

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of )  
METROPOLITAN EDISON COMPANY, ET AL. )  
(Three Mile Island, Unit 1) )

Docket No. 50-289  
(Restart)

NRC STAFF RESPONSE TO APPEAL BOARD  
ORDER OF OCTOBER 15, 1982

I. INTRODUCTION

The NRC Staff issued Board Notification BN-82-93 on September 14, 1982 to provide information to the Appeal Board and the parties concerning a Semiscale test regarding "feed and bleed" capability.<sup>1/</sup> On October 7, 1982 Intervenor Union of Concerned Scientists ("UCS") filed what it characterized as a "response" to the board notification, together with a motion to direct the Staff "to immediately serve all documents in the Staff's possession relating to feed and bleed on the Appeal Board and the parties in this proceeding."<sup>2/</sup> The UCS "response"

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<sup>1/</sup> As explained in the August 30, 1982 memorandum from Roger J. Mattson to Darrell Eisenhut ("Mattson August 30 memorandum") included with the Board Notification, "feed and bleed" refers to a mode of core cooling in which all feedwater (main and auxiliary) is not available, and decay heat removal is accomplished by adding coolant inventory with the high pressure injection system and removing decay heat energy through the safety or relief valves. The feed and bleed mode of core cooling was being tested in the Semiscale test which was the subject of the Board Notification when uncovering of the core simulator occurred unexpectedly, causing premature termination of the test.

<sup>2/</sup> UCS Response to Board Notification BN-82-93 and Motion that Appeal Board Direct NRC Staff to Provide All Pertinent Documentation and Analyses, dated October 7, 1982 ("UCS Response"), at 4. Three specific documents sought by UCS are listed at pages 3-4 of its filing.

contains several pages of argument styled as an "assessment of relevance and significance" of the Semiscale test to this proceeding,<sup>3/</sup> after which UCS concludes that several of its exceptions should be sustained "[o]n the basis of this new evidence . . . ."<sup>4/</sup>

By Order dated October 15, 1982, the Appeal Board directed the Staff to respond to the UCS motion. The Appeal Board asked the Staff in particular to advise it "whether, and to what extent, it intends to make any relevant documents available to the parties voluntarily." Order, dated October 15, 1982, at 2. The Staff's response to this Order is set forth below; an affidavit of Brian W. Sheron and Walton L. Jensen, Jr. Concerning Semiscale Test (S-SR-2) Results, dated October 25, 1981, is submitted in support of the Staff's response.<sup>5/</sup>

## II. DISCUSSION

As the Appeal Board noted, the UCS filing consists of two parts: a motion for specific relief and a "response" of uncertain procedural status. Because UCS' "response" consists principally of new argument based on what UCS characterizes as "new evidence," the Staff treats the

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<sup>3/</sup> Id. at 7-13.

<sup>4/</sup> Id. at 13.

<sup>5/</sup> UCS also makes several allegations concerning the timing of the Staff's disclosure of the Semiscale test results. UCS Response at 2-5. The time that transpired between the conduct of the test and the issuance of BN-82-93 was simply that necessary for obtaining the test results, conducting an evaluation of them and preparing and issuing the board notification materials. Sheron and Jensen Aff. at ¶ 8. As to UCS' assertion that the Staff "should have been aware of the Appeal Board's interest in any empirical information on the ability of feed and bleed to cool the core" based on a question posed to the Staff in an Appeal Board Order issued on July 14, 1982 (UCS Response at 4), the Appeal Board's question was addressed specifically to LOFT tests and that information was provided in the Staff's response to the Appeal Board's July 14, 1982 Order.

UCS "response" as a motion to reopen the record of this proceeding. For the reasons discussed below, UCS' motion to direct the Staff to serve all relevant documents should be denied as moot or, to the extent it is not moot, as overbroad and UCS' constructive motion to reopen the record should be denied for failure to satisfy the applicable legal standards.

A. Motion to Direct Service of Documents

As UCS correctly notes, NRC Office Letter No. 19 provides the procedure for promptly notifying adjudicatory boards of information that could reasonably be regarded as putting a new or different light upon an issue before adjudicatory boards or as raising a new issue. This procedure is designed to ensure that adjudicatory boards and parties are informed of any new information which is relevant and material to matters being adjudicated. See generally Duke Power Company (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-143, 6 AEC 623, 625-26 (1973).

In the case of the Semiscale test which is the subject of Board Notification BN-82-93, the Staff concluded on the basis of its assessment of the information and the procedure cited above that no board notification was required. This determination was based on the Staff's judgment at the time that the Semiscale test results were not material since they did not call into question the capability of feed and bleed cooling to provide an inherent margin of safety in the event of loss of all feedwater. See BN-82-93; Sheron and Jensen Aff. at ¶¶ 9-12; see also BN-82-71. However, the Staff decided to issue BN-82-93 and the attachments thereto due to the interest in feed and

bleed cooling in recent licensing proceedings, including TMI-1.<sup>6/</sup>

See BN-82-93.

