UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

January 16, 2003

Rick Muench, President and
Chief Executive Officer
Wolf Creek Nuclear Operating Corporation
P.O. Box 411
Burlington, Kansas 66839

SUBJECT: NRC INTEGRATED INSPECTION REPORT 50-482/02-005

Dear Mr. Muench:

On December 28, 2002, the NRC completed an inspection at your Wolf Creek Generating Station. The enclosed report documents the inspection findings which were discussed on January 7, 2003, with you and other members of your staff.

This inspection examined 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 selected examination of procedures and representative records, observations of activities, and interviews with personnel.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response 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/reading-rm/adams.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/

David N. Graves, Chief
Project Branch B
Division of Reactor Projects

Docket: 50-482
License: NPF-42

Enclosure:
NRC Inspection Report
50-482/02-05

cc w/enclosure:
Vice President Operations
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

Office of the Attorney General
120 SW 10th Avenue, Floor 2
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
1000 SW Jackson, Suite 310
Topeka, Kansas 66612-1366

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

Technical Services Branch Chief
FEMA Region VII
2323 Grand Blvd., Suite 900
Kansas City, Missouri 64108-2670

Electronic distribution by RIV:
Regional Administrator **(EWM)**
DRP Director **(ATH)**
DRS Director **(DDC)**
Senior Resident Inspector **(FLB2)**
Resident Inspector **(JXC2)**
SRI, Callaway **(MSP)**
Branch Chief, DRP/B **(DNG)**
Senior Project Engineer, DRP/B **(RAK1)**
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RITS Coordinator **(NBH)**
Dale Thatcher **(DFT)**
W. Maier **(WAM)**, RSLO
Scott Morris **(SAM1)**
WC Site Secretary **(SLA2)**

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Dockets:	50-482
Licenses:	NPF-42
Report No:	50-482/02-05
Licensee:	Wolf Creek Nuclear Operating Corporation
Facility:	Wolf Creek Generating Station
Location:	1550 Oxen Lane, NE Burlington, Kansas 66839
Dates:	September 22 through December 28, 2002
Inspectors:	F. L. Brush, Senior Resident Inspector J. Cruz, Resident Inspector P. Elkmann, Emergency Preparedness Inspector
Approved By:	D. N. Graves, Chief, Project Branch B
ATTACHMENT:	Supplemental Information

SUMMARY OF FINDINGS

Wolf Creek Generating Station
NRC Inspection Report 50-482/02-05

IR 500482/02-05; Wolf Creek Nuclear Operating Corporation; on September 22 through December 28, 2002; Wolf Creek Generating Station. Integrated Resident/Regional Report.

The report covers a 14-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. Findings for which the significance determination process does not apply are indicated by the severity level of the applicable violation. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at http://www.nrc.gov/NRR/OVERSIGHT/index.html.

A. Inspector-Identified and Self-Revealing Findings

No findings of significance were identified.

B. Licensee-Identified Findings

Violations of very low safety significance, which were identified by the licensee have been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. These violations and corrective action tracking numbers are listed in Section 4OA7.

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

1R01 Adverse Weather (71111.01)

a. Inspection Scope

On November 4-5, 2002, the inspectors performed a walkdown of various power block buildings using licensee Procedure STN GP-001, "Plant Winterization," Revision 29, to verify that the onset of cold weather would not affect mitigating systems. The inspectors also reviewed licensee Procedure SYS EF-205, "ESW/CIRC Water Cold Weather Operations," Revision 11, and portions of the Updated Safety Analysis Report. Additionally, the inspectors discussed adverse weather preparations with various licensee personnel.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

Partial walkdowns

The inspectors performed the following partial walkdowns:

- Centrifugal charging Pump A during a centrifugal charging Pump B outage, October 30
- Control room emergency ventilation system Train A during a control room emergency ventilation system Train B outage, November 25
- Residual heat removal Pump B during a residual heat removal Pump A outage, October 10

The inspectors performed the walkdowns to verify equipment alignment and identify discrepancies that could impact redundant system operability. The inspectors used the Updated Safety Analysis Report, system drawings, system lineup checklists, and other documents to perform the walkdowns. The inspectors also discussed the walkdowns with various licensee personnel.

