

July 18, 1980

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARDS

In the Matters of	)	
	)	
PHILADELPHIA ELECTRIC COMPANY <u>et al.</u>	)	Docket Nos. 50-277
(Peach Bottom Atomic Power Station,	)	50-278
Units 2 and 3)	)	
	)	
METROPOLITAN EDISON COMPANY <u>et al.</u>	)	Docket No. 50-320
(Three Mile Island Nuclear Station,	)	
Unit 2)	)	
	)	
PUBLIC SERVICE ELECTRIC AND GAS CO.	)	Docket Nos. 50-354
(Hope Creek Generating Station,	)	50-355
Units 1 and 2)	)	
	)	

LICENSEES' REPLY TO FILINGS BY OTHER PARTIES  
ON DISPOSITION OF ALLEGED DEFICIENCY NO. 1

In its Order of March 7, 1980 setting the schedule for filing proposed findings of fact in the generic radon proceeding, the Appeal Boards suggested that any party might address the question of whether the disposition of alleged deficiency No. 1 made in ALAB-562 had been materially affected by the information contained in a recent draft report issued by Battelle-Pacific Northwest Laboratory, "An Investigation of Radon-222 Emissions From Underground Uranium Mines," Progress Report 2 (February 1980), NUREG/CR-1273. All parties, including Licensees, have filed responses to the Appeal Boards' invitation. Licensees reply herein to the other parties' positions on this question.

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Licensees' views on the status of alleged deficiency No. 1 are contained in their "Brief Submitted on Behalf of Philadelphia Electric Company et al., Metropolitan Edison Company et al., and Public Service Electric and Gas Co. on Disposition of Alleged Deficiency No. 1" ("Licensees' Brief") and the affidavit of Morton I. Goldman ("Goldman Aff."), both filed on April 28, 1980. In a nutshell, Licensees believe that the new estimates of radon-222 emissions from active underground and open-pit uranium mines presented by Staff witness Wilde at the hearing are more reliable than those available to the Licensing Board in Perkins. That these better estimates are now available does not require, however, a revisitation of the Appeal Boards' summary disposition of alleged deficiency No. 1, because the Appeal Boards' rationale in granting summary disposition of that deficiency has in no way been undermined by the findings in NUREG/CR-1273.

The intervenors have taken different positions on this issue. Environmental Coalition on Nuclear Power ("ECNP") would have re-examination of the disposition of alleged deficiency No. 1 held in abeyance until Battelle's final report is available to the parties and the Boards. ECNP Proposed Finding 25. Ecology Action of Oswego ("EAO") would have the Boards reverse their summary disposition of alleged deficiency No. 1, but would hold no further hearings on the matter; EAO would not have the Boards accept the Staff's new release figures for underground mining, and would have the Boards "find

that no correlation between radon releases and AFRs has been demonstrated." EAO Response to Board Request on Deficiency No. 1 at p. 2. It is unclear what radon emissions, if any, EAO would have the Appeal Boards associate with the active period of mining uranium for the facilities of interest here.

For its part, Staff would have the Appeal Boards adopt the radon release estimates from active underground and open-pit mines testified to by Staff witness Wilde at the hearing, i.e., 8000 Ci/AFR for underground mines and 630 Ci/AFR for open-pit mines, averaging out for all active mines to 5200 Ci/AFR on the basis of 60% of the total ore production coming from underground mines and 40% from open-pit mines. Tr. 348-349, 383-384 (Wilde). The Staff would, however, have the Appeal Boards reaffirm the summary disposition of alleged deficiency No. 1. NRC Staff's Proposed Findings of Fact, etc., at 23-26. The Staff's position is, therefore, similar to Licensees'. See Licensees' Brief at pp. 4-5.

ECNP's proposal to hold this matter in abeyance until issuance of the final Battelle report is unwarranted. There is no clear indication of when the final version of this report will be issued. Tr. 434 (Wilde). Moreover, NUREG/CR-1273 gives the results of an analysis of radon releases from mines representing a large proportion (63%) of the total underground mine production of uranium in the United States. It is, therefore, unlikely that the final results will differ in any significant respect from those in the current draft. Goldman

Aff. at paras. 5, 6. In any event, it is not necessary under NEPA to await clarification of all unresolved factual issues before completion of the environmental review of the action in question. See Licensees' Brief at p. 4 and cases cited therein.

EAO's proposed course of action is no sounder. Radon releases may be slightly better correlated with cumulative ore production than with yearly ore production; this, however, does not invalidate a release estimate based on the latter. For cumulative ore production is of no use in estimating future radon releases, since it is impossible to predict or model the cumulative underground mine production as a function of time into the future. Goldman Aff. at para. 13.<sup>1</sup>

Also, obtaining average industry releases by dividing yearly radon releases by yearly ore production is an appropriate methodology. This averaging procedure would be inappropriate only if the releases and/or ore production rates changed substantially from year to year so that a historical average had no value in predicting future releases. However, Staff witness Wilde testified that the current uranium mine population is "mature", that is, an equilibrium exists between new

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<sup>1</sup> NUREG/CR-1273 did not undertake to predict radon releases per AFR based on cumulative ore production. Instead, the report concluded that the best way to obtain industry averages of radon releases per AFR was to divide total yearly radon releases by total yearly ore production, which is the method endorsed by the Appeal Boards in ALAB-562. See Draft NUREG/CR-1273 at 45.

mines going into service and old mines being retired from production, so that the average mine age and, consequently, the average mine size and radon release rate, are not likely to change significantly in the future. Tr. 412-413 (Wilde). Therefore, the industry averages obtained by dividing the yearly radon emissions by the yearly ore production rates are not expected to be appreciably different from year to year, and current values of these variables can be used to predict future radon releases. Tr. 397 (Wilde).

The methodology utilized in Perkins and endorsed by the Appeal Boards in ALAB-562 is adequate and is also the only practical way to estimate the radon emissions attributable to the mining of uranium ore. Goldman Aff. at para. 13. EAO has offered no new radon release estimates, has not proposed a better, practical estimation method, and does not even believe that a further hearing on the issue is necessary.<sup>2</sup> In short,


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2 None of the parties has suggested that an evidentiary hearing be held in the future with respect to alleged deficiency No. 1.

EAO has failed to offer any valid reason for the Boards' re-examination of the summary disposition of alleged deficiency No. 1.

Respectfully submitted,

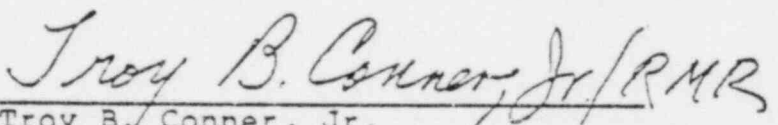
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