



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
612 EAST LAMAR BLVD, SUITE 400
ARLINGTON, TEXAS 76011-4125

November 6, 2008

Mr. Edward D. Halpin, Chief Nuclear Officer
STP Nuclear Operating Company
P.O. Box 289
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION - NRC
INTEGRATED INSPECTION REPORT 05000498/2008004 AND
05000499/2008004

Dear Mr. Halpin:

On September 27, 2008, the U.S. 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 on September 29, 2008, with you and other members of your staff.

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.

Based on the results of this inspection, one self-revealing finding of very low safety significance (Green), which was determined to be a violation, was identified. However, because of the very low safety significance and because it is entered into your corrective action program, the NRC is treating this violation as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest this noncited violation, 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, 612 East Lamar Blvd., Suite 400, Arlington, Texas 76011-4125; 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 Part 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 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).

Sincerely,

/RA/

Claude E. 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 05000498/2008004 and 05000499/2008004
w/Attachment: Supplemental Information

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SUNSI Review Completed: CEJ ADAMS: Yes No Initials: CEJ
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RIV:RI:DRP/A	SRI:DRP/A	C:DRS/PSB1	C:DRS/PSB2
BKTharakan	JLDixon	MPShannon	GEWerner
/RA - E/	/RA - E/	/RA/	/RA/
10/30/08	10/30/08	10/23/08	10/21/08
C:DRS/OB	C:DRS/EB1	C:DRS/EB2	C:DRP/A
RELantz	RLBywater	NFO'Keefe	CEJohnson
/RA/	/RA/	/RA/	/RA/
10/21/08	10/21/08	10/22/08	11/06/08

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**U.S. NUCLEAR REGULATORY COMMISSION
REGION IV**

Dockets: 05000498, 05000499

Licenses: NPF-76, NPF-80

Report: 05000498/2008004 and 05000499/2008004

Licensee: STP Nuclear Operating Company

Facility: South Texas Project Electric Generating Station, Units 1 and 2

Location: FM521 - 8 miles west of Wadsworth
Wadsworth, Texas 77483

Dates: June 29 through September 27, 2008

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M. Bielby, Operator Licensing, Region III
L. Carson II, Senior Health Physicist
M. Chambers, Resident Inspector, Cooper
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J. Melfi, Resident Inspector, Palo Verde
B. Tharakan, CHP, Resident Inspector

Approved By: Claude E. Johnson, Chief, Project Branch A
Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000498/2008004, 05000499/2008004; 06/29/08 - 09/27/08; South Texas Project Electric Generating Station, Units 1 and 2; Integrated Resident and Regional Report; Problem Identification and Resolution.

This report covered a 3-month period of inspection by regional and resident inspectors. One Green finding was identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 0609, "Significance Determination Process." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management's review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

Green. The inspectors reviewed a self-revealing noncited violation of Technical Specification 6.8.1.d for the failure to follow Procedure OPGP03-ZF-0018, "Fire Protection System Operability Requirements," Revision 14. As a result the licensee unintentionally isolated fire water to all of Unit 2 and a majority of Unit 1. The licensee entered this issue into the corrective action program for resolution.

The inspectors determined the finding was more than minor because it affected the mitigating systems cornerstone objective of ensuring the availability of systems that respond to initiating events to prevent undesirable consequences. The inspectors evaluated the finding using the fire protection significance determination process. The finding screened to a Phase 2 based on a high degradation rating and the number of areas impacted. The Phase 2 screening resulted in a high degradation rating based on the number of areas impacted. Consequently, the licensee performed a detailed probabilistic risk assessment analysis using their fire probabilistic risk assessment model, and determined that the overall increase in core damage probability and in large early release probability was of very low safety significance. The regional senior reactor analyst compared the licensee's results with the NRC's review of the individual plant examination of external events and concluded that the results were essentially identical. Based on these results, the inspectors determined that the risk significance of the event was of very low safety significance. Additionally, the inspectors determined that the issue had crosscutting aspects associated with the work control component of human performance, in that, the licensee did not incorporate the impact of work on different job activities, the need for work groups to stay apprised of work status, operational impact of work activities, and other plant conditions that may affect the work activity [H.3(b)] (Section 4OA2).

