UNITED STATES

NUCLEAR REGULATORY COMMISSION

REGION IV

611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

January 10, 2001

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 INTEGRATED INSPECTION REPORT NO. 50-482/00-10

Dear Mr. Maynard:

On December 30, 2000, the NRC completed inspections at the Wolf Creek Generating Station. The enclosed report presents the results of these inspections which were discussed during meetings on December 1, 2000, and January 2, 2001, with you and members of your staff.

These inspections were 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. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

No findings of significance were identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

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.
50-482/00-10

cc w/enclosure:
Chief Operating Officer
Wolf Creek Nuclear Operating Corp.
P.O. Box 411
Burlington, Kansas 66839

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

Supervisor Licensing
Wolf Creek Nuclear Operating Corp.
P.O. Box 411
Burlington, Kansas 66839
Chief Engineer
Utilities Division
Kansas Corporation Commission
1500 SW Arrowhead Rd.
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 66612-1597

County Clerk
Coffey County Courthouse
110 South 6th Street
Burlington, Kansas 66839-1798

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

Frank Moussa
Division of Emergency Preparedness
2800 SW Topeka Blvd
Topeka, Kansas 66611-1287

Electronic distribution from ADAMS by RIV:
Regional Administrator **(EWM)**
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RITS Coordinator **(NBH)**

Only inspection reports to the following:
Scott Morris **(SAM1)**
NRR Event Tracking System **(IPAS)**
WC Site Secretary **(SLA2)**
Dale Thatcher **(DFT)**

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.:	50-482
License No.:	NPF-42
Report No.:	50-482/00-10
Licensee:	Wolf Creek Nuclear Operating Corporation
Facility:	Wolf Creek Generating Station
Location:	1550 Oxen Lane, NE Burlington, Kansas
Dates:	November 19 to December 30, 2000
Inspectors:	F. L. Brush, Senior Resident Inspector J. S. Dyke, Resident Inspector M. P. Shannon, Senior Health Physicist
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. 50-482/00-10

IR 50-482/00-10; on 11/19-12/30/2000; Wolf Creek Nuclear Operating Corporation; Wolf Creek Generating Station. Integrated Resident/Regional Report.

The report covers a 6-week period of resident inspection and an announced inspection by a Region IV inspector. The significance of issues is indicated by their color (green, white, yellow, red) and was determined by the Significance Determination Process in Inspection Manual Chapter 0609.

A. Inspector Identified Findings

None

B. Licensee Identified Findings

- Violations of very low significance which were identified by the licensee have been reviewed by the inspectors. Corrective actions taken or planned by the licensee appear reasonable. These violations are listed in Section 40A7 of this report.

Report Details

Summary of Plant Status

The plant operated at essentially 100 percent power for the report period.

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

1R01 Adverse Weather (71111.01)

a. Inspection Scope

The inspectors performed a walkdown of the essential service water pump house frazil icing detection and prevention measures to verify that adverse weather would not affect mitigating systems. The inspectors discussed aspects of severe weather preparations with licensee personnel. The inspectors used Procedure SYS EF-205, "Essential Service/Circulating Water Cold Weather Operations," Revision 9, to verify that the required equipment was installed.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

The inspectors performed a partial walkdown of Auxiliary Feedwater System B when the turbine-driven auxiliary feedwater pump was inoperable for testing to verify equipment alignment and identify discrepancies that could impact redundant system operability. The inspectors also performed a complete walkdown of the auxiliary feedwater system to verify that equipment alignment problems that could cause initiating events or impact mitigating system availability were identified and resolved. The inspectors also performed a partial walkdown of Emergency Diesel Generator A while Emergency Diesel Generator B was inoperable for testing. The inspectors used the following procedures and information to perform the walkdowns:

- CKL AL-120, "Auxiliary Feedwater Normal Lineup," Revision 29
- CKL KJ-121, "Diesel Generator NE01 and NE02 Valve Checklist," Revision 21
- Auxiliary feedwater system engineer's notebook
- Plant Technical Specifications and Bases
- Appropriate sections of the Updated Safety Analysis Report

The inspectors also discussed the system status with various licensee personnel.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope

The inspectors performed a walkdown of the following areas to determine that the licensee implemented a fire protection program for the control of combustibles that maintains the fire detection and suppression equipment and passive fire protection features and adequately compensates for inoperable or degraded fire protection equipment, systems, or features:

- Auxiliary feedwater system pump rooms
- Control Building 2016 foot elevation
- Emergency Diesel Generator A room

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

a. Inspection Scope

The inspectors observed control room operator simulator training to verify that the licensed operator requalification program adequately evaluated how well the operators and crews have mastered the training objectives. The scenario included main feed regulating Valve B failing closed followed by a rupture in a Steam Generator A tube.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (71111.12)

a. Inspection Scope

The inspectors reviewed the licensee's maintenance rule implementation for the chemical and volume control system letdown heat exchanger, emergency lighting dc system, and offsite power (super system) to assess the effectiveness of maintenance efforts that apply to scoped structures, systems, and components. The inspectors reviewed various maintenance rule information.

b. Findings

No findings of significance were identified.

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 to evaluate the licensee's effectiveness in assessing risk for 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 the weeks of November 20 and 27 and December 11, 2000
- Actual, planned, and emergent work schedules for the same weeks

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the following operability evaluations to ensure that operability was properly justified and the component or system remained operable:

- Component cooling water system
- Essential service water system and ultimate heat sink

The inspectors also discussed the evaluations with licensee personnel and reviewed applicable portions of the Updated Safety Analysis Report.

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed or observed the postmaintenance testing on the following equipment to verify that procedures and test activities were adequate to verify system operability:

- Emergency Diesel Generator A
- Essential Service Water System A
- Spent Fuel Cooling Pump B motor

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed or observed all or part of the following surveillance activities to verify that risk significant structures, systems, and components were capable of performing their intended safety functions and assessing their operational readiness:

- STS AL-103, "Turbine-Driven Auxiliary Feedwater Pump Inservice Pump Test," Revision 33
- STS EG-100A, "Component Cooling Water Pumps A/C Inservice Pump Test," Revision 17
- STS IC-208B, "NB02 4 kV Loss of Voltage and Loss of Offsite Power Trip Actuation Device Operational Test," Revision 0
- STN IC-265, "Calibration of the Essential Service Water Forebay Level Loop EFLP0027," Revision 3

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed the auxiliary transformer temporary modification to verify that the modification had not affected the safety functions of important safety systems. The plant operated at 100 percent power with the auxiliary transformer removed. The startup transformer was then the normal power supply to vital Bus NB02 and was also supplying power to the plant nonvital load centers. The inspectors discussed the temporary modification with licensee personnel and reviewed the following documents:

- AP 21I-001, "Temporary Modifications," Revision 3
- 00-014-MA, "XMA02 Unit Auxiliary Transformer and XMR01 Start-up Transformer Temporary Modification Order," Revision 2
- 59-00-0052, "XMA02 Unit Auxiliary Transformer and XMR01 Start-up Transformer Unreviewed Safety Question Determination," Revision 1
- Temporary modifications - control room daily index

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors observed and reviewed an emergency drill to evaluate the conduct of the drill. The inspectors observed licensee activities in the simulator control room, the technical support center, and the emergency offsite facility. The inspectors reviewed the following documents:

- TIN GE-77-356-10, "2000 Semi-Annual Drill Scenario," Revision 0
- LR 50 100 05, "E-Plan Drill Simulator Guide," Revision 1
- Wolf Creek Generating Station emergency notification messages

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY
Cornerstones: Occupational, Public

2OS2 As Low As Reasonably Achievable (ALARA) Planning and Controls (71121.02)

a. Inspection Scope

The inspector interviewed radiation workers and radiation protection personnel throughout the radiological controlled area and conducted independent radiation surveys of selected work areas. The following items were reviewed to determine whether the licensee had an adequate program to maintain ALARA occupational exposures:

- ALARA program procedures
- Radiation Protection Quality Evaluation Report OB 00-1325
- Processes used to estimate and track exposures
- Collective plant exposure history for the past 3 years, current exposure trends, and 3-year rolling average dose information
- Three radiation work permit packages from the outage work activities which resulted in the highest personnel collective exposures during the inspection period

