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

November 9, 2004

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

SUBJECT: WOLF CREEK GENERATING STATION - NRC INTEGRATED INSPECTION REPORT 05000482/2004004

Dear Mr. Muench:

On September 26, 2004, the NRC completed an inspection at your Wolf Creek Generating Station. The enclosed integrated report documents the inspection findings which were discussed on September 29, 2004, with you and other members of your staff.

The inspections 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. Inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

The report documents one NRC-identified and one self-revealing finding of very low safety significance (Green). Both of these findings were determined to involve violations of NRC requirements. However, because of their very low safety significance and because they were entered into your corrective action program, the NRC is treating these findings as noncited violations consistent with Section VI.A of the NRC Enforcement Policy. If you contest the noncited violations, 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 2.390 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 05000482/2004004
w/attachment: Supplemental Information

cc w/enclosure:
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RIV:SRI:DRP/B	RI:DRP/B	SRI:DRP/B	C:DRS/EB	C:DRS/OB
FLBrush:sa	TBRhoades	MSPeck	JAClark	ATGody
E - DNGraves	***E - DNGraves***	***E - DNGraves***	***LEEllershaw for***	***/RA/***
10/5/04	10/5/04	11/5/04	11/3/04	11/3/04

C:DRS/PEB	C:DRS/PSB	C:DRP/B	
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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	50-482
License:	NPF-42
Report:	05000482/2004004
Licensee:	Wolf Creek Nuclear Operating Corporation
	Wolf Creek Generating Station
Location:	1550 Oxen Lane NE Burlington, Kansas
Dates:	June 27 through September 26, 2004
Inspectors:	F. L. Brush, Senior Resident Inspector T. B. Rhoades, Resident Inspector M. S. Peck, Senior Resident Inspector, Callaway R. A. Kopriva, Senior Project Engineer
Approved By:	D. N. Graves, Chief, Project Branch B

ATTACHMENT: Supplemental Information

Enclosure

SUMMARY OF FINDINGS

IR 500482/2004004; 6/27/04 - 9/26/04; Wolf Creek Nuclear Operating Corporation. Event Followup, Operability Evaluations

The report covered the period of resident inspection. One inspector-identified Green noncited violation and one self-revealing Green noncited violation were identified. The significance of the issues is indicated by their color (Green, White, Yellow, or 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 application 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.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Initiating Events

- Green. The inspectors documented a self-revealing noncited violation for failure to follow a surveillance procedure in accordance with 10 CFR Part 50, Appendix B, Criterion V, which resulted in a reactor trip. On August 22, 2004, the reactor tripped during restoration from partially completed surveillance Procedure STS IC-211B, "Actuation Logic Test Train B Solid State Protection System." The operators appropriately responded to the event using Procedures EMG E-0, "Reactor Trip or Safety Injection;" and EMG ES-02, "Reactor Trip Response." This finding had human performance crosscutting aspects in that an operator failed to follow a procedure.

  The failure to follow the procedure was a performance deficiency. The finding was greater than minor because it was similar to Example 4.b of Manual Chapter 0612, Appendix E, and caused a reactor trip. The finding is of very low safety significance because, even though it resulted in a reactor trip, it did not: contribute to the likelihood of a primary or secondary system loss of coolant accident initiator, contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available, nor increase the likelihood of a fire or internal/external flood (Section 4OA3).

Cornerstone: Barrier Integrity

- Green. The inspectors identified a noncited violation of Criteria XVI of 10 CFR Part 50, Appendix B, Corrective Action, for failure to identify and correct a significant condition adverse to quality. Specifically, the licensee failed to recognize that the containment atmosphere radiation gaseous monitors were inoperable. The monitors were not able to meet the operability requirement of detecting a reactor coolant leakage rate of 1 gallon per minute in less than 1 hour.

This finding was greater than minor because the containment gas channel radiation monitors were not capable of performing the design bases function for an extended period of time. The inoperability of the containment radiation monitor resulted in potential impact on reactor safety and adversely affected the reactor coolant leakage performance attribute of the barrier integrity cornerstone. The finding was of very low safety significance because other methods of reactor coolant system leak detection were available to the licensee and no actual leak had occurred. The unavailability of the gaseous channel leak detection function did not contribute to an increase in core damage sequences when evaluated using the significance determination process Phase 2 worksheets (Section 1R15).

B. Licensee-Identified Violations

None

REPORT DETAILS

Summary of Plant Status

The plant operated at essentially 100 percent power for the report period, with the following exceptions. On July 30, 2004, the licensee reduced plant power to approximately 29 percent when the main condenser developed a tube leak. On August 1, the licensee returned the plant to full power following repair of the leak. On August 22, 2004, the plant tripped from full power during a surveillance test due to a personnel error. The licensee started up the plant on August 23 and returned the plant to full power on August 25. On September 24, the licensee reduced plant power to approximately 97 percent to remove heater drain Pump B from service due to a failed seal. The licensee returned the plant to full power the same day.

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

1R04 Equipment Alignment (71111.04)

Partial Walkdowns

a. Inspection Scope

The inspectors performed the following partial walkdowns:

- Auxiliary feedwater Train B during an auxiliary feedwater Train A outage, July 15, 2004
- Component cooling water system Train B during a component cooling water Train A outage, September 2, 2004
- Essential service water Train A during an essential service water Train B outage, August 17, 2004

The inspectors performed the walkdowns to verify equipment alignment and identify discrepancies that could impact redundant system operability.

b. Findings

No findings of significance were identified.

Complete Walkdown

a. Inspection Scope

On August 2, 2004, the inspector completed a walkdown of residual heat removal Train A. The inspector performed the walkdown to verify the train lineup and identify

any discrepancies that could impact train operability. The inspector used the Updated Safety Analysis Report (USAR) and residual heat removal system lineup checklist and drawings. The inspector also reviewed the outstanding work order list and system health report.

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 six areas to assess the licensee's control of combustibles, 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 plan areas selected. Compensatory measures for degraded equipment, if any, were evaluated for effectiveness.

- Auxiliary feedwater area, August 6, 2004
- Electrical penetration Rooms A and B, August 27, 2005
- Electrohydraulic control system cabinet room, September 14, 2004
- Emergency diesel generator Room B, July 6, 2004
- Essential service water pump house, July 20, 2004
- PK battery charger room, September 14, 2004

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

a. Inspection Scope

On July 14, 2004, the inspectors observed one session of control room operator simulator training to verify that the licensed operator requalification program ensures safe operation of the plant by adequately evaluating how well the operators and crews

have mastered the training objectives. The inspector used Simulator Guide LR50020024, "Uncontrolled Depressurization of All Steam Generators," Revision 001, to evaluate operator performance.

The inspector also attended the crew critique and discussed crew performance with training personnel.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed the licensee's maintenance rule implementation for the following two systems to assess the effectiveness of maintenance efforts in accordance with 10 CFR 50.65:

- Chemical and volume control system
- Offsite power

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 four of the licensee's risk assessments 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 9. The inspectors also discussed the planned and emergent work activities with planning and maintenance personnel. The inspector's reviewed the following:

- Operational risk assessments for planned maintenance for the weeks of July 12, August 16, September 6, and September 13, 2004

- Actual, planned, and emergent work schedules for the same weeks

b. Findings

No findings of significance were identified.

1R14 Operator Performance During Nonroutine Evolutions and Events (71111.14)

1. Plant Downpower Due to Steam Generator High Sodium Levels

a. Inspection Scope

The inspectors observed the licensee's performance when reducing plant power in response to sodium levels in all four steam generators in the Action Level 2 range. On July 29, 2004, control room operators observed that the sodium levels in all four steam generators was increasing, which was indicative of a condenser tube leak. At 12:40 a.m., on July 30, the sodium level in Steam Generator A reached 50 ppb, the Action Level 2 entry level. Licensee procedures required power be reduced to less than 30 percent within 8 hours. At 3 a.m. the licensee commenced the power decrease and at 6:30 a.m., the plant was at approximately 29 percent power.

The licensee identified that the leak was in the high pressure condenser. The condenser had six passes which allowed the licensee to isolate various passes to determine which one had the leaking tube. The licensee identified that the leak was in the 3-13 pass in a tube with an old style plug. On August 1, 2004, the licensee returned the plant to full power operation following steam generator cleanup and condenser tube replugging. The inspectors discussed the event with licensee personnel and reviewed completed Procedure Gen 00-004, "Power Operation," Revision 49, and the control room operator logs.

b. Findings

No findings of significance were identified.

