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ENERGY**

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VICE PRESIDENT - NUCLEAR

March 16, 1992  
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U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D. C. 20555

Perry Nuclear Power Plant  
Docket No. 50-440  
Technical Specification Change  
Request: Remote Shutdown System  
Controls (T.S. 3/4.3.7.4)

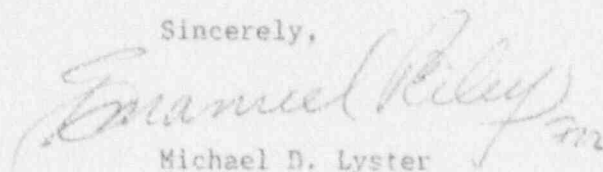
Gentlemen:

In accordance with 10CFR50.90, enclosed is a request for amendment of Facility Operating License NPP-58 for the Perry Nuclear Power Plant (PNPP) Unit 1. In accordance with the requirements of 10CFR50.91(b)(1), a copy of this amendment request has been sent to the State of Ohio as indicated below.

This amendment request proposes a change to PNPP Technical Specification Table 3.3.7.4-1, "Remote Shutdown System Controls", to remove the line item for the controls to the Reactor Core Isolation Cooling (RCIC) pump discharge to lube oil cooler valve. A description of the proposed change, including the Significant Hazards Consideration and Environmental Considerations is included in Attachment 1. A copy of marked up Technical Specification page 3/4 3-75 containing the proposed change is included in Attachment 2.

If you have any questions, please feel free to call.

Sincerely,



Michael D. Lyster

MDL:CJP:sc

**Attachments**

cc: NRC Project Manager  
NRC Resident Inspector Office  
NRC Region III  
J. Harris State of Ohio

9203240049 920316  
PDR ADOCK 05000440  
P PDR

Operating Companies  
Cleveland Electric Illuminating  
Toledo Edison

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## SUMMARY OF PROPOSED CHANGE

This Operating License amendment request proposes to remove the line item for the controls to the Reactor Core Isolation Cooling (RCIC) Pump Discharge to Lube Oil Cooler Valve from PNPP Unit 1 Technical Specification 3/4.3.7.4, Table 3.3.7.4-1, "Remote Shutdown System Controls". The referenced valve is currently a normally closed Motor Operated Valve that is required to automatically open on RCIC system initiation to provide a source of cooling water to the RCIC pump lube oil cooler. This change is requested in order to implement a design change which would convert this valve from a Normally Closed Motor Operated Valve to a Locked Open manually operated valve. This change would improve system reliability and thereby enhance plant safety by removing one active component from the RCIC system and replacing it with a passive valve which would ensure availability of cooling water to the RCIC system lube oil cooler. This design change will also reduce station battery loads, reduce periodic maintenance costs, and would eliminate costly MOV testing and the Equipment Qualification inspection work required for active components.

### I. DESCRIPTION OF CURRENT LICENSE CONDITION

General Design Criterion 19 of 10CFR50 Appendix A specifies, in part, that equipment at appropriate locations outside the Control Room shall be provided with a design capability for prompt hot shutdown of the reactor, including necessary instrumentation and controls to maintain the unit in a safe condition during Hot Shutdown. PNPP Technical Specification 3/4.3.7.4, "Remote Shutdown System Instrumentation and Controls", provides Limiting Conditions for Operation (LCO) and Surveillance Requirements to ensure the operability of PNPP's remote shutdown system as a condition of the PNPP facility operating license. The operability of PNPP's remote shutdown monitoring instrumentation and controls ensure that sufficient capability is available to permit shutdown and maintenance of Hot Shutdown of the unit from locations outside the Control Room. This capability is required in the event Control Room habitability is lost and is consistent with General Design Criterion 19 (reference PNPP Unit 1 Technical Specification Bases 3/4.3.7.4, page B 3/4 3-5).

The LCO for PNPP Technical Specification 3.3.7.4 requires that the Remote Shutdown system instrumentation and controls listed in Table 3.3.7.4-1 shall be Operable in Operational Conditions 1 and 2. Among the items listed in Table 3.3.7.4-1 are the controls for the Reactor Core Isolation Cooling (RCIC) pump discharge to lube oil cooler valve (MPL no. 1E51-FO46), which are identified in the Table as the "RCIC Pump Discharge to L.O. Cooler Valve" controls (reference PNPP Technical Specification page 3/4 3-75). RCIC valve 1E51-FO46 is currently a Normally Closed Motor Operated Valve that is required to automatically open on RCIC system initiation to provide a source of cooling water to the RCIC pump lube oil cooler (reference enclosed RCIC system drawing included in Attachment 1, page 5 of 5). The purpose of the RCIC system is to provide reactor water inventory make-up following loss of coolant flow from the normal Feedwater System supply source during vessel isolation conditions. The RCIC system however, is not classified as an Emergency Core Cooling System (ECCS).

## II. DESCRIPTION OF PROPOSED CHANGE

This amendment request proposes to remove reference to the controls for the RCIC system pump discharge to lube oil cooler valve 1E51-F046 from PNPP Unit 1 Technical Specification 3.3.7.4, Table 3.3.7.4-1. A copy of the marked up technical specification page reflecting the requested change is provided in Attachment 2.

