



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
 WASHINGTON, D. C. 20555

ACRS R-0937

July 14, 1981



Honorable Nunzio J. Palladino
 Chairman
 U.S. Nuclear Regulatory Commission
 Washington, DC 20555

SUBJECT: REPORT ON RESTART OF THE THREE MILE ISLAND NUCLEAR STATION, UNIT 1

Dear Dr. Palladino:

During its 255th meeting, July 9-11, 1981, the Advisory Committee on Reactor Safeguards completed its review of the proposed restart of the Three Mile Island Nuclear Station, Unit 1 (TMI-1). The Committee had the benefit of discussions with representatives of the Metropolitan Edison Company (Licensee), General Public Utilities Nuclear Group, the Babcock and Wilcox Company, and members of the NRC Staff. The Committee also had the benefit of the documents listed. This matter was the subject of Subcommittee meetings in Middletown, PA on January 31 and February 1, 1980, and in Washington, D.C. on November 28-29, 1980, and June 25-26, 1981. This matter was also discussed during the 248th ACRS meeting and a Status Report was issued on December 11, 1980.

The question of restarting TMI-1 cannot be separated from the important issues revealed by the accident at TMI-2. Among these issues were significant deficiencies in the Licensee's management. Since that time the management structure which will be responsible for operation of TMI-1 has undergone substantial change. These changes have included establishment of a full-time organization dedicated solely to nuclear operations and considerable expansion of the full-time, in-house staff. The Committee believes that the management of a nuclear power plant deserves the highest degree of attention. Although we believe the current structure is sufficient for restart, we urge continued diligence on the part of the Licensee and the NRC Staff to assure the maintenance of adequate managerial capabilities for TMI-1.

In response to the requirements in NUREG-0737, "Clarification of TMI Action Plan Requirements," the Licensee is considering a variety of instruments that might be installed for detecting inadequate core cooling but has not established a plan for selecting an appropriate device. The Licensee and the NRC Staff should act promptly to establish a basis for selecting a suitable monitoring system at TMI-1 taking into account the questions raised by the ACRS in its letter to Mr. Dircks of June 9, 1981, concerning the conditions under which such a system would be of use.

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Currently the Licensee has a number of studies underway in response to suggestions of the Committee and to requirements of the Action Plan. These studies include a reliability assessment of the plant as modified, an identification of possible events which might lead to the loss of both battery trains, and evaluations of outages of emergency core cooling systems to indicate areas where improvements in availability can be made. The Licensee has made some limited progress in each of these areas. We believe these studies should be concluded in a timely manner, but need not be conditions for restart, with the exception of those studies required by the NRC Staff prior to restart.

Recently the security system for TMI-1 was reviewed by a team of specialists from the Los Alamos National Laboratory and a formal report detailing necessary improvements was issued. The Licensee indicated that the recommended changes are being addressed and will be implemented over the next few months. Because of the decontamination operations underway within TMI-2, and the large number of people present, we recommend that plant security continue to be given special attention.

One of the primary deficiencies noted in reviews of the TMI-2 accident was the inadequacy of the exchange of information among the Licensee, state, and local organizations and federal agencies, such as the NRC. Although information reported by the Licensee to state and federal authorities during the course of the TMI-2 accident was incomplete and misleading with regard to the severity of the accident, the deficiencies which contributed to this problem have been addressed in the revised organization and in the improved procedures for collecting, evaluating, and reporting information during the course of an accident. Other improvements have included an upgrading of emergency procedures and emergency response capabilities at all levels, including the periodic conduct of drills and exercises, and the development of better mechanisms for keeping those agencies informed who have responsibility for alerting the public in case of an accident. These steps represent significant progress and are considered by the Committee as sufficient for the restart of TMI-1.

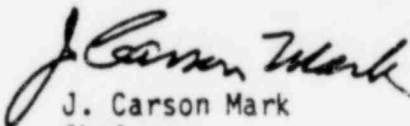
The Licensee has proposed a start-up test program for TMI-1 similar to that being conducted at the near-term operating license plants. The Committee agrees that such a program is desirable, particularly in view of the length of time that TMI-1 has been out of service and the number of modifications made. Such a program should also provide useful additional operator training and experience. The review of this program by the NRC Staff is not yet complete. Those issues remaining should be resolved to the NRC Staff's satisfaction.

The Committee believes it is acceptable to allow TMI-1 to complete the remainder of the required Action Plan items as outlined by the NRC Staff on a schedule consistent with other operating reactors.

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The Advisory Committee on Reactor Safeguards believes the Licensee has demonstrated reasonable progress toward completion of those requirements necessary to restart this facility. Subject to the satisfactory completion of the NRC Staff review and the comments noted above, the Committee believes that Three Mile Island Nuclear Station, Unit 1 can be restarted and operated without undue risk to the health and safety of the public.