The documents attached to BN-82-93 were those the Staff, in the exercise of its judgment, considered most informative for the involved licensing boards.<sup>7/</sup> The Staff informed the Appeal Board and the parties in BN-82-93 that "the staff is pursuing resolution of this issue and the Appeal Board will be notified of the Staff's conclusions regarding this test, in the near future." That notification, BN-82-107, has now been issued. Additional documents relevant to the Semiscale test, including those listed by UCS at pages 3-4 of its filing, are attached to BN-82-107 or to the affidavit of Brian W. Sheron and Walter L. Jensen, Jr., dated October 22, 1982, which accompanies this Staff response. Thus, all documents which the Staff considers arguably relevant and material to this proceeding relating to the Semiscale test have been served on the Appeal Board and the parties. UCS' motion to direct service of such documents should accordingly be denied

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<sup>6/</sup> The provision of this information is not a concession that the information is relevant and material to the issues under consideration in this proceeding. See, e.g., Carolina Power and Light Company (Shearon Harris Nuclear Power Plant, Units 1, 2, 3 and 4), LBP-78-2, 7 NRC 83, 88 (1978). Whether or not the Staff at the time considered this information material, the essential point is that a board notification was issued.

<sup>7/</sup> The EG&G, Idaho, Inc. September 1982 report on the Semiscale test in question was not available to the Staff at the time of Board Notification BN-82-93. This report is attached to BN-82-107. With respect to the other two documents cited by UCS, the Staff did not consider these materials to be of sufficient importance to warrant their inclusion among the informational materials voluntarily provided to the licensing boards and the parties. See Sheron and Jensen Aff. at ¶ 10.

as moot. The Staff notes that UCS requests "all documents in the Staff's possession relating to feed and bleed." UCS Response at 4. Such a request is so broad as to be meaningless and the Staff opposes UCS' motion as overbroad to the extent it calls for the service of documents unrelated to Semiscale test S-SR-2.

B. Constructive Motion to Reopen

As the Staff noted above, UCS presents several pages of argument on the subject of feed and bleed capability and concludes that several of its exceptions should be sustained "on the basis of this new evidence." In order for the facts cited by UCS to be available in the record to be used as support for UCS' argument on its exceptions, UCS must satisfy the legal standard for reopening the record in this proceeding. UCS has made no attempt to satisfy the applicable standard and, as shown below, is unable to make the necessary showing.

The standard for reopening a record in Commission proceedings is set forth in Kansas Gas and Electric Company, et al. (Wolf Creek Generating Station, Unit No. 1), ALAB-462, 7 NRC 320, 338, reconsideration denied, ALAB-477, 7 NRC 766 (1978). The proponent of a motion to reopen bears a heavy burden. The movant must demonstrate that: (1) the motion is timely; (2) the motion is directed to a significant safety or environmental issue;<sup>8/</sup> and (3) a different result would have been reached initially had the

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<sup>8/</sup> See Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-598, 11 NRC 876, 879 (1980); Georgia Power Co. (Alvin W. Vogtle Nuclear Power Plant, Units 1 and 2), ALAB-291, 2 NRC 404, 409 (1975); Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), ALAB-138, 6 AEC 520, 523 (1973).

material submitted in support of the motion been considered.<sup>9/</sup> As the attached affidavit<sup>10/</sup> and Board Notification BN-82-107 demonstrate, UCS has not carried its heavy burden because it cannot show that the Semiscale tests raise a significant safety issue or that information related to these tests would have caused a different result to be reached.<sup>11/</sup>

The Semiscale test results do not raise a significant safety issue. Board Notification BN-82-93 noted that sufficient information was not yet available to draw any conclusions from the Semiscale test, but stated preliminarily the Staff's belief that these results do not adversely affect the Staff position regarding reliance on feed and bleed cooling. BN-82-93 explained that core simulator uncovering was not expected to occur in S-SR-2, although this expectation was based on engineering judgment rather than any pre-test predictive calculations. Thus it was "not known if any new phenomena occurred that were not capable of being predicted by current analysis computer codes." BN-82-93 (Mattson August 30 Memorandum at 2). In Board Notification BN-82-107, the Staff has now reported on the completion of its evaluation of the Semiscale tests. That evaluation and a RELAP-5 analysis demonstrate

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<sup>9/</sup> See Northern Indiana Public Service Co. (Bailly Generating Station, Nuclear-1), ALAB-227, 8 AEC 416, 418 (1974); Duke Power Co. (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-669, 15 NRC 453, 465 (1982) ("[I]t is well-settled that, in order to obtain a reopening of an evidentiary record, a party must establish, inter alia, the existence of newly discovered evidence having a material bearing upon the proper result in the proceeding.")

