

# WOLF CREEK

NUCLEAR OPERATING CORPORATION

Robert C. Hagan  
Vice President Nuclear Assurance

November 5, 1992

NA 92 0089

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

Subject: Docket No. 50-482: Proposed Revision to Technical  
Specification Surveillance Requirements 4.2.1.1 for  
Axial Flux Difference Monitoring

Gentlemen:

Enclosed is an application for amendment to Facility Operating License No. NPF-42 for Wolf Creek Generating Station (WCGS), Unit No. 1. This proposed amendment would modify Technical Specification Surveillance Requirement 4.2.1.1 to eliminate monitoring and logging requirements that are not applicable to the method of axial flux difference control used at WCGS.

Attachments I through III provide the Safety Evaluation, Significant Hazards Consideration Determination, and Environmental Impact Determination supporting the requested change. Attachment IV provides the revised Technical Specification page. The proposed revision will be fully implemented within 30 days of formal Nuclear Regulatory Commission approval.

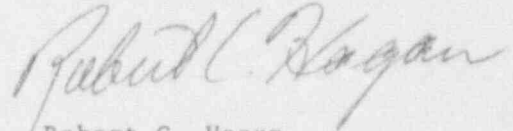
In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the designated Kansas State Official.

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If you have any questions concerning this matter, please contact me at (316) 364-8831 Ext. 4553 or Mr. Kevin J. Moles of my staff at (316) 364-8831 Ext. 4565.

Very truly yours,



Robert C. Hagan  
Vice President  
Nuclear Assurance

RCH/jra

Attachments: I - Safety Evaluation  
II - Significant Hazards Consideration Determination  
III - Environmental Impact Determination  
IV - Proposed Technical Specification Changes

cc: G. W. Allen (KDHE), w/a  
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STATE OF KANSAS     )  
                          ) SS  
COUNTY OF COFFEY    )

Robert C. Hagan, of lawful age, being first duly sworn upon oath says that he is Vice President Nuclear Assurance 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 Robert C. Hagan  
Robert C. Hagan  
Vice President  
Nuclear Assurance

SUBSCRIBED and sworn to before me this 4<sup>TH</sup> day of November, 1992.

Mary E. Gifford.  
Notary Public

Expiration Date 12/09/95



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ATTACHMENT I  
SAFETY EVALUATION

## SAFETY EVALUATION

### DESCRIPTION OF CHANGE

This license amendment request proposes to revise Technical Specification 3/4.2.1, "Axial Flux Difference," Surveillance Requirement 4.2.1.1 to eliminate requirement 4.2.1.1 a.2) regarding monitoring the indicated Axial Flux Difference (AFD) after restoring the AFD Monitor Alarm to OPERABLE status and to change the requirements for monitoring and logging indicated AFD when the AFD Monitor Alarm is inoperable. The proposed change would require monitoring and logging the indicated AFD once per hour for the entire period that the AFD Monitor Alarm is inoperable. The present requirement to monitor and log the indicated AFD at 30-minute intervals after 24 hours would be removed.

### EVALUATION

Wolf Creek Generating Station (WCGS) currently uses the Relaxed Axial Offset Control (RAOC) method of axial power distribution control. Use of RAOC was approved by the NRC in Amendment No. 1, dated April 22, 1986, to the WCGS operating license. Prior to use of RAOC, the method of axial power distribution employed was Constant Axial Offset Control (CAOC).

The CAOC method required the AFD to be maintained within a target band about a target flux difference. Whenever AFD was outside the target band, penalty time was accumulated at specified rates depending upon the thermal power level. The amount of penalty time accumulated during the previous 24-hour period was used to further restrict plant operation until the AFD could be returned to within acceptable operating limits. The penalty time was normally computed automatically by the plant computer. The plant computer provided an essentially continuous determination of penalty time for the previous 24 hours and provided warnings to the plant operators via the AFD Monitor Alarm. The CAOC Technical Specification surveillance requirements included provisions to manually monitor and log the indicated AFD during periods when the AFD Monitor Alarm was inoperable or unable to determine the penalty time for the previous 24 hours. If the AFD Monitor Alarm program had been stopped and then restarted, the accumulated penalty time had the potential of being inaccurate for the subsequent 24-hour period.

Existing Surveillance Requirement 4.2.1.1 a. 2), which requires monitoring the indicated AFD at least once per hour for the first 24 hours after restoring the AFD Monitor Alarm to operable status, is a vestige of the CAOC surveillance requirement that was intended to accumulate AFD data during the period that the process computer was rebuilding its 24-hour data base. Since the RAOC method of AFD control does not employ a penalty time associated with a target band, there is no need to manually accumulate this information after the AFD Monitor Alarm is returned to operable status.

Existing Surveillance Requirement 4.2.1.1 b., which applies when the AFD Monitor Alarm is inoperable, includes a provision to monitor and log indicated AFD at least once per hour for the first 24 hours and at least once per 30 minutes thereafter. There is no technical basis for increasing the frequency of monitoring and logging after 24 hours. The once-per-hour frequency applicable for the first 24 hours would continue to be adequate for detecting AFD values that are approaching the limits of the allowed operational envelope. Wolf Creek Nuclear Operating Corporation (WCNOC) places high priority on maintaining the AFD Monitor Alarm operable; therefore, the amount of time that monitoring and logging will be required will be minimized.

