August 16, 1993

Docket No. 50-482

DISTRIBUTION:

Docket File	JRoe
NRC PDR	GHill (2)
Local PDR	Wanda Jones
PDIV-2 Reading	CGrimes
EPeyton	ACRS (10)
WReckley (2)	OC/LFMB
EAdensam	DHagan
OGC	WJohnson, RIV
OPA	

Mr. Neil S. Carns
President and Chief Executive Officer
Wolf Creek Nuclear Operating Corporation
Post Office Box 411
Burlington, Kansas 66839

Dear Mr. Carns:

SUBJECT: WOLF CREEK GENERATING STATION - AMENDMENT NO. 66 TO FACILITY OPERATING LICENSE NO. NPF-42 (TAC NO. M86054)

The Commission has issued the enclosed Amendment No. 66 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 March 8, 1993, as supplemented by letter dated June 2, 1993.

The amendment deletes Section 3/4.3.3.7, "Chlorine Detection Systems," Section 3/4.3.3.7 from the Bases, and Surveillance Requirement 4.7.6e.5. The Index has also been updated to reflect this deletion.

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

William D. Reckley, Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 66 to NPF-42
2. Safety Evaluation

cc w/enclosures:
See next page

SPLB:NRR
CMcCraken
7/9/93

OFFICE	PDIV-2/LA	PDIV-2/Intern	PDIV-2/PM	OGC	PDIV-2/D
NAME	EPeyton	JGaniere:nb	WReckley		SBlack
DATE	7/8/93	7/9/93	7/9/93	7/14/93	8/9/93

Document Name: b:\M86054.AMD

9309020199 930816
PDR ADOCK 05000482
P PDR

NRC FILE CENTER COPY

cc w/enclosures:
Jay Silberg, Esq.
Shaw, Pittman, Potts & Trowbridge
2300 N Street, NW
Washington, D.C. 20037

Mr. C. John Renken
Policy and Federal Department
Missouri Public Service Commission
P. O. Box 360
Jefferson City, Missouri 65102

Regional Administrator, Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

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

Mr. Robert Elliot, 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
1st Floor - The Statehouse
Topeka, Kansas 66612

County Clerk
Coffey County Courthouse
Burlington, Kansas 66839

Mr. Gerald Allen
Public Health Physicist
Bureau of Environmental Health Services
Division of Health
Kansas Department of Health
and Environment
109 SW Ninth
Topeka, Kansas 66612

Mr. Otto Maynard
Director Plant Operations
Wolf Creek Nuclear Operating Corporation
P. O. Box 411
Burlington, Kansas 66839

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

Mr. Keven J. Moles
Manager Regulatory Services
Wolf Creek Nuclear Operating Corporation
P. O. Box 411
Burlington, Kansas 66839

Robert Eye, General Council
Kansas Department of Health
and Environment
LSOB, 9th Floor
900 SW Jackson
Topeka, Kansas 66612

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. 66
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 March 8, 1993, as supplemented by letter dated June 2, 1993, 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.

9309020201 930816
PDR ADOCK 05000482
P PDR

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. 66 , 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 and shall be implemented upon removal of all of the one-ton chlorine storage containers from the site.

FOR THE NUCLEAR REGULATORY COMMISSION

Suzanne C. Black

Suzanne C. Black, Director
Project Directorate IV-2
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 16, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 66

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	INSERT
VI	VI
3/4 3-56	3/4 3-56
3/4 7-16	3/4 7-16
B 3/4 3-5	B 3/4 3-5

