

March 23, 1999

Mr. Otto L. Maynard  
President and Chief Executive Officer  
Wolf Creek Nuclear Operating Corporation  
Post Office Box 411  
Burlington, Kansas 66839

SUBJECT: WOLF CREEK GENERATING STATION - AMENDMENT NO. 122 TO FACILITY  
OPERATING LICENSE NO. NPF-42 (TAC NO. MA4600)

Dear Mr. Maynard:

The Commission has issued the enclosed Amendment No. 122 to Facility Operating License No. NPF-42 for the Wolf Creek Generating Station. The amendment changes the Technical Specifications (TS) in response to your application dated May 15, 1997, as supplemented by letters dated June 30, August 5, August 28, September 24, October 16, October 23, November 24, December 2, December 17, and December 21, 1998 and January 15, 1999.

The amendment revises TS 4.7.3b, "Plant Systems - Component Cooling Water System - Surveillance Requirements," by deleting the requirement to perform the specified surveillances during shutdown. The corresponding Bases were also changed.

This amendment is being issued prior to issuance of the Improved Standard Technical Specifications (ISTS) conversion to support its immediate implementation (i.e., prior to implementation of the ISTS).

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,  
Original Signed By  
Kristine M. Thomas, Project Manager  
Project Directorate IV-2  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-482

Enclosures: 1. Amendment No. 122 to NPF-42  
2. Safety Evaluation

cc w/encls: See next page

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DOCUMENT NAME: WCA4600.AMD

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DATE	3 / 10 / 99	3 / 10 / 99	3 / 10 / 99	3 / 15 / 99

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*Please make  
changes in  
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Mr. Otto L. Maynard

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March 23, 1999

cc w/encls:

Jay Silberg, Esq.  
Shaw, Pittman, Potts & Trowbridge  
2300 N Street, NW  
Washington, D.C. 20037

Regional Administrator, Region IV  
U.S. Nuclear Regulatory Commission  
611 Ryan Plaza Drive, Suite 1000  
Arlington, Texas 76011

Senior Resident Inspector  
U.S. Nuclear Regulatory Commission  
P. O. Box 311  
Burlington, Kansas 66839

Chief Engineer  
Utilities Division  
Kansas Corporation Commission  
1500 SW Arrowhead Road  
Topeka, Kansas 66604-4027

Office of the Governor  
State of Kansas  
Topeka, Kansas 66612

Attorney General  
Judicial Center  
301 S.W. 10th  
2nd Floor  
Topeka, Kansas 66612

County Clerk  
Coffey County Courthouse  
Burlington, Kansas 66839

Vick L. Cooper, Chief  
Radiation Control Program  
Kansas Department of Health  
and Environment  
Bureau of Air and Radiation  
Forbes Field Building 283  
Topeka, Kansas 66620

Chief Operating Officer  
Wolf Creek Nuclear Operating Corporation  
P. O. Box 411  
Burlington, Kansas 66839

Supervisor Licensing  
Wolf Creek Nuclear Operating Corporation  
P.O. Box 411  
Burlington, Kansas 66839

U.S. Nuclear Regulatory Commission  
Resident Inspectors Office  
8201 NRC Road  
Steelman, Missouri 65077-1032



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION

DOCKET NO. 50-482

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 122  
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 15, 1997, as supplemented by letters dated June 30, August 5, August 28, September 24, October 16, October 23, November 24, December 2, December 17, and December 21, 1998 and January 15, 1999 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. 122, 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

*Kristine M. Thomas*

Kristine M. Thomas, Project Manager  
Project Directorate IV-2  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: March 23, 1999

ATTACHMENT TO LICENSE AMENDMENT NO. 122

FACILITY OPERATING LICENSE NO. NPF-42

DOCKET NO. 50-482

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain marginal lines indicating the areas of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE

3/4 7-11  
B 3/4 7-4

INSERT

3/4 7-11  
B 3/4 7-4

## PLANT SYSTEMS

### 3/4.7.3 COMPONENT COOLING WATER SYSTEM

#### LIMITING CONDITION FOR OPERATION

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3.7.3 At least two independent component cooling water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With only one component cooling water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

#### SURVEILLANCE REQUIREMENTS

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4.7.3 At least two component cooling water loops shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) servicing safety-related equipment that is not locked, sealed, or otherwise secured in position is in its correct position. In addition, an ANALOG CHANNEL OPERATIONAL TEST of the surge tank level and flow instrumentation which provide automatic isolation of the non-nuclear safety-related portion of the system shall be performed at least once per 31 days;
- b. At least once per 18 months, by verifying that:
  - 1) Each automatic valve servicing safety-related equipment or isolating the non-nuclear safety-related portion of the system actuates to its correct position on a Safety Injection and on a simulated High Flow and Low Surge Tank Level test signal, and
  - 2) Each OPERABLE Component Cooling Water System pump starts automatically on a Safety Injection and Loss-of-Power test signal.
- c. At least once per 18 months during shutdown, by performing a CHANNEL CALIBRATION of the surge tank level and flow instrumentation which provide automatic isolation of the non-nuclear safety-related portion of the system.

