UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

July 11, 2002

William T. Cottle, President and
Chief Executive Officer
STP Nuclear Operating Company
P.O. Box 289
Wadsworth, Texas 77483

SUBJECT: SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION -
NRC INSPECTION REPORT 50-498/02-02; 50-499/02-02

Dear Mr. Cottle:

On June 22, 2002, the NRC completed an inspection at your South Texas Project Electric Generating Station, Units 1 and 2, facility. The enclosed report documents the inspection findings which were discussed on June 27, 2002, with Mr. J. Sheppard and other members of your staff.

This 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. 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 no findings of significance were identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, 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/

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

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

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NRC Inspection Report
50-498/02-02; 50-499/02-02

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Dockets:	50-498 50-499
Licenses:	NPF-76 NPF-80
Report No:	50-498/02-02 50-499/02-02
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
Date:	March 24 through June 22, 2002
Inspectors:	N. F. O'Keefe, Senior Resident Inspector G. L. Guerra, Resident Inspector J. M. Keeton, Project Engineer J. F. Melfi, Reactor Inspector, Engineering Maintenance Branch D. W. Schaefer, Physical Security Inspector, Plant Support Branch
Approved By:	W. D. Johnson, Chief, Project Branch A, Division of Reactor Projects
Attachment:	Supplemental Information

SUMMARY OF FINDINGS

South Texas Project Electric Generating Station, Units 1 and 2
NRC Inspection Report 50-498/02-02; 50-499/02-02

IR 05000498-02-02; IR 05000499-02-02; on 3/24/2002 - 6/22/2002; STP Nuclear Operating Company; South Texas Project Electric Generating Station; Units 1 & 2. Integrated Resident and Regional Report

The inspection was conducted by resident inspectors and region-based engineering and plant support inspectors. No issues of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at http://www.nrc.gov/NRR/OVERSIGHT/index.html.

Report Details

Plant Status

Unit 1 began this inspection period at full power. On May 13, 2002, power was reduced to 60 percent at the request of the load dispatcher. Power was returned to 100 percent later the same day. On May 16, the licensee implemented a 1.4 percent power uprate in Unit 1. The plant remained at or near the new full power for the balance of the inspection period.

Unit 2 began this inspection period at full power. On May 18, 2002, power was reduced to 80 percent to perform maintenance on main turbine governor valves. Power was returned to 100 percent the same day. On June 14, operators manually tripped the unit when Feedwater Isolation Valve 2C unexpectedly shut during a partial stroke test. The problem was corrected and the plant was restarted on June 16. The unit reached full power on June 20 and operated at full power for the remainder of this inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

During the week of June 10, 2002, the inspectors completed a review of the licensee's adverse weather preparations for the hurricane season. The inspection included a review of the following licensee procedures:

- 0PGP03-ZV-0001, "Severe Weather Plan," Revision 7
- 0POP04-ZO-0002, "Natural or Destructive Phenomena Guidelines," Revision 18

The inspectors reviewed individual departmental plans and checklists to be completed prior to the start of hurricane season. Discussions were held with the licensee's emergency preparedness coordinator to assess the extent and completeness of preparations. A walkdown of the site facilities was conducted and inventories of essential supplies were verified. The inspectors specifically reviewed hurricane and tornado preparations for the following risk-significant systems by performing walkdowns of the system enclosures and exposed features in accordance with inspection procedure guidance:

- Units 1and 2 standby diesel generator enclosures
- Units 1and 2 essential cooling water building and intake structure.

b. Findings

No findings of significance were identified.

