

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

January 27, 2005

James J. Sheppard, President and Chief Executive Officer STP Nuclear Operating Company P.O. Box 289 Wadsworth, Texas 77483

SUBJECT: SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION -NRC INTEGRATED INSPECTION REPORT 05000498/2004005 AND 05000499/2004005

Dear Mr. Sheppard:

On December 31, 2004, the US Nuclear Regulatory Commission (NRC) completed an inspection at your South Texas Project Electric Generating Station, Units 1 and 2, facility. The enclosed integrated report documents the inspection findings which were discussed with you and members of your staff on January 5, 2005.

The inspection examined activities conducted under your licenses as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your licenses. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

This report documents one finding of very low safety significance (Green), evaluated under the risk significance determination process, which was determined to involve a violation of NRC requirements. However, because of the very low safety significance and because it was entered into your corrective action program, the NRC is treating this finding as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. If you contest any noncited violation in this report, 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 76011-4005; the Director, Office of Enforcement, U.S. Nuclear Regulatory at the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; and the NRC Resident Inspector at South Texas Project Electric Generating Station, Units 1 and 2, 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 (if any) 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 <u>http://www.nrc.gov/reading-rm/adams.html</u> (the Public Electronic Reading Room).

Sincerely,

/**RA**/

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

Dockets: 50-498 50-499 Licenses: NPF-76 NPF-80

Enclosure:

NRC Inspection Report 05000498/2004005 and 05000499/2004005 w/Attachment: Supplemental Information

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION REGION IV

Dockets:	50-498, 50-499
Licenses:	NPF-76 NPF-80
Report No:	05000498/2004005 05000499/2004005
Licensee:	STP Nuclear Operating Company
Facility:	South Texas Project Electric Generating Station, Units 1 and 2
Location:	FM 521 - 8 miles west of Wadsworth Wadsworth, Texas 77483
Dates:	September 27 through December 31, 2004
Inspectors:	J. Cruz, Senior Resident Inspector G. L. Guerra, Resident Inspector J. L. Taylor, Resident Inspector
Approved By:	W. D. Johnson, Chief Project Branch A Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000498/2004005, 05000499/2004005; 09/27/04 - 12/31/04; South Texas Project Electric Generating Station; Units 1 & 2; Integrated Resident Report, Maintenance Effectiveness.

The report covered a 3-month period of inspection completed by the resident inspectors. One Green noncited violation was identified. The significance of 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 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.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

• <u>Green</u>. A noncited violation of 10 CFR Part 50, Appendix B, Criteria V, was identified for the failure of maintenance personnel to obtain an authorized work document containing instructions, procedures, or drawings prior to performing maintenance on the fuel pump metering rods of emergency diesel Generator 21. Without authorized work documents issued, there were no instructions or procedures available and no quantitative or qualitative acceptance criteria established. The operability of emergency diesel Generator 21 immediately following the maintenance was indeterminate. However, after learning of the unauthorized maintenance, the licensee successfully completed operability testing of the diesel.

The finding was determined to be greater than minor because it affected the equipment performance attribute of the reactor safety mitigating system cornerstone. Additionally, the finding was associated with the operability, availability, and reliability of the emergency diesel generator. Using Phase 1 of the Significance Determination Process, the finding was determined to screen as Green because the finding was not a design or qualification deficiency, it did not represent the loss of a safety function, and it did not screen as potentially risk significant due to a seismic, flooding, or severe weather event (Section 1R12).

B. Licensee-Identified Violations

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 40A7.

REPORT DETAILS

Summary of Plant Status

On December 13, Unit 1 reduced reactor power to 14 percent to permit the isolation of a leaking fitting on a reactor coolant system sample line. The unit was returned to 100 percent power on December 16. The unit operated at essentially 100 percent power for the remainder of the inspection period.

Unit 2 operated at essentially 100 percent power throughout the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

On December 15 the inspectors completed a walkdown of various power block buildings to verify that severe weather would not affect mitigating systems. During the walkdown the inspectors assessed the material condition of room heaters, heat tracing, and other cold weather protection devices. The inspectors also discussed aspects of severe weather preparations with licensee personnel and reviewed the following documents:

- 0POP01-ZO-0004, "Extreme Cold Weather Guidelines," Revision 19
- 0PGP03-ZV-0001, "Severe Weather Plan," Revision 11
- b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

- .1 Partial System Walkdown
 - a. Inspection Scope

The inspectors conducted partial walkdowns of the following two risk-significant systems to verify that they were in their proper standby alignment as defined by system operating procedures and system drawings. During the walkdowns, inspectors examined system components for materiel conditions that could degrade system performance. In addition, the inspectors evaluated the effectiveness of the licensee's problem identification and resolution program in resolving issues which could increase event initiation frequency or impact mitigating system availability.