## PLANT SYSTEMS

### 3/4.7.4 ESSENTIAL SERVICE WATER SYSTEM

#### LIMITING CONDITION FOR OPERATION

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3.7.4 At least two independent essential service water (ESW) loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With only one ESW loop OPERABLE, restore at least two ESW loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

#### SURVEILLANCE REQUIREMENTS

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4.7.4 At least two ESW loops shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) servicing safety-related equipment that is not locked, sealed, or otherwise secured in position is in its correct position. In addition, at least once per 31 days, an ANALOG CHANNEL OPERATIONAL TEST of the differential pressure instrumentation for automatic isolation of the ESW to the air compressors shall be performed;
- b. At least once per 18 months during shutdown, by verifying that:
  - 1) Each automatic valve servicing safety-related equipment or isolating the non-nuclear safety-related portion of the system actuates to its correct position on a Loss-of-Power or Safety Injection test signal and on a simulated High Differential Pressure test signal, and
  - 2) Each Essential Service Water System pump starts automatically on a Safety Injection, Low Suction Pressure (AFW pumps), and Loss-of-Power test signal.
- c. At least once per 18 months during shutdown, by performing a CHANNEL CALIBRATION of the differential pressure instrumentation for automatic isolation of ESW to the air compressors.

## PLANT SYSTEMS

### BASES

#### 3/4.7.1.5 MAIN STEAM LINE ISOLATION VALVES

The OPERABILITY of the main steam line isolation valves ensures that no more than one steam generator will blowdown in the event of a steam line rupture. This restriction is required to: (1) minimize the positive reactivity effects of the Reactor Coolant System cooldown associated with the blowdown, and (2) limit the pressure rise within containment in the event the steam line rupture occurs within containment. The OPERABILITY of the main steam isolation valves within the closure times of the Surveillance Requirements are consistent with the assumptions used in the safety analyses.

#### 3.4.7.1.6 STEAM GENERATOR ATMOSPHERIC RELIEF VALVES

The operability of the main steamline atmospheric relief valves (ARV's) ensures that reactor decay heat can be dissipated to the atmosphere in the event of a steam generator tube rupture and loss of offsite power and that the Reactor Coolant System can be cooled down for Residual Heat Removal System operation. The number of required ARV's assures that the subcooling can be achieved, consistent with the assumptions used in the steam generator tube rupture analysis, to facilitate equalizing pressures between the Reactor Coolant System and the faulted steam generator. For cooling the plant to RHR initiation conditions, only one ARV is required. In this case, with three ARV's operable, if the single failure of one ARV occurs and another ARV is assumed to be associated with the faulted steam generator, one ARV remains available for required heat removal.

Each ARV is equipped with a manual block valve (in the auxiliary building) to provide a positive shutoff capability should an ARV develop leakage. Closure of the block valves of all ARV's because of excessive seat leakage does not endanger the reactor core; consistent with plant accident and transient analyses, decay heat can be dissipated with the main steamline safety valves or a block valve can be opened manually in the auxiliary building and the ARV can be used to control release of steam to the atmosphere. For the steam generator tube rupture event, primary to secondary leakage can be terminated by depressurizing the Reactor Coolant System with the pressurizer power operated relief valves.

#### 3/4.7.1.7 MAIN FEEDWATER ISOLATION VALVES

The OPERABILITY of the main feedwater isolation valves: (1) provides a pressure boundary to permit auxiliary feedwater addition in the event of a main steam or feedwater line break; (2) limits the RCS cooldown and mass and energy releases for secondary line breaks inside containment; and (3) mitigates steam generator overfill events such as a feedwater malfunction, with protection provided by feedwater isolation via the steam generator high-high level trip signal. The OPERABILITY of the main feedwater isolation valves within the closure times of the surveillance requirements is consistent with the assumptions used in the safety analysis.

