



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

SEP 25 1979

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MEMORANDUM FOR: R. B. Minogue, Director  
Office of Standards Development

FROM: Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

SUBJECT: LIMITING CONDITION FOR OPERATION RULEMAKING  
RE: OSD TASK INITIATION FORM - TASK NO. 918-1

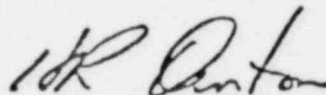
The referenced task initiation form (copy attached) indicated that the proposed rule would not be issued for public comment until August 1, 1980. The Office of Nuclear Reactor Regulation does not find this approach to be consistent with either the intent or priority of this rule change.

The recommendation for prompt attention to this subject area was made by the Lessons Learned Task Force and endorsed by the Advisory Committee on Reactor Safeguards (ACRS). The goal is to vastly diminish, and hopefully eliminate the occurrences of loss of safety function due to operational errors by plant staff. It is intended that the threat of plant shutdown through the approach recommended by the Task Force, or the alternatives recommended by me or the ACRS, or other equivalent action will be sufficiently onerous to act as a preventative for such events. It is not intended to be a punitive penalty after the fact.

We believe that the recommended rule change will substantially increase safety at operating nuclear plants. There have been several instances of complete loss of safety function due to a breakdown in administrative controls at operating nuclear power plants since the accident at TMI-2. They highlight the continued urgency of NRC taking clear and unambiguous steps to assure prompt corrective action by all licensed utilities. Therefore, I request the OSD take the following steps to expeditiously process this task. First, expedite the rulemaking procedure such that an effective rule or interim rule is in place by January 1, 1980. Second, prepare a Commission Paper by November 1, 1979 or earlier outlining the proposed rule change and discussing alternatives. The

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alternatives should include the three options for corrective action to reduce the occurrence of LCO violations identified in my August 20, 1979 memorandum to the Commission and various methods for implementing these options immediately, i.e., effective rule, interim rule, obtaining public comment, etc. It is our understanding that Mr. Stello's preference of using NRC enforcement authority for these purposes will be included as an alternative in the Commission Paper. Lastly, establish this effort on a priority equivalent to that of emergency planning.



Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

Enclosure:  
As stated

cc: L. Gossick  
H. Shapar  
V. Stello  
~~2~~ R. Mattson  
D. Eisenhut



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

August 13, 1979

Honorable Joseph M. Hendrie  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

SUBJECT: SHORT-TERM RECOMMENDATIONS OF TMI-2 LESSONS LEARNED TASK FORCE

Dear Dr. Hendrie:

During its 232nd meeting, August 9-11, 1979, the Advisory Committee on Reactor Safeguards completed a review of the short-term recommendations of the TMI-2 Lessons Learned Task Force as reported in NUREG-0578. These recommendations had been reviewed, in part, by an ACRS Subcommittee at a meeting in Washington, D.C., on July 27, 1979. During its review the Committee had the benefit of discussions with members of the Task Force. Comments from representatives of the nuclear industry were also considered.

In its review, the Committee has noted that the recommendations in NUREG-0578 are those deemed by the Task Force to be required in the short term to provide substantial additional protection for the public health and safety.

The Committee has considered both the recommendations themselves and the schedules proposed for their implementation. Regarding the latter, the Committee believes that the orderly and effective implementation and the appropriate level of review and approval by the NRC Staff will require a somewhat more flexible, and in some cases more extended, schedule than is implied by NUREG-0578.

With regard to the requirements themselves, the Committee agrees with the intent and substance of all except those discussed below.

2.1.5 Post-Accident Hydrogen Control Systems

a. The Committee agrees with the recommendations relating to dedicated penetrations for external recombiners or purge systems for operating plants that have such systems.

b. and c. The majority of the Task Force has recommended rule-making to require inerting of BWR Mark I and II reactors. A minority of the Task Force has recommended rule-making to require that all operating light water reactors provide the capability to use a hydrogen recombiner.

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The Committee believes that questions relating to hydrogen generation during and following an accident, the rate and amount of generation, the need to control it, and the means of doing so, need to be reexamined. The Task Force has advised the Committee that it is considering this question further in connection with its longer-term recommendations which are scheduled to be completed by September, 1979. The ACRS believes that decisions concerning possible additional measures to deal with hydrogen should be deferred pending early evaluation of the forthcoming longer-term Task Force recommendations.