## III. JUSTIFICATION FOR PROPOSED CHANGE

This change is requested in order to implement a design change which would convert RCIC valve 1E51-F046 from a Normally Closed (NC) Motor Operated Valve (MOV) to a Locked Open (LO) manually operated valve. The MOV will be disabled electrically from the Motor Control Center, Control Room and Remote Shutdown Panel. The valve will be locked in the normally open position and may be closed for maintenance purpose by the actuator handwheel only.

Per present design, valve 1E51-F046 has to open automatically from its normally closed position on a RCIC system initiation signal to supply cooling water to the RCIC lube oil cooler. This design is a carry-over from a previous BWR design where the cooling water from the RCIC pump discharge was routed through the lube oil cooler and then on to a barometric condenser. The cooling water was sprayed into the barometric condenser and was then routed to the Main Condenser through the barometric condenser drain. In the previous BWR design, this valve needed to be closed after RCIC system operation to prevent draining water from the Condensate Storage Tank to the Main Condenser. New BWR designs, such as those utilized at Perry, do not utilize a Barometric Condenser. The lube oil cooler outlet is returned to the RCIC pump suction line, making this a closed loop operation. In this design there is no concern of a water drainage problem to the Main Condenser and therefore, there is no need for this valve to close after RCIC system operation. Therefore, valve 1E51-F046 can be a manually operated open valve. This design change was approved by General Electric, PNPP's Nuclear Steam Supply System (NSSS) supplier.

With the new design, the valve will be locked in the normally open position and cooling water to the RCIC lube oil cooler will always be available whenever RCIC pump 1E51-C0001 runs. By converting the valve from a NC MOV to a LO Manual Valve there will be no question of whether or not the valve has opened to allow cooling water to the lube oil cooler. There is no need for the valve to close when the RCIC system is not running because this is a closed loop design. By leaving the valve in the normally open position the operability of the RCIC system is enhanced as it removes one active component from the system and replaces it with a passive valve. RCIC system operation from the Control Room and from the Remote Shutdown Panel as required by General Design Criteria 19 (USAR section 3.1.2.2.10) will not be affected because this will be a LO Manual Valve which requires no remote operation.

Implementation of this design change will reduce periodic preventive maintenance costs, and will eliminate costly diagnostic testing and

Equipment Qualification inspection work. Elimination of this Direct Current (DC) MOV will also reduce station battery load.

#### IV. SIGNIFICANT HAZARDS CONSIDERATION

The standards used to arrive at a determination that a request for amendment involves no significant hazards considerations are included in the Commission's Regulations, 10CFR50.92, which state that the operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any previously evaluated, or (3) involve a significant reduction in a margin of safety.

The proposed amendment has been reviewed with respect to these three factors and it has been determined that the proposed change does not involve a significant hazard because:

- (1) The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

First, the proposed change does not involve a significant increase in the probability of an occurrence of an accident previously evaluated in PNPP's Updated Safety Analysis Report (USAR). The Reactor Core Isolation Cooling (RCIC) system is a standby system during normal plant operation, and is designed as a system to respond to help mitigate transients/accidents that have already occurred. Therefore, changing the RCIC pump discharge to lube oil cooler valve from a normally closed motor-operated valve with controls in the Remote Shutdown Room to a locked open manually operated valve would not cause the probability of an accident previously evaluated in the PNPP USAR Chapter 15, to increase. And since this valve is not a containment or reactor pressure boundary valve during normal operation, the design change does not subject any more piping to reactor pressure and does not increase the probability of a loss of coolant accident (LOCA). Consequently, the proposed change does not increase the probability of any accident previously evaluated.

In addition, the proposed change does not involve a significant increase in the consequences of an accident previously evaluated. The proposed change does not affect the RCIC system operation as described in PNPP's USAR section 5.4.6. By changing the valve to a normally open valve, there is one less active component relied upon for the RCIC system to perform its design function, resulting in a more reliable RCIC system operation. By changing the RCIC pump discharge to lube oil cooler valve to a normally open valve, the list of active components required for the RCIC system to operate is reduced by one. By reducing the number of active components required for the RCIC system to operate, the reliability of the RCIC system is actually enhanced by the proposed change. By changing the valve to a normally open valve, cooling water to the RCIC lube oil cooler will always be available when the RCIC pump runs, and will no

longer depend on the opening of valve 1E51-7046, thereby further enhancing the reliability of the RCIC system as well as reducing the probability of a malfunction of equipment important to safety. Consequently, the proposed change does not involve an increase in the consequences of an accident previously evaluated in PNPP's USAR. Furthermore, there is no resultant increase in post-accident radiological release rate, duration or radionuclide population as a consequence of making the valve normally open or manually operated.

