

September 24, 1982



SECY-82-392

ADJUDICATORY ISSUE

For: (Affirmation)
The Commissioners

From: Leonard Bickwit, Jr., General Counsel

Subject: REVIEW OF ALAB-685 -- IN THE MATTER OF
METROPOLITAN EDISON COMPANY

Facility: Three Mile Island Nuclear Station, Unit 1

Purpose: To inform the Commission of an Appeal Board
decision [which, in the General Counsel's
opinion,

No party filed a
petition for review.

Review Time
Expires:

^{22nd}
October 15, 1982, as extended.

Discussion:

Summary

The Appeal Board in ALAB-685 discusses at length its general review authority over Licensing Board decisions, holding that it is not limited to reviewing issues raised before it but rather that it can review the entire record.

CONTACT:
Rick Levi, OGC
4-1465

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Information in this record was deleted
in accordance with the Freedom of Information
Act, exemptions 5
FOIA 92-436

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1. Background

On August 9, 1979 the Commission established (1) a Licensing Board to conduct a hearing on whether Three Mile Island, Unit 1 (TMI-1) should be restarted and (2) the parameters for that hearing. The Commission stated that "[t]he hearing will be conducted in accordance with the applicable provisions of Subpart G of the Commission's Rules of Practice" and that the Commission would review the Licensing Board's decision without the intermediate step of an Appeal Board. CLI-79-8, 10 NRC 141, 147 (1978).

On August 20, 1981, due to the size and complexity of the hearing, the Commission modified its Order "to provide that an Atomic Safety and Licensing Appeal Board be established to hear initial appeals in this proceeding." CLI-81-19, 14 NRC 304, 305 (1981).

The Licensing Board on December 14, 1981 issued a partial initial decision which addressed, among other issues, hardware/design concerns and the separation of units 1 and 2. LBP-81-59, 14 NRC 1211, 1711 (1981). The Appeal Board scheduled oral argument on those issues for September 1, 1982.

To assist it in its preparation for oral argument the Appeal Board directed the parties to answer a number of questions in writing prior to argument. (Unpublished Appeal Board

Order, July 14, 1982). The questions generally fell in four categories: (1) update of status of restart requirements; (2) detailed questions concerning some items in the TMI-Restart Certification; (3) questions based on Licensing Board requirements and findings; and (4) questions to clarify testimony presented at the hearing.

(a) Licensee's Position

On July 26, 1982 Licensee filed with the Appeal Board an "Objection to and Comments on Appeal Board Order dated July 14, 1982." Licensee first objected to Question III.E, which requested it to provide "the current status of compliance by the licensee with CLI-80-21 for qualification of safety equipment for a harsh environment." Licensee argued that the request went beyond the evidentiary record considered by the Licensing Board and beyond the scope of this special proceeding.

Licensee then commented on the Appeal Board's other questions, arguing that the Appeal Board appeared to be exceeding its jurisdiction:

Some questions suggest . . . that the Appeal Board means to address itself to matters of compliance and compliance schedules which, in Licensee's view, have been assigned by the Commission to the NRC Staff or, in certain cases, to the Commission itself. In addition, the Appeal Board has addressed matters which, while the subject of the hearing below, have not been raised on appeal by any party. It is Licensee's position that in this special proceeding the Appeal Board only has jurisdiction to carry out the responsibility specifically delegated to it by the Commission.

That responsibility is "to hear initial appeals in this proceeding." CLI-81-19, 14 NRC 304, 305 (1981).

Licensee Comments at 7.

Licensee next divided the questions on compliance asked by the Appeal Board into four categories, arguing with respect to each category that the Appeal Board did not have jurisdiction to consider the matter. Regarding the first category, short-term pre-restart requirements imposed by the Licensing Board, Licensee argued that such requirements must be met unless the Commission decides otherwise and that "[t]here is no need for the Appeal Board to police this kind of requirement." Licensee Comments at 9. On the second category, short-term pre-restart requirements with a set completion date but with staff having discretion on implementation, Licensee argued that in its August 9, 1979 Order the Commission delegated to the Licensing Board the authority to determine compliance requirements and the extent to which the Board would rely on staff determinations. Licensee concluded that the Commission did not withdraw this delegation of authority to the Licensing Board when it provided for an Appeal Board to hear appeals.

The third category of questions concerned long-term requirements for which a finding of reasonable progress must be made prior to restart. Licensee argued that the Licensing Board must make the "reasonable progress" determination, and the staff will monitor long-term compliance. The fourth category consisted of NUREG-0737 requirements imposed by the Licensing Board consistent with compliance schedules for other reactors. Licensee argued that the Commission has reserved to itself the authority to adjust action schedules on a case-by-case basis, and that any request for relief hereunder "is outside the scope of the hearing and appeals." Licensee Comments at 11.

Licensee in conclusion argued that the Commission did not intend the Appeal Board to extend its review beyond hearing appeals by the parties from the Licensing Board's decision. Licensee maintained that the Commission in its August 9, 1979 and August 20, 1981 Orders reserved to itself the authority to review all matters not appealed to the Appeal Board. Licensee cited language in the August 20, 1981 Order that the Commission was establishing an Appeal Board "to hear initial appeals" because of "its concern that the appeals be handled efficiently and agency resources be used effectively in this important proceeding." Accordingly, Licensee, although it stated it would answer all questions except Question III.E, submitted "that the Appeal Board should confine its review to the multiple exceptions filed by the parties to the Licensing Board's decision." Licensee Comments at 13.

(b) The Appeal Board's Decision

In ALAB-685 the Appeal Board suspended Licensee's obligation to answer Question III.E "[i]n view of the large amount of data which licensee asserts would have to be submitted . . . as well as the pendency of a final rule on environmental qualification. . . ." ALAB-685 at 2.

The Appeal Board then discussed the scope of its appellate review, addressing Licensee's assertion that the Board can review only issues raised before it by the parties. The Appeal Board first noted that the Commission in its August 9, 1979 Order directed that this proceeding be "conducted in accordance with the applicable provisions of subpart G of the Commission's Rules of Practice set forth in 10 CFR Part 2 . . . 10 NRC 141, 147 . . .", and that upon issuance of the Licensing Board's decision "the record be certified to the Commission itself for final decision." The

Appeal Board found nothing in the Commission's later August 20, 1981 Order providing for an Appeal Board to suggest "that the Commission intended to relieve us from our well-established authority to review the entire record of a proceeding sua sponte, independently of the parties' positions, in accordance with subpart G." ALAB-685 at 4. The Board noted that under 10 CFR 2.758(a) it is authorized to act in place of the Commission, and that the Commission "will ordinarily consider the whole record on review." 10 CFR 2.770(a). Finally, the Board distinguished the issue here from attempts to raise issues sua sponte which have not been the subject of a contested adjudicatory proceeding.

Analysis

OGC does not believe that

1/ OGC has provided a more complete analysis in an appendix to this paper.

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3/ OGC believes that

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therefore believes that

OGC

In OGC's view,



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Leonard Bickwit, Jr.
General Counsel

Attachments:

- (1) Appendix
- (2) Proposed Order
- (3) ALAB-685
- (4) Licensee's Objection and Comment
- (5) July 14, 1982 Appeal Board Order

Commissioners' comments should be provided directly to the Office of the Secretary by c.o.b. Tuesday, October 12, 1982.

Commission Staff Office comments, if any, should be submitted to the Commissioners NLT Monday, October 4, 1982, with an information copy to the Office of the Secretary. If the paper is of such a nature that it requires additional time for analytical review and comment, the Commissioners and the Secretariat should be apprised of when comments may be expected.

This paper is tentatively scheduled for consideration at an Open/Closed Meeting during the Week of October 11, 1982. Please refer to the appropriate Weekly Commission Schedule, when published, for a specific date and time.

DISTRIBUTION:

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Attachment 1

Attachment 2

Attachment 3

Release

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING APPEAL BOARD

Administrative Judges:

Gary J. Edles, Chairman
Dr. John H. Buck
Dr. Lawrence R. Quarles*
Christine N. Kohl*
Dr. Reginald L. Gotchy

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

MEMORANDUM AND ORDER

August 2, 1982

(ALAB-685)

In our order of July 14, 1982 (unpublished), we directed licensee and the NRC staff to answer certain questions arising out of the plant design and procedures phase of this proceeding. On July 26, 1982, licensee filed an objection to our question III.E (concerning environmental qualification), asserting that it goes beyond the scope of the restart hearing and is governed by Commission regulations of generic applicability to operating reactors.

