzymowski's inherently contradictory testimony, the Board finds that such was the case.

Mr. Krzymowski checked a box on his recording form denoting the presence of visible water vapor (J. Ex. 3, p. 2). At hearing, Mr. Krzymowski testified that when he checked the presence of visible water vapor on the recording form (J. Ex. 3, p. 2), he was not referring to visible vapor from the stack, but rather to visible vapor rising intermittently from the pit about four or five feet from the ground level; that while water vapor exited the stack, it was not visible. He also characterized the stack plume as blue. (R. 253, 263, 272). Mr. Krzymowski indicated that the plume he read was attached, which requires a downstream reading after the visible water vapor evaporates. But he also testified that he recorded the presence of visible water vapor rising from the pit because of the possibility that it might mix downstream with the stack plume. (R. 262).

Mr. Krzymowski further testified that, based on his evaluation of the July, 1985 stack test data, he concluded that it would be virtually impossible for water or water vapor to condense (i.e. be visible) outside the stack. (R. p. 250). This latter testimony was offered because previous testimony had

established that on the day of the stack test, July 18, 1985, and on the day of the inspection, May 8, 1986, the Fritz shredder was operating under similar conditions. (R. p. 71). Additionally, the testimony was offered to dispute Fritz's opacity expert's assertion that there was condensed water vapor exiting the stack during his site visit on June 18, 1986, when the shredder also was operating in normal fashion. (R. 238-249). However, Mr. Krzymowski acknowledged that he never calculated the dew point at the Fritz facility on the day of the stack test or on the day of the inspection. (R. p. 257).

The Agency's failure to determine a dew point suggests that its back-calculation efforts are not plausible. This serves to undermine, rather than to support, the Agency's claim that there was no visible water vapor exiting the stack during the May 8, 1986 opacity readings.\*

Finally, in order to determine whether a violation has occurred, Method 9 also requires averaging of readings taken at consecutive intervals, and then corrected for an error factor. The Board notes that Joint Exhibit 3 indicates that the Agency did not follow this methodology particularly as regards data reduction.

In summary the Agency used the attached plume methodology of Reference Method 9, which assumes visible water vapor. The Agency claimed that no visible water vapor was in the plume, nor could it have been. The Agency recorded that visible water vapor was present, though from other potentially interfering sources, which the Agency claimed did not interfere. The Agency was, at best, vague as to where it took its readings in relation to the visible water vapor emanating from the pit. There were less than ideal conditions for taking any reading, given the interference of the I-beam, the emanations from the pit and the wind speed. Given these circumstances, the Board finds that the Agency's assertions that it nevertheless took valid readings pursuant to Reference Method 9 methodology are not supported by its own testimony. Based on the requirements of Reference Method 9, the Board finds that the Agency failed to properly follow required methodologies to obtain valid opacity results for purposes of determining compliance.

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\* Apart from the lack of a dew point to support the Agency already questionable back-calculation efforts, another question arises. On July 18, 1985, the actual particulate stack emissions were low and at the same time the stack plume had above 30% opacity. If visible water vapor was not a factor, as the Agency asserts at hearing, is the Agency suggesting that the opacity was caused solely by emitted particulates?

Having determined that the opacity reading was invalid, the Board finds that the alleged opacity violation is an improper basis for permit denial. The Board need not, therefore, reach Fritz's arguments that observed opacities in excess of the standard cannot support the denial of a permit or, that if they can, Fritz must be afforded an opportunity to establish an affirmative defense to these observed excess opacities: that is, that mass emission limitations are being met. Fritz' arguments point out a troublesome aspect of the opacity rules, in that once excess opacities are observed, the regulations afford the alleged violator an opportunity to establish a defense to such excess opacities. Observed excess opacities can support the denial of a permit in the absence of an affirmative defense. The question then becomes at what point in the permitting procedure should the permittee be able to establish an affirmative defense to the excess opacities, particularly in cases where, as here, the Agency is faced with a decision deadline. By way of dicta, the Board observes that some due process concerns arise where the applicant is not informed of opacity violations prior to permit denial, and given the opportunity to either a) waive the decision deadline and attempt to establish the affirmative defense or b) waive its right to that defense and stand upon the application as submitted. The Board further notes, however, that this problem is obviated to some extent if a permit is not denied on the basis of opacity but is instead issued subject to reporting conditions, as the Agency has indicated is sometimes the case. (See Fritz Brief, p. 15, citing Agency comments filed in the R82-1 opacity rulemaking.)

#### Water Sprays

Regarding the second reason for denial, the Agency testified that the sole reason for denial was that the water sprays were potentially not operating (R. 211). The Board finds otherwise. Ms. Williams testified that she twice confirmed that the sprays were operating, once before and then during the inspection and that the Agency inspectors never asked her about them (R. 73). The Agency inspectors not only did not refute Ms. Williams testimony, but confirmed at hearing that they made no attempt to look at the water sprays (R. 270, 288).

After a review of the testimony and the exhibits and for the reasons stated above, the Board finds that the Agency's decision to deny Fritz an operating permit on such a tenuous basis cannot be supported by the record.

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

R. Flemal and B. Forcade dissented.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion was adopted on the 11<sup>th</sup> day of September, 1986 by a vote of 4-2.

*Dorothy M. Gunn*

Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board