SECTION		PAGE
3/4.2	POWER DISTRIBUTION LIMITS	
3/4.2.1	AXIAL FLUX DIFFERENCE (AFD)	3/4 2-1
3/4.2.2	HEAT FLUX HOT CHANNEL FACTOR - $F_Q(X,Y,Z)$	3/4 2-4
3/4.2.3	NUCLEAR ENTHALPY RISE HOT CHANNEL FACTOR - $F_{\Delta H}(X,Y)$	3/4 2-9
3/4.2.4	QUADRANT POWER TILT RATIO	3/4 2-11
3/4.2.5	DNB PARAMETERS	3/4 2-14
TABLE 3.2-1	DNB PARAMETERS	3/4 2-16
3/4.3	INSTRUMENTATION	
3/4.3.1	REACTOR TRIP SYSTEM INSTRUMENTATION	3/4 3-1
TABLE 3.3-1	REACTOR TRIP SYSTEM INSTRUMENTATION	3/4 3-2
TABLE 3.3-2	REACTOR TRIP SYSTEM INSTRUMENTATION RESPONSE TIMES	3/4 3-7
TABLE 4.3-1	REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS	3/4 3-9
3/4.3.2	ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION	3/4 3-13
TABLE 3.3-3	ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION	3/4 3-14
TABLE 3.3-4	ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS	3/4 3-22
TABLE 3.3-5	ENGINEERED SAFETY FEATURES RESPONSE TIMES	3/4 3-29
TABLE 4.3-2	ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS	3/4 3-34

SECTION PAGE

INSTRUMENTATION (Continued)

3/4.3.3 MONITORING INSTRUMENTATION

Radiation Monitoring for Plant Operations..... 3/4 3-39

TABLE 3.3-6 RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS..... 3/4 3-40

TABLE 4.3-3 RADIATION MONITORING INSTRUMENTATION FOR PLANT OPERATIONS SURVEILLANCE REQUIREMENTS..... 3/4 3-42

Movable Incore Detectors..... 3/4 3-43

Seismic Instrumentation..... 3/4 3-44

TABLE 3.3-7 SEISMIC MONITORING INSTRUMENTATION..... 3/4 3-45

TABLE 4.3-4 SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS..... 3/4 3-46

Meteorological Instrumentation..... 3/4 3-47

TABLE 3.3-8 METEOROLOGICAL MONITORING INSTRUMENTATION..... 3/4 3-48

TABLE 4.3-5 METEOROLOGICAL MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS..... 3/4 3-49

Remote Shutdown Instrumentation..... 3/4 3-50

TABLE 3.3-9 REMOTE SHUTDOWN MONITORING INSTRUMENTATION..... 3/4 3-51

TABLE 4.3-6 REMOTE SHUTDOWN MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS..... 3/4 3-52

Accident Monitoring Instrumentation..... 3/4 3-53

TABLE 3.3-10 ACCIDENT MONITORING INSTRUMENTATION..... 3/4 3-54

TABLE 4.3-7 ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS..... 3/4 3-55

Chlorine Detection Systems..... DELETED

Loose-Part Detection System..... 3/4 3-57

Radioactive Liquid Effluent Monitoring Instrumentation... DELETED

TABLE 3.3-12 RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION..... DELETED

TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
1. Containment Pressure	M	R
2. Reactor Coolant Outlet Temperature - T_{HOT} (Wide Range)	M	R
3. Reactor Coolant Inlet Temperature - T_{COLD} (Wide Range)	M	R
4. Reactor Coolant Pressure - Wide Range	M	R
5. Pressurizer Water Level	M	R
6. Steam Line Pressure	M	R
7. Steam Generator Water Level - Narrow Range	M	R
8. Steam Generator Water Level - Wide Range	M	R
9. Refueling Water Storage Tank Water Level	M	R
10. Containment Hydrogen Concentration Level	M	R
11. Auxiliary Feedwater Flow Rate	M	R
12. PORV Position Indicator*	M	N.A.
13. PORV Block Valve Position Indicator**	M	N.A.
14. Safety Valve Position Indicator	M	N.A.
15. Containment Water Level	M	R
16. Containment Radiation Level (High Range)	M	R***
17. Thermocouple/Core Cooling Detection System	M	R
18. Unit Vent - High Range Noble Gas Monitor	M	R

*Not applicable if the associated block valve is in the closed position.
**Not applicable if the block valve is verified in the closed position and power is removed.
***CHANNEL CALIBRATION may consist of an electronic calibration of the channel, not including the detector, for range decades above 10 R/h and a one point calibration check of the detector below 10 R/h with an installed or portable gamma source.

This page has been deleted.