• On November 23 the inspectors verified the condition of the Unit 1 Train B auxiliary feedwater system. This walkdown was performed while the Train A auxiliary feedwater system was out of service for planned maintenance. The inspectors compared system equipment and control board lineups to Plant Operating Procedure 0POP02-AF-0001, "Auxiliary Feedwater," Revision 21.

- On December 7, the inspectors performed a partial system walkdown of the Unit 2 engineered safety features (ESF) sequencer rooms and equipment. The walkdown was performed with the system engineer to access the logic cabinets to verify the proper equipment lineup. The inspectors also examined component condition.
- b. Findings

No findings of significance were identified.

- .2 Semiannual System Walkdown
 - a. Inspection Scope

The inspectors completed a detailed system walkdown of the accessible portions of the Unit 2 auxiliary feedwater system on December 2. The inspectors verified that all three trains and the common portions of the system were in a proper standby alignment and that components were in good condition. The system walkdown included checking the control board and electrical lineups. The inspectors referenced Plant Operating Procedure 0POP02-AF-0001, "Auxiliary Feedwater," Revision 21, applicable piping and instrumentation drawings, and the Updated Final Safety Analysis Report information on this system.

b. <u>Findings</u>

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope

The inspectors toured six plant 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. The following plant areas were inspected:

- (Unit 2) Train C cable spreading Room 401, on October 27 (Fire Zone 57)
- (Unit 1) Train B auxiliary feedwater pump Room 006, on November 23 (Fire Zone 402)
- (Unit 2) Train A emergency diesel generator rooms on December 1 (Fire Zones 502, 508, 511, and 514)

- (Unit 2) Trains A, B, and C of the ESF sequencer rooms, on December 7 (Fire Zones 17, 73, and 72)
- (Unit 1) Main control room on December 28 (Fire Zone 034)
- (Unit 1) Train B ESF switchgear room on December 28 (Fire Zone 42)
- b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

b. Inspection Scope

During the week of November 22, the inspectors verified that the licensee's flooding mitigation plans and equipment were consistent with the licensee's design requirements and risk-analysis assumptions in the Updated Final Safety Analysis Report. The inspection included a review of flood analysis documentation and calculations to determine areas susceptible to flooding from internal sources. A walkdown of the Unit 1 isolation valve cubicle building was completed. This building contained redundant trains of auxiliary feedwater, steam generator power-operated relief valves (PORVs), main steam isolation valves, and feedwater isolation valves. The inspectors assessed the adequacy of flood protection measures regarding a postulated flood and verified that the mitigating systems defined in the flood analysis were in place and functional.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Regualification (71111.11)

a. Inspection Scope

On October 26, the inspectors evaluated Crew 1C during licensed operator simulator requalification training. The inspectors observed a control room simulator scenario that included a failed open pressurizer PORV and a steam generator tube rupture. The inspectors evaluated the performance of Crew 1C for clarity and formality of communications, the correct use of procedures, performance of high risk operator actions, monitoring of critical safety functions, and the oversight and direction provided by the shift supervisor. The inspectors observed the operators' use of emergency action levels and protective action recommendations for accuracy and timeliness, reviewed the scenario sequence and objectives, observed the training critique, and discussed the crew's performance with training instructors. In addition, the inspectors attended the critique held by the operating crew to assess individual performance and training effectiveness.

b. Findings

No findings of significance were identified.

1R12 <u>Maintenance Implementation (71111.12)</u>

a. Inspection Scope

The inspectors independently verified that licensee personnel properly implemented 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," for the following equipment performance problems:

- (Common) Increased trend in sequencer trouble alarms in 2004 (several condition records (CRs) reviewed are listed in the attachment to this report) on December 23
- (Unit 1) Standby Diesel Generator 11 (CR 04-12297) work performed without authorized work document on December 21

The inspectors reviewed whether the structures, systems, or components were properly characterized in the scope of the Maintenance Rule Program and whether the failure or performance problem was properly characterized. In addition, the inspectors assessed the appropriateness of the established performance criteria. The inspectors also independently verified that the corrective actions and responses implemented were appropriate and adequate.

b. Findings

<u>Introduction</u>. A Green noncited violation of10 CFR Part 50, Appendix B, Criteria V, was identified. Appendix B, Criteria V, of 10 CFR Part 50 requires, in part, that activities affecting quality be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances. The violation involved the failure of maintenance personnel to obtain an authorized work document containing instructions, procedures, or drawings prior to performing maintenance on the fuel pump metering rods of emergency diesel Generator 21.

