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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

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

LICENSEE'S REPLY TO
UNION OF CONCERNED SCIENTISTS'
COMMENTS ON IMMEDIATE EFFECTIVENESS

I. Introduction

The Union of Concerned Scientists (UCS) has filed comments with the Commission, dated January 28, 1982, on whether the Atomic Safety and Licensing Board's December 14, 1981 Partial Initial Decision on Plant Design and Procedures, Separation, and Emergency Planning Issues should be made immediately effective. Commenting for the most part on the Licensing Board's findings with respect to plant design and procedures, UCS concludes that the Partial Initial Decision

should not become immediately effective.¹ Licensee submits the following reply to the UCS comments.

In the introduction to its comments, UCS advances the proposition that the Commission need not make an "early ruling" on the immediate effectiveness of the Partial Initial Decision. UCS cautions the Commission to "avoid precipitous approval of restart," and advises that "extreme care must be taken to assure the correctness, the credibility, and the appearance of fairness in the ultimate decision."² UCS Comments at 2. It is absurd that any party to this proceeding, other than Licensee, could complain about the fairness of the decision-making

1 In the letter to the Commission from counsel for UCS, dated January 28, 1982, UCS announces that in spite of, and in full recognition of, the Commission's orders ruling on various UCS motions for extension of time, UCS intends to file additional immediate effectiveness comments at some unspecified time beyond the January 28 deadline set by the Commission. If a party and its counsel choose to disregard explicit direction from the Commission in these circumstances, they do so at their own risk that their views will not be heard. The Commission should not delay its decision-making in response to such willful noncompliance by a party to one of its proceedings.

2 UCS urges "that the Commission not even consider the question of immediate effectiveness at least until after other legal and practical obstacles to restart have been removed," citing the decision in PANE v. NRC, No. 81-1131 (D.C. Cir., Jan. 7, 1982), and the steam generator tube leakage problem at TMI-1. UCS Comments at 2. For reasons we have already advanced, Licensee continues to urge the Commission, in spite of these present obstacles, to reach the earliest possible decision on whether the concerns which led to the Commission's suspension of TMI-1's operating license have now been satisfactorily resolved and whether the Licensing Board's decisions should be made immediately effective. See Licensee's Comments on Immediate Effectiveness, Etc., January 28, 1982, at 5-10.

process undertaken by the Commission on August 9, 1979, with respect to the TMI-1 operating license. Yet, having had the advantage of the full public hearing while operation was suspended, UCS would now depart from the decision-making procedure established by the Commission. There is nothing "precipitous" or "early" about the matters before the Commission for decision at this time. TMI-1 has been shut down for almost three years. It is clear to all rational observers that the Commission already has exercised extreme care in its decision-making with respect to the immediately effective order of July 2, 1979.

The comments filed by UCS address six major issues.

These issues are:

- (1) The applicable standard for deciding the immediate effectiveness issue;
- (2) The Licensing Board's consideration of feasibility;
- (3) The adequacy of the Partial Initial Decision as to the confrontation of issues raised by UCS;
- (4) The Licensing Board's responsibilities versus those of the NRC Staff;
- (5) Whether the conditions for plant restart are known; and,
- (6) Issues excluded from the proceeding.

Licensee's reply addresses these six issues in the order in which they were argued by UCS.

II. Applicable Standard

In its comments, UCS expends considerable effort in an attempt to establish that the Commission's immediate effectiveness decision should be governed by the standards set forth in 10 C.F.R. § 2.764(f)(2)(i). In making this argument, UCS finds it necessary to characterize this as a license amendment proceeding, rather than as an enforcement proceeding. While UCS is mysteriously silent on the implications of adopting its proposed standard,³ Licensee submits that the UCS proposed standard does not apply.

The NRC Staff was clearly correct when it stated that "[s]ince the current restart proceeding is, by the very terms of the August 9, 1979 Order, a proceeding to determine whether or not the suspension of the previously existing license authority should be terminated, it is an enforcement proceeding to which Section 9(b) of the APA applies."⁴ See CLI-79-8, 10 N.R.C. 141, 149 (1979).

³ As we address below, restart would be warranted under any of the standards discussed here. There is no basis for the unsupported assertion by UCS that the application of a standard other than 10 C.F.R. § 2.764(f)(2)(i) would result in treating "serious disputes about the safety of TMI-1 in summary fashion in making a decision on restart of the reactor." See UCS Comments at 5.

⁴ NRC Staff Comments on Whether Commission Should Defer Restart Decision Until Issuance of Licensing Board's Opinion on Operator Cheating Incidents, January 13, 1982, at 5 (footnote omitted).

UCS makes the almost frivolously technical argument, citing no legal authority,⁵ that if an enforcement proceeding results in any additional requirement imposed upon the licensee, then it becomes a proceeding on a license amendment application. This obviously is not the regulatory approach embodied in the Commission's rules of practice, 10 C.F.R. Part 2, which provide distinct procedures for enforcement and application proceedings.⁶

The UCS proposed standard does not apply, then, because this is not a license amendment proceeding. Further, UCS totally misreads the applicability of 10 C.F.R. §2.764(f)(2)(i). That regulation by its own terms applies only to Commission review of a licensing board decision authorizing the initial issuance of a license authorizing operation at beyond 5 percent of rated power. It clearly does not apply to operating license amendments. See 46 Fed. Reg. 28627 (1981) ("The Nuclear Regulatory Commission hereby amends its review procedures for Licensing Board decisions granting nuclear power reactor operating license applications. . .").

5 Contrary to the implication in the UCS comments, the decision in Sholly v. NRC, 651 F.2d 780 (1980), cert. granted, 101 S. Ct. 3004 (1981), does not address distinctions between enforcement and license amendment proceedings. See UCS Comments at 3.

6 It is equally futile, we believe, for UCS to attempt to argue that the Licensing Board has not resolved the issues which led to the license suspension in favor of lifting the suspension. See UCS Comments at 6, 7; I.D., ¶¶ 2024-2026.

