November 1, 1982

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE COMMISSION

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

LICENSEE'S COMMENTS ON DOCUMENTS RELATING TO THE REACTOR VESSEL WATER LEVEL INDICATOR ISSUE

By memorandum to the parties to the TMI-1 Restart proceeding, dated October 15, 1982, the Secretary of the Commission transmitted various briefing documents produced by the Staff, and the transcript of a Commission meeting of October 14, on the reactor vessel water-level indicator program. The Secretary's memorandum advises that the Commission may take this material into consideration in reaching its decision whether or not to permit the restart of TMI-1. The memorandum states that all parties are invited to comment on the transmitted material if they so desire. Licensee herein submits its comments.[1/]

I. The Licensing Board's Decision

The relevant section of the Licensing Board's Partial Initial Decision of December 14, 1981, is II.B., entitled,

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1/ On two previous occasions the Commission transmitted water level indicator documents to the parties for possible comment (see Secretary's memoranda of December 23, 1981, and January 15, 1982). Licensee filed comments dated January 13 and February 1, 1982.

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"Detection of Inadequate Core Cooling (ICC)." LBP-81-59, 14 N.R.C. 1211, 1233-54 (1981) (¶¶ 630-705). There the Licensing Board explains that the issues arose in two ways: as a mandatory hearing issue under NUREG-0578, section 2.1.3.b (Instrumentation for Detection of Inadquate Core Cooling in PWRs and BWRs), and as a result of contentions by three intervenors.

Since the thrust of the intervenor contentions was that installation of reactor vessel level (or inventory) instrumentation should be required prior to the restart of TMI-1, a major objective of the testimony presented by Licensee and by the NRC Staff was to convince the Licensing Board that implementation of the short-term recommendations of section 2.1.3.b of NUREG-0578 was sufficient for restart, without reactor vessel level instrumentation. Licensee and the Staff succeeded on this score. The Licensing Board found that the short-term measures will be adequate to protect the health and safety of the public in the short term. 14 N.R.C. at 1237 (¶ 642). This finding by the Board is fully supported by the record, and none of the documents transmitted for comment contain information which could call into question the appropriateness of a decision in favor of immediate effectiveness as to this part of the decision.

In fact, none of the intervenors pursued their initial challenges to the adequacy of the short-term requirements

at the hearings before the Licensing Board. Intervenors UCS and Sholly withdrew their contentions before trial, and intervenor ANGRY did not participate in the litigation of its contention in any way. As the Licensing Board states, the only parties participating in the adjudication of issues associated with instrumentation to detect inadequate core cooling were Licensee, the NRC Staff, and the Commonwealth of Pennsylvania. 14 N.R.C. at 1233 (¶ 632). No party has filed an exception with the Atomic Safety and Licensing Appeal Board to challenge the Licensing Board's findings on the short-term requirements.

The controversy before the Licensing Board was the disagreement between Licensee and the Staff on whether the long-term recommendations of section 2.1.3.b warrant a conclusion now that reactor vessel level instrumentation is necessary for the long-term operation of TMI-1 and, if so, whether Licensee has demonstrated reasonable progress toward the satisfactory completion of the requirement. The Licensing Board found in favor of the Staff as to the long-term requirement, and in Licensee's favor as to the demonstration of reasonable progress.

The Licensing Board received substantial evidence on the efforts Licensee has undertaken in response to the long-term recommendations of NUREG-0578 section 2.1.3.b, the status of development of additional instrumentation by other licensees and applicants, and the status of Staff review efforts and

decision-making. This record is well documented in the Licensing Board's Partial Initial Decision. See 14 N.R.C. at 1242-44 (¶¶ 666-672). On the basis of that evidence, the Licensing Board concluded that "[f]rom a regulatory point of view, and in view of the state of the art, Licensee has demonstrated reasonable progress in meeting position 2 of Recommendation 2.1.3.b." Id. at 1244 (¶ 672). Neither the Staff nor any other party has filed an exception with the Appeal Board to challenge the Licensing Board's determination on the reasonable progress question.[2/]

II. Immediate Effectiveness Decision

The Licensing Board has made the findings, on the subject of detecting inadequate core cooling, which clear the way for the Commission to decide to lift its suspension order. The Licensing Board authorized resumption of operation upon completion of certain short-term actions in this area by Licensee, and found that Licensee is making reasonable progress toward completion of the long-term actions on instrumentation to detect inadequate core cooling. 14 N.R.C. at 1237 (¶ 642), 1244 (¶ 672). Pursuant to the Commission's earlier orders in

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2/ Licensee filed an exception challenging the Licensing Board's finding that additional instrumentation in the form of reactor vessel level instrumentation is necessary for the long-term operation of TMI-1. The Staff has supported Licensee's exception, albeit on totally different grounds. See NRC Staff's Brief in Response to the Exceptions of Others to the Atomic Safety and Licensing Board's Partial Initial Decision on Plant Design and Procedures, Separation, and Emergency Planning Issues, May 20, 1982, at 16-17. No other party responded to Licensee's exception.

this proceeding, these findings by the Licensing Board are all that is required, as to detection of inadequate core cooling, to enable the Commission to decide whether the shutdown order shall remain immediately effective. See CLI-79-8, 10 N.R.C. 141, 149 (1979); CLI-81-3, 13 N.R.C. 291, 295 (1981).

