

March 1, 1989

Docket No. 50-482

Mr. Bart D. Withers
President and Chief Executive Officer
Wolf Creek Nuclear Operating Corporation
Post Office Box 411
Burlington, Kansas 66839

Dear Mr. Withers:

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SUBJECT: WOLF CREEK GENERATING STATION - AMENDMENT NO. 26 TO FACILITY
OPERATING LICENSE NO. NPF-42 (TAC NO. 57376)

The Commission has issued the enclosed Amendment No. 26 to Facility Operating License No. NPF-42 for the Wolf Creek Generating Station. The amendment consists of changes to the Technical Specifications in response to your application dated June 29, 1987.

The amendment revises Wolf Creek Generating Station Technical Specification 3/4.3.1, "Reactor Trip System Instrumentation," in accordance with the staff's requirements of Generic Letter 85-09 dated May 23, 1985. Generic Letter 85-09 was a followup to Generic Letter 83-28, Item 4.3.

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,

/s/

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

Enclosures:

1. Amendment No. 26 to License No. NPF-42
2. Safety Evaluation

cc w/enclosures:
See next page

DOCUMENT NAME: WOLF CREEK TAC NO. 57376

PD4/LA *gpr*
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PD4/PM *✓*
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555
March 1, 1989

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President and Chief Executive Officer
Wolf Creek Nuclear Operating Corporation
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Sincerely,

A handwritten signature in dark ink, reading "Douglas V. Pickett", is written above the typed name.

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

Enclosures:

1. Amendment No. 26 to
License No. NPF-42
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. Bart D. Withers
Wolf Creek Nuclear Operating Corporation

Wolf Creek Generating Station
Unit No. 1

cc:

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

WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION

DOCKET NO. 50-482

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 26
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 June 29, 1987, 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.

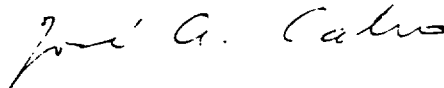
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-42 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 26 , 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



Jose A. Calvo, Director
Project Directorate - IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 1, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 26

FACILITY OPERATING LICENSE NO. NPF-42

DOCKET NO. 50-482

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE PAGES

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3/4 3-6

3/4 3-9

3/4 3-11

3/4 3-12

-

INSERT PAGES

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3/4 3-12a

TABLE 3.3-1 (continued)

REACTOR TRIP 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>	
11. Pressurizer Water Level-High	3	2	2	1	6#	
12. Reactor Coolant Flow - Low						
a. Single Loop (Above P-8)	3/loop	2/loop in any oper- ating loop	2/loop in each oper- ating loop	1	6#	
b. Two Loops (Above P-7 and below P-8)	3/loop	2/loop in two oper- ating loops	2/loop in each oper- ating loop	1	6#	
13. Steam Generator Water Level-Low-Low	4/stm. gen.	2/stm. gen. in any oper- ating stm. gen.	3/stm. gen. in each oper- ating stm. gen.	1, 2	(1)	
14. Undervoltage-Reactor Coolant Pumps	4-2/bus	2-1/bus	3	1	6#	
15. Underfrequency-Reactor Coolant Pumps	4-2/bus	2-1/bus	3	1	6#	
16. Turbine Trip						
a. Low Fluid Oil Pressure	3	2	2	1	6#	
b. Turbine Stop Valve Closure	4	4	1	1	11#	
17. Safety Injection Input from ESF	2	1	2	1, 2	9	

TABLE 3.3-1 (Continued)

TABLE NOTATIONS

- *Only if the Reactor Trip System breakers happen to be in the closed position and the Control Rod Drive System is capable of rod withdrawal.
- **The boron dilution flux doubling signal may be blocked during reactor startup in accordance with normal operating procedures.
- #The provisions of Specification 3.0.4 are not applicable.
- ##Below the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint.
- ###Below the P-10 (Low Setpoint Power Range Neutron Flux Interlock) Setpoint.
- (1)The applicable MODES and ACTION statements for these channels noted in Table 3.3-3 are more restrictive and therefore applicable.

ACTION STATEMENTS

- ACTION 1** - 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 be in HOT STANDBY within the next 6 hours.
- ACTION 2** - 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:
- The inoperable channel is placed in the tripped condition within 6 hours;
 - 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 4.3.1.1; and
 - Either, THERMAL POWER is restricted to less than or equal to 75% of RATED THERMAL POWER and the Power Range Neutron Flux Trip Setpoint is reduced to less than or equal to 85% of RATED THERMAL POWER within 4 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours per Specification 4.2.4.2.
- ACTION 3** - With the number of channels OPERABLE one less than the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:
- Below the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 Setpoint; or
 - Above the P-6 (Intermediate Range Neutron Flux Interlock) Setpoint but below 10% of RATED THERMAL POWER, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above 10% of RATED THERMAL POWER.
- ACTION 4** - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE requirement suspend all operations involving positive reactivity changes.

