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January 24, 1983

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of)	
)	
METROPOLITAN EDISON COMPANY)	Docket No. 50-289
)	(Restart)
(Three Mile Island Nuclear)	
Station, Unit No. 1))	

LICENSEE'S REPLY TO THE UCS RESPONSE
TO ALAB-708 AND TO THE UCS REQUEST
FOR MODIFICATION OF SCHEDULE

On Wednesday, January 19, 1983, intervenor Union of Concerned Scientists filed with the Atomic Safety and Licensing Appeal Board assigned to the design issues in this proceeding a pleading entitled "Union of Concerned Scientists' Response to ALAB-708 and Request for Modification of Schedule" (hereinafter, the "UCS Response"). On the same day, the Appeal Board directed that any comments Licensee might wish to file on the UCS Response must be received by the Appeal Board before the close of business on Monday, January 24, 1983.

The UCS pleading includes three distinct requests with respect to the reopening of the record directed by this board's

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Memorandum and Order dated December 29, 1982 (ALAB-708): (1) that the schedule for filing of UCS testimony and commencement of the hearing be extended; (2) that the scope of the reopened proceeding be expanded to include additional matters UCS believes should be addressed; and (3) that the NRC Staff be ordered to produce witnesses from EG&G. In addition, UCS makes several gratuitous so-called "substantive comments" on ALAB-708 which bear no apparent relationship to the three requests for relief. See UCS Response at 3-4 (section 1 of the UCS "Substantive Comments"), 5-10 (section 3, most of section 4, and sections 5 and 6). Licensee opposes each of the UCS requests, and addresses separately the UCS substantive comments.

I. Proposed Schedule Modification

Pursuant to the Appeal Board's Order of January 18, 1983:

All supplemental written testimony shall be in our hands and in the hands of other parties no later than the close of business, Wednesday, February 16, 1983. The evidentiary hearing will be held at 9:00 a.m. on Tuesday, March 1, 1983. Briefs shall be in our hands no later than close of business, Monday, March 21, 1983.

UCS now requests that it be permitted to file direct testimony by March 16, 1983 (i.e., one month after the Staff and Licensee), and ". . . that the hearing sessions and deadline for proposed findings be established by the Board to follow that date." UCS Response at 3.

UCS has advanced no basis here for a departure from the well-established Commission practice -- followed below by the Licensing Board -- of a common deadline for the filing of direct written testimony by all parties.^{1/} See 10 C.F.R. § 2.743(b). UCS complains that it is unreasonable to expect UCS to be able to present direct testimony by February 16 because UCS will not know the positions of Licensee and the Staff until then. To the extent UCS is in the dark about the positions of the other parties, the same can be said of the capability of those parties to anticipate any UCS testimony.

Further, UCS confuses the role of direct testimony with the rebuttal process which occurs during the hearing itself. It is the purpose of filing direct testimony in advance of hearing that each party -- including its counsel, technical advisers and witnesses -- know in advance the basic positions to be taken by each witness, and prepare so as to proceed expeditiously in the hearing. See Consumers Power Company (Midland Plant, Units 1 and 2), ALAB-379, 5 N.R.C. 565, 569

^{1/} While Licensee opposes any extension of the testimony filing date for UCS, we also note that the UCS request for an entire month in which to reflect on the testimony of Licensee and the Staff flagrantly ignores this board's stated intent ". . . to proceed promptly to supplement the record and to complete the appellate process in this phase of the case." ALAB-708, slip op. at 44. At the same time, UCS has urged the Commission to postpone its immediate effectiveness decision until the Appeal Board's concerns are resolved. See Comm. Tr. 74A-78 (Nov. 9, 1982). Finally, it is noteworthy that UCS presents this extraordinary request without an accompanying commitment that it will in fact file direct testimony.

(1977); 37 Fed. Reg. 15,127, 15,129 (1972) (Commission statement of considerations upon promulgation of amendments to 10 C.F.R. Part 2). It is not expected that parties should be in position to file rebuttal testimony in advance of hearing.^{2/} If UCS can make a case, at the hearing, for the proposition that written rebuttal testimony is necessary in spite of the opportunity for cross-examination, a motion should be presented to the Appeal Board at that time, when the question is not academic, but may be judged in the light of real facts showing the need by the movant and substantial benefit to the resolution of the Appeal Board's concerns.^{3/}

II. Proposed Expansion of the Reopened Proceeding

In its 45-page Memorandum and Order of December 29, 1982, the Appeal Board identified the bases for its belief that the

^{2/} Further, if a staggered filing schedule were considered, UCS would not necessarily be last. See Consolidated Edison Company of New York, Inc. (Indian Point, Units 1, 2, and 3), ALAB-377, 5 N.R.C. 430, 431 (1977). In fact, where nonsimultaneous filings are required, as with proposed findings of fact, the party with the burden of proof has the last word. See 10 C.F.R. § 2.754(a)(3).