3/4.3.3.4 METEOROLOGICAL INSTRUMENTATION

The OPERABILITY of the meteorological instrumentation ensures that sufficient meteorological data is available for estimating potential radiation doses to the public as a result of routine or accidental release of radioactive materials to the atmosphere. This capability is required to evaluate the need for initiating protective measures to protect the health and safety of the public and is consistent with the recommendations of Regulatory Guide 1.23, "Onsite Meteorological Programs," February 1972.

3/4.3.3.5 REMOTE SHUTDOWN INSTRUMENTATION

The OPERABILITY of the Remote Shutdown System ensures that sufficient capability is available to permit shutdown and maintenance of HOT SHUTDOWN of the facility from locations outside of the control room and that a fire will not preclude achieving safe shutdown. The Remote Shutdown System transfer switches, power circuits, and control circuits are independent of areas where a fire could damage systems normally used to shut down the reactor. This capability is required in the event control room habitability is lost and is consistent with General Design Criteria 3 and 19 and Appendix R of 10 CFR Part 50.

3/4.3.3.6 ACCIDENT MONITORING INSTRUMENTATION

The OPERABILITY of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97, Revision 2, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1980 and NUREG-0737, "Clarification of TMI Action Plan Requirements," November 1980.

3/4.3.3.7 DELETED

3/4.3.3.8 DELETED

3/4.3.3.9 LOOSE-PART DETECTION INSTRUMENTATION

The OPERABILITY of the loose-part detection instrumentation ensures that sufficient capability is available to detect loose metallic parts in the Reactor Coolant System and avoid or mitigate damage to Reactor Coolant System components. The allowable out-of-service times and Surveillance Requirements are consistent with the recommendations of Regulatory Guide 1.133, "Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors," May 1981.

3/4.3.3.10 DELETED

3/4.3.3.11 DELETED

3/4.3.4 TURBINE OVERSPEED PROTECTION

This specification is provided to ensure that the turbine overspeed protection instrumentation and the turbine speed control valves are OPERABLE and will protect the turbine from excessive overspeed. Although the orientation of the turbine is such that the number of potentially damaging missiles which could impact and damage safety-related components, equipment, or structures is minimal, protection from excessive turbine overspeed is required.

SURVEILLANCE REQUIREMENTS (Continued)

c. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by:

1) Verifying that the Control Room Emergency Ventilation System satisfies the in-place penetration and bypass leakage testing acceptance criteria; of less than 1% for HEPA filters and 0.05% for charcoal adsorbers and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 2000 cfm ±10% for the Filtration System and 2200 cfm ±10% for the Pressurization System with 750 cfm ±10% going through the Pressurization System filter adsorber unit;

2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 1%; and

3) Verifying system flow rate of 2000 cfm ±10% at greater than or equal to 6.6 inches W.G. (dirty filter) for the Filtration System and 2200 cfm ±10% at greater than or equal to 3.6 inches W.G. (dirty filter) for the Pressurization System with 750 cfm ±10% going through the Pressurization System filter adsorber unit during system operation when tested in accordance with ANSI N510-1980.

d. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 1%;

e. At least once per 18 months by:

1) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6.6 inches Water Gauge while operating the system at a flow rate of 2000 cfm ±10% for the Filtration System and less than 3.6 inches Water Gauge while operating the system at a flow rate of 750 cfm ±10% for the Pressurization System filter adsorber unit,

2) Verifying that on a Control Room Ventilation Isolation or High Gaseous Radioactivity test signal, the system automatically switches into a recirculation mode of operation with flow through the HEPA filters and charcoal adsorber banks,

SURVEILLANCE REQUIREMENTS (Continued)

3) Verifying that the system maintains the control room at a positive pressure of greater than or equal to 1/4 inch Water Gauge relative to the outside atmosphere during system operation, and

4) Verifying that the Pressurization System filter adsorber unit heaters dissipate 15 ± 2 kW in the Pressurization System when tested in accordance with ANSI N510-1975.