#### 3/4.7.2 DELETED



## PLANT SYSTEMS

### BASES

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#### 3/4.7.3 COMPONENT COOLING WATER SYSTEM

The OPERABILITY of the Component Cooling Water System ensures that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the safety analyses. Each independent CCW loop contains two 100% capacity pumps and, therefore, the failure of one pump does not affect the OPERABILITY of that loop. Surveillance Requirement 4.7.3b. verifies proper operation of the CCW valves and pumps on an actuation signal. The CCW System is a normally operating system that cannot be fully actuated as part of routine testing during normal operation. The 18 month Frequency is based on the need to perform this surveillance under the conditions that apply during a unit outage and the potential for an unplanned transient if the Surveillance were performed with the reactor at power.

#### 3/4.7.4 ESSENTIAL SERVICE WATER SYSTEM

The OPERABILITY of the Essential Service Water System ensures that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the safety analysis.

#### 3/4.7.5 ULTIMATE HEAT SINK

The limitations on the ultimate heat sink level and temperature ensure that sufficient cooling capacity is available either to: (1) provide normal cooldown of the facility or (2) mitigate the effects of accident conditions within acceptable limits.

The limitations on minimum water level and maximum temperature are based on providing a 30-day cooling water supply from the Essential Service Water pumps to safety-related equipment without exceeding its design basis temperature and is consistent with the recommendations of Regulatory Guide 1.27, "Ultimate Heat Sink for Nuclear Plants," March 1974.

#### 3/4.7.6 CONTROL ROOM EMERGENCY VENTILATION SYSTEM

The OPERABILITY of the Control Room Emergency Ventilation System ensures that: (1) the ambient air temperature does not exceed the allowable temperature for continuous-duty rating for the equipment and instrumentation cooled by this system, and (2) the control room will remain habitable for operations personnel during and following all credible accident conditions. Operation of the system with the heaters operating to maintain low humidity using automatic control for at least 10 continuous hours in a 31-day period is sufficient to reduce the buildup of moisture on the charcoal adsorbers and HEPA filters. The OPERABILITY of this system in conjunction with control room design provisions is based on limiting the radiation exposure to personnel occupying the control room to 5 rems or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criterion 19 of Appendix A, 10 CFR Part 50. ANSI N510-1975 and N510-1980 will be used as procedural guides for surveillance testing. Surveillance testing provides assurance that system and component performances continue to be in accordance with performance specifications for Wolf Creek Unit 1, including applicable parts of ANSI N509-1976.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 122 TO FACILITY OPERATING LICENSE NO. NPF-42

WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION

DOCKET NO. 50-482

**1.0 INTRODUCTION**

By letter dated May 15, 1997, as supplemented by letters dated June 30, August 5, August 28, September 24, October 16, October 23, November 24, December 2, December 17, and December 21, 1998 and January 15, 1999 Wolf Creek Nuclear Operating Corporation (WCNOC, the licensee) requested changes to the Technical Specifications (TS) (Appendix A to Facility Operating License No. NPF-42) for the Wolf Creek Generating Station (WCGS). The proposed changes would revise TS 4.7.3b, "Plant Systems - Component Cooling Water System - Surveillance Requirements," by deleting the requirement to perform the specified surveillances during shutdown. The corresponding Bases would also be changed.

**2.0 SYSTEM DESCRIPTION**

As described in the Wolf Creek Updated Safety Analysis Report (USAR), Section 9.2.2, "Cooling System for Reactor Auxiliaries," the component cooling water system (CCWS) provides cooling water to several auxiliary components during normal plant operation and shutdown, and also provides cooling water to several engineered safety features systems during a loss-of-coolant or main steam line break accident. The CCWS is closed loop and provides an intermediate barrier between service water systems and potentially radioactive systems to reduce the possibility of an uncontrolled release of radioactivity. The CCWS consists of two separate 100-percent-capacity trains, and includes an isolable loop, common to both trains, that serves non-essential equipment. Each of the two trains includes a heat exchanger, two 100-percent-capacity CCW pumps, a surge tank and a chemical addition tank. The installation of two full capacity pumps per train is provided to avoid shutdown which could otherwise be required by the TSs due to prolonged maintenance or repair of a CCW pump. Only one pump per train is required for train operability.

**3.0 EVALUATION**

TS 4.7.3b currently reads:

At least two component cooling water loops shall be demonstrated OPERABLE:

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At least once per 18 months during shutdown, by verifying that:

- 1) Each automatic valve servicing safety-related equipment or isolating the non-nuclear safety-related portion of the system actuates to its correct position on a Safety Injection and on a simulated High Flow and Low Surge Tank Level test signal, and
- 2) Each OPERABLE Component Cooling Water System pump starts automatically on a Safety Injection and Loss-of-Power test signal.

