



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 34 TO FACILITY OPERATING LICENSE NO. NPF-42

WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION

DOCKET NO. 50-482

INTRODUCTION

Technical Specification Surveillance Requirements 4.9.6.1 and 4.9.6.2 currently require the Refueling Machine used for movement of fuel assemblies and the Auxiliary Hoist and associated load indicator used for movement of drive rods to be demonstrated operable within 100 hours prior to removal of the Reactor Vessel Head.

By letter dated July 25, 1989, the licensee proposed technical specification changes that would revise Surveillance Requirement 4.9.6.1 to require the Refueling Machine to be demonstrated operable within 100 hours prior to the movement of fuel assemblies within the Reactor Vessel. The proposed change would also revise Surveillance Requirement 4.9.6.2 to require the Auxiliary Hoist to be demonstrated operable within 100 hours prior to the movement of drive rods within the Reactor Vessel.

EVALUATION

The sequence of events for fuel movement during a refueling outage is as follows:

- 1) Strip vessel head of support equipment.
- 2) Detension vessel head studs and remove them to storage area.
- 3) Lift vessel head and place it in its storage location.
- 4) Raise reactor coolant level and refueling pool level up to 23 feet above the fuel assemblies and unlatch the control rods, using the Auxiliary Hoist.
- 5) Level is then raised to 23 feet above the reactor vessel flange and the upper internals are removed from the reactor vessel and placed in its storage location.
- 6) Fuel assemblies are then removed from the reactor vessel using the Refueling Machine (Manipulator Crane).

The above chronology shows that neither the Auxiliary Hoist nor the Refueling Machine are needed prior to lifting the reactor vessel head. When the reactor vessel head studs are being detensioned (step 2), the reactor coolant level is maintained at least one foot below the flange level. Operations during these conditions of reduced reactor coolant system inventory is of concern to the staff and has been addressed in Generic Letters 87-12, "Loss of Residual Heat Removal (RHR) While the Reactor Coolant System (RCS) is Partially Filled," and

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88-17, "Loss of Decay Heat Removal." Both of these generic letters discuss the risks of losing decay heat removal systems during periods of reduced reactor coolant system inventory.

In practice, the operability tests of the Auxiliary Hoist and the Refueling Machine are typically conducted during this time of reduced inventory. This has resulted in 1) delays in lifting the reactor vessel head while performing surveillance requirements, and 2) the likelihood of an extended duration in a reduced inventory situation if problems develop during the operability tests.

Once the reactor vessel head is lifted, the reactor coolant inventory is increased to the control rod unlatch level. This is a considerable increase in coolant inventory and it ameliorates the staff's concern of operating in a reduced inventory. If the operability tests for the Auxiliary Hoist and Refueling Machine were scheduled as proposed by the licensee, they could be performed after lifting the reactor vessel head thus minimizing plant operations in a reduced coolant inventory.

Considering that 1) there is no practical need for performing the subject operability tests prior to lifting the vessel head, and 2) scheduling the operability tests prior to system need minimizes plant operations during reduced coolant inventory and thus increases overall plant safety, the staff finds the licensee's proposal acceptable.

ENVIRONMENTAL CONSIDERATION

The amendment involves a change in a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposures. The Commission has previously issued a proposed finding that the amendment involves no significant hazardous consideration and there has been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: November 1, 1989

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