^{3/} UCS also implies that no opportunity for discovery has been provided with respect to the RELAP5 code or the B&W Appendix K code. See UCS Response at 2. The fact is, however, that UCS had the opportunity to pursue discovery on the B&W code, and did so, prior to the Licensing Board hearings. See, e.g., Licensee's Response to UCS's First Set of Interrogatories, answer to Interrogatory No. 80 (January 25, 1980). Substantial information on the RELAP5 code, which is not new, already has been provided in Board Notification BN-82-107 (Oct. 22, 1982).

existing record is unclear as to whether adequate core decay heat removal can be assured for TMI-1 in the event of a loss of main feedwater or a small break loss of coolant accident. The Board ". . . concluded, therefore, that a limited reopening of the record is required to facilitate our prompt resolution of these matters." ALAB-708, slip op. at 3; see also id. at 42. Eleven requests for supplemental testimony were delineated by the Appeal Board to address its concerns with the existing record. Id. at 42-44. The scope of the reopened proceeding is limited, then, to the scope of the direct testimony requested by the Appeal Board.

UCS now moves the Appeal Board to expand the scope of the reopened proceeding in the following ways:

Add a question directed specifically toward establishing whether adequate operator training and procedures exist for decay heat removal, including use of the boiler-condenser mode, feed and bleed, transition between boiler-condenser and feed and bleed, and use of the high point vents; and

Add a question specifically directed toward establishing whether the RELAP5 code is able to accurately predict plant behavior following a loss of main feedwater or small break loss of coolant accident at TMI-1, including the adequacy of decay heat removal using the boiler-condenser mode or feed and bleed and the effects of RCS high point vent operation.

UCS Response at 10-11.

Licensee opposes the UCS motion. The Appeal Board has termed this reopening a "limited" one for good reason. The

Board has before it the Licensing Board's Initial Decision and the substantial underlying record, the briefs of and oral arguments by the parties on appeal, and the parties' views, filed on November 22, 1982, on the Board's preliminary views and concerns, expressed in its Memorandum and Order of November 5, 1982. While UCS certainly is entitled to participate in this reopened proceeding, the Appeal Board has not reached a decision yet on the design issues and clearly is in a position on its own to limit, and rightly should limit, the reopened hearing to those matters necessary for the Appeal Board to reach a final decision. There has not been a broad invitation for parties to advance evidence with respect to any systems, components, procedures or operator training which arguably relate to decay heat removal capability at TMI-1.

Consequently, the UCS request to add to the scope of the reopened proceeding constitutes a motion to reopen the record, and UCS has not addressed the standards by which such motions must be judged. See Kansas Gas and Electric Company, et al. (Wolf Creek Generating Station, Unit No. 1), ALAB-462, 7 N.R.C. 320, 338 (1978). Nevertheless, we will address the merits of the two UCS requests to reopen the record.

The first request is based upon the frequently rehearsed UCS argument that adherence to plant operating procedures purportedly will preclude the establishment of a condenser surface for boiler-condenser cooling and put the system into feed and bleed operation.^{4/} UCS Response at 4-5. This is the

^{4/} UCS erroneously implies here that feed and bleed cooling is present whenever HPI is in operation and a relief valve is

subject of UCS Exception 7, which has been briefed and argued, and which Licensee has shown to be in error. See Licensee's Brief in Opposition . . . , May 10, 1982, at 61.5/ Further, the record on plant procedures and operator training for decay heat removal during a small-break LOCA or main feedwater transient is already complete, and was available for challenge by UCS before the Licensing Board as well as on appeal. The B&W small break operating guidelines are in evidence (Licensee Ex. 12), as are several relevant TMI-1 operating and emergency procedures. See, e.g., Licensee Ex. 48, which includes detailed instructions (beyond HPI initiation) on bringing the plant to a cold shut-down condition following a small-break LOCA. See also Licensee Ex. 49 (loss of feedwater). The record also includes the Staff's findings that Licensee's small-break LOCA procedures and training are in compliance with the requirements of NUREG-0578 item 2.1.9.a, and that the

(Continued)

lifted. However, feed and bleed cooling, as the term has been used throughout this proceeding, refers to the situation where no feedwater is available (i.e., the steam generator is not available as a heat sink). See, in this proceeding, LBP-81-59, 14 N.R.C. 1211, 1227-28 (¶ 608), 1230 (¶ 619) (1981).

