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UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

BEFORE ADMINISTRATIVE JUDGES:

Lawrence Brenner, Chairman Dr. Richard F. Cole Dr. Peter A. Morris

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In the Matter of

PHILADELPHIA ELECTRIC COMPANY

(Limerick Generating Station, Units 1 and 2) Docket Nos. 50-352-0L 50-353-0L

March 2, 1984

MEMORANDUM AND ORDER DENYING INTERVENOR LEWIS' MOTIONS BASED ON NEWLY RECEIVED INFORMATION

Introduction

On December 24, 1983, Intervenor Marvin I. Lewis filed "Motions based on Newly Received Information". These motions were listed as:

- Reconsideration of previously summarily disposed Contention I-62.
- 2. Acceptance of a new contention.
- 3. Certification to the Commission of a question.
- Clarification to the ALAB that Contention I~62 is a major part of this hearing.
- Any and all other contentions, motions and appeals that may properly preserve Intervenor's rights on this record.

These motions are denied.

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Background

These motions stem from Mr. Lewis' concern with the potential for pressurized thermal shock (PTS) in the Limerick boiling water reactors (BWRs).

As reworded on October 17, 1983 (Tr. 4561-62), Lewis Contention I-62 alleges that:

> Staff's dependence upon a comparison of Limerick to PWRs in which pressurized thermal shock (PTS) has been studied in order to develop its low probability for PTS failure at Limerick, is not justified. An operating license should not be issued without a full engineering analysis of PTS at Limerick, since PTS can cause a major breach of containment, which is an accident beyond the design basis.

In an unpublished order dated November 15, 1983, over the opposition of Mr. Lewis, the Board granted Applicant's motion for summary disposition (supported by the NRC Staff) of Contention I-62.

After the issuance of the Board's order, Mr. Lewis filed two simultaneous pleadings: One requested reconsideration by this Board, and the other sought to appeal our grant of summary disposition to the Appeal Board. In an unpublished order dated November 30, 1983, the Appeal Board summarily dismissed Mr. Lewis' appeal, finding it an impermissible interlocutory appeal. On December 7, 1983, this Board issued an unpublished ruling denying Mr. Lewis' motion for reconsideration of the decision to summarily dispose of Contention I-62. Mr. Lewis now seeks to revisit this issue once again in the form of his series of alternative motions for reconsideration of Contention I-62, as listed above, which we discuss in order, below.

1. Reconsideration of summary disposition of Contention 1-62.

Mr. Lewis moves for reconsideration of the dismissal of Contention I-62 on the basis of information he obtained after December 7, 1983, the date on which the Board denied his earlier motion for reconsideration. The issue of PTS at Limerick was initially resolved, based on a review of the merits of Contention I-62 and its previously stated basis as discussed in the motions before us in support of and in opposition to summary disposition. The instant motion for reconsideration of Contention I-62 is based on information not previously a part of the basis of Contention I-62 and not previously considered by the Board. The new information that Mr. Lewis relies on is contained in two reports issued by General Electric (GE) for the Applicant in response to the Staff's request that the Applicant commence studies to determine: (1) the consequences of instrument sensing line failures and (2) the consequences of multiple control system failures resulting from a common power supply loss.

The purpose of the studies was to confirm that the analyses of design basis events documented in the Limerick FSAR identified other credible failure modes. Specifically, the purpose of the first study was to assure that "Chapter 15 [of the Limerick FSAR] analyses bound any occurrence that could result from the failure of a cormon instrument