The material distributed by the Commission on October 15, 1982, and other developments since the close of the evidentiary record before the Licensing Board, generally underscore the wisdom of that Board's findings on the short-term requirements and on Licensee's reasonable progress toward meeting the long-term requirements. For example, Staff testimony before the Licensing Board had identified January 1, 1982 as the scheduled installation date for level measurement systems. That schedule has since been extended considerably.

In addition, a factor to be considered in assessing Licensee's progress is the extent to which the NRC has been able to define, with a reasonable degree of confidence and certainty, its own version of the long-term requirement. Subsequent to the hearings below, substantial questions were raised early in 1982 by members of the Commission and the ACRS. This led to Staff/industry meetings in February and review by the Committee to Review Generic Requirements (CRGR). As a result of this process, the Staff modified one of the fundamental objectives of the long-term requirement:

> . . . CRGR concluded that it is sufficient to require only a void indication or inventory tracking system to aid the operators in the period between saturation and core

> dryout, rather than requiring an unambiguous indication of water level in the vessel (which is probably not possible).

SECY-82-407 (October 7, 1982), at 2. CRGR also requested the Staff to perform an assessment of the costs of the overall instrument package, including the need for redundancy and qualification requirements, for further CRGR review, and identified some open technical issues for further review. Id. at 4.

Nevertheless, Licensee has continued, since the evidentiary record below closed on this issue, to make significant progress. In a letter to the Staff dated August 26, 1981 (LIL 246), Licensee documented its program to further evaluate additional instrumentation to detect inadequate core cooling, including an evaluation of each of the major vendor systems and an independent study of existing and potential options.

On September 14, 1981 (LIL 261, letter from Licensee to the Staff), Licensee reported that it had completed its preliminary evaluations of available instrumentation and informed the Staff of Licensee's intent to install additional delta P type instrumentation. Additional information on Licensee's proposed Hot Leg Level Instrumentation System (HLLIS) was provided to the Staff on November 13, 1981 (LIL 324), with a schedule to install the system during the Cycle 6 refueling outage. A system design description (criteria document) and design technical specification for the HLLIS were issued by GPU Nuclear in October, 1982.

In a letter dated January 6, 1982, prior to the additional Commission, ACRS and CRGR review discussed above, the Staff advised Licensee that its proposed HLLIS does not meet all of the Staff's criteria. Licensee continues to believe, however, that its ongoing work on the HLLIS will be productive and that this system would be a key ingredient to any system of additional instrumentation proposed by the Staff.

III. Conclusion

In making the Licensing Board's decision immediately effective, the Commission does not foreclose further consideration of the Licensing Board's findings as to the necessity and sufficiency of, among other things, the long-term requirements. The merits of the Licensing Board's decision on the long-term requirements to meet the Staff's objectives for additional instrumentation to detect inadequate core cooling should be left either to the appellate process established by the Commission or for generic resolution by the Commission with respect to all B&W reactors.[3/]

In short, to the extent that the material distributed by the Commission bears upon its decision on whether or not to lift its suspension order, the information supports the correctness of the only two Licensing Board findings which

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3/ The Licensing Board took care not to set a time frame for the installation of a reactor coolant level meter at TMI-1, and stated that "[w]e leave it to the Staff and the Commission to require the installation at TMI-1 consistent with the treatment of other similar reactors." 14 N.R.C. at 1244-45 (¶ 673).

are relevant to the Commission's decision-making at this point: (1) the short-term measures are adequate, and (2) Licensee has made reasonable progress toward the long-term requirements. No party has challenged these determinations.

Respectfully submitted,

SHAW, PITTMAN, POTTS & TROWBRIDGE

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Dated: November 1, 1982

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CERTIFICATE OF SERVICE

I hereby certify that copies of "Licensee's Comments on Documents Relating to the Reactor Vessel Water Level Indicator Issue" were served this 1st day of November, 1982, by hand delivery upon the parties identified by an asterisk and by deposit in the U.S. mail, first class, postage prepaid, to the other parties on the attached Service List.

Thomas A. Baxter

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