

April 2, 1990

Docket No. 50-482

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Mr. Bart D. Withers
President and Chief Executive Officer
Wolf Creek Nuclear Operating Corporation
Post Office Box 411
Burlington, Kansas 66839

Dear Mr. Withers:

SUBJECT: WOLF CREEK GENERATING STATION - AMENDMENT NO. 38 TO FACILITY
OPERATING LICENSE NO. NPF-42 (TAC NO. 75929)

The Commission has issued the enclosed Amendment No. 38 to Facility Operating License No. NPF-42 for the Wolf Creek Generating Station. The amendment consists of changes to the Technical Specifications in response to your application dated February 7, 1990 (WM 90-0024).

The amendment revises Technical Specification 4.6.2.3.a.2 by reducing the minimum cooling water flow rate to each containment fan cooler group from 2200 gpm to 1850 gpm during normal operations.

A copy of our related Safety Evaluation is enclosed. The notice of issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

/s/

Douglas V. Pickett, Project Manager
Project Directorate IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

- Amendment No. 38 to License No. NPF-42
- Safety Evaluation

cc w/enclosures:
See next page

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

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President and Chief Executive Officer
Wolf Creek Nuclear Operating Corporation
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Sincerely,

A handwritten signature in cursive script that reads "Douglas V. Pickett".

Douglas V. Pickett, Project Manager
Project Directorate IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 38 to
License No. NPF-42
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. Bart D. Withers
Wolf Creek Nuclear Operating Corporation

Wolf Creek Generating Station
Unit No. 1

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

WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION

DOCKET NO. 50-482

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 38
License No. NPF-42

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Wolf Creek Generating Station (the facility) Facility Operating License No. NPF-42 filed by the Wolf Creek Nuclear Operating Corporation (the Corporation), dated February 7, 1990, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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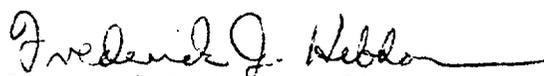
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-42 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 38 , and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated in the license. The Corporation shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


Frederick J. Heddon, Director
Project Directorate IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 2, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 38

FACILITY OPERATING LICENSE NO. NPF-42

DOCKET NO. 50-482

Revise Appendix A Technical Specifications by removing the page identified below and inserting the enclosed page. The revised page is identified by amendment number and contains a marginal line indicating the area of change. The corresponding overleaf page is also provided to maintain document completeness.

REMOVE PAGE

3/4 6-15

INSERT PAGE

3/4 6-15

CONTAINMENT SYSTEMS

CONTAINMENT COOLING SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.3 Two independent groups of containment cooling fans shall be OPERABLE with two fan systems to each group.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

- a. With one group of the above required containment cooling fans inoperable and both Containment Spray Systems OPERABLE, restore the inoperable group of cooling fans to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With two groups of the above required containment cooling fans inoperable and both Containment Spray Systems OPERABLE, restore at least one group of cooling fans to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore both above required groups of cooling fans to OPERABLE status within 7 days of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- c. With one group of the above required containment cooling fans inoperable and one Containment Spray System inoperable, restore the inoperable Containment Spray System to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore the inoperable group of containment cooling fans to OPERABLE status within 7 days of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.3 Each group of containment cooling fans shall be demonstrated OPERABLE:

- a. At least once per 31 days by:
 - 1) Starting each non-operating fan group from the control room, and verifying that each fan group operates for at least 15 minutes, and
 - 2) Verifying a cooling water flow rate of greater than or equal to 1850 gpm to each cooler group.
- b. At least once per 18 months by verifying that on a Safety Injection test signal, the fans start in slow speed or, if operating, shift to slow speed and the cooling water flow rate increases to at least 4000 gpm to each cooler group.

CONTAINMENT SYSTEMS

3/4.6.3 CONTAINMENT ISOLATION VALVES

LIMITING CONDITION FOR OPERATION

3.6.3 The containment isolation valves specified in Table 3.6-1 shall be OPERABLE with isolation times* as shown in Table 3.6-1.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With one or more of the containment isolation valve(s) specified in Table 3.6-1 inoperable, maintain at least one isolation valve OPERABLE in each affected penetration that is open and:

- a. Restore the inoperable valve(s) to OPERABLE status within 4 hours, or
- b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or
- c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange, or
- d. Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.3.1 The containment isolation valves specified in Table 3.6-1 shall be demonstrated OPERABLE prior to returning the valve to service after maintenance, repair or replacement work is performed on the valve or its associated actuator, control or power circuit by performance of a cycling test, and verification of isolation time.