Licensee believes that the Commission has already correctly stated the issue before it. The Commission must determine

whether the concerns which prompted its original immediate suspension order of August, 1979, justify a continuation of that suspension. If they do not, and the Commission therefore can no longer find that the 'public health, safety and interest' mandates the suspension, then the Commission is required by law -- whatever the nature of the Licensing Board's decision -- to lift that suspension immediately.

CLI-81-34, 14 N.R.C. ____ (December 23, 1981), slip op. at 2.

Licensee submits that in posing the issue, the Commission has already established the standard. In doing so, the Commission has merely recognized the fundamental principle that agency action in the form of a sanction is invalid (i.e., arbitrary and capricious) if it is unwarranted in law or without justification in fact. Summary administrative action substantially curtailing existing rights -- here, the right to operate a nuclear power plant pursuant to a validly issued operating license -- is a drastic procedure. Such action, unless warranted by existing compelling safety considerations, is contrary to the public interest. See Consumers Power Company (Midland Plant, Units 1 and 2), CLI-73-38, 6 A.E.C. 1082 (1973).

Even if the proposed UCS standard were applied, however, the Commission would not have grounds for staying the

Licensing Board's decision. Section 2.764(f)(2)(i) would have the Commission consider ". . . the gravity of the substantive issue, the likelihood that it has been resolved incorrectly below, the degree to which correct resolution of the issue would be prejudiced by operation pending review, and other relevant public interest factors." There is more than ample basis in the Licensing Board's decision to warrant a decision in favor of immediate effectiveness when considering the factors set forth in 10 C.F.R. § 2.764(f)(2)(i).

III. Licensing Board Consideration of Feasibility

UCS argues that the Licensing Board adopted an improper standard for determining, under the terms of the Commission's August 9, 1979 Order, what is necessary to provide reasonable assurance that the facility can be operated without endangering the health and safety of the public. UCS proposes, therefore, that the Commission should reject the Licensing Board's standard or reopen the proceeding to allow UCS to address the standard. UCS Comments at 8-15.

In order to construct this argument, UCS has: (1) mischaracterized the standard actually articulated by the Licensing Board; (2) erroneously presumed that the UCS version of the standard was applied by the Licensing Board and was pivotal in its rejection of the UCS contentions; and (3) misstated the law which governs the NRC's duty to protect the health and safety of the public.

UCS attacks here a Licensing Board discussion, in the midst of its resolution of a dispute between Licensee and the Staff on the Detection of Inadequate Core Cooling, on the standard for determining need or necessity under the Commission's Order and Notice of Hearing in this proceeding. See I.D., ¶¶ 674-689. UCS concludes, from this discussion, that "[r]ather than judging proposed actions strictly on the basis of whether they are essential to assuring the safety of the reactor, the Board has improperly taken into account the technical feasibility of proposed actions in reaching its final judgments." UCS Comments at 8. UCS implies that the Licensing Board concluded "that actions necessary to safety would not be required," and that the Board dispensed "with actions essential to safety simply because they are technically or financially infeasible." See id. at 12. This totally misrepresents the Licensing Board's discussion. In no case did the Board find that a proposed action was "essential" or "necessary" to safety, but reject it because of technical or financial infeasibility.

The Licensing Board's discussion on the standard for determining need, in order to be properly understood, must be placed in the context of the dispute over reactor water level instrumentation which, as the Board stated, brought the standard into sharp focus. See I.D., ¶ 674. The Board and the participating parties (Licensee, the Staff and the Commonwealth of Pennsylvania) were grappling here with a long-term

recommendation in NUREG-0578, by the TMI-2 Lessons Learned Task Force, that "Licensees shall provide a description of any additional instrumentation or controls (primary or backup) proposed for the plant to supplement those devices cited in the previous section [existing instrumentation plus a saturation meter] giving an unambiguous, easy-to-interpret indication of inadequate core cooling." See I.D., ¶ 633. The Task Force neither identified the equipment, or even the concept for the equipment, to be considered, and even left open the possibility, in Licensee's view, that upon further study and investigation it might be concluded that no additional instrumentation is required. In this situation, it was at best difficult to focus upon the "necessity" of instrumentation which, even at the time of hearing, was not very well defined. See I.D., ¶¶ 665 and 672 (Board comments on the state of the art for such instrumentation).

Licensee's reading of the Licensing Board's discussion is that the Board was attempting to expand upon the scope of proposed actions it could require, and not to narrow it as UCS argues. The Board pointed out that

The term "necessary" in normal English would be synonymous with the absolute concept of "indispensable" and "essential." A given "necessary" measure under the Commission's order could fairly be regarded as a sine qua non to reasonable assurances of public safety.

I.D., ¶ 675. The Licensing Board did not feel constrained, however, to find first that the plant is unsafe before it could require additional measures to improve safety. See id., ¶ 685.

This is where UCS jumps ahead of the Licensing Board and misconstrues its opinion. UCS would have us believe that the Board found TMI-1 to be unsafe (i.e., that there was no reasonable assurance it could be operated without endangering the health and safety of the public), but improperly considered feasibility in establishing the measures needed to correct the situation. This is not what happened at all. Rather, as we have stated, the Licensing Board determined that it could find additional measures to be "necessary" without having first to find that TMI-1 is unsafe to operate.⁷ And in deciding what might produce a substantial and additional protection to the public health and safety, the Board considered feasibility.⁸
See I.D., ¶ 689.

7 UCS, in this argument as in its other positions in this hearing, appears incapable of recognizing that there is anything between the absolutes which UCS applies. For example, UCS was unwilling to recognize, in its case on UCS Contention 14, that improvements could be made to non-safety-grade systems which did not make them totally safety-grade. The Licensing Board found, however, that incremental improvements can be made depending on the varying degrees of importance to safety. I.D., ¶¶ 992, 1003b.

8 It must be observed that if the Board's decision on the water level indication issue best illustrates its use of the feasibility consideration, it appears to Licensee that the Board does not easily discard proposals on this basis. There was no record to support the feasibility of water level instrumentation for TMI-1 other than the optimistic opinion of Staff witness Ross that he believes it unlikely that the indicators will prove to be infeasible. See I.D., ¶ 671, n.76.

