



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

April 30, 2003

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

**SUBJECT: OMITTED PAGE OF WOLF CREEK GENERATING STATION -  
NRC INTEGRATED INSPECTION REPORT 50-482/03-03**

The subject report dated April 28, 2003, was inadvertently issued with the enclosed page of the letter omitted from the hard copies. Please insert that page in the document you should already have received.

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

Sincerely,

*/RA/*

David N. Graves  
Project Branch B  
Division of Reactor Projects

Docket: 50-482  
License: NPF-42

Enclosure:  
Omitted page

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

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ADAMS:  **Yes**     No    Initials: \_\_dng\_\_  
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50-482/03-03

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April 28, 2003

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Wolf Creek Nuclear Operating Corporation  
P.O. Box 411  
Burlington, Kansas 66839

**SUBJECT: WOLF CREEK GENERATING STATION - NRC INTEGRATED INSPECTION  
REPORT 50-482/03-03**

Dear Mr. Muench:

On April 5, 2003, the NRC completed an integrated inspection at your Wolf Creek Generating Station. The enclosed report documents the inspection findings which were discussed on April 4, 2003, with Ms. D. Jacobs 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.

Based on the results of this inspection, the NRC has identified an issue that was evaluated under the risk significance determination process as having very low safety significance (Green). The NRC has also determined that a violation is associated with this issue. This violation is being treated as a noncited violation (NCV), consistent with Section VI.A of the Enforcement Policy. The NCV is described in the subject inspection report. 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.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, 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  
Project Branch B  
Division of Reactor Projects

Docket: 50-482  
License: NPF-42

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NRC Inspection Report  
50-482/03-03

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**ENCLOSURE**

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

Docket Nos: 50-482  
License Nos: NPF-42  
Report No: 50-482/03-03  
Licensee: Wolf Creek Nuclear Operating Corporation  
Wolf Creek Generating Station  
Location: 1550 Oxen Lane NE  
Burlington, Kansas  
Dates: December 29, 2002, through April 5, 2003  
Inspectors: F. L. Brush, Senior Resident Inspector  
J. Cruz, Resident Inspector  
P. J. Elkmann, Emergency Preparedness Inspector  
J. F. Melfi, Reactor Inspector  
G. A. Pick, Senior Physical Security Inspector  
Approved By: D. N. Graves, Chief, Project Branch B  
ATTACHMENT: Supplemental Information

## SUMMARY OF FINDINGS

### Wolf Creek Generating Station NRC Inspection Report 50-482/03-03

IR 500482/03-03; Wolf Creek Nuclear Operating Corporation; 12/29/2002 - 4/5/2003; Wolf Creek Generating Station. Personnel Performance During Nonroutine Plant Evolutions.

The report covers a 14-week period of resident inspection and announced inspections by three Region IV inspectors. The inspections identified one Green noncited violation. 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 in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

#### **Cornerstone: Initiating Events**

- Green. The inspectors documented a failure to follow Procedure AP 21D-005, "Component Manipulation Control." Step 6.1.2 of Procedure AP 21D-005 requires shift manager or designee authorization to operate all systems or components. While restoring a rod-drive motor generator to service, an operator did not receive authorization prior to operating the motor-generator output breaker handle. The manipulation of the handle was an action not directed by procedure and resulted in a reactor trip. The failure to follow Procedure AP 21D-005 was identified as a violation of Technical Specification 5.4.1, for a Regulatory Guide 1.33 referenced procedure. This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy and is in the licensee's corrective action program as Performance Improvement Request 2003-0010.

This issue was considered more than minor because the failure to follow procedure resulted in an unplanned reactor trip and the inherent challenges to plant safety systems and equipment associated with a reactor trip. This issue was determined to be of very low safety significance because the finding did not contribute to the likelihood of: (1) a primary or secondary system loss of coolant accident, (2) mitigation equipment or function unavailability; and (3) a plant fire or internal/external flooding affecting plant response (Section 1R14).