2. Reactor Trip

a. Inspection Scope

On August 22, 2004, the inspector observed portions of the control room operators' response to a reactor trip. The reactor tripped from full power during a surveillance test on the solid state protection system. The licensee determined that a maintenance technician's error resulted in the trip. The inspectors observed plant parameters and reviewed the following:

- Control room operator logs for August 22, 2004
- EMG E-0, “Reactor Trip or Safety Injection,” Revision 17
- EMG ES-02, “Reactor Trip Response,” Revision 14
- Posttrip review package

The inspector also discussed the cause of the trip and operator response with various licensee personnel. Refer to Section 4OA3 of this report for the results of the inspector’s review of the personnel error.

b. Findings

No findings of significance were identified.

3. Plant Downpower Due to Heater Drain Pump Seal Degradation

On September 24, 2004, the inspector observed control room operator performance during the plant downpower as a result of seal degradation for heater drain Pump B. The operators reduced power to approximately 97 percent and removed the heater drain pump from service. The inspectors observed operator usage of the following procedures:

- GEN 00-004, “Power Operations,” Revision 50
- SYS AF-121, “Heater Drain Pump Operation,” Revision 9

The operators returned the reactor to full power after securing the pump.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors selected five 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:

- Centrifugal Charging Pump B, August 11, 2004
- Containment radiation gas channel monitors, September 24, 2004
- Emergency Diesel Generators A and B air start system filters, September 7, 2004
- Emergency Diesel Generator B manual air start valve, September 9, 2004
- Safety-related portions of the main steam system with snubbers removed from Loop 4 main steam low point drain, September 13, 2004

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

b. Findings

Introduction. The inspectors identified a Green noncited violation of Criteria XVI of 10 CFR Part 50 Appendix B, Corrective Action, for failure to identify and correct a significant condition adverse to quality. Specifically, the licensee failed to recognize that the containment atmosphere radiation gaseous monitors were inoperable.

Description. In April 2003, the licensee identified that the containment radiation gas channel monitors, GTRE31 and GTRE32, were not capable of detecting a 1 gallon per minute reactor coolant system leak. The licensee entered this condition into the corrective action program as Performance Improvement Request 2003-1232. Technical Specification 3.4.15, “RCS Leakage Detection Instrumentation,” required either the containment cooler condensate monitoring system or one containment atmosphere gaseous radioactivity monitor to be operable in Modes 1, 2, 3, and 4. USAR Table 5.2-6, “Design Comparison with Regulatory Guide 1.45, Reactor Coolant Pressure Boundary Leakage Detection Systems,” stated that the Wolf Creek containment atmosphere gaseous radioactivity monitor complied with Regulatory Guide 1.45, Positions C.3 and C.5. Compliance with Position C.5 required that the monitor be capable of detecting a 1 gallon per minute reactor coolant leak within 1 hour. NUREG 0881, “Safety Evaluation Report Related to the Operation of Wolf Creek, Unit 1,” Section 5.2.5, Reactor Coolant Leakage Detection System and NUREG 0830, “Safety Evaluation Report Related to the Operation of Callaway Plant, Unit 1,” documented the bases of NRC acceptability of the Wolf Creek design. NUREG 0830 stated that the Wolf Creek containment gas channel radiation monitor was acceptable because the sensitivity and response time for the detection of unidentified leakage was adequate to detect a leakage rate of 1 gallon per minute in less than 1 hour.

USAR Section 5.2.5, “Reactor Coolant Pressure Boundary Leakage Detection Systems,” described the leakage response of the containment radiation gas channel. The licensee used an inappropriately high reactor coolant system activity source term when demonstrating that the gaseous channel could meet the 1 gallon per minute in less than 1-hour response time. This source term used was equivalent to 0.1 percent failed fuel. This value was greater than 500 times the actual reactor coolant system source term at any point in the current or previous fuel cycle. Regulatory Guide 1.45 specified that a “realistic” primary coolant radioactivity concentration should be used when demonstrating leak detection capability. The inspectors estimated that greater than 500 hours would be needed before the gaseous channel monitor could detect a reactor coolant system leak using a realistic reactor coolant system source term.