Full Walkdown

The inspectors performed a full walkdown of the essential service water system Train B on December 12, 2002.

The inspectors performed the walkdown to verify equipment alignment and identify discrepancies that could impact redundant system operability. The inspectors used the Updated Safety Analysis Report, system drawings, and system lineup checklists to perform the walkdowns. The inspectors also reviewed the outstanding work order list, corrective action program documents, operator workarounds, and plant temporary modifications. The inspectors also discussed the walkdowns with various licensee personnel.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

Quarterly Fire Area Walkdowns

a. Inspection Scope

The inspectors toured the following areas to assess the licensee's control of transient combustible materials, the material condition and lineup of fire detection and suppression systems, and the material condition of manual fire equipment and passive fire barriers. The licensee's fire preplans and fire hazards analysis report were used to identify important plant equipment, fire loading, detection and suppression equipment locations, and planned actions to respond to a fire in each of the plant areas selected. Compensatory measures for degraded equipment were evaluated for effectiveness.

- Auxiliary building 2026 foot level, component cooling water heat exchangers and pump general areas, October 8
- Auxiliary building 2026 foot level, north electrical penetration room, October 28
- Auxiliary building 2047 foot level, control room air conditioning and filtration units Room B, December 13
- Auxiliary feedwater pump and valve rooms, 2000 foot level, November 27
- Essential service water pump house, November 14
- Transformer areas north and west of the turbine building, October 2

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

On September 30, 2002, the inspectors verified that the licensee's flooding mitigation plans and equipment were consistent with the licensee's design requirements and the risk assumptions in the Updated Safety Analysis Report. The inspectors conducted walkdowns of areas susceptible to external flooding to verify that risk-significant equipment was adequately protected. The inspectors also examined the plant cooling lake's normal and emergency overflow structures. The inspectors observed that the structures were clear of debris which would restrict overflow functions.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

a. Inspection Scope

On October 4, 2002, the inspectors observed control room operator simulator training to verify that the licensed operator requalification program ensured safe operation of the plant. The inspectors observed crew performance during simulator sessions to evaluate the clarity and formality of communications, the correct use of procedures, high risk operator actions, and the oversight and direction provided by the shift supervisor. The inspectors used Simulator Guide LR 50 010 06, "Steam Generator Tube Rupture," Revision 4. The scenario included a steam generator tube rupture and a loss-of-offsite power upon receipt of a safety injection signal and emergency core cooling system actuation.

The inspectors also reviewed the scenario sequences and objectives, observed the licensee's critique, and discussed crew performance with licensee monitors for the training.

a. 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 following structures, systems, or components to assess the effectiveness of maintenance efforts in accordance with 10 CFR 50.65.

- Emergency diesel generator starting air system, November 16
- Steam generator blowdown system, October 18

The inspectors reviewed work practices, scoping in accordance with 10 CFR 50.65(b), performance, 10 CFR 50.65(a)(1) or (a)(2) classification and reclassification goals, and identification of common cause failures. The inspectors reviewed various documentation and discussed maintenance rule items with licensee personnel.

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 in accordance with the requirements of 10 CFR 50.65(a)(4) and licensee Procedure AP 22C-003, "Operational Risk Assessment Program," Revision 7. The inspectors also discussed the planned and emergent work activities with planning and maintenance personnel. The inspectors reviewed the following:

- Operational risk assessments for planned maintenance for the weeks of September 30, October 21, and November 18
- Actual, planned, and emergent work schedules for the same weeks

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Nonroutine Plant Evolutions (71111.14)

a. Inspection Scope

The inspectors performed a followup inspection of the licensee's performance during nonroutine evolutions and events. The inspectors reviewed operator logs, procedures, plant data, and performance improvement requests (PIR). The inspectors also discussed the evolutions and events with various licensee personnel.