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status

Unit 1 began the inspection period at 100 percent rated thermal power and remained there for the duration of the inspection period.

Unit 2 began the inspection period at 100 percent rated thermal power and commenced coastdown operations on September 13, 2008, in anticipation of Refueling Outage 2RE13. Unit 2 remained in coastdown operations for the remainder of the inspection period.

1. REACTOR SAFETY

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

1R01 Adverse Weather Protection (71111.01)

.1 Readiness for Impending Adverse Weather Conditions

a. Inspection Scope

On July 22, 2008, the inspectors completed a review of the licensee's readiness for impending adverse weather involving Hurricane Dolly (including severe thunderstorms, tornadoes, high winds, etc.). The inspectors: (1) reviewed plant procedures, the Updated Final Safety Analysis Report, and Technical Specifications to ensure that operator actions defined in adverse weather procedures maintained the readiness of essential systems; (2) walked down the protected and switchyard areas (including the essential cooling water intake structure, the essential cooling pond, all external flood protection doors, and areas susceptible to wind generated missiles) and the immediately surrounding areas to ensure that adverse weather protection features (heat tracing, space heaters, weatherized enclosures, temporary chillers) were sufficient to support operability, including the ability to perform safe shutdown functions; (3) reviewed maintenance records to determine that applicable surveillance requirements were current before the anticipated severe weather (severe thunderstorms, tornadoes, high winds, etc.) developed; and (4) reviewed plant modifications, procedure revisions, and operator work arounds to determine if recent facility changes challenged plant operation.

Documents reviewed by the inspectors included:

- Procedure 0ERP01-ZV-IN01, "Emergency Classification," Revision 8
- Procedure 0PGP03-ZV-0001, "Severe Weather Plan," Revision 14
- Procedure 0PGP03-ZV-0002, "Hurricane Plan," Revision 2
- Procedure 0POP04-ZO-0002, "Natural or Destructive Phenomena Guidelines," Revision 38

These activities constitute completion of one adverse weather sample as defined in Inspection Procedure 71111.01-05.

b. Findings

No findings of significance were identified.

.2 Annual External Flooding

a. Inspection Scope

The inspectors reviewed: (1) the Updated Final Safety Analysis Report, the flooding analysis, and plant procedures to assess seasonal susceptibilities involving external flooding; (2) the corrective action program to determine if the licensee identified and corrected flooding problems; (3) inspected underground bunkers/manholes to verify the adequacy of: (a) sump pumps, (b) level alarm circuits, (c) cable splices subject to submergence, and (d) drainage for bunkers/manholes; (4) verified that operator actions for coping with flooding can reasonably achieve the desired outcomes; and (5) walked down the below listed areas to verify the adequacy of: (a) equipment seals located below the flood level, (b) floor and wall penetration seals, (c) watertight door seals, (d) common drain lines and sumps, (e) sump level alarms and control circuits, and (f) temporary or removable flood barriers.

- September 21, 2008, main cooling reservoir, essential cooling pond, Units 1 and 2 perimeters including entrances to mechanical electrical auxiliary buildings, tendon gallery access shaft covers, diesel generator building knockout panels, and fuel handling building loading area.

Documents reviewed by the inspectors included:

- Procedure 0PGP03-ZV-0001, "Severe Weather Plan," Revision 14
- Procedure 0PGP03-ZV-0002, "Hurricane Plan," Revision 2
- Procedure 0POP04-ZO-0002, "Natural or Destructive Phenomena Guidelines," Revision 38

These activities constitute completion of one external flooding sample as defined in Inspection Procedure 71111.01-05.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

Partial Walkdown

a. Inspection Scope

The inspectors: (1) walked down portions of the two below listed risk important systems and reviewed plant procedures and documents to verify that critical portions of the selected systems were correctly aligned, and (2) compared deficiencies identified during the walkdown to the licensee's Updated Final Safety Analysis Report and corrective action program to ensure problems were being identified and corrected.