UCS asserts that "[a]lthough the Board does not specifically discuss feasibility in ruling on the various actions proposed by the parties, one must assume that the Board took feasibility into account in reaching all of its conclusions." UCS Comments at 14. Licensee disagrees that such an assumption is either required or appropriate. While the Licensing Board did state that its discussion on need "exemplifies the consideration given to the 'necessary' standard in other plant modification issues," I.D., ¶ 674, the feasibility consideration cannot be considered to have been pivotal to the Board's decision-making unless, as to some issue, the Board found that there was a serious safety deficiency which warranted correction. Then, if the Board failed to require measures to address the concern, UCS might infer that feasibility played a role.

This clearly did not happen, and no doubt explains why UCS chose to argue this point conceptually, rather than as it applies to the issues decided by the Licensing Board. A quick look at the UCS contentions brought to trial by UCS makes it clear that feasibility did not enter into the Licensing Board's disposition of the issues raised by UCS.

UCS Contentions 1 and 2 challenge the adequacy of natural circulation to remove decay heat at TMI-1 in the event of a small-break LOCA. I.D., ¶ 601. The Board, however, found "that, contrary to UCS Contention 1, the accident at TMI-2 did not demonstrate that natural circulation is inadequate to

remove decay heat." Id., ¶ 611. In answer to UCS Contention 2, the Board found "that operation of the reactor coolant pumps following a small-break LOCA is not required to assure adequate cooling of the core," and that "[i]n the event that natural circulation is interrupted, the decay heat can be dissipated by other means until natural circulation is restored." Id., ¶ 629. The Licensing Board did not reject the UCS contentions here because there was no feasible way to implement them. Rather, the UCS contentions were clearly rejected because they had not identified a safety concern.

UCS Contention 3, which proposed to make the pressurizer heaters safety-grade, was rejected because the Board found UCS' arguments regarding safety-grade requirements for pressurizer heaters to be unpersuasive, not because it was infeasible to accomplish. I.D., ¶ 756. Similarly, the Licensing Board did not require a safety-grade PORV (UCS Contention 5) because the Board found that

. . . contrary to UCS' contention, proper operation of the PORV and associated block valve, and the instruments and controls for these valves is not required to mitigate the consequences of design basis LOCAs and, although the failure of the PORV can create or aggravate a LOCA, the consequences of such an accident can be safely mitigated by safety-grade equipment.

Id., ¶ 792. The Board did not have to consider feasibility here, since there was no safety reason found to contemplate the measures suggested by UCS.

The Licensing Board rejected the UCS proposed interlocks on safety systems (UCS Contention 10), not because of technical infeasibility, but because the Board disagreed with UCS and found it desirable and appropriate, under applicable standards and the TMI-2 lessons learned, to retain operator flexibility. I.D., ¶¶ 743, 745. See also, I.D., ¶ 770 (on UCS Contention 4) and ¶ 1003 (on UCS Contention 14).

Finally, UCS challenges the law cited by the Licensing Board in association with its discussion of the standard for determining need.⁹ First, UCS attacks the Board's use of the Commission's backfit regulation, 10 C.F.R. § 50.109(a), which provides that "[t]he Commission may . . . require the backfitting of a facility if it finds that such action will provide substantial, additional protection which is required for the public health and safety or the common defense and security." The Licensing Board observed, and Licensee agrees, that "[i]n practice the Commission requires substantial improvements in the safety of nuclear facilities even where, under preexisting technology, the facility design had been

⁹ UCS also criticizes the Licensing Board's use of the Commission's revised policy statement on NUREG-0737, which approves a sequence of actions that will result in a gradually increasing improvement to safety. I.D., ¶ 688. UCS states that the Commission there only addressed the scheduling of improvements, and not what is required. UCS Comments at 12. Nevertheless, in adopting an incremental implementation of what is required, and a schedule for doing so, the Commission clearly recognizes feasibility and rejects the UCS "black and white" thesis that if a required action is not feasible, a plant may not operate. See UCS Comments at 13.

considered adequate to protect the public health and safety."

See I.D., ¶ 685.

UCS argues that there is nothing in the backfit regulation that would permit consideration of feasibility:

If an action would provide substantial additional protection, it would be required regardless of whether it is feasible. If it is not feasible, the plant may not operate.

UCS Comments at 13 (footnote omitted). This is entirely circuitous reasoning. Unless feasibility is considered, there is nothing to provide assurance that some conceptual action would, in fact, provide substantial additional protection.

There are several reasons to conclude that the Commission's backfitting regulation is intended to include such a practical consideration as the feasibility of the proposed retrofit. First of all, the Commission's discussion of the purpose of the regulation at the time of its promulgation in 1970 makes clear that backfitting is desirable to accommodate developments in technology which result in specific improvements which can be made to previously licensed facilities.

The rapid changes in technology in the field of atomic energy result in the continual development of new or improved features designed to improve the safety of production and utilization facilities. Section 50.109 which follows defines the circumstances under which the Commission may require backfitting of facilities -- that is, the addition or modification of structures, systems or components affecting the safety of the facility after the construction permit has been issued.

35 Fed. Reg. 5317 (1970). If an improvement exists only in theory, it cannot be the subject of backfitting. Obviously, then, the backfitting regulation does not come into play unless and until a specific modification is feasible; at that juncture, the issue becomes whether a licensed facility should be required to be backfitted to accommodate the modification.

Futher insight into the NRC's implementation of 10 C.F.R. § 50.109 can be gained from a decision denying a rulemaking petition requesting seismic reanalysis of all operating power reactors, in which the Director of Nuclear Reactor Regulation discussed, inter alia, the function of the Commission's backfitting regulation. See In the Matter of Petition Requesting Seismic Reanalysis. DD-80-1, 11 N.R.C. 153, 165-66 (1980). This decision was allowed by the Commission to become the final action of the agency.