#### 2.1.8 Instrumentation to Follow the Course of an Accident

With regard to instrumentation to follow the course of an accident, the ACRS believes that containment pressure, containment water level, and on-line monitoring of hydrogen concentration in the containment should also be considered for implementation for all operating reactors on the same schedule as that recommended by the Lessons Learned Task Force.

#### 2.2.1.b Shift Technical Advisor

The Committee agrees completely with the two closely related objectives of this recommendation. One relates to the presence in the control room during off-normal events of an individual having technical and analytical capability and dedicated to concern for safety of the plant. The other relates to the need for an on-site, and perhaps dedicated, engineering staff to review and evaluate safety-related aspects of plant design and operation. The achievement of these objectives will contribute significantly to the safe operation of a plant.

The Committee believes that there may be difficulty in finding a sufficient number of people with the required qualifications and interest in shift work to fill the Technical Advisor positions. The Committee therefore believes the solution proposed by the Staff should not be mandatory but that alternate solutions also should be considered.

#### 2.2.3 Revised Limiting Conditions for Operation

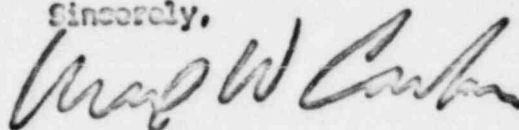
The Committee agrees with the findings of the Task Force that there are too many human or operational errors resulting in the defeat of an entire safety system, that the number of such occurrences should be and can be reduced, and that the ultimate responsibility for doing this must rest with the licensee.

The Committee, however, is not convinced that the Task Force proposal is the best or only way to increase the licensee's awareness of the

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need to improve operational reliability, and suggests that measures short of shutdown, such as a rule that requires actions similar to those of a show-cause order, may be equally effective.

Sincerely,



Max W. Carbon  
Chairman

References:

1. NUREG-0570, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations," Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, July 1979.
2. Letter, D. Rauh, President, INE, Inc., to Harold Denton, Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, August 0, 1979, Subject: TMI-2 Lessons Learned Task Force Report (NUREG-0570).
3. Letter, Stanley Ragone, President, Virginia Electric and Power Company, to Joseph M. Hendrie, Chairman, U.S. Nuclear Regulatory Commission, August 0, 1979, Subject: Lessons Learned Task Force on TMI-2, NUREG-0570.
4. Letter, Floyd W. Lewis, Chairman, Ad Hoc Nuclear Oversight Committee, to Harold R. Denton, Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, August 1, 1979, Subject: Lessons Learned from TMI-2.
5. Letter, American Nuclear Society, NS-3 Committee, to Joseph M. Hendrie, Chairman, U.S. Nuclear Regulatory Commission, August 2, 1979, Subject: Lessons Learned Task Force Status Report NUREG-0570.
6. Letter, Robert Saaley, Atomic Industrial Forum, Inc. (AIF), to Harold Denton, Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, August 2, 1979, Subject: "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations," (NUREG-0570).
7. Report by the Advisory Committee on Follow-up to the Three Mile Island Accident, July 5, 1979.
8. Memorandum, C. G. [unclear], Lessons Learned Task Force Member, to R. J. Denton, Director, TMI-2 Lessons Learned Task Force, July 30, 1979, Subject: Review of LERs for Loss of Safety Function Due to Personnel Error and Defective Procedures, (50-3[unclear]).

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

July 18, 1979

MEMORANDUM FOR: Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

FROM: Roger J. Mattson, Director  
TMI-2 Lessons Learned Task Force

SUBJECT: TMI-2 LESSONS LEARNED TASK FORCE  
REPORT (SHORT TERM) NUREG-0578

Enclosed is the first report of the TMI-2 Lessons Learned Task Force. It contains a set of short term recommendations to be implemented in two stages over the next 18 months on operating plants, plants under construction, and pending construction permit applications. There are 23 specific recommendations in 12 broad areas (nine in the area of design and analysis and three in the area of operations). The 23 recommendations would provide substantial, additional protection which is required for the public health and safety.

All but one of the 23 recommendations have a majority concurrence by the Task Force. The exception is the recommended requirement to provide capability to install an external recombiner at each reactor plant for post-accident hydrogen control, if necessary following an accident. The majority of the Task Force recommends that this matter deserves further evaluation in conjunction with other hydrogen generation and control questions being reviewed by the Task Force for its final report.

