

June 28, 1983

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

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

LICENSEE'S ANSWER TO UNION OF
CONCERNED SCIENTISTS' PETITION
FOR REVIEW OF ALAB-729

The Atomic Safety and Licensing Appeal Board's decision on plant design and procedures, and the physical separation of Units 1 and 2 of the Three Mile Island Nuclear Station was served on May 27, 1983. Metropolitan Edison Company, et al. (Three Mile Island Nuclear Station, Unit No. 1), ALAB-729, 17 N.R.C. ____ (May 26, 1983). On June 13, 1983, intervenor UCS filed with the Commission "Union of Concerned Scientists' Petition for Review of ALAB-729." Pursuant to 10 C.F.R. § 2.786(b)(3), Licensee files this answer in opposition to the UCS petition.

The UCS petition does not address explicitly all of the four factors enumerated in 10 C.F.R. § 2.786(b)(2). Further, the petition is somewhat confusing in its identification of the matters sought to be raised. Two issues are raised under the heading "Statement of Matters as to Which Review is Sought and as to Which Rulings were Erroneous": (a) "Are procedures in place at TMI-1 which provide

reasonable assurance of reliable decay heat removal?" and (b) "The pressurizer heater and PORV should be safety-grade." UCS Petition at 1, 4. Elsewhere, however, UCS ~~lists~~, without elaboration, a number of other Appeal Board holdings with which UCS disagrees.^{1/} UCS Petition at 4, n.2. Finally, UCS suggests the "hope" that the Commission will review the entire Appeal Board decision. Id. at 8.

I. Decay Heat Removal

In the words of the Appeal Board, "[a] critical aspect of UCS' challenge to the Licensing Board's decision is its disagreement with the Board's conclusion that the systems and procedures at TMI-1 will permit satisfactory decay heat removal in the event of an accident." ALAB-729, slip op. at 21-22 (footnote omitted). Decay heat removal was the subject of a four-day reopened hearing before the Appeal Board, and is addressed in a 67-page portion of the decision for which review is sought. While it arrived at its conclusion in part on different grounds, the Appeal Board's decision essentially endorses the Licensing Board's ultimate conclusion on decay heat removal capability at TMI-1.

On the issue of the reliability of the emergency feed-water ("EFW") system at TMI-1, a subject raised by the Licensing Board sua sponte as Board Question 6, the Licensing

^{1/} UCS attempts to explain the absence of any argument in support of review of these matters as the consequence of the 10-page limitation on the petition. UCS Petition at 4, n.2. The UCS petition, however, consists of only seven and one-half pages.

Board found that the system would be safety-grade at restart for small break LOCAs and main feedwater transients,^{2/} but determined nevertheless that the EFW system would not be sufficiently reliable at restart or in the long term.^{3/}

The Licensing Board based this conclusion on its own quantitative probabilistic analysis of EFW system failure. The Licensing Board found the "feed and bleed" cooling mode to be a reliable backup to the EFW system, however, and thereby endorsed decay heat removal capability at TMI-1. See LBP-81-59, 14 N.R.C. 1211, 1353-1373.

As the Appeal Board correctly stated, "[n]one of the parties agrees with the Licensing Board's assessment" of EFW system reliability. ALAB-729, slip op. at 26. For reasons clearly spelled out in its decision, and on the basis of evidence in the record, the Appeal Board held that the Licensing Board misapplied its quantitative probabilistic analysis in reaching the conclusion that the EFW system is unreliable despite its status as safety-grade for small break LOCAs and main feedwater transients. Id. at 27-31.

The Appeal Board concluded, however, that there is insufficient evidence in this record to support the Licensing Board's reliance on feed and bleed to provide core cooling at TMI-1. Id. at 71-80. Licensee and the Staff, as a prudent action, did recognize in this proceeding the available feed

^{2/} UCS misstates the Licensing Board decision on this point. Compare UCS Petition at 2 with LBP-81-59, 14 N.R.C. at 1372 (1981).

