

May 28, 1998

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. 117 TO FACILITY  
OPERATING LICENSE NO. NPF-42 (TAC NO. MA1713)

Dear Mr. Maynard:

The Commission has issued the enclosed Amendment No. 117 to Facility Operating License No. NPF-42 for the Wolf Creek Generating Station. The amendment consists of changes to the Technical Specifications (TS) in response to your application dated May 8, 1998, as supplemented by letter dated May 11, 1998. The May 11, 1998, supplement was needed to address the exigent circumstances surrounding the request.

The amendment adds a new Action Statement to TS 3/4.3.2, Table 3.3-3, Functional Unit 7.b., Refueling Water Storage Tank Level - Low-Low Coincident With Safety Injection.

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 Reactor Projects III/IV  
Office of Nuclear Reactor Regulation

Docket No. 50-482

Enclosures: 1. Amendment No. 117 to NPF-42  
2. Safety Evaluation

cc w/encls: See next page

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*w/ comments  
See a table b  
sheet and  
page plots*

*comments reviewed  
w/ C.S. and incorporated  
M. Maynard 5/17/98*

*CP-1*

Mr. Otto L. Maynard

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May 28, 1998

cc w/encl:

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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. 117  
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 8, 1998, as supplemented by letter dated May 11, 1998, 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. 117, 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, Project Manager  
Project Directorate IV-2  
Division of Reactor Projects III/IV  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: May 28, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 117

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 3-18  
3/4 3-21a

INSERT

3/4 3-18  
3/4 3-21a

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
<b>6. Auxiliary Feedwater</b>					
a. Manual Initiation	3(1/pump)	1/pump	1/pump	1, 2, 3	24
b. Automatic Actuation Logic and Actuation Relays (SSPS)	2	1	2	1, 2, 3	29
c. Automatic Actuation Logic and Actuation Relays (BOP ESFAS)	2	1	2	1, 2, 3	21
d. Stm. Gen. Water Level-Low-Low					
1) Start Motor-Driven Pumps	4/stm. gen.	2/stm. gen. in any operating stm. gen.	3/stm. gen. in each operating stm. gen.	1, 2, 3	28*
2) Start Turbine-Driven Pump	4/stm. gen.	2/stm. gen. in any 2 operating stm. gen.	3/stm. gen. in each operating stm. gen.	1, 2, 3	28*
e. Safety Injection - Start Motor-Driven Pumps	See Item 1. above for all Safety Injection initiating functions and requirements.				
f. Loss-of-Offsite Power - Start Turbine-Driven Pump	2	1	2	1,2,3	22

WOLF CREEK - UNIT 1

3/4 3-17

Amendment No. 43

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
6. Auxiliary Feedwater (Continued)					
g. Trip of All Main Feedwater Pumps - Start Motor-Driven Pumps	4-(2/pump)**	2-(1/pump in same separation)	3	1	19***
h. Auxiliary Feedwater Pump Suction Pressure-Low (Transfer to ESW)	3	2	2	1, 2, 3	15*
7. Automatic Switchover to Containment Sump					
a. Automatic Actuation Logic and Actuation Relays (SSPS)	2	1	2	1, 2, 3, 4	14
b. RWST Level - Low-Low Coincident With Safety Injection	4	2	3	1, 2, 3, 4	30
	See Item 1. above for Safety Injection initiating functions and requirements.				
8. Loss of Power					
a. 4 kV Bus Undervoltage -Loss of Voltage	4/Bus	2/Bus	3/Bus	1, 2, 3, 4	19*
b. 4 kV Bus Undervoltage -Grid Degraded Voltage	4/Bus	2/Bus	3/Bus	1, 2, 3, 4	19*

WOLF CREEK - UNIT 1

3/4 3-18

Amendment No. 29, 43, 117

TABLE 3.3-3 (Continued)

ACTION STATEMENTS (Continued)

- b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 2 hours for surveillance testing of other channels per Specification 4.3.2.1.

- ACTION 20** - With less than the Minimum Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock is in its required state for the existing plant condition, or apply Specification 3.0.3.
- ACTION 21** - With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.
- ACTION 22** - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within 6 hours and in at least HOT SHUTDOWN within the following 6 hours.
- ACTION 23** - With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or declare the associated valve inoperable and take the action required by Specification 3.7.1.5.
- ACTION 24** - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, declare the affected auxiliary feedwater pump inoperable and take the ACTION required by Specification 3.7.1.2.
- ACTION 25** - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, declare the affected diesel generator and off-site power source inoperable and take the ACTION required by Specification 3.8.1.1.
- ACTION 26** - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or initiate and maintain operation of the Control Room Emergency Ventilation System. During operation in MODE 5 and 6, the provisions of Specification 3.0.4 are not applicable.