Safety Analysis Report Section 5.2.5.2.3, “Containment Gaseous Radioactivity Monitor,” stated that gaseous radioactivity is determined from the containment free volume and the gaseous activity concentration of the reactor coolant. Any increase greater than two standard deviations above background would indicate a possible leak. The total gaseous activity level above background increases almost linearly for the first several hours after the beginning of the leak. As specified in USAR Figure 5.2-2, with 0.1 percent failed fuel, containment background airborne gaseous radioactivity equivalent to 1 percent per day, and a partition factor equal to one, a 1 gallon per minute leak would be detected within 1 hour. Extended reactor operation with a reactor coolant system source term of less than the equivalent of 0.1 percent failed fuel was a change in the facility as described in the Final Safety Analysis Report. This change resulted in the containment gaseous monitor no longer being capable of performing its design basis function of detecting a 1 gallon per minute reactor coolant system leak within 1 hour. The licensee closed Performance Improvement Request 2003-1232 in January 2004 without implementing corrective action.

Analysis. This finding was greater than minor because the containment gas channel radiation monitor was not capable of performing the design bases function for an extended period of time. The inoperability of the containment radiation monitor resulted in potential impact on reactor safety and adversely affected the reactor coolant leakage performance attribute of the barrier integrity cornerstone. The finding was only of very low safety significance because other methods of reactor coolant system leak detection were available to the licensee and no actual leak had occurred. The unavailability of the gaseous channel leak detection function did not contribute to an increase in core damage sequences when evaluated using the significance determination process Phase 2 worksheets.

Enforcement. Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion XVI, Corrective Action, requires that measures shall be established to assure that conditions adverse to quality, such as nonconformances, are promptly identified. Contrary to the above, the licensee failed to identify that the gaseous containment atmosphere radiation monitors were inoperable when the licensee determined that the

monitors were not capable of detecting a 1 gallon per minute leak within 1 hour or a reasonable period of time as specified in USAR Table 5.2-6. Specifically, USAR Table 5.2-6 established that the containment airborne gaseous radioactivity monitors be able to detect a 1 gallon per minute reactor coolant system leak in less than 1 hour as specified by Regulatory Guide 1.45, Position C.5. Because of the very low safety significance and the licensee's action to place the issue in their corrective action program (Performance Improvement Request 2004-2279), this violation is being treated as a noncited violation in accordance with Section VI.A.1 of the Enforcement Policy (05000482/200404-001).

1R16 Operator Workarounds (71111.16)

a. Inspection Scope

On September 2, 2004, the inspectors completed the review of 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 mitgating 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 2, and the licensee's operator workaround/burden list.

There were no items on the workaround list. The inspectors discussed with licensee operations personnel long-term equipment problems that were not included in the workaround or burden list. The inspectors reviewed one deficiency that was not on either list. The licensee was going to evaluate whether the deficiency was an operator burden, since it did not meet the definition of a workaround. The inspectors reviewed the cumulative effects of the operators' 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 six postmaintenance tests on the following equipment or systems to verify that procedures and test activities are adequate to verify system operability:

- Auxiliary feedwater Pump A, July 19, 2004
- Component cooling water Pump A, September 1, 2004
- Emergency Diesel Generator B, August 20, 2004
- Emergency Diesel Generator B, September 24, 2004
- Essential service water Train B, August 20, 2004
- Safety injection Pump B, July 6, 2004

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 USAR, design basis documents, and selected calculations were also reviewed in some cases 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 five surveillance activities in accordance with inspection Attachment 71111.22 to verify that risk significant structures, systems, and components are capable of performing their intended safety functions and assessing their operational readiness:

- STS AL-103A, “Turbine-Driven AFW Pump Inservice Pump Test,” Revision 38, September 16, 2004

- STS BG-100A, “Centrifugal Charging System A Train Inservice Pump Test,” Revision 27, July 9, 2004

- STS BG-100A, “Centrifugal Charging System B Train Inservice Pump Test,” Revision 29, August 3, 2004

- SYS EF-300, "ESW/Service Water Macrofoul Treatment," Revision 10, August 18, 2004
- STS EG-100A, "Component Cooling Water Pumps A/C Inservice Pump Test," Revision 20, September 2, 2004

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

On July 7, 2004, the inspectors completed the review of Temporary Modification 04-12-A, "Temporary Repair of XMA01C Control Cables." The modification replaced a small transformer and provided an interim repair to wiring in the main Transformer C control cabinet. The components were damaged as a result of a fire in the panel. The licensee planned to permanently repair the damaged components during the spring 2005 refueling outage.