1R02 Evaluation of Changes, Tests, and Experiments (71111.02)

a. Inspection Scope

The inspectors reviewed the safety evaluations the licensee performed after the last assessment, documented in Inspection Report 50-498;499/01-04. The safety evaluations reviewed for the Unit 2 steam generator replacement are assessed in Inspection Report 50-499/02-07. The inspector verified that the licensee appropriately considered the conditions under which the licensee may make changes to the facility or procedures or conduct tests or experiments without prior NRC approval. In addition, the inspectors reviewed Plant General Procedure 0PGP05-ZA-0002, "10 CFR 50.59 Evaluations," Revision 11, which implemented the new safety evaluation program and was effective August 1, 2001. The following safety evaluations were reviewed:

- CR 00-6479-20 Add bypass testing capability to reactor protection system and engineered safety features actuation system
- CR 00-8094-35 Evaluate the condition in Unit 1 Cycle 11 if the control rods fail to fully insert on a reactor trip
- CR-00-8159-2 Revise the Updated Final Safety Analysis Report to reflect changes in the description of a fuel handling accident in the fuel handling building
- CR-8768-1 Evaluate a one-time deferral of Surveillance Test 88003992 for Motor Control Center E1C2 Cubicle H3 until October 2001
- CR-01-9518-5 Allow an increase in pressurizer water level above the program level while in Mode 3

Two of the above safety evaluations were assessed as unresolved safety questions, and were evaluated appropriately, consistent with the requirements of 10 CFR 50.59, "Evaluations of Changes, Tests, or Experiments." No new screening evaluations were identified.

The inspectors reviewed a licensee self-assessment and two condition reports initiated by the licensee that addressed problems or deficiencies associated with 10 CFR 50.59 requirements to ensure that appropriate corrective actions were being taken.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

.1 Partial System Walkdown

a. Inspection Scope

The inspectors performed a partial system walkdown of several Unit 1 systems required by the station configuration risk management system to be operable during the Train B extended allowed outage the week of April 15, 2002. The inspectors verified the proper standby equipment and control board lineup. The inspectors also examined component condition. The following systems were inspected:

- Turbine-driven auxiliary feedwater pump
- Technical support center diesel generator
- Positive displacement charging pump

The inspectors performed a partial system walkdown of the Unit 1 and Unit 2 solid state protection system Train R logic and actuation Train A on April 24, 2002. The inspectors used the Licensed Operator Training Manual and Updated Final Safety Analysis Report as references and held discussions with the system engineer. 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.

The inspectors performed a partial system walkdown of the Unit 2 standby diesel generator Trains A and B during the extended allowed outage of standby diesel generator Train C on April 11, 2002. The inspectors used Plant Operating Procedure 0POP02-DG-0002, “Emergency Diesel Generator 22,” Revision 28, to verify that the required standby and support systems were in a proper standby lineup. The inspectors also examined component condition.

The inspectors performed a partial system walkdown of the Unit 1 standby diesel generator Train C on June 12, 2002, while Train A was out of service. The inspectors verified the proper standby equipment and control board lineup in accordance with Plant Operating Procedure 0POP02-DG-0003, “Emergency Diesel Generator 13,” Revision 32. The inspectors also examined component condition.

b. Findings

No findings of significance were identified.

.2 Semi-Annual System Walkdown

b. Inspection Scope

The inspectors performed a detailed system walkdown of the accessible portions of the Unit 1 component cooling water system June 7-11, 2002. 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-CC-0001, "Component Cooling Water," Revision 23, applicable piping and instrumentation drawings, and the Updated Final Safety Analysis Report information on this system.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope

The inspectors used Inspection Procedure 71111.05 to evaluate the control of transient combustibles and ignition sources. The licensee's individual plant examination, 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. The inspection included observing the condition and operational lineup of fire protection systems and fire barriers used to prevent fire damage or propagation. The following plant areas were inspected:

- Unit 1 electrical auxiliary building Train B cable spreading room (Fire Zone Z047)
- Unit 2 electrical auxiliary building Train B cable spreading room (Fire Zone Z047)
- Unit 1 isolation valve cubicle, all areas (Fire Zones Z400 through Z409)
- Unit 2 isolation valve cubicle, all areas (Fire Zones Z400 through Z409)
- Unit 2 relay room, computer room, and halon suppression system room (Fire Zones Z032, Z037, and Z045)
- Unit 1 electrical auxiliary building Train C cable spreading rooms (Fire Zones Z057 and Z060)
- Unit 2 diesel generator building Train A rooms (Fire Zones Z502, Z508, Z511, and Z514)
- Unit 1 diesel generator building Train C rooms (Fire Zones Z500, Z506, and Z509)

b. Findings

No findings of significance were identified.

