

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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OFFICE OF THE
DIRECTOR OF THE
NRC

BEFORE THE COMMISSION

In the Matter of)
)
METROPOLITAN EDISON COMPANY)
)
(Three Mile Island Nuclear)
Station, Unit No. 1))

Docket No. 50-289
(RESTART)

UNION OF CONCERNED SCIENTISTS'
COMMENTS ON IMMEDIATE EFFECTIVENESS

Introduction

On November 30, 1981, the Commission invited the parties to comment on "whether the Licensing Board's partial initial decision on hardware/design issues, emergency planning and the separation of Units 1 and 2 should be made immediately effective if that decision is favorable to restart."^{1/} Following the issuance of the Partial Initial Decision (PID) on December 14, 1981, the Commission issued an order on December 23, 1981, suspending the Appeal Board's authority to hear stay motions and extending the deadline for comments on

^{1/} The Commission also directed the parties to comment on whether it should make a decision on the restart within 35 days after issuance of the PID, or defer it until after the Licensing Board had issued its decision on the implications of the cheating incident. UCS filed comments on this with the NRC on January 13, 1982.

immediate effectiveness until January 13, 1982.^{2/} Metropolitan Edison Company
(Three Mile Island Nuclear Station, Unit No. 1) CLI-81-34, 14 NRC ____ (1981)

The question of whether the restart of Three Mile Island Unit 1 should be made immediately effective may be moot, now that the U.S. Court of Appeals has stayed restart until the NRC has addressed the issue of psychological distress^{3/}, and steam generator tube leaks may keep the plant in a shutdown condition for the next six months.^{4/} There is clearly no need to make an early ruling on the immediate effectiveness of the Partial Initial Decision, and it may be that all appeals can be resolved before TMI-1 is even ready for restart. In these circumstances, the Commission should avoid precipitous approval of restart, which would severely damage the public perception of the NRC and its procedures. If there is any case in which extreme care must be taken to assure the correctness, the credibility, and the appearance of fairness in the ultimate decision, it is this one. While we urge that the Commission not even consider the question of immediate effectiveness at least until other legal and practical obstacles to restart have been removed, we address below the question of whether the PID should be made immediately effective when the issue is considered. Based on the standards that govern immediate effectiveness in this proceeding, which are set out at 10 CFR 2.764(f)(2)(i), the Commission must find that the Partial Initial Decision may not become immediately effective.

2/ Upon UCS' motion, the deadline was later extended to January 28, 1982.

3/ See, People Against Nuclear Energy v. Nuclear Regulatory Commission, No. 81-1131 (D.C. Cir. 1982).

4/ See, Washington Post, January 26, 1982 at p. A-7.

I. The Immediate Effectiveness Issue is Governed by 10 CFR 2.764(f)(2)(i)

- A. The question of the standard to be applied in determining whether the PID should be made immediately effective is governed by the character of this proceeding.

The current proceeding had its origin as an enforcement action, with the suspension of the operating license for TMI Unit 1. However, following extensive hearings on the TMI-1 restart, the Licensing Board issued a decision containing amendments to the license. The case can therefore no longer be characterized as a mere "enforcement" proceeding, but must be treated as a proceeding for the amendment of an operating license, with the requisite procedural guidelines for determining immediate effectiveness.

The distinction between enforcement actions such as license suspensions and the modification of licenses was emphasized in Sholly v. NRC, 651 F.2d 780, 791 (D.C. Cir. 1980). There, the Court of Appeals rejected the Commission's characterization of a venting order, following the suspension and modification of the Three Mile Island Unit 2 operating license, as "a reinstatement of some preexisting authority." Instead, the venting order was treated by the Court as a license amendment because it "granted the licensee authority to do something that it otherwise would not have done under the existing license authority." Id. Likewise, the PID, which substantially changes the terms of the license for TMI-1, constitutes an amendment to the license. A decision by the Commission in favor of immediate effectiveness of the PID will not merely "unsuspend" the license, but will amend it. Sholly, supra, at 790. Therefore, the Commission's decision on the immediate effectiveness issue is governed by the NRC regulations for the immediate effectiveness of license amendments.

- B. The Commission's decision on the immediate effectiveness of the Partial Initial Decision is not a summary reinstatement of the operating license for TMI-1.

Because the approval of the PID constitutes enactment of a new set of amendments for the TMI-1 reactor, a decision by the Commission in favor of the PID is more than a simple lifting of the suspension and reinstatement of the status quo. The Commission must therefore reject the NRC Staff's arguments (advanced in its comments on whether the Commission should defer its restart decision until the Licensing Board has issued its decision on the operator cheating incidents (dated January 13, 1982)) that because the NRC took the "extraordinary" step of suspending the TMI-1 license summarily, without prior opportunity for a hearing, it must summarily restore the license "when the situation changes." Id. at 5.

License suspension or modification without notice or opportunity for hearing is certainly an extraordinary agency action, which the Administrative Procedure Act permits only where the "public health, safety or interest so requires." 5 U.S.C. 558(c). However, the cases cited by the NRC Staff for the proposition that licenses summarily suspended should be summarily reinstated reflect a concern for the rights of the parties to notice and hearing rather than a concern with immediate reinstatement of prior authority to act. In ICC v. Oregon Pacific Industries, 420 U.S. 184, 95 S.Ct 909 (1975), for example, the Supreme Court upheld the ICC's power to summarily promulgate an order affecting the circulation of freight cars during an "emergency." The issue of the reinstatement of the original license conditions was not discussed in the body of the opinion. However, in concurrence, Justice Powell noted that:

Summary action is justified by the need to prevent imminent and severe public harm, harm that could not be avoided were action delayed. In authorizing this type of procedure, Congress implicitly concluded that avoidance of the public harm justifies bypassing normal procedures. But the justification for summary action ends with the emergency that called it forth.

420 U.S. at 192. Justice Powell then called, not for a reinstatement of the original license conditions, but for proper notice to all interested parties, with the opportunity to object, submit evidence, and file briefs. Id. Similarly, in Northwest Airlines Inc., v. Civil Aeronautics Board, 539 F.2d 748 (D.C. Cir. 1976), cited by the NRC Staff, the court focused on the licensee's right to a hearing as soon as possible after the summary order was issued. There, the CAB was found to have exceeded its authority by leaving a temporary route change order in place for two years without affording interested parties an opportunity for comment or a hearing. The court held that:

The temporary [route] changes should have been implemented only until such time as the Board could complete narrowly focused, expedited proceedings—including proper notice and hearing—looking toward a decision on permanent changes in certificate authority.

*539 F.2d at 752. In the eyes of the court, "meeting the crisis" meant offering a meaningful opportunity to adjudicate the merits of a summary action.

In this case, the hearing was commenced almost immediately after TMI-1 was shut down and the affected parties were given an opportunity to litigate the merits of the suspension order. The summary nature of the license suspension itself does not allow the Commission to treat serious disputes about the safety of TMI-1 in summary fashion in making a decision on restart of the reactor. Rather, the Commission is governed by 10 CFR 2.764(f)(2)(i) in making its judgment on immediate effectiveness.

- C. The Commission may not make a summary determination of whether the suspension should be lifted.

The Commission's order of August 9, 1979, reflects the fact that this proceeding began as an enforcement action, and that at the time, restart was considered only in terms of reversing the enforcement action, i.e. lifting the license suspension:

The Commission shall issue an order lifting immediate effectiveness [of the shutdown order] if it determines that the public health, safety or interest no longer require immediate effectiveness.

Metropolitan Edison Company (Three Mile Island Nuclear Station, Unit No. 1) CLI-79-8, 10 NRC 141, 149 (1979). The Commission again declared in its order of December 23, 1981, that it would 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 NRC ____, slip op. at 2. Under this standard, if the Commission finds that the issues which led to the shutdown of the facility have been resolved in favor of restart, the suspension must be lifted immediately.

However, even assuming that standard applies, restart may not be permitted because those issues have not been favorably resolved by the Licensing Board. To the extent that the PID changes the TMI Unit 1 license,

it shows that the issues which led to the license suspension were resolved unfavorably to the lifting of the suspension. Had the Licensing Board found that the changes to the plant proposed by the NRC Staff and included in the August 1979 order were unnecessary, the suspension of the license would indeed have to be lifted. However, the Board not only found those changes necessary, but added a number of other license modifications which must be instituted. The Board's decision prevents summary reinstatement of the prior license and requires that the Commission consider the matter as license amendments necessary to assure safety.

- D. The Commission's determination on immediate effectiveness must be made under 10 CFR 2.764.

The Commission may choose one of two analytical approaches to the immediate effectiveness of the license amendments contained in the Partial Initial Decision. First, the Commission may treat the PID as an initial proposal for license amendments upon which the licensee is entitled to further hearings. Those amendments may be made immediately effective under 10 CFR 2.204 if the Commission finds that the "public health, safety or interest so requires." Under this standard, the Commission must make a positive finding that the immediate effectiveness is required for the public health, safety or interest, and the Licensee and the NRC Staff would therefore bear the burden of proving that immediate effectiveness is necessary.

Alternatively, the Commission may treat the recently completed proceeding before the Licensing Board as a hearing on requested license amendments, and decide whether to give the Licensing Board decision immediate effectiveness under 10 CFR 2.764. This is the correct approach since the hearing before the Licensing Board has given the licensee a full opportunity to contest proposed changes to the TMI-1 operating license. Under 10 CFR 2.764(f)(2)(i),

An operating license decision will be stayed by the Commission if it determines that it is in the public interest to do so, based on a consideration of 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.

Although not technically labelled as such, the Licensing Board's Partial Initial Decision constitutes a set of license amendments which will be put into place if the Commission decides the PID should be immediately effective. In the final analysis, the Commission cannot approve those amendments if they would be "inimical to the public health and safety." 43 USC 2133. With that ultimate criterion in mind, the Commission must weigh the provisional approval of the amendments in the light of the considerations set forth in the immediate effectiveness rule. As we will demonstrate below, the PID meets neither this standard, nor the standard established in 10 CFR 2.204, for permitting the immediate effectiveness of the Licensing Board decision.

II. The Board has Improperly Considered the "Feasibility" of Actions Proposed as Necessary to Protect the Public Health and Safety.

In the midst of its discussion of the need for water level indicators, the Board has adopted an improper standard for determining whether actions are "necessary ... to provide reasonable assurance that the facility can be operated ... without endangering the health and safety of the public." Rather 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. (PID at 52, @689) This standard has been applied not

only with respect to water level indicator issues, but to all plant modification issues. (PID at 45, @674)

In basing its judgments on this standard, the Board may well have rejected some proposed actions on the ground that their implementation would be either infeasible or difficult, despite the fact that the actions must be taken to assure safety. However, since the Board did not discuss the issue in each instance, it is not possible to determine the extent to which it considered the feasibility issue in each case. We and the Commission are forced to assume that the Board followed the standard that it articulated and considered the feasibility issue at least to some extent in all of its judgments.

The Board's approach violates fundamental precepts of the Atomic Energy Act. It also makes it impossible to determine which actions rejected by the Board would have been considered "necessary" to protect the public health and safety had the proper standard been followed. As a result, the Commission cannot know whether even this Licensing Board would consider TMI-1 to be safe under the correct legal standard, and the Commission has no basis for allowing the Partial Initial Decision favorable to restart to become immediately effective. In addition, the Board's adoption of this standard violates the due process rights of UCS and other intervenors by establishing a threshold requirement for a "feasibility" showing without providing any notice that such a showing would be required.

A. The Board adopted an illegal standard.

After fumbling with the Commission's language for several pages, the Board concluded that

we have adopted a standard that "necessary" modifications as stated in the Commission's hearing order are modifications which would produce a substantial and additional protection to the public health and safety and which, based upon the record, are reasonable in view of the technology, resources, and risk involved. In other words, we have done exactly what Staff witnesses have done, i.e., measured necessity partially in terms of feasibility.

(PID at 52, @689). The Board was half right. Any modification that "would produce a substantial and additional protection to the public health and safety" is necessary to protect the public health and safety under Commission practice and regulations. The Board erred, however, in taking into account the feasibility of proposed actions.

Although the Board cites absolutely no authority that supports its new interpretation of the Atomic Energy Act, we sympathize with its difficulty in attempting to determine the meaning of the word "necessary" in this proceeding. If there were an absolute standard against which safety could be judged, the word would clearly cover anything that is required to meet that standard. However, there is no such standard, which is undoubtedly why Staff witnesses were reluctant to use language such as "absolutely necessary." (PID at 49, @682). There is no absolute standard on which the answer could be based. Since the term "necessary" implies some sort of absolute judgment, it is hardly surprising that the Board found itself in a semantic tangle in trying to force the word to fit where it did not. Unfortunately, given two basic options for interpreting the Commission's language, the Board chose the one that is contrary to the Atomic Energy Act, Staff views, Commission regulations, and the fundamental mandate to assure safety.

There is no doubt that the mandate of the Atomic Energy Act is to assure that nuclear reactors are not "inimical to the ... health and safety of

the public." 42 USC 2133(d). That is, the NRC must assure that nuclear reactors are safe. There is no room in any provision of the Atomic Energy Act for a standard that would permit a reactor to operate in the absence of actions that are required to assure safety, regardless of whether those actions are difficult or easy to take. For example, there is no dispute that the Emergency Core Cooling System is necessary to assure reactor safety. No reactor would be allowed to operate without an ECCS, even if the owner could show that adding such a system would be both financially and technically infeasible for that particular plant. Similarly, reactor operation will not be allowed if a generic safety issue has not been resolved for the particular reactor, regardless of the fact that an overall solution may be under development in a separate, generic proceeding. Virginia Electric and Power Company (North Anna Nuclear Power Station, Units 1 and 2), ALAB-491, 8 NRC 245, 248-249 (1978).

Under the Atomic Energy Act, if a particular action is necessary to protect the public health and safety, it must be taken before reactor operation may be permitted. If the action is not feasible, and there is no feasible substitute, the reactor may never be allowed to operate. Thus, UCS' evidence was appropriately geared toward showing safety deficiencies at the plant. It was not our duty to show how those deficiencies could be cured or whether a cure is even possible.

The Board cites Staff testimony, a court decision, and a Commission policy statement for the proposition that it must consider the feasibility of proposed actions in determining whether they should be required. None supports the Board's conclusion.

The Court decision, Citizens for a Safe Environment v. Nuclear Regulatory Commission, 524 F.2d 1291, 1297 (D.C. Cir. 1975), simply recognizes

what we have said above, that there is no absolute safety standard. However, nowhere does the Court indicate that actions necessary to assure safety or actions that would significantly contribute to assuring safety may be rejected on the ground that they are difficult or infeasible to implement.

While the Staff's view of either the Atomic Energy Act or the Commission's language is hardly definitive, or even particularly significant, it does reflect the proper standard and does not support the Board's approach. The clear message of both Mr. Phillips and Dr. Ross (PID at 46-49, @676-682) is that an action is necessary to protect the public health and safety if it would enhance reactor safety to some significant extent. While both witnesses indicated that technical feasibility would be taken into account in evaluating a proposed action, they did not conclude that actions necessary to safety would not be required. To the contrary, as Dr. Ross explained, if one action were found not to be feasible, "some other way" would have to be found to achieve the same goal. (Id.) This is an entirely different proposition. Contrary to the Board's mischaracterization, the Staff does not purport to have measured safety partially in terms of feasibility.

Neither has the Commission indicated that it would dispense with actions essential to safety simply because they are technically or financially infeasible. The Policy Statement cited by the Board does not such thing. The Commission's reference to consideration of NRC and industry resources is relevant only to the scheduling of improvements, not to whether or not the improvements will be required. (PID at 51, @688).

The Commission's view of what is "necessary" to assure safety in this context is most clearly demonstrated by the backfit regulation, 10 CFR 50.109(a), under which the 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.

There is nothing in that 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. / This is consistent with the Staff's view as previously discussed, with the Court's recognition of the limits of current knowledge and technology, and with the absence of an absolute standard by which safety may be judged. This standard is also consistent with that of other statutes enacted to protect the public health and safety, under which cost or feasibility are not considerations unless the statute specifically so provides. Hercules, Inc. v. EPA, 598 F.2d 91, 111 (D.C. Cir. 1978), Union Electric v. EPA, ___ US ___, 8 ERC 2143, 2146-7 (1976) ("feasibility" not considered in determining safety unless specifically provided for by statute).

Accordingly, the Board's consideration of the "feasibility" of necessary actions was improper. Instead, the standard that must be followed establishes as "necessary" all actions that would significantly enhance the safety of the reactor. While these may not be sufficient to assure reactor safety, they must be considered as necessary.

The Board's incorrect interpretation of the requirements of the

5/ The Board expressed some concern that this proceeding not be used as an improper forum for routine backfitting requirements. This concern is valid only with respect to issues outside the scope of this proceeding. As long as a proposed action is within the scope, as established by the "nexus" to the TMI-2 accident, it is within the Board's authority and may be required even if it would otherwise be included in a separate backfit program.

Commission's Order and the Atomic Energy Act permeates the Partial Initial Decision. Although 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. Otherwise, the Board would have had no need to undertake its extensive and obviously difficult discussion of the issue. Accordingly, neither the parties nor the Commission can have any idea which proposed actions were rejected in part because the Board believed that the question of feasibility outweighed safety considerations. The Board may well have rejected a proposed actions on feasibility grounds although the action is otherwise required to assure safety. If that is true, permitting TMI-1 to reopen would pose a threat to the public health and safety. The Commission may not allow the Partial Initial Decision to become immediately effective until it has reviewed all of the rejected conditions under the proper standard to determine for itself whether feasibility played a role in their rejection and whether any of them should be adopted.

B. The Board's use of the feasibility standard violates
the due process rights of UCS and other intervenors.

Acting on the Commission's Order, which referred only to whether various actions are "necessary and sufficient" to provide a reasonable assurance of reactor safety, UCS presented testimony and, we believe, proved that various additional proposed actions such as requiring safety grade qualification of power operated relief valves (PID at 97-106, @774-792), are necessary to

assure safety. We fully expected the Board to rest its findings on whether or not the plant is safe. At no time did we understand that we would be required to prove not only that the plant would be unsafe if certain actions were not taken, but that the actions we proposed were technically or financially feasible.

Without giving any notice to the parties, the Board decided to establish a feasibility threshold under which UCS and other intervenors were required to establish not only that actions are necessary, but that they are feasible. While UCS did address feasibility at times in passing, we neither planned nor developed the sort of testimony that we would have presented if we had known of the feasibility threshold. Accordingly, UCS has been treated unfairly. The remedies are to reject the Board's warped interpretation of the word "necessary" or to reopen the proceeding to allow UCS to address the feasibility question in all cases.

III. The Board has Failed to Confront the Issues Presented by UCS.

The Commission should not grant immediate effectiveness to the PID because, inter alia, we have pointed out several instances where the 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. This Commission and the Federal Courts have uniformly condemned such evasive tactics by an administrative tribunal. Quoting Wingo v. Washington, 395 F.2d 633, 636 (D.C. Cir. 1968), the Appeal Board held that "a board must do more than reach conclusions; it must 'confront the facts'." Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-422, 6 NRC 33, 41 (1977). In that case, the Appeal Board held that the Licensing Board's decision failed to meet that standard,

particularly ... with respect to the Board's lack of reference to (much less discussion of) evidence contrary to that which it accepted. Much of the contrary evidence was reasonable on its face and sponsored by well-qualified witnesses; it if was not to be accepted, the Board had some obligation to explain why not.

Id., at 41. A natural corollary of this obligation to confront the facts which are presented is the obligation to fairly characterize the various positions and contentions advanced by the parties. See, e.g., Harborlite Corp. v. ICC, 613 F.2d 1088, 1093 n. 11 (D.C. Cir. 1979) (discussion must "indicate an appropriate consideration of the evidence and arguments presented"). Obviously, an adjudicatory tribunal cannot be permitted to misstate the contentions and arguments of a party, and then proceed to knock down the straw man it has created. In fact, the Board has committed both of these types of errors. It has not only ignored responsible UCS testimony on critical issues, but it has mischaracterized UCS's position and testimony in various instances. In our summary of the contentions, we will point out these errors by the Board.

IV. The Board's Decision Cannot Be Made Immediately Effective Because Its Decision Does Not Resolve Numerous Issues Critical To Public Safety

A. The Board Improperly Delegated Its Responsibility To Decide Issues To the Staff

The various contentions raised by the Union of Concerned Scientists (UCS) addressed serious issues of fact relating to public safety. However, on several occasions the Board improperly delegated its obligation to decide those matters in issue to the Staff, a party to the proceeding. The law in this area is clear. When a matter is involved in an adjudicatory proceeding under Section 554 of the Administrative Procedure Act, the presiding officer "shall make the recommended decision or initial decision," and employees "engaged in the performance of investigative or prosecuting functions for an agency in a case may not . . . participate or advise in the decision." 5 USC 554(d). In Trans World Airlines v. Civil Aeronautics Board, 254 F.2d 90 (D.C. Cir. 1958), the court summarily vacated a decision reached after an adjudicatory hearing where a former party later decided issues in the case. Similarly, see FTC v. Atlantic Richfield Company, 567 F.2d 96, 102 (D.C. Cir. 1977); King v. Caesar Rodney School District, 380 F.Supp. 1112, 1118 (D. Del. 1974).

Despite the fact that the Board recognizes that "its responsibility for adjudicating in the first instance is ours" (PID 1214), in its PID the Board has on numerous occasions given the Staff the responsibility to decide contested issues. These issues include, for example, the development of satisfactory procedures to resolve UCS Contention 4 (PID 771-73); development and approval of new logic for the steam generator rupture detection system (PID 1064); development of testing plans (PID 1275-76); approval of a potentially open-ended schedule for the installation of long term radio-effluent monitors (PID 874, n. 101); development of solutions to recognized deficiencies in relation to control room design (PID 914, n. 108).

By giving the Staff the discretion to decide whether the licensee should perform certain corrective actions, or what standards a particular action must meet,^{6/} the Board essentially removes that issue from litigation and finds in favor of whatever the Staff's position may be. Such a result elevates the Staff to the level of a decision-maker, a role prohibited by the APA and case law.

Moreover, the Staff appears to be delegating its new decision-making role further, asking the advice of the licensee in developing a series of corrective actions. (See letter, attached as Exhibit A.) This "sweetheart" arrangement cannot be justified on any grounds. The APA and NRC regulations impose on the Board the responsibility to decide matters contested in this proceeding, not the Staff, and most assuredly not the licensee.

B. Proposed Staff Conditions For Restart Have Not Been Prepared

The Commission can allow restart only if it is assured that TMI-1 can be operated without endangering the public health and safety. Yet, the precise conditions for restart are unknown. The Board ordered that the Staff draft its view of the proposed license conditions within 45 days of issuance of the PID with allowance for parties to review and submit their replies within 15 days. (PID 1217) As we have shown that several substantive adjudicatory issues have been left in the Staff's discretion, UCS's first opportunity to review the full resolution of its contentions will occur with this Staff filing due on February 8, 1982. Any decision to allow restart prior to allowing the parties the opportunity to review and comment on the Board's resolution of their contentions would be arbitrary and capricious.

^{6/} UCS does not contest the entirely proper role for the Staff of verifying licensee compliance with the findings of the Board. Instead, UCS objects to the Board's delegation to the Staff of both roles of decision-maker and enforcer.

V. Erroneously Excluded Issues and Contentions

It would be improper for the Commission to permit restart of TMI-1 prior to completion of the appeal process, as several issues, raised by UCS, were improperly excluded from consideration. UCS is entitled to the opportunity to argue to the Appeal Board and, if necessary, the Commission, that those issues should be addressed substantively prior to restart.

A. Hydrogen Control

UCS originally contended that the restart proceeding should consider the requirement of a proper hydrogen control system. (UCS Contention 11) This contention was based on the eminently reasonable logic that rules requiring hydrogen control premised on 5% fuel cladding reaction were inadequate at TMI-1, since during the TMI-2 accident at least 30-50% of the fuel cladding reacted. However, after certification of this issue to the Commission, and a Petition for Reconsideration by UCS, the Commission twice ruled that this issue was more appropriately dealt with in a generic rulemaking, and that the current rule (50.44) should be adhered to, absent the showing by UCS of a "credible accident scenario" which could result in greater than 5% cladding reaction. (Order, September 26, 1980).

UCS continues to believe that this order is both legally and factually in error. In reaching its conclusion, the Commission used a string of "logical" assumptions more suited to "Alice in Wonderland" than an adjudicatory hearing involving critical public safety questions. In the September 26, 1980 Commission Order denying reconsideration, Commissioner Hendrie and Chairman Ahearne reasoned that as only "special circumstances with respect to the subject matter of the particular proceeding" justify the waiver of a regulation, and since the hydrogen control failure at TMI-2 indicated a wide-spread defect in the basis for 50.44, no "special circumstances" have been found here. (Order of September 26, 1980, Separate Views of Ahearne and

Hendrie, at 1-2). Thus, the Commission is in the truly remarkable position of recognizing that a critical rule is not adequate to protect public health and safety generally, but refusing to acknowledge that fact in the one case which demonstrated its lack of factual basis. To require UCS to conceive of yet another "credible accident scenario" in the face of a real live illustration is not responsible. (See UCS Motion for Reconsideration, attached as Exhibit B).

In fact, since the Commission's denial of UCS's contention that 50.44 is inadequate to assure public safety at TMI-1, it has required hydrogen control measures stricter than those required to meet 50.44 in the operating license for at least the Sequoyah plant—without any showing of a "credible accident scenario." Moreover, the proposed revision of 50.44 presumes a 75% cladding reaction. (46 Fed. Reg. 62281, Dec. 23, 1981) The Commission is not free to set up arbitrary barriers (the requirement of proof of a hydrogen generating scenario) to consideration of one plant's hydrogen control system while at the same time it implicitly acknowledges that these barriers are unnecessary for its own rulemaking and subsequent plant licensing. Since the accident at TMI-2, the Commission has acted in all subsequent cases on the premise that the 5% cladding reaction limitation is far too low. Holding to that discredited premise in this case is clearly arbitrary and capricious. TMI-1 cannot be allowed to operate under that inadequate rule prior to either the imposition of the proposed new rule on this facility or the consideration of hydrogen control requirements in this proceeding.

B. National Environmental Policy Act

In a separate order dated December 15, 1981, the Board ruled that while preparation of an environmental impact assessment was not ordered by the Commission and therefore not required, the EIA that was prepared met the specific contentions raised by the parties. (Order at 5). The Board then

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. (Id., at 12)

At the outset, it must be recognized that the obligation to comply with NEPA springs from the Congressional mandate. It cannot be waived or avoided due to the lack of any explicit delegation from the Commission. In fact, the question of whether NEPA applies has been implicitly decided in favor of its coverage in PANE v. NRC, No. 81-1131 (D.C. Cir. Jan. 7, 1982). In that case, the court ordered the NRC to prepare an environmental assessment of the impact of psychological distress on nearby residents caused by restart of TMI-1 prior to such restart.

NEPA requires that all potentially significant impacts on the human environment be evaluated in an environmental impact statement prior to agency action. (42 U.S.C. Section 4331(c)) The accident at TMI-2 clearly demonstrated that Class 9 accidents are a credible event and therefore "reasonably foreseeable" at TMI-1 (40 CFR 1508.8)^{7/} The Board itself acknowledges that the record in this proceeding is completely devoid of any evidence on the impacts of Class 9 accidents. (Order at 11) Therefore, the

^{7/} CEQ regulations at 40 CFR Part 1500 apply to "all agencies of the Federal Government." 40 CFR 1507.1. NRC regulations at 10 CFR 51.10(a) adopt these regulations, absent any conflict with NRC's NEPA rules. UCS believes that the NRC is bound by all CEQ regulations, but it is unnecessary to argue this issue because all relevant CEQ regulations involved here are either not disavowed or not inconsistent with NRC rules.

Commission must prepare, circulate, and consider an EIS on this issue prior to restart.^{8/}

C. Unresolved Safety Issues and Regulatory Guides

The Board also refused to allow UCS to litigate the question of whether plants should be allowed to operate in the absence of a resolution of unresolved generic safety issues, asserting that this contention (UCS Contention 20) lacked "specificity." Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), LBP-79-34, 10 NRC 828, 838 (1979). In fact, two specific examples were given: (1) interaction between safety and non-safety systems (Task A-17) and (2) environmental qualification of safety-related equipment (Task A-24). These examples demonstrate that the policy of permitting plants to operate in the absence of a plant-specific resolution of the unresolved safety problems is unjustifiable. TMI-2 showed that unresolved safety problems can and will cause accidents; thus the analysis now mandated by the Appeal Board prior to the issuance of an operating license^{9/} is required at this stage for TMI-1. The Board's rejection of this issue is unjustifiable, and it should be ordered to consider this contention prior to restart. We have stated precisely what is required to assure public health and safety: a plant-specific resolution of the generic

^{8/} As discussed above, the appropriateness of any "impact" in an environmental review under NEPA is determined in the first instance by reference to the statute and its regulations. Under that criterion, Class 9 accident impacts clearly qualify. However, in spite of the Board's arguments, UCS's contention 20 raised the issue of Class 9 accident impacts precisely in accordance with the NRC policy statement on Class 9 accidents. 45 Fed. Reg. 40101 (June 13, 1980). The issue was raised at the beginning of an agency proceeding, prior to the NRC's preparation of a NEPA document for restart. This case does not involve the reopening of any prior proceeding or EIS. Indeed, the proposed policy states that the new consideration of Class 9 accident impacts is motivated in large part by the TMI accident itself. 45 Fed. Reg. at 40102 (Col. 3).

^{9/} Virginia Electric Power Co. (North Anna Nuclear Power Station, Units 1 and 2), ALAB-491, 8 NRC (1978).

unresolved safety problems applicable to B&W PWR's as listed in NUREG-0410. The Board's ruling amounts to accepting the principle that each unresolved safety problem must itself cause another accident before the Staff and licensee are required to address them. This would be a tragic mistake.

Similarly, Contention 18 alleged the uncontested fact that the accident at TMI-2 was caused or aggravated by factors which are the subject of Regulatory Guides which were not applied during the design or review of TMI-1. As an example, the absence of an automatic indication of the disabling of a safety system is cited (Regulatory Guide 1.47). A systematic analysis is required of the design of TMI-1 against present Regulatory Guides to determine whether TMI-1 conforms with each or provides an equivalent level of protection. This contention was also found to be lacking in "specificity" and rejected.

The Board refusal to consider these contentions on "specificity" grounds is seriously wrong. These contentions go to the heart of the issue of safe operation of TMI-1, and that unit cannot be restarted prior to their resolution.

VI. COMMENTS ON UCS CONTENTIONS

Contentions 1 and 2

1. UCS Contentions 1 and 2 are discussed at paragraphs 600 to 629 of the PID, at paragraphs 1 to 37 of UCS's Proposed Findings (PF), and at paragraphs 10 to 58 of UCS's Reply Findings (RF).

2. UCS PF 36 summarized the evidence as follows:

We reach the following conclusion:

a. Liquid natural circulation capability at TMI-1 is not a sufficiently reliable method of decay heat removal because:

- (1) Voids that can accumulate in the hot legs and interrupt liquid natural circulation cannot be removed because the reactor coolant pumps are not safety grade and therefore cannot be relied upon and high point vents on the hot legs have not been installed, and
- (2) The emergency feedwater system is not sufficiently reliable.

b. The boiler-condenser or two-phase mode of natural circulation at TMI-1 is not a sufficiently reliable method of decay heat removal because:

- (1) There is no method of determining primary system water level,
- (2) Post-TMI-2 emergency procedures requiring refilling of the primary system after a break will preclude the establishment of a condensing surface on the primary side of the steam generator tubes,
- (3) The effectiveness of the boiler-condenser mode has not been and will not be tested, and
- (4) Emergency feedwater is not sufficiently reliable.

c. The feed-and-bleed mode of operation at TMI-1 is not a sufficiently reliable method of decay heat removal because:

- (1) Its effectiveness has not been demonstrated,
- (2) Its operation depends upon operator action and the requisite actions and decision process are complex,
- (3) Cold shutdown conditions cannot be achieved using feed-and-bleed.

d. No reliable method of forced cooling is provided at TMI-1 because:

- (1) The reactor coolant pumps do not meet the Commission's requirements applicable to components important to safety (i.e., safety grade components), and
- (2) The normal shutdown cooling mode of operation of the decay heat removal system cannot be used because primary system pressure will be far above the design pressure of the decay heat removal system.

3. In finding against UCS on these contentions, the Board ignored evidence elicited by UCS on cross-examination and contained in its Proposed Findings demonstrating that all of the cooling modes available at TMI-2 during the accident were ineffective and that TMI-1 will not be changed at restart to provide any reliable method of removal of decay heat in the event of an accident similar in dimension to TMI-2 involving voiding in the primary system. The Board does not address the evidence demonstrating that the only way in which primary coolant circulation was established during the TMI-2 accident was by startup of a reactor coolant pump. (UCS PF 15-18)

4. The Board finds that the evidence did not establish that natural circulation is inadequate but only that maintaining adequate reactor coolant system inventory is essential to adequate core cooling. (PID 611) The Board ignores or disregards the fact that for the majority of small-break loss-of-coolant accidents (SBLOCAs) the steam bubble sufficient to interrupt natural circulation will be trapped in the U-bend and, contrary to PID 619, will not be condensed. (UCS RF 57, citing Tr. 4619-21, Jones; Contrast with PID 611-618)

5. The Board misses the point that, after circulation is interrupted as it will be for most SBLOCAs, heat removal from the primary system is dependent upon establishing circulation. As noted above, the steam will not be condensed, contrary to PID 619.

6. The Board further found that the expected quantities of noncondensable gases should not interfere with natural circulation. (PID 619) The Board disregards the fact that the testimony purporting to support this position was explicitly based on the assumption that core damage as occurred at TMI-2 is not present. (UCS RF 56)

7. The Board finds that the high-point vents would be "useful" in re-establishing natural circulation following a SBLOCA. (PID 620) In fact, these vents are essential in the majority of SBLOCAs to vent the steam bubble and to vent the hydrogen in the event of significant core damage. Furthermore, the vents will not be installed by July 1, 1982, contrary to the Board's finding. (PID 620) As the Staff stated in its letter of January 5, 1982 to Governor Thornburgh, the high point vents will not be required until the first refueling outage after restart.^{10/}

8. The Board relies on bald assertions of witnesses to the effect that the boiler-condenser mode of cooling will work (PID 621), disregarding the significance of the fact that no test duplicating the conditions following a SBLOCA has ever been attempted (UCS PF 27), despite the fact that these are the precise conditions for which it is being relied upon. Moreover, it has never been used during any so-called "unplanned occurrence." (UCS PF 27)

9. In rejecting UCS's arguments in this connection, the Board makes a serious error of fact. UCS pointed out that the effectiveness of the boiler-condenser mode depends upon the water level in the primary system being

^{10/} Letter from William J. Dircks to the Honorable Dick Thornburgh, January 5, 1982, p. 2. (copy attached)

lower than that in the secondary system. The Board claims that this will always be the case after a SBLOCA. (PID 623) However, there are situations after such a LOCA when the primary system water level, while below the U-bend in the candy cane, will not be below the level of the secondary system, precisely because the emergency procedures explicitly direct the operator to immediately refill the primary system. (UCS PF 28) This was never refuted.

10. Thus, following emergency procedures results in raising the primary level above the secondary level and trapping a steam bubble in the hot-leg U-bend, negating the effectiveness of both single-phase natural circulation and boiler-condenser circulation. (UCS RF 50) This situation can only be remedied using the TMI-1 existing design by starting a reactor coolant pump, a non-safety grade component having no emergency onsite power supply among other deficiencies. The only other potential remedies (i.e., high-point vents or a high-pressure residual heat removal system) have not been installed at TMI-1.

11. Thus, the Board has erred in finding that the operation of one or more reactor coolant pumps is not required to mitigate the majority of SBLOCAs when a steam or noncondensable gas bubble is formed in the primary system.^{11/}

12. The Board finds that core heat can be removed by bleed-and-feed. (PID 619) The Board appears to completely ignore UCS's findings to the effect that the effectiveness of bleed-and-feed has never been adequately demonstrated (UCS PF 30-33) and does not adequately consider that the plant cannot be taken to cold shutdown in this mode with safety-grade equipment. (UCS PF 34)

^{11/} Note that during the recent accident at Ginna, natural circulation was not effective and cooling was restored by starting a reactor coolant pump. (Preliminary Notification of Occurrence, PNO-I-82-09, January 25, 1982)

13. The Board erred by applying an incorrect standard in judging the effectiveness of bleed-and-feed. The Board found that "the feed-and-bleed mode has not been shown to be an unacceptable way of cooling the core . . ." (PID 756) The Board was unable to find that the bleed-and-feed mode is an acceptable way of cooling the core because there is no evidence to support such a finding. (UCS PF 30-35; UCS RF 53)

14. Finally, the Board is incorrect in finding that TMI-1 will have two safety-grade systems for removing residual heat at high pressure. (PID 626) First, emergency feedwater is not safety-grade now. Moreover, it was clearly established that for some SBLOCAs, two HPI pumps are needed in the bleed-and-feed mode. (UCS PF 14) Thus, for this use the HPI system cannot be considered safety-grade because it would not meet the single failure criterion.

Contention 3

15. UCS Contention 3 is discussed at PID 748-757, at UCS's PF 38-71, and at UCS's RF 59-65.

16. The Board rejects UCS's contention that the pressurizer heaters are important to safety and should meet safety grade requirements. It does so on the basis of its finding that another means exists to maintain primary system pressure—i.e. use of the HPI pumps with the RCS in a water solid condition or in a bleed-and-feed mode. In so finding, the Board seems to miss a primary point made by UCS - that it is not only "undesirable" to challenge safety systems frequently, but that this is one of the significant lessons learned from the TMI-2 accident. The Lessons Learned Task Force found that changes to plant design were needed "to increase the availability of the reactor pressurizer for pressure control in the event of loss of offsite power, thus decreasing the frequency of challenges to [the] emergency core cooling

system." (UCS PF 44, quoting NUREG-0578 at 6). Thus, the goal is not simply the iteration of a "general philosophy." (PID 756) In relying on the ECCS to mitigate an anticipated operational occurrence, i.e., loss of offsite power, the Board has thus completely ignored the pertinent lesson learned from the accident - that the heaters should be upgraded to reduce reliance on ECCS.

17. The Board also alleges that UCS may be confused with respect to whether the PORV or safety valve would be used in bleed and feed. (PID 753) UCS is not confused; we are well aware that the licensee has done a theoretical "analysis" showing that the safety valves can be used for the bleeding function and discussed this issue in connection with the evidence on UCS Contention 5 concerning whether the PORV should be safety grade. The safety valves have never been tested or qualified under conditions requiring the number of repeated openings and closings that would be called for during bleed and feed operation. (UCS PF 210) The staff has not even evaluated the nature of the demands placed upon the valves during bleed and feed and the current safety valve test program cannot simulate these conditions. (UCS PF 211)

18. The safety valves have no block valve. (UCS PF 188) If they fail to reseal, the loss of coolant cannot be stopped.

19. All applicable bleed and feed procedures have been written for use of the PORV and assume use of the PORV. (UCS PF 208) After the TMI-2 accident, the staff observed accurately that "[t]his method of decay heat removal [bleed and feed] requires the use of the emergency core cooling system (ECCS) and the power-operated relief valves (PORVs) in the pressurizer." (UCS PF 214)

20. In addition, the Board notes with apparent approval the licensee's testimony that natural circulation can be accomplished without use of the pressurizer heaters by maintaining pressure with the makeup or HPI system

while the primary system is solid. (PID 754) The Board ignores substantial evidence cited by UCS to the effect that there are serious safety problems involved in attempting to cool the plant in a solid condition. UCS's PF 60 is as follows:

Perhaps more importantly, there are serious safety disadvantages associated with attempting to cool the plant in a solid water condition which have been ignored by the licensee. It is extremely difficult to control reactor coolant system ("RCS") pressure in the solid mode while making any changes whatever to the plant condition. (Tr. 8183, Pollard) Very small changes in temperature can result in large pressure fluctuations. (Id.; see also Tr. 8060, 8083-5, Brazill.) If the pressure decreases too rapidly, there is a risk of flashing to steam in the RCS, creating bubbles which can interrupt natural circulation. (Id.) If the pressure increases too rapidly, a challenge to the non-safety-grade PORV and/or safety valves can result. At low temperatures there is also a risk of exceeding the pressure/temperature limits on the reactor vessel. This has happened even with plants in a cold shutdown condition. (Id.) UCS's witness knew of no case where a commercial plant has been taken from hot to cold shutdown in a solid water condition throughout. (Tr. 8187, Pollard). None of the other witnesses knew of such an example either. (Tr. 8055-6, Brazill and Keaten; Tr. 8726-7, Jensen). Cooling down in a solid water condition would take the full attention of at least one operator and possibly others to avoid fluctuations in the temperature or inventory of the RCS, to stay within the pressure/temperature limits on the reactor vessel and to maintain the required subcooling margin. (Tr. 8189, Pollard) We find that these are substantial safety disadvantages which preclude finding that solid water operation is a satisfactory substitute for natural circulation using the pressurizer heaters to control pressure.

VII. Conclusion

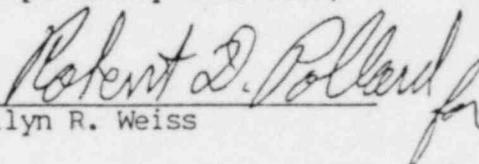
Under the standard applicable to this proceeding, the Commission will refuse to allow the Partial Initial Decision to become immediately effective if "it is in the public interest to do so, based on a consideration of the gravity of the substantive issue, the likelihood that it has been resolved incorrectly below, the degree to which correct resolution of the issue would be prejudiced by operation pending review, and other relevant public interest factors." 10 CFR 2.764(f)(2)(i). UCS has demonstrated that it would not be in the public interest to allow immediate effectiveness, particularly because the substantive issues of

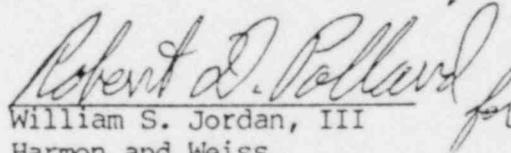
this proceeding are extremely significant and because the Licensing Board has resolved several substantial issues incorrectly and contrary to the public health and safety. This conclusion is required by the Board's incorrect treatment of the evidence and failure to address all issues in ruling on UCS's contentions. It is also required by virtue of the Board's adoption of an illegal standard that takes into account the "feasibility" of proposed actions essential to safety in determining whether they should be required. That failure alone renders it impossible for the Commission to judge the correctness of the Board's conclusions.

For these reasons, the Commission has no basis for a finding of reasonable assurance that the operation of Three Mile Island Unit No. 1 would not be inimical to the public health and safety either at full power operation or at the low power level recommended by the Board. We urge the Commission to hold that the Partial Initial Decision may not become immediately effective.

DATED: January 28, 1982

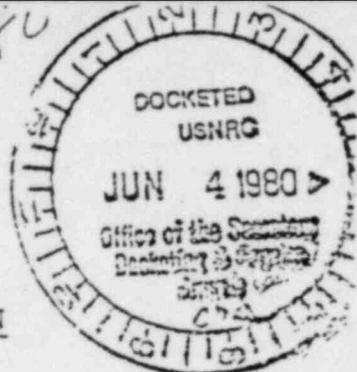
Respectfully Submitted,


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Counsel for UCS

6/4/80



UNITED STATES OF AMERICA
'82 JUN 20 NUCLEAR REGULATORY COMMISSION

BEFORE THE NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
)
METROPOLITAN EDISON)
COMPANY, et al.,)
)
)
(Three Mile Island)
Nuclear Station, Unit)
No. 1))
)

Docket No. 50-289
(Restart)

UNION OF CONCERNED SCIENTISTS' MOTION
FOR RECONSIDERATION OF CLI-80-16

In a Memorandum and Order dated May 16, 1980, CLI-80-16, the Commission addressed itself to two questions certified to it by the Licensing Board for the TMI-1 Restart proceedings. These were:

1. Whether the provisions of 10 CFR 50.44 should be waived or exceptions made thereto in this proceeding where a prima facie showing has been made under 10 CFR 2.758 that hydrogen gas generation during the TMI-2 accident was well in excess of the amount required under 10 CFR 50.44 as a design basis for the post-accident combustion gas control system for TMI-1.
2. Whether post-accident hydrogen gas control should be an issue in this proceeding where post-accident hydrogen control was perceived to be a serious problem and was in fact a problem during the TMI-2 accident.

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In response to the certification (and without inviting the comments of the parties), the Commission declined to waive 10 CFR 50.44 and held that post-accident hydrogen control can be litigated under Part 100. Specifically, in order to get to the question of whether hydrogen control measures planned for TM-1 are adequate, intervenors must show that there is "a credible loss-of-coolant accident scenario entailing hydrogen generation, hydrogen combustion, containment breach or leaking, and offsite radiation doses in excess of Part 100 guideline values." (Sl. op. at 2)

In support of its decision to leave 10 CFR 50.44 in place, the Commission made two basic and interrelated arguments. First, while recognizing that the TMI accident "raised a safety issue regarding hydrogen control . . . that should be addressed," (Sl. op. at 2), the Commission argued that the appropriate forum in which to consider hydrogen design basis assumptions is a "planned" rulemaking which has yet been neither noticed nor scheduled. Second, the Commission finds that "operator interference with ECCS operation . . . was the root cause of the hydrogen generation problem" at TMI-2 (Sl. op. at 4) and that the post-TMI "instruction" to licensees not to prematurely turn off ECCS "compensates for the less conservative analytical framework of Part 100, and serves as a basis to sustain the present hydrogen generation assumption of 50.44 at least for the interim until the degraded core rulemaking can be completed." (Id.)