<sup>10/</sup> It is appropriate to consider an affidavit submitted in response to a motion to reopen the record for the purpose of ruling on the motion. See Vermont Yankee, supra, 6 AEC at 523.

<sup>11/</sup> The Staff does not take issue with the timeliness of the UCS "response."



the code's ability to calculate accurately both the overall system response and local responses. BN-82-107 (Mattson October 19 Memorandum at 1).

In other words, a pre-test calculation on the Semiscale S-SR-2 test would have predicted the phenomena observed. Sheron and Jensen Aff. at ¶ 11.

The Staff has concluded in BN-82-107 that the Semiscale test "does not exhibit any new phenomena and can be adequately predicted by our computer codes." The Staff further concludes that "[t]hese analyses and this test are not a generic indication of the ability of PWR's to feed and bleed."

BN-82-107 (Mattson October 19 Memorandum at 2). Nor can they be viewed as an indication of any inability of a Babcock & Wilcox PWR such as TMI-1 to feed and bleed since the Semiscale S-SR-2 test was only representative of a typical Westinghouse 4-loop plant. BN-82-107 (Mattson October 19 Memorandum at 1); see also BN-82-71, Enclosure at 14-15.

These conclusions and the bases for them demonstrate that no significant safety concern for TMI-1 is raised by the Semiscale test results. As the Staff has argued elsewhere, feed and bleed capability is utilized only as a back-up to the Emergency Feedwater System ("EFW") which is completely safety-grade for all design basis requirements within the scope of this proceeding.<sup>11/</sup> Even for this limited purpose, however, the effectiveness

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<sup>11/</sup> UCS cites a Staff proposed finding (No. 435) in an attempt to demonstrate that, contrary to a statement contained in the materials included in BN-82-93, the Staff does rely on feed and bleed to meet the Commission's regulations. UCS Response at 5. The finding cited was supported by a reference to Tr. 6201, where Staff witness Wermeil explains that the Staff relies on feed and bleed under specific conditions until EFW is demonstrated to be wholly safety-grade. These conditions for which EFW has not been demonstrated to be fully environmentally qualified (steam line break and high energy line break) are not considered to be within the scope of this proceeding since they have no nexus to the TMI accident. See LBP-79-34, 10 NRC 828, 829-32 (1979) and PID ¶¶ 1139-81. In the context of the issues involved in this proceeding, the statement contained in BN-82-93 is completely accurate and UCS' assertions to the contrary are themselves "flatly wrong". UCS Response at 6. Board Notification BN-82-71 discusses at length the position of the Staff with respect to feed and bleed cooling at TMI-1.

of the feed and bleed mode of cooling is not called into question by the Semiscale test results. Semiscale tests such as S-SR-2 are used primarily for verification of computer codes and in the analysis of plant response to various conditions or events. The EG&G, Idaho, Inc. analysis (attached to BN-82-107) shows to the Staff's satisfaction that the RELAP-5 code accurately calculates both the overall system response and local responses. Sheron and Jensen Aff. at ¶¶ 12-13. In addition, subsequent to the Semiscale test the Staff has conducted calculations for TMI-1 using the RELAP-5 code which demonstrate that the core would remain cool and covered. These results are consistent with the evidence in the record concerning the efficacy of the feed and bleed mode of core cooling. Id. at ¶ 13; see also BN-82-71. Thus, even if the Semiscale test results are arguably relevant and material to the feed and bleed issue involved in this proceeding, they clearly do not raise a significant safety concern and would not have caused a different result to have been reached by the Licensing Board.

In view of UCS' failure to satisfy the criteria for reopening the evidentiary record, its constructive motion to reopen should be denied.

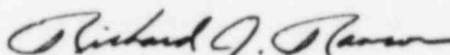
### III. CONCLUSION

For the reasons discussed above, the requests for relief contained in "Union of Concerned Scientists' Response to Board Notification BN-82-93 Concerning Semiscale Tests of Feed and Bleed And Motion That Appeal Board Direct NRC Staff To Provide All Pertinent Documentation And Analyses" should be denied. All documents the Staff considers arguably relevant and material to this proceeding regarding the Semiscale tests have been served on UCS and that portion of its request for relief is moot. To the extent that the



UCS motion calls for documents other than those relevant and material to the results of Semiscale test S-SR-2, it must be denied as overbroad. UCS has failed to satisfy the legal standards for reopening the record and its additional arguments in support of its exceptions should be rejected by the Appeal Board.

Respectfully submitted,



Richard J. Rawson  
Counsel for NRC Staff

Dated at Bethesda, Maryland  
this 25th day of October, 1982.