5/ As we point out in our brief, emergency feedwater enters the steam generator at a very high point which is close to the top of the tube sheet, so that even though the "still" water level on the secondary side could be below the primary level, there would still be a heat transfer surface available by the difference between the elevation of the emergency feedwater entry point and the level of the primary system. Tr. 4933-34 (Jensen).

procedures adequately reflect the B&W guidelines. Staff Ex. 1 at C1-14, 15. This record shows that in fact there is no operator action, beyond the initial raising of the steam generator level, necessary to establish boiler-condenser cooling.

The UCS request on the RELAP5 code is simply anomalous and unsupported. UCS appears to challenge the Appeal Board's potential reliance upon Staff analyses, using RELAP5, of feed and bleed cooling at TMI-1. The UCS argument, as best we understand it, is that no computer code, even one verified on a scaled experimental facility, is a reliable predictor of adequate core cooling with feed and bleed. See UCS Response at 7. It is a mystery, then, as to what additional evidence UCS seeks. In any event, Licensee understands Appeal Board Item 10 to be aimed toward an assessment of the adequacy of the RELAP5 code. The UCS request, then, is unnecessary.

III. Proposed Directive that the Staff Produce Designated Witnesses

UCS requests the Appeal Board to direct the Staff to produce witnesses from EG&G to discuss the relevant Semiscale tests and their interpretation of the significance of the test results. UCS Response at 11. The basis for the request amounts to nothing more than the expectation by UCS that the Staff's own witnesses will not agree with UCS on the implications of those tests. The UCS request is both premature and

without basis. The Staff, like other parties, has the right to offer witnesses of its own choosing. Before directing that other witnesses be presented, the Appeal Board first would have to provide the Staff every opportunity -- following interrogation of the witness(es) advanced -- to explain, correct or supplement its testimony as it sees fit. See South Carolina Electric and Gas Company, et al. (Virgil C. Summer Nuclear Station, Unit 1), ALAB-663, 14 N.R.C. 1140 (1981).

IV. Other UCS Comments on ALAB-708

In its pleading of January 19, 1983, UCS offers several comments on the Appeal Board's Memorandum and Order of December 29, 1982 (ALAB-708), unaccompanied by any request for relief. While Licensee would not expect the Appeal Board to rule on these gratuitous UCS statements, we nevertheless offer a brief recitation of Licensee's position in response.

UCS expresses its disagreement with the Appeal Board's conclusion that the manual control capability provided at TMI-1 for the emergency feedwater flow control valves is sufficient for restart. UCS Response at 3; ALAB-708, slip op. at 13, 14. In support of its argument,^{6/} UCS postulates a main steam line break accident -- a scenario totally lacking nexus to the TMI-2 accident -- in which the Main Steam Line Rupture Detection System (MSLRDS) functions properly in isolating main feedwater

^{6/} This UCS argument is not new. See UCS Exception 104.

to the affected steam generator while, at the same time, malfunctioning by isolating main feedwater to the intact steam generator.^{7/} Although the initiating event assumed by UCS is not a simple loss of main feedwater event, the end result would be the same: the control room operators would be aware of the demand on the EFW system^{8/} and would be able to control the EFW flow control valve manually either from the control room or locally at the valve itself.

UCS asserts that the potential exists for a net inventory loss during any feed and bleed operation at TMI-1, pointing to the Semiscale tests and the purported absence of a demonstration that there is a successful feed and bleed pressure band for TMI-1. UCS Response at 4-6. UCS continues to ignore Licensee Exhibit 9, the B&W generic analysis of feed and bleed

^{7/} This scenario postulated by UCS is absurd. It stretches the imagination to assume that a system, even a non-safety-grade system, can both properly perform and undergo a failure at the same time. Of course, it has long been recognized that the upgrade of the MSLRDS to safety-grade is a long-term action. See Licensee Ex. 15 at 11. UCS is also in error when it states that a main steam line break in containment requires isolation of all feedwater to the affected steam generator to prevent overpressurization of containment. See UCS Response at 3. Cavitating venturis have been added to the EFW system to regulate flow and prevent overpressurization. See Licensee's Response to the Atomic Safety and Licensing Appeal Board's Order of July 14, 1982 (August 12, 1982), at 20 and Attachment A.

