UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of	)	
	)	
PUBLIC SERVICE COMPANY OF INDIANA, INC. (Marble Hill Nuclear Generating Station, Units 1 and 2)	)	Docket Nos. STN 50-546 [1/] STN 50-547

LICENSEES' RESPONSE TO ALAB-509

Pursuant to Philadelphia Electric Company (Peach Bottom Atomic Station, Units 2 and 3), ALAB-509, 8 NRC ___, as modified by ALAB-512 and the subsequent order served on March 5, 1979, Public Service Company of Indiana, Inc. ("PSI") and Wabash Valley Power Association, Inc. ("WVPA") ("Licensees") hereby file their response in support of the de minimis theory advanced by the Atomic Safety and Licensing Board in the Perkins proceeding. No intervenor in the Marble Hill proceeding has responded to ALAB-509. This response will, nevertheless, address certain aspects of Marble Hill as well as the responses to ALAB-509 filed by Northern Thunder and Dr. Chauncey Kepford.

1/ The pleadings to which this response is addressed are being considered in various cases. The lead docket is Philadelphia Electric Company (Peach Bottom Atomic Power Station, Units 2 and 3), Docket Nos. STN 50-277 and STN 50-278.

As the Appeal Board will recall, all of the environmental and site suitability issues concerning the Marble Hill units were addressed in hearings in March, April, and early May 1977. One of the contentions in those hearings was that inadequate consideration had been given to alternate sources of energy, including coal. In response to that contention, the Staff filed testimony by its witness Gotchy concerning the comparative health effects of the coal and nuclear fuel cycles. Ff. Tr. 4972. In his testimony, witness Gotchy referred to the environmental effects of radon releases and took into account 4,800 Ci of radon-222 for each annual fuel requirement ("AFR"). Id. at 9. No other party filed testimony concerning comparative health effects, and no party contested the Staff testimony.

In its partial initial decision issued on August 22, 1977, LBP-77-52, 6 NRC 294, the Licensing Board included detailed findings on the environmental effects of the coal and nuclear fuel cycles. 6 NRC at 321-23. Although numerous exceptions were taken to the decision, none addressed either radon releases specifically or the merits of the comparative health effects findings in general.

The Licensing Board's initial decision was affirmed by the Appeal Board in all respects save the location of

the Kentucky boundary on February 16, 1978. ALAB-459, 7 NRC 179. No party sought Commission review of ALAB-459 with respect to its affirmance of the Licensing Board's findings on the consideration of alternatives or the issue of comparative health effects. By an order dated March 16, 1978, the Commission extended its time for review of ALAB-459 to April 21, 1978. On the later date, review was denied by the Commission's failure to act. No party has sought judicial review of those aspects of ALAB-459.

On April 27, 1978, the Staff filed a motion to consolidate some 17 proceedings in order to reopen the record and receive new evidence on the environmental effects of radon releases during the nuclear fuel cycle. The Staff motion included the Marble Hill proceedings, asserting that Marble Hill was "pending before the Appeal Board." Staff Motion at 3. That assertion, of course, ignored the fact that ALAB-459 was no longer appealable within the Commission and had become final with respect to both the comparative health effects of coal and nuclear power and the overall NEPA cost-benefit analysis.[2/] Upon

2/ The only aspect of Marble Hill "pending before the Appeal Board" on April 27, 1978, was the Licensing Board's Initial Decision of April 4, 1978, LBP-78-12, 7 NRC 573, which was expressly limited to two issues, the financial qualifications of WVPA and the location of the Kentucky-Indiana boundary. Neither issue could conceivably have been affected by radon releases.

that basis, among others, Licensees vigorously objected to the Staff's motion to reopen Marble Hill. Licensees' Answer served May 8, 1978.

On May 30, 1978, the Appeal Boards issued their order in Philadelphia Electric Power Company (Peach Bottom Atomic Power Station, Units 2 and 3) ALAB-480, 7 NRC 796. In a footnote, ALAB-480 brushed aside Licensees' jurisdictional objections.[3/] ALAB-480 went on to deny the Staff motion for consolidation. Instead, it created special procedures pursuant to which any party to the Marble Hill case could request an additional hearing on the radon issue.

In response to ALAB-480, Save the Valley/Save Marble Hill ("STV") filed a purported request for a hearing on July 26, 1978. Sassafras Audubon Society ("SAS"), which was no longer a party, sent a letter asking to participate in future hearings on the radon issue as a "friend of the court" on July 23, 1978. Both Licensees and Staff have opposed the hearing requests of STV and SAS. See Licensees' Response to STV of August 7, 1978;

3/ It is difficult to square ALAB-480's treatment of this issue with the subsequent decisions in Public Service Company of Indiana, Inc. (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-530, 9 NRC ___ (March 19, 1979); Public Service Company of New Hampshire (Seabrook Station), ALAB-513, 8 NRC ___ (December 21, 1978); Washington Public Power Supply System (WPPSS Projects 3 and 5), ALAB-501, 8 NRC 381 (1978).