f. After each complete or partial replacement of a HEPA filter bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing criteria of less than 1% in accordance with ANSI N510-1975 (however Prerequisite Testing, Sections 8 and 9 shall be in accordance with ANSI N510-1980) for a DOP test aerosol while operating the system at a flow rate of 2000 cfm ±10% for the Filtration System and 750 cfm ±10% for the Pressurization System filter adsorber unit; and

g. After each complete or partial replacement of a charcoal adsorber bank, by verifying that the cleanup system satisfies the in-place penetration and bypass leakage testing criteria of less than 0.05% in accordance with ANSI N510-1975 (however Prerequisite Testing, Sections 8 and 9 shall be in accordance with ANSI N510-1980) for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 2000 cfm ±10% for the Filtration System and 750 cfm ±10% for the Pressurization System filter adsorber unit.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 66 TO FACILITY OPERATING LICENSE NO. NPF-42

WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION

DOCKET NO. 50-482

1.0 INTRODUCTION

By application dated March 8, 1993, as supplemented by letter dated June 2, 1993, Wolf Creek Nuclear Operating Corporation (the licensee), requested an amendment to Facility Operating License No. NPF-42 for the Wolf Creek Generating Station. The proposed amendment would delete, in its entirety, Section 3/4.3.3.7, "Chlorine Detection Systems," Section 3/4.3.3.7 from the Bases, and Surveillance Requirement 4.7.6e.5. The application also requested that the Index be updated to reflect this change. The proposed changes would be made effective upon the removal of the one-ton chlorine storage containers from the site.

2.0 EVALUATION

The purpose of the chlorine detection system at the Wolf Creek Generating Station (WCGS) is to provide an alarm and to automatically isolate the control room in the event that a chlorine concentration of 5 parts per million (ppm) or more is present in the control room intake duct. It was originally designed and installed in accordance with the NRC guidelines contained in Regulatory Guide (RG) 1.78, "Assumptions for Evaluating the Habitability of a Nuclear Power Plant Control Room Following a Postulated Accident Release," and RG 1.95, "Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release." The principal criterion governing the design of this system was the limitation stated in RG 1.78 that the chlorine concentration in the control room should not exceed 15 ppm by volume within 2 minutes after the operators are made aware of the presence of chlorine.

The chlorine detection system provides protection from the gaseous chlorine that is stored in one-ton storage containers located in the Essential Service Water System (ESWS) pumphouse and the circulating water screenhouse . The worst case chlorine release accident is postulated and analyzed in Section 2.2.3.1.7 of the Updated Safety Analysis Report (USAR) and involves the rupture of one of the chlorine containers in the ESWS pumphouse. In accordance with RG 1.95, release from a one-ton container requires automatic control room ventilation system isolation initiated by the chlorine detectors. Chlorine is also stored in 150 pound containers located in the shop building chlorine house.

9309020203 930816
PDR ADOCK 05000482
P PDR

The licensee has scheduled a plant modification after the sixth refueling outage that will remove all one-ton chlorine storage containers from the WCGS site. Consequently, the only remaining chlorine gas on site will be stored in the 150 pound containers in the shop building chlorine house which is located approximately 550 feet from the control room normal air intakes. This complies with the guidance in RG 1.95, Regulatory Position 1, which suggests liquified chlorine in quantities greater than 20 pounds be stored at least 100 meters away from the control room. The control room ventilation system is provided with the capability of manual isolation as stated in USAR Section 9.4.1. This complies with RG 1.95, Regulatory Position 2, which suggests the capability for manual isolation of the control room if a chlorine container having an inventory of 150 pounds or less is stored more than 100 meters from the control room. As a result, the proposed changes to delete the chlorine detection system applicability and surveillance requirements would not result in a reduction in protection for the control room operators since the criteria of RG 1.95 would be met by manual isolation of the control room ventilation system.

Surveillance Requirement 4.7.6e.5 requires the control room emergency ventilation system be demonstrated operable by verifying on a high chlorine test signal the system automatically switches into a recirculation mode of operation. With the removal of the one-ton storage containers, the chlorine detectors will not be maintained operable and will not initiate control room ventilation system isolation. Therefore, the surveillance requirement is no longer applicable.

Based on the staff's review of the licensee's submittal, the staff concludes that the proposed amendment conforms with the guidelines of RG 1.95 and is therefore acceptable.

3.0 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.

4.0 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 and changes a surveillance requirement. 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 (58 FR 34098). Accordingly, the amendment meets the eligibility criteria for categorical exclusion 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.

5.0 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: John Ganiere

Date: August 16, 1993