1R06 Flood Protection (71111.06)

a. Inspection Scope

The inspectors used the guidance in Inspection Procedure 71111.06 to perform inspections of the isolation valve cubicle buildings in both units to verify that the licensee's flood mitigation plans and equipment were consistent with the licensee's design requirements and risk-analysis assumptions. This inspection was performed for both internal and external sources of flooding. The inspection focused on the licensee's design for protecting redundant trains of auxiliary feedwater, steam generator power operated relief valves, main steam isolation valves, and feedwater isolation valves located in these buildings to verify that adequate mitigation equipment would remain in all flooding scenarios. The inspectors reviewed the Updated Final Safety Analysis Report, the Individual Plant Examination for External Events Report, and various historical license-basis documents to evaluate the internal and external flooding design and how current station procedures implemented that design. The inspectors also walked down the isolation valve cubicles to identify sources of flooding which were not considered in the licensee's analysis, as well as any missing or degraded flood barriers and flood control features. The following additional documents were also reviewed:

- 0POP04-ZO-0002, "Natural or Destructive Phenomena Guidelines," Revision 19
- Design-basis Document 5N209MB1035, "External Environment," Revision 1
- Calculation MC-5557, "Isolation Valve Cubicle Flooding Analysis," Revision 8

The inspectors assessed the licensee's response to one missing flood protection seal associated with protection for the Unit 1 turbine-driven auxiliary feedwater pump to determine the impact on the intended flood protection design. This issue was addressed in Condition Report (CR) 02-6680.

The inspectors also reviewed planned changes to Calculation MC-5557 to account for two previously unrecognized conditions which had nonconservative impacts on the potential magnitude of flood water which could be introduced into an auxiliary feedwater pump room. The results of the updated analysis were checked to see if additional safety-related equipment would be affected by the postulated flooding. These changes were addressed in CR 02-6833.

b. Findings

No findings of significance were identified.

1R07 Annual Heat Sink Performance Inspection (71111.07)

a. Inspection Scope

The inspectors observed the inspection of the Unit 2 Train C standby diesel generator jacket water cooler and lube oil cooler on June 4, 2002. This included observing scale thickness measurements in selected tubes and assessment of the results against performance criteria. The inspectors reviewed Calculation MC-6476,

"Jacket Water and Lube Oil Cooler Performance," Revision 0, and compared the results and assumptions to the licensee's inspection and evaluation process.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

a. Inspection Scope

The inspectors observed licensed operator requalification training on May 15, 2002. The inspectors observed Crew 1A performance during two simulator sessions for clarity and formality of communications, correct use of procedures, high-risk operator actions, and the oversight and direction provided by the shift supervisor. The inspectors also observed the crew's use of emergency action levels for proper emergency classification. The inspectors reviewed the scenario sequence 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 Functional Failure Review (71111.12)

a. Inspection Scope

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

- Train C electrical auxiliary building ventilation supply fan breaker failure on demand (Work Authorization Number (WAN) 227686, CR 02-5588)
- Pressurizer level instrument exhibited excessive drift (WAN 223941, CRs 02-192-23, 02-1849, 02-5070, and 02-5654)
- Containment Cubicle Exhaust Fan 22B breaker tripped repeatedly on overload (WAN 223021, CR 02-1096)
- Standby Diesel Generator 21 failed to reach rated speed (WAN 228325, CR 02-6224)
- Containment water level transmitter power supply failure (WAN 223837, CR 02-1813)
- Emergency Electrical Bus E2C4 failure to control supply of 480 volt power to nonclass motor control center (WAN 223021, CR 02-5705)

The inspectors focused the review on whether the structures, systems, or components (SSCs) that experienced problems were properly characterized in the scope of the program. They also reviewed whether the SSC failure or performance problem was properly characterized. The inspectors assessed the adequacy of the licensee's significance classification for the SSC. This included the appropriateness of the performance criteria established for the SSC (if applicable) and the adequacy of corrective actions for SSCs classified in accordance with 10 CFR 50.65 a(1) as applicable.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

