

September 6, 1990

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: ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT -
WOLF CREEK GENERATING STATION, UNIT NO. 1 (TAC NO. 68507)

Enclosed is a copy of an "Environmental Assessment and Finding of No Significant Impact" for your information. This assessment relates to your application dated June 20, 1988, and as supplemented by letters dated May 22, June 8, and August 1, 1990, for an amendment to change the pressure/temperature limits and PORV limits for the cold overpressure mitigation system of the Wolf Creek Generating Station, Unit No. 1 Technical Specifications.

This assessment has been forwarded to the Office of the Federal Register for publication.

Sincerely,

Original Signed By

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

Enclosure:
Environmental Assessment

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cc:

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UNITED STATES NUCLEAR REGULATORY COMMISSIONWOLF CREEK NUCLEAR OPERATING CORPORATIONDOCKET NO. 50-482ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

The U. S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating License No. NPF-42, issued to Wolf Creek Nuclear Operating Corporation (the licensee), for operation of the Wolf Creek Generating Station, Unit No. 1, located in Coffey County, Kansas.

ENVIRONMENTAL ASSESSMENTIdentification of Proposed Action

The proposed amendment would revise the provisions in the Technical Specifications (TS) relating to the primary coolant heatup and cooldown pressure/temperature limit curves and the Cold Overpressure Mitigation System (COMS) setpoint curve effective up to seven Effective Full Power Years (EFPY). These changes are required by 10 CFR Part 50 Appendix H and Technical Specification 4.4.9.1.2.

The proposed action is in accordance with the licensee's application for amendment dated June 20, 1988, and as supplemented by letters dated May 22, June 8, and August 1, 1990.

The Need for the Proposed Action

The heatup and cooldown limit curves define the range of acceptable operations for the reactor. The redefined limits ensure that the margin

or protection against non-ductile failure (margin lost due to progressive in-service irradiation embrittlement of the reactor pressure vessel) is maintained by Appendix G requirements of 10 CFR Part 50. This is accomplished by limiting the maximum allowable RCS pressures for operations at low RCS temperatures to compensate for the reduced ductility of the pressure vessel. This reduction in maximum allowable pressure (leading to lower pressure stresses for the vessel) for RCS T-avg less than 350°F reduces the probability or possibility that the composite minimum Appendix G limits for the reactor pressure vessel will be challenged or exceeded.

The COMS pressure operated relief valve (PORV) pressure/temperature setpoint limit curve is used to ensure that the PORV operational setpoint pressures are set such that a PORV actuation during a cold overpressure transient will prevent the RCS pressure from exceeding the composite 10 CFR Part 50 Appendix G pressure limits.

Appendix H of 10 CFR Part 50 requires that surveillance capsules be periodically removed from the reactor vessel and examined to predict radiation induced embrittlement of the reactor vessel. The revisions proposed to the TS as discussed above, have resulted from examination of the "U" capsule removed from the Wolf Creek reactor vessel during the first refueling outage.

Environmental Impacts of the Proposed Action

The Commission has completed its evaluation of the proposed revisions to the TS and concludes that these revisions are acceptable because the licensee has used acceptable methodologies that conform to the requirements of Appendices G and H to 10 CFR Part 50. The major impact of the revised curves

is a redefining of the range of acceptable operations. The revised range of operations compensates for inservice radiation induced embrittlement of the Wolf Creek reactor pressure vessel in a conservative manner. The revised curves are more restrictive (i.e., decreases the maximum allowed reactor coolant system pressure at any heatup or cooldown rate for the same measured reactor coolant system temperature). Incorporating the revised curves into the Wolf Creek TS, along with the change to limit the reactor coolant system heatup rate to less than or equal to 60°F per hour for indicated reactor coolant system T-avg less than 200°F, will maintain the margin of safety required to prevent non-ductile failure of the reactor pressure vessel as required by Appendix G of 10 CFR Part 50 for all modes of plant operation. Therefore, the proposed changes do not increase the probability or consequences of accidents, no changes are being made in any types of any effluents that may be released offsite, and there is no significant increase in the allowable individual or cumulative occupational radiation exposure. Accordingly, the Commission concludes that this proposed action would result in no significant radiological environmental impact.

The Notice of Consideration of Issuance of Amendment and Opportunity for Hearing in connection with this action was published in the Federal Register on August 19, 1988 (53 FR 31777). No request for hearing or petition for leave to intervene was filed following this notice.

With regard to potential nonradiological impacts, the proposed change to the TS involves systems located within the restricted area as defined in 10 CFR Part 20. It does not affect nonradiological plant effluents and has no other environmental impact. Therefore, the Commission concludes that there are

no significant nonradiological environmental impacts associated with the proposed amendment.

Alternative to the Proposed Action

Since the Commission concluded that there are no significant environmental effects that would result from the proposed action, any alternatives with equal or greater environmental impacts need not be evaluated.

The principal alternative would be to deny the requested amendment. This would not reduce environmental impacts of plant operation and would result in reduced operational flexibility.

Alternative Use of Resources

This action does not involve the use of any resources not previously considered in the Final Environmental Statement for the Wolf Creek Generating Station, Unit No. 1, dated June 1982 (NUREG-0878).

Agencies and Persons Consulted

The NRC staff reviewed the licensee's request and did not consult other agencies or persons.

FINDING OF NO SIGNIFICANT IMPACT

The Commission has determined not to prepare an environmental impact statement for the proposed license amendment.

Based upon the foregoing environmental assessment, we conclude that the proposed action will not have a significant effect on the quality of the human environment.

For further details with respect to this action, see the application for amendment dated June 20, 1988, and as supplemented on May 22, June 8, and August 1, 1990, which is available for public inspection at the Commission's

Public Document Room, the Gelman Building, 2120 L Street, N.W., Washington, D.C.
and at the Emporia State University, William Allen White Library, 1200 Commercial
Street, Emporia, Kansas 66801 and Washburn University School of Law Library,
Topeka, Kansas 66621.

Dated at Rockville, Maryland, this 6th day of September 1990.

FOR THE NUCLEAR REGULATORY COMMISSION

George F. Dick Jr.

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