Sincerely,



J. Carson Mark
Chairman

References:

1. Metropolitan Edison Company, "Report in Response to NRC Staff Recommended Requirements for Restart of Three Mile Island Nuclear Station Unit 1," Volumes 1-3, and Amendments 1-24.
2. U.S. Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation, "TMI-1 Restart, Evaluation of Licensee's Compliance with the Short- and Long-Term Items of Section II of the NRC Order Dated August 9, 1979, Metropolitan Edison Company, et al., Three Mile Island Nuclear Station Unit 1, Docket 50-289," NUREG-0680, June 1980 and Supplements 1, 2, and 3 dated November 1980, March 1981, and April 1981, respectively.
3. U. S. Nuclear Regulatory Commission, Office of Inspection and Enforcement, "Emergency Preparedness Evaluation for TMI-1, Metropolitan Edison Company et al., Three Mile Island Nuclear Station Unit 1, Docket 50-289," NUREG-0746, December 1980 and Supplement 1 dated May 29, 1981.
4. U.S. Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation, "Control Room Design Review Report for TMI-1, Metropolitan Edison Company, et al., Three Mile Island Nuclear Station Unit 1, Docket 50-289," NUREG-0752, December 1980 and Supplement 1 dated April 1981.
5. U.S. Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation, "Clarification of TMI Action Plan Requirements," NUREG-0737, November 1980.
6. U. S. Nuclear Regulatory Commission, "NRC Action Plan Developed as a Result of the TMI-2 Accident," Vols. 1 & 2, May 1980, revised August 1980.
7. Two letters from J. Stolz, NRC, to H. D. Hukill, Metropolitan Edison Company, transmitting "Safety Evaluation Reports for Items Contained in NUREG-0694 and Enclosure 1 to NUREG-0737 Outside of the Content of the Commission's Orders of August 9, 1979 and March 6, 1980 Required by Restart (October 1981)," April 22, 1981.
8. "Report of the Presidential Commission on The Accident at Three Mile Island - The Need for Change: The Legacy of TMI," October, 1979.
9. "Three Mile Island -- A Report to the Commissioners and to the Public" Vols. I & II, Nuclear Regulatory Commission Special Inquiry Group, January 1980.

References Cont'd:

10. Memorandum to Chairman Ahearne, NRC, from Mitchell Rogovin and George T. Frampton, Jr., Special Inquiry Group, Subject: Questions Submitted by Congressman Udall, March 4, 1980.
11. Staff Studies "Nuclear Accident and Recovery at Three Mile Island, A Special Investigation, Subcommittee on Nuclear Regulation for the Senate Committee on Environment and Public Works," July 1980.
12. U.S. Nuclear Regulatory Commission, Office of Inspection and Enforcement, "Investigation Into the March 28, 1979 Three Mile Island Accident by the Office of Inspection and Enforcement," NUREG-0600, August 1979.
13. U.S. Nuclear Regulatory Commission, Office of Inspection and Enforcement, "Investigation Into Information Flow During the Accident at Three Mile Island," NUREG-0760, January 1981.
14. Memorandum for William J. Dircks, Executive Director for Operations, from Carlyle Michelson, Director, Office of Analysis and Evaluation of Operational Data, Subject: Investigations Into Information Flow Concerning the TMI Accident, February 20, 1981.
15. "Reporting of Information Concerning the Accident at Three Mile Island," A Report Prepared by the Majority Staff of the Committee on Interior and Insular Affairs of the U.S. House of Representatives, Ninety-Seventh Congress First Session, March 1981.
16. Letter from Congressman Morris K. Udall, Chairman, Committee on Interior and Insular Affairs, U.S. House of Representatives, to Dr. D. W. Moeller, Chairman, Advisory Committee on Reactor Safeguards Subcommittee on Three Mile Island Nuclear Station, Unit 1, enclosing information for the record of the June 25, 1981 meeting of the TMI-1 Subcommittee, July 6, 1981.
17. Letter from Marvin Lewis, member of the public, to Richard Major, ACRS Staff, regarding the restart of the Three Mile Island Nuclear Station Unit 1, undated, received April 1981.
18. Letter from Marvin Lewis, member of the public, to M. Plesset, Chairman, ACRS, regarding the restart of the Three Mile Island Nuclear Station Unit 1, undated, received December 31, 1980.
19. Letter from Marvin Lewis, member of the public, to M. Plesset, Chairman, ACRS, regarding the restart of the Three Mile Island Nuclear Station Unit 1, December 31, 1980.