UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

June 1, 2000

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

SUBJECT: WOLF CREEK GENERATING STATION -- NRC INSPECTION REPORT NO. 50-482/00-05

Dear Mr. Maynard:

This refers to the inspection conducted on April 2 through May 13, 2000, at the Wolf Creek Generating Station facility. The enclosed results were discussed with Mr. Otto Maynard and other members of your staff. The enclosed report presents the results of this inspection.

The inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel. As identified in the report, no findings were identified during this inspection.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room and will be available on the NRC Public Electronic Reading Room (PERR) link at the NRC home page, http://www.nrc.gov/NRC/ADAMS/index.html.

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

/RA/

William D. Johnson, Chief
Project Branch B
Division of Reactor Projects

Docket No.: 50-482
License No.: NPF-42

Enclosure:
NRC Inspection Report No.
50-482/2000-05

cc w/enclosure:
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NRR Event Tracking System **(IPAS)**
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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.:	50-482
License No.:	NPF-42
Report No.:	50-482/2000-05
Licensee:	Wolf Creek Nuclear Operating Corporation
Facility:	Wolf Creek Generating Station
Location:	1550 Oxen Lane, NE Burlington, Kansas
Dates:	April 2 through May 13, 2000
Inspectors:	F. L. Brush, Senior Resident Inspector R. A. Kopriva, Senior Project Engineer R. V. Azua, Project Engineer
Approved By:	W. D. Johnson, Chief, Project Branch B

ATTACHMENTS:
1. Supplemental Information
2. NRC's Revised Reactor Oversight Process

SUMMARY OF FINDINGS

Wolf Creek Generating Station
NRC Inspection Report No. 50-482/00-05

The report covers a 6-week period of resident inspection.

The body of the report is organized under the broad categories of Reactor Safety and Other Activities. There were no findings identified in these areas.

Report Details

Summary of Plant Status

The plant was operated at essentially 100 percent power for the report period, with the following exception. On May 9, 2000, the licensee reduced plant power to approximately 90 percent to allow repair of moisture separator reheater drain tank drain lines. The licensee returned the plant to 100 percent power the following day.

1. REACTOR SAFETY
Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather (71111.01)

a. Inspection Scope

The inspectors performed a walkdown of the auxiliary building and part of the diesel generator building. The inspectors discussed severe weather preparations with operations personnel. The inspector reviewed Procedure OFN SG-003, "Natural Events," Revision 7. The inspectors also reviewed portions of the Updated Safety Analysis Report.

The inspectors also performed a plant walkdown of applicable equipment using the restoration section of Procedure STN GP-001, "Plant Winterization," Revision 28. The plant ventilation systems were aligned for summer operation.

b. Issues and Findings

The inspectors did not identify any findings.

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

The inspectors performed a partial walkdown of Emergency Diesel Generator B during surveillance testing on Emergency Diesel Generator A. The inspectors walked down the fuel oil and starting air systems. The inspectors also performed a partial walkdown of Emergency Diesel Generator A following the surveillance test. The inspectors used the following procedures to perform the walkdowns:

- CKL KJ-121, "Diesel Generator NE-01 and NE02 Valve Checklist," Revision 21
- SYS KJ-121, "Diesel Generator NE-01 and NE02 Valve Lineup For Automatic Operation," Revision 25
- CKL JE-120, "Emergency Fuel Oil System Lineup," Revision 14

The inspectors also reviewed applicable portions of the Technical Specifications and Updated Safety Analysis Report.

b. Issues and Findings

The inspectors did not identify any findings.

1R05 Fire Protection (71111.05)

.1 Quarterly Fire Area Walkdowns

a. Inspection Scope

The inspectors performed a walkdown of the following areas:

- Auxiliary feedwater pump rooms and associated valve rooms, pipe chase, and vestibule
- Emergency diesel generator rooms and associated switchgear rooms
- Essential service water pump rooms

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The inspectors used the area fire preplans for the walkdown. The inspectors also discussed the status of the fire preplans with various licensee personnel.

b. Issues and Findings

The inspectors did not identify any findings.

.2 Annual Fire Drill Observation

a. Inspection Scope

The inspectors observed a fire drill that included licensee and local fire department participation. The licensee held the drill in the Emergency Diesel Generator A room. The inspectors reviewed the fire drill scenario, 2000-02-OS-02, prior to the drill. Following the drill, after equipment restoration, the inspectors walked down the rooms entered by the onsite and offsite fire protection personnel.

b. Issues and Findings

The inspectors did not identify any findings.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

The inspectors reviewed the internal and external flood protection measures for parts of the control and auxiliary buildings. The inspectors reviewed the following:

- Applicable portions of the Updated Safety Analysis Report
- Probability Safety Assessment Model Summary Report
- Flooding calculations

The inspectors also discussed flood protection with licensee personnel.

b. Issues and Findings

The inspectors did not identify any findings.

1R11 Licensed Operator Requalification (71111.11)

a. Inspection Scope

The inspectors observed control room operator simulator training and attended a critique. The scenarios included the loss of a vital electrical bus, loss of a circulating water pump, and an intersystem loss of coolant accident. The licensee had identified a decline in three-way communications during previous training sessions. The evaluators identified additional examples of three-way communication performance problems.

b. Issues and Findings

The inspectors did not identify any findings.