^{8/} The TMI-1 control room has two diverse indications of EFW flow to the intact steam generator: safety-grade EFW flow indicators and redundant, single-failure-proof steam generator level indicators. See Licensee Ex. 15 at 6, 7; Staff Ex. 1 at C8-39; Staff Ex. 14 at 38.

cooling, which is bounding for all B&W 177-FA lowered-loop plants, such as TMI-1. In that analysis, both pressurizer code safety valves are assumed to be full open at 2575 psig (103% of setpoint), and only one HPI train is assumed to operate, with initiation after 20 minutes. Licensee Ex. 9 at 2. That analysis shows that the reactor coolant level remains above the core throughout the transient. See Licensee Ex. 9, Fig. 5 (showing reactor coolant system liquid volume; at 8900 seconds, when HPI flow exceeds the boil-off rate, the reactor coolant system begins to refill).

With respect to the seismic qualification of the EFW system, Licensee merely records its agreement with the Appeal Board's observation that the issue is outside the scope of this proceeding. See ALAB-708, slip op. at 7, n.5; UCS Response at 7-8.

In its final "comment," UCS mounts a confusing argument which purports to show that the Appeal Board misunderstands its role and authority. See UCS Response at 9-10. UCS attacks here the Appeal Board's observation that it is not free to alter regulatory requirements established by the Commission. See ALAB-708, slip op. at 21, n.35. UCS erroneously construes this Commission regulation (requiring the installation of hot leg high point vents as a means for removing noncondensable gases) as the equivalent of a Staff recommendation. Clearly, this proceeding is aimed at determining the necessity and sufficiency of the recommendations made by the Director of

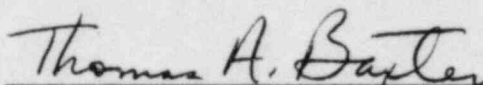
Nuclear Reactor Regulation. In the holding attacked by UCS, however, the Appeal Board was deferring, as it must, to the Commission itself.^{9/}

V. Conclusion

For all of the foregoing reasons, the UCS requests for relief, presented in its pleading of January 19, 198³, should be denied.

Respectfully submitted,

SHAW, PITTMAN, POTTS & TROWBRIDGE



George F. Trowbridge, P.C.
Thomas A. Baxter, P.C.

Counsel for Licensee

1800 M Street, N.W.
Washington, D.C. 20036

(202) 822-1090

^{9/} We should also note that UCS failed to bring a hydrogen control contention to trial under the terms set by the Commission. See, in this proceeding, LBP-81-59, 14 N.R.C. 1211, 1224 (1981).

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CERTIFICATE OF SERVICE

I hereby certify that copies of "Licensee's Reply to the UCS Response to ALAB-708 and to the UCS Request for Modification of Schedule" were served this 24th day of January, 1983, by hand delivery upon the parties identified by an asterisk and by deposit in the U.S. mail, first class, postage prepaid, to the other parties on the attached Service List.

Thomas A. Baxter
Thomas A. Baxter, P.C.

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SERVICE LIST

* Gary J. Edles, Esquire
Chairman
Atomic Safety and Licensing Appeal
Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

* Dr. John H. Buck
Atomic Safety and Licensing Appeal
Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

* Dr. Reginald L. Gotchy
Atomic Safety and Licensing Appeal
Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Ivan W. Smith, Esquire
Chairman
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. Walter H. Jordan
Atomic Safety and Licensing Board
Panel
881 West Outer Drive
Oak Ridge, Tennessee 37830

Dr. Linda W. Little
Atomic Safety and Licensing Board
Panel
5000 Hermitage Drive
Raleigh, North Carolina 27612

James M. Cutchin, IV, Esquire
Office of the Executive Legal Director
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Docketing and Service Section
Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

John A. Levin, Esquire
Assistant Counsel
Pennsylvania Public Utility Commission
P.O. Box 3265
Harrisburg, Pennsylvania 17120

Robert Adler, Esquire
Assistant Attorney General
505 Executive House
P.O. Box 2357
Harrisburg, Pennsylvania 17120

Ms. Louise Bradford
TMI ALERT
1011 Green Street
Harrisburg, Pennsylvania 17102

Ellyn R. Weiss, Esquire
Harmon & Weiss
1725 Eye Street, N.W., Suite 506
Washington, D.C. 20006

Steven C. Sholly
Union of Concerned Scientists
1346 Connecticut Avenue, N.W., Suite 1101
Washington, D.C. 20036

Jordan D. Cunningham, Esquire
2320 North Second Street
Harrisburg, Pennsylvania 17110

ANGRY/TMI PIRC
1037 MacLay Street
Harrisburg, Pennsylvania 17103

William S. Jordan, III, Esquire
Harmon & Weiss
1725 Eye Street, N.W., Suite 506
Washington, D.C. 20006

Chauncey Kepford
Judith H. Johnsrud
Environmental Coalition on Nuclear Power
433 Orlando Avenue
State College, Pennsylvania 16801

Marjorie M. Aamodt
R. D. 5
Coatesville, Pennsylvania 19320