The inspectors reviewed selected activities regarding risk evaluations and overall plant configuration control. The inspectors discussed emergent work issues with work control personnel and reviewed the potential risk impact of these activities to verify that the work was adequately planned, controlled, and executed. The activities reviewed were associated with:

- (Unit 1) Configuration risk management associated with the Train A essential cooling water extended allowed outage work the week of April 15, 2002 (WANs 222687 and 219219)
- (Unit 2) Partial stroking of Trains C and D main feedwater regulating valves following packing adjustments (WAN 231539)
- (Unit 2) Configuration risk management associated with standby diesel generator Train C restoration work following rain water flooding during maintenance the week of April 8, 2002 (CR 02-5265)
- (Unit 2) Risk impact of unplanned out-of-service time for the turbine-driven auxiliary feedwater pump while investigating the cause of a turbine overspeed trip on June 10, 2002 (CR 02-8444)
- (Unit 1) Replacement of failed backup power supply for solid state protection system Train R (WAN 227300, CR 02-5184)
- (Unit 1) Risk mitigation actions for maintenance on high temperature connections on a fuse clip associated with the Train C main steam isolation valve (CR 02-5662)
- (Unit 2) Risk mitigation actions for repair to Train D main feedwater regulating valve regulator air leak (CR 02-8913, Risk Analysis PRA-02-011)

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-routine Plant Evolutions (71111.14)

a. Inspection Scope

The inspectors observed and reviewed the following events:

- Unit 1 power uprate on May 16, 2002. Using Temporary Engineering Procedure 0TEP04-RX-0001, "Power Uprate Implementation," Revision 0, the licensee implemented the 1.4 percent power uprate.

- Unit 1 power reduction on May 13, 2002. Power was reduced to 60 percent at the request of the grid operator for power grid stability due to the deenergization of three out of eight offsite power lines.

- Unit 2 reactor trip on June 14 and restart on June 16, 2002.

During these evolutions, the inspectors observed operator performance, command and control, procedure use, reactivity control, and communications. Plant equipment was verified to perform as expected with no challenges to safety-related equipment. The inspectors observed the proper operation of radiation monitors being used to trend operational leakage from all four Unit 2 steam generators during the manual trip to verify that leakage remained minor. The inspectors discussed the just-in-time training on startup procedures provided to the operating crews with the Unit 2 operations manager.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors used Inspection Procedure 71111.15 to review selected operability evaluations conducted by the licensee during the report period involving risk-significant systems or components. The inspectors evaluated the technical adequacy of the licensee's operability determination, reviewed any compensatory measures, and checked to see that the licensee considered the impact of other preexisting 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.

- (Unit 2) Pressurizer level calibration drift incorrectly thought to be caused by calibration error (CR 02-5070)

- (Unit 2) Evaluation of the Train C standby diesel generator and support systems following rain water flooding during maintenance (CR 02-5265)
- (Unit 1) Solid State Protection System P-4 interlock indication anomaly during surveillance testing (CRs 02-6394, 02-6385)
- (Unit 1) Multiple cells in Battery E1C11 with degraded voltage (CR 01-9885)
- (Unit 1) Missing flood protection seal above turbine-driven auxiliary feedwater pump (CR 02-6680)
- (Unit 2) Apparent cause investigation for the overspeed trip of the turbine-driven auxiliary feedwater pump (CR 02-8444)
- (Unit 2) Evaluation of two essential chilled water trains out of service when hot gas bypass valve failed on the Train A essential chiller (CR 02-7770)
- (Both Units) Fire water storage tank levels below minimum volume (CR 02-8201)

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17A)

a. Inspection Scope

During this inspection period, the licensee implemented a 1.4 percent power uprate in Unit 1 along with the plant modifications needed to attain the new power level. The inspectors reviewed the license change package, modification package, 10 CFR 50.59 evaluation, and one of the installation work orders associated with the main steam pressure transmitter replacement modification. The inspectors also reviewed the special test procedure for implementing the uprate. The inspectors observed operator training on the impact of the power uprate and the implementation procedure. The following specific documents were reviewed:

- WAN 215708, “Implement DCP 00-5862-17 - Replacing Unit 1 S/G Pressure Transmitters in Support of the 1.4 Percent Power Uprate,” Revision 0
- Design Change Package (DCP) 00-5862-17, “Replacement of Main Steam Pressure Transmitters,” Supplements 0 and 1, and the associated 50.59 evaluation
- Plant Surveillance Procedure 0PSP05-MS-0514T, “Main Steam Pressure Transmitter Calibration,” Revision 4
- South Texas Project Calculation ZC07052, “Loop Allowable Value Calculation for Main Steam Pressure Monitoring,” Revision 0

- Temporary Engineering Procedure 0TEP04-RX-0001, “Power Uprate Implementation,” Revision 0

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors witnessed or reviewed the results of postmaintenance testing for the following maintenance activities:

- (Unit 2) Auxiliary feedwater system Train B containment isolation valve diagnostic testing (WAN 172654)

- (Unit 2) Standby diesel generator Train C postmaintenance testing following restoration from rain water flooding (WANs 227452, 227453, 227460, 227463, 227464, 227465, 227474, 227467, 227468, 227470, and 227545)

- (Unit 1) Steam pressure transmitter replacement in support of power uprate (WAN 215708)

- (Unit 2) Preventive maintenance for the turbine-driven auxiliary feedwater pump and subsequent troubleshooting when the postmaintenance test failed on June 10, 2002 (WANs 190468 and 200679)

- (Unit 1) Testing after implementation of temperature change on essential chilled water Train C due to the 150 ton chiller abandonment (WAN 223261)

- (Unit 1) Speed switch replacement on standby diesel generator Train A (WAN 193713)

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, Technical Specifications, and design-basis documents were also reviewed as applicable 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 evaluated the adequacy of periodic testing of the following 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, the effectiveness of the licensee's problem identification and resolution program, and test equipment accuracy, range and calibration. The inspectors observed or reviewed the following tests:

- (Unit 1) 0PMP03-RH-0867, "Residual Heat Removal Pump Discharge Flow Calibration," Revision 8
- (Unit 1) 0PSP07-VE-0002, "Unit Vent Iodine and Particulate Analysis," Revision 7, and 0PSP07-VE-0003, "Unit Vent Noble Gas, Tritium, and Composite Analysis," Revision 11
- (Unit 2) 0PSP03-DG-0002, "Standby Diesel Generator 22 Operability Test," Revision 19
- (Unit 1) 0PSP03-CH-0006, "Essential Chilled Water Pump 11C Reference Values Measurement," Revision 7
- (Unit 2) 0PSP03-SP-0010C, "Train C Emergency Safety Function Load Sequencer Manual Local Test," Revision 11
- (Unit 1) 0PSP05-RC-0410, "Delta Temperature and Temperature Average Loop 1 Set 1 Calibration," Revision 15
- (Unit 2) 0PSP03-AF-0007, "Auxiliary Feedwater Pump 24 Inservice Test," Revision 20
- (Unit 1) 0PSP03-DG-0001, "Standby Diesel 11 Operability Test, " Revision 21

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed the following temporary modification, using the guidance contained in Inspection Procedure 71111.23 with respect to design bases, approvals, and tracking. The inspectors reviewed the 10 CFR 50.59 screening, updated procedures, and drawings. The inspectors walked down Temporary

Modification T2-01-18551-4, “Temporary Power to Main Feedwater Isolation Valve 2B,” Revision 0 (Work Order 391705).

b. Findings

No findings of significance were identified.

1EP1 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors evaluated an emergency preparedness drill involving a security event in a vital area conducted on May 8, 2002, using Inspection Procedure 71114, Attachment 6. This evaluation included reviewing the scenario and drill objectives, observing licensee performance in the control room simulator, observing the licensee’s critique, and discussing observations and the licensee’s findings with the emergency preparedness evaluators. Emphasis was placed on confirming proper event classification and timely reporting. The inspectors also observed the effectiveness of the licensee’s interactions with federal and local law enforcement agencies.

b. Findings

No findings of significance were identified.

