

July 5, 1989

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. 32 TO FACILITY  
OPERATING LICENSE NO. NPF-42 (TAC NO. 72993)

The Commission has issued the enclosed Amendment No. 32 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 April 13, 1989.

The amendment revises Technical Specifications 3.1.3.4 and Figure 3.1-1 to change the fully withdrawn position of the Rod Cluster Control Assemblies to a range of 222 to 231 steps, inclusive.

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:

1. Amendment No. 32 to License No. NPF-42
2. Safety Evaluation

cc w/enclosures:  
See next page

DOCUMENT NAME: 6/16 2

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FHebdon  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555  
July 5, 1989

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*Douglas V Pickett*

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

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cc w/enclosures:  
See next page

Mr. Bart D. Withers  
Wolf Creek Nuclear Operating Corporation

Wolf Creek Generating Station  
Unit No. 1

cc:

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Topeka, Kansas 66612

Attorney General  
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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. 32  
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 April 13, 1989, 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.

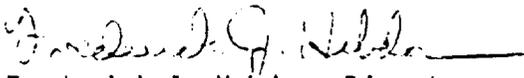
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-42 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 32, 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: July 5, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 32

FACILITY OPERATING LICENSE NO. NPF-42

DOCKET NO. 50-482

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE PAGES

3/4 1-19

3/4 1-22

INSERT PAGES

3/4 1-19

3/4 1-22

## REACTIVITY CONTROL SYSTEMS

### ROD DROP TIME

#### LIMITING CONDITION FOR OPERATION

---

3.1.3.4 The individual full-length shutdown and control rod drop time from the physical fully withdrawn position shall be less than or equal to 2.2 seconds from beginning of decay of stationary gripper coil voltage to dashpot entry with:

- a.  $T_{avg}$  greater than or equal to 551°F, and
- b. All reactor coolant pumps operating.

APPLICABILITY: MODES 1 and 2.

#### ACTION:

- a. With the rod drop time of any full-length rod determined to exceed the above limit, restore the rod drop time to within the above limit prior to proceeding to MODE 1 or 2.
- b. With the rod drop times within limits but determined with three reactor coolant pumps operating, operation may proceed provided THERMAL POWER is restricted to less than or equal to 66% of RATED THERMAL POWER.

#### SURVEILLANCE REQUIREMENTS

---

4.1.3.4 The rod drop time of full-length rods shall be demonstrated through measurement prior to reactor criticality:

- a. For all rods following each removal of the reactor vessel head,
- b. For specifically affected individual rods following any maintenance on or modification to the Control Rod Drive System which could affect the drop time of those specific rods, and
- c. At least once per 18 months.

REACTIVITY CONTROL SYSTEMS

SHUTDOWN ROD INSERTION LIMIT

LIMITING CONDITION FOR OPERATION

---

3.1.3.5 All shutdown rods shall be fully withdrawn.

APPLICABILITY: MODES 1\* and 2\*#.

ACTION:

With a maximum of one shutdown rod not fully withdrawn, except for surveillance testing pursuant to Specification 4.1.3.1.2, within 1 hour either:

- a. Fully withdraw the rod, or
- b. Declare the rod to be inoperable and apply Specification 3.1.3.1.

SURVEILLANCE REQUIREMENTS

---

4.1.3.5 Each shutdown rod shall be determined fully withdrawn:

- a. Within 15 minutes prior to withdrawal of any rods in Control Bank A, B, C, or D during an approach to reactor criticality, and
- b. At least once per 12 hours thereafter.

---

\*See Special Test Exceptions Specifications 3.10.2 and 3.10.3.

#With  $K_{eff}$  greater than or equal to 1.

REACTIVITY CONTROL SYSTEMS

CONTROL ROD INSERTION LIMITS

LIMITING CONDITION FOR OPERATION

---

---

3.1.3.6 The control banks shall be limited in physical insertion as shown in Figure 3.1-1.

APPLICABILITY: MODES 1\* and 2\*#.