1. Reactor Trip Due to Feedwater Control System Card Failure

The inspectors reviewed and observed personnel performance in response to a reactor trip which occurred on May 8, 2002. The inspectors also reviewed emergency operating Procedures EMG E-0, "Reactor Trip or Safety Injection," Revision 15, and EMG ES-02, "Reactor Trip Response," Revision 13, used by the operators in response to the reactor trip. In addition, the inspectors reviewed operator logs, plant computer data, and strip charts, as documented in Administrative Procedure AP 20-002, "Post-Trip Review,"

Revision 3, to determine the sequence of events and assess whether operators responded in accordance with plant procedures and training. This event was discussed in NRC Inspection Report 50-482/02-02, Section 4OA3.

2. Reactor Shutdown Due to Loose Parts in the Reactor Coolant System

On May 9, 2002, the control room operators heard an unusual noise when listening to the loose parts monitoring system following a loose parts monitoring system alarm. The location of the noise was the Steam Generator B inlet plenum. The licensee, following an analysis by the reactor vendor, determined that the loose part needed to be removed. On May 13, 2002, the licensee shut down the reactor and proceeded to Mode 5 to allow entry into midloop operation. The inspectors observed portions of the shutdown and cooldown. The followup inspection included reviewing control room logs and plant monitoring system computer data. For more details see NRC Inspection Report 50-482/02-02, Section 1R20B.

3. Hot Midloop Operation

On May 16, 2002, the operators drained the reactor coolant system and entered hot midloop operations. On May 17, 2002, the licensee exited hot midloop operations. However, an operator error contributed to the lowering of residual heat removal shutdown cooling water flow and a subsequent rise in reactor coolant system temperature. The inspectors reviewed control room logs, plant monitoring system computer data, and PIRs and discussed the evolution with plant personnel. This event, which resulted in a noncited violation, was discussed in Inspection Report 50-482/2002-002, Section 1R20B.

4. Partial Loss of Instrument Air

On June 18, 2002, the plant experienced a partial loss of instrument air when operators were restoring the air dryer to service. The control room annunciators for dryer and compressed air pressure low alarmed. The control room operators immediately directed the operator at the dryer to place both dryer trains in manual. Instrument air pressure returned to normal in approximately 3 minutes.

The operators also entered Off-Normal Procedure OFN KA-019, “Loss of Instrument Air,” Revision 4. The operators discussed tripping the plant since some air-operated valves started to change position. However, the quick restoration of air pressure precluded the need to trip the plant. The inspectors reviewed control room logs, PIRs, and the off-normal procedure and discussed the event with various licensee personnel.

5. Emergency Diesel Generator Start and Loading Due to a Circuit Card Failure

On September 9, 2002, an automatic actuation of emergency diesel Generator A and the load shed and emergency load sequencer occurred due to a failure of a relay driver card. The driver card failure tripped the normal feeder breaker to emergency ac Bus A. The emergency diesel started and loaded on the bus and all systems responded as required. The operators entered Procedure OFN NB-030, “Loss of AC Emergency Bus

NB01 (NB02)," Revision 7. Following repair of the driver card, the operators paralleled the normal power supply to the bus and secured the emergency diesel generator. The inspectors reviewed control room logs, plant procedures, and a PIR and discussed the event with various licensee personnel.

6. Lake Water Contamination of the Condensate Storage Tank Due to Operator Error

On November 5, 2002, while performing Procedure SYS EF-300, "ESW/Service Water Macrofoul Treatment," Revision 5, an operator connected a hose to a condensate storage tank outlet pipe drain connection instead of an essential service water pipe drain connection. The other end of the hose was correctly connected to an essential service water drain. The purpose of the hose connection was to facilitate flow through an auxiliary feedwater pump room cooler during the macrofoul treatment. The operator discovered the error approximately 5 minutes after opening the drain valves to start the treatment.

As a result of the misconnection, lake water entered the condensate storage tank. The sodium, chloride, and sulfate concentrations in the tank increased. The main condenser and steam generators were affected since the condensate storage tank provides makeup to the balance-of-plant condensate system. The steam generator concentrations never exceeded the licensee's administrative limits. The licensee isolated the condensate storage tank from the main condenser. On November 27, 2002, the operators returned the tank to service following cleanup.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors selected operability evaluations conducted by the licensee during the report period involving risk-significant systems or components to review. The inspectors evaluated the technical adequacy of the licensee's operability determinations, verified that appropriate compensatory measures were implemented, and verified that the licensee considered all other pre-existing conditions, as applicable. Additionally, the inspectors evaluated the adequacy of the licensee's problem identification and resolution program as it applied to operability evaluations. Specific operability evaluations reviewed are listed below.