3. SAFEGUARDS
Cornerstone: Physical Protection (PP)

3PP1 Access Authorization (71130.01)

a. Inspection Scope

The inspectors performed the following inspection activities:

- Reviewed licensee event reports and safeguards event logs to identify problems in the access authorization program
- Reviewed procedures, audits, and self-assessments for behavior observation, access authorization, fitness-for-duty, supervisor and escort training, and requalification training
- Interviewed six supervisors/managers and six individuals who had escorted visitors into the protected and/or vital areas to determine their knowledge and understanding of their responsibilities in the behavior observation program
- Reviewed condition reports, licensee event reports, safeguards event logs, audits, selected security event reports, and self-assessments for the licensee's access authorization program to determine the licensee's ability to identify and resolve problems

b. Findings

No findings of significance were identified.

3PP2 Access Control (71130.02)

a. Inspection Scope

The inspectors performed the following inspection activities:

- Reviewed licensee event reports and safeguards event logs to identify problems with access control equipment
- Reviewed procedures and audits for testing and maintenance of access control equipment and for granting and revoking unescorted access to protected and vital areas
- Interviewed security personnel concerning the proper operation of the explosive and metal detectors, X-ray devices, and key card readers
- Observed licensee testing of access control equipment and the ability of security personnel to control personnel, packages, and vehicles entering the protected area
- Reviewed procedures to verify that a program was in place for controlling and accounting for hard keys to vital areas
- Reviewed the licensee’s process for granting access to vital equipment and vital areas to authorized personnel having an identified need for that access
- Reviewed condition reports, licensee event reports, safeguards event logs, audits, selected security event reports, and self-assessments for the licensee's access control program in order to assess the licensee's ability to identify and resolve problems with the access control program
- Interviewed key security department and plant support personnel to determine their knowledge and use of the corrective action reports and resolution of problems regarding repair of security equipment

b. Findings

No findings of significance were identified.

3PP4 Security Plan Changes (71130.04)

a. Inspection Scope

The inspectors completed the following actions:

- Reviewed the Physical Security Plan (Revision 15A), Training and Qualification Plan (Revision 5A), and Safeguards Contingency Plan (Revision 3A), dated September 19, 2001, to determine if requirements of 10 CFR 50.54 (p) had been met

- Reviewed the safeguards event logs from January 1, 2000, to March 25, 2002, and interviewed security personnel to determine their knowledge and use of the corrective action program and resolution of problems as it relates to making changes to the licensing documents

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator Verification (71151)

.1 Initiating Events Performance Indicator Review

a. Inspection Scope

The inspectors reviewed performance indicator data reported by the licensee in order to assess the accuracy and completeness of the information. The inspectors used Nuclear Energy Institute (NEI) Guidance NEI 99-02, "Performance Indicator Verification," Revision 2, as guidance for this inspection. Data was reviewed for the following indicators for both units for the second quarter of 2001 through the first quarter of 2002:

- Unplanned scrams per 7000 critical hours
- Scrams with loss of normal heat removal
- Unplanned power changes per 7000 critical hours

b. Findings

No findings of significance were identified.

.2 Mitigating Systems Performance Indicator Review

a. Inspection Scope

The inspectors reviewed performance indicator data for the period from January 2001 through March 2002, 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 performance indicators were reviewed for both units:

- Safety system functional failures
- Safety system unavailability for the following systems:

  Emergency power
  High head safety injection
  Auxiliary feedwater
  Residual heat removal

b. Findings

No findings of significance were identified.

.3 Safeguards Performance Indicator Review

a. Inspection Scope

The inspectors reviewed the program for collection and reporting of performance indicator data. Specifically, a random sampling of security event logs and corrective action reports from January 2001 to February 2002 were reviewed for the following program performance areas:

- Protected area security equipment
- Personnel screening program performance
- Fitness-for-duty program performance

b. Findings

No findings of significance were identified.

