



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

March 5, 1990

Docket No. 50-482

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. 36 TO FACILITY  
OPERATING LICENSE NO. NPF-42 (TAC NO. 65673)

The Commission has issued the enclosed Amendment No. 36 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 June 19, 1987 (ET 87-0219).

The amendment modifies Technical Specification 3/4.10.4 by replacing references to the Reactor Protection System P-7 Interlock Setpoint (turbine impulse pressure or reactor power greater than 10%) with references to the P-10 Interlock Setpoint (reactor power greater than 10%) during startup and physics tests.

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,

*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. 36 to  
License No. NPF-42
2. Safety Evaluation

cc w/enclosures:  
See next page

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 /s/

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- Safety Evaluation

cc w/enclosures:  
 See next page

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Wolf Creek Nuclear Operating Corporation

Wolf Creek Generating Station  
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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. 36  
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 June 19, 1987, 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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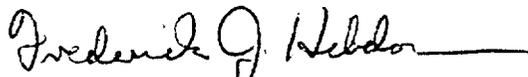
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-42 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 36, 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. Hebdon, 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:        March 5, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 36

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 marginal lines indicating the areas of change. The corresponding overleaf page is also provided to maintain document completeness.

REMOVE PAGE

3/4 10-4

INSERT PAGE

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## SPECIAL TEST EXCEPTIONS

### 3/4.10.4 REACTOR COOLANT LOOPS

#### LIMITING CONDITION FOR OPERATION

---

3.10.4 The limitations of the following requirements may be suspended:

- a. Specification 3.2.3 and 3.4.1.1 - During the performance of startup and PHYSICS TESTS in MODE 1 or 2 provided:
  - 1) The THERMAL POWER does not exceed the P-10 Interlock Setpoint, and
  - 2) The Reactor Trip Setpoints on the OPERABLE Intermediate and Power Range channels are set less than or equal to 25% of RATED THERMAL POWER.
- b. Specification 3.4.1.2 - During the performance of hot rod drop time measurements in MODE 3 provided at least three reactor coolant loops as listed in Specification 3.4.1.2 are OPERABLE.

APPLICABILITY: During operation below the P-10 Interlock Setpoint or performance of hot rod drop time measurements.

#### ACTION:

- a. With the THERMAL POWER greater than the P-10 Interlock Setpoint during the performance of startup and PHYSICS TESTS, immediately open the Reactor trip breakers.
- b. With less than the above required reactor coolant loops OPERABLE during performance of hot rod drop time measurements, immediately place two reactor coolant loops in operation.

#### SURVEILLANCE REQUIREMENTS

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4.10.4.1 The THERMAL POWER shall be determined to be less than P-10 Interlock Setpoint at least once per hour during startup and PHYSICS TESTS.

4.10.4.2 Each Intermediate and Power Range channel, and P-10 Interlock shall be subjected to an ANALOG CHANNEL OPERATIONAL TEST within 12 hours prior to initiating startup and PHYSICS TESTS.

4.10.4.3 At least the above required reactor coolant loops shall be determined OPERABLE within 4 hours prior to initiation of the hot rod drop time measurements and at least once per 4 hours during the hot rod drop time measurements by verifying correct breaker alignments and indicated power availability.

## SPECIAL TEST EXCEPTIONS

### 3/4.10.3 PHYSICS TESTS

#### LIMITING CONDITION FOR OPERATION

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3.10.3 The limitations of Specifications 3.1.1.3, 3.1.1.4, 3.1.3.1, 3.1.3.5, and 3.1.3.6, may be suspended during the performance of PHYSICS TESTS provided:

- a. The THERMAL POWER does not exceed 5% of RATED THERMAL POWER,
- b. The Reactor Trip Setpoints on the OPERABLE Intermediate and Power Range channels are set at less than or equal to 25% of RATED THERMAL POWER, and
- c. The Reactor Coolant System lowest operating loop temperature ( $T_{avg}$ ) is greater than or equal to 541°F.

APPLICABILITY: MODE 2.

#### ACTION:

- a. With the THERMAL POWER greater than 5% of RATED THERMAL POWER, immediately open the Reactor trip breakers.
- b. With a Reactor Coolant System operating loop temperature ( $T_{avg}$ ) less than 541°F, restore  $T_{avg}$  to within its limit within 15 minutes or be in at least HOT STANDBY within the next 15 minutes.

