

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In The Matter of)
CONSUMERS POWER COMPANY) Docket No. 50-155-OLA
(Big Rock Point Nuclear Power Plant)) (Spent Fuel Pool Modification)

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INTERVENORS OPPOSITION TO
IMMEDIATE REVIEW OF A PARTIAL INITIAL
DECISION CONCERNING CRITICALITY

By order of October 4, 1982 this Appeal Board deferred all appeals from partial initial decisions of the Licensing Board, noting that "we see no purpose in embarking upon a piecemeal review of this proceeding by entertaining appeals from such serialized decisions." This Board also stated that although "the sound management of some proceedings requires the issuance of more than one initial decision [t]he proceeding at hand, however, does not appear to be one of them." Nevertheless, Licensee seeks piecemeal review of a partial initial decision concerning criticality.

The piecemeal review sought by Licensee is unnecessary, the delay in the proceeding before the Licensing Board is now solely due to the fault of Licensee and the need to maintain full core offload has not been demonstrated. Further the hearings will not be expedited, but rather delayed.

1. The hearings before the Licensing Board began in June 1982. Only about half the issues were heard. At the hearing, Licensee withdrew a portion of the application relating to the ability of the concrete liner on the spent fuel pool to withstand boiling. This

portion of the application has never been resubmitted and is now the principal reason why the hearings cannot be resumed and completed. The only other reason for delay is that Licensee also has not submitted certain other information concerning seismic qualifications of the plant. Thus, were it not for Licensee's delays the entire hearing would have been completed by now and one final review by the Licensing Board could have been undertaken. Licensee, already responsible for delaying the hearing before the Licensing Board, now seeks piecemeal review before this Appeal Board.

2. Licensee's appeal would not dispose of all criticality issues.

Licensee seeks an immediate appeal primarily to relieve it from having to prepare an amended application, particularly concerning the potential for supercriticality at very low water densities. See Motion of Consumer Power Company for Immediate Appeal, etc., p. 2, par. 3 and Licensing Board Initial Decision (Concerning Neutron Multiplication Factor), dated October 29, 1982, pp. 15-18, 22. But a further report on supercriticality is not all that the Licensing Board's order requires. The Licensing Board also found that there were substantial problems with Licensee's criticality analysis and with the Staff's review of that analysis. Initial Decision, pp. 6-15. This is the second major defect in the criticality analysis by Licensee. In its motion for summary disposition, Licensee's calculations were based entirely on a maximum temperature of 212° F. It was the Licensing Board that noted correctly in denying summary disposition that the saturation temperature can reach 243° F, dated February 5, 1982, and Licensee's experts conceded this and recalculated using a maximum temperature of 237° . See Initial Decision, pp 6-7.

Most notable is the wholly deficient review by the Staff.

The Initial Decision, p. 13, states: "We are concerned about the adequacy of the Staff's review and the soundness of its conclusions." The Licensing Board described the calculations of Staff's expert, Mr. Lantz, noting that the "ascribed significance may be an artifact resulting from the intersection of two distinguishable curves." Initial Decision, p. 14. Second, Mr. Lantz's analysis is based on a different type of fuel (GIU) than at issue in this case (G.3 modified fuel). The Licensing Board found that "the 'peaking phenomenon' (from which Mr. Lantz derives his favorable conclusions concerning safety) is not apparent in the data for G 3. modified fuel." Id. at 14 and Figure 1. The Board concluded:

"We cannot accept as a basis for a safety assurance a technical review that starts with a questionable assumption (that changes in Keff are density dominated) and reaches its conclusions from questionable inferences about a graphical analysis of a data for a type of fuel we are not considering...We cannot rely on Mr. Lantz's generalizations about other fuel pools whose specific characteristics may be quite different from those which caused the calculational problems in this case, and, in any event, whose characteristics have not been introduced into evidence." Id. 14-15.

It should further be noted that the Staff's review was slipshod, that Mr. Lantz never read either the summary disposition affidavit or the written trial testimony of Licensee's expert, Dr. Kim, before Mr. Lantz wrote his testimony and testified at the hearing. Tr. pp. 1924-26. Thus, even if Licensee were successful on an appeal on the question of amending its license application, an adequate review would still be necessary by staff and the matter would still require another hearing.