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. Manual Reactor Trip	N.A.	N.A.	N.A.	R(11)	N.A.	1, 2, 3*, 4*, 5*
2. Power Range, Neutron Flux						
a. High Setpoint	S	D(2, 4) M(3, 4) Q(4, 6) R(4, 5)	Q(14)	N.A.	N.A.	1, 2
b. Low Setpoint	S	R(4)	S/U(1)	N.A.	N.A.	1###, 2
3. Power Range, Neutron Flux, High Positive Rate	N.A.	R(4)	Q(14)	N.A.	N.A.	1, 2
4. Power Range, Neutron Flux, High Negative Rate	N.A.	R(4)	Q(14)	N.A.	N.A.	1, 2
5. Intermediate Range, Neutron Flux	S	R(4, 5)	S/U(1)	N.A.	N.A.	1###, 2
6. Source Range, Neutron Flux	S	R(4, 5, 12)	S/U(1), Q(9, 14)	N.A.	N.A.	2##, 3, 4, 5
7. Overtemperature ΔT	S	R(13)	Q(14)	N.A.	N.A.	1, 2
8. Overpower ΔT	S	R	Q(14)	N.A.	N.A.	1, 2
9. Pressurizer Pressure-Low	S	R	Q(14)	N.A.	N.A.	1
10. Pressurizer Pressure-High	S	R	Q(14)	N.A.	N.A.	1, 2
11. Pressurizer Water Level-High	S	R	Q(14)	N.A.	N.A.	1
12. Reactor Coolant Flow-Low	S	R	Q(14)	N.A.	N.A.	1

WOLF CREEK - UNIT 1

3/4 3-9

Amendment No. 12, 26

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>ANALOG CHANNEL OPERATIONAL TEST</u>	<u>TRIP ACTUATING DEVICE OPERATIONAL TEST</u>	<u>ACTUATION LOGIC TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
18. Reactor Trip System Interlocks (Continued)						
d. Power Range Neutron Flux, P-10	N.A.	R(4)	R	N.A.	N.A.	1, 2
e. Turbine Impulse Chamber Pressure, P-13	N.A.	R	R	N.A.	N.A.	1
19. Reactor Trip Breaker	N.A.	N.A.	N.A.	M(7, 16)	N.A.	1, 2, 3*, 4*, 5*
20. Automatic Trip and Interlock Logic	N.A.	N.A.	N.A.	N.A.	M (7)	1, 2, 3*, 4*, 5*
21. Reactor Trip Bypass Breaker	N.A.	N.A.	N.A.	M(17),R(18)	N.A.	1, 2, 3*, 4*, 5*

TABLE 4.3-1 (Continued)

TABLE NOTATIONS

- (13) CHANNEL CALIBRATION shall include the RTD bypass loops flow rate.
- (14) Each channel shall be tested at least every 92 days on a STAGGERED TEST BASIS.
- (15) The surveillance frequency and/or MODES specified for these channels in Table 4.3-2 are more restrictive and, therefore, applicable.
- (16) The TRIP ACTUATING DEVICE OPERATIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip attachments of the Reactor Trip Breakers.
- (17) Local manual shunt trip prior to placing breaker in service.
- (18) Automatic undervoltage trip.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 26 TO FACILITY OPERATING LICENSE NO. NPF-42

WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION

DOCKET NO. 50-482

INTRODUCTION

On May 23, 1985 the Nuclear Regulatory Commission (NRC) issued Generic Letter 85-09 to all Westinghouse Pressurized Water Reactor licensees. The Generic Letter explicitly described Technical Specification revisions required by Item 4.3 of Generic Letter 83-28, "Required Actions Based on Generic Implications of Salem ATWS Events." Item 4.3 in part established the requirement for the automatic actuation of the shunt trip attachment for Westinghouse plants.

Based on a review of the Westinghouse design for automatic actuation of the shunt trip attachments, the NRC Staff concluded that revisions to licensee Technical Specifications were required to explicitly require both independent testing of the undervoltage and shunt trip attachments during power operation and independent testing of the control room manual switch contacts during each refueling outage. The staff concluded that these changes were necessary to ensure reliable operation of the Reactor Trip Breakers.

EVALUATION

By letter dated June 29, 1987 the Wolf Creek Nuclear Operating Corporation submitted proposed revisions to the Wolf Creek Generating Station Technical Specification based upon the NRC staff evaluation of the Westinghouse shunt trip attachment design and the requirements of Generic Letter 85-09. In response to the NRC requirements, the following Technical Specification revisions were proposed.

1. ACTION 12 is being added to Table 3.3-1. This action statement corresponds to Functional Unit 19 (Reactor Trip Breakers) and allows continued plant operation for up to 48 hours with one of the diverse trip features inoperable. The proposed Reactor Trip Breaker surveillances will serve to independently verify the operability of the shunt and undervoltage trip features. There is a high degree of confidence that the remaining operable trip feature would be capable of initiating a reactor trip within the allowed 48 hours.
2. Table Notation 11 of Table 4.3-1 has been revised to verify the operability of the undervoltage and shunt trip circuits for Functional Unit 1 (Manual Reactor Trip). This notation will also verify the OPERABILITY of the Bypass Breaker trip circuits.

3. Table Notation 16 is being added to Table 4.3-1. This notation corresponds to Functional Unit 19 (Reactor Trip Breaker). The proposed notation requires that the TRIP ACTUATING DEVICE OPERATIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip attachments of the Reactor Trip Breakers.
4. Table 4.3-1 is being revised to add Functional Unit 21. (Reactor Trip Bypass Breaker). This Functional Unit requires a TRIP ACTUATING DEVICE OPERATIONAL TEST (TADOT). Table Notation 17 requires a local manual shunt trip prior to placing the breaker in service. Table Notation 18 requires an automatic undervoltage trip.

On the basis of its review of the above items, the staff concludes that the licensee has provided an acceptable response to these items as addressed in the NRC guidance requiring independent testing of the undervoltage and shunt trip attachments during power operation and independent testing of the control room manual switch contacts during each refueling outage. Furthermore, the staff finds that these changes are consistent with the staff's generic finding on the acceptability of such changes as noted in Generic Letter 85-09. Accordingly, the staff finds the proposed changes to be acceptable.

ENVIRONMENTAL CONSIDERATION

The amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The 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 exposures. 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. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 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.

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

Date: March 1, 1989

Principal Contributor: Douglas V. Pickett