## Report Details

### Summary of Plant Status

The plant operated at essentially 100 percent power for the report period, with one exception. On January 3, 2003, the plant tripped due to the failure of an operator to follow procedure while restoring a rod-drive motor generator to service. The licensee restarted the plant and placed the main generator online on January 4. The plant returned to 100 percent power on January 6.

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

##### 1R01 Adverse Weather (71111.01)

###### a. Inspection Scope

On March 27, 2003, the inspectors performed walkdowns of various plant areas. These areas included the power block buildings, switchyard, main and auxiliary transformer area, and the vital bus power supply transformer area. The inspectors reviewed the following documents:

- AI 14-006, "Severe Weather," Revision 4
- OFN SG-003, "Natural Events," Revision 9
- "Radiological Emergency Response Plan," Revision 5, EAL-11, natural phenomena

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:

- Component cooling water Pumps B and D during component cooling water Pumps A and C outages, March 5-7
- Emergency diesel Generator A during an emergency diesel Generator B outage, March 28

- Motor-driven auxiliary feedwater Pump A during a motor-driven auxiliary feedwater Pump B outage, February 27
- Safety injection Pump B during a safety injection Pump A outage, February 5

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 fuel pool cooling and cleanup system on February 13-15, 2003.

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)

#### .1 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.

- Control building 2000 foot level, NB01 vital switchgear room, February 12
- Control building 2016 foot level, air conditioning Unit SGK05B room, March 15
- Control building 2016 foot level, vital battery and nonvital switchgear rooms, February 28

- Reactor building 2026 foot level, reactor coolant Pump B oil leak inspection, February 15
- Turbine building 2065 foot level, general floor area north, January 10
- Turbine building 2065 foot level, general floor area south, January 23

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

On January 31, 2003, 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 areas inspected were the emergency core cooling system pump rooms. The inspectors reviewed the following:

- ALR 00-095A, "RHR RM Sump A/B LEV HI," Revision 6
- ALR 00-096A, "RHR RM Sump C/D LEV HI," Revision 5
- Calculation FL-02, "Flooding of Auxiliary Building Rooms 1107-1114," Revision 0
- Calculation AN-96-126, "Wolf Creek Generating Station Plant Specific Analysis, Internal Flooding Notebook," Revision 0
- Manual M-093-00116-04, "Instruction Manual for Installation, Operation, & Maintenance of Miscellaneous Sump Pumps for SNUPPS"
- OFN SG-003, "Natural Events," Revision 9
- Updated Safety Analysis Report, Section 3.4, water level (flood) design

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

a. Inspection Scope

On March 5, 2003, 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 50 020 16, "Control Room Not Habitable Lab," Revision 0. The scenario included the donning of self-contained breathing apparatus and implementation of Off-normal Procedure OFN RP-013, "Control Room Not Habitable," Revision 9.

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

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (71111.12)

.1 Periodic Evaluation Reviews

a. Inspection Scope

The inspectors reviewed the licensee's reports documenting the performance of the last maintenance rule periodic effectiveness assessments. This periodic evaluation covered the period from November 7, 2000, through April 27, 2002. This periodic evaluation was prepared as required by 10 CFR 50.65(a)(3). The inspectors also reviewed maintenance panel meeting minutes and other program documents through the end of 2002.

The inspectors reviewed whether the licensee's program had identified and monitored risk-significant functions associated with structures, systems, and components using reliability and unavailability. Additionally, the performance of nonrisk-significant functions were monitored using plant level criteria. The inspectors reviewed the conclusions reached by the licensee with regard to the balance of reliability and unavailability for specific maintenance rule functions. This review was conducted by examining the licensee's evaluation of all risk-significant functions that had exceeded performance criteria during the evaluation periods. The inspectors also examined the licensee's evaluation of program activities associated with placement of maintenance rule program risk-significant functions in Categories (a)(1) and/or (a)(2).

b. Findings

No findings of significance were identified.

.2 Effectiveness of Maintenance Rule Program

a. Inspection Scope

The inspectors reviewed the maintenance rule expert panel meeting minutes for those meetings listed in the Attachment with an emphasis on issues associated with functions

of the containment isolation, component cooling water, and plant service water systems. For the identified functions, the inspectors followed up by obtaining the needed documentation (listed in the Attachment) and assessing the maintenance rule program performance related to:

- Program adjustments made in response to unbalanced reliability and availability
- Cause determination of degraded performance or failure to meet performance criteria
- Functional failure evaluation and determination of maintenance preventable functional failures
- Adequacy of corrective action and goal setting
- Monitoring of established goals for functions placed in Category (a)(1)
- Program revisions to scoping and risk significance
- Creation of new risk-significant functions to improve performance monitoring
- Assessment of plant level performance

b. Findings

No findings of significance were identified.

.3 Identification and Resolution of Problems

a. Inspection Scope

The inspectors evaluated the use of the corrective action system within the maintenance rule program. This evaluation was accomplished by reviewing the performance improvement requests (PIRs). The purpose of this review was to establish that the corrective action program was entered at the appropriate threshold for the purposes of:

- Starting the evaluation and determination of the corrective action process when performance criteria were exceeded
- Correction of performance-related issues or conditions identified during the periodic evaluation
- Correction of generic issues or conditions identified during programmatic audits or assessments

The inspectors verified that the identification and implementation of corrective action were acceptable.

b. Findings

No findings of significance were identified.

.4 Maintenance Effectiveness for Systems

a. Inspection Scope

The inspectors reviewed the licensee's maintenance rule implementation for the plant service water and containment isolation 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.

.5 Routine Maintenance Effectiveness Inspection

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 lighting dc system, January 24
- Spent fuel pool cooling and cleanup, February 15

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 8. 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 January 6 and 27, February 3, 17, and 24, and March 24, 2003
- 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 reviewed the licensee's performance in accordance with alarm response and off-normal procedures following a reactor trip.

b. Findings

Introduction. A Green noncited violation was identified for failure to follow a Regulatory Guide 1.33 referenced procedure in accordance with Technical Specification 5.4.1. Specifically, Licensee Procedure AP 21D-005, "Component Manipulation Control," was not followed while restoring plant equipment. This Human Performance related issue, a failure to follow procedure, resulted in a reactor trip.

Description. On January 3, 2003, an operator was restoring a rod-drive motor generator to service following planned preventive maintenance. The operator used Procedure SYS SF-120, "Rod Control System Operation," to restore the motor generator. The operator was also providing on-the-job training to another operator during this evolution.

When asked a question concerning the operation of the motor generator output breaker charging motor, the operator performing the restoration manipulated the handle on the breaker. The breaker closed and, since the motor generator was not running, the other rod-drive motor generator output breaker opened. The operator did not receive authorization prior to operating the motor-generator output breaker handle as required by Procedure AP 21D-005. The reactor tripped when the breaker opened.

Analysis. This issue was considered more than minor because the failure to follow procedure affected the objective of the Reactor Safety Initiating Events Cornerstone by resulting in an unplanned reactor trip and the inherent challenges to plant safety systems and equipment associated with a reactor trip. The inspectors performed a Phase 1 screening using Manual Chapter 0609, Appendix A. The finding is of very low safety significance (Green) because, although it caused a reactor trip, it did not increase the likelihood of a primary or secondary system loss of coolant accident initiator, did not contribute to a combination of a reactor trip and loss of mitigation equipment functions, and did not increase the likelihood of a fire or internal/external flood affecting plant response.

Enforcement. Technical Specification 5.4.1 states, in part, written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, 1978. Item 1.b of Regulatory Guide 1.33, Revision 2, Appendix A, 1978, lists "Authorities and Responsibilities for Safe Operation and Shutdown" as a typical safety-related activity that should be covered by written procedures. Licensee Procedure AP 21D-005, "Component Manipulation Control," step 6.1.2, required shift manager or designee authorization to operate all systems or components. Contrary to the above, an operator did not receive authorization prior to operating the motor-generator output breaker handle. The manipulation of the handle was an action outside of the requirements of Procedure SYS SF-120.

The failure to follow Procedure AP 21D-005 was identified as a violation of Technical Specification 5.4.1 for a Regulatory Guide 1.33 referenced procedure. This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy and is in the licensee's corrective action program as PIR 2003-0010 (50-482/03-01).

Cornerstone: Reactor Safety Initiating Events

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.

The components or systems were:

- Accumulator Tank A PT-960 Drain Valve EPV0097, January 8
- Auxiliary feedwater pump turbine-steam inlet system snubber configuration, January 21
- Emergency fuel oil transfer Pump PJE01B, January 27
- Motor-operated Valve ALHV0030, essential service water to motor-driven auxiliary feedwater Pump B, March 4
- Reactor coolant pump thermal barrier component cooling water isolation Valve BBHV14, January 23

- Spent fuel cooling Pump A discharge check Valve ECV004, January 22

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.

1R16 Operator Workarounds (71111.16)

a. Inspection Scope

On January 31, 2003, the inspectors reviewed the cumulative effects of operator workarounds to determine the following:

- Effect of the workarounds on system reliability, availability, and potential for misoperation
- Whether the cumulative effects of the workarounds could affect multiple mitigating systems
- The cumulative effects of the workarounds on operator response to plant transients and accidents

The inspectors reviewed licensee Administrative Procedure AI 22A-001, "Operator WorkArounds," Revision 1, and the licensee's operator workaround/burdens list.

The inspectors discussed with licensee operations personnel long-term equipment problems that were not included in the workaround list. The inspectors reviewed five deficiencies that were not on the list and did not meet the licensee's definition of a workaround or operator burden. The inspectors reviewed the cumulative effects of the operator workarounds, burdens, and long-term equipment problems to determine whether they could affect mitigating system response during normal and emergency plant operations.

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 determine whether procedures and test activities were adequate to verify system operability:

- Containment spray Pump A, February 12
- Emergency diesel Generator B, February 26
- Essential service water Pump B, February 25
- Normal charging pump, February 19
- Safety injection Pump B, January 2
- Turbine-driven auxiliary feedwater pump, March 19

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 in accordance with inspection Attachment 71111.22 to determine whether risk significant structures, systems, and components were capable of performing their intended safety functions and assessing their operational readiness:

- STS EG-100A, "Component Cooling Water Pumps A/C Inservice Pump Test," Revision 19, March 6
- STS EJ-100A, "RHR System Inservice Pump A Test," Revision 24, January 9
- STS IC-208A, "NB01 4KV Loss of Voltage and Loss of Off-site Power TADOT," Revision 0, February 4
- STS IC-209A, "4KV Degraded Voltage TADOT NB01 Bus - Separation Group 1," Revision 6, February 4
- STS KJ-005B, "Manual/Auto Start, Synchronization and Loading of Emergency D/G NE02," Revision 40, January 23
- STS KJ-015A, "Manual/Auto Start, Sync & Loading of EDG NE01," Revision 16, March 12

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

1. Camera Installation in the Bioshield

a. Inspection Scope

On February 21, 2003, the inspectors reviewed the long-term installation of a camera within the containment bioshield to verify that the modification had not affected the safety functions of systems important to safety. The modification installed the camera to allow monitoring of the oil level site glass for the reactor coolant Pump B motor upper reservoir following the receipt of an "RCP Oil Leak" alarm in the control room on February 13, 2003. The level indicator transmitter for the reactor coolant Pump B motor upper reservoir had previously failed on December 13, 2002. Containment entries by licensee personnel verified that the oil level in the site glass was within the acceptable range and that there was no evidence of oil leakage outside of the reactor coolant pump leakage detection system.