Licensees' Response to SAS of August 22, 1978; Staff's Response to SAS of August 25, 1978; Staff's Response to STV of September 27, 1978. The Appeal Board has never ruled on the July 1978 hearing requests.

On October 3, 1978, Ecology Action of Oswego filed a motion for consolidated hearings on radon. Among the proceedings included in the motion was Marble Hill. By an answer filed on October 18, 1978, Licensees opposed consolidation with respect to Marble Hill. In its response of October 24, 1978, Staff reiterated its position that STV was not entitled to a hearing, but went on to say that it might be appropriate for STV to participate in any hearing that might be held in the Sterling case. Ecology Action's motion has never been decided by the Appeal Board.

On December 1, 1978, the Appeal Boards issued ALAB-509. ALAB-509 departed from the format of ALAB-480 and provided for the filing of two more rounds of pleadings on radon issues. The first additional round was, by its terms, limited to Sterling and Tyrone. The second, however, permitted "any party in any of the pending proceedings" who disagreed with the Perkins initial decision to file an additional brief and required any party who supported the Perkins decision to file a response. The

response times were subsequently modified by ALAB-512 and the March 1, 1979 order of the Appeal Boards.

Licensees moved for reconsideration and clarification of ALAB-509 on December 14, 1978. We pointed out that by its continued failure to rule upon long-pending procedural motions, the Appeal Board was unnecessarily complicating the substantive resolution of the radon issue. Our motion was peremptorily denied on December 19, 1978.

Accordingly, Licensees now file their response as required by ALAB-509. In so doing, we renew our previous assertions that:

1. Marble Hill is beyond the Appeal Board's jurisdiction with respect to the radon question,

2. No one other than Licensees and Staff has satisfied the requirements of ALAB-480, and there is no reason to reopen the record in Marble Hill, and

3. There is no basis for consolidation of the Marble Hill proceeding with any other proceeding.

Argument

THE VALIDITY OF THE COMMISSION'S DECISION TO PERMIT CONSTRUCTION OF THE MARBLE HILL UNITS IS CONFIRMED BY THE INITIAL DECISION ON RADON IN PERKINS.

The Appeal Boards, in ALAB-509, have asked us to address the propriety of the finding by the Perkins

licensing board that the environmental impact of radon releases associated with the mining and milling of nuclear fuel is so small, when compared with background levels of radon and with fluctuations in that level, as to be insignificant. Whether or not a given circumstance is "insignificant" depends upon the context of the inquiry. In this case, the context is a cost-benefit analysis of the nuclear units in question.

There is nothing in section 102(2) of the National Environmental Policy Act of 1969 ("NEPA"), 42 U.S.C. § 4322, that requires a cost-benefit analysis. That such an analysis is not required is confirmed by the regulations issued by the Council on Environmental Quality on November 29, 1978. 43 Fed. Reg. 55978, to be codified as 40 C.F.R. §§ 1500.1-1508.28. The new CEQ regulations are intended to "establish formal guidelines from the Council on the requirements of NEPA" and to address all of the requirements of § 102(2). 43 Fed. Reg. 55978.[4/] The CEQ regulations, in § 1502.23, make clear that a cost-benefit analysis is not required and that a monetary

4/ By citing the CEQ regulations, we do not intend to endorse CEQ's position that it is authorized to impose those regulations upon the Nuclear Regulatory Commission.

cost-benefit analysis may not be appropriate "when there are important qualitative considerations." Id.

To be sure, the Commission's own regulations expressly require the preparation of a cost-benefit analysis in certain circumstances. A cost-benefit analysis is required to be included in an applicant's environmental report, 10 C.F.R. § 51.20(b), a draft environmental statement, id. § 51.23(c), and a final environmental statement, id. § 51.26(a). Significantly, however, there is no requirement that the Commission's licensing decision include a cost-benefit analysis. See id. § 51.52. The Commission is, therefore, legally free to meet the requirements of NEPA without conducting a cost-benefit analysis.

In the event that the Commission does conduct a cost-benefit analysis, the outcome of that analysis is not determinative of whether a license shall be approved. Again, the new CEQ regulations address this issue. They indicate that an alternative other than the one most environmentally preferable may be selected based upon "economic and technical considerations", the statutory mission of the Commission, or "essental considerations of national policy." § 1505.2(b). As stated in the CEQ's introductory comments: "Other factors may, on

balance, lead the decisionmaker to decide that other policies outweigh the environmental ones . . . ." 43 Fed. Reg. 55985.

CEQ's statutory interpretation is clearly correct. Section 103 of the Atomic Energy Act, 42 U.S.C. § 2133, provides that the Commission "shall" issue licenses to those persons who qualify for them. NEPA, on the other hand, has repeatedly been characterized by the Supreme Court as imposing only procedural obligations. E.g., Tennessee Valley Authority v. Hill, 98 S.Ct. 2279, 2298-99 n.34 (1978); Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 98 S.Ct. 1197, 1216 (1978). NEPA, therefore, does not alter the statutory obligation of the Commission to issue a license to a duly qualified applicant.