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line, defined as a line to which are attached sensors for more than one control system," and to assure that "[a] failure of a common instrument line will not defeat the required separation between control and protection systems, nor the redundancy of any protection system." Common Sensor Failure Evaluation Report (August 1983), at 1. The objectives of the second study were to "[p]erform an analysis in response to the NRC concern that the failures of power sources which provide power or electrical signals to multiple control systems could result in consequences outside the bounds of the Limerick [FSAR] Chapter 15 analyses and beyond the capability of operators or safety systems," and to "[p]rovide a positive demonstration that adequate review and analysis has been performed to ensure that despite such failure the Limerick FSAR Chapter 15 analyses are bounding, and no consequence beyond the capability of operators or safety systems would result." Control Systems Failures Evaluation Report (September 1983), at 1. The results of the GE studies are summarized in these two cited reports, which documents are the ones primarily relied on by Mr. Lewis' motions. These reports were transmitted to the Staff by letter dated Pacember 14, 1983, and were received by Mr. Lewis on December 15. These reports do not address the occurrence of PTS at Limerick and Mr. Lewis has not shown their relevance. Rather, he has reached an ipse dixit conclusion that "this 'new information' must be directly applicable to the question of PTS in BWRs such as Limerick." Motions, at 2.

Mr. Lewis believes that his discovery rights were abridged (Motions, at 1), in that the GE documents were within the Applicant's

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organization during discovery on Contention I-62, that these documents were pertinent to discovery on Contention I-62, and that these documents were not delivered to Mr. Lewis until after all appeal routes on the summary disposition of Contention I-62 were exhausted. As is evident from the nature of the GE documents, as revealed in the statement of the purposes and objectives of the studies, neither is pertinent to the study of PTS. The Board finds that Mr. Lewis' discovery rights with respect to Contention I-62 were not abridged.

As we noted in our November 15, 1983 "Memorandum and Order Granting Applicant's Motion for Summary Disposition of Contention I-62," slip op. at 2, the prerequisites for PTS are high reactor pressure, cold water injection (into the hot reactor vessel) and significant neutron radiation embrittlement (of the reactor vessel materials).

Nr. Lewis, in "Example 1" of his instant motions, argues that the Staff's acceptance of a 12.5 psi pressure rise during a rod drop accident would not be reasonable during "startup or hydrotest." Motions, at 2. He asserts that the pressure would be different, but fails to explain how the other conditions necessary for PTS would occur during a mode such as startup or hydrotest. In a hydrotest, as the Intervenor has attempted to explain, the reactor vessel is completely filled with water and pressurized but the reactor is shut down. Thus, it is warm (approximately 200° F), not hot (approximately 600-700° F). If the reactor vessel is not hot, there will be no rapid cooldown; therefore, the second condition for PTS is not present. Since PTS can occur only in vessel materials embrittled by neutron irradiation,

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Mr. Lewis admits that he "cannot meet the Board's tests as far as the issue of [neutron] fluxes." Motions, at 3.

The three "admissions in the GE report" that Mr. Lewis points to reflect only his own interpretation of the Control System Failures Evaluation Report. He fails to tie these assertions to the occurrence of PTS at Limerick. Mr. Lewis' "analysis" is completely lacking in specificity and bases and nexus to PTS and provides no support for his conclusion.

Mr. Lewis' "Example 2" (Motions, at 3) alleges the existence of a "violation of pressure limits in a BWR startup" due to inadequate control of water level resulting from a feedwater line break with no operator intervention. This could cause depressurization rather than a pressure increase associated with PTS. Thus, Mr. Lewis has failed to show how such a scenario could lead to PTS in the Limerick reactor pressure vessels.

Mr. Lewis' "Example 3" (Motions, at 3) involves some undefined speculation concerning external flooding and reactor vessel flooding. The Board does not find this scenario to be within the bounds of any credible PTS event. <u>See</u> our order of December 7, 1983 denying reconsideration, slip op. at 4-5.

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In sum, Mr. Lewis has failed to tie any of these scenarios to the occurrence of PTS in a BWR. Therefore, Intervenor Lewis has failed to support any change in the prior Board rulings, based on new information.

2. Acceptance of a new contention.

It is nowhere explicit in Mr. Lewis' December 24, 1983 filing what new contention he wishes to assert. Rather, it appears from a reading of the filing as a whole, and particularly the Summary (Motions, at 4), that he simply wishes Contention I-62 to be reinstated, together with additional time for discovery on the two General Electric reports.

