SNUPPS
Standardized Nuclear Unit
Power Plant System

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Executive Director

August 10, 1984

SLNRC 84-0106 FILE: 0278
SUBJ: Fire Protection Review

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Docket Nos.: STN 50-482 and STN 50-483

Reference:
1. SLNRC 82-046, dated November 15, 1982: Same Subject
2. NUREG-0881, Supplement No. 3, dated August 1983: Safety Evaluation Report Related to Operation of Wolf Creek Generating Station, Unit No. 1
3. NUREG-0830, Supplement No. 3, dated May 1984: Safety Evaluation Report Related to Operation of Callaway Plant, Unit No. 1

Dear Mr. Denton:

During a fire protection audit at the Wolf Creek Generating Station the week of July 30, 1984, the NRC audit team, from Region IV of the Office of Inspection and Enforcement (OIE), questioned the assumptions of the control room fire hazards analysis for the SNUPPS plants - Callaway Plant Unit No. 1 and Wolf Creek Generating Station Unit No. 1. The NRC audit team also imposed a new control room fire scenario and requested to review SNUPPS design provisions or procedures which would demonstrate the capability to mitigate the new scenario. This new scenario requires immediate evacuation of the control room by plant operators (who may be allowed to perform one or two quick actions in the course of departing) and causes immediate loss of function or spurious operation (due to fire-induced electrical shorts, etc.) of any or all plant equipment controlled from the control room, i.e., complete and total loss of the control room.

The SNUPPS design and procedural controls for mitigation of postulated control room fires are described in the "SNUPPS Control Room Fire Hazards Analysis" report which was submitted by Reference 1. This analysis clearly states that immediate evacuation and conflagration of the control room or immediate loss of function and/or spurious function of control systems are not assumed in the SNUPPS plants. Based on the

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construction of the cabinets and size of the postulated credible fires, the analysis supports the passage of some small amount of time (greater than four minutes) before the adverse consequences of fire damage occur. Prior to submittal of Reference 1, the assumptions of the SNUPPS analysis were presented in detail and discussed at a meeting with the appropriate review branches of the Office of Nuclear Reactor Regulation (ONRR) on October 19, 1982. The purpose of this meeting was to ascertain the acceptability of the assumptions especially those concerning magnitude of the fire, definition of acceptable repair activities, and time to respond prior to the assumption of fire damage effects. Based on the control room fire hazards analysis and feedback from the meeting with NRC staff, the SNUPPS Utilities modified the design of the SNUPPS plants to incorporate isolation switches to preclude the need to make repairs to certain electrical control circuits. The NRC staff in References 2 and 3 concluded that the SNUPPS Control Room Fire Hazards Analysis was acceptable.

At the recent Wolf Creek Audit, the audit team stated that they did not reject the SNUPPS Control Room Fire Hazards Analysis or the plant procedures which are based on that analysis. However, the audit team indicated that the control room fire concern would be an audit "open item" until such time as Kansas Gas and Electric Company produces a procedure to shut the plant down using a new fire scenario. Since this procedure cannot be produced until a new analysis is performed, hardware modifications are analyzed and operator response requirements are studied, the existing analysis for credible fires has, in effect, been rejected.

A meeting between the SNUPPS Utilities and the NRC staff was held on August 10, 1984 to discuss the postulated control room fire. The NRC staff stated that the concern was not the development of a new procedure but independence of the SNUPPS alternate shutdown equipment from the control room. The NRC staff did not consider the imposition of immediate evacuation and immediate electrical damage resulting from an exposure fire to be a new position and stated that the SNUPPS Control Room Fire Hazards Analysis was not clear regarding the assumption of some time delay before the adverse consequences of fire damage occur. The SNUPPS Utilities stated that the previously approved analysis is clearly based on the assumption of time delay prior to damage and that the imposition of immediate damage represents a new regulatory position for the SNUPPS plants.

To date, the SNUPPS fire protection design has been subjected to a licensing review and four site audits/walkdowns: ONRR, 10/17-20/1983, Callaway; ONRR, 2/7-8/84, Wolf Creek; OIE, 3/84-4/84, Callaway; OIE, 7/30-8/3/84, Wolf Creek. Because of the SNUPPS design provisions for fire protection (for example, separate train-related cable spreading rooms), these extensive NRC reviews have resulted in few plant modifications to meet regulatory positions. Nevertheless, the SNUPPS Utilities agreed to install certain plant design changes (control room isolation switches, additional sprinkler heads in two plant areas,

a control room ventilation system smoke detector and a cable tray fire stop) to resolve NRC review concerns. Even prior to installation of these design changes the overall SNUPPS plant fire protection design provided a level of protection for public health and safety substantially above acceptable levels.

The new control room fire position presented by the audit team at Wolf Creek represents a significant change in the previously approved regulatory position regarding control room fires in the SNUPPS plants. Therefore, the SNUPPS Utilities request that this new regulatory position be reviewed in accordance with the provisions of 10 CFR Part 50.109. In addition, the SNUPPS Utilities request a meeting with appropriate NRC management in accordance with the procedures for disposition of backfitting requirements which have been implemented by the Offices of Inspection and Enforcement and Nuclear Reactor Regulation.

Very truly yours,

Nicholas A. Petrick

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cc:

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