- Backup nitrogen tank (TKA05) for the Steam Generator D atmospheric relief valve and auxiliary feedwater flow control valve, November 22
- Centrifugal charging Pump B, October 17
- Emergency diesel Generator A governor high oil level, October 16

- Emergency diesel Generator A jacket water keep warm pump leak, November 12
- Essential service water component cooling water heat exchanger return Valve EFHV59, October 15
- Main steam isolation Valve D, November 4
- Residual heat removal heat exchanger bypass Valves EJFCV0618 and -0619, December 13
- Spent fuel pool cooling Pump A, October 18

The inspectors also reviewed applicable portions of the Updated Safety Analysis Report, Technical Specifications, and system drawings and discussed the operability evaluations with licensee personnel.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope

On October 11, the inspectors reviewed the licensee's change to the testing requirements for the essential service water system containment isolation valves. The inspectors verified that the modification maintained the system availability, reliability, and functional capability.

The four essential service water system containment isolation valves remain open during normal plant operations. They are required to be open for all design-basis accidents and following a containment isolation signal. Upon being granted a relief request from the requirements of ASME Code, Section XI (related to Code Case OMN-1), the licensee modified the quarterly test to consist of the stroking of the valves without timing. The licensee had previously measured the valve-stroke times each quarter.

The inspectors verified that the new testing requirements for the essential service water containment isolation valves were contained in the appropriate procedure. The inspectors also verified that the licensee's procedure for tracking and documenting the exercising of motor-operated valves included these valves.

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 are adequate to verify system operability:

- Component cooling water Pumps B and D, September 30
- Control room emergency ventilation system Train B, October 24
- Emergency diesel Generator A, December 16
- Residual heat removal Pump B, November 5
- Steam Generator C atmospheric relief valve, November 24

In each case, the associated work orders and test procedures were reviewed to determine the scope of the maintenance activity and determine if the test adequately tested components affected by the maintenance. The Updated Final Safety Analysis Report, design basis documents, and selected calculations were also reviewed to determine the adequacy of the acceptance criteria listed in the test procedures.

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 are capable of performing their intended safety functions and assessing their operational readiness:

- STS EN-100B, “Containment Spray Pump B Inservice Pump Test,” Revision 15, September 27

- STS KJ-005B, “Manual/Auto Start, Synchronization and Loading of Emergency D/G NE02,” Revision 40, October 2

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP2 Alert Notification System Testing (71114.02)

a. Inspection Scope

The inspectors discussed with the licensee changes made in the installed systems and testing programs for off-site siren and tone alert radio systems between November 2000 and November 2002, to determine the adequacy of licensee methods for testing the alert and notification system in accordance with 10 CFR Part 50, Appendix E. The licensee's siren testing program was compared with the guidance of NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1, and Federal Emergency Management Agency Document REP-10, "Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plant." The inspector also reviewed Procedures EPP 06-019, "Alert and Notification System Sirens," Revision 2, and EPP 06 022, "Tone Alert Radio Maintenance/Compensatory Measures," Revision 1.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization Augmentation Testing (71114.03)

a. Inspection Scope

The inspectors discussed with the licensee changes made in the installed systems and testing programs for automatic phone dialing systems and paging systems between November 2000 and November 2002, to determine the licensee's ability to staff emergency response facilities in accordance with the licensee emergency plan and the requirements of 10 CFR Part 50, Appendix E. The inspectors also reviewed Procedures EPP 06-001, "Control Room Operations," Revision 3, and EPP 06-015, "Emergency Response Organization Callout," Revision 3.