<u>Description</u>. On September 1, 2004, emergency diesel Generator 11 failed a plant surveillance test when it failed to achieve the required voltage and frequency requirements. The licensee's investigation into the surveillance failure determined that a loose guide screw on a fuel pump metering rod may have been a contributing factor. On September 9, 2004, maintenance personnel familiar with the investigation's preliminary results tightened the fuel pump metering rod guide screws on emergency diesel Generator 21 without the proper work authorization. Without authorized work documents issued, there were no instructions or procedures available, and no quantitative or qualitative acceptance criteria established. Although the maintenance personnel verified that the metering rods could still move throughout the normal range of motion, the operability of emergency diesel Generator 21 immediately following the maintenance was indeterminate. Upon learning of the unauthorized maintenance later on September 9, the licensee successfully completed operablity testing of the diesel.

<u>Analysis</u>. The finding affected the equipment performance attribute of the reactor safety mitigating system cornerstone. Additionally, as the finding was associated with the operability, availability, and reliability of the emergency diesel generator, it was determined to be of greater than minor significance. Using Phase 1 of the Significance Determination Process, the finding was determined to screen as Green because the finding was not a design or qualification deficiency, did not represent the loss of a safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather event.

<u>Enforcement</u>. 10 CFR Part 50, Appendix B, Criteria V, requires, in part, that activities affecting quality be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances. On September 9, 2004, maintenance was performed on emergency diesel Generator 21 without an authorized work document containing instructions, procedures, or drawings. However, since the finding was determined to be of very low safety significance and was entered into the licensee's Corrective Action Program as CR 04-12297, this violation is being treated as a noncited violation (NCV) consistent with section VI.A of the NRC Enforcement Policy: NCV 05000498;499/2004005-01, Failure to Use Authorized Document to Perform Quality Related Work.

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

a. Inspection Scope

The inspectors assessed whether the performance of risk assessments for selected planned and emergent maintenance activities was in accordance with 10 CFR 50.65(a)(4). The inspectors assessed the completeness and accuracy of the information considered in the risk assessments and compared the actions taken to manage the resultant risk with the requirements of the licensee's Configuration Risk Management Program. The inspectors reviewed these assessed risk configurations against actual plant conditions and any in-progress evolutions or external events to verify that the assessments were accurate, complete, and appropriate for the conditions. In addition, the inspectors walked down the control room and plant areas to verify that compensatory measures identified by the risk assessments were appropriately performed. The inspectors reviewed the following four activities:

- (Unit 1) Evaluation of high risk temporary modification on Auxiliary Relay Panel 3E251ERR118A Circuit DS-28, to solenoid valve for Main Steam Isolation Bypass Valve 7442 on October 1 (Evaluation 1213 for Work Authorization Number (WAN) 280187)
- (Unit 2) Evaluation of high risk maintenance on inverter output breaker to instrument Panel DP002 on October 8 (Evaluation 1257 for WAN 284319)

- (Unit 1) Evaluation of high risk maintenance on Class 1E 7.5 kV Inverter 1204 on November 2 (Evaluation 1289 for WAN 286143)
- (Unit 2) Evaluation of high risk maintenance on Switchgear 2F auxiliary bus undervoltage relays on November 22 (Evaluation 1300 for WAN 241802)
- b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Nonroutine Plant Evolutions (71111.14)

a. Inspection Scope

The inspectors observed two nonroutine evolutions described below to verify that they were conducted in accordance with licensee procedures and Technical Specification requirements. The inspectors reviewed the licensee's planning documents, attended prejob briefs, and observed personnel performance in the control room and in the field.

- (Unit 2) 200 MW load reduction at the request of the load dispatcher on September 27
- (Unit 1) Reduction in reactor power to 14 percent, crimping and clamping activities to facilitate the isolation of a fitting leak on a primary sample line, and the subsequent return to full power operations on December 13-17
- b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors selected three operability evaluations conducted by licensee personnel during the report period involving risk-significant systems or components. The inspectors evaluated the technical adequacy of the licensee's operability determination, determined whether appropriate compensatory measures were implemented, and determined whether pre-existing plant conditions were considered, 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:

- (Unit 2) Sequencer trouble alarm (CR 04-14174) on October 25
- (Unit 1) Emergency Diesel Generator 12 material condition of Relay 3E to alarm circuit (CR 04-14918) on November 12

• (Unit 1) Pressurizer PORV limit switch cover gasket environmental evaluation (CR 04-14935) on December 8. The NRC's review and a licensee-identified Green NCV are further discussed in Sections 4OA3.2 and 4OA7 of this report.

1R16 Operator Workarounds (71111.16)

a. Inspection Scope

The inspectors reviewed licensee-identified operator workarounds and other existing equipment conditions with the potential to be workarounds to verify that they had been identified and assessed in accordance with STP's Total Impact Assessment and Operator Burden Program documents and to determine if the functional capability of the system or human reliability in responding to initiating events had been affected. The ability of operators to implement normal and emergency operating procedures with the existing equipment issues was specifically evaluated. The following item was reviewed:

- (Common) Emergent Excessive seat leakage on one pressurizer PORV in each unit potentially requiring block valve manipulation to limit reactor coolant system overpressurization on November 18 (CRs 04-6255 and 04-12381)
- b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed postmaintenance test procedures and associated testing activities for four risk-significant mitigating systems. In each case, the associated work orders and test procedures were reviewed against the attributes in Inspection Procedure 71111, Attachment 19, to determine the scope of the maintenance activity and determine if the testing was adequate to verify equipment operability. The Updated Final Safety Analysis Report, Technical Specifications, and design basis documents were also reviewed, as applicable, to determine the adequacy of the acceptance criteria listed in the test procedures. The inspectors witnessed or reviewed the results of postmaintenance testing for the following maintenance activities:

- (Unit 2) Plant Surveillance Procedure 0PSP03-CS-0007, "Containment Spray System Valve Operability Test," Revision 4, review of postmaintenance testing on October 19
- (Unit 1) Plant Surveillance Procedure 0PSP03-RH-0001, "Residual Heat Removal Pump 1A Inservice Test," Revision 6, postmaintenance testing on October 28

- (Unit 2) Plant Maintenance Procedure 0PMP05-ZE-0058, "FCB Fiber Optical Interface Calibration," Revision 3, preventive maintenance testing on U-2 Standby Transformer, on December 7
- (Unit 2) Plant General Procedure 0PGP03-ZE-0027, ASME Repair, Replacement, and Post-Maintenance Pressure Testing, Revision 22, postmaintenance testing of Component Cooling Water Pump 2C and gasket failure, on December 8
- b. Findings

No findings of significance were identified.

- 1R22 Surveillance Testing (71111.22)
 - a. Inspection Scope

The inspectors evaluated the adequacy of three periodic tests of important nuclear plant equipment. This review included aspects such as preconditioning, the impacts of testing during plant operations, the adequacy of acceptance criteria, test frequency, procedure adherence, record keeping, the restoration of standby equipment, test equipment, and the effectiveness of the licensee's problem identification and resolution program. The inspectors observed or reviewed the following tests:

- (Unit 2) Plant Surveillance Procedure 0PSP03-DG-0003, "Standby Diesel Generator 23 Operability Test," Revision 26, on October 19 (WAN's 262000, 262001, and 262186)
- (Unit 2) Plant Surveillance Procedure 0PSP03-RC-0009, "Reactor Coolant System Valve Operability Test," Revision 6, on October 21 (WAN 260475)
- (Unit 1) Plant Surveillance Procedure 0PSP03-AF-0001, "Auxiliary Feedwater Pump 11 Inservice Test," Revision 24, on November 23 (WAN 264174)
- b. Findings

No findings of significance were identified.