In addition, as the Licensing Board found, the calculations by Licensee's expert are all based on assumptions of a water inlet temperature at the bottom entry to the fuel racks of 212°F. Initial Decision p. 22. But this assumption is based solely on a computerized proprietary model called GFLOW which "is experimental and has never been validated. It has not met the test of validity of the consulting firm that created it nor has it had any empirical testing." Id. at 22. Whether the Licensing Board requested that Staff undertake to test the validity of the GFLOW analysis, the Staff refused. Tr. _____. Thus additional hearings must be undertaken to verify the assumptions used in Licensee's calculations.

Finally, it should be noted that if an intermediate appeal is granted Licensee, the criticality issue will not be fully decided since Intervenor's intend also to appeal from the Initial Decision to the extent that it does approve of some of the calculations of Licensee's expert. If an intermediate appeal is granted Licensee, Intervenor will also appeal. Intervenor also expect to request permission to provide additional information for the record before the Appeal Board. Intervenor must find experts to assist them without fee on these highly technical matters. Preparation for the appeal including brief writing, would consume substantial time of Intervenor's counsel, who acts as a volunteer, without compensation, and has necessarily limited time available for the case. As a result, Intervenor would require a delay in any hearings before the Licensing Board as a result of the appeal. Thus the end result would be a piecemeal appeal with no time saved.

3. Licensee will not be prejudiced by any delay in this proceeding.

The only possible result of any additional delay in this proceeding might be a temporary closing of the plant, but even this might not be necessary. Further, the closing of the plant is inconsequential. The plant produces only about one percent of all of Licensee's Michigan production. It is an old (1962), tiny plant. Recently, employees of the plant have told area residents that management is talking of closing the plant because it is cheaper to buy electricity elsewhere. Whether this is management "scare" talk or serious we do not know, but it is obvious there is no great need for the plant's production.

Further, whether the plant might close if the spent fuel pool is not expanded by June 1983, is sheer speculation. Licensee insists there is no safety problem in operating without full core off load capacity. Affidavit of David J. Vandewalle, attached to Licensee's Motion for Immediate Appeal, par. 6. The 61 unoccupied locations in the current spent fuel pool are more than sufficient to handle the next refueling scheduled for March or April 198³, when one-third of the 84 fuel assemblies in the core are removed. Affidavit of Vandewalle, par. 5. Thus a possible shut down would arise only "during either a planned or unplanned outage when access to areas normally obstructed by the core is required in order to perform maintenance activities such as inservice inspection of the reactor vessel or repairs to the reactor components". Id. par. 6. But even such a shut-down may not be necessary. Licensee could seek permission to ship a small number of spent fuel rods to its other Michigan plants, the operating Palisades plant and the soon to be completed Midland plant.

Further, Licensee could request permission to install a temporary additional rack in the Big Rock Plant Spent fuel pool to accommodate the additional 22 rods needed to give the plant full off-core load capacity, a possibility raised earlier by Licensee's counsel.

Finally, the plant will go off line in any event sometime after March 15, 1983 for almost three months for refueling and maintenance.

Thus, no prejudice will ensue to Licensee from proceeding with this case in an orderly fashion, completing the hearings before the Licensing Board and then raising all appeals.

4. The Health and Safety of the Public and an Expeditious Licensing Process require Denial of an Intermediate Appeal.

The Licensing Board correctly found that serious deficiencies exist in the criticality analysis of Licensee and that the Staff review was wholly inadequate. These are matters of great consequence to the health and safety of the public. The most prudent course is that suggested by the Licensing Board, a further analysis and report by the Licensee and a review by the Staff. Then, and only then, will the NRC and the public know whether expanding the pool is safe.

The additional report is also the most expeditious. Even if it required three months, it would not delay the proceedings since the hearings are not likely to resume for four or five months. Further, Licensee's claim that the additional report on supercriticality is unnecessary is based on its assertion that it will install a make-up water line which it asserts will

make it impossible for a boil-off to occur. Licensee has yet to produce a report on the claims it makes or the feasibility of the make-up water line. Even if it does someday, that report must be reviewed by staff and tested at a hearing. Thus no time will be saved even if an intermediate appeal on a portion of the criticality issue were held.

What Licensee seeks is to substitute its idea about how the hearing should be conducted from that of the Licensing Board. The best method for the safety of the public is to get all the facts on the table, the information ordered by the Licensing Board and the make-up water line if Licensee intends to proceed with that proposal.

CONCLUSION

For the reason set forth above, Licensees Motion for an Intermediate Appeal should be denied.

Respectfully submitted,

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