TABLE 3.3-3 (Continued)

ACTION STATEMENTS (Continued)

- ACTION 27 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, be in at least HOT STANDBY within 12 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is OPERABLE.
- ACTION 28 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:
- a. The inoperable channel is placed in the tripped condition within 6 hours.
  - b. The minimum channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 4 hours for surveillance testing of other channels per Specification 4.3.2.1.
- ACTION 29 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 6 hours or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1 provided the other channel is operable.
- ACTION 30 - With the number of OPERABLE channels one less than the Total Number of Channels, operation may proceed provided the following conditions are satisfied:
- a. The inoperable channel is placed in the bypass condition within 6 hours.
  - b. The minimum channels OPERABLE requirement is met; however, one additional channel may be tripped for up to 4 hours for surveillance testing per Specification 4.3.2.1.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 117 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 8, 1998, as supplemented by letter dated May 11, 1998, 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 add a new Action Statement to TS 3/4.3.2, Table 3.3-3, Functional Unit 7.b., Refueling Water Storage Tank Level (RWST) - Low-Low Coincident With Safety Injection, by adding a new Action Statement. Specifically, new Action Statement 30, which will replace existing ACTION 16, and would be entered for an inoperable RWST analog channel, allows for 6 hours to place an inoperable RWST analog channel in a bypassed condition and allows for surveillance testing of an additional analog channel of Functional Unit 7.b., by placing the channel in a tripped condition for up to 4 hours.

2.0 BACKGROUND

Action Statement 16 for Functional Unit 7.b. requires that with the number of operable channels one less than the total number of channels, operation may proceed provided the inoperable channel is placed in the bypassed condition and the minimum channels operable requirement is met. An RWST analog channel can be placed in a bypassed condition by removing the bistable card. However, removal of the bistable card prohibits the performance of the analog channel operational test (ACOT). The ACOT for Functional Unit 7.b. is required by Surveillance Requirement 4.3.2.1. The quarterly ACOT is performed by declaring the RWST analog channel inoperable and placing the channel in the test position. WCNOG personnel identified on May 5, 1998, during the procedure brief for performance of surveillance procedure STS IC-201, "Analog Channel Operational Test 7300 Process Instrumentation Protection Set 1 (Red)," that the RWST level channel in the test position actually places the channel in a "tripped" condition. As such, prior surveillance testing of these normally de-energized channels has been performed in a manner which is contrary to Action Statement 16 requirements for an inoperable channel.

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### 3.0 EVALUATION

During the injection phase of a loss of coolant accident (LOCA), the RWST is the source of water for all emergency core cooling system (ECCS) pumps. A low low-1 level in the RWST, coincident with a safety injection (SI) signal, provides protection against a loss of water for the ECCS pumps and indicates the end of the injection phase of the LOCA. The RWST is equipped with four level transmitters. These transmitters provide a two-out-of-four logic to initiate the protection function actuation. Automatic switchover occurs only if the RWST low low-1 level signal is coincident with an SI signal. This prevents accidental switchover during normal operation. Accidental switchover could damage ECCS pumps if they are attempting to take suction from empty containment recirculation sumps.

The RWST Level Low-Low Coincident With Safety Injection function (Functional Unit 7.b.) must be operable in MODES 1, 2, 3, and 4 when there is a potential for a LOCA to occur, to ensure a continued supply of water for the ECCS pumps. Functional Unit 7.b. provides actuation of switchover to the containment recirculation sumps. This function requires the bistables to energize to perform their required action. The failure of up to two channels will not prevent the operation of this function. Placing a failed channel in the tripped condition could result in a premature switchover to the sump prior to the injection of the minimum volume from the RWST. Placing the inoperable channel in a bypass condition results in a two-out-of-three logic configuration, which satisfies the requirement to allow another failure without disabling actuation of the switchover when required. Restoring the channel to operable status or placing the inoperable channel in the bypass condition within 6 hours is sufficient to ensure that the function remains operable, and minimizes the time that the function may be in a partial trip condition. The 6-hour completion time in new Action Statement 30 is justified in WCAP-10271-P-A, Supplement 2, Revision 1, "Evaluation of Surveillance Frequencies and Out of Service Times of the Engineered Safety Systems Actuation System." If the channel cannot be placed in the bypass condition, Technical Specification 3.0.3 would be entered.