* Because Part I of this opinion concerns our review of all phases of this proceeding, we include all the members of the several Appeal Boards assigned to review this case.

Licensee also argues that many of our questions exceed the proper scope of appellate review in this case. Licensee's Objection to and Comments on Appeal Board Order dated July 14, 1982 (July 26, 1982), at 1-2, 6-7, 13. 1/

In view of the large amount of data which licensee asserts would have to be submitted in answering question III.E (id. at 6), as well as the pendency of a final rule on environmental qualification (see 47 Fed. Reg. 28363 (June 30, 1982)), we suspend until further notice licensee's obligation to answer that question. Parties may respond to the licensee's objection by filing a reply no later than August 20, 1982, and may address licensee's objection at oral argument. 2/

With regard to licensee's comments on our other questions, we perceive a need to clarify the scope of our appellate review, as detailed in Part I, below. Licensee's comments in this connection include a request that we set

1/ Licensee nonetheless intends to answer all questions addressed to it (except III.E). Licensee's Objection at 13.

2/ Licensee also requested that, in the event we disagree with its objection, we certify the matter to the Commission. Because of our temporary suspension of licensee's obligation to respond to question III.E, we need not rule on licensee's request now.

aside time at oral argument for discussion of the proper scope of our appellate review in this proceeding. We believe the issue can be resolved without oral argument; the licensee's request is therefore denied. Part II contains our notice of oral argument for the plant design, procedures, and separation issues on appeal.

I. Scope of Appellate Review

As a general proposition, licensee asserts that our appellate jurisdiction in this proceeding is limited to a review of only those contested issues that the parties have raised before us in their exceptions and briefs. In its view, we should confine our inquiry accordingly and not ask questions about matters covered at the hearing but not raised in exceptions. Licensee's Objection, supra, at 6-8, 11-13. ^{3/} We believe that licensee's position is not only incorrect but fundamentally inconsistent with the proper exercise of our appellate review function.

As licensee correctly points out, this is a special proceeding not specifically addressed by Commission regulations. But in its August 9, 1979 Order and Notice of Hearing, the Commission expressly directed that the TMI-1

^{3/} One of the licensee's particular concerns is that our inquiry may delay resolution of the issues on appeal. Such is not our intention. To the contrary, we anticipate that the answers provided may serve to clarify and thereby expedite our consideration of the matters before us.

restart proceeding was to be "conducted in accordance with the applicable provisions of subpart G of the Commission's Rules of Practice set forth in 10 CFR Part 2." Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), CLI-79-8, 10 NRC 141, 147 (1979). ^{4/} In the same order, the Commission directed that, pursuant to 10 CFR 2.760(a), upon issuance of the Licensing Board's initial decision "the record be certified to the Commission itself for final decision." Id. at 147. In view of the length of the hearing, size of the evidentiary record, and number of complex issues involved, the Commission later reconsidered what it characterized as a "decision to deviate from its customary practice" and ordered that an Appeal Board be established to hear initial appeals. CLI-81-19, 14 NRC 304, 305 (1981).

Nothing in the latter order suggests that the Commission intended to relieve us of our well-established authority to review the entire record of a proceeding sua sponte, independently of the parties' positions, in accordance with subpart G. This authority to review the entire hearing record, including matters not appealed by the

^{4/} Subpart G contains rules of general applicability that govern procedure in all adjudications initiated by the issuance of, inter alia, a notice of hearing. 10 CFR 2.700.

parties, is expressly delegated to us in subpart G of 10 CFR Part 2. Pursuant to 10 CFR 2.785(a), we are authorized "to exercise the authority and perform the review functions which would otherwise have been exercised and performed by the Commission, including, but not limited to, those under [10 CFR 2.770] in . . . such . . . licensing proceedings under the regulations . . . as the Commission may specify." Section 2.770(a) states that, although it may limit the issues to be reviewed and consider only findings and conclusions to which exceptions have been filed, the Commission (and hence, the Appeal Board) "will ordinarily consider the whole record on review." In short, "there is no doubt that the absence of an appeal does not deprive us of the right to review an issue that was contested before a licensing board." Virginia Electric and Power Co. (North Anna Nuclear Power Station, Units 1 and 2), ALAB-491, 8 NRC 245, 247 (1978). See, e.g., Public Service Electric and Gas Co. (Salem Nuclear Generating Station, Unit 1), ALAB-650, 14 NRC 43, 49 n.6 (1981). There is no indication whatsoever in the Commission's order returning appellate jurisdiction to us that it intended to override the customary scope of our appellate review as established by the regulations and case precedents. Accordingly, the scope of our review of each phase of this proceeding will be comparable to that

generally undertaken in all cases before us. 5/

II. Notice of Oral Argument

On July 26, 1982, in response to licensee's motion of the same date, we granted a three-day extension (to August 12, 1982) for the filing of licensee's responses to our questions. Replies are due by August 25, 1982. Oral argument on issues of plant design, procedures, and separation will begin at 9:30 a.m. on Wednesday, September 1, 1982, in the NRC Public Hearing Room, Fifth Floor, East-West Towers Building, 4350 East-West Highway, Bethesda, Maryland. The Union of Concerned Scientists is allotted a total of 90 minutes for its presentation. Licensee and the staff are each allotted 60 minutes. Appellants may reserve

5/ Our authority to review the entire record must be distinguished from our power in operating license application proceedings to consider serious safety, environmental, and common defense and security matters not otherwise placed in issue by the parties. See 10 CFR 2.785(b)(2). That authority can be invoked only after advising the Commission and observing special procedures. Cf.: Houston Lighting and Power Co. (South Texas Project, Units 1 & 2), LBP-81-54, 14 NRC 918, 922-23 & n.4 (1981). We also distinguish those cases not involving operating license applications where we seek Commission approval before pursuing new safety questions not previously put in controversy or otherwise raised in an adjudicatory context. See CLI-82-12, 16 NRC ____ (July 16, 1982), denying our June 30, 1982 request for authorization to consider three new safety issues as part of our appellate review of plant design, procedures, and separation matters in this very proceeding.


up to 25 percent of their time for rebuttal. We anticipate that both morning and afternoon sessions will be required. Parties need not address all issues at oral argument and should concentrate on the more important matters raised on appeal.

We recognize that the staff has withdrawn its support of the Licensing Board's decision on the need for reactor water level instrumentation. All parties should be prepared to address licensee's arguments on appeal of this issue.

Each party is to notify the Secretary to this Board, in writing, by Monday, August 23, 1982 of the name of the person who will present argument on its behalf.

It is so ORDERED.

FOR THE APPEAL BOARD


C. Jean Shoemaker
Secretary to the
Appeal Board

Dr. Quarles was not available to participate in this decision.

Attachment 4

Licensee 7/26/82

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

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

LICENSEE'S OBJECTION TO AND
COMMENTS ON APPEAL BOARD ORDER
DATED JULY 14, 1982

On July 14, 1982, the Appeal Board concerned with appeals on plant design and procedure issues posed a number of questions to the Licensee and NRC Staff to be answered in the form of affidavits. Licensee objects to one of the questions (Question III.E) as involving matters outside the scope of the restart hearing and governed by Commission regulations of generic applicability to operating nuclear power plants. Licensee also comments on a number of other questions addressed to Licensee and the NRC Staff which appear to be outside the scope of issues on appeal or to involve compliance matters reserved to the NRC Staff and the Commission.

I. Objection to Question III.E

Question III.E asks Licensee to provide "the current status of compliance by the licensee with CLI-80-21 for qualification of safety equipment for a harsh environment[.] This information should include all of the parameters addressed by IE Bulletin 79-01B and its Supplements, such as temperature, pressure, chemical spray, radiation, aging and humidity. Also information concerning the environmental qualification of the various components of the emergency feedwater system should be provided with an estimate of the schedule for full qualification of this system."^{1/}

Licensee's objection is to the Appeal Board's request for a status report on the compliance of all safety equipment (including the emergency feedwater system) with all of the parameters for a harsh environment addressed in IE Bulletin 79-01B. This request inexplicably goes well beyond the evidentiary record considered by the Licensing Board and the scope of this special proceeding.

