

GL79051

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

October 10, 1979

(TO ALL LICENSEES OF PLANTS UNDER CONSTRUCTION)

Gentlemen:

SUBJECT: FOLLOWUP ACTIONS RESULTING FROM THE NRC STAFF REVIEWS REGARDING  
THE THREE MILE ISLAND UNIT 2 ACCIDENT

Over the past several months following the Three Mile Island accident, the NRC staff has been conducting an intensive review of the design and operational aspects of nuclear power plants and the emergency procedures for coping with potential accidents. The purpose of these efforts was to identify measures that should be taken in the short-term to reduce the likelihood of such accidents and to improve the emergency preparedness in responding to such events. To carry out this review, efforts within NRR were established in four areas: (a) licensee emergency preparedness, (b) operator licensing, (c) bulletins and orders followup (primarily in the areas of auxiliary feedwater systems reliability; loss of feedwater and small break loss-of-coolant accident analysis; emergency operating guidelines and procedures) and (d) Short-Term Lessons Learned.

The purpose of this letter is to provide for planning and guidance purposes the NRR staff position on the status and applicability of the results of these efforts to plants under construction. The Commission may add to or modify these staff positions after reviewing them. Additional staff requirements may be developed as NRR's Lessons Learned Task Force completes its long-term recommendations. Several other investigations, including the Presidential Commission and NRC's Special Inquiry Group, can be expected to lead to additional requirements.

#### Lessons Learned Task Force Report

The principal element of the staff activities listed above is contained in the report titled, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations" (NUREG-0573), a copy of which was previously sent to you. The Task Force report contains a set of recommendations to be implemented in two stages over the next 16 months on operating plants and pending operating license applications. The Task Force recommended 20 licensing requirements and three rulemaking matters in 12 broad areas.

The Advisory Committee on Reactor Safeguards has completed its review of the Task Force report. The several public meetings of the ACRS subcommittee on TMI-2 and the public meeting of the full committee on August 9 provided

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an opportunity for the presentation and discussion of public comments on the report. The ACRS letter of August 13, 1979 to Chairman Hendrie states that the Committee agrees with the intent and substance of all the Task Force recommendations, except four upon which the Committee offered constructive comments to achieve the same objectives articulated by the Task Force. A copy of the ACRS letter is provided as Enclosure 1.

After evaluating all comments received, we have concluded that the following actions are appropriate for plants under construction.

- (a) The staff will be proposing a new rule on a Limiting Condition of Operation to require plant shutdown for certain human or procedural errors, particularly those which are repetitive in nature. As such, no action is required on your part at this time.
- (b) At the present time we are delaying efforts regarding proposed rulemaking on both the inerting requirements for Mark I and II BWR containments, and the requirement regarding hydrogen recombiner capability; accordingly, no action is required on your part at this time.
- (c) The ACRS comments on the shift technical advisor have resulted in our reassessment of the possible means of achieving the two functions which the Task Force intended to provide by this requirement. The two functions are accident assessment and operating experience assessment by people onsite with engineering competence and certain other characteristics. We have concluded that the shift technical advisor concept is the preferable short-term method of supplying these functions. We have also concluded that some flexibility in implementation may yield the desired results if there is management innovation by individual licensees. We have prepared a statement of functional characteristics for the shift technical advisor that will be used by the staff in the review of any alternatives proposed by applicants for operating licenses. A copy is provided as Enclosure 2. The Commission is considering whether or not additional qualifications should be required for this individual.
- (d) Three additional instrumentation requirements for short-term action were developed during the ACRS review of NUREG-0578. These items relate to containment pressure, containment water level and containment hydrogen monitors designed to follow the course of an accident. Descriptions of these items are provided in Enclosure 3.
- (e) An additional requirement following issuance of NUREG-0578, which concerned a remotely operable high point vent for gas from the

reactor coolant system, was developed. A description of this requirement is provided in Enclosure 4.

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- (f) The Lessons Learned- Task Force has compiled a set of errata and clarifying comments for NUREG-0578. It is provided as Enclosure 5.

Following our review of the proposed Task Force recommendations, ACRS review and comments received, we have concluded that all licensees of plants under construction should implement the actions contained in NUREG-0578, as modified and/or supplemented by items (a) through (f) above. Therefore, we suggest that you also consider these requirements in developing your final plant design and procedures, and include a description of your actions in this regard in your application for an operating license. An implementation schedule for operating plants and pending operating license applications is provided in Enclosure 6 for information. The implementation dates for the Commission rulemaking actions and those deferred actions, identified above, will be established later.

#### Other Review Areas

Enclosure 7 outlines the requirements developed to date resulting from the staff's Emergency Preparedness Studies. Enclosure 8, which applies to operating plants and pending operating license applications, provides the implementation schedules for the emergency preparedness recommendations which, you will note, includes three of the Lessons Learned topics. The staff position is that you should comply with each of the recommendations of Enclosure 7. Therefore, we suggest that you also consider these requirements in developing your final plant design and procedures, and include a description of your actions in this regard in your application for an operating license. Further, the Commission has initiated a rulemaking procedure, now scheduled for completion in January 1980 in the area of Emergency Planning and Preparedness. Additional requirements are to be expected when rulemaking is completed and some modifications to the emergency preparedness requirements contained in this letter may be necessary.

Enclosure 9 outlines the staff recommendations concerning improvements in the area of operator training which are provided for your information. These recommendations are undergoing Commission review and are expected to be adopted as requirements in the near future. Further Commission review in the areas of operator training and qualification can be expected to result in substantial additional requirements.

A number of other related actions on your facility may have been initiated under the direction of the NRR Bulletins and Orders Task Group. Each licensee will receive additional guidance from this group, particularly related to auxiliary feedwater systems and small break LOCAs, in the near future. Your activities should continue in these areas, as all the mentioned activities are meant to complement one another.

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The measures discussed above represent a set of requirements that the staff has concluded should be implemented at this time. As stated earlier, other requirements may follow in the future. The procedures for Commission review of TMI-related issues prior to the issuance of operating licenses have not yet been established. The Commission is considering several alternatives, and you will be notified when a decision is made in this matter.

If you have any questions regarding these actions, please contact the NRC Project Manager for your facility.

Sincerely,

Domenic B. Vassallo, Acting Director  
Division of Project Management

Enclosures:

1. ACRS Ltr: Carbon to  
Hendrie dtd 8/13/79
2. Alternatives to Shift Technical  
Advisor
3. Instrumentation to Monitor  
Containment Conditions
4. Installation of Remotely  
Operated High Point Vents  
in the Reactor Coolant System
5. NUREG-0578 Errata
6. Implementation Schedule
7. Requirements for Improving  
Emergency Preparedness
8. Emergency Preparedness Improve-  
ments - Implementation Schedule
9. Improvements in Operator Training