The inspectors reviewed the following documents:

- Temporary Modification 04-012-MA, "Temporary Repair of XMA01C Control Cables," which included the 10 CFR 50.59 screen and applicability determination
- Work Orders 04-264400-000 and -001

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

On August 26, 2004, the inspectors observed and reviewed emergency drill activities in the simulator control room, the technical support center, and the emergency offsite facility. The drill involved an earthquake followed by a loss of coolant accident. The inspectors attended the technical support center critique, reviewed the drill critique sheets and other associated documents and information, and discussed the drill activities with various licensee personnel.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

Resident Inspection

a. Inspection Scope

The inspectors performed a review of data for three performance indicators. The inspectors reviewed the licensee's data submittal using Nuclear Energy Institute 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 - Residual heat removal system for the period of April 2003 through June 2004, completed July 20, 2004
- Unplanned scrams per 7000 critical hours for the period of April 2003 through June 2004, completed August 5, 2004
- Reactor coolant system leakage for the period of July 2003 through June 2004, completed September 10, 2004

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

b. Findings

No findings of significance were identified.

4OA3 Event Followup (71153)

1. Reactor Trip During Surveillance Testing due to Personnel Error

a. Inspection Scope

On August 22, 2004, the inspector observed portions of the control room personnel response to a reactor trip. The trip was caused by a maintenance technician's error during restoration from partial completion of surveillance Procedure STS IC-211B,

"Actuation Logic Test Train B Solid State Protection System," Revision 31. The licensee was unable to complete a step of the surveillance procedure due to an unanticipated result. The plant trip occurred when maintenance personnel failed to perform a step while restoring from the procedure prior to commencing troubleshooting of the solid state protection system.

b. Findings

Introduction. A Green self-revealing finding was identified for failure to follow a surveillance procedure in accordance with 10 CFR Part 50, Appendix B, Criterion V, which resulted in a reactor trip.

Description. On August 22, 2004, the reactor tripped during restoration from partially completed surveillance Procedure STS IC-211B, "Actuation Logic Test Train B Solid State Protection System." The operators appropriately responded to the event using Procedures EMG E-0, "Reactor Trip or Safety Injection," and EMG ES-02, "Reactor Trip Response."

The licensee determined that a maintenance technician failed to properly restore the solid state protection system in accordance with the surveillance procedure. The licensee had made the decision to restore from the partially completed surveillance test when the performance of a step did not produce the expected result. The licensee later determined that a relay in the system had intermittently failed but this intermittent failure did not contribute to the trip. This finding had human performance crosscutting aspects in that an operator failed to follow the surveillance procedure.

Analysis

The deficiency that caused the event was the failure to perform a step when restoring from a surveillance procedure. The finding was greater than minor because it was similar to Example 4.b of Manual Chapter 0612, Appendix E, and caused a reactor trip. The finding, which was under the initiating events cornerstone, was of very low safety significance for the following reasons:

- The finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator.

- The finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available.

- The finding did not increase the likelihood of a fire or internal/external flood.

Enforcement

10 CFR Part 50, Appendix B, Criterion V, requires, in part, that activities affecting quality shall be accomplished in accordance with prescribed procedures. Contrary to the above, on August 22, 2004, while performing restoration from STS IC-211B, "Actuation Logic Test Train B Solid State Protection System," licensee personnel failed to perform a step which resulted in a reactor trip. Because this finding is of very low safety significance and had been entered into the licensee's corrective action program as Performance Improvement Request 2004-2162, this violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy: Noncited Violation (NCV) 05000482/2004004-002, failure to follow procedure which resulted in a reactor trip.