In evaluating the subject petition, the Director reviewed the Commission's ongoing seismically oriented programs, including the Systematic Evaluation Program ("SEP"), a program which evaluated the seismic design adequacy of eleven older nuclear power plant facilities. Recognizing the evolution in the standards utilized to assess seismic design safety, the NRC nevertheless had to make an assessment of the seismic design safety of the SEP facilities relative to those designed under current standards, criteria, and procedures and to make an integrated evaluation to verify that these facilities possessed acceptable levels of seismic resistance capability. 11 N.R.C. at 165.

Having recognized and considered in more detail the inherent capabilities of these [older] facilities, a decision will be made regarding the need to retrofit. It must be emphasized that if such an eventual decision is made, it does not necessarily imply that the existing facilities are unsafe but rather that substantial benefit to the public health and safety can be attained through such actions in accordance with 10 CFR 50.109.

11 N.R.C. at 166. Thus, a requirement to backfit is not concomitant with a recognition that a facility is unsafe without the proposed action.

That judgments, and not absolutes, govern the Commission's licensing decisions is clear from the "reasonable assurance" standard which accompanies "necessary and sufficient" in the August 9, 1979 Order and Notice of Hearing. The following discussion in Nader v. Ray, 363 F. Supp. 946, 954 (D.D.C. 1973), cogently explains the legal basis for this standard:

Under the Atomic Energy Act, the standard applied in issuing facility operating licenses for nuclear power reactors is whether the Commission can find that there will be "adequate protection to the health and safety of the public." 42 U.S.C. § 2232(a). This has been interpreted by the expert agency to mean that it must be able to find "reasonable assurance that the health and safety of the public will not be endangered by operation of the facility. . . ." 10 C.F.R. § 50.35(c); see also id. §§ 50.40(a), 50.57(a)(3). The "reasonable assurance" standard was upheld by the Supreme Court in the landmark case of Power Reactor Development Co. v. Int'l Union, Electrical Workers, 367 U.S. 396, 81 S. Ct. 1529, 6 L. Ed.2d 924 (1961).

Absolute certainty or "complete," "entire," or "perfect" safety is not required by the Atomic Energy Act, nor does nuclear safety technology admit of such a standard. *Power Reactor Development Co. v. Int'l Union, Electrical Workers*, supra, cf. *Crowther v. Seaborg*, 312 F. Supp. 1205, 1234 (D. Colo. 1970). The Supreme Court recognized in the Power Reactor case that nuclear technology is subject to change. 367 U.S. at 408, 81 S. Ct. 1529, 6 L. Ed.2d 924. What constitutes "reasonable assurance of adequate protection" is also subject to change, as the state of the nuclear safety art advances. Cf. *Crowther v. Seaborg*, supra. It is for the Commission to weigh the state of that art, the risk of accidents, the record of past performance, the need for further improvement in nuclear safety matters, and other considerations. Balancing these factors calls for the exercise of discretion by the expert agency in a judgmental process that is very different from the kind of "clear, nondiscretionary legal duty" to comply with the procedural requirements of the National Environmental Policy Act that the court referred to in *Izaak Walton League of America v. Schlesinger*, 337 F. Supp. 287, 291 (D.D.C. 1971.)

See also, Nader v. Nuclear Regulatory Commission, 513 F.2d 1045, 1052 (D.C. Cir. 1975).

In short, UCS totally misreads the Atomic Energy Act, Commission regulations, and the applicable case law¹⁰ in its effort to challenge the Licensing Board's consideration of feasibility.

¹⁰ The cases, cited by UCS, which construe the Clean Air Act and the Federal Water Pollution Control Act, clearly do not apply to the situation here. See UCS Comments at 13. Those statutes, unlike the Atomic Energy Act, prescribe quantitative pollution standards to be met.

IV. Licensing Board Confrontation
of Issues Presented by UCS

UCS charges broadly that the Licensing Board "improperly failed to address the evidence on several major issues raised by UCS which directly relate to the protection of public health and safety." UCS argues its allegations that the Licensing Board "ignored responsible UCS testimony on critical issues * * * [and] mischaracterized UCS's position and testimony" in a summary of its contentions, which is largely a recitation of its proposed findings.

Licensee responds to UCS' specific charges in the Appendix to this reply. Suffice it to note here that, contrary to the implication of UCS's reliance on Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-422, 6 N.R.C. 33 (1977)("Seabrook"), UCS does not -- and cannot -- contend that the Licensing Board failed to mention its evidence (the fault of the opinion discussed in Seabrook). The Licensing Board's discussion of each issue on which UCS participated is replete with references to UCS' evidence, arguments and proposed findings.

Moreover, in Columbia Transportation Co. v. U.S., 167 F. Supp. 5 (E.D. Mich. 1958), disposing of a challenge to an administrative agency's decision, a three-judge court:

Plaintiffs assert that the Commission's order ignored evidence offered by them, and recite evidence which they claim the Commission ignored. The fact that the Commission did not in its report discuss various portions of testimony offered by

plaintiffs, and give its reasons why it did not accept such evidence as controlling its decision does not, in our opinion, constitute ignoring that evidence. Inasmuch as the Commission's report contained ultimate facts which it found from the record, it cannot be said that the Commission ignored any evidence that was before it. Failure to give to evidence the weight claimed for it by a party does not amount to ignoring such evidence.

167 F. Supp. at 15 [emphasis supplied].

UCS is predictably disappointed that the Licensing Board has not rested its decision on UCS' evidence and found for UCS. Nevertheless, a careful examination of the record and comparison of it with the Licensing Board's decision reveals no misstatement or distortion of the evidence. The Licensing Board's findings were "supported by substantial evidence and were not required to be cast in the language of the witnesses" (or in the language of the findings proposed by the parties). See generally, Raye and Co. Transports, Inc. v. U.S., 314 F. Supp. 1036, 1043 (W.D. Mo. 1970).