^{3/} The system will be modified to safety-grade for all design basis events during the first refueling after restart. See ALAB-729, slip op. at 27, n.33.

and bleed cooling alternative provided by the TMI-1 design. Both Licensee and the Staff advanced this alternative as an additional, backup method of providing forced cooling which could be utilized as a defense-in-depth procedure for events beyond the design basis. Neither Licensee nor the Staff, however, relied upon feed and bleed cooling to mitigate design basis events. Jones and Lanese, ff. App. Tr. 111, at 1; Sheron and Jensen, ff. App. Tr. 83, at 22; App. Tr. 200-201 (Sheron). Consequently, Commission review of the Appeal Board's decision has not been sought by Licensee or the Staff.

In its petition, UCS seeks review of the Appeal Board's resolution of the decay heat removal issues in three respects. First, UCS asserts that the Appeal Board rejected the Licensing Board's quantitative EFW reliability analysis on so-called "specious" grounds, a criticism which UCS does not support in any way, and that the Appeal Board "failed to adequately consider the fact that the EFW system is not safety-grade." UCS Petition at 2. In fact, as noted above, the Appeal Board's rejection of the Licensing Board's analysis is clearly correct and supported by the record. Further, the safety-grade status of the EFW system was extensively considered and consistently resolved by the Licensing and Appeal Boards. The UCS petition offers no hint of any error on this subject other than its weak accusation that the issue was not adequately considered.

Second, UCS claims that the Appeal Board should have postulated core damage (e.g., the TMI-2 accident) as a new design basis against which the TMI-1 systems and procedures for decay heat removal should be measured. UCS Petition at 2. This UCS position, rejected as well by the Licensing Board,^{4/} flies in the face of the purpose of the NRC's TMI Action Plan and this proceeding -- to provide reasonable assurance that accidents involving inadequate core cooling do not occur.^{5/} Surely the Licensing and Appeal Boards correctly determined that this proceeding was not to assume blindly that a TMI-2 or beyond design basis accident happens again, but was instead to focus primarily on the means to avoid such an accident.

Third, UCS seeks Commission review because the Appeal Board followed Commission guidance and did not consider the seismic and environmental qualification of the EFW system at TMI-1. UCS Petition at 2-4. The Appeal Board correctly found, as did the Licensing Board, that the issue

4/ See 10 C.F.R. § 50.2(u) for the definition of "design bases." The Licensing Board carefully considered and found that the Staff has demonstrated that its methods for identifying the accident sequences which are credible for the purposes of determining the plant's design basis are reasonable, and that the Staff's method of determining that all of the necessary TMI-2 accident-related recommendations have been identified is sufficient. LBP-81-59, 14 N.R.C. at 1379-1396.

5/ Of course events beyond the design basis have not been ignored, as attested to by NRC requirements for reactor coolant system high point vents, post-accident in-plant shielding, instrumentation to detect inadequate core cooling, accident monitoring, training and procedures on inadequate core cooling, and off-site emergency planning.

of environmental qualification of safety-related equipment at TMI-1 has been preempted by the Commission's independent and generic orders and rulemaking which have established the substantive criteria to be met and the schedule for doing so, and which have approved the Staff's plan for review of operating reactors.^{6/} See ALAB-729, slip op. at 170-175. In excluding the seismic qualification of the EFW system^{7/} the Appeal Board simply followed explicit Commission guidance on the scope of this proceeding^{8/} and the "nexus standard" initially proposed by UCS itself to the Licensing Board. See Metropolitan Edison Company (Three Mile Island Nuclear Station, Unit 1), LBP-81-32, 14 N.R.C. 381, 394 (1981), and ALAB-705, 16 N.R.C. ____, slip op. at 20 (Dec. 10, 1982). Obviously, there is no basis for Commission review of an Appeal Board decision which is faulted because it followed clear Commission guidance.

6/ As the Appeal Board observes: "In reaching its decision, the Licensing Board expressly considered whether, despite the Commission's findings, TMI-1 should be considered differently from the other plants. It concluded that it should not. In reaching this conclusion, it approved certain restart conditions proposed by the staff, in which the licensee acquiesced. See 14 NRC at 1404-05." ALAB-729, slip op. at 175, n.361.