Three of the recommendations appear to require changes in existing regulations for which the Task Force recommends immediately effective rulemaking. They are: 1) inerting of MK I and MK II BWR containments that are not already inerted; 2) provision of the capability to install an external recombiner for plants that do not already have recombiners (minority view); and, 3) revised limiting conditions of operation in operating licenses for total loss of safety system availability through human or operational error. The Office of Standards Development has agreed to develop the required Commission papers and carry through with these rulemaking actions.

The 23 recommended actions were discussed with the Regulatory Requirements Review Committee (June 22, 1979), the Commission (June 25, 1979), the TMI-2 Subcommittee of the ACRS (July 11, 1979), and the ACRS (July 12, 1979). In addition, meetings were held with various groups in the Office of Nuclear Reactor Regulation in the course of the last few weeks to discuss technical aspects of specific portions of the recommended actions and the implementation alternatives.

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The Task Force recommends that time not be taken to request and evaluate public comments on these short term requirements prior to their promulgation as licensing requirements or rules because they are safety significant matters that require prompt application to operating reactors and operating license applications in the late stages of review. Other TMI-2 accident review groups and the Lessons Learned Task Force are continuing to evaluate the longer term implications of the accident. Any public comments on the short term recommendations that are received after their issuance (just as in the case of the earlier IE Bulletins) can be factored into those continuing evaluations.

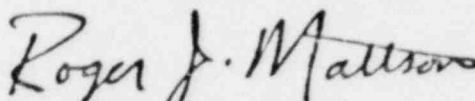
Having identified the 23 specific recommendations for short term action, the Lessons Learned Task Force will turn to the broader, more fundamental regulatory questions which should be addressed in the longer term (some of them likely to require evaluations that extend beyond the life span of the Task Force) before other regulatory actions are recommended. These longer term interests of the Task Force are described in Section Three of the report. The Task Force intends to develop its final recommendations and issue a final report in early September 1979. The topics to be addressed in the final report could affect the future structure and content of the licensing process to correct deficiencies identified by the TMI-2 accident and to further upgrade the level of safety in operating plants and plants under construction. The Task Force does not believe that allowing new plants to begin operation in the next few months will foreclose further design changes that may be shown to be desirable by its continuing review of the accident.

On July 11, I solicited the comments of the principal NRR line organizations on the final draft of the report and its central conclusion regarding the necessity and sufficiency of the short term recommendations for continued operations and licensing. General support for the conclusions of the Task Force report was expressed by all of the principal NRR line managers. We have reviewed and considered the detailed comments supplied by the various NRR organizations in the course of their review. Where appropriate, we made clarifying changes in the language of the report. The principal substantive change occurred in the form and schedules of the implementation section (Appendix B). Some of the comments addressed matters that the Task Force has deferred for consideration in its final report. There are significant differences of opinion within the staff on two of the Task Force recommendations, as follows: a) the need for recommendation 2.2.3 concerning rulemaking for revised limiting conditions for operation (some agree with the recommendation and others prefer more stringent enforcement actions using existing regulatory machinery) and b) the need for the minority Task Force recommendation 2.1.5.c concerning rulemaking for backfit of recombiner capability (some support the minority recommendation, others do not). Having considered these comments and made changes to the report where appropriate to reconcile them with the intent of the Task Force, I recommend that you:

a. direct the immediate implementation by DPM, DOR or B&OTF, as appropriate, of all the short term recommendations, except the three rulemaking matters, through the issuance of licensing positions to operating plant licensees, plants under construction, and construction permit applicants.

b. request the formulation of immediately effective rules by the Office of Standards Development for action by the Commission on the three rulemaking matters.

Another matter that needs to be considered by you in deciding upon the additional requirements for near term CP and OL decisions and for operating reactors is improvements in licensee emergency preparedness.



Roger J. Mattson, Director  
TMI-2 Lessons Learned Task Force

Enclosure: as stated

cc: Chairman Hendrie  
Commissioner Gilinsky  
Commissioner Kennedy  
Commissioner Bradford  
Commissioner Ahearne  
ACRS (20)  
Policy Evaluation  
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NRC PDR