Thus, a licensing board has a duty not only to resolve contested issues but "to articulate in reasonable detail the basis" for the course of action chosen. Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-104, 6 A.E.C. 179 (1973). Nevertheless, as the Appeal Board acknowledged in Seabrook, a licensing board's obligation in this regard has limits:

We have previously held that a decision need not refer individually to every proposed finding; it "meets the

requirements of the Administrative Procedure Act and the Commission's Rules of Practice if it sufficiently informs a party of the disposition of its contentions." [citations omitted].

6 N.R.C. at 41. See also, Raye and Co. Transports, Inc. v. U.S., 314 F. Supp. 1036, 1042 (W.D. Mo. 1970)(no duty "to make findings of fact upon all items of evidence submitted, nor even necessarily to answer each and every contention raised by the contestants to the hearing, but merely to make such findings which are sufficient to resolve the material issues"). Clearly, the TMI-1 Licensing Board's decision meets these standards.

V. Licensing Board Responsibility
Vis-a-Vis Responsibility of NRC Staff

UCS contends that the Licensing Board has, in several instances, improperly delegated to the Staff the responsibility to decide contested issues. UCS simply misperceives the division of responsibility between the Licensing Board and the Staff which was contemplated by the Commission in framing its August 9, 1979 Order in this proceeding. The Commission there stated:

Satisfactory completion of the required actions will be determined by the Director of Nuclear Reactor Regulation. However, prior to issuing its decision the Board shall have authority to require staff to inform it of the detailed steps staff believes necessary to implement actions the Board may require and to approve or disapprove of the adequacy of such measures.

Order and Notice of Hearing, CLI-79-8, 10 N.R.C. 141, 148 (1979). The unmistakable import of this language is that the Licensing Board could, but was not expected routinely to, inquire into the details of the Staff's plans for implementing the Board's decision. Clearly, the Staff alone was given the responsibility for determining that the actions directed by the Licensing Board are satisfactorily completed. Thus, as the Licensing Board observed, it has sole responsibility for making the adjudicative determinations on contested issues, but the Staff bears the responsibility for implementing and enforcing those determinations. I.D., ¶ 1216.

The Licensing Board has already made its adjudicative determinations on all contested issues in this proceeding. The items cited by UCS as matters improperly delegated to the Staff simply do not rise to the level of "adjudicative determinations," but rather are fairly characterized as implementation and enforcement of the Licensing Board's determinations. Four of the five matters cited by UCS relate to long-term requirements, which must of necessity involve further Staff action. The only cited matter related to short-term items is the Licensing Board's resolution of UCS Contention 4, which directs the Staff to verify certain provisions of plant procedures and to monitor and evaluate a particular test specified by the Licensing Board -- clearly tasks of implementation and enforcement. See I.D., at ¶¶ 771-773.

VI. Identification of Conditions for Restart

UCS further argues that restart should not be authorized until it has reviewed and commented on the Staff's report to the Board on the details of the plan for Staff enforcement of the decision, since that report -- UCS alleges -- constitutes "the full resolution of its contentions." Again, UCS has simply mischaracterized the division of responsibilities between the Licensing Board and the Staff. The Licensing Board has already decisively disposed of UCS' contentions; all that remains for the Staff to do in its report is to compile a list of the Licensee commitments, Staff requirements, and Board conditions relied upon in the Licensing Board's decision, and to cast those commitments, requirements and conditions into implementation and enforcement vehicles. I.D., ¶ 1217. Thus, since the Licensing Board has already resolved the contested issues (including all of UCS' contentions), and has made the required findings, authorization of restart need not await UCS' comments on the details of the implementation and enforcement of the Licensing Board's decision.

VII. Issues Excluded from the Proceeding

UCS argues that it would be improper for the Commission to permit restart of TMI-1 prior to completion of the appeal process because the following issues, raised by UCS, were improperly excluded from consideration.

A. Hydrogen Control

Here UCS simply reargues an issue which the Commission has ruled upon twice. See CLI-80-16, 11 N.R.C. 674 (1980), motion to reconsider denied, Commission Memorandum and Order (unpublished, September 26, 1980). There is no prospect that the agency appellate process would produce a different result. As the Licensing Board observed, the Commission prescribed a manner in which post-accident hydrogen gas control could be litigated in this proceeding under 10 C.F.R. Part 100, and UCS chose not to go to hearing on that basis. See I.D., ¶ 599. The Licensing Board's decision simply implements the decision already made by the Commission.

B. NEPA and Class 9 Accidents

UCS claims that the Licensing Board improperly excluded from consideration UCS' contention (Contention 20) that an environmental impact statement must be prepared in connection with the restart proceeding on the issue of the environmental impact of Class 9 accidents. UCS' argument in support of its claim ignores, however, the reasons given by the Board in its Memorandum and Order, dated December 15, 1981, for rejecting the UCS contention and for concluding that Class 9 accidents had been adequately evaluated in the proceeding.

Before discussing the Board's reasons it is first necessary to dispose of two misrepresentations made by UCS at

the outset of its argument concerning the Board's rulings in its December 15 Memorandum and Order.

First, UCS states that the Board ruled that "preparation of an environmental impact assessment was not ordered by the Commission and therefore not required." The Board made no such ruling. The Board did acknowledge its initial doubt, as to whether the Commission in its August 9, 1979 Order meant to include the need for an EIA or EIS as part of its mandate and jurisdiction. Taking into account, however, the provisions of Part 51 and the fact that no party had urged the Board to dispose of NEPA issues on jurisdictional grounds, the Board "decided to rule on the NEPA contentions." Memorandum and Order, December 15, 1981, at 5. The Board then proceeded to rule on NEPA contentions, including UCS Contention 20, without further question as to its jurisdiction.

Second, UCS represents the Board as having "refused to consider UCS contention 20 regarding the impacts of Class 9 accidents, as the NRC policy statement on that issue did not require such impacts to be considered." Licensee did indeed urge the Board to reject requests for an environmental statement on Class 9 accident impacts on the ground that Class 9 accidents had been considered in the initial operating license proceeding for TMI-1 under the guidance then provided by the Commission and that under present guidance from the Commission no further EIS need be prepared on the subject. This is still Licensee's position.¹¹ The Board, however, declined to make

¹¹ Commission Interim Statement of Policy dated June 13, 1980, 45 Fed. Reg. 40101. See Licensee's Reply to Sholly Motion to

its ruling on this ground, stating that "the Board is uncertain as to whether the new risk assessment policy applies or does not apply to the TMI-1 restart." Id. at 12. The Board held instead, for reasons discussed below, that "if the new policy does not apply, the EIA as supplemented by the hearing record and our Partial Initial Decision, contains an adequate evaluation of Class 9 accidents." Id. at 12.