1R12 Maintenance Rule Implementation (71111.12)

Maintenance Effectiveness Routine Review

a. Inspection Scope

The inspectors reviewed the licensee's maintenance rule implementation for Emergency Diesel Generator A, containment isolation valves, and chemical volume and control system valve performance problems. The inspector's review included the following information:

- Maintenance rule bases Information
- Maintenance Rule (a)(1) disposition checklist and documentation summary
- Maintenance rule management reports
- Maintenance rule expert panel meeting minutes
- Maintenance rule performance evaluations
- Functional failure determination checklists

b. Issues and Findings

The inspectors did not identify any findings.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation (71111.13)

a. Inspection Scope

The inspectors reviewed the licensee's risk assessment for equipment outages as a result of planned and emergent maintenance. The inspectors also discussed the planned and emergent work activities with planning and maintenance personnel. The inspectors' review included the following:

- Operational risk assessments for planned maintenance for weeks of April 10, 17, and 24 and May 1, 2000
- Plant risk assessment for the essential service water pipe spool replacement in March 2000
- Work Order 00-215705-000, component cooling water to residual heat removal heat Exchanger B isolation Valve EG-HV0102, surveillance testing
- Actual and planned work schedules for weeks of April 10, 17, and 24 and May 1, 2000

b. Issues and Findings

The inspectors did not identify any findings.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the operability determination the licensee performed following a case in which the pressure in a section of essential service water piping between containment isolation Valves EF-HV45 and -49 may have reached 1,333 pounds per square inch. The inspectors also reviewed the operability determination the licensee performed following the discovery that lockwire and washers were missing on an emergency diesel generator engine.

The inspectors discussed the issues with licensee personnel and reviewed the following documents:

- PIR 2000-0697, Evaluation of nonconforming conditions of installed plant equipment for the affected essential service water piping and valves
- PIR 2000-0392, Evaluation of nonconforming conditions of installed plant equipment for Emergency Diesel Generator B

- Procedure AP 28-001, “Evaluation of Nonconforming Conditions of Installed Plant Equipment,” Revision 7
- Various sections of the Updated Safety Analysis Report

b. Issues and Findings

The inspectors did not identify any findings.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed the postmaintenance testing on the following equipment:

- Centrifugal Charging Pump A
- Control Room Air Conditioning Unit B
- Residual Heat Removal Train B

b. Issues and Findings

The inspectors did not identify any findings.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed or observed all or part of the following surveillance activities:

- STS EN-100B Containment Spray Pump B test
- STS KJ-005B Manual/Auto start, synchronization and loading of Emergency Diesel Generator NE02
- STS AL-201B Auxiliary feedwater system Train B inservice valve test
- STS IC-241 ACOT Nuclear Instrumentation System Power Range N41 Protection Set 1
- STN OQT-001B Operations B train quarterly tasks
- STS BN-207B Borated refueling water storage system inservice valve test

b. Issues and Findings

The inspectors did not identify any findings.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed Temporary Modification 00-005-FP. The temporary modification implemented a repair to the diesel fire pump heat exchanger. The licensee placed a soft patch on a leaking solder joint between the shell and end casting.

b. Issues and Findings

The inspectors did not identify any findings.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

a. Inspection Scope

The inspectors verified the transients per 7,000 critical hours, unplanned scrams per 7,000 critical hours, and emergency ac power system unavailability performance indicators for the period of April 1997 through March 2000. The inspectors reviewed the following:

- Daily generation records
- Licensee worksheets
- A sampling of control room logs
- NRC resident inspector inspection reports for the time period

b. Issues and Findings

The inspectors did not identify any findings.

4OA5 Other

.1 (Closed) Licensee Event Report (LER) 50-482/98-007-00: Securing switchgear room cooler during normal operations. This LER was a minor issue and was closed.

4OA6 Meetings

.1 Exit Meeting Summary

The inspectors presented the inspection results to Mr. Otto Maynard, President and Chief Executive Officer, and other members of licensee management on May 12, 2000.

The inspectors asked the licensee whether or not any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

K. A. Harris, Manager, Regulatory Affairs
J. W. Johnson, Manager, Resource Protection
O. L. Maynard, President and Chief Executive Officer
B. T. McKinney, Vice President Plant Operations and Plant Manager
R. Muench, Vice President Engineering and Information Services
S. R. Koenig, Manager, Performance Improvement and Assessment
C. C. Warren, Vice President Operations Support

ITEM CLOSED

Closed

50-482/98-007-00	LER	Securing switchgear room cooler during normal operations (Section 4OA5)

LIST OF DOCUMENTS REVIEWED

Calculations

- AN 96-126 Wolf Creek Generating Station Probability Safety Assessment Flooding Analysis
- FL-15 Control Building Rooms Flooding Summary