The inspectors reviewed Temporary Modification Order 03-001-BB and its associated 10 CFR 50.59 screening against the system's design basis documentation in the Updated Safety Analysis Report and verified that the installation of the temporary modification was consistent with the modification documents.

b. Findings

No findings of significance were identified.

2. Reactor Coolant Pump B Oil Level Alarm

On March 27, 2003, the inspectors reviewed the temporary modification that eliminated the reactor coolant Pump B upper oil reservoir low-level alarm. The transmitter for the oil level, BBLT0495B, provided a false low-level indication, thereby generating an alarm on the main control board. The temporary modification disabled this low-level alarm but did not affect the other inputs to the annunciator. The licensee installed a jumper across the low-alarm contact. The licensee planned to perform corrective maintenance on the level transmitter during the fall 2003 refueling outage.

The inspectors reviewed Temporary Modification Order 02-023-BB and its associated 10 CFR 50.59 screening against the system's design basis documentation in the Updated Safety Analysis Report and verified that the installation of the temporary modification was consistent with the modification documents.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspector performed an in-office review of Revision 5 to the Wolf Creek Generating Station Emergency Plan, submitted December 13, 2002. Revision 5 of the plan made changes to the public information function, clarified the station's policy on protective action recommendations, updated evacuation time estimate tables, implemented approved changes to facilities, and corrected editorial errors. The inspector compared Revision 5 to its previous revision and to the requirements of 10 CFR 50.54(q) to determine if the revision decreased the effectiveness of the emergency plan.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

On February 5, 2003, the inspectors observed and reviewed emergency drill activities in the simulator control room, the technical support center, and the emergency offsite facility in accordance with inspection Attachment 71114.06. The inspectors also attended a drill critique in the technical support center. The inspectors reviewed associated documents and logs associated with the drill and discussed the drill activities with various licensee personnel.

b. Findings

No findings of significance were identified.

3. **SAFEGUARDS**  
**Cornerstone: Physical Protection**

3PP4 Security Plan Changes (71130.04)

a. Inspection Scope

The inspectors reviewed the following physical security plan, security contingency plan, and training and qualification plan changes to determine if they decreased the effectiveness of the physical security plan, security contingency plan, and training and qualification plan, respectively, and to determine if requirements of 10 CFR 50.54 (p) were met:

- Physical Security Plan, Revision 32, dated August 24, 2000
- Physical Security Plan, Revision 33, dated January 18, 2002

The inspectors determined that these plan changes were administrative.

b. Findings

No findings of significance were identified.

4. **OTHER ACTIVITIES**

4OA1 Performance Indicator Verification (71151)

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:

- Reactor coolant system specific activity - October 2001 through September 2002, February 15
- Scrams with loss of normal heat removal - January 2000 through December 2002, February 10
- Unplanned transients per 7000 critical hours, January 2001 through December 2002, March 14

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. Spent Fuel Pool Cooling System Valve Out of Position

a. Inspection Scope

The inspectors reviewed the licensee's response to spent fuel pool cooling system Valve EC-V091, "Refueling Pool to Fuel Pool Cooling Pump 1A Isolation," out of position. The licensee initiated PIR 2002-2195 to document the evaluation and corrective actions. The inspectors also reviewed additional PIRs that documented out-of-position valves.

The licensee could not determine when the valve was mispositioned. The licensee reviewed Procedure SYS EC-120, "Fuel Pool Cooling and Cleanup System Startup." As a corrective action, the licensee was implementing a change to Procedure SYS EC-120 to ensure refueling pool cleanup is secured prior to swapping cooling pumps. The inspectors did not identify any trends after reviewing the additional PIRs.

b. Findings

No findings of significance were identified.

4OA3 Event Followup (71153)

1. (Closed) Licensee Event Report (LER) 50-482/2003-001-00: Manipulation of Component Outside of Procedural Guidance Causes Reactor Trip

The inspectors observed and reviewed the licensee's response to the January 3, 2003, reactor trip due to an operator error while returning a control rod drive motor generator to service following planned preventive maintenance. The inspectors observed plant parameters and status and determined the conditions preceding the event. The inspectors also examined the posttrip review package, discussed the trip with control room personnel, and attended outage meetings. The licensee properly classified the event and the inspectors communicated details of the event and classification to Region IV management.