UCS requests the Commission to reconsider CLI-80-16. We believe that it is incorrect both as a matter of law and

of fact and that it reflects an ill-considered prejudgment of some of the basic unresolved issues raised by the TMI-2 accident.

Because the key to the decision seems to be the Commission's conviction that interference with the ECCS was the "root cause" of the hydrogen problem and that the new instruction to operators has sufficiently addressed that cause, we will address that issue first. UCS believes that, in reaching that factual conclusion, the Commission has made a number of implicit assumptions in the absence of any factual record and has prejudged issues yet to be resolved in the hearings.

First, the Commission has assumed that if the TMI operators had not turned off the ECCS, the core would have been adequately cooled. This assumption is unproven and unwarranted. There is no evidence of which we are aware indicating that the core was in a coolable condition at the time ECCS was throttled. It is not an established fact that, for the small-break LOCA sequence of the TMI-2 accident, the core would have been adequately cooled but for premature throttling of ECCS. On the contrary, this is the subject of UCS Contention No. 8.^{1/}

Second, the Commission has assumed that the instruction to operators removes the cause for concern that ECCS will be prematurely turned off. The instruction only specifies the conditions under which the operator may terminate ECCS. It assumes that the instrumentation available to the operator

^{1/} For the convenience of the Commission, a copy of UCS's final contentions is attached.

to indicate the condition of the core is reliable. UCS believes that in the case of TMI-1, the available instrumentation does not in all instances give an unambiguous and reliable indication of the condition of the core and thus, the NRC's instructions do not ensure against premature ECCS termination. Again, this is an issue in controversy in this case through UCS contention No. 7.

Thirdly, the Commission appears to assume that instructions to operators can compensate for poor design. 10 CFR 50.55 (a) (h) incorporates §4.16 to IEEE 279, which requires:

The protection system shall be so designed that, once initiated, a protection system action shall go to completion.

In UCS's view, this requires that the design of the facility preclude premature ECCS termination by, for example, preventing manual interference with ECCS until certain selected plant parameters measuring the condition of the core have reached established levels. We recognize that our interpretation of the regulations is disputed by other parties. Nonetheless, it is an issue yet to be decided in this case and properly raised by UCS Contention No. 10.

Finally, the Commission assumes that the appropriate dose limits to apply to the analysis of hydrogen control are those contained in Part 100. Part 100 requires the licensee to show that, even if the plant's safety systems are breached, doses to the public will not exceed the limits established therein. In contrast, the much stricter provisions of Part 20 limit expected releases which occur assuming the proper operation of plant systems.

By incorporating the Part 100 limits for the purpose of judging the acceptability of hydrogen control measures, the Commission has confused the two and misapplied Part 100. Application of the principle established by CLI-80-16 would allow purposeful releases up to the Part 100 limits. This would be analogous to saying that, if a plant's system for treating radioactive wastes were to malfunction, the licensee would be permitted to deliberately release material up to the Part 100 limits. Of course, this would not be permitted; the Part 20 limits would apply.

The staff has acknowledged this issue in NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short-term Recommendations:"

The course of events at TMI-2 with respect to hydrogen production and control in containment has indicated a need for thorough reconsideration of the Commission's design basis for combustible gas control systems. This should include both a re-examination of the reactor system effects (i.e., coupling the ECCS evaluation and the assumption of hydrogen produced by metal-water reaction) and the acceptability of 10 CFR Part 100 guidelines for evaluation of offsite doses from purposeful releases from the containment. (NUREG-0578, A-23, Emphasis added)

The above discussion has demonstrated that, in CLI-80-16, the Commission explicitly or implicitly resolved disputed factual issues without benefit of a record and without giving the parties an opportunity to make their case. This is analogous to the course followed by the Commission in a previous case and disapproved by the Court in State of Minnesota v. N.R.C. 602 F. 2d 412 (D.C. Cir., 1979). The Commission may establish precedent by rulemaking or by adjudication; what it may not

do is resolve factual issues properly raised in pending proceedings by fiat. (Id. at 416-417)

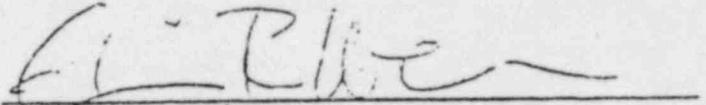
The final issue is whether the Commission, recognizing the lack of a rational technical foundation for the hydrogen generation design basis limits established in 10 CFR 50.44, may keep these limits in place for this proceeding while moving on an entirely separate track toward a "planned" rulemaking which has been neither scheduled nor noticed. We believe that it cannot.

There is no question that the agency is free to resolve issues before it either by rulemaking or by adjudication. SEC v. Chenery Corp. 332 US 194 (1947) The question here is whether, once the issue has been raised in this case the Commission can (1) take it out of this case when no formal rulemaking has yet been announced and (2) proceed with completing this case and authorizing restart before the issue has been resolved in the rulemaking proceeding. If the Commission were to tie the restart of TMI-1 to resolution of the generic issue in the rulemaking context, we would have no grounds to object. However, we believe that it is impermissible to deny the intervenors any forum in which to address this question before the plant resumes operation. The Commission's decision would do precisely that.

For the above-stated reasons, UCS moves the Commission to reconsider CLI-80-16 and to answer the certified questions in the affirmative by waiving the applicability of 10 CFR 50.44 for this proceeding. In so doing, the Commission would fully preserve its ability to consider the generic

issues in a rulemaking proceeding and would avoid prejudicially prejudging unresolved questions involved in the restart proceedings.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Eilyn R. Weiss", written over a horizontal line.

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Counsel for the Union of Concerned
Scientists

June 4, 1980

2009 8-1-2016



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

DOCKET

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Docket No. 50-289

The Honorable Dick Thornburgh
Governor of Pennsylvania
Harrisburg, Pennsylvania 17120

Dear Governor Thornburgh:

I am providing you with an interim response from the Staff to the questions you posed in your November 20, 1981 letter to the Commission because it would be inappropriate for the Commission to comment on matters pending before it in the Three Mile Island Unit One (TMI-1) Restart proceeding. You will be hearing further from us on the issues you raise after the Commission makes its decision whether to permit the restart of the facility.

You stated that you intend to support restart of TMI-1 if two conditions are met, namely:

- "(1) Development of a consensus for a realistic plan for Unit 2 decontamination.
- (2) Receipt of adequate assurance that Unit 1 can be operated safely."

As to your first condition, I share your concern about the need to assure financial resources to complete the cleanup at TMI-2. At recent Congressional hearings, Chairman Palladino stated that while maintaining the basic independence of nuclear regulation mandated by Congress, the Commission intends to support both Federal and state initiatives to expedite the cleanup. I agree with your assessment that progress in this area has been made and I am hopeful that a plan incorporating the administration's support (see October 19, 1981 letter from Edwin Meese III to you) of government sponsored activities, as well as support from all other affected parties can be finalized very soon.

With regard to the second condition, you have enclosed correspondence from Representative Udall and the Union of Concerned Scientists (UCS) regarding several technical and procedural questions on the TMI-1 restart. The UCS stated in its letter to you a range of concerns regarding the TMI-1 restart hearings. As you know, UCS was a party to the proceedings and had the opportunity to present and defend its positions before the Board. The Atomic Safety and Licensing Board issued its decision on Plant Design and Procedures and Separation Issues on December 14, 1981. That decision deals with several of the UCS concerns. The NRC Staff and the Commission are presently reviewing the Board's findings. Since the Commonwealth of Pennsylvania also participated in the TMI-1 restart proceedings, you will also be receiving these findings for your review.