Wolf Creek does not have the capability to perform surveillance testing on a routine basis with an RWST analog channel in a bypassed condition. These channels are not designed for testing in the bypassed condition for Action Statement 16 to be applicable. New Action Statement 30 would allow 6 hours to perform surveillance testing once the channel was declared inoperable before it would have to be placed in a bypassed condition. With one channel inoperable and the minimum channels operable requirement met, one additional channel may be placed in trip for up to 4 hours for surveillance testing.

Based on the above, the staff finds the proposed changes to the Wolf Creek Nuclear Generating Station TS to be acceptable.

### 4.0 DESCRIPTION OF EXIGENT CIRCUMSTANCES

On May 5, 1998, WCNOC control room personnel were reviewing the technical specifications associated with the refueling water storage tank (RWST) level, instrumentation and the performance of surveillance procedure, STS IC-201, "Analog Channel Operational Test 7300

Process Instrumentation Protection Set 1 (Red).” During that review, control room personnel identified that when the RWST level channel is taken into the test position, the channel is actually put in a tripped condition. However, the associated Technical Specification Action Statement (TS 3.3-2, Functional Unit 7.b, Action 16) for an inoperable channel indicates that the inoperable channel must be placed in the bypass condition. There is no time limit allowance for placing an inoperable channel in the bypass condition associated with Action 16. Since this surveillance would render the channel inoperable, and there is no way of performing the surveillance with the channel in the bypass condition, WCNOG personnel determined that a technical specification amendment would be needed to allow the surveillance test to be completed.

The RWST level instrumentation analog channel operational test (STS IC-201) was last performed on February 5, 1998. The surveillance is required by Technical Specification Surveillance Requirement 4.3.2.1 to be performed on a quarterly basis. Taking into account the extra 25 percent allowance from Technical Specification 4.0.2, this surveillance would become overdue, rendering the channel inoperable, on May 31, 1998. The first surveillance test (STS IC-202) for an RWST level channel would become overdue on May 29, 1998, and another channel surveillance test (STS IC-203) will become overdue on May 30, 1998. With two channels being inoperable, entry into Technical Specification 3.0.3 would be required, forcing shutdown of Wolf Creek Generating Station (WCGS). The time between initial discovery of this event (May 5, 1998) and the date when a forced shutdown of WCGS (May 30, 1998) is less than 30 days; therefore, there is not enough time for normal processing of an amendment.

WCNOG believes that, given the circumstances surrounding the discovery of this event and the complexity of the instrumentation function, WCNOG has made a best effort to submit a timely application for this amendment. WCNOG has not delayed any actions in order to create the need for exigency and therefore take advantage of the procedure described in 10 CFR 50.91 for exigent amendments. WCNOG believes that this exigent amendment is unavoidable and meets the criterion of 10 CFR 50.91(a)(6) for an exigent request.

The staff finds the licensee acted in a timely manner, the licensee has not abused the exigent provisions and there is not sufficient time to process this amendment request in the routine manner as described in 10 CFR 50.91 without causing an unnecessary plant shutdown.

#### **5.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION**

The Commission has made a final determination that the amendment involves no significant hazards consideration. Under the Commission's regulations in 10 CFR 50.92(c), this means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

The staff evaluated the proposed changes against the above standards as required by 10 CFR 50.91(a) and has concluded that:

1. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The new Action Statement 30 for Functional Unit 7.b. of Table 3.3-3, Automatic Switchover to Containment Sump or RWST Level Low-Low Coincident with Safety Injection, reflects the current plant design and testing practices. As discussed in License Amendment No. 43 and associated submittals, the increase in allowed outage time was evaluated and the associated unavailability and risk was shown to be equivalent to, or less than, that of other functional units evaluated in WCAP-10271, Supplement 2, Revision 1. The proposed change does not change any previously evaluated accident and therefore does not involve an increase in the probability or consequences of an accident previously evaluated.

2. The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed change will not result in physical alteration to any plant system nor will there be a change in the method by which any safety-related plant system performs its safety function. The proposed change does not alter the functioning of the engineered safety features actuation System (ESFAS) or change the manner in which the ESFAS provides plant protection. Therefore, there is no possibility of a new or different kind of accident from any accident previously evaluated.

3. The proposed change does not involve a significant reduction in a margin of safety.

The proposed change does not alter any safety limits, limiting safety system settings, or limiting conditions for operation. The proposed change will not involve a significant reduction in any margin of safety.

Accordingly, the Commission has determined that this amendment involves no significant hazards consideration.

## **6.0 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.

## **7.0 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 (63 FR 26829). Accordingly, the amendment meets the eligibility criteria for categorical

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.

## 8.0 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: K. Thomas

Date: May 28, 1998