^{1/} Question III.E continues with an observation concerning the six conditions imposed by the Licensing Board in Paragraphs 1163 and 1168 of the PID, and inquires about the effect of a new Commission rule on Licensee's schedule for completion of equipment qualification. Environmental Qualification of Electric Equipment, 47 Fed. Reg. 28363 (June 30, 1982). The interim rule, 10 C.F.R. § 50.49, will have no effect upon Licensee's compliance with the six Licensing Board conditions--elements of which must be completed prior to restart, and elements of which must be completed prior to exceeding 5% power operation--since Licensee does not plan to seek relief from those commitments. As to Licensee's schedule for completion of equipment qualification pursuant to generic Commission requirements, Licensee will attempt to meet the schedule to be established by the Commission in the final version of 10 C.F.R. § 50.49.

The Licensing Board heard evidence from Licensee on the specific equipment qualification "lessons learned" from the TMI-2 accident and on the resultant corrective actions to be undertaken at TMI-1.^{2/} See Braulke, ff. Tr. 6820. The Staff presented the results of a review, conducted especially for this proceeding, of the qualification of equipment, required to safely shut down TMI-1 following a loss of feedwater and small-break loss-of-coolant accident, to perform its safety function when subject to the environmental conditions to which it would be exposed during the period in which that safety function must be performed. See Rosztoczy, ff. Tr. 21867.

Given the experience of the TMI-2 accident, however, the Licensing Board was uniquely interested in equipment qualification for high radiation levels.^{3/} PID, ¶ 1142. While the IE Bulletin 79-01B program includes qualification for design basis radiation values (based upon release from the core of 100% of the noble gases, 50% of the halogens, and 1% of the solids^{4/}), the Staff's review for the harsh environment was not complete at the time of the hearing. Consequently, the Licensing Board

2/ The Licensing Board's findings on submergence address what Licensee advanced to be the equipment qualification lesson learned. See PID, ¶¶ 1169-1174.

3/ Nevertheless, the uncontradicted evidence shows that the environment inside containment during the TMI-2 accident, with respect to radiation, was below the levels associated with a design basis loss-of-coolant accident. Braulke-1, ff. Tr. 6820, at 6-8 and Table 3.

4/ Braulke-1, ff. Tr. 6820, at 7, 8; Braulke-2, ff. Tr. 6820, at 2. See also, PID, ¶ 1161.

required a Staff report to the Commission on Licensee's compliance with CLI-80-21, 11 N.R.C. 707 (1980), as it relates to safety equipment functioning in a radiological environment in a TMI-2 type accident. PID, ¶ 1162.

Except for the parameters of submergence and radiation, the Licensing Board limited its conditions to the fruits of the Staff's review of small-break LOCA and loss of feedwater events. While we do not appreciate the Licensing Board's interest in providing the Commission with an early report of the Staff's review of TMI-1 equipment qualification for harsh radiation environments, at least this condition (as well as the others imposed) had, in the Licensing Board's view a nexus to the TMI-2 accident.^{5/} This basic nexus criterion was used by the Licensing Board throughout the proceeding in shaping the scope of the hearing,^{6/} and has been cited with approval by the Commission.^{7/} Licensee should not now be requested to expand the hearing record as to environments, parameters and equipment previously ruled outside the scope of the proceeding.

In making its rulings on the scope of the hearing the Licensing Board also took into account that the subject of equipment qualification and related compliance schedules were

^{5/} At the same time, the Licensing Board stated that "[w]e see no basis upon which to treat TMI-1 differently than other operating reactors on the issue of radiation environmental qualification of electrical equipment." PID, ¶ 1161.

^{6/} See PID, ¶ 24, LBP-81-32, 14 N.R.C. 381, 394 (1981).

^{7/} Unpublished and unnumbered Commission Order, March 14, 1980.

at the time of the hearing the subject of a Commission order (CLI-80-21) adopting Staff guidelines, and compliance schedules applicable to all operating reactors. These requirements were incorporated by an immediately effective amendment to the TMI-1 operating license. PID, ¶ 1148. Since the close of the hearing the Commission has suspended the June 30, 1982, compliance date contained in CLI-80-21, pending issuance in the near future of final regulations. 47 Fed. Reg. 28363 (June 30, 1982). It is important to recognize that

The Commission has received, and the staff has evaluated, each operating plant licensee's justification for continued operation. On the bases of these analyses, the Commission has determined that continued operation of these plants pending completion of the equipment qualification program, will not present undue risk to the public health and safety.

Id. The Appeal Board should not attempt to duplicate this Staff/Commission review as it applies to TMI-1. Further, under these circumstances where Commission rulemaking is both active and imminent, it is entirely appropriate, quite apart from questions as to the proper scope of the hearing, for the Licensing Board and Appeal Board to defer the equipment qualification issue to Commission rulemaking. See Potomac Electric Power Company (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 A.E.C. 79, 85 (1974); Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station), ALAB-655, 14 N.R.C. 799, 816 (1981).

Our objection to Question III.E is a legal and procedural one. However, we would also call to the Appeal Board's

attention the practical consequences of its question, which encompasses the entire scope of the IE Bulletin 79-01B program to date. Licensee has filed three large and two smaller volumes of data on equipment qualification and some 10 supplemental submittals. NRC Staff review of this material is not complete and there are a number of outstanding requests to Licensee for additional information. Licensee questions whether it is even feasible, much less appropriate, for the Appeal Board to inject itself into the review process.

If the Appeal Board disagrees with Licensee's objection, we respectfully request that, in view of the Commission's active role in and close supervision of this special proceeding, the following question be certified to the Commission for its determination:

Should the Appeal Board in the TMI-1 Restart proceeding inquire into the status of Licensee's compliance with CLI-80-21 for qualification of safety equipment for a harsh environment, to include information on all of the parameters addressed by IE Bulletin 79-01B and its Supplements?

II. Licensee Comments on Other Questions

The purpose and relationship to the restart proceeding of a number of the Appeal Board's questions is unclear to Licensee. Some questions suggest, however, that the Appeal Board means to address itself to matters of compliance and compliance schedules which, in Licensee's view, have been assigned by the Commission to the NRC Staff or, in certain cases,

to the Commission itself. In addition, the Appeal Board has addressed matters which, while the subject of the hearing below, have not been raised on appeal by any party. It is Licensee's position that in this special proceeding the Appeal Board only has jurisdiction to carry out the responsibility specifically delegated to it by the Commission. That responsibility is "to hear initial appeals in this proceeding." CLI-81-19, 14 N.R.C. 304, 305 (1981).

We begin our discussion, where the restart hearing itself begins, with the Commission Order and Notice of Hearing dated August 9, 1979. CLI-79-8, 10 NRC 141 (1979). That Order, confirming an earlier Order dated July 2, 1979 suspended TMI-1's operating authority, effective immediately and without a prior opportunity for hearing. The Order stipulated the conditions under which the Commission itself might authorize restart of TMI-1 after a public hearing. Restart authorization could occur in either of two ways. One of these (presently under consideration by the Commission) would be for the Commission, on the basis of a favorable recommendation from the Licensing Board assigned to conduct the hearing, to lift the immediate effectiveness of its July 2 and August 9 Orders. In that event TMI-1 would be allowed to restart subject to the outcome of appeals from the Licensing Board decision. If the Commission did not lift its suspension order, restart would be contingent on Commission decision following the resolution of any appeals. The Commission's later order assigning to the

Appeal Board responsibility for hearing appeals, but leaving the final restart decision in the Commission's hands, did not alter fundamentally the two paths by which restart could occur.

Should the Commission decide (as urged by a number of intervenors) not to authorize restart on the basis of the Licensing Board's decisions but to await completion of the Appeal Board's appellate review, the Appeal Board's decision(s) would of course become a critical path item. The length of that critical path will be directly affected by the scope and complexity of the Appeal Board's review.

A. Compliance Matters

Division of responsibility on compliance matters under the Commission's August 9 Order can best be addressed by dividing possible compliance matters into four different categories and discussing each individually.

1. The simplest category consists of short-term pre-restart requirements imposed by the Licensing Board where a determination of compliance requires no more than verification by the NRC Staff and certification to the Commission that the requirement has in fact been timely met. Unless the Commission itself decides otherwise (see category 4 below), such requirements imposed by the Licensing Board must, under the Commission's August 9, 1979

Order, be met prior to restart.^{8/} There is no need for the Appeal Board to police this kind of requirement.

2. The second category involves short-term pre-restart requirements when the pre-restart completion requirement date is clear but where some element of judgment has been left by the Licensing Board to the Staff as to the manner of implementing the requirement. The August 9 Order deals explicitly with this situation. The Order states that "[s]atisfactory completion of the required actions will be determined by the Director of Nuclear Reactor Regulation. The Licensing 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 such measures."^{9/} Thus the Commission clearly intended the Licensing Board to have broad discretion in determining the level and detail of compliance actions and, conversely, in determining the extent to which it would rely on Staff determinations.

^{8/} CLI-79-8, 10 NRC 141, 149 (1979).

^{9/} Id. at 148.

We do not believe that in adding the Appeal Board to hear appeals the Commission meant to withdraw any of its delegation of authority to the Licensing Board.

3. A third category of compliance items involves long-term requirements imposed by the Board which need not be completed prior to restart but as to which a finding of reasonable progress must be made. Here it is clear that the Licensing Board must itself make the reasonable progress determination as a part of its initial review.^{10/} No provision is contained in the Commission's August 9 Order for monitoring subsequent progress on long-term requirements. It is, however, a reasonable reading of the Order, consistent with its other provisions, that the Commission meant the NRC Staff to assume this function. Certainly this is the view of the Licensing Board which stated in its decision its belief that "the record amply demonstrates that the Staff will require or ascertain that the reasonable progress we have found continues to be made with respect to the long-term items."^{11/}

^{10/} Id. at 146.

^{11/} PID, § 1210.

4. The fourth category consists of NUREG-0737 requirements imposed by the Licensing Board as pre-restart conditions consistent with the compliance schedules which, at the time of the restart hearing, had been established for other operating reactors. By Order dated March 23, 1981, the Commission recognized that developments subsequent to the close of the hearing record might make it impossible to meet the then established schedules on all action items and expressly reserved to itself the flexibility to adjust action schedules on a case-by-case basis.^{12/} Any request for relief under the Commission's Order will be directed to the Commission itself and is outside the scope of the hearing and appeals.

B. Matters Not on Appeal

As indicated above, some of the Appeal Board questions appear to involve matters which were covered in the restart hearing but which are not the subject of any of the exceptions by parties to the proceeding. Licensee does not believe that the Commission intended the Appeal Board to extend its review beyond hearing appeals by the parties from the Licensing Board decision.

^{12/} CLI 81-3, 13 NRC 291, 295-6 (1981). See also PID, December 14, 1981, ¶ 1219.

In this special proceeding, unlike construction permit and operating license proceedings, the role of the Appeal Board is established solely by Commission order rather than by Commission regulations. In its original Order and Notice of Hearing, dated August 9, 1979, the Commission (1) directed that the record of the hearing before the Licensing Board be certified to the Commission itself for review, (2) provided that any party might take an appeal directly with the Commission, and (3) specified that Commission review of the initial decision would be conducted in accordance with Section 2.770 of the Commission's Rules of Practice.^{13/} Section 2.770 in turn provides in pertinent part that the "Commission will ordinarily consider the whole record on review, but may limit the issues to be reviewed and consider only findings and conclusions to which exceptions have been filed." Thus from the outset the Commission made it clear that, beyond ruling on appeals, the Commission retained the discretion to decide what other issues, if any, might require or warrant its review.

In its subsequent Order of August 20, 1981,^{14/} the Commission took cognizance of the unanticipated length of the restart hearing and the size of the hearing record and decided to establish an Atomic Safety and Licensing Appeal Board "to hear initial appeals in this proceeding." In so doing the Commission explained "its concern that the appeals be handled

^{13/} CLI 79-8, 10 NRC 141, 147 (1979).

^{14/} CLI 81-19, August 20, 1981.

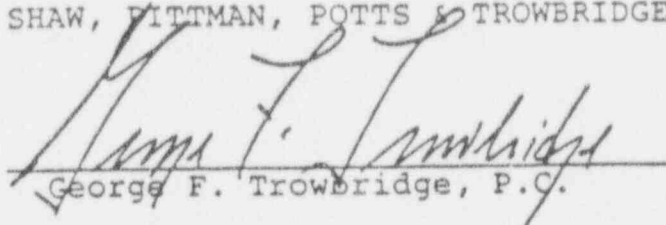
efficiently and agency resources be used effectively in this important proceeding." (Emphasis supplied) Nothing in the Order suggests that the Commission meant the Appeal Board to extend its review beyond the appeals into other aspects of the proceeding.

Accordingly Licensee submits that the Appeal Board should confine its review to the multiple exceptions filed by the parties to the Licensing Board's decision. This would be consistent in Licensee's view with the Commission's most recent Order dated July 16, 1982,^{15/} indicating the Commission's intent itself to review any important uncontested issues in the proceeding.

In the interest of time, Licensee intends to answer all of the Appeal Board questions addressed to Licensee (except Question III.E discussed above). Licensee requests, however, that the Appeal Board review carefully Licensee's comments and views on the scope of the Appeal Board's responsibilities and that time be set aside at the September 1, 1982, oral argument for discussion of any differences that may exist.

Respectfully submitted,

SHAW, PITTMAN, POTTS & TROWBRIDGE


George F. Trowbridge, P.C.

Dated: July 26, 1982

^{15/} CLI 82-12, July 16, 1982.

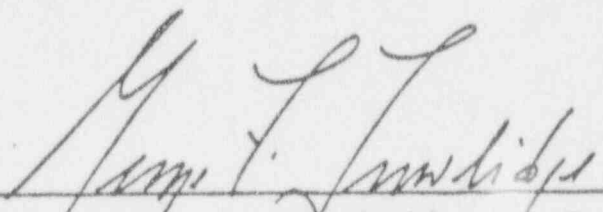
UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

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

CERTIFICATE OF SERVICE

I hereby certify that copies of "Licensee's Objection to and Comments on Appeal Board Order Dated July 14, 1982," dated July 26, 1982, were served upon those persons on the attached Service List by deposit in the United States mail, postage prepaid, or as indicated by asterisk, by personal service this 26th day of July, 1982.



 George F. Trowbridge, P.C.

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In the Matter of)
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Attachment 5

Some of our questions may involve simply clarification of the existing record; others request information not available at the time of the hearing. The staff shall provide an initial response to each question marked with an asterisk. Licensee shall provide an initial response to all questions not marked with an asterisk. Because the responses may include both evidentiary material and comments, we request that all answers be provided in affidavit form. All parties may reply to initial responses in the form of comments or affidavits. Our questions follow.

I. Update of Restart Requirements

Appendix A to this order is a list of restart items ^{1/} for which we would like information as to current status and, where applicable, present estimates of completion dates. In each case, a simple statement that the item has been completed or an estimate of the percentage of completion and an expected completion date will be sufficient.

^{1/} The "status list" of restart items was formulated from the requirements for TMI-1 restart as stated in the Commission's "Order and Notice of Hearing," CLI-79-8, 10 NRC 141 (August 9, 1979). The list itself was attached to the staff's TMI Restart Certification, SECY-82-250, dated June 16, 1982. For the parties' convenience, a copy of the status list is included as Appendix B. Our request for an update in Part I pertains to only those items listed in Appendix A, however.

II. Detailed Questions Concerning Some of the Items Listed in the TMI-Restart Certification (Status List, Appendix B)

A. In letters dated April 22, 1982 and May 13, 1982, the licensee notified this Board that certain steam and water tests exhibited valve instability that resulted in damage to the safety relief valve. Throughout the hearing, licensee maintained that the feed and bleed mode of forced core cooling relied upon these valves to provide a release pathway for excess coolant. In light of these tests results, how does the licensee plan to ensure that safety relief valves are capable of performing their function during feed and bleed when they may be called upon to open and close frequently with both steam and water flow mixtures?

B. The status list indicates that the installation of the Emergency Feedwater (EFW) automatic initiation is completed as control grade equipment (Item A.8.2.1.7a) but that further modifications up to safety grade will be partially completed by August 1982, and a footnote indicates that additional long term modifications are scheduled for the first refueling after restart. During the hearing, the staff testified that emergency feedwater modifications should be completed by late 1982 (Ross, Tr. 15,577).

1. Which, if any, of the modifications discussed in Paragraphs 1028-1034 of the partial initial decision (PID), LBP-81-59, 14 NRC 1211 (1981), will not be completed before restart?

2. What are the reasons for the delay beyond the completion date estimated by the staff during the hearing?

*C. In Paragraph 880 of the PID, the Licensing Board left resolution of the issue of separation of the new wide-range containment building radiation monitors to the staff. Has this issue been resolved? If so, state where the monitors are to be located.

*D. In CLI-79-8, 10 NRC 141 (1979), the Commission required, inter alia, that long-term action 2.1.9 of the table in Appendix B of NUREG-0578 be completed by the licensee as "promptly as practicable." The status list (Item 2.1.9b) indicates that the Guidelines have been submitted with the procedure implementation to be completed by the first refueling after October 1, 1982. What progress has been made by the staff in its review of licensee's submittals?

E. During the hearing, the licensee indicated that the high point vents were planned to be installed prior to restart (Tr. 16,580). NUREG-0737 requires the installation to be complete by July 1, 1982. The status list indicates that the completion date is "to be determined." What progress has been made

in complying with the requirements of NUREG-0737 for the installation of high point vents? Are the vents and their controls fully safety grade? If the high point vents will not be installed prior to restart, what is the justification for allowing operation of TMI-1 before the vents are installed?

III. Questions Based on Licensing Board Requirements and Findings

*A. In Paragraph 628 of the PID, the Licensing Board discussed the installation of shield walls in the motor control centers. What is the status of staff review of this plant modification? What was the source term used in determining the adequacy of the shield walls?

B. In Paragraph 771 of its PID, the Licensing Board directed the staff to verify that procedures to connect the pressurizer heaters to the diesels include provisions to assure that the heaters would not be reconnected to onsite power until stabilization of the event that caused their disconnection. The status list attached to SECY-82-250 indicates that this item is complete. What provisions have been included in the procedures to comply with the Licensing Board's direction?

C. PID Paragraph 943 listed measures that have been or will be taken at TMI-1 to improve protection against small break LOCAs. One of those measures was the improvement of the HPI system by adding cavitating venturis and cross-connection lines. It was also stated that the system being installed will automatically perform the balancing of HPI flow. How is this to be accomplished and what is the completion status of these HPI modifications?

D. In Paragraph 1064 of its PID, the Licensing Board directed the staff to certify to the Commission that the licensee has made reasonable progress in initiating a program for long-term solution of the steam generator bypass logic problem. What progress has been made by the licensee in solving this problem? What interim methods will be used to ensure that plant operators are aware of the problem and the actions to be taken in the event of isolation of both steam generators?

E. The Licensing Board has directed the staff (PID Paragraph 1162) to certify to the Commission a report on licensee's compliance with CLI-80-21, 11 NRC 707 (1980) as it relates to safety equipment functioning in a radiological environment in a TMI-2 type accident. On January 28, 1982, the staff submitted such a report to the Commission. This certified the status of licensee's compliance as of January 30, 1981. What is the current status of compliance by the licensee with CLI-80-21 for qualification of safety equipment for a harsh environment? This information should include all of the parameters addressed by IE Bulletin 79-01B and its Supplements, such as temperature, pressure, chemical spray, radiation, aging, and humidity. Also information concerning the environmental qualification of the various components of the emergency feed-water system should be provided with an estimate of the schedule for full qualification of this system.

As stated in Paragraphs 1163 and 1168 of the PID, the Licensing Board has placed six conditions for restart involving material aging and other environmental qualifications of some equipment. These conditions were apparently originally presented in the staff's testimony with some objection by the licensee. However, a final rule entitled "Environmental Qualification of Electric Equipment" 2/ suspends the deadline for environmental qualification of safety-related electric equipment at operating plants. What effect will this rule have on licensee's schedule for completion of equipment qualification?

*F. The Licensing Board imposed several conditions concerning the establishment of an accurate flood level. (PID, Paragraph 1174.) The staff was directed to review (1) licensee's flood level calculations and (2) operational limitations to ensure that the actual level does not exceed the maximum flood level. In particular, the staff was directed to review the ability to enter the recirculation mode under all postulated conditions. What is the status of this review? What are the results?

If the licensee's maximum flood level is not conservative, the Licensing Board directed that a new flood level be determined and all equipment important to safety relocated above the new flood level by June 30, 1982. What progress has been made in complying with these conditions?

2 / 47 Fed. Reg. 28363 (June 30, 1982).

*G. In Paragraph 1180 of its PID, the Licensing Board discusses the confusion concerning the environmental qualification of equipment needed to achieve cold shutdown. The Licensing Board also directed that the Commission be informed if licensee does not plan to qualify the equipment in accordance with Supplement 3 to IE Bulletin 79-01B. On January 28, 1982, the staff informed the Commission that it was not aware of plans by the licensee to qualify equipment needed to achieve cold shutdown. What is the current staff position with regard to compliance with Supplement 3 to IE Bulletin 79-01B for an environmentally qualified pathway to achieve cold shutdown? If this requirement is deleted and the subject incorporated into Unresolved Safety Issue A-45 as proposed in SECY-82-207A, "Environmental Qualification of Safety-Related Electric Equipment for Nuclear Power Plants" (June 9, 1982), how is adequate protection of the public health and safety provided at TMI-1 if the plant is operated while this issue is being resolved?

*H. In PID Paragraph 640, the Licensing Board stated that inadequate core cooling procedures were under review by the staff and that revised submittals had been required from the licensee. It was indicated that the staff had not completed its review at that time but was confident that procedures

acceptable for TMI-1 restart without reliance on water level measurement could be developed. What are the results of the staff review of the licensee's inadequate core cooling procedures?

I. In a footnote to Paragraph 919 of the PID, the Licensing Board indicated that the licensee planned to perform an in-plant communications study in 1981. What is the status of that study? If completed, please briefly summarize results and present status of implementation.

*J. In PID Paragraph 1000, the Licensing Board specified that TMI-1 be included by the staff in generic reviews of systems interactions. What progress has been made in complying with this requirement?

K. The Licensing Board indicated in PID Paragraph 1264 that a tunnel-like barrier for personnel passage between the Unit 1 control tower and the Unit 1 auxiliary building will be completed before restart. What progress has been made in completing this modification?

*L. The Licensing Board (PID, Paragraph 935) discussed the absence of analyses that would indicate the time allowed for operator action to initiate either HPI or EFW flow in the event of a small-break LOCA at the reactor coolant pump (RCP) suction. The Licensing Board specified as a condition of restart that this missing analysis be performed and submitted to the staff

for review. The staff was required to bring the matter to the attention of the Commission if the results were unacceptable.

On June 4, 1981, the licensee submitted to the TMI Licensing Board a letter from B&W which indicated that "a pump suction break will result in the loss of lower quality fluid which will deplete system inventory at a higher rate. Thus at the time of AFW actuation the RCS inventory will be less for the pump suction line break than for the pump discharge line break." However, no statement as to the decrease in the maximum 20 minute time for the operator to react was given. Staff witness Jensen, on the other hand, stated in his affidavit ^{3/} that the reduction in available time for operator decision would come about "because the reactor coolant piping is lower at the reactor coolant pump suction than at the pump discharge and more reactor system water might be lost out the break." We do not understand the reasoning behind this statement or what significance it has to the dynamic situation present during a LOCA. Mr. Jensen gives no indication of the

^{3/} This affidavit (dated November 24, 1981) was initially presented during the Rancho Seco (Sacramento Municipal Utility District) proceeding and transmitted to the TMI Licensing Board by the licensee on December 30, 1981. The statement concerning the lower elevation of the suction piping relative to the discharge piping was repeated in an affidavit by Mr. Jensen on January 22, 1982.

difference in time involved for operator decisions between a break on the discharge side of the reactor coolant pump versus the suction side. We recognize that the Licensing Board vacated its request for further analysis on this subject ⁴/ but we request the staff to explain fully the conclusions Mr. Jensen reaches on the last page of his January 22, 1982 affidavit that "a minimum of 20 minutes would be available to the operator to actuate HPI and prevent core uncovering for breaks in the pump suction as well as at the pump discharge, even if all feed-water is temporary [sic] lost."

⁴/ Unpublished memorandum and order of January 26, 1982, Modifying Partial Initial Decision of December 14, 1981 at p. 7.

IV. Clarification of Testimony Presented at the Hearing

*A. Staff witness Jensen testified at the hearing (Tr. 5501) that, if the EFW system was available, one HPI pump would be adequate to cool the core for all small-break LOCAs. What analysis was performed to show that natural circulation would occur with only one HPI and one EFW pump? Would the natural circulation be liquid or boiler-condenser mode?

B. In the event that the pressurizer heaters fail to operate while the plant is operating at full power,

(1) how much time would it take to achieve RHR system initiation conditions and then cold shutdown?

(2) how would pressure control be performed during cooldown to conditions allowing RHR system operation?

(3) how soon after shutdown from full power conditions does the RHR system have sufficient decay heat removal capability?

* (4) do any Commission offices have any data on pressurizer heater failures? If so, what has been the frequency of such failures?

*C. Why did the steam safety valve associated with the damaged steam generator open twice during the steam generator tube rupture event at the Ginna plant on January 25, 1982? What

effect does this have on the position that the pressurizer safety relief valves can be used for feed and bleed cooling without opening of the steam generator steam safety valves during a steam generator tube rupture?

D. What is the extent of the environmental qualification of the PORV block valve and its controls?

*E. What is the basis for requiring that the high-point vents be safety grade and have sufficient redundancy to minimize the probability of inadvertent actuation but not applying the same requirements to the PORV?

F. Describe the method for cooling the plant to RHR initiation conditions by feed and bleed cooling using only safety-grade equipment.

*G. Have any tests been conducted at the LOFT facility that provide information on the ability of feed and bleed to adequately cool the core? If so please state conclusions.

*H. In this record we have found no official staff definition of the term "inadequate core cooling." However, one staff witness stated "when the two-phase froth level begins to drop below the top of the core, the exposed fuel begins to heat up and will ultimately reach temperatures at which fuel damage

occurs. This is inadequate core cooling." Testimony of Lawrence E. Phillips Regarding Water Level Instrumentation, fol. Tr. 10,807 at 3.

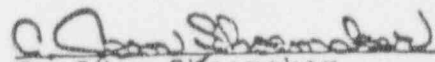
If the Phillips definition properly reflects the staff's position on inadequate core cooling, please state the bases on which this definition is formulated. If it does not represent the staff's position, please give the accepted definition with an explanation of the bases for adopting a different definition.

I. During RHR system operation, how is overpressure protection provided?

Initial responses shall be in our hands and the hands of those parties participating in this phase of the proceeding by close of business on Monday, August 9, 1982. All replies shall be delivered in the same manner by close of business on Wednesday, August 25, 1982.

It is so ORDERED.

FOR THE APPEAL BOARD


C. Jean Shoemaker
Secretary to the
Appeal Board

APPENDIX A

Answers to be Supplied on the Following Items
of the TMI-1 Restart Certification Status List
(Appendix B)

I. August 9, 1979 Order Requirements (CLI-79-8, 10 NRC 141)

A. Short Term

Order Item 1 EFW Reliability

1a-3 Auto EFW Load to Diesels

1a-4 EFW Technical Specification

1a Additional Items

1 CWST Level Alarm

6 EFW Initiation Independent of AC

*7 EFW Operability in Steam Environment

8 Cross-Tie Break

Order Item 2 IE Bulletins

*79-05A-2 Plant Transient Review

79-05B-3 PORV Set Point

79-05B-5 Anticipatory Reactor Trip (Safety Grade)

Order Item 4 Separation of TMI-1 & 2

(a) Liquid Radwaste

(b) Gaseous Radwaste

(c) Solid Radwaste

(d) Sampling System

Order Item 8 Lessons Learned - Short Term

- 2.1.1 Emergency Power Supply
 - Pressurizer Heaters
- 2.1.3a Valve Position Indication
- 2.1.3b Inadequate Core Cooling
 - Existing Instrumentation & Saturation Meter
- 2.1.4 Containment Isolation
- 2.1.5c Install Recombiner
- 2.1.8c Iodine Instrumentation

B. Long Term (LT) (NUREG-0737 numbers)

LT-1 (II.K.2.9) ICS FMEA Modifications

*LT-2 Small Break Analyses

LT-3 Lessons Learned Category B from NUREG-0578

- 2.1.3b (II.F.2.3) ICC Instrumentation
 - Backup Incore Thermocouples (safety grade)
- 2.1.5a (II.E.4.1) Dedicated H₂ Penetrations
 - Install
- 2.1.6b (II.B.2) Plant Shielding
 - Plant Modifications
- 2.1.7a (II.E.1.2) EFW Auto Initiation
 - Safety Grade
- 2.1.7b (II.E.1.2) EFW Flow Indication
 - Safety Grade

2.1.8a (II.B.3) Post-Accident Sampling

- Modifications

2.1.8b (II.F.1) Radiation Monitors

- Effluent Monitors

- Iodine/Particulate Monitors

Additional Items

#1 (II.F.1) Containment Pressure

#2 (II.F.1) Containment Water Level

#3 (II.F.1) Containment Hydrogen

LT-4 Emergency Preparedness

Emergency Communications

- Install control room emergency telephone

- Connect emergency telephone equipment to
vital power

Emergency Facilities

- Install high radiation monitoring alarm
system

II. ASLB Imposed Requirements (December 14, 1981 PID)

B. Plant Design, Modification and Procedures Findings

II.E. Pressurizer Heaters

- Demonstrate RCS pressure control w/HPI

II.K Computer

- Incore thermocouple backup display (not safety grade)

II.M Safety System Status Panel

- System Status Administrative Controls

II.N Control Room Design

- Correct NUREG-0752 deficiencies

II.P Systems Classification

- Upgrade Pressurizer Level Instrument Power Supplies

II.Q EFW Reliability (see detailed question on long-term order Item B.2.1.7a)

- Safety grade automatic EFW control
- Install following long-term EFW modifications
 - (a) EFW cavitating venturis
 - (b) CWST level alarm (safety grade)
 - (c) OTSG high level alarm
 - (d) Safety grade isolation of MFW on OTSG overfill
 - (e) Upgrade main steam rupture detection system to safety grade

C. Separation of TMI-1 and TMI-2 Findings

III.B

- *- Ventilation Separation Program (PID # 1267)

THE-1 RESTART CERTIFICATION STATUS
I. AUGUST 9, 1979 ORDER REQUIREMENTS

APPENDIX B

<u>Item</u>	<u>Description</u>	<u>Item Type</u>	<u>Licensee Status</u>	<u>Inspection/Review Status</u>	<u>Estimated Completion/Remarks</u>
A. SHORT TERM					
<u>Order Item 1</u>	EFW Reliability				
1a-1	Auto Initiation of EFW	Mod	Complete	Complete	Except power escalation testing
1a-2	EFW Valves Fail Open	Mod	Complete	Complete	
1a-3	Auto EFW Load on Diesels	Mod	Complete	Complete except testing	6/82
1a-4	EFW Tech Specs	Tech Specs	Procedure Chgs. Req.	Partially Complete	9/82 ³
1a-5	EFW Flow Indication (control grade)	Mod	N/A	N/A	Licensee installing safety grade inst. IAW II.E.1.2
1a-6	EFW Procedures	Procedures	Complete	Complete	
1a-7	EFW Valve Alignment	Procedures	Complete	Complete	
1a-8	EFW Auto Start Annunciation	Mod	Complete	Complete	Except power escalation testing
1a Additional items ¹	Reliability Analysis				
1	CHST Level Alarm	Mod	IWL Items - Est. 7/82 ²	Partially Complete	8/82
2	Endurance Test	Test	Complete	Complete	
3	Transfer of EFW Supply	Procedures	Complete	Complete	
4	EFW to Intact OTSG	Mod	Complete	Complete	
5	Auto EFW Protection on loss of Water Source	Analysis	Complete	Complete	

¹ 1a Additional items were not Order items; all but 1a-additional item 7 to be completed prior to restart.

² IWL items-Incomplete work list items (i.e., modification essentially complete).

³ License amendment to be issued for changes to Technical Specifications prior to restart.

<u>Item</u>	<u>Description</u>	<u>Item Type</u>	<u>Licensee Status</u>	<u>Inspection/Review Status</u>	<u>Estimated Completion/Remarks</u>
6	EFW Initiation Independent of AC	Mod	In construction- Est. 7/82	Partially complete	Est. 8/82 Except Hot Functional Testing (HFT)
7	EFW Operability in Steam Environment	Mod	--	--	Not required for restart per NUREG-0680 Supp. 7/82
8	Cross-Tie Break	Analysis	Complete	Non-destructive exam of welds scheduled-7/82	7/82
1b	EFW Independent of ICS	Mod	Complete	Complete	
1c	Superseded by Order Item 2 79-05B-5	N/A	N/A	N/A	
1d	Small Break Analysis	Analysis	Complete	Complete	
1e	Operator Retraining	Training	Complete	Complete	
<u>Order Items</u>	<u>IE Bulletins</u>				
79-05A-1	Accident Understanding	Training	Complete	Complete	
79-05A-2	Plant Transient Review	Inspection	Complete	Scheduled 7/82	7/82
79-05A-3	Transient Procedures	Procedures	Complete	Complete	
79-05A-4	Operating Procedures	Procedures	Complete	Complete	
79-05A-5	Valve Position Review	Procedures	--	--	Valve lineup verification at time of restart
79-05A-6	Containment Isolation	Mod	See Order Item 8 2.1.4	See Order Item 8 2.1.4	
79-05A-7	EFW Valve Procedures	Procedures	Complete	Complete	
79-05A-8	EFW Operability	Procedures	Complete	Complete	
79-05A-9	Transfer of Containment Liquids	Procedures	See Order Item 8 2.1.6a	See Order Item 8 2.1.6a	
79-05A-10	Safety System Operability	Procedures	Complete	Complete	
79-05A-11	Personnel Actions-TMI-2	Training	Complete	Complete	
79-05A-12	Prompt Reporting	Procedures	Complete	Complete	

<u>Item</u>	<u>Description</u>	<u>Item Type</u>	<u>Licensee Status</u>	<u>Inspection/Review Status</u>	<u>Estimated Completion/Remarks</u>
79-06B-1	Natural Circulation	Procedures	Complete	Complete	
79-05B-2	Vessel Integrity	Procedures	Complete	Complete	
79-05B-3	PORV Setpoint	Mod	Complete	Partially Complete	9/82
79-05B-4	Manual Reactor Trip	Procedure	Complete	Complete	
79-05B-5	Anticipatory Reactor Trip (Safety Grade)	Mod	Complete	Partially Complete	6/82 except power escalation testing
79-05B-6	Prompt Reporting	Procedures	Complete	Complete	
79-05B-7	Tech Spec Changes	Tech Specs	Procedure changes required	Pending	9/82 ¹
79-05C-1	RCP Trips	Procedures	Complete	Complete	
79-05C-2	Small LOCA Analysis	Analysis	Complete	Complete	
79-05C-3	Operator Action-RCP Trips	Procedure	Complete	Complete	
79-05C-4	Reactor Trip Training	Training	Complete	Complete	
79-05C-5	Inadequate Core Cooling	Analysis	Complete	Complete	
<u>Order Item 3</u>	Emergency Preparedness (Short Term)	--	Complete	Complete	
<u>Order Item 4</u>	Separation of TMI-1 & 2				
	a) Liquid Radwaste				
	-Interconnection Isolation	Mod	Complete	Scheduled 8/82	8/82
	b) Gaseous Radwaste				
	-Leak Test of Waste System	Test	Complete	Scheduled 8/82	8/82
	-Fuel Handling Building Isolation	Mod	IWL Items-Est. 7/82	Pending	8/82
	-Fuel Handling Building Ventilation Sys. Mod.	Mod	IWL Items-Est. 7/82	Pending	8/82
	c) Solid Radwaste				
	-Hittman Sys. Installation	Mod	Complete	Complete	8/82
	-TMI-1/2 Trash Segregation	Procedures	Complete	Scheduled 8/82	8/82
	d) Sampling System				
	-Independent TMI-2 Sampling System	Mod	Complete	Scheduled 8/82	8/82

<u>Item</u>	<u>Description</u>	<u>Item Type</u>	<u>Licensee Status</u>	<u>Inspection/Review Status</u>	<u>Estimated Completion/Remarks</u>
<u>Order Item 5</u>	Waste Management				
	a) Liquid & Gaseous Sys.	Analysis	Complete	Complete	
	b) Solid Radwaste - low activity stor. expansion	Mod	IWL items- Est. 7/02	Pending	8/02
<u>Order Item 6</u>	Managerial Capability		(All actions from this Order Item verified completed by NRR (NUREG-0600 and Supp. 1 & 2) with following exceptions)		
	a) Management & Technical - Training manual	Training	Partially complete	Partially complete	7/02
	b) Safety Review - Final Version of Procedure on operating experience info.	Procedure	Procedure revision required	Pending	8/02
	c) Health Physics - Qualification Records	Training	Complete	Partially complete	8/02
	d) NUREG-0694 Items - II.B.4 Training Records for Training Mitigating Core Damage		Partially complete	Partially complete	9/02
<u>Order Item 8</u>	Lessons Learned- <u>Short Term</u> (Long Term Lessons Learned Under LT-3)				
2.1.1	Emergency Power Supply - Pressurizer Heaters	Mod	IWL Items-Est. 6/02	Partially complete	7/02
	- PORV, Block Valve, Level	Analysis	Complete	Complete	
2.1.2	Relief Valve Testing (Program Description only)	Testing	Complete	Complete	
2.1.3a	Valve Position Indication	Mod	IWL Items-Est. 7/02	Partially complete	8/02
2.1.3b	Inadequate Core Cooling - Existing Instrumentation & Saturation Meter	Mod	Complete	Partially complete	7/02
2.1.4	Containment Isolation	Mod	In construction Est. 8/02	Partially complete	9/02
2.1.5a	Dedicated Hydrogen Penetra- tions	Design	Complete	Complete	
2.1.5c	Install Recombiner	Mod	IWL Items-Est. 7/02	Partially complete	(Not required by 8/9/79 Order)

<u>Item</u>	<u>Description</u>	<u>Item Type</u>	<u>Licensee Status</u>	<u>Inspection/Review Status</u>	<u>Estimated Completion/Remarks</u>
2.1.6a	Systems Integrity	Testing	Complete	Complete	Complete for restart, additional tests post restart
2.1.6b	Plant Shielding	Analysis	Complete	Complete	
2.1.7a	EIW Auto Initiation (Control Grade)	Mod	Complete	Complete	
2.1.7b	EFW Flow Indication (Control Grade)	Mod	N/A	N/A	Licensee installing safety grade inst. IAW II.E.1.2; see LT 3 Item 2.1.7b
2.1.8a	Post-Accident Sampling	Design	Complete	Complete	
2.1.8b	Radiation Monitors (Control Grade) a) Noble Gas Monitors b) Radioiodine Monitors c) Particulate/Effluent Monitors	Mod	N/A	N/A	Licensee installing final monitors IAW II.F.1; see LT 3 Item 2.1.8b
2.1.8c	Iodine Instrumentation	Mod	Complete	Pending	9/82
2.2.1a	Shift Supervisor	Procedures	Complete	Complete	
2.2.1b	Shift Technical Advisor	Procedures	Complete	Complete	
2.2.2a	Control Room Access	Procedures	Complete	Complete	
2.2.2b	Onsite Tech Support Center	Mod	Complete	Complete	
2.2.2c	Onsite Operations Support Ctr.	Mod	Complete	Complete	

Item	Description	NUREG-0737 OR Implemen- tation Date	Licensee Status	Inspection/Review Status	Estimated Completion/ Remarks
LONG TERM (LT) (NUREG-0737 CORRESPONDING ITEM NUMBERS ALSO LISTED) ¹					
-1 1.K.2.9)	ICS FMEA Mods	TBD	Testing-6/02	Partially complete	7/02
-2	Small Break Analysis	1/1/02	Generic program submitted	NRR review	
1-3 1.2 1.D.1.2)	Lessons Learned Category B From NUREG-0570 Relief & Safety Valve Testing -Complete testing	4/1/02	Complete	Generic report under NRR review	Generic EPRI Program
	-Plant specific rept.	7/1/02	Est. 7/02	Pending NRR review	
1.3b 1.F.2.3)	ICC Instrumentation -Backup Incore T/C (safety grade)	1/1/02	In Construction- 8/02	Pending	9/02 ²
	-Water level inst.	Under development	TBD	TBD	TBD
2.1.5a (11.E.4.1)	Ded. H ₂ Penetrations -Install	7/1/01	IWL Items-7/02	Partially complete	8/02
2.1.6b (11.B.2)	Plant Shielding -Plant Mods	1/1/02	Procurement problems-TBD	--	1st refuel after restart ²
2.1.7a (11.E.1.2)	EFW Auto Initiation -Safety Grade	7/1/01	IWL Items-6/02	Partially complete	8/02 ³
2.1.7b (11.E.1.2)	EFW Flow Indication -Safety Grade	7/1/01	Complete	Pending	8/02
2.1.8a (11.B.3)	Post-Accident Sampling -Modifications	1/1/02	In Construction- 8/02	Partially complete	9/02 ²

¹ Board 12/14/01 PID found licensee had made reasonable progress on all LT items except 2.1.9

² Licensee's commitment for completion is first refueling after restart
(commitment not yet accepted by staff)

³ Additional LT mods first refuel after restart.

1. ASLR IMPOSED REQUIREMENTS

ID Item	Description	Licensee Status	Inspection/Review Status	Estimated Completion/Remarks
<u>A. MANAGEMENT FINDINGS - August 27, 1981 PID</u>				
11.D	Accuracy of Maintenance Records	Complete	Partially Complete	8/82
11.M	Board Conditions	Complete	Pending	
	1. Category T Exam for remaining individuals	Complete	Pending	9/82
	2. Additional 3 days of TMI-2 accident training	Complete	Pending	
	3. Simulator exam for operators not previously licensed	Complete	Pending	
	4. CRT part-task simulator to display temp/press.	Complete	N/A	10/82-First of licensee annual repts. on progress to have simulator installed by 1985
	5. Bids and specs for TMI-1 simulator	10/82 Status Report	Pending	
	6. Contract for basic principles trainer to be installed in 1982	11/82 Installed Contract complete	Pending	9/82
	7. Emergency Director/Support Director training	8/82	--	Post-restart, license condition
	8. ATOG training prior to ATOG implementation	--	Scheduled at restart	At time of restart, license condition
	9(a)-9(g). License conditions for shift manning	Complete	Pending	At time of restart, license condition
	10(a)-10(c). Management system to perform specific functions related to operating experience information	8/82		
<u>B. PLANT DESIGN, MODIFICATION AND PROCEDURES FINDINGS - DECEMBER 14, 1981 PID</u>				
11.A	Natural and Forced Circulation - Motor control center shield walls (para. 628)	IWL Items-6/82	Pending	7/82
11.B	Detection of ICC - Water level meter in long term (para. 673)	TBD	TBD	No certification required
11.C	Staff review revised ATOG program (para. 721)	Generic Program Submitted -B-	Under HRR Review	Certify Reasonable Progress-Est. 9/82

<u>PID Item</u>	<u>Description</u>	<u>Licensee Status</u>	<u>Inspection/Review Status</u>	<u>Estimated Completion/Remarks</u>
11.E	Pressurizer Heaters -Demonstrate RCS pressure control w/HPI (para. 755)	11/82	Pending	HFT ¹
11.F	Pressurizer (PZR) Heaters Power -Procedures for connecting PZR heaters to diesel (para. 771) -Demonstrate PZR heater connection to emergency bus (para. 772)	Complete See Order Item 8 2.1.1	Complete See Order Item 8 2.1.1	
11.K	Computer -Operator reliance on computer (para. 865) -Incore thermocouple backup display (not safety grade)(para. 867)	Complete 7/82	Pending Pending	11/82 License Condition before 5% power- Est. 9/82
11.L	In-Plant Instrument Ranges -Effluent monitors (para. 874-875)	See Order Item LT-3 2.1.8b long term	See Order Item LT-3 2.1.8b long term	
11.M	Safety System Status Panel -Safety system valve lineup review (para. 899) -System status admin. controls (para. 904)	See Order Item 2 79-05A-2 Partially complete	See Order Item 2 79-05A-2 Pending	At time of restart HFT ¹
11.N	Control Room Design -Correct NUREG-0752 deficiencies (para. 914-915)	Partially complete	Partially complete	Short-term 9/82, LT deficiencies 1st refuel after restart (license condition)
11.O	Additional LOCA Analysis -Install HPI Cavitating Venturis (para. 943)	Complete	Partially complete	8/82

¹HFT=Hot Functional Testing

<u>ID Item</u>	<u>Description</u>	<u>Licensee Status</u>	<u>Inspection/Review Status</u>	<u>Estimated Completion/Remarks</u>
11.P	Systems Classification -Upgrade Pressurizer Level Inst. Power Supplies (para. 1001)	IWL items-7/02 Testing	Pending	8/02
11.Q	EFW Reliability -Safety grade automatic EFW control (para. 1036)	See remarks	See remarks	1st refuel after restart (license condition)
	-Install following long term EFW mods (para. 1037)			
	a) EFW cavitating venturis	IWL items-6/02	Complete except IWL & testing	8/02 except HFT
	b) CHST level alarm (safety grade)	See remarks	See remarks	1st refuel after restart (license condition)
	c) OTSG high level alarm	See remarks	See remarks	1st refuel after restart (license condition)
	d) Safety grade isolation of MFW on OTSG overflow	See remarks	See remarks	1st refuel after restart
	e) Upgrade main steam rupture detection system to safety grade	See remarks	See remarks	1st refuel after restart (license condition)
	-Propose means to prevent EFW isolation due to rupture detection sys. failure (para. 1064)	Est. 6/02	NRR Review Pending	Certify reasonable progress-Est. 9/02
11.S	Board Questions NUREG-0694 Items (para. 1132)			
	-1.B.1.2-Organization & management improvement	Complete	Complete	
	-1.C.7-HSSS vendor review of procedures	Partially complete	Pending	11/02
	-1.D.1-Control room design review	See remarks	See remarks	See Board Item 11.N. NUREG-0752
	-1.G.1-Low power testing	Partially complete	NRR Review Pending	During low power testing
	-1.C.8-Monitoring of Selected Emergency Procedures	Complete	Complete	

<u>Item</u>	<u>Description</u>	<u>Licensee Status</u>	<u>Inspection/Review Status</u>	<u>Estimated Completion/Remarks</u>
11.1	Equipment Qualification			
	-Status of compliance w/CI-80-21 for radiation levels. Report to Commission (para. 1162)	Complete	Complete	
	-Six Board conditions concerning material aging & other EQ items (para. 1163 & 1160)	Submitted response	Under NRR Review	11/82; License condition for 3 items prior to exceeding 5% power
	-Staff review flood level calculations (para. 1174)	Est. 6/82	NRR Review Pending	9/82
	-Position on Cold Shutdown (para. 1160)	Complete	Complete	

<u>Item</u>	<u>Description</u>	<u>Licensee Status</u>	<u>Inspection/Review Status</u>	<u>Estimated Completion/Remarks</u>
<u>C. SEPARATION OF TMI-1 AND TMI-2 FINDINGS - December 14, 1981</u>				
III.D	-ESF Filter System Installation	See remarks	See remarks	1st refuel after restart (license condition)
	-Suspension of Unit 1 Fuel Handling Activities During Unit 2 Fuel Movements (para. 1256)	N/A for restart	N/A for restart	Prior to Unit 2 fuel movements (license condition)
	-Ventilation Separation Program (para. 1267)	Est. 8/82	NRR Review pending	10/82
	-Unit 1 solid waste not affected by Unit 2 (para. 1303)			License condition
	-Groundwater monitoring program (para. 1326)	Ongoing	Ongoing	Continuous, no certification required
<u>D. EMERGENCY PLANNING FINDINGS - December 14, 1981</u>				
IV.L Board Condi- tions	<u>CONCLUSIONS</u> <u>Paragraph 2010</u>			
	a. Emergency Support Director staffing in EOF prior to full emergency support organization arrival (para. 2010(a))	Procedures-6/82	Pending	8/82
	b. Staff review county EP brochures and PEMA EP pamphlet and advise Commission of impact of changes	Complete	Review complete Advise Commission 9/82	9/82
	c. PEMA pamphlet and county brochure distribution to populace in EPZ	See remarks	Pending	Licensee committed to distribute one month prior to restart
	d. Public information brochure distribution to transient locations	See remarks	Pending	Licensee committed to distribute one month prior to restart
	e. Licensee to conduct EP briefings to major employers and operators of transient locations. Briefings to begin prior to restart.	Scheduled 8/82	Pending	9/82

Description	Licensee Status	Inspection/Review Status	Estimated Completion/Remarks
f. Staff certify satisfactory completion of siren system testing	Complete	FEMA review 6/02 Staff review 9/02	9/02
g. Communications drill to be held prior to restart	Complete	Complete	
h. Certify to Commission that EPZ school plans are complete	N/A	FEMA review 6/02 Advise Commission 9/02	9/02
Board Suggestions	Paragraph 2011		
a. Five York county school districts should prepare plans for mass care emergency responsibilities	N/A	Est. 9/02	Certification not required
b. Staff should notify Commission within 1 yr. after restart whether distribution of KI accomplished	See remarks	See remarks	Certification not required. To be completed 1 yr. after restart
c. Municipalities should prepare written plans to assist with evacuation	N/A	Est. 9/02	Certification not required
d. Commission should direct staff to certify to report on status of various state, county & municipal plan deficiencies (1 yr. after restart)	See remarks	See remarks	Certification not required. To be completed 1 yr. after restart