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The remainder of this letter will summarize Staff positions on the several technical and procedural issues raised.

Inadequate Core Cooling

Congressman Udall in his letter to you dated July 23, 1981, addresses his concern that General Public Utilities (GPU) is not actively pursuing installation of additional instrumentation to detect loss of water from the primary system leading to a condition of inadequate core cooling (ICC). An extensive record on the need for such instrumentation was created in the restart proceeding. The Staff position on this issue is that such instrumentation is necessary to ensure safe operation of pressurized water reactors in the long term and that at the close of the hearing in July 1981, GPU had not yet demonstrated sufficient or "reasonable" progress towards fulfilling this requirement. Since that time, however, GPU has revised its position on this matter and has now committed to installation of a system in the Reactor Collant System (RCS) hot leg piping which will provide an indication of RCS inventory loss. This system is currently being reviewed by the Staff and some design modifications are expected to be required before the system is installed at the next TMI-1 refueling outage.

Hydrogen Control

UCS was specifically concerned regarding the removal of the hydrogen control issue from the hearing by the Board. Since the accident at TMI-2 on March 28, 1979 resulted in hydrogen generation well in excess of the amounts specified in 10 CFR 50.44, it became apparent to NRC that specific design measures are needed for handling larger hydrogen releases, particularly for smaller low-pressure containments. The Commission has issued a new rule published in the Federal Register on December 2, 1981 which amends Part 50 of NRC regulations. Two of the requirements in this rule will affect the TMI-1 plant at its next refueling outage; namely, hydrogen recombiner capability, and high point vents in the reactor coolant system. In addition, the Commission has published in the Federal Register on December 23, 1981, a proposed rule which would require licensees of plants with large dry containments, including TMI-1, to perform certain analyses to show that essential equipment will not be jeopardized by the environment resulting from hydrogen releases from postulated degraded core accidents. However, for plants with large dry containments, such as TMI-1, this proposed rule on hydrogen control is not yet effective and thus no near-term additional hydrogen control requirements apply to TMI-1. Analyses for several large dry containments show that a

substantial structural margin exists for the containment vessel to accommodate the hydrogen that would be released from a degraded core condition such as that following the accident at TMI-2. Also, the accident at TMI-2 serves to demonstrate the inherent resistance of large dry containments and safety equipment to hydrogen burning. Finally, at TMI-1, the implementation of our short-term lessons learned and other post-TMI actions will reduce the likelihood of accidents that could lead to a degraded core condition. It is for these reasons that we conclude that there is no present need for any additional hydrogen control measures required beyond the present regulatory requirements noted above.

Environmental Qualification

UCS was also concerned that the restart proceedings restricted consideration of the question of whether the equipment needed to safely shutdown the plant in an accident has not been shown to be fully qualified to survive the accident environment. The NRC Staff's testimony was directed to the ability of equipment to function following a small break loss of coolant accident (SBLOCA) not involving core damage as a criterion for restart considering appropriate implementation of the short-term lessons learned and other post-TMI actions that will reduce the likelihood of accidents that could lead to a degraded core. This was the Staff's judgment for allowing interim operation until the licensee could complete the actions required for all operating plants under the Commission's Memorandum and Order CLI-80-21 dated May 27, 1980 to demonstrate that all safety-related electrical equipment will be qualified to withstand accident environments.

Safety-related electrical equipment at TMI-1 has been evaluated by the licensee to determine its ability to function in accident environments. The NRC Staff has reviewed the licensee's evaluation. Although qualification of all of the equipment has not been fully demonstrated, many of the inabilityes to fully demonstrate compliance involve a lack of documentation of confirmatory test results to support a finding that the equipment is qualified.

This issue was litigated in the TMI-1 restart proceeding. The Board has provided a detailed discussion and findings on this issue in its December 14, 1981 partial initial decision.

Safety Standards

UCS also presents concerns about appropriate safety classifications that should be applied to the TMI-1 design. These were among the issues litigated in the restart proceedings that UCS believes have not been adequately addressed by the NRC staff and GPU. For example, UCS argued for stricter safety requirements at the hearing for the Power Operated Relief Valve (PORV), the pressurizer heaters, and valve position

cation in safety systems. The NRC has evaluated each of these areas and has mandated improvements to enhance the reliability of the PORV and minimize the consequences of its failure, to enhance the reliability of pressurizer heaters and to help ensure correct valve lineups in safety systems. UCS argued for stricter safety requirements at the hearing. A complete discussion and findings are provided on these issues in the Board's decision issued on December 14, 1981.

NRC Deadlines and GPU Commitments

UCS also expressed concerns about possible extension by the Commission of schedules then currently established for completion of post-TMI requirements should those schedules not be achievable. In an order issued on March 23, 1981 (CLI-81-3, 13 NRC 291 (1981)) the Commission stated that it would consider, on a case-by-case basis, licensee's requests for schedule extensions where developments occur that affect licensee's ability to comply with requirements recommended by the Licensing Board or proposed to be imposed by the Commission. The Commission will be reviewing TMI-1 as noted above with respect to revised schedules for post-TMI requirements before its decision on restart. To put this issue in perspective, of the 64 post-TMI requirements which had deadlines prior to January 1, 1982, GPU is in compliance with all items with the following exceptions: Six items require modifications which are near completion and will be completed prior to the NRC authorizing restart; five additional items involve submittals which are currently under staff review and only one item has been significantly delayed. This last item involves further upgrading of the Emergency Feedwater System and reasons for the delay of this modification and compensatory measures are discussed in the Board's December 14, 1981 decision.

Sincerely,
(Signed) William J. Dircks

William J. Dircks
Executive Director for
Operations

RECEIVED JAN 13 1982



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 WASHINGTON, D. C. 20555

January 6, 1982

'82 JAN 28 P6:42

Docket No. 50-289

OPERATING & SAFETY
 BRANCH

Mr. Henry D. Hukill, Vice President
 and Director - TMI-1
 GPU, Nuclear Corporation
 P. O. Box 480
 Middletown, Pennsylvania 17057

Dear Mr. Hukill:

The staff's review of the December 14, 1981 Board decision on Plant Design and Procedures, Separation of TMI-1/2 and Emergency Planning issues reveals a number of unanticipated requirements applied to the staff and the licensee. It is our judgement (concurred in by your staff) that most of these requirements will involve submittals to the staff from your organization.

So that we may schedule our review resources, we request that as soon as possible you provide the staff with your schedule for submittals to comply with outstanding requirements from the Board's December 14, 1981 decision. We will endeavor to review these submittals as soon after we receive them as we can.

Sincerely,

A handwritten signature in cursive script that reads "John F. Stolz".

John F. Stolz, Chief
 Operating Reactors Branch #4
 Division of Licensing

cc: See next page

~~920150282~~

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
METROPOLITAN EDISON COMPANY)
)
(Three Mile Island Nuclear)
Station, Unit No. 1))

02 JAN 28 P6:43

Docket No. 50-289
(Restart)

CERTIFICATE OF SERVICE

I hereby certify that copies of UCS's letter to the NRC Commissioners dated January 28, 1982, and "Union of Concerned Scientists' Comments on Immediate Effectiveness" have been served on the following persons by deposit in the United States mail, first class postage prepaid, this 28th day of January 1982.

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

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

* Peter Bradford, Commissioner
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Washington D.C. 20555

* John Ahearne, Commissioner
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* Thomas Roberts, Commissioner
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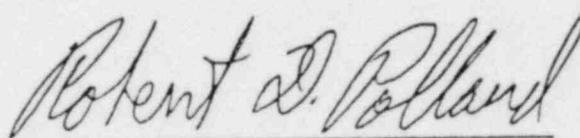
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* Hand delivered to 1717 H St.,
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** Hand delivered to indicated
address.