*For valves with excessive leakage, refer to Technical Specification 3.6.1.2.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 38 TO FACILITY OPERATING LICENSE NO. NPF-42
WOLF CREEK NUCLEAR OPERATING CORPORATION
WOLF CREEK GENERATING STATION
DOCKET NO. 50-482

INTRODUCTION

The Wolf Creek Generating Station (WCGS) service water system consists of the Service Water System and the Essential Service Water System. The Service Water System is a nonsafety-related system which provides a source of heat removal for plant auxiliaries that require cooling during normal plant operation and normal plant shutdowns. This system also supplies cooling water to the safety-related Essential Service Water System during normal plant operation. The Essential Service Water System provides a source of heat removal for safety-related equipment during and following Design Basis Accidents.

The WCGS service water system includes four containment fan cooler units that are used for both normal operations and for accident conditions. The nonsafety-related Service Water System supplies cooling water to the fan coolers during normal operations to ensure that the containment air temperature will be maintained less than 120°F per Technical Specification 3.6.1.5. In addition, the safety-related Essential Service Water System supplies cooling water (via a different set of pumps) to the fan coolers during accident conditions to ensure that adequate containment heat removal capacity is available.

A concern of the NRC staff has been the long-term degradation of heat removal systems served by open-cycle service water systems. In particular, Recommended Action III of Generic Letter 89-13 discussed establishment of a routine inspection and maintenance program for open-cycle service water piping and components to ensure that corrosion, erosion, protective coating failure, silting and biofouling cannot degrade the performance of safety-related systems supplied by service water.

Due to both the NRC's concerns and previous commitments made by the licensee regarding the erosion potential of service water system piping, the licensee has scheduled major modifications of the service water systems for the Refuel IV (Spring 1990) outage. The modifications are intended to increase and redistribute the total flow of the Service Water System. The redistribution of flow decreases flow to some components and increases flow to other components initially on standby (i.e., stagnant conditions) in order to minimize Microbiologically Induced Corrosion (MIC). In addition, the modifications are intended to increase back pressure in the system to reduce the potential for previous problems resulting from erosion.

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By letter dated February 7, 1990, the licensee proposed revising Technical Specification 4.6.2.3.a.2 by reducing the minimum flow rate to each group of two containment fan coolers from 2200 gpm to 1850 gpm. The proposed change, which will result from the scheduled system modifications, will only affect flow during normal operations. Flow rates during accident conditions are not being changed.

EVALUATION

Technical Specification 3/4.7.5 prohibits plant operation if the temperature of the ultimate heat sink (used by both the Service Water System and the Essential Service Water System) exceeds 90°F. This limit is needed because the Essential Service Water System components were designed to 95°F. This assumption conservatively assumes that the ultimate heat sink is at the maximum 90°F when the accident occurs and the subsequent heat loads increase the overall heat sink temperature to 95°F.

Flow reductions without loss of heat removal capability are possible because the Service Water System components were also designed assuming an inlet temperature of 95°F. Calculations by the licensee indicate that the current flow rate of 2200 gpm at 95°F can be reduced to 1850 gpm if the inlet water temperature is assumed to be the technical specification limit of 90°F as opposed to the design limit of 95°F. The licensee has also indicated that flow velocities associated with 1850 gpm are greater than 3 feet per second which minimizes sedimentation buildup of entrained particles and corrosion products in piping and components. This, in turn, will help to minimize concerns associated with MIC.

The proposed changes by the licensee will not change the overall heat removal capability of the Service Water System during plant operations and shutdowns. While the flow rates to the containment fan coolers are being reduced, Technical Specification 3.6.1.5 remains unchanged and continues to require that containment air temperatures remain below 120°F. The Essential Service Water System flow rates to the containment fan coolers do not change thus ensuring that accident heat removal capabilities remain unchanged. In addition, the surveillance requirement of Technical Specification 4.6.2.3 will continue to provide assurance that containment air cooler cooling water flow degradation will be identified and corrected in a timely manner consistent with the flow indications obtained. Therefore, based on our review of the licensee's submittal, we find the proposed changes to be acceptable.

ENVIRONMENTAL CONSIDERATION

The amendment involves a change in a requirement with respect to the 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 hazards

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: April 2, 1990

Principal Contributor: D. V. Pickett, PDIV