4OA3 Event Followup (71153)

.1 Unit 2 Reactor Trip

a. Inspection Scope

The inspectors responded to a manual reactor trip in Unit 2 on June 14, 2002. Operators manually tripped the unit in accordance with procedures when the Train C feedwater isolation valve unexpectedly shut during a partial stroke test in accordance with Plant Surveillance Procedure 0PSP03-FW-0001, "Feedwater System Valve Operability Test," Revision 7. The inspectors reviewed Plant Operating Procedure 0POP05-EO-ES01, "Reactor Trip Response," Revision 18, in evaluating plant response and operator actions. The plant response was verified to be as expected during the trip using plant computer graphs. The cause of both source range detectors failing was reviewed, as was the proper operation of the extended range detectors.

b. Findings

No findings of significance were identified.

.2 (Closed) Licensee Event Report (LER) 50-499/2001-003: On March 19, 2001, during Refueling Outage 2RE08, eddy-current examination results revealed that Steam Generator 2C fell into Category C-3 in accordance with Technical Specification Surveillance Requirement 4.4.5.2. Maintenance personnel plugged 48 tubes in Steam Generator 2C as a result of the eddy-current examination findings. The eddy-current results identified outside diameter stress corrosion cracking at the tube-to-tube support plate intersection as the main cause for the plugging. Including the 48 tubes plugged in 2RE08, Steam Generator 2C currently has 297 tubes plugged. As noted in LER 50-499/1999-007, the original maximum allowed plugging limit of 5 percent of the total number of tubes (4,864) had been exceeded. Licensee engineers performed the necessary analysis to demonstrate the acceptability of increasing the steam generator tube plugging limit from 5 to 10 percent. These actions were performed in accordance with the Technical Specification requirements and the issue was determined to be of minor safety significance. No additional issues were identified during the review of this licensee event report. This issue was identified in the corrective action program as CR 01-4752. This was not a violation of NRC regulations.

.3 (Closed) Licensee Event Report (LER) 50-498/2001-002: Pressurizer Safety Valves Discovered Outside Required Tolerances. During testing, the licensee found that three of the pressurizer safety valves had initial lifts out-of-tolerance low, which they identified as a violation of Technical Specification 3.4.2.2. The licensee replaced the valves with identical valves which were properly set. No additional issues were identified during the review of this LER. The issue was determined to be of minor safety significance since the safety function of the valves, which is to assure that reactor coolant system pressure does not exceed the design safety limit, was not affected. In addition, the point where the valves lifted out-of-tolerance low did not affect any core thermal limits. This issue was identified in the corrective action program as CR 01-16532.

.4 (Closed) Licensee Event Report 50-498/2001-S01-00: Protection of Safeguards Information. The inspector reviewed the licensee's event report and no findings of significance were identified. The inspector reviewed the licensee's corrective actions. This event was determined to be a minor violation of 10 CFR 73.21, "Requirements for the Protection of Safeguards Information."

.5 (Closed) Licensee Event Report 50-498/2002-001: Control Room Envelope Ventilation System Failed to Maintain a Positive Pressure in the Control Room. The failure of licensee personnel to properly assess the impact of a failed fire damper in the electrical auxiliary building ventilation system on the operability of the control room ventilation system resulted in all three trains of control room ventilation being inoperable for longer than the allowed outage time permitted by Technical Specifications. The damper redirected air flow in a way that degraded the control room radiological barrier by preventing that system from attaining the positive pressure required by Technical Specifications resulting in a noncited violation of very low risk significance. The details of this event are documented in Inspection Report 50-498;499/01-08. The inspectors reviewed the corrective actions taken by the licensee in response to this event

(CR 02-3183). After discussions with personnel in the Office of Nuclear Reactor Regulation, the inspectors determined that the licensee's methodology of "smoke testing" for positive pressure at some locations of the control room envelope was inadequate in determining 1/8 inch water gage as required by Technical Specification 3.7.7 because the test method did not quantitatively verify that the required differential pressure existed at the doors in question. This issue constitutes a violation of minor significance that is not subject to enforcement action in accordance with Section IV of the NRC's Enforcement Policy. The licensee's corrective actions included revising the surveillance procedure to eliminate the smoke test method and using a quantitative measurement for positive pressure determination. No additional issues were identified.

4OA6 Meetings, including Exit

Exit Meeting Summary

The results of the inspection of evaluations of changes, tests, and experiments were presented to Mr. T. Jordan, Vice President, Engineering and Technical Services, and other members of licensee management at the conclusion of the inspection on April 11, 2002.