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies (71114.05)

a. Inspection Scope

The inspectors reviewed the following documents related to the licensee's corrective action program, to determine the licensee's ability to identify and correct problems in accordance with the requirements of 10 CFR 50.47(b)(14) and 10 CFR Part 50, Appendix E:

- Self-Assessment Report SEL-02-08, “STARS Round Robin Assessment of Emergency Planning, Wolf Creek Generating Station”
- Self-Assessment Report SEP-01-049, “Emergency Response Organization Readiness”
- QE Audits K567 and K590
- Drill reports for drills conducted: 12/4/2001, 2/1/2001, 2/26/2001, 5/9/2001, 6/4/2001, 6/3/2002, 6/11/2002, 6/17/2002, 8/16/2002, 8/29/2002, 9/6/2002, 11/4/2002, and 12/5/2002
- Exercise reports for the 2001 dress rehearsal and evaluated exercise
- Summaries of 150 corrective actions assigned to the emergency preparedness department between November 2000 and November 2002
- Details of PIRs: 00-3607, 00-3700, 01-0165, 01-0460, 01-0529, 01-0826, 01-0981, 01-1153, 01-1904, 01-1955, 01-2043, 01-2102, 01-2183, 01-2183, 01-2771, 01-2834, 01-2894, 01-3000, 02-0010, 02-0276, 02-1419, 02-1523, 02-1525, 02-1548, 02-2104, 02-2157, and 02-2282
- AI 26A-003, “Regulatory Evaluations (Other than 10 CFR 50.59)”

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

On December 5, 2002, the inspectors observed and reviewed emergency drill activities in the simulator control room, the technical support center, and the emergency off-site facility. The inspectors attended the emergency offsite center postdrill critique. The inspectors reviewed associated documents and information and discussed the drill activities with various licensee personnel.

b. Findings

No findings of significance were identified.

3. SAFEGUARDS

Cornerstone: Physical Protection

3PP3 Response to Contingency Events (71130.03)

The Office of Homeland Security developed a Homeland Security Advisory System to disseminate information regarding the risk of terrorist attacks. The Homeland Security Advisory System implements five color-coded threat conditions with a description of corresponding actions at each level. NRC Regulatory Information Summary 2002-12a, dated August 19, 2002, "NRC Threat Advisory and Protective Measures System," discusses the Homeland Security Advisory System and provides additional information on protective measures to licensees.

a. Inspection Scope

On September 10, 2002, the NRC issued a Safeguards Advisory to reactor licensees to implement the protective measures described in Regulatory Information Summary 2002-12a in response to the Federal government declaration of threat level "ORANGE." Subsequently, on September 24, 2002, the Office Homeland Security downgraded the national security threat condition to "YELLOW" with a corresponding reduction in the risk of a terrorist threat.

The inspectors interviewed licensee personnel and security staff, observed the conduct of security operations, and assessed licensee implementation of the threat level "ORANGE" protective measures. Inspection results were communicated to the region and headquarters security staff for further evaluation.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

.1 Drill and Exercise Performance

a. Inspection Scope

The inspectors reviewed the following documents related to the drill and exercise performance indicator in order to verify the licensee's reported data:

- Adminstrative Procedure AP 26A-007, "NRC Performance Indicators," Revision 2
- Desk guide, "Emergency Planning Performance Indicators," Revision 1

- Drill schedules for Calendar Years 2001 and 2002
- Drill scenarios for drills conducted during the fourth quarter of Calendar Year 2001 through the third quarter of Calendar Year 2002
- Notification forms and participant logs from drills conducted during the fourth quarter of Calendar Year 2001 through the third quarter of Calendar Year 2002
- Drill evaluation worksheets and records for a 100 percent sample of drills conducted during the fourth quarter of Calendar Year 2001 through the third quarter of Calendar Year 2002
- Performance indicator summary sheets
- Performance indicator reports

b. Findings

No findings of significance were identified.

.2 Emergency Response Organization Drill Participation

a. Inspection Scope

The inspectors reviewed the following records related to emergency response organization participation in order to verify the licensee's reported data:

- Emergency response organization rosters for the fourth quarter of Calendar Year 2001 through the third quarter of Calendar Year 2002
- List of key emergency response organization positions
- Drill participation records for a 100 percent sample of key responders for the fourth quarter of Calendar Year 2001 through the third quarter of Calendar Year 2002
- Performance indicator summary sheets
- Performance indicator reports

b. Findings

No findings of significance were identified.