Fire Preplans

- FPP A-13, 29 Auxiliary Building 2000 Foot Auxiliary Feedwater Pump Room B, Feedwater Pump Valve Compartments 1and 2, Revision 3
- FPP A-14 Auxiliary Building 2000 Foot Auxiliary Feedwater Pump Room A, Revision 5
- FPP A-15 Auxiliary Building 2000 Foot Turbine Driven Auxiliary Feedwater Pump Room, Revision 5
- FPP A-30 Auxiliary Building 2000 Foot Valve Compartments 3 and 4, Revision 3

- FPP A-33 Auxiliary Building 1989 Foot Pipe Chase, and 2000 Foot Auxiliary Feedwater Pumps Vestibule, Revision 4
- FPP C-9 Control Building 2000 Foot NB01 Switchgear Room, Revision 6
- FPP C-10 Control Building 2000 Foot NB02 Switchgear Room, Revision 6
- FPP C-11 Control Building 2000 Foot South Vertical Cable Chase, Revision 5
- FPP C-12 Control Building 2000 Foot North Vertical Cable Chase, Revision 5
- FPP D-1 Diesel Building 2000 Foot A Train Diesel Generator, Revision 6
- FPP D-2 Diesel Building 2000 Foot B Train Diesel Generator, Revision 6
- FPP ESW-1 Essential Service Water Pumphouse Room B, Revision 6
- FPP ESW-2 Essential Service Water Pumphouse Room B, Revision 6

Maintenance Rule Documents

- Functional Failure Evaluations for CI-01, Containment Isolation
- Functional Failure Evaluations for KJ-01, Standby Diesel Engine System
- Maintenance Rule (a)(1) Disposition Checklist and Document Summary for CI-01, Containment Isolation, Dates - November 20, 1998, and July 15, 1999
- Maintenance Rule(a)(1) Disposition Checklist and Document Summary for KJ-01, Standby Diesel Engine System, Dated March 31, 1999
- Maintenance Rule Expert Panel Meeting Minutes for CI-01, Containment Isolation
- Maintenance Rule Expert Panel Meeting Minutes for KJ-01, Standby Diesel Engine System
- Performance Improvement Request 1999-0901
- Performance Improvement Request 2000-1073
- EDI 23M-050 Engineering Desktop Instruction Monitoring Performance to Criteria and Goals, revision 1, attachment B, “Functional Failure Determination Checklist”
    - Functional Failure # - PIR 20001369
    - Functional Failure # - PIR 99017064
    - Functional Failure # - PIR 992845
    - Functional Failure # - PIR 982715

  - Functional Failure # - PIR 981225
  - Functional Failure # - PIR 991178
  - Functional Failure # - PIR 980565

- Performance Indicator Historical Data Entry Table for 3rd Quarter 1999

- Auxiliary Feedwater System NRC Unavailability from 1997-1999

- Centrifugal Charging System Maintenance Rule Data Base Unavailability from 1997-1999

- Residual Heat Removal System Maintenance Rule Data Base Unavailability from 1997-1999

- Middle Head Centrifugal System Maintenance Rule Data Base Unavailability from 1997-1999

- Emergency Diesel Generator System Maintenance Rule Data Base Unavailability from 1997-1999

- Performance Indicator Monthly Submittal Form

  - Form 10-99
  - Data 10-99
  - Form 11-99
  - Data 11-99
  - Form 12-99
  - Data 12-99
  - Form 01-00
  - Form 01-00r1
  - Data 01-00
  - Form 02-2000
  - Form 02-2000r1
  - Data 02-00
  - Form 03-2000
  - Data 03-00

- Administrative Procedure AP 26A-007, Revision 0, NRC Performance Indicators, Form 4-2000

  - Data 04-00

<u>Postmaintenance Testing</u>

- STS EG-205B Residual Heat Removal System Inservice Pump B Test

- SYS GK-121 Control Building HVAC Startup

- Work Order 99-205460-002 Centrifugal Charging Pump PBG05A
- Work Order 99-209893-001 Reactor Coolant System Hot Leg Loop 1 to Residual Heat Removal Pump B Pressure Indicator, EJPI0602
- Work Order 99-211518-001 Control Room Air Conditioning Unit SGK04B Feeder Breaker
- Work Order 99-211874-003 Charging Pump Suction From the Refueling Water Storage Tank, BNLCV0112D
- Work Order 99-213519-001 Centrifugal Charging Pump (PBG05A) Lube Oil Pump Relief Valve
- Work Order 99-214719-002 Centrifugal Charging Pump Motor, DPBG05A
- Work Order 00-215705-001 Component Cooling Water to Residual Heat Removal Heat Exchanger B Isolation Valve, EGHV 0102
- Work Order 00-215705-002 Component Cooling Water to Residual Heat Removal Heat Exchanger B Isolation Valve, EGHV 0102
- Work Order 00-216302-002 Control Room Air Conditioning Unit SGK04B
- Work Order 00-216367-001 Charging Pump Discharge Header to Boron Injection Tank Insolation Valve, EMHV8803A

ATTACHMENT 2

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
● Initiating Events	● Occupational	● Physical Protection
● Mitigating Systems	● Public	
● Barrier Integrity		
● Emergency Preparedness		

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the significance determination process, and assigned colors of GREEN, WHITE, YELLOW, or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, or RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.