As discussed above, nothing in Mr. Lewis' motions changes our earlier rulings, referenced above, which summarily disposed of Contention I-62 and denied Mr. Lewis' earlier request for reconsideration. We agree with the NRC Staff response that the most that Mr. Lewis has shown is that documents exist that, unrelated to PTS, demonstrate that different pressures may exist in the reactor pressure vessel under certain conditions. Mr. Lewis has not overcome our findings on the other prerequisites for PTS -- cold water injection (into the hot reactor vessel) and significant radiation embrittlement (of the reactor vessel materials).*/

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We note that our previous rulings granting and reaffirming summary disposition of Mr. Lewis' PTS contention in this BWR licensing proceeding are consistent with the Commission's recently published proposed rule on "fracture toughness requirements for protection against pressurized thermal shock events" (Proposed 10 C.F.R. § 50.61). 49 Fed. Reg. 4498, 4501 (February 7, 1984). The proposed rule expressly applies only to pressurized water reactors (PWRs). Id. at 4501, col. 2. As the (Footnote continued)

Mr. Lewis' motions 3, 4 and 5 all appear to be requests for certification (referral) or a declaration by this Board that our grant of summary disposition is eligible for appeal at this time. Mr. Lewis has not discussed the grounds prerequisite for certification (or referral). We agree with the Applicant and NRC Staff that the standards are not met here.

In addition, the Appeal Board has already determined, in its order of November 30, 1983, that this Board's summary disposition of Contention I-62 is not appealable at this time for the reasons noted in its order. For Mr. Lewis' information, in response to his request for procedural guidance, he may file an appeal of the summary disposition of Contention I-62 if and when a partial initial or initial decision is issued which meets the qualifying standards for appealability by a party, like Mr. Lewis, opposed to operation of Limerick -- for example, a decision which authorizes operation of Limerick in some manner, or

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statement of considerations (Id. at 4498, col. 3) explains:

The PTS issue is a concern only for PWR's. Boiling water reactors (BWR's) operate with a large portion of water inventory inside the pressure vessel at saturated conditions. Any sudden cooling will condense steam and result in a pressure decrease. Simultaneous conditions of high pressure and low temperature are considered to be improbable. Most BWR's also receive lower integrated fast neutron flux at the vessel inner wall, resulting in smaller RT_{NDT} shifts. BWRs are

designed with a thinner-walled vessel, resulting in lower thermal stress intensities for postulated cracks.

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otherwise disposes of a major segment of the case with a result adverse to Mr. Lewis' interests or eliminates Mr. Lewis as a party in the proceeding. Similar guidance to Mr. Lewis was contained in the Appeal Board's November 30, 1984 order dismissing his appeal.

For the reasons stated, Mr. Lewis' motions are denied.

IT IS SO ORDERED.

FOR THE ATOMIC SAFETY AND LICENSING BOARD

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Lawrence Brenner, Chairman ADMINISTRATIVE JUDGE

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Dr. Richard F. Cole ADMINISTRATIVE JUDGE

Dr. Peter A. Morris ADMINISTRATIVE JUDGE

Bethesda, Maryland March 2, 1984

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COURTESY NOTIFICATION

As circumstances warrant from time to time, the Board will mail copies of its memoranda and orders directly to each party, petitioner or other interested participant. This is intended solely as a courtesy and convenience to those served to provide extra time. Official service will be separate from the courtesy notification and will continue to be made by the Office of the Secretary of the Commission. Unless otherwise stated, time periods will be computed from the official service.

I hereby certify that I have today mailed copies of the Board's "Memorandum and Order Denying Intervenor Lewis' Motions Based on Newly Received Information" to the persons designated on the attached Courtesy Notification List.

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Valarie M. Lane Secretary to Judge Brenner Atomic Safety and Licensing Board Panel

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