By letter dated May 15, 1997, the licensee proposed a conversion of the current TSs for Wolf Creek Generating Station to the Improved Technical Specifications (ITSs). The requested change in the January 15, 1999, application was also included in the ITS submittal. When TS 4.7.3b testing was last conducted, a portion of the required testing was not completed for one pump in each train of the CCWS. Since only one CCW pump per train is required for the CCW system to be operable, the Limiting Condition for Operation (LCO) of TS 3.7.3 regarding CCW operability is currently satisfied. However, if there is a problem with one of the two operable CCW pumps, the licensee would have to enter the LCO, which allows 72 hours to restore the system to operable status. If the LCO could not be satisfied in 72 hours, the plant would have to initiate a shutdown.

To avoid this potential shutdown, the licensee proposes to remove the words "during shutdown" from TS 4.7.3b. In addition, the licensee proposes to add the following text to TS Bases 3/4.7.3:

Surveillance Requirement [SR] 4.7.3b verifies proper operation of the CCW valves and pumps on an actuation signal. The CCW system is a normally operating system that cannot be fully actuated as part of routine testing during normal operation. The 18 month frequency is based on the need to perform this surveillance under the conditions that apply during a unit outage and the potential for an unplanned transient if the surveillance were performed with the reactor at power.

Details for performing SRs are more appropriately specified in the TS Bases, the USAR, station procedures, the technical requirements manual, or other controlled programmatic documents. The governing procedures ensure proper implementation of SRs. As indicated in Generic Letter (GL) 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," allowing this procedural control is consistent with the vast majority of other SRs that do not dictate station conditions for surveillances. Prescriptive procedural information in a TS is unlikely to contain all procedural considerations necessary for station operators to complete the requirements, and referral to station procedures is required in any event.

The staff has determined that removal of the words "during shutdown" from TS 4.7.3b is acceptable because this requirement will be added to TS Bases 3/4.7.3, which will maintain an effective level of regulatory control. The proposed Bases text allows the licensee to perform a portion of the test at power if the licensee determines that this can be accomplished without

compromising the goal of the requirement, which is to avoid an unnecessary plant shutdown. This change will allow the licensee to satisfy SR 4.7.3b (for the two inoperable pumps) without shutting down the plant.

#### 4.0 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.

#### 5.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32 and 51.35, an environmental assessment and finding of no significant impact was published in the FEDERAL REGISTER on March 23, 1999 (64 FR 14018).

Accordingly, based upon the environmental assessment, the Commission has determined that issuance of this amendment will not have a significant effect on the quality of the human environment.

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

Principal Contributor: A. Hansen

Date: March 23, 1999

UNITED STATES NUCLEAR REGULATORY COMMISSION

WOLF CREEK NUCLEAR OPERATING CORPORATION

DOCKET NO. 50-482

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U.S. Nuclear Regulatory Commission (Commission) has issued Amendment No. 122 to Facility Operating License No. NPF-42 issued to the Wolf Creek Nuclear Operating Corporation (WCNOC or the licensee), which revised the technical specifications for operation of the Wolf Creek Generating Station (WCGS) located in Coffey County, Kansas.

The amendment is effective as of the date of issuance.

The amendment revises Technical Specification (TS) 4.7.3b., "Plant Systems - Component Cooling Water System - Surveillance Requirements," by deleting the requirement to perform the specified surveillances during shutdown.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment.

Notice of Consideration of Issuance of Amendment and Opportunity for Hearing in connection with this action was published in the FEDERAL REGISTER on October 5, 1998 (63 FR 53471), February 26, 1999 (64 FR 9546), and March 1, 1999 (64 FR 10028). No request for a hearing or petition for leave to intervene was filed following these notices.

The Commission has prepared an Environmental Assessment related to the action and has determined not to prepare an environmental impact statement. Based upon the

environmental assessment, the Commission has concluded that the issuance of this amendment will not have a significant effect on the quality of the human environment.

For further details with respect to the action see (1) the application for amendment dated May 15, 1997, as supplemented by letters dated June 30, August 5, August 28, September 24, October 16, October 23, November 24, December 2, December 17, and December 21, 1998 and January 15, 1999, (2) Amendment No. 122 to Facility Operating License No. NPF-42, and (3) the Commission's related Safety Evaluation and Environmental Assessment. All of these items are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, and at the local public document rooms located 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. A copy of items (2) and (3) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, D.C., 20555, Attention: Director, Division of Licensing Project Management.

Dated at Rockville, Maryland, this 23rd day of March 1999.

FOR THE NUCLEAR REGULATORY COMMISSION



Kristine M. Thomas, Project Manager  
Project Directorate IV-2  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation