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June 24, 1985
NE-85-0901

Mr. James G. Keppler
Regional Administrator
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

- Reference: (1) Fermi 2
NRC Docket No. 50-341
NRC License No. NPF-33
- (2) Detroit Edison to NRC Region III Letter,
"Detroit Edison Response Inspection Report
50-341/85009", VP-85-0132, June 5, 1985

Subject: Additional Information on Electrical Separation

The Reference (2) letter provided additional information concerning 13 representative cases where IE and non-IE circuits electrically interfaced. Your staff recently identified two additional related concerns. This letter provides additional clarifying information which should resolve this matter.

ATWS Recirculation Pump Trip

This circuit trips the Recirculation Pump field breaker on high reactor pressure or low level to assist in mitigation of a potential ATWS event. The Recirculation Pump, its breaker, and control systems are non-IE. The design whereby a non-IE device is tripped by IE signals has been thoroughly reviewed by NRR and accepted. This modification is known as the "Monticello" ATWS Recirculation Pump Trip (RPT) design and is referred to on page 7-22 of the Fermi 2 Safety Evaluation Report. In the "Basis for the Final Rule as Promulgated by the Commission" published with the ATWS rule (FR26036, June 26, 1984), the necessity for IE and non-IE devices to interface is recognized and discussed. In fact, it is specially noted in a footnote to a Table published with the rule referenced above that "Existing recirculation pump trip equipment installed in BWRs in accordance with previous staff requirements for the mitigation of anticipated transients without SCRAM need not be modified" because of the rule.

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After discussions with your staff, however, Detroit Edison agrees to install flexible conduit as practicable on one of the divisional control cables for initiation of RPT in each of the Recirculation Pump field breaker cabinets. Since this conduit is intended to provide increased assurance that the RPT will function as designed, it is appropriate the modification be installed consistent with the implementation schedule for modifications necessitated by the ATWS rule. The rule calls for utilities to submit their implementation schedules 180 days after the staff's issuance of QA guidance associated with the rule. This guidance was issued on April 16, 1985 in Generic Letter 85-06. Accordingly, Edison will submit its schedule to NRC in October and include in that schedule the installation of the flexible conduit as described above.

RHR Sample Valves

IE cables used in the control circuits for the primary containment isolation valves in RHR sample lines were downgraded to non-IE since the design basis for the system is deenergize-to-operate and since both divisionally routed circuits for these valves were brought to the same local panel. The cables were IE qualified cables and routed divisionally until they interface at the panel.

Each of the two RHR loops has a sample line connected to the downstream side of each heat exchanger. Each sample line, since it is connected to the reactor coolant pressure boundary, has a safety-grade isolation scheme consistent with the Nuclear Steam Supply Shut-off System (NS4) design basis. The design, provided by General Electric, consists of two normally closed, primary containment isolation valves connected in series for each sample line. Each valve is air-operated, pilot-solenoid controlled, fail-closed on loss of air or electric power, ASME Class II. The solenoid valves and control relays for each valve are classified by G.E. as active-essential. The electric power for the solenoids is supplied by the Reactor Protection System MG-Sets; MG Set A powering the inboard valve's solenoids and MG Set B the outboard. The NS4 initiates automatic closure of the valves in response to signals from the Reactor Protection System.

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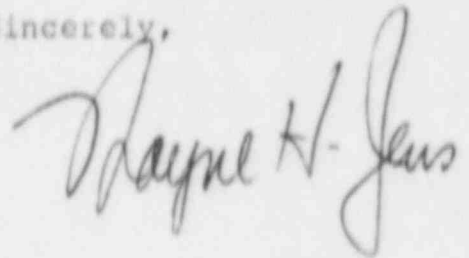
This automatic closure of the valves follows the RPS/NS4 basis of trip on loss of energy. The active-essential classification specified by G.E. is made because the valves must go closed on actuation of the NS4 trip.

Local-manual control and indication for the valves is provided by switches and indicators on local instrument racks, H21-P018 and H21-P021. Since each of these racks is the control interface for one sample line valve pair, each rack has cabling of both divisions terminated thereon. Providing the controls and cabling for both divisions (one inboard and one outboard valve pair) on one instrument rack was done to allow operation of the valves from one location. This facilitates taking of a sample which otherwise would have been more difficult if the divisional controls had been located in separate rooms.

The divisional valve isolation circuits on each instrument rack are contained in metal enclosures which are grounded and are separated by at least 1 foot. The control cables for each of the two valves in the sample line are routed to each of the instrument racks in separate division cable trays. Providing separate enclosures and cable tray systems acceptably minimizes the possibility of a single failure causing inadvertent opening of a sample line. Based on this, the installation as described was considered acceptable.

If you should have any additional questions, please contact Mr. Lewis Bregni at (313) 586-5083.

Sincerely,



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