#### CONCLUSIONS

Based on the above evaluation, the proposed deletion of Surveillance Requirement 4.2.1.1 a.2) is essentially an administrative change to the Technical Specifications since the requirement is not required for a plant that has implemented RAOC.

In addition, the removal of the increased frequency (once per 30 minutes) for AFD monitoring and logging in Surveillance Requirement 4.2.1.1 b. will result in a default frequency of once per hour which is adequate for AFD monitoring while the AFD Monitor Alarm is inoperable.



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ATTACHMENT II

SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

#### SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

This proposed amendment has been reviewed per the standards provided in 10 CFR 50.92. Each standard is discussed separately below.

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

The proposed removal of the requirement for monitoring the AFD once per hour for the first 24 hours after restoring the AFD Monitor Alarm to operable status is essentially administrative in nature. The requirement is a vestige of a method of power distribution control, the CAOC method, that is no longer used at WCGS.

Because this requirement is not part of the current power distribution control methodology, its deletion will have no impact on the consequences of any accidents previously evaluated. Also, the power distribution Technical Specifications are intended to assure that the assumptions used in transient and accident analyses are satisfied should an accident or transient occur; and the proposed changes do not involve plant modifications or the imposition of new performance requirements on plant systems or components. Therefore, changes to these Technical Specifications would have no impact on the probability of occurrence of a previously evaluated accident.

The proposed removal of the 30-minute monitoring and logging requirement after the first 24 hours of operation with an inoperable AFD Monitor Alarm would not involve an increase in the consequences of an accident previously evaluated because the monitoring and logging activity would still be required to be performed once per hour. Continuing the monitoring and logging functions on an hourly schedule after the first 24 hours would continue to provide the same assurance that power distribution limits were maintained in accordance with the accident analyses. Therefore, the consequences of previously evaluated accidents would not be increased. Also, as noted in the previous paragraph, changes to the AFD Technical Specifications would have no effect on the probability of occurrence of a previously evaluated accident.

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

The Technical Specification requirements for power distribution limits are intended to assure that the assumptions used in the accident and transient analyses are satisfied should an accident or transient occur. These requirements are of a monitoring nature, and corrective actions are specified if the monitored conditions exceed established limits. The proposed amendment does not involve design changes, hardware modifications nor changes to the method by which any safety-related plant system performs its safety function. Therefore, changes to these



Technical Specifications would not create the possibility of a new or different accident from any previously evaluated.

Standard III - Involve a Significant Reduction in the Margin of Safety.

The proposed removal of the requirement to monitor the indicated AFD once per hour for the first 24 hours after restoring the AFD Monitor Alarm to operable status would not reduce a margin of safety because the analyses that were performed in support of the implementation of RAOC at WCGS showed that the AFD limits under RAOC provide an acceptable margin of safety and, once the AFD Monitor Alarm is operable, the plant operators will be warned if that margin is degraded. The RAOC method of power distribution control does not require 24 hours of monitoring of indicated AFD in order to provide this warning. An AFD Monitor Alarm that is "operable" in accordance with the Technical Specification definition is capable of performing its specified function and has all of its necessary support systems capable of providing their necessary functions.

The proposed removal of the 30-minute frequency for monitoring and logging indicated AFD after the first 24 hours of operation with an inoperable AFD Monitor Alarm would not result in a significant reduction of a margin of safety because the requirement to monitor and log on an hourly frequency would provide the same margin to safety as available during the first 24 hours. A reduction in the frequency of monitoring indicated AFD would represent a decrease in the time margin available to the operator to prevent AFD from approaching the RAOC limits; however, the decrease is not significant because the margin available during the first 24 hours, using the hourly frequency, would not be reduced.

Based on the above, the requested Technical Specification changes do not involve a significant increase in the probability or consequences of a previously evaluated accident, create the possibility of a new or different kind of accident, or involve a significant reduction in the margin of safety. Therefore, the requested license amendment does not involve a significant hazards consideration in accordance with 10 CFR 50.92.

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ATTACHMENT III  
ENVIRONMENTAL IMPACT DETERMINATION

#### ENVIRONMENTAL IMPACT DETERMINATION

This amendment request meets the criteria specified in 10 CFR 51.22(c)(9) as specified below:

(i) the amendment involves no significant hazards consideration.

As demonstrated in Attachment II, the proposed change do not involve any significant hazards consideration.

(ii) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

The proposed changes do not involve generation or release of effluents from the plant. The changes impact surveillance requirements for reactor power distribution used to assure the operation of the plant within its safety design basis. Therefore, the proposed changes will have no effect on normal plant effluents and there will be no change in the types or amounts of any effluents released offsite.

(iii) there is no significant increase in individual or cumulative occupational radiation exposure.

The proposed changes to surveillance requirements will have no effect on general levels of radiation present in the plant; nor will additional quantities of radioactive materials be generated as a result of the proposed changes. Therefore, there will be no increase in individual or cumulative occupational radiation exposure associated with this proposed change.

Based on the above, it is concluded that there will be no impact on the environment resulting from this change. The change meets the criteria specified in 10 CFR 51.22 for a categorical exclusion from the requirements of 10 CFR 51.22 relative to specific environmental assessment by the Commission.