7/ The so-called "record" cited by UCS obviously is incomplete on this score. Licensee has separately answered the Staff's outstanding questions on seismic qualification of the EFW system.

8/ Metropolitan Edison Company (Three Mile Island Nuclear Station, Unit No. 1), CLI-83-5, 17 N.R.C. ____ (March 4, 1983).

II. Pressurizer Heaters and the PORV

UCS seeks Commission review of the Appeal Board's resolution of appeals from the Licensing Board's decision against UCS Contentions 3, 4 and 5. UCS Petition at 4-7. UCS Contentions 3 and 5 challenge the adequacy of the Staff's proposed "lessons learned" improvements to the pressurizer heaters and the PORV (along with its instrumentation and controls), and asserts that they should be made fully safety-grade. UCS Contention 4 asserts that the recommended improvement to the pressurizer heaters -- that provision be made for connection to the on-site emergency power supply of an adequate number of heaters to maintain natural circulation in the hot standby condition -- will detract from safety.

The Licensing Board heard the UCS direct testimony in support of each of these contentions and, considering all of the evidence, resolved each of them against UCS. See LBP-81-59, supra, 14 N.R.C. at 1267-1270 (Contention 3), 1270-1277 (Contention 4), 1277-1282 (Contention 5). The Appeal Board, in a fully explained opinion, affirmed the Licensing Board's conclusions on each of these issues. See ALAB-729, slip op. at 44-51 (Contention 3), 88-100 (Contention 4), 100-111 (Contention 5). The UCS petition advances no basis for Commission review other than UCS' disagreement with the factual determinations consistently reached by both boards. There are no new or unique questions

of law or policy here. The decisions below merely confirm the appropriateness of the lessons learned improvements to the pressurizer heaters and PORV which already have been applied by the NRC to other operating reactors.

UCS attempts to characterize as novel the principle applied here by the Licensing and Appeal Boards, and derived in resolution of UCS Contention 14, that plant structures, systems and components need not be safety grade merely because they may play some safety role, where reliance is placed on other safety grade structures, systems and components to meet critical safety functions. Compare UCS Petition at 5, 7 with ALAB-729, slip op. at 125-137, and LBP-81-59, 14 N.R.C. at 1340-1350. Hardly novel, the interpretation of the Commission's General Design Criteria applied in this proceeding was found to be consistent with the Staff's historic approach to design regulation. ALAB-729, slip op. at 133-134. In short, no new precedent has been established here, as UCS implies, and Commission review of the consistent factual determinations of the Licensing and Appeal Boards is not warranted.

III. Other Issues Raised

In a footnote to its petition, UCS identifies, without any explanation, three issues on which it has "differences" with the Appeal Board's decision. UCS Petition at 4, n.2. Certainly more than a skeletal expression of disagreement is required to support Commission review of this Appeal Board decision.

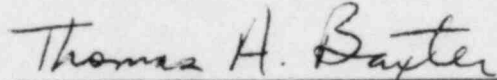
Finally, UCS concludes with an expression of ". . . hope . . . that the Commission will review this entire decision, as originally contemplated." UCS Petition at 8. Of course, it was never "contemplated" that there would be two complete appellate reviews of the Licensing Board's decision, as UCS apparently seeks.

IV. Conclusion

For all of the foregoing reasons, the UCS petition for review of ALAB-729 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

Dated: June 28, 1983

In the Matter of

METROPOLITAN EDISON COMPANY

(Three Mile Island Nuclear
Station, Unit No. 1)

Docket No. 50-289
(Restart)

I hereby certify that copies of "Licensee's Answer to Union of Concerned Scientists' Petition for Review of ALAB-729" were served this 28th day of June, 1983 by deposit in the U.S. mail, first class, postage prepaid, to the parties on the attached Service List.

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

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SERVICE LIST

Chairman Nunzio J. Palladino
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Commissioner Victor Gilinsky
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Commissioner John F. Ahearne
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Commissioner Thomas M. Roberts
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

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 Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. Reginald L. Gotchy
Atomic Safety and Licensing Appeal
Board Panel
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

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

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

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

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