- Use of engineering controls to achieve dose reductions including temporary shielding
- Individual exposures of selected work groups (mechanical maintenance, instrumentation, and engineering)
- Hot spot tracking and reduction program
- Plant-related source-term data, including source-term control strategy
- Radiological work planning
- A summary of ALARA related performance improvement requests written since August 1, 2000, were reviewed. Eighteen of these performance improvement requests were reviewed in detail.
- Declared pregnant worker dose monitoring controls
- Job site inspections and ALARA control. No work was performed in high exposure or high radiation areas during this inspection. Therefore, this aspect of the above procedure could not be evaluated.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA3 Event Followup (71153)

(Closed Licensee Event Report (LER) 50-482/2000-004-00: failure to satisfactorily perform Technical Specification Surveillance Requirement 3.8.1.3 on Emergency Diesel Generator A. Refer to Section 4OA7 for a description of this licensee identified violation.

4OA6 Meetings

Exit Meeting Summary

The inspector presented the ALARA planning and controls inspection results to Mr. Otto Maynard, President and Chief Executive Officer, and members of licensee management at the conclusion of the inspection on December 1, 2000.

The inspectors presented the resident inspection results to Mr. Otto Maynard and members of licensee management after the conclusion of the inspection on January 2, 2001.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. The licensee furnished proprietary materials during the auxiliary feedwater system walkdown. The inspectors returned the material to the licensee prior to the end of the report period.

4OA7 Licensee Identified Violations

The following findings of very low safety significance were identified by the licensee and are violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as a noncited violation.

.1 The licensee failed to satisfactorily perform Technical Specification Surveillance Requirement 3.8.1.3 on Emergency Diesel Generator A on two occasions. The licensee determined that the diesel would have performed satisfactorily in the event of a loss of offsite power. The licensee initiated corrective action document Performance Improvement Request 2000-3385 as a result of this issue. This is a noncited violation (50-482/0010-01).

.2 Technical Specification 5.4.1 requires procedures for the radiation work permit system. Section 6.2.2 of Procedure AP 25B-300, “Radiation Work Permit Program,” Revision 10, states that all workers shall read, understand, and follow the provisions set forth on their radiation work permit. On October 30, 2000, a radiation worker did not follow the radiological requirement listed on Radiation Work Permit 00-3220, as described in the licensee’s corrective action program, reference Performance Improvement Request 2000-3290. This is a noncited violation (50-482/0010-02).

ATTACHMENT 1

Supplemental Information

PARTIAL LIST OF PERSONS CONTACTED

Licensee

K. A. Harris, Manager, Licensing and Corrective Action
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
C. C. Warren, Vice President Operations Support

ITEMS OPENED

Opened

50-482/0010-01	NCV	Failure to satisfactorily perform Technical Specification Surveillance Requirement 3.8.1.3 Emergency Diesel Generator A (Section 4OA7)
50-482/0010-02	NCV	Failure to follow radiological work permit requirement (Section 4OA7)

ITEMS CLOSED

Closed

50-482/2000-004-00	LER	Failure to satisfactorily perform Technical Specification Surveillance Requirement 3.8.1.3 Emergency Diesel Generator A (Section 4OA3)
50-482/0010-01	NCV	Failure to satisfactorily perform Technical Specification Surveillance Requirement 3.8.1.3 Emergency Diesel Generator A (Section 4OA7)
50-482/0010-02	NCV	Failure to follow radiological work permit requirement (Section 4OA7)

LIST OF DOCUMENTS REVIEWED

ALARA Planning and Controls

Procedures

- AP 15C-002, “Procedure Use and Adherence,” Revision 11
- AP 25A-001, “Radiation Protection Manual,” Revision 6
- AP 25A-401, “ALARA Program,” Revision 3
- AP 25A-410, “ALARA Committee,” Revision 4
- AP 25A-700, “Use of Temporary Lead Shielding,” Revision 4
- AP 25B-300, “RWP Program,” Revision 10

ALARA Work Packages

- Primary side steam generator work (RWP 99-3220 and 00-3220)
- RCP mechanical seal replacement (RWP 99-4208 and 00-4208)
- Secondary side steam generator work (RWP 99-4200 and 00-4200)

Performance Improvement Requests

- 2000 -2430, -2431, -2432, -2471, -2491, -2641, -2891, -2996, -2998, -3031, -3089, -3116, -3126, -3195, -3235, -3258, -3290, and -3341.