Refer to paragraph 1R14 in this report for a discussion of the findings associated with this event.

2. (Closed) LER 50-482/2002-001-00: Voluntary Report of Emergency Diesel Generator Heat Exchanger Tube Degradation

The issues associated with this LER were discussed and four unresolved items were opened in NRC Inspection Report 50-482/2002-06. The unresolved items were closed and a noncited violation was issued in NRC Inspection Report 50-482/2002-04.

4OA6 Meetings

.1 Exit Meeting Summary

The inspectors presented the resident inspection results to Ms. D. Jacobs, Plant Manager, and other members of licensee management after the conclusion of the inspection on April 4, 2003.

The inspectors presented the Maintenance Rule inspection results to Mr. R. A. Muench, President and Chief Executive Officer, and other members of licensee management on February 7, 2003. The licensee acknowledged the information presented.



The inspectors presented the Physical Security Plan inspection results to Mr. D. Elbe, Security Manager, verbally on February 21, 2003. The licensee acknowledged the information presented.

The inspectors presented the Emergency Plan inspection results to Mr. T. East, Superintendent, Emergency Planning, and other members of licensee management during a telephonic exit interview conducted on March 18, 2003. The licensee acknowledged the findings presented.

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

## ATTACHMENT

### Supplemental Information

#### PARTIAL LIST OF PERSONS CONTACTED

##### Licensee

K. A. Harris, Manager, Licensing and Corrective Action  
R. Munch, President and Chief Executive Officer  
B. T. McKinney, Vice President Operations  
D. Jacobs, Plant Manager  
W. B. Norton, Director Engineering

#### ITEMS OPENED, CLOSED, AND DISCUSSED

##### Opened

|                 |     |   |
|-----------------|-----|---|
| 50-482/03-03-01 | NCV | Manipulation of component outside of procedural guidance causes reactor trip (Section 1R14) |
|-----------------|-----|---|

##### Closed

|                    |     |   |
|--------------------|-----|---|
| 50-482/03-03-01    | NCV | Manipulation of component outside of procedural guidance causes reactor trip (Section 1R14)   |
| 50-482/2003-001-00 | LER | Manipulation of component outside of procedural guidance causes reactor trip (Section 4OA3)   |
| 50-482/2002-001-00 | LER | Voluntary report of emergency diesel generator heat exchanger tube degradation (Section 4OA3) |

#### LIST OF DOCUMENTS REVIEWED

##### Drill Evaluation

- 03-SA-01, "2003 Semi-Annual Drill," Revision 0
- Technical Support center logs

##### Equipment Alignment

- CKL AL-120, "Auxiliary Feedwater Normal Lineup," Revision 32
- CKL EC-120, "Fuel Pool Cooling and Cleanup System Normal Valve Lineup/Breaker Checklist," Revision 11

- CKL EG-120, "Component Cooling Water System Valve, Switch and Breaker Lineup," Revision 34
- CKL EM-120, "Safety Injection System Lineup Checklists," Revision 21
- CKL KJ-121, "Diesel Generator NE01 and NE02 Valve Checklist," Revision 24
- M-12EC01, "Piping and Instrumentation Diagram, Fuel Pool Cooling and Cleanup System," Revision 16
- Open fuel pool cooling and cleanup system work orders as of February 12, 2002
- PIRs 2002-0407, -0971, -1237, -1239, -1660, -1981, -2015, -2195, and -2391

#### Fire Protection

- AP 10-100, "Fire Protection Program," Revision 6
- AP 10-106, "Fire Preplans," Revision 2
- FPP T-12, "Turbine Building General Floor Area 2065' South," Revision 5
- FPP T-13, "Turbine Building General Floor Area 2065' North," Revision 6
- Updated Safety Analysis Report fire hazards analysis

