WOLF CREEK
NUCLEAR OPERATING CORPORATION

Bart D. Withers
President and
Chief Executive Officer

July 26, 1988

WM 88-0196

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station P1-137
Washington, D. C. 20555

Subject: Docket No. 50-482: Revision to Technical Specification 5.3.1 - Fuel Assemblies

Gentlemen:

The purpose of this letter is to transmit an application for amendment to Facility Operating License No. NPF-42 for Wolf Creek Generating Station (WCGS) Unit No. 1. This license amendment request proposes revising Technical Specification 5.3.1, Fuel Assemblies, to allow the replacement of a limited number of fuel rods with filler rods or vacancies if such replacement is acceptable based on the results of a cycle-specific reload analysis.

A complete Safety Evaluation and No Significant Hazards Consideration determination are provided as Attachments I and II respectively. The proposed changes to the Technical Specifications are provided as Attachment III.

In accordance with 10 CFR 50.91, a copy of this application, with attachments is being provided to the designated Kansas state official. Enclosed is a check (No. 1918) for the $150.00 application fee required by 10 CFR 170.21.

In order to accommodate scheduled fuel inspection activities, Wolf Creek Nuclear Operating Corporation requests NRC approval of this submittal prior to the shutdown of WCGS for its third refueling outage which is currently scheduled to begin on September 29, 1988. In any case, the proposed revision to the Wolf Creek Generating Station Technical Specifications will be fully implemented within 30 days of formal Nuclear Regulatory Commission approval.

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If you have any questions concerning this matter, please contact me or D. L. Maynard of my staff.

Very truly yours,

Bart D. Withers
President and
Chief Executive Officer

BDW/jad

Enclosure

Attachments: I - Safety Evaluation
II - Addressing the Standards in 10 CFR 50.92
III - Proposed Technical Specification Change

cc: G. W. Allen (KDHE), w/a
B. L. Bartlett (NRC), w/a
D. D. Chamberlain (NRC), w/a
R. D. Martin (NRC), w/a
P. W. O'Connor (NRC), w/a (2)

STATE OF KANSAS)
) SS
COUNTY OF COFFEY)

Bart D. Withers, of lawful age, being first duly sworn upon oath says that he is President and Chief Executive Officer of Wolf Creek Nuclear Operating Corporation; that he has read the foregoing document and knows the content thereof; that he has executed that same for and on behalf of said Corporation with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By B D Withers
Bart D. Withers
President and Chief Executive Officer

SUBSCRIBED and sworn to before me this 26 day of July, 1988.

Marline Heathman
Notary Public

Expiration Date August 4, 1990

ATTACHMENT I

SAFETY EVALUATION

SAFETY EVALUATION

Description of Amendment Request

This license amendment request proposes to revise Technical Specification 5.3.1, Fuel Assemblies, to allow the replacement of a limited number of fuel rods with filler rods or vacancies if such replacement is acceptable based on the results of a cycle-specific reload analysis.

Evaluation

Technical Specification 5.3.1 currently states that each fuel assembly shall contain 264 fuel rods clad with Zircaloy-4. The proposed license amendment will allow for a reduction in the number of fuel rods per assembly and replacement of defective rods with filler rods consisting of either Zircaloy-4 or stainless steel, or with vacancies. The ability to replace defective rods with filler rods or vacancies will permit utilization of the energy in the remaining non-leaking rods of the effected fuel assemblies. In addition, the proposed amendment allows added flexibility to provide for improved fuel performance by permitting the timely removal of individual fuel rods which are found to be leaking during a refueling outage.

In general, substitution of a limited number of fuel rods with filler rods or vacancies has a negligible effect on core physics parameters and consequently on the safety analysis. A safety evaluation for the replacement of fuel rods will be made on a cycle-specific basis as part of the reload safety evaluation process. The core reload analysis is performed to ensure that the safety criteria and design limits, including peaking factors and core average linear heat rate effects, are not exceeded. An explicit model with each discrete rod identified is utilized to predict core performance based on actual core inventory. The core reload methodology does not change when filler rods or vacancies are used. The filler rods or vacancies in a fuel assembly that is used in a core design will be modeled as required for the specific replacement.

Based on the above discussions and the considerations presented in Attachment II, the proposed revision to the WCGS Technical Specifications does not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report; or create a possibility for an accident or malfunction of a different type than any previously evaluated in the safety analysis report; or reduce the margin of safety as defined in the basis for any technical specification. Therefore, the proposed revision does not adversely affect or endanger the health or safety of the general public or involve a significant safety hazard.

ATTACHMENT II

ADDRESSING THE STANDARDS IN 10 CFR 50.92

ADDRESSING THE STANDARDS IN 10 CFR 50.92

This license amendment request proposes to revise Technical Specification 5.3.1, Fuel Assemblies, to allow the replacement of a limited number of fuel rods with filler rods or vacancies if such replacement is acceptable based on the results of a cycle-specific reload analysis. The following sections discuss proposed changes under the three 10 CFR 50.92 standards:

Standard 1 - Involve a Significant Increase in the Probability or Consequences of an Accident Previously Evaluated.

This license amendment request will allow the utilization of filler rods or vacancies in the fuel assemblies at Wolf Creek Generating Station. These fuel assemblies will meet the same mechanical, nuclear and thermal hydraulic limits as the other fuel assemblies. A cycle-specific reload analysis will confirm that the use of a fuel assembly with filler rods or vacancies in a core design does not result in an existing design limit being exceeded. Therefore, this license amendment request does not involve a significant increase in the probability or consequences of an accident previously evaluated.

Standard 2 - Create the Possibility of a New or Different Kind of Accident From Any Accident Previously Evaluated.

A fuel assembly with filler rods or vacancies satisfies the same design criteria as other fuel assemblies and since only a single fuel assembly will be moved at a time during fuel reconstitution activities, the consequences of an accident are bounded by the presently postulated fuel handling accident. Therefore, this license amendment request does not create the possibility of a new or different kind of accident from any accident previously evaluated.

Standard 3 - Involve a Significant Reduction in a Margin of Safety.

The use of a fuel assembly with filler rods or vacancies will not result in any existing design limit being exceeded. These reconstituted fuel assemblies meet essentially the same design requirements, satisfy the same design criteria as the other fuel assemblies and the use of reconstituted assemblies will not result in a change to existing safety criteria or design limits. Therefore, this change does not reduce the margin of safety.

Based on the above discussions and those presented in Attachment I, it has been determined that the requested Technical Specification revision does not involve a significant increase in the probability or consequences of an accident or other adverse condition over previous evaluations; or create the possibility of a new or different kind of accident over previous evaluations; or involve a significant reduction in a margin of safety. Therefore, the requested license amendment does not involve a significant hazards consideration.

ATTACHMENT III

PROPOSED TECHNICAL SPECIFICATION CHANGE