.3 Alert and Notification System

a. Inspection Scope

The inspectors reviewed siren testing records for a 100 percent sample of tests conducted during the fourth quarter of Calendar Year 2001 through the third quarter of Calendar Year 2002 to verify the accuracy of data reported for this performance indicator.

b. Findings

No findings of significance were identified.

4. Safety System Unavailability

a. Inspection Scope

The inspectors performed a review of performance indicator data. The inspectors reviewed the licensee's data submittal using NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 2. The inspectors reviewed various licensee indicator input information to determine the accuracy and completeness of the performance indicator:

- Safety system unavailability - high pressure injection system, October 2001 through September 2002

The inspectors discussed system status with various licensee personnel. The inspectors also reviewed licensee information, including control room logs, and the applicable Technical Specifications.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

1. Hydrolocking of Essential Service Water Containment Isolation Valves

a. Inspection Scope

The inspectors reviewed the licensee's response to the failure of one of the essential service water system's four containment isolation valves to open following a surveillance test. The licensee initiated PIR 2001-1976 to document the evaluation and corrective actions.

The licensee determined by engineering calculation that the essential service water piping had not been pressurized beyond its design limit. The licensee also electrically tested the outboard isolation valve motor operator and opened the isolation valves. All four valves performed satisfactorily.

b. Findings

No findings of significance were identified.

2. Unanticipated Reactivity Change

a. Inspection Scope

The inspectors reviewed the licensee's response to an unanticipated reactivity change that occurred on June 10, 2001, during a surveillance to equalize boron concentration between the reactor coolant system and the centrifugal charging pump piping. The licensee initiated PIR 001-1524 to document the evaluation and corrective actions.

The transient resulting from the starting of centrifugal charging Pump B was below the design limit for reactivity changes and there was no challenge to plant equipment. The operators implemented normal operating procedures to respond to the transient and restored normal reactor coolant system temperature and reactor power.

b. Findings

No findings of significance were identified.

4OA3 Event Followup (71153)

.1 (Closed) Licensee Event Report (LER) 50-482/2002-005-00: Engineering safety features actuation, including emergency diesel generator start due to a hardware failure in a relay driver card. The inspectors reviewed the LER and no significant findings were identified. The licensee initiated PIR 2002-2250 for this issue.

.2 (Closed) LER 50-482/2002-004-02: Postulated fire event could lead to the loss of redundant trains of postfire safe shutdown equipment.

Between June 7 and August 20, 2002, the licensee identified three separate conditions where a postulated fire event could lead to the loss of redundant trains of postfire safe shutdown equipment. Immediate corrective actions included the implementation of fire watches in the affected areas until long-term resolution of the conditions could be achieved. This finding is more than minor because it had a credible impact on safety in that, if the redundant trains were not available, postfire safe shutdown would not be ensured. The finding affects the initiating events and mitigating systems cornerstones and was considered to have very low safety significance (Green) using Appendix F of the Significance Determination Process because of the low ignition frequencies in the areas, the low combustible loading in the areas, the automatic fire detection capabilities, and the ability of operator actions to extinguish the postulated fire and restore

equipment necessary for postfire safe shutdown. This licensee-identified finding involved a violation of License Condition 2.C(5)(a) of Facility Operating License NPF-42. The enforcement aspects of the violation are discussed in Section 4OA7.

4OA6 Meetings

.1 Exit Meeting Summary

The inspectors presented the resident inspector inspection results to Mr. R. A. Muench, President and Chief Executive Officer, and other members of licensee management on January 7, 2003

The Emergency Preparedness inspector presented the inspection results to Mr. O. Maynard, President and Chief Executive Officer, and other members of licensee management at the conclusion of the inspection on December 13, 2002.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements, which meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as a noncited violation.