#### Identification and Resolution of Problems

- PIRs 2002-2195, -2391, and -3076

#### Licensee Event Report Closure

- Design Change Package 09206, Revisions 0 and 1
- OFN RP-017, "Control Room Evacuation," Revision 18
- PIR 98-3012, 99-1100

#### Maintenance Rule Documents

- Functional failure evaluations for EC, spent fuel pool cooling and cleanup system
- Functional failure evaluations for QD, emergency lighting dc system
- Maintenance rule bases information for QD, emergency lighting dc system
- Maintenance rule bases information for EC, spent fuel pool cooling and cleanup system
- Maintenance rule expert panel meeting minutes for QD, emergency lighting dc system

- Maintenance rule expert panel meeting minutes for EC, spent fuel pool cooling and cleanup system
- Maintenance rule performance evaluation for EC, spent fuel pool cooling and cleanup system
- Maintenance rule performance evaluation for QD, emergency lighting dc system
- MPE BA-010, "Preventive Maintenance on Teledyne Emergency Lighting," Revision 10
- PIRs 2002-0194, -0217, -0407, -0439, -0971, -1237, -1239, -1250, -1595, -1660, -1781, -1783, -1816, -1981, -2015, -2195, and -2391
- Work Orders 02-233306-000, 02-233343-000, 02-233348-000, 02-234251-000, 02-234470-000, 02-235391-000, 02-237383-000, 02-237371-000, 02-243412-005, 02-243688-000, 02-245619-000, 02-246735-000, 02-247021-000, and 02-247022-000
- Functional failure determination checklist for AAPL-01, plant level performance criteria, initiated by PIR 2002-1180
- Functional failure determination checklist for INS-03, postaccident instrumentation, initiated by PIR 2002-0173
- Maintenance Rule Paragraph (a)(3) Periodic Assessment Report , SEL 02-005, (November 7, 2000, through April 27, 2002)
- Maintenance Rule (a)(1) disposition checklist and documentation summary for KE1-1, provide safe means for handling and transporting new and spent fuel, June 12, 2002
- Maintenance Rule (a)(1) disposition checklist and documentation summary for WS-01, provide continuous supply of strained water to the power block and nonsafety-related essential service water system, May 3, 2002
- Maintenance Rule (a)(1) disposition checklist and documentation summary for BM-08, provide the means to identify a steam generator tube leak, March 19, 2002
- Maintenance Rule (a)(1) disposition checklist and documentation summary for CI-01, containment isolation, November 23, 1999, and December 7, 2000
- Maintenance Rule (a)(1) disposition checklist and documentation summary for UU-01, provide remote indication, indicating lights, plan annunciation/BOP computer alarms, and the ability to select and manually operate remote auxiliaries from the main control room, February 7, 2001
- SEL 02-005, Maintenance Rule Paragraph (a)(3) periodic assessment report, November 7, 2000, through April 27, 2002

### Operability Evaluations

- Calculation P-060, "Auxiliary Feedwater Pump Turbine-Steam Inlet System," Revision 10
- Calculation M-JE-321, "Emergency Diesel Storage Tank and Day Tank Volumes and Level Limits," Revision 2
- Control room operations' logs
- Drawing M-13EP04, "Small Piping Isometric Accumulator Safety Injection System Loop 1 - Reactor Building," Revision 2
- Engineering Disposition CCP 10421, "Evaluation of Snubber FC-01R020/135," Revision 1
- Engineering Disposition CCP 11035, "ALVH0030 Over Torque," Revision 0
- PIR 02-3039, 2003-0078, -0096, and -0516
- Piping and Instrumentation Diagram M-12EC01, "Fuel Pool Cooling and Cleanup System," Revision 16
- Work Order 02-246887-000, Evaluation of nonconforming conditions of installed plant equipment for BBHV14
- Work Order 03-248123-003, Evaluation for active leak on packing or body-bonnet for EPV0097
- Work Order 03-249601-000, Evaluation of nonconforming conditions of installed plant equipment for PJE01B
- STS EC-100A, "Spent Fuel Pool Cooling Pump A Inservice Pump Test," Revision 15, conducted on January 15, 2003
- STS KJ-005B, "Manual/Auto Start, Synchronization and Loading of Emergency D/G NE02," Revision 40, conducted on January 23, 2003