Fire Protection

- Fire preplan for control building 2016 foot level
- Combustible loading information for Rooms 3403, 3404, 3405, 3406, 3407, 3408, 3409, 3410, 3411, 3412, 3413, 3414, 3415, 3416, 3418, and 3419
- FPP A-13, 29, “Auxiliary Building 2000 Foot Auxiliary Feedwater Pump Room B, Feedwater Pump Valve Compartment Numbers 1 and 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 D-1, “Diesel Generator Building 2000 Foot, A Train Diesel Generator,” Revision 7
- Performance Improvement Request 2000-1275

Maintenance Rule Documents

- Functional failure determination checklist for BG, letdown heat exchanger, WR22282
- Functional failure determination checklist for BG, letdown heat exchanger support, PIR 20002899
- Functional failure determination checklist for BG, Piping Line EG052HBC-6, WR22464
- Functional failure determination checklist for BG, Piping Line EG052HBC-6, WR22554
- Functional failure determination checklist for BG, letdown heat exchanger lifting lug, WR22846
- Functional failure determination checklist for BG, Piping Lines EG-052-HBC-6 to EG-101-HBC-14, WR22858
- Functional failure determination checklist for BG, Piping Line BG034HBC-6, WR22630
- Functional failure determination checklist for BG, Piping Line BB149HBC-4, WR22571
- Functional failure evaluations for OF, offsite power (super system)
- Functional failure evaluations for QD, emergency lighting dc system
- Maintenance rule bases information, OF-01, offsite electrical power to the ESF buses
- Maintenance rule bases information, OF-02, offsite electrical power to the PA01 and PA02 buses from the startup transformer
- Maintenance rule bases information, OF-03, offsite electrical power to the PA01 and PA02 buses from the auxiliary transformer
- Maintenance rule bases information, OF-04, switchyard breakers and buswork
- Maintenance rule bases information, QD-02, emergency lighting dc system
- Maintenance rule expert panel meeting minutes for OF, offsite power (super system)
- Maintenance rule expert panel meeting minutes for QD, emergency lighting dc system

- Maintenance rule performance evaluation for OF, offsite power (super system)
- Maintenance rule performance evaluation for QD, emergency lighting dc system
- Performance Improvement Requests 2000-1369 and -2899
- Reportability Evaluation Request 2000-022, EBG01, letdown heat exchanger

Operability Evaluations

- Operations Information Report 95EG002, Revision 2
- Performance Improvement Requests 2000-2405, 2336, 2337, and 2338
- System engineer essential service water leak tabulation

Postmaintenance Testing

- AP 23E-001, “Emergency Diesel Generator Reliability Program,” Revision 3
- STN EC-100B, Spent fuel pool cooling Pump B reference pump curve determination
- STS KJ-015A, “Manual/Auto Fast Start, Synchronization, and Loading of Emergency Diesel Generator NE01,” Revision 12
- Work Order 98-128590-004, Spent fuel pool cooling Pump B motor
- Work Order 99-212456-000, Emergency Diesel Generator NE01 negative sequence relay
- Work Order 00-206881-001, EFV0273, Diesel Generator 1A coolers and 1E Switchgear Condenser 5A Essential Service Water A return
- Work Order 00-218221-000, EFHV0025, Essential service water/service water cross-connect valve
- Work Order 00-218659-000, Jacket water heat Exchanger 6A temperature control valve
- Work Order 00-218683-000, EFHV0023, Essential service water/service water cross-connect valve
- Work Order 00-218834-000, Emergency Diesel Generator NE01 differential relay
- Work Order 00-219722-000, Emergency Diesel Generator NE01 undervoltage relay

- Work Order 00-220342-000, Essential Service Water Pump A motor
- Work Order 00-220766-00, Essential Service Water Pump A

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. 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.