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October 16, 1989  
NRC-89-0214

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

- References: 1) Fermi 2  
NRC Docket No. 50-341  
NRC License No. NPF-43
- 2) Detroit Edison Letter to NRC, NRC-89-0205  
dated September 14, 1989

Subject: Additional Information on Deferral of Human Engineering  
Discrepancy 1178 on MSIV Actuation Indication Lights

Reference 2 requested deferral of Detailed Control Room Design Review (DCRDR) Human Engineering Discrepancy (HED) 1178 until the Second Refueling Outage. HED 1178 involves implementation of Engineering Design Package (EDP) 9828. EDP 9828 will install status indication on the Iso-Mimic Board in the Control Room for the seven (7) plant variables (in each channel) that can cause a Main Steam Isolation Valve (MSIV) isolation actuation.

Information related to this EDP/HED deferral was subsequently discussed with the NRC staff (J. Stang and D. Eckenrode) in a meeting with Detroit Edison Company (DECo) representatives on October 3, 1989, at NRC headquarters. Further conversations were held via teleconferences with Messrs. J. Stang and J. Zwolinski of NRC/NRR during that week. Based on these follow-up discussions, the NRC requested additional information relative to this specific HED and information on DECo's implementation plans for the Category III HEDs. The purpose of this letter is to provide you with the requested information.

Resolution of HED 1178 and issuance of EDP 9828 has been under development since October 1988 when the contract to perform this work was awarded to the vendor. The chronology of this effort has been discussed with Mr. J. Stang of your staff. This chronology indicates that resolution of conceptual design aspects was at times difficult and availability of qualified parts for the modification resulted in changes to the EDP scope. Subsequently, as noted in the Reference 2

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letter, DECo requested deferral due to material unavailability for the outage and the potential for impacting concurrent work in progress. In addition, it should be noted that EDP 9828 would require considerable post-modification testing which, considering the impact on other modifications affecting the same relay room panels, had yet to be integrated into the outage schedule.

Deferral of EDP 9828/HED 1178 work until the 2nd Refueling Outage does not change DECo's overall date for final completion of our commitment on TMI Action Plan Item I.D.1. As a result, this should not impact timely completion of Fermi 2's DCRDR program.

The following provides additional information on the technical justification for accepting deferral of EDP 9828/HED 1178:

- (1) Category II HEDs have a low probability for operator error.
- (2) MSIV position indication (open/close lights) are already available in the Control Room. Irrespective of the actuation logic signal, this will inform the operators if the MSIVs have actually closed.
- (3) There are seven plant variables (in each logic division) that can cause an MSIV isolation to occur. These are discussed below in terms of the information currently available to operations personnel to determine MSIV isolation actuation status.
  - o Main Steam Line Low Pressure (MSLLP) - annunciation already exists which provides an indication of a condition that should cause an MSIV logic channel trip.
  - o Main Steam Line High Flow - same as MSLLP noted above.
  - o Steam Tunnel High Temperature - same as MSLLP noted above.
  - o Reactor Vessel Low Level (Level 1) - same as MSLLP noted above.

- o Main Steam Line High Radiation (MSLHR) - annunciation exists in the Control Room (although not at the MSTV closure setpoint) which would lead the operators to an Alarm Response Procedure for this condition. Also, indication and trend data for these radiation monitors is available on the Safety Parameter Display System (SPDS).
- o Condenser Low Vacuum - same as MSLHR noted above, with the exception of SPDS (this parameter is not an SPDS parameter).
- o Turbine Building Steam Tunnel Area High Temperature - see discussion of shiftly rounds surveillances below.

Per Fermi 2 procedure 24.000.02, shiftly surveillances are conducted which monitor and record the seven variables.

Thus, as discussed above, information already exists for the operators to use in determining MSTV isolation actuation status.

- (4) EDP 7838 (HFD 1091) has been installed during this refueling outage. EDP 7838 modified the MSTV manual control circuits to install latching relays. This EDP will prevent inadvertent MSTV isolations due to momentary losses of power to the logic circuit. This will eliminate a potential source of confusion to plant operators when attempting to determine the cause of an MSTV isolation and reduce unnecessary challenges to the plant.
- (5) Installation of EDP 9828 during the 1st Refueling Outage is also complicated by the Backup Manual Scram Breakers and MSTV manual control circuit modifications which are being worked in the same RPS Relay Room Panels.
- (6) Deferral to the 2nd Refueling Outage is necessary since an outage of significant duration is needed to perform this EDP and the associated post-modification testing.



- (7) Deferral will allow adequate time for installation, testing and operator training on the Fermi 2 Simulator prior to the Second Refueling Outage. This will allow DECo to learn from the Simulator installation process and better integrate this activity into the outage work scope. This will help minimize the potential for inadvertent challenges to plant engineered safety feature equipment.

The following information relates to DECo's plans for review and implementation of Category III HEDs. Currently, DECo is committed to complete the Category III HEDs (approximately 300) by the end of the Third Refueling Outage. However, given the requested deferral of HED 1178, we are proposing an alternative course of action relative to implementation of Category III HEDs. The DCRDR multi-disciplinary review team will review the scope and acceptability of the Category III HED recommendations. This review is scheduled for completion by the end of January 1990. The scope of this review will include the following considerations:

- o Fermi 2 operational experience gained since the original DCRDR was completed in 1987.
- o Potential safety significance of the Category III item(s) (generally low).
- o Scope of the proposed changes and required coordination with related work.
- o The need for an extended outage to implement any of these HEDs.
- o Available materials and resources required.
- o Appropriate cost/benefit criteria for each HED.

As a result of this review, each Category III HED will be evaluated for implementation by the Second Refueling Outage based on the priorities and needs established.

By February 1990, DECo will be prepared to discuss the results of this review with the NRC Staff. Currently, we would note that approximately 50% of the Category III HEDs may require plant modifications, 40% involve cosmetic changes to panels or instruments (e.g., color coding, label changes, etc.) and 10% involve changes to procedures or operator training.

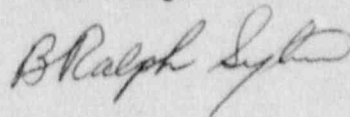
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DECo proposes a meeting with the NRC in February 1990 be planned to review the Category III HEDs evaluation and the resultant detailed scope and schedule for final implementation. It is our intention to complete as many of these HEDs by the end of the 2nd Refueling Outage as is possible.

Based on the above discussion, DECo considers the deferral of HED 1178 to the 2nd Refueling Outage to have little or no potential safety significance or impact on operations personnel.

If you should have any questions on this matter, please contact Terry L. Riley, Supervisor of Compliance and Special Projects, Nuclear Licensing, at (313) 586-4041 (or -1584).

Sincerely,



cc: A. B. Davis  
R. C. Knop  
W. G. Rogers  
J. F. Stang