### Performance Indicator Verification

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

### Postmaintenance Testing

- CKL KJ-121, "Diesel Generator NE01 and NE02 Valve Checklist," Revision 24
- STN AL-201, "Auxiliary Feedwater Valve Test," Revision 0
- STS AL-210C, "TDAFW Pump Inservice Valve Test," Revision 3
- STS EF-100B, "ESW System Inservice Pump B & ESW B Discharge Check Valve Test," Revision 22
- STS EM-100B, "Safety Injection Pump B Inservice Pump Test," Revision 18
- STS EN-100A, "Containment Spray Pump A Inservice Pump Test," Revision 15
- STS IC-641A, "Slave Relay Test K641 Train A TDAFP Start," Revision 8
- STS KJ-015B, "Manual/Auto Fast Start, Sync & Loading of EDG NE02," Revision 16
- SYS KJ-124, "Post Maintenance Run of Emergency Diesel Generator B," Revision 16
- Work Orders 94-101437-031, 00-219451-420, 00-219451-466, 00-219451-472, 02-234011-003, 02-237319-000, 02-237319-001, 02-238037-001, 02-240689-001, 02-243342-002, 02-243342-004, 02-243344-002, 02-243344-004, 02-243346-001, 02-243698-001, 02-245272-000, 02-245278-000, 02-245282-000, 02-245510-001, 02-245510-002, 02-245511-001, 02-245783-000, 02-245783-001, 02-245783-002, 02-245864-001, 02-245865-001, 02-245870-001, 02-245940-001, 02-246303-001, 02-246472-000, 02-246472-001, and 02-246516-000

### Temporary Modification

- AP 12-004, "Containment Entry and Material Control," Revision 2
- AP 14A-003, "Scaffold Construction and Use," Revision 10
- AP 21B-003, "Control of Temporary Equipment," Revision 2
- AP 25A-700, "Use of Temporary Lead Shielding," Revision 6
- Calculation GS-M-005, "Aluminum in Containment," Revision 3
- CKL ZL-001, "Auxiliary Building Reading Sheets," Revision 49
- Temporary shielding Request 03134
- Seismic qualification of Scaffolding 03-S0038
- WCGS scaffolding Request 03-S0038

### Procedures

- AI 23M-003, "Maintenance Rule Expert Panel Duties and Responsibilities," Revision 3
- AP 23M-001, "WCGS Maintenance Rule Program," Revision 4
- AP 28A-001, "Performance Improvement Request," Revision 21
- AI 23M-007, "Engineering Structural Monitoring Walkdowns," Revision 1
- EDI 23M-010, "Determination of Structures, Systems, and Components Within the Scope of the Maintenance Rule," Revision 2
- EDI 23M-020, "Determining the Safety Significance of Structures, Systems, and Components Within the Scope of the Maintenance Rule," Revision 2
- EDI 23M-030, "Establishing Performance Criteria for Structures, Systems and Components Within the Scope of the Maintenance Rule," Revision 2
- EDI 23M-050, "Monitoring Performance to Criteria and Goals," Revision 3
- Maintenance Rule Expert Panel Meeting Minutes
- February 12 and 23, and March 12, 2001, January 14 and 28, February 11, March 7, 11, and 22, May 7 and 9, June 17, November 3, July 11 and 15, August 12, September 9, and December 16 and 17, 2002

### Performance Improvement Requests

- 2000-3719, 2001-0195, -0198, -0267, -0268, -0989, -1279, -1758, -2783, -2797, 2002-0439, -2352, -2226, -2699, and -2483