License Condition 2.C(5)(a) of Facility Operating License NPF-42 requires, in part, that the licensee shall maintain all provisions of the approved fire protection program as described in the SNUPPS Final Safety Analysis Report for the facility through Revision 17 and the Wolf Creek site addendum through Revision 15. In 1987, Revision 00 of the Wolf Creek Updated Safety Analysis Report was issued and combined the SNUPPS Final Safety Analysis Report, Revision 17, and the Wolf Creek site addendum, Revision 15, into the Updated Safety Analysis Report. Table 9.5E, Section III.G, of the Updated Safety Analysis Report details the licensee's methods of ensuring that one of the redundant trains of postfire safe shutdown equipment is free of fire damage. Between June 7 and August 20, 2002, the licensee identified three separate conditions where a postulated fire event could lead to the loss of redundant trains of postfire safe shutdown equipment. The conditions have been entered into the licensee's corrective action program as PIRs 2000-2378 and 2002-1670. Due to the low ignition frequencies of the areas, the low combustible loading in the areas, the automatic fire detection capabilities, and the ability of operator actions to extinguish the postulated fire and restore equipment necessary for postfire safe shutdown, this violation is of very low safety significance and is being treated as a noncited violation. If you contest the violation or significance of the NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011; the Director,

Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Wolf Creek Generating Station facility.

ATTACHMENT

Supplemental Information

PARTIAL LIST OF PERSONS CONTACTED

Licensee

K. A. Harris, Manager, Regulatory Affairs
M. W. Hicks, Manager, Operations
D. Jacobs, Plant Manager
R. A. Muench, President and Chief Executive Officer
B. T. McKinney, Site Vice President

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

50-482/2002-004-02	LER	Postulated fire event could lead to the loss of redundant trains of postfire safe shutdown equipment (Section 4OA7).
50-482/2002-005-00	LER	Engineering safety features actuation including emergency diesel generator start due to a hardware failure in a relay driver card (Section 4OA3).

LIST OF DOCUMENTS REVIEWED

Drill Evaluation

- 02-SA-02, “2002 Semi-Annual Drill,” Revision 0
- Technical Support Center logs

Equipment Alignment

- CKL BG-120, “Chemical and Volume Control System Normal Valve Lineup,” Revision 33
- CKL BG-130, “Chemical and Volume Control System Switch and Breaker Lineup,” Revision 24
- CKL EF-120, “Essential Service Water Valve, Breaker and Switch Lineup,” Revision 37
- CKL EJ-120, “RHR Normal System Lineup,” Revision 30
- CKL GK-121, “Control Building HVAC Valve Checklist,” Revision 14

- CKL GK-131, “Control Building HVAC Electrical Checklist,” Revision 19
- M-12EF01, “Piping and Instrumentation Diagram, Essential Service Water System,” Revision 17
- M-12EF02, “Piping and Instrumentation Diagram, Essential Service Water System,” Revision 21
- Open essential service water work orders as of December 12, 2002
- Performance Improvement Requests 2001-3101, 2002-0032, 2002-0467, 2002-0865, 2002-1329, 2002-1466, 2002-1844, 2002-2045, 2002-2471, 2002-2764 and 2002-2774

Fire Protection

- AP 10-100, “Fire Protection Program,” Revision 6
- AP 10-106, “Fire Preplans,” Revision 2
- FPP T-14, “Transformers XMR01, XPB03, XPB04, XNB01 and XNB02,” Revision 3
- FPP T-15, “Transformers XMA01A, XMA01B, XMA01C, XMA01D and XMA02,” Revision 3
- Updated Safety Analysis Report fire hazards analysis

Identification and Resolution of Problems

- AP 17C-026, “Call Superintendent,” Revision 2
- AP 21-001, “Operations Guidance and Expectations,” Revision 22
- Functional failure evaluations for NN-01, instrument ac power system-120V (Class IE power system)
- LR 10 040 01, Licensed Operator Requal Training Lesson Plan, Revision 2
- Maintenance rule bases information for GN, containment cooling system
- Maintenance rule bases information for NN, instrument ac power system-120V (Class IE power system)
- Maintenance rule expert panel meeting Minutes NN-01, instrument ac power system-120V (Class IE power system)
- NO 16 313 01, Electrical Print Reading Lesson Plan, Revision 1