The Board was explicit about its reasons for rejecting UCS Contention 20:

In determining the scope of the proceeding our guiding rule has been that we hear and decide only those issues with a reasonable nexus to the TMI-2 accident. The rule is based on the facts that TMI-1 was reviewed and approved at the operating license stage and that, but for the accident, we would not be involved in this particular proceeding. The review at the operating license stage included not only a safety evaluation but also NEPA environmental review culminating in the issuance of an EIS. It is appropriate, therefore, to apply the nexus rule again as we consider NEPA environmental contentions.

We reject several contentions for lack of nexus to the accident. UCS Contention 20, for one, is rejected on this ground to the extent it calls for an analysis of all Class 9 accidents. This is merely an extension of our ruling in the safety area, where we limited the scope of the Class 9 accident inquiry to accidents with a reasonable nexus to the TMI-2 accident.

Id. at 9-10.

(continued)
Reject the NRC Staff Environmental Impact Appraisal on TMI-1 Restart, April 20, 1981, at 5-7.

UCS not only ignores in its comments the basis explained by the Board for rejecting the UCS contentions, but also the fact that UCS itself was a proponent of the "guiding rule" that the Board hear and decide only those issues with a reasonable nexus to the TMI-2 accident.¹² UCS made no attempt to bring its contention within the ambit of accidents having a nexus to the TMI-2 accident.

The Licensing Board did not end its consideration of the NEPA/Class 9 issue with its rejection of the UCS contention or with the fact that no party presented for litigation any factual basis for assessing the impact of a Class 9 accident having a nexus to the TMI-2 accident. It decided, in the light of its own extensive inquiries into Class 9 accidents as a safety issue, that the Staff had an adequate basis for treating as "incredible" those Class 9 accidents with a nexus to the TMI-2 accident and that the Staff EIA as supplemented by the hearing record and the Board's Partial Initial Decision contains an adequate evaluation of Class 9 accidents. Id. at 11-12. Thus while UCS is literally correct in stating that the record in this proceeding is devoid of any evidence of the impacts of Class 9 accidents, the record does contain ample evidence on which to conclude that the impacts of Class 9 accidents having a nexus to the TMI-2 accident need not be considered.

12 Partial Initial Decision (Procedural Background and Management Issues), August 27, 1981, at ¶ 24.

C. Unresolved Safety Issues

UCS castigates the Licensing Board for its rejection of proposed UCS Contention 20 [sic; UCS Contention 17], which alleged that TMI-1 should not be allowed to operate in the absence of a resolution of all unresolved generic safety issues. UCS asserts that the Licensing Board rejected the proposed contention as lacking in specificity, notwithstanding UCS' identification of two specific examples of generic issues it wished to litigate -- "(1) interaction between safety and non-safety systems (Task A-17) and (2) environmental qualification of safety-related equipment (Task A-24)." But, as the Licensing Board noted in rejecting proposed UCS Contention 17, both the examples cited by UCS were the subjects of other UCS contentions which were accepted by the Licensing Board, and which were in fact litigated. See First Special Prehearing Conference Order; LBP-79-34, 10 N.R.C. 828, 838 (1979); I.D., ¶¶ 971-1004 (Systems Classification and Interaction -- UCS Contention 14); ¶¶ 1139-1181 (Equipment Qualification -- UCS Contention 12).

UCS similarly criticizes the Licensing Board for its rejection of proposed UCS Contention 18, which would have required Licensee to demonstrate conformance with each Regulatory Guide presently applicable to plants of the same type. UCS complains that its proposed Contention 18 was rejected as lacking in specificity despite UCS' identification

of a specific Regulatory Guide which it wished to litigate. Again, however, UCS neglects to note that the Regulatory Guide which it identified for the Licensing Board and the other parties -- Regulatory Guide 1.47 -- was the subject of UCS Contention 9, which was accepted by the Licensing Board and which was in fact litigated [See First Special Prehearing Conference Order, LBP-79-34, 10 N.R.C. 828, 838-9 (1979); I.D., ¶¶ 887-906], though not by UCS. UCS withdrew its sponsorship of the contention, presented no direct testimony, failed to participate in the cross-examination of Staff and Licensee witnesses on the subject, and filed no proposed findings on the issue. I.D., ¶ 889.

UCS' failure to avail itself fully of each and every opportunity to litigate the issues in which it now expresses strong interest gives a hollow ring to its claims of prejudice. In any event, UCS cannot now identify for the Commission unresolved safety issues and Regulatory Guides to be litigated for application to TMI-1, when it failed to timely specify those issues for the Licensing Board and the other parties.

VIII. Conclusion

Because the UCS comments are aimed at the Licensing Board's decision on plant design and procedures issues (the only portion of the proceeding in which UCS participated), it is appropriate to bring two factors to the Commission's

attention which apply uniquely to the UCS comments on immediate effectiveness.

First, the TMI-1 plant design and procedures issues are not among the unique concerns identified by the Commission as additional to the concerns identified for other B&W reactors.¹³ As to these matters, TMI-1 was no different than the other operating B&W plants which were allowed to resume operation after the TMI-2 accident and a brief shutdown to accomplish certain short-term modifications.

Second, the record shows that each of the contentions raised by UCS calls for additional plant modifications which are equally applicable to other operating reactors, and which have not been required for those reactors. Not one of the UCS contentions is unique to TMI-1.