- 4. OTHER ACTIVITIES
- 4OA1 Performance Indicator Verification (71151)
- .1 Barrier Integrity Performance Indicator Review
 - a. Inspection Scope

On December 3-22, 2004, the inspectors reviewed performance indicator data for the period from the fourth quarter of 2003 through the third quarter of 2004 to assess the

accuracy and completeness of the indicator reporting. The inspectors used NEI 99-02, "Regulatory Assessment Performance Indication Guideline," Revision 2, as guidance for this inspection. The following two performance indicators were reviewed for both units for a total of four indicators examined:

- Reactor Coolant System Activity
- Reactor Coolant System Leak Rate
- b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

- .1 Review of ESF Sequencer Problems
 - a. Inspection Scope

The inspectors evaluated the effectiveness of the licensee's problem identification and resolution processes regarding several trouble alarms received and additional equipment failures associated with the ESF sequencer equipment in both units during 2003 and 2004. The equipment alarms were documented by the licensee in several CRs. The licensee's extent of condition assessment, operability assessments, and maintenance plan were reviewed and discussed with engineering and operations personnel. The inspectors evaluated the CRs against the requirements in the licensee's Corrective Action Program and 10 CFR Part 50, Appendix B.

b. Findings and Observations

During CR reviews, the inspectors had noted a trend in the number of trouble alarms received from the ESF sequencer equipment in both units. The inspectors were already aware of ESF sequencer equipment upgrades implemented by the licensee. The upgrades included the replacement of timing switches and optical isolators. However, the inspectors noted a continued high number of trouble alarms associated with the sequencers following the equipment upgrades. A licensee investigation determined that, although the original material deficiency had been corrected by using a better material in the timing switches, the new switches had dust and dirt contamination which interfered with their function. The problem did not render the equipment inoperable, but resulted in the repetitive actuation of the autotest function of the equipment. It also required the licensee to declare the equipment inoperable following each trouble alarm until the plant operators could examine the sequencers and verify the autotest condition. The licensee initiated corrective action to clean and bench test the switches prior to installation in the plant. The licensee expects the sequencer trouble alarms to decrease since the majority of the switches have already been replaced. No findings in the area of identification and resolution of problems were identified.

.2 <u>South Texas Project evaluation of potential for voiding in Emergency Core Cooling</u> <u>Systems</u>

a. Inspection Scope

During the week of December 20, the inspectors evaluated the effectiveness of the licensee's problem identification and resolution processes regarding the evaluation of industry operating experience. The inspectors reviewed the licensee's investigation of an industry event which resulted in voids in postloss of coolant accident (post-LOCA) recirculation piping. The licensee determined that piping, valving, and elevation differences between the South Texas Project units and the affected facility would prevent the formation of similar voids in the South Texas Project recirculation piping. The licensee's review of this issue was documented in accordance with the licensee's Corrective Action Program in CR 04-11678.

b. Findings

No findings of significance were identified.

.3 <u>Semiannual Sample Review</u>

a. Inspection Scope

On December 29, 2004, the inspectors completed a semiannual review of licensee internal documents, reports, and performance indicators to identify trends that might indicate the existence of more significant safety issues. The inspector's review nominally considered the 6-month period of July through December 2004, although some examples expanded beyond those dates when the scope of the trend warranted. Corrective actions associated with a sample of the issues identified in the licensee's trend reports were reviewed for adequacy. The inspectors evaluated the licensee's implementation of the corrective action program as specified in licensee Procedure 0PGP03-ZX-0002, "Condition Reporting Process," and 10 CFR Part 50, Appendix B. Documents reviewed by the inspectors included:

- Condition record Daily Monitor
- System Performance Indicators
- System Health Reports
- Systems Engineering Quick Hitter List
- Quality Assurance Audit Reports
- Selected Work Orders from the 3rd and 4th Quarters of 2004
- South Texas Project Internal Performance Summary Reports
- b. Findings and Observations

No findings of significance were identified. However, the inspectors did make the following observations which were shared with plant management.

- For the CRs documented with human performance event codes during the third and fourth quarters of 2004, the most frequent event codes identified were procedure adherence events.
- An equipment reliability trend regarding the ESF sequencers was previously discussed in Section 40A2.1 of this report.
- .4 Daily CR Review
 - a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," and in order to help identify repetitive equipment failures or specific human performance issues for followup, the inspectors performed a daily screening of items entered into the licensee's corrective action program. This review was accomplished by reviewing hard copy or electronic summaries of each CR, attending various daily screening meetings, and accessing the licensee's computerized corrective action program database.

b. Findings and Observations

No findings of significance were identified.