ACTION:

With the control banks inserted beyond the above insertion limits, except for surveillance testing pursuant to Specification 4.1.3.1.2:

- a. Restore the control banks to within the limits within 2 hours, or
- b. Reduce THERMAL POWER within 2 hours to less than or equal to that fraction of RATED THERMAL POWER which is allowed by the bank position using the above figure, or
- c. Be in at least HOT STANDBY within 6 hours.

SURVEILLANCE REQUIREMENTS

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4.1.3.6 The position of each control bank shall be determined to be within the insertion limits at least once per 12 hours except during time intervals when the Rod Insertion Limit Monitor is inoperable, then verify the individual rod positions at least once per 4 hours.

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\*See Special Test Exceptions Specifications 3.10.2 and 3.10.3.

#With  $K_{eff}$  greater than or equal to 1.

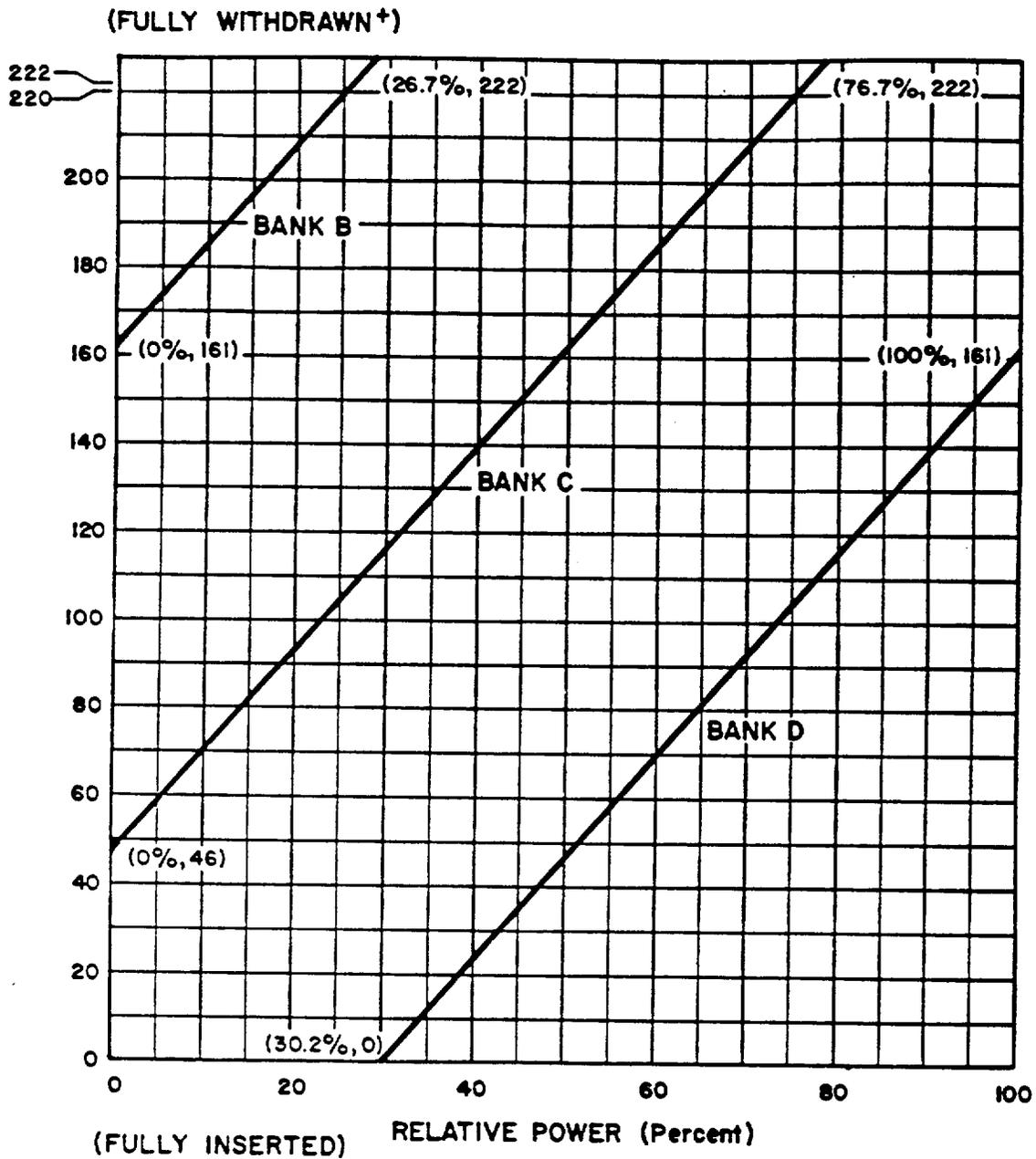


FIGURE 3.1-1

ROD BANK INSERTION LIMIT VERSUS  
THERMAL POWER-FOUR LOOP OPERATION

<sup>†</sup>Fully Withdrawn shall be the condition where control rods are at a position within the interval of  $\geq 222$  and  $\leq 231$  steps withdrawn.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 32 TO FACILITY OPERATING LICENSE NO. NPF-42

WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION

DOCKET NO. 50-482

INTRODUCTION

By letter dated April 13, 1989 the licensee proposed to revise Technical Specifications 3.1.3.4 and Figure 3.1-1 to change the fully withdrawn position of the Rod Cluster Control Assemblies (RCCAs) for Wolf Creek Generating Station to a range of 222 to 231 steps, inclusive.

Wolf Creek Generating Station (WCGS) Technical Specifications require all shutdown rods to be fully withdrawn and all control rod banks to be withdrawn in accordance with Figure 3.1-1. Past operational history at WCGS has shown that long periods of operation with the control rods withdrawn to 228 steps has led to control rod wear by fretting against the upper internals guide surface due to flow induced vibration. In order to minimize the effect of this control rod wear, axial repositioning of the control rods can be used to eliminate further degradation at locations where control rod wear has been observed. This Technical Specification change would allow axial repositioning between 222 steps and 231 steps withdrawn.

EVALUATION