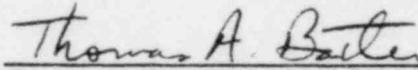
In conclusion, and for all of the foregoing reasons, none of the objections raised by UCS to the Licensing Board's decision rise to the level of concerns which would justify immediate suspension of an existing operating license or the continuation of immediate suspension of the TMI-1 license. All of the UCS objections should be left for review by the Atomic

13 Those additional safety concerns were: (1) potential interaction between Unit 1 and the damaged Unit 2, (2) questions about the management capabilities and technical resources of Metropolitan Edison, including the impact of the Unit 2 accident on these, (3) the potential effect of operations necessary to decontaminate the Unit 2 facility on Unit 1, and (4) recognized deficiencies in emergency plans and station operating procedures. CLI-79-8, 10 N.R.C. 141, 143-44 (1979).

Safety and Licensing Appeal Board through the appellate process already established. Licensee urges the Commission to issue a decision making the Licensing Board's decision immediately effective and finding that but for the decision in PANE v. NRC, supra, the Commission would authorize the resumption of operation at TMI-1.

Respectfully submitted,

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APPENDIX

Reply to UCS' Comments on UCS Contention Nos. 1 and 2

The comments submitted by UCS regarding the Licensing Board's Partial Initial Decision on its Contentions 1 and 2 are, for the most part, a restatement of its position as articulated in UCS' Proposed Findings. Licensee, has, therefore, previously responded to the assertions in its Reply Findings, submitted to the Board on July 13 and 27, 1981. However, in view of the inaccuracies and misleading nature of certain of UCS' comments, Licensee here will reply further to the comments submitted by UCS.

Prior to discussing the specific comments set forth by UCS, Licensee believes it would be helpful to clarify certain underlying issues not explicitly addressed in UCS' comments. The issues of core cooling and removal of energy from the primary system are not distinguished by UCS. However, these are different functions; adequate core cooling will be provided by the ECCS maintaining a liquid or two-phase mixture covering the core. If liquid natural circulation is lost, the boiler-condenser or feed and bleed mode are capable of primary system heat removal. I.D. ¶¶ 606-608. Secondly, many of UCS' postulates (see paragraphs 3, 4, 6 and 7) assume, as a starting

point, core damage equivalent to that presumed to exist at TMI-2. Evidence produced at the hearing did not assume core damage; it is well established, however, that the TMI-2 core was adequately cooled subsequent to core damage. See I.D. ¶ 609; see also Licensee RF 22, 24.

UCS ignores, in paragraphs 3 and 4, the basis for the Board's finding that the TMI-2 accident did not demonstrate that natural circulation is inadequate for removing core decay heat -- the uncontroverted testimony presented by Licensee, and endorsed by the Staff, that the periods of inadequate core cooling experienced at TMI-2 did not occur due to any inherent inability of natural circulation, or other decay heat removal processes, but resulted from the premature reduction of high pressure injection (HPI) flow. I.D. ¶¶ 609, 611, see Licensee PF 15. Further, contrary to UCS' assertion in paragraph 4, the Board has explicitly recognized that many small-break loss-of-coolant-accidents (SBLOCAs) can result in sufficient voiding^{1/} in the reactor coolant system, thereby inhibiting natural circulation through the course of the accident. I.D. ¶¶ 605, 618. Here, however, UCS goes on to allege that such voids will not be condensed and, by extension, that the boiler-condenser circulation mode would be ineffective in providing a decay heat

^{1/} This statement applies only to breaks smaller than approximately .01 square foot; breaks larger than this discharge sufficient energy on their own, such that there would be no reliance on natural circulation or boiler-condenser cooling for energy removal. I.D. ¶¶ 607, 615.

removal path.^{2/} Our view of the record shows that the testimony of Licensee witness Jones, referred to by UCS, does not support such a statement. Witness Jones, at the pages cited by UCS, was comparing system response where voiding in the "U-bend" of the hot leg is due to the presence of steam bubbles versus voiding due to the presence of noncondensable gases, such as hydrogen. Tr. 4619-4621 (Jones). Mr. Jones here is also explaining the transition period between the time boiler-condenser cooling is lost and liquid natural circulation is established, when the primary system is being refilled via the HPI system. Under such conditions, the compression effect provided by the HPI flow would not completely condense the bubble at the top of the hot leg. Further, with the primary system completely filled above the secondary liquid height, no heat transfer surface would be provided to condense the voids. Tr. 4616-4621, 4625-4626 (Jones). However, following this repressurization cycle, as mass and energy continues to be discharged from the system through the break, the primary system level will thus decrease, resulting in a re-exposed heat transfer surface, allowing the boiler-condenser mode to function. Tr. 4853-4854 (Jones). It should also be emphasized that effective core cooling is maintained throughout the transition to the boiler-condenser mode, by the HPI injected fluid covering the core. See I.D. ¶ 609.

^{2/} UCS' Proposed Findings did not set forth this claim; rather, this assertion was first brought out in UCS' Reply Findings, effectively prohibiting Licensee from responding. UCS RF 57.

Similarly, in paragraphs 9 and 10, UCS asserts that the allegations in UCS PF 28 (that the boiler-condenser cooling mode will be ineffective due to the height of the primary system water level) have never been refuted. UCS here is plainly incorrect; Licensee RF 25 explicitly addressed this assertion, by providing the remainder of Staff witness Jensen's testimony identifying the available heat transfer surface, which UCS apparently has overlooked. Tr. 4933-34 (Jensen). Further, the refilling of the primary system referred to by UCS occurs during the transition period discussed above, where the HPI flow is adequately cooling the core. UCS is therefore incorrect in implying that the boiler-condenser cooling mode would be ineffective. Rather, the core is being effectively cooled and the system is in a dynamic transition to the boiler-condenser mode which will be capable of removing heat from the primary system.

Licensee believes that UCS, in paragraph 6, is attempting to confuse the record with respect to voiding produced following an SBLOCA. Licensee wishes to make clear to the Commission that this paragraph applies only to those non-condensable gases which could be produced from other sources, i.e., those non condensibles not already present in the primary system, such as nitrogen in the core flood tanks or hydrogen produced following core damage. UCS RF 54-56. As stated above, the Licensing Board found that voiding due to a SBLOCA can interrupt reactor coolant system heat removed by natural circulation, but that such voiding does not preclude removal of

reactor coolant system heat by either the boiler-condenser or feed and bleed cooling modes. I.D. ¶¶ 605, 607, 608.