4OA4 Crosscutting Aspects of Findings

Section 4OA3 documents a finding with human performance crosscutting aspects. An operator failed to follow a surveillance procedure, which resulted in a reactor trip.

4OA5 Other

1. Temporary Instruction 2515/154, "Spent Fuel Material Control and Accounting at Nuclear Power Plants"

   a. Scope

   The inspectors collected the data specified in Phases I and II of the Temporary Instruction. The data was forwarded for consolidation and assessment to the individuals identified in the Temporary Instruction.

4OA6 Meetings

.1 Exit Meeting Summary

The inspectors presented the resident inspection results to Mr. R. Muench, President and Chief Executive Officer and other members of licensee management after the conclusion of the inspection on September 29, 2004.

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

None

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

K. A. Harris, Director, Performance Improvement and Learning
R. Muench, President and Chief Executive Officer
D. Jacobs, Vice President Operations and Plant Manager
K. Scherich, Director Engineering

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000482/2004-001	NCV	Failure to identify and correct a significant condition adverse to quality (Section 1R15)
05000482/2004-002	NCV	Failure to follow procedure, which resulted in a reactor trip (Section 4OA3)

Closed

05000482/2004-001	NCV	Failure to identify and correct a significant condition adverse to quality (Section 1R15)
05000482/2004-002	NCV	Failure to follow procedure, which resulted in a reactor trip (Section 4OA3)

LIST OF DOCUMENTS REVIEWED

Equipment Alignment

- CKL AL-120, “Auxiliary Feedwater Normal Lineup,” Revision 33
- CKL EF-120, “Essential Service Water Valve. Breaker and Switch Lineup,” Revision 38
- CKL EG-120, “Component Cooling Water System Valve, Switch and Breaker Lineup,” Revision 35

Maintenance Effectiveness

- Final scope evaluation for the chemical and volume control system
- Final scope evaluation for the off-site power system
- Functional failure evaluations for the chemical and volume control system
- Functional failure evaluations for the off-site power system
- Maintenance rule expert panel meeting minutes for the chemical and volume control system
- Maintenance rule expert panel meeting minutes for the off-site power system
- Maintenance rule performance evaluations for the chemical and volume control system
- Maintenance rule performance evaluations for the off-site power system
- Performance Improvement Requests 2002-1724, -1785, -1967, -1975, -2319, and -2649; 2003-1046, -1198, -2101, -2178, and -2496; and 2004-0841
- System health report for the chemical and volume control system
- System health report for the main turbine generator and auxiliaries
- System health report for the startup transformer
- Work Orders 02-247161-000, 03-25147-000, 04-260743-000, and 04-263832-000

Operability Evaluations

- Control room operator logs for January 21, August 3, and September 9, 2004
- Engineering Disposition, “Engineering Evaluation of Main Steam low point drain temporary snubber removal,” June 17, 2004
- Engineering Procedure I-ENG-004, “Lubricating Oil Analysis,” Revision 2, Attachment B, “Acceptance Criteria Guideline”
- Mobil DTE 790 series lube oil product description
- Maintenance Procedure MPM OS-001, “Preventive Maintenance Lubricant Sampling and Replenishment,” Revision 18
- Reportability Evaluation Request 2004-007

- Work Order 04-265227-001

- Work Request 00719-85

Performance Indicator Verification

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

Postmaintenance Testing

- STS AL-101, “MDAFW Pump A Inservice Pump Test,” Revision 31

- STS AL-201, “Auxiliary Feedwater System Valve Test,” Revision 0

- STS EG-100A, “Component Cooling Water Pumps A/C Inservice Pump Tests,” Revision 20

- STS EM-100B, “Safety Injection Pump B Inservice Pump Test,” Revision 19

- SYS KJ-124, “Postmaintenance Run of Emergency Diesel Generator B,” Revision 24

- TMP 03-010, “B ESW Macro Foul Flush for TDAFW and MDAFW B,” Revision 0

- Work Orders 01-226887-002, 03-251013-000, 03-255786-001, 04-259101-001, 04-261475-000, 04-261478-002, 04-261479-000, 04-263705-001, 04-264295-001, 04-265613-000, and 04-265608-000