The results of the access authorization and controls inspection were presented to Mr. J. Sheppard, Vice President & Assistant to the President/CEO, and other members of licensee management at the conclusion of the inspection on April 18, 2002.

The results of the resident inspection were presented to Mr. J. Sheppard, Vice President and Assistant to the President/CEO, and other members of licensee management at the conclusion of the inspection on June 27, 2002.

In each case, the inspectors also asked the licensee if any materials reviewed during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT

Supplemental Information

PARTIAL LIST OF PERSONS CONTACTED

Licensee

R. Aguilera, Supervisor, Radiation Protection
M. Berg, Manager, Operating Experience Group
D. Brune, Senior Coordinator, Access Authorization
K. Coates, Manager, Maintenance
J. Conly, Licensing Engineer
W. Cottle, President and Chief Executive Officer
L. Earls, Health Physicist
R. Gangluff, Manager, Chemistry
R. Grantom, Manager, Risk Management
A. Haedge, Supervisor, Engineering
M. Hall, Senior Coordinator, Security
E. Halpin, Plant Manager
S. Head, Manager, Licensing
J. Johnson, Supervisor, Quality
T. Jordan, Vice President, Engineering and Technical Services
A. Kent, Manager, Engineering
D. Leazar, Director, Nuclear Fuel Analysis
R. Lovell, Manager, Training
T. Lucas, Employee Concerns Program
R. Maier, Manager, Security
F. Mangan, Vice President, Business Services
L. Matula, Supervisor, Health Services
M. McBurnett, Director, Quality/Licensing
W. Mookhoek, Licensing Engineer
P. Morales, Coordinator, Access Authorization
C. Morgan, Supervisor, Emergency Preparedness
G. Parkey, Vice President, Generation
J. Phelps, Division Manager, Operations
R. Piggott, Senior Licensing Specialist
G. Powell, Manager, Health Physics
D. Rencurral, Manager, Operations
P. Serra, Manager, Plant Protection
J. Sheppard, Vice President & Assistant to the President/CEO
D. Stillwell, Supervisor, Probabilistic Risk Analysis
C. Stone, Supervisor, Radiation Protection
S. Thomas, Manager, Plant Design Engineering
D. Towler, Manager, Generation Quality
T. Walker, Manager, Engineering and Support
J. Winters, Maintenance Rule Coordinator
R. Young, Senior Coordinator, Access Authorization

Contractor

D. Bilsic, Project Manager, Wackenhut
J. Frick, Security Force Supervisor, Wackenhut

NRC

J. Hayes, Senior Health Physicist, SPSB/DSSA/NRR
R. Manili, Security Specialist, RSPS/NSIR

ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

50-499/2001-003	LER	Steam Generator 2C Classified as Category C-3 in 2RE08 (Section 4OA3.2).
50-498/2001-002	LER	Pressurizer Safety Valves Discovered Outside Required Tolerances (Section 4OA3.3).
50-498/2001-S01-00	LER	Protection of Safeguards Information (Section 4OA3.4).
50-498/2002-001	LER	Control Room Envelope Ventilation System Failed to Maintain a Positive Pressure in the Control Room (Section 4OA3.5).

LIST OF ACRONYMS USED

CR	condition report
DCP	design change package
NEI	Nuclear Energy Institute
NRR	Nuclear Reactor Regulation
SSCs	structures, systems, or components
UFSAR	Updated Final Safety Analysis Report
WAN	Work Authorization Number

MISCELLANEOUS DOCUMENTS

NUMBER	DESCRIPTION	DATE
NOC-AE-02001242	License Amendment Request - Proposed Amendment to Technical Specification 3.4.2.2.	February 14, 2002
NOC-AE-01001109	Steam Generator Tube Burst and Accident Leakage Information Requested by NRC	June 7, 2001
NOC-AE-01001055	License Amendment Request - Proposed Revision to Reactor Trip System and Engineered Safety Features Actuation System Allowed Outage Times and Bypass Test Times	May 30, 2001

CONDITION REPORTS

CR 01-16532
CR 01-18332