There is no support in the record for UCS' statement in paragraph 7 that high-point vents are "essential", following a SBLOCA, in order to vent steam bubbles and thereby reestablish natural circulation. Further, UCS would have us believe that it has been caught off-guard by the deferral of implementing this modification from the NUREG-0737 date of July 1, 1982 to the first refueling outage following July 1, 1982, as allowed by the final hydrogen control rule. See 46 Fed. Reg. 58484 (1981). The possibility of a delay beyond July 1, 1982 was recognized by UCS in UCS PF 19.

UCS PF 27, referenced in paragraph 8 of its comments, was considered by the Licensing Board. The Board acknowledged, but did not view as dispositive, the fact that the tests of this cooling mode did not duplicate the expected conditions following a SBLOCA. The Board found that the boiler-condenser mode is reliable, based upon testimony by the Staff and Licensee, and that the cross-examination conducted by UCS^{3/} failed to elicit any evidence to the contrary. I.D. ¶ 621.

UCS claims, in paragraphs 12, 13 and in UCS PF 36 (cited in paragraph 2), that the feed and bleed cooling mode is

^{3/} USC presented no direct testimony on this issue. I.D. ¶601.

inadequate to remove core decay heat.^{4/} The effectiveness of the feed and bleed mode is discussed generally by the Board in connection with its decision on Board Question 6, at I.D. ¶¶ 1051-1056. There the Board considers the issues raised by UCS in paragraph 12, but goes on to find that the emergency feedwater (EFW) system, backed by the HPI feed and bleed mode, is adequate to reliably protect the core in the event of a SBLOCA. Further, contrary to UCS' statement in paragraph 13 that the Board was unable to find that the feed and bleed is an acceptable core cooling mode,^{5/} the Board has found that the feed and bleed mode is capable of removing core decay heat. I.D. ¶¶ 619, 629.

Finally, with respect to UCS' statement that TMI-1 will not have two safety-grade systems for removing decay heat

^{4/} It is instructive to note that UCS Contention 2.c, which challenged the feed and bleed process, reads as follows.

The emergency core cooling system cannot be operated in the bleed and feed mode for the necessary period of time because of inadequate capacity and radiation shielding for the storage of the radioactive water bled from the primary coolant system.

These alleged deficiencies were not addressed by UCS in its proposed findings. See Licensee RF 38. Rather, UCS' proposed findings went to the reliability of feed and bleed cooling, a subject which was addressed in Board Question 6.

^{5/} The excerpted quote cited by UCS in paragraph 13 is taken, out of context, from the portion of the Board's decision on UCS Contention No. 3, Pressurizer Heaters. In that paragraph, the Board is discussing its reasons for rejecting UCS Contention No. 3, explaining that, while the Board agrees with the philosophy of reducing demands on safety systems, "... the feed and bleed mode has not been shown to be an unacceptable way of cooling the core, and the reactor coolant system pressure can be maintained by the HPI system." I.D. ¶ 756.

at high pressure, Licensee notes the following: The Board has found that the emergency feedwater system will be safety-grade for SBLOCA events and main feedwater transient events at restart. I.D. ¶ 1057. Secondly, to reach the situation where two HPI pumps would be needed for feed and bleed cooling, both emergency feedwater and main feedwater would have to be lost -- a scenario clearly beyond the design basis, single failure criteria. Licensee RF 26.

Reply to UCS Comments on UCS Contention No. 3

As with its comments on UCS Contentions 1 and 2, the issues raised by UCS in paragraphs 16 through 20 have been previously addressed by Licensee in proposed and reply findings submitted to the Board. See, for example, Licensee RF 67-68, 71, 88-90.

UCS castigates the Board for its finding that the pressurizer heaters need not be upgraded to safety-grade in view of the capability at TMI-1 to control pressure by use of the HPI pumps. UCS contends that such usage violates one of the lessons learned from the TMI-2 accident, i.e., to reduce challenges to safety systems. Here, however, UCS overlooks the fact that this action does not constitute a challenge to the emergency core cooling system. The makeup function of the HPI pumps is a normal and continual plant operation; therefore, the use of the makeup system to control plant pressure would not place a thermal cycle on the HPI system. Licensee RF 68. Further, one must postulate an unlikely series of events occurring prior to an alternative means of pressure control being necessary: (1) an extended loss-of-offsite-power; and, (2) that the pressurizer heaters are not manually connected to the diesel generators (analyses have shown, conservatively, that a two hour time period exists before this connection would be required). Licensee PF 135, n. 51; Licensee RF 67.

UCS also takes issue with the Board's acknowledgement that the pressurizer safety valves, rather than the PORV, can be utilized in the feed and bleed process of pressure control.

UCS alleges that questions exist as to the qualification of the safety valves and, further, that the TMI-1 procedures rely on the PORV, rather than the safety valves, for feed and bleed cooling. The Board's review of the capabilities of the pressurizer safety valves is found at I.D. ¶¶ 1071-1075; additionally, the Board has found that the EPRI test program (which will include testing of the valves under two-phase and solid flow) is adequate to reveal any potential design deficiencies. I.D. ¶¶ 1082-1083. With respect to the second point raised by UCS, the Board found that, while the PORV will be utilized for the feed and bleed process if it is available, the PORV is not required and reliance is placed on the safety valves only. I.D. ¶ 791.

UCS' concerns regarding pressure control under solid system conditions, as set forth in paragraph 20, have been fully responded to by Licensee and were therefore before the Board for consideration even though they were not explicitly recited in the decision. Further, any concerns regarding the ability to control primary system pressure without utilizing the pressurizer heaters will be put to rest by the demonstration test required by the Board. In this test, Licensee will be required to demonstrate the ability to control pressure with the HPI/Makeup and Purification System, without reliance on the pressurizer heaters. I.D. ¶ 755.