What NEPA does require is informed consideration by the Commission of alternatives to a proposed nuclear power plant before a determination is made to issue a license. The cost-benefit analysis is simply one means that the Commission may employ to assist it in considering alternatives. The cost-benefit analysis is not an end in and of itself.

In the Marble Hill proceeding, the Commission has complied with its obligation under NEPA to consider the

alternatives. The first choice of alternatives that the Commission was required to consider was the choice of new baseload electric generating capacity versus no new capacity. The "power-no power" dichotomy was addressed by the Licensing Board and the Appeal Board, and a choice in favor of power was made. That choice is now final and no longer subject to review.

The second set of alternatives that the Commission was required to consider was alternative sources of power. In the case of the Marble Hill units, the inquiry was narrowed to coal power versus nuclear power. Following full consideration of contentions and testimony with respect to those two sources of power, the Licensing Board and the Appeal Board made a choice of nuclear. That choice is now likewise final, unless the environmental effects of radon releases from the nuclear fuel cycle differ so materially from those considered by the Licensing Board as to tip the balance away from nuclear and in favor of coal.

The information concerning radon releases in Perkins is essentially the same as that considered in Marble Hill. In Marble Hill, witness Gotchy testified that adding mining to Table S-3 would result in a calculated release of 4,800 Ci of radon-222 per AFR in year one.

Ff. Tr. 4972 at 9. In Perkins, Staff witness Lowenberg testified to releases of 4,060 Ci per AFR for mining, 780 Ci per AFR for milling, and 350 Ci per AFR for tailings, or a total of 5,190 Ci in year one. Ff. Tr. 2369 at 8. In Marble Hill, witness Gotchy pointed out that radon-222 "will continue to emanate from flyash for millions of years after the coal has been burned" and that "[c]ombustion of the coal and dispersal of the remaining ash leads to approximately the same health effects from radon-222 emissions as uranium mill tailings piles." Ff. Tr. 4972 at 10. The Perkins licensing board made findings to the same effect. LBP-78-25, 8 NRC at 99. Therefore, the Perkins initial decision simply confirms the conclusion in Marble Hill that nuclear is the preferred choice.

There is no significant difference between the annual radon releases considered by witness Gotchy in the Marble Hill proceeding and those the Staff presented in Perkins. The only "new" issue is in the number of years for which annual releases are projected and considered.

Assuming that releases over thousands (or millions) of years should be considered, the question is how? It is here that the de minimis theory advocated in Perkins may come into play.

The Perkins licensing board observed, we believe correctly, that: "The benefits [of nuclear power] are certain--the impacts hypothetical." LBP-78-25, 8 NRC at 100. It should be pointed out that the Perkins decision correctly identifies the comparison to be made, namely benefits and impacts. A risk is not an impact. Only the harm that may result if the risk materializes can be considered an impact. Thus, the Perkins licensing board was, and the Appeal Boards are, confronted with the necessity of evaluating the harm, i.e., the social cost, that may result from radon releases.

The increased risk arising from radon releases can readily be quantified by selecting certain assumptions. Translating that risk into a cost or harm is far more difficult. As Dr. Kepford points out at page 30 of his response, we simply do not know how much radon causes how many deaths. The answer can be pursued in one of two ways.

One way is to assume a relationship between radon releases and harm and calculate the hypothetical number of resulting additional deaths. That methodology results in a prediction of one additional fatality in one thousand years from the incremental radon releases for one AFR. The same methodology indicates that over 2,000 fatalities

each year would be caused by natural background levels of radon. The results can be extended over time, but the calculated number of incremental fatalities remains a tiny fraction of the number predicted to occur naturally.

The second approach is to inquire whether it is realistic to assume that any additional harm will result from incremental radon releases. As the Perkins licensing board pointed out, the incremental releases are tiny fractions of natural background radon and are many orders of magnitude less than the variations to which an individual would be exposed to as a result of normal movements during his lifetime. Because natural background and its normal fluctuations so greatly exceed the postulated incremental radon releases, it is sensible to conclude, as the Perkins decision did, that there will be no significant incremental harm.

For a more complete analysis of the reasons why the Perkins licensing board correctly decided the radon question, we refer to Part IV of the memorandum being filed today by Rochester Gas and Electric Corporation, et al.

As we have shown, the initial decision in Perkins confirms the validity of the Marble Hill decisions in LBP-77-52 and ALAB-459. Accordingly, the reservation of

jurisdiction over this case initiated in ALAB-480 and continued in ALAB-493, 8 NRC at 269-71, should now be terminated.

Conclusion

For the foregoing reasons, the Appeal Boards should terminate the ALAB-480 proceeding with respect to Marble Hill.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that I have served, this 9th day of April, 1979, copies of "Licensees' Response to ALAB-509" by first-class mail, postage prepaid and properly addressed to the following:

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