The licensee proposed the change to minimize localized RCCA wear at the top of the control rods. The proposed technical specification change will allow operation with the RCCAs positioned between 222 steps and 231 steps withdrawn as compared to the current fixed position of 228 steps. With the RCCAs positioned at 222 steps withdrawn, the tips of the RCCAs will be approximately 3 steps (1.875 inches) into the active fuel region. Since the top region of the core has such low worth, the resultant power distribution perturbations are expected to be negligible and should be accommodated with available margin. As expected, calculations by the licensee show that operation with the rods positioned at 222 steps withdrawn will have minimal impact on axial peak power and axial offset over the life of the fuel cycle.

The licensee has examined the impact of the RCCA repositioning for both transient and loss of coolant accident (LOCA) conditions. Mechanically, the RCCA repositioning will not effect the operation of the control rod drive mechanisms. Since the technical specification proposal does not change the control rod drop time limit of 2.2 seconds, the transient analysis found in the Updated Safety Analysis Report (USAR) remains valid.

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The small and large break LOCA analyses were also evaluated to determine the impact of this technical specification change. For the small break analysis, credit is taken for control rod insertion. Since the maximum rod drop time has not changed due to the RCCA repositioning, there will be no effect on the USAR small break LOCA analysis. The large break analysis does not take credit for control rod insertion. During a large break LOCA, the reactor is assumed to be brought to subcritical by the presence of voids in the core caused by the rapid depressurization of the reactor coolant system. Since credit is not taken for the control rods, there will be no effect on the USAR large break analysis for RCCA repositioning.

Other licensed facilities have requested similar technical specification changes which the staff has found acceptable. Based on the staff's evaluation of the licensee's submittal, the staff agrees that the proposed change has negligible effect and is, therefore, acceptable.

#### ENVIRONMENTAL CONSIDERATION

The amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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: July 5, 1989

Principal Contributor: Douglas V. Pickett