- 4OA3 Event Followup (71153)
- .1 (Closed) Licensee Event Report (LER) 0500499/2002-003-001: Automatic Reactor Trip due to Turbine Trip caused by high water level in Steam Generator 2B

On July 7, 2002, power was lost to the Train D instrumentation channel while switching battery chargers. All four controlling channels of narrow-range steam generator water level instrumentation failed low, causing the feedwater control system to maximize feedwater flow to all steam generators. While the operators attempted to take manual control and reduce feedwater flow, an automatic trip occurred on high water level in Steam Generator 2B. The remaining plant equipment performed as expected during the trip response. The details of this event and the NRC's subsequent issuance of a Green finding were documented in NRC Inspection Report 0500498;499/2002004. The corrective actions implemented in response to this event were documented in accordance with the licensee's Corrective Action Program in CR 02-9755. No additional issues were identified by the inspectors. This LER is closed.

.2 (Closed) LER 0500498/2004-006: Pressurizer PORV limit switch cover gasket environmental evaluation

On November 8, 2004, the licensee identified that PORV RC-PCV-656A had been inoperable for approximately 11 days without completing the Technical Specification required mode changes. The details of this event and the NRC's subsequent issuance of a licensee-identified Green NCV are further discussed in Sections 1R15 and 4OA7 of this report. The corrective actions implemented in response to this event were

documented in accordance with the licensee's Corrective Action Program in CR 04-14935. No additional issues were identified by the inspectors. This LER is closed.

4OA6 Meetings, Including Exit

The results of the inspection were presented to James J. Sheppard, President and Chief Executive Officer, and other members of licensee management on January 5, 2005.

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

40A7 Licensee-identified Violations

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

Technical Specification 3.4.4 requires, in part, with one PORV inoperable, the licensee to restore it to operable or close the associated block valve with power maintained. If this condition is not satisfied within 1 hour, the reactor shall be in at least hot standby within the next 6 hours and in hot shutdown within the following 6 hours. On November 8, 2004, the licensee identified that PORV RC-PCV-656A had been inoperable for approximately 11 days without completing the required mode changes. The PORV had become inoperable because the limit switch cover gasket had exceeded its allowable lifetime due to elevated temperatures in the PORV cubicle. This item was documented in the licensee's Corrective Action Program as CR 04-14935. This finding is of very low safety significance because a redundant PORV was available and operable instrumentation would have alerted operators of a problem in a timely manner, which would have permitted remedial actions by the operators.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

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- K. Coates, Manager, Maintenance
- J. Crenshaw, Manager, Plant Engineering
- R. Gangluff, Manager, Chemistry
- S. Head, Manager, Licensing
- D. Leazar, Manager, Nuclear Fuels and Analysis
- M. McBurnett, Manager, Quality and Licensing
- A. McGalliard, Supervisor, Plant Engineering
- M. Meier, Manager Generation Station Support
- A. Mikus, Supervisor, Communication and Public Affairs
- A. Moldenhauer, Staff PRA Engineer
- G. Parkey, Vice President, Generation
- K. Richards, Manager, Outage and Projects
- R. Savage, Senior Staff Specialist
- J. Sheppard, President and CEO
- S. Thomas, Manager, Design Engineering
- T. Walker, Manager, Quality
- J. Wells, Manager, Work Control
- G. Williams, Specialist, Health Physics

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed		
05000498;499/2004-005-01	NCV	Failure to Use Authorized Document to Perform Quality Related Work (Section1R12)
Closed		
05000499/2002-003-01	LER	Automatic Reactor Trip Due to Turbine Trip Caused by High Water Level in Steam Generator 2B (Section 4OA3.1)
05000498/2004-006-00	LER	Pressurizer PORV Limit Switch Cover Gasket Environmental Evaluation (Section 4OA3.2)

LIST OF DOCUMENTS REVIEWED

In addition to the documents identified in the inspection report, the following documents were selected and reviewed by the inspectors to accomplish the objectives and scope of the inspection and to support any findings:

Section 71111.12 and 4OA2: Review of ESF Sequencer Problems

Condition records						
02-9655	03-92503-928	03-1001	03-5805	03-5970		
03-6345	03-6359	03-6499	03-15487	03-16680	04-528	
04-3200	04-6529	04-6541	04-6644	04-9035	04-11116	
04-12023	04-12614	04-12889	04-14137	04-14540		

System Health Report - ESF Actuation System 3rd Quarter 2004

LIST OF ACRONYMS

- CFR Code of Federal Regulations
- CR condition record
- ESF engineered safety features
- LER licensee event report
- NCV noncited violation
- PORV power-operated relief valve
- WAN work authorization number