#### SURVEILLANCE REQUIREMENTS

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4.10.3.1 The THERMAL POWER shall be determined to be less than or equal to 5% of RATED THERMAL POWER at least once per hour during PHYSICS TESTS.

4.10.3.2 Each Intermediate and Power Range channel shall be subjected to an ANALOG CHANNEL OPERATIONAL TEST within 12 hours prior to initiating PHYSICS TESTS.

4.10.3.3 The Reactor Coolant System temperature ( $T_{avg}$ ) shall be determined to be greater than or equal to 541°F at least once per 30 minutes during PHYSICS TESTS.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 36 TO FACILITY OPERATING LICENSE NO. NPF-42  
WOLF CREEK NUCLEAR OPERATING CORPORATION  
WOLF CREEK GENERATING STATION  
DOCKET NO. 50-482

INTRODUCTION

By letter dated June 19, 1987 Wolf Creek Nuclear Operating Corporation submitted proposed changes to Technical Specification 3/4.10.4 for the Wolf Creek Generating Station.

Technical Specification (TS) 3/4.10.4, Reactor Coolant Loops, is a special test exception that allows certain requirements to be suspended provided specific criteria are met. One of the requirements that may be suspended is Technical Specification 3.4.1.1, provided 1) the thermal power does not exceed the P-7 Interlock Setpoint, and 2) the Reactor Trip Setpoints on the OPERABLE Intermediate and Power Range channels are set less than or equal to 25% of RATED THERMAL POWER.

This test exception is applicable for operations below the P-7 Interlock Setpoint, or during performance of hot rod drop time measurements. The reactor trip breakers are opened if the thermal power exceeds the P-7 Interlock Setpoint during the performance of the startup and PHYSICS TESTS.

The Surveillance requirements related to THERMAL POWER are as follows:

- 4.10.4.1 The THERMAL POWER must be determined to be less than the P-7 Interlock Setpoint at least once per hour during the startup and PHYSICS TESTS.
- 4.10.4.2 Each intermediate and Power Range channel, and P-7 Interlock shall be subjected to an ANALOG CHANNEL OPERATIONAL TEST within 12 hours prior to initiating startup and PHYSICS TESTS.

The licensee requests that the above references to the P-7 Interlock be changed to reference the P-10 Interlock. An evaluation of this request is presented in this safety evaluation.

EVALUATION

The P-7 Interlock is a Reactor Protection System permissive that unblocks certain Reactor Trips when the indicated thermal power exceeds 10% of the unit rated thermal power. The P-7 interlock status is derived from a bistable circuit that uses the P-10 Interlock and the P-13 Interlock as input signals. Either P-10 or P-13 will actuate the P-7 bistable circuit.

The P-10 Interlock input signal represents the unit thermal power as measured by the neutron flux in the reactor core. The P-10 permissive is actuated when nuclear power is above ten percent on two of four channels. This setpoint ensures that proper overlap exists between intermediate and power ranges before power level is increased. The P-10 Interlock allows manual blocking of the power range (low setpoint) reactor trip, the intermediate range reactor trip, and the intermediate rod stops when the reactor power is above 10% of rated thermal power. The P-10 Interlock is also used as a backup to block the source range reactor trip. When power is reduced below the P-10 setpoint (10% rated thermal power), all of the above mentioned trips and the rod stops are automatically reinstated.

Another indication of unit thermal power is the main turbine first stage impulse pressure. The P-13 Interlock provides a signal when one-of-two main turbine impulse pressure channels indicate an equivalent power greater than 10% of the unit rated thermal power.

The main turbine is kept on the turning gear during operations under TS 3/4.10.4 at the Wolf Creek Generating Station. With the main turbine on the turning gear, the P-13 Interlock will not actuate because the turbine first stage impulse pressure channels indicate zero thermal power. Consequently, P-10 provides the only signal to the P-7 Interlock while the plant is performing this Technical Specification. Since the P-13 Interlock cannot trip the reactor, P-10 may be monitored instead of P-7, and it is not necessary to perform the associated surveillance requirements for P-13. Since the P-13 signal to the P-7 Interlock during operations under TS 3/4.10.4 tests indicates a constant 0% thermal power, the licensee request to perform surveillance only for the P-10 Interlock Setpoint is acceptable.

Any requests for Technical Specification changes that result in an increase in the P-10 Interlock Setpoint must show that the resulting increase in the thermal power threshold during operations under TS 3/4.10.4 does not impact the safe operation of the plant.

#### 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: March 5, 1990

Principal Contributors: Michael E. Waterman  
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