

August 22, 1991

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

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Dear Mr. Withers:

SUBJECT: WOLF CREEK GENERATING STATION - AMENDMENT NO. 48 TO FACILITY
OPERATING LICENSE NO. NPF-42 (TAC NO. 80432)

The Commission has issued the enclosed Amendment No. 48 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 May 14, 1991 (ET 91-0076).

The amendment revises Technical Specification 5.3.2, "Control Rod Assemblies," to allow the use of the hafnium and/or silver-indium-cadmium as the absorber material in the rod cluster control assemblies.

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

Sincerely,

Original Signed By

Douglas V. Pickett, Project Manager
Project Directorate IV-2
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 48 to NPF-42
- 2. Safety Evaluation

cc w/enclosures:
See next page

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August 22, 1991

cc w/enclosures:

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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. 48
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 May 14, 1991, 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. 48 , 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



George F. Dick, Jr., Acting Director
Project Directorate IV-2
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 22, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 48

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 area of change.

REMOVE

5-6

INSERT

5-6

DESIGN FEATURES

5.3 REACTOR CORE

FUEL ASSEMBLIES

5.3.1 The core shall contain 193 fuel assemblies with each fuel assembly normally containing 264 fuel rods clad with Zircaloy-4 except that limited substitution of fuel rods by filler rods consisting of Zircaloy-4 or stainless steel or by vacancies may be made if justified by a cycle-specific reload analysis. Each fuel rod shall have a nominal active fuel length of 144 inches. The initial core loading shall have a maximum nominal enrichment of 3.10 weight percent U-235. Reload fuel shall be similar in physical design to the initial core loading and shall have a maximum enrichment of 4.50 weight percent U-235.

CONTROL ROD ASSEMBLIES

5.3.2 The core shall contain 53 full-length and no part-length control rod assemblies. The full-length control rod assemblies shall contain a nominal 142 inches of absorber material. All control rod assemblies shall be hafnium, silver-indium-cadmium, or a mixture of both types. All control rods shall be clad with stainless steel tubing.

5.4 REACTOR COOLANT SYSTEM

DESIGN PRESSURE AND TEMPERATURE

5.4.1 The Reactor Coolant System is designed and shall be maintained:

- a. In accordance with the Code requirements specified in Section 5.2 of the FSAR, with allowance for normal degradation pursuant to the applicable Surveillance Requirements,
- b. For a pressure of 2485 psig, and
- c. For a temperature of 650°F, except for the pressurizer which is 680°F.

VOLUME

5.4.2 The total volume of the Reactor Coolant System, including pressurizer and surge line, is 12,135 ± 100 cubic feet at a nominal T_{avg} of 557°F.

5.5 METEOROLOGICAL TOWER LOCATION

5.5.1 The meteorological tower shall be located as shown on Figure 5.1-1.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 48 TO FACILITY OPERATING LICENSE NO. NPF-42

WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION

DOCKET NO. 50-482

1.0 INTRODUCTION

By application dated May 14, 1991, the Wolf Creek Nuclear Operating Corporation (the licensee) requested changes to the Technical Specifications (Appendix A to Facility Operating License No. NPF-42) for the Wolf Creek Generating Station. The proposed changes would revise Technical Specification 5.3.2 "Control Rod Assemblies," to allow the use of a silver-indium-cadmium (Ag-In-Cd) as the neutron absorbing material in control rods. Technical Specification 5.3.2 currently specifies hafnium as the neutron absorbing material. The proposed revision would allow the use of the hafnium control rods, Ag-In-Cd control rods, or a mixture of both types.

2.0 DISCUSSION

Wolf Creek Generating Station currently uses hafnium as the absorber material in rod cluster control assemblies (RCCAs). Prior to the use of hafnium, Ag-In-Cd was the material most widely used in RCCAs for Westinghouse plants. Wolf Creek was originally designed to use Ag-In-Cd RCCAs, but changed to hafnium prior to the initial fuel loading. Ag-In-Cd has continued to be used in many plants, and as such, a large amount of operating experience has been gained with Ag-In-Cd used as an absorber material. Ag-In-Cd has proven to be an effective absorber material and RCCAs with Ag-In-Cd have shown very good operating results.

3.0 EVALUATION

Hafnium and Ag-In-Cd RCCAs are interchangeable. The physical dimensions of the RCCAs are identical as are the materials of the spider assembly and the rodlet cladding. The rod drop times and the rod worths for the two absorber types are expected to be equivalent. As additional assurance, both the rod drop times and rod worths are verified by testing during startup tests following each refueling outage. The use of Ag-In-Cd absorber material in RCCAs is consistent with all assumptions of the transient and accident analyses of record for Wolf Creek since the RCCAs will meet the same mechanical, nuclear and thermal hydraulic limits as the original RCCAs. Since they are equivalent, a mixture of absorber types is permitted with no adverse impact on plant safety.

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3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Kansas state official was notified of the proposed issuance of the amendment. The state official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC 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 exposure. 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 (56 FR 27051). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 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.

5.0 CONCLUSION

The Commission 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Douglas V. Pickett, PDIV-2, NRR

Date: August 22, 1991