- OFN NN-021, “Loss of Vital 120 VAC Instrument Bus,” Revision 7
- OFN SB-008, “Instrument Malfunctions,” Revision 13
- STN OMT-001, “Operations Monthly Tasks,” Revision 11
- STS EF-201A, “ESW System Train A Inservice Valve Test,” Revision 7
- STS EF-201B, “ESW System Train B Inservice Valve Test,” Revision 7
- STS EG-206, “Component Cooling Water System Inservice Valve Test,” Revision 6
- STS PE-038, “Containment Cooler Performance Test,” Revision 4
- STS PE-175, “LLRT Valve Lineup For Penetration 75,” Revision 3
- STS PE-176, “LLRT Valve Lineup For Penetration 76,” Revision 3
- SY 14 008 00, “Component Cooling Water System Lesson Plan,” Revision 14
- SY 14 089 00, “Essential Service Water System Lesson Plan,” Revision 12
- SYS EG-401, “Component Cooling Water System Drain Procedure,” Revision 13

Maintenance Rule Documents

- AP 23M-001, “WCGS Maintenance Rule Program,” Revision 4
- Functional failure evaluations for BM-08, steam generator blowdown system
- Functional failure evaluations for KJ-01, standby diesel engine system
- Maintenance rule bases information for BM-08, steam generator blowdown system
- Maintenance rule bases information for KJ-01, standby diesel engine system
- Maintenance rule (A1) disposition checklist and document summary for BM-08, steam generator blowdown system
- Maintenance rule expert panel meeting minutes BM-08, steam generator blowdown system
- Maintenance rule expert panel meeting minutes for KJ-01, standby diesel engine system
- Maintenance rule performance evaluation for BM-08, steam generator blowdown system
- Maintenance rule performance evaluation for KJ-01, standby diesel engine system

- Performance Improvement Requests 2001-2891 and -2895 and 2002-0111, -0182, -1014, -1209, -1268, -1521, -2070
- Work Orders 01-232033-00, 01-232034-00, 01-232035-00, and 01-232036-00,

Operability Evaluations

- Control room operations' logs
- Engineering Calculation KA-03-W, "KA System Back-up Nitrogen Accumulators," Revision 1
- Evaluation of nonconforming conditions of installed plant equipment for Work Order 02-243824-000
- Evaluation of nonconforming conditions of installed plant equipment for Work Request 02-035046
- Framatome ANP calculation for EJFCV0618/619
- Functional Failure Determination Checklist for BG, Chemical and Volume Control System dated October 11, 2002
- Instruction Manual M-084-0052, "Gould Pumps"
- Instruction Manual M-018-00309, "Governor - Woodward EGB-50C SU 062"
- Operability Evaluation Number 59
- Performance Improvement Requests 2002-0325, -0379,-1967,- 2279, -2340, -2357, -2648
- Temporary Modification 02-022-EF
- Technical Specifications and Technical Specification Bases
- Updated Safety Analysis Report
- Work Order 02-237413-00, Fuel Pool Cooling Pump PEC01A
- Work Order 02-245432-000, Emergency Diesel Generator A jacket water keep warm Pump PKJ01A

Performance Indicator Verification

- Licensee performance indicator worksheets
- Performance indicator summary reports
- Selected control room operator logs

Permanent Plant Modifications

•NRC Letter, Relief request from the requirements of ASME Code, Section XI, Related to Code Case OMN-1 for Wolf Creek Generating Station (TAC MB0982), dated March 29, 2001

•STS IC-610A, “Slave Relay Test K610 Train A Safety Injection,” Revision 16

•STS VT-001, “Verification of OMN-1, MOV Exercise Requirements,” Revision 1

Personnel Performance During Nonroutine Plant Evolutions

- Control room Operator Logs
- Performance Improvement Requests 2002-1213, -1486, -1496, -1857, -2250, and -2667

Postmaintenance Testing

- STS AB-201D, “Atmospheric Relief Valve Inservice Valve Test,” Revision 12
- STS EG-100B, “Component Cooling Water Pumps B/D Inservice Pump Test,” Revision 16
- STS EJ-100B, “RHR System Inservice Pump B Test,” Revision 20
- STS GK-001B, “Control Room Emergency Vent System Train B Operability Test,” Revision 26
- Work Orders 02-233423-000, 02-233423-001, 02-233499-000, 02-233499-001, 02-233499-002, 02-234014-001, 02-234015-001, 02-236245-001, 02-236892-001, 02-236892-002, 02-237009-000, 02-237117-001, and 02-237819-000