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

Gentlemen:

Subject: **WNP-2, OPERATING LICENSE NPF-21**
POST FIRE SAFE SHUTDOWN PROCEDURES

This letter describes the Supply System's planned actions relative to the post-fire safe shutdown procedures in the event of a control room evacuation. In the spring of 1994, the Supply System conducted a detailed Quality Assurance audit of the post-fire safe shutdown analysis for WNP-2. This audit identified several areas of potential concern that required additional evaluation. In response to the audit, the Supply System initiated a detailed system by system re-evaluation of the potential impacts of fire-induced spurious signals of safe shutdown and non-safe shutdown systems and components on the ability to achieve safe shutdown. In addition, a time-line evaluation of the required post-fire operator actions and the time-frame to perform these actions was conducted. These evaluations identified several issues that resulted in enhancements of our operating procedures for responding to fires.

The system by system evaluation identified the potential for single spurious actuation of either the suppression pool spray or suppression pool cooling valves in the Residual Heat Removal (RHR) system in the event of a control room fire. The potential exists for fire-induced spurious opening of these valves prior to transfer of control to the remote shutdown panel. Opening of either of these valves with the RHR pumps not running would lead to a drain-down of the system. A subsequent start of the RHR pumps, either automatically or manually by the operator, could result in a water-hammer event.

To address this issue, the operating procedure for responding to fires will be changed to direct that if there is a fire in the control room in a control panel or floor cable raceway, an operator will be immediately dispatched to the remote shutdown panel and alternate remote shutdown panel. This operator will transfer control of the two RHR system valves in each loop to the remote panels by placing four transfer switches in the emergency position. Upon completion of these actions, the operator informs the Control Room of the transfer. After transfer, fire-induced spurious operation of the these valves is precluded.

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The system by system evaluation also identified that a single spurious actuation (closure) of the minimum flow control valve (RHR-V-64B) for the RHR B pump could eventually lead to pump damage if the condition existed for to long with the pump operating. To address this issue, an operator will be immediately dispatched to the remote shutdown panel and alternate remote shutdown panels as described above. This operator will, in addition to transferring control of the RHR 24 and 27 valves, transfer control of RHR-V-64B and open the valve. This ensures availability of a minimum flow path for the pump.

The time-line evaluation effort identified the need to promptly close the Main Steam Isolation Valves (MSIVs) and to trip the Reactor Feedwater System (RFW). MSIV closure is necessary to ensure that the reactor coolant system is isolated following a reactor scram. If the fire results in the need to evacuate the control room, the reactor will be manually scrammed and the MSIVs will be closed prior to evacuation. As a backup measure, the operator that was dispatched to transfer control of the RHR system valves will proceed to the Reactor Protection System (RPS) Electrical Protection Assembly (EPA) breakers. Upon Control Room evacuation, this operator will trip the RPS EPA breakers, thus verifying MSIV closure. Fire damage to the circuits contained in the control room will not result in re-opening of the Main Steam lines.

The need to trip RFW results from the potential for reactor vessel overfill. Overfill can occur when reactor vessel makeup systems that have sufficient flow capacity and discharge pressure are spuriously started or continue to operate after the normal trip logics fail due to fire damage. The evaluation identified that a fire-induced RFW controller failure could cause the vessel to fill rapidly and, with additional fire damage to the high reactor vessel level feedwater turbine trip logic, result in an overfill event.

To address this issue, the operating procedure for responding to fires will be changed to direct that if there is a fire in the control room in a control panel or floor cable raceway, an operator will be immediately dispatched to local RFW panels to await direction to trip the feedwater pump turbines. If the fire results in the need to evacuate the control room, the reactor will be manually scrammed and the condensate and condensate booster pumps tripped. As a backup measure, the local operator will trip the feedwater pump turbines. Fire damage to the circuits contained in the control room can not prevent local tripping of the feedwater pump turbines.

While the above described operator actions are consistent with the intent of our original analysis, and consistent with requirements and regulatory guidance concerning post-fire safe shutdown, these operator actions are considered interim measures at this time and will be implemented prior to restart from the current refueling outage. The Supply System continues to evaluate the fire safe shutdown methodology for WNP-2 to ensure optimum implementation of our post-fire safe shutdown capability. The staff will be kept informed of developments resulting from these evaluations. Formal discussion of the planned permanent resolution of the above identified issues, including schedule, will be initiated prior to the next refueling outage currently scheduled for April, 1995.

Should you have any questions or desire additional information regarding this matter, please call me or D. A. Swank at (509) 377-4563.

Sincerely,

J. V. Parrish (Mail Drop 1023)
Assistant Managing Director, Operations

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