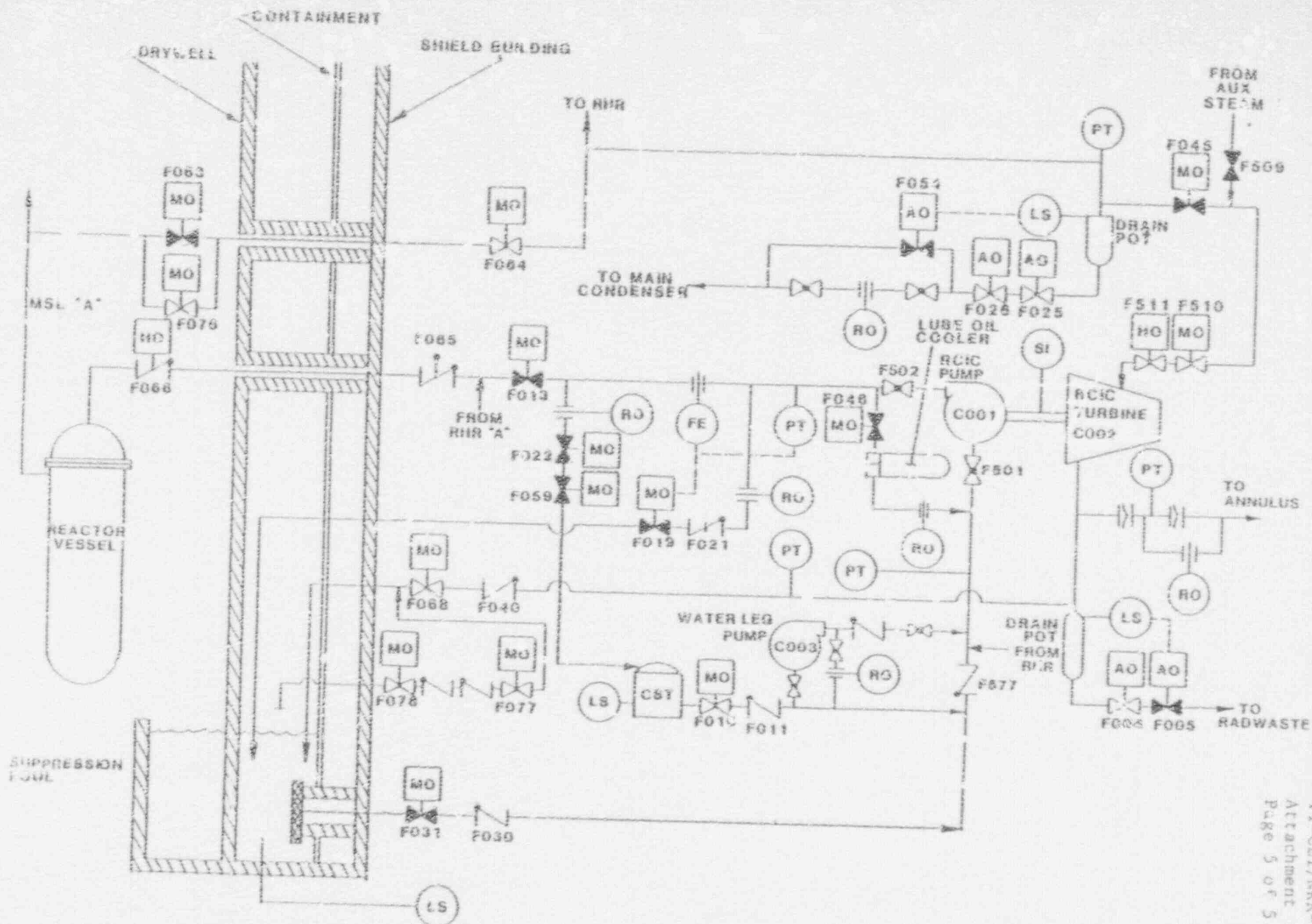
Based upon the above, the proposed change cannot increase the probability or the consequences of any accident previously evaluated.

- (2) The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated in PNPP's USAR because the RCIC system function and operability will remain unaffected by this proposed change. Valve 1E51-7046 will be a normally open valve during RCIC system operation to ensure a supply of cooling water to the lube oil cooler. To prevent inadvertent mispositioning, the valve will be locked in the open position. As a result, no new failure modes are introduced.
- (3) The proposed change does not result in a significant reduction in the margin of safety, because the proposed change has no effect on the function of the RCIC system or its ability to perform its safety function. Consequently, the proposed change still provides adequate assurance that the applicable RCIC safety functions are capable of performing their intended function when required. Therefore, this change does not reduce the margin of safety as defined in the basis for any Technical Specification.

Based upon the above considerations, it has been concluded that the proposed change does not involve significant hazards considerations.

#### ENVIRONMENTAL CONSIDERATION

The proposed Technical Specification change has been reviewed against the criteria of 10CFR51.22 for environmental considerations. As shown above, the proposed change does not involve a significant hazards consideration, nor does it increase the types and amounts of effluents that may be released offsite, nor does it significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, it has been concluded that the proposed Technical Specification change meets the criteria given in 10CFR51.22(c)(9) for a categorical exclusion from the requirement for an Environmental Impact Statement.



RCIC SYSTEM