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MEMORANDUM FOR: J. T. Collins, Deputy Program Manager, TMI Program Office

FROM: T. Murphy, Task Force
 P. Knapp, Task Force
 G. Kalman, Task Force
 J. Wigginton, Task Force
 M. Shanbaky, Task Force

SUBJECT: REACTOR BUILDING ENTRY, NRC STAFF RECOMMENDATION

- Reference: a. NRC letter, NRC/TMI-80-048, from J. T. Collins to R. C. Arnold, dated March 25, 1980
 b. Met-Ed letter, TLL 166, from G. K. Hovey to J. T. Collins, dated April 8, 1980
 c. Met-Ed letter, TLL 185 from G. K. Hovey to J. T. Collins, dated April 15, 1980

On March 21, 1980, the licensee requested permission from the NRC to enter the TMI Unit 2 Reactor Building (RB).

The NRC staff has been following the licensee's preparations to enter the RB for several months. An NRC staff task force convened at TMI on March 11, 1980, to specifically review the hazards associated with the entry and to evaluate the benefit of the entry versus the anticipated risk to the participants. The task force's recommendations and concerns relative to the RB entry were forwarded to the licensee in Reference a. The licensee was unable to show that the RB atmosphere could support life in the event of respiratory equipment failure and permission to enter the RB was denied.

The licensee's response to the task force's recommendations and concerns is contained in Reference b. Reference c. describes the results of a licensee RB atmosphere sampling program which demonstrated that there are no hazardous concentrations of toxic gases in the RB atmosphere and that the RB oxygen level is sufficient to sustain life. The RB oxygen concentration was reported by the licensee to be 12.8% (normal O₂ level is 20%). This relatively low O₂ level is hazardous but not life threatening. The licensee's contingency plan provides for timely rescue of an incapacitated or injured entry team member.

The licensee's responses and the results of the atmosphere sampling program were reviewed by each member of the task force and were found acceptable. Additionally, all comments generated by the NRC staff following review of the entry procedure have been adequately resolved by the licensee. Several

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full dress practice entries into the Unit I RB were witnessed by the NRC staff and no significant problems were identified.

Based on the information presented above, the NRC staff recommends that the licensee's request to enter the Unit II RB be approved. Approval is recommended for one entry.

The staff concluded that entry into the RB in a krypton 85 and oxygen deficient environment is significantly more hazardous than an entry following clean-up of the RB atmosphere. However, in view of the uncertain schedule for RB clean-up, the staff concurs with the licensee that the benefits derived by an entry at this time outweigh the postulated risks.

George Kalman

- cc: B. Snyder
- T. Murphy
- P. Knapp
- G. Kalman
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