- August 12, 2008, Unit 2, chemical volume and control system - boron thermal regeneration system sub-system placed in service for reactivity management in preparation for Refueling Outage 2RE13
- September 26, 2008, Unit 2, safety injection system Train B in preparation for Refueling Outage 2RE13

Documents reviewed by the inspectors are listed in the attachment.

These activities constitute completion of two partial system walkdown samples as defined by Inspection Procedure 71111.04-05.

b. Findings

No findings of significance were identified.

1R05 Fire Protection Annual/Quarterly (71111.05AQ)

Quarterly Inspection

a. Inspection Scope

The inspectors walked down the four below listed plant areas to assess the material condition of active and passive fire protection features and their operational lineup and readiness. The inspectors: (1) verified that transient combustibles and hot work activities were controlled in accordance with plant procedures; (2) observed the condition of fire detection devices to verify they remained functional; (3) observed fire suppression systems to verify they remained functional and that access to manual actuators was unobstructed; (4) verified that fire extinguishers and hose stations were provided at their designated locations and that they were in a satisfactory condition; (5) verified that passive fire protection features (electrical raceway barriers, fire doors, fire dampers, steel fire proofing, penetration seals, and oil collection systems) were in a satisfactory material condition; (6) verified that adequate compensatory measures were established for degraded or inoperable fire protection features and that the compensatory measures were commensurate with the significance of the deficiency; and (7) reviewed the corrective action program to determine if the licensee identified and corrected fire protection problems.

- September 16, 2008, Unit 1, electrical switchgear room Train A (Fire Zone Z004)
- September 16, 2008, Unit 1, component cooling water pump and essential chiller Trains B and C (Fire Zones Z139 and Z140)
- September 17, 2008, Unit 2, electrical penetration area Trains A, B and C (Fire Zones Z006, Z031 and Z046)

- September 17, 2008, Unit 2, relay cabinet room (Fire Zone Z032)

Documents reviewed by the inspectors included:

- Applicable fire preplans
- Fire Hazards Analysis Report
- Procedure 0PGP03-ZF-0019, "Control of Transient Fire Loads and Use of Combustible and Flammable Liquids and Gases," Revision 5
- Procedure 0PGP03-ZF-0001, "Fire Protection Program," Revision 18
- Penetrations 7M23W00420, 7M2EW00428 and 7M2EW02257 data sheets

These activities constitute completion of four quarterly fire-protection inspection samples as defined by Inspection Procedure 71111.05-05.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07)

a. Inspection Scope

The inspectors reviewed licensee programs, verified performance against industry standards, and reviewed critical operating parameters and maintenance records for the essential chiller Train A heat exchanger. The inspectors verified that: (1) performance tests were satisfactorily conducted for heat exchangers and reviewed for problems or errors; (2) the licensee utilized the periodic maintenance method outlined in EPRI NP-7552, "Heat Exchanger Performance Monitoring Guidelines"; (3) the licensee properly utilized biofouling controls; (4) the licensee's heat exchanger inspections adequately assessed the state of cleanliness of their tubes; and (5) the heat exchanger was correctly categorized under the maintenance rule.

- June 3, 2008, Unit 1, clean and inspect condenser tubes of Train A essential chilled water chiller Unit 12A

Documents reviewed by the inspectors included:

- Preventive Maintenance MM-1-87014718, Work Authorization Number 304837
- System Engineering Inspection Report on 12A Essential Chiller dated June 3, 2008
- Procedure 0PMP04-ZG-0011, "Heat Exchanger Cleaning (General Guidelines and Instructions)," Revision 6

These activities constitute completion of one heat sink inspection sample as defined by Inspection Procedure 71111.07-05.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Regualification Program (71111.11)

a. Inspection Scope

On September 10, 2008, the inspectors observed training of senior reactor operators and reactor operators to identify deficiencies and discrepancies in the training, to assess operator performance, and to assess the evaluator's critique. The training scenario involved initial conditions of a fuel leak and a steam generator tube leak below Technical Specification limits. The scenario progressed due to a security related event that resulted in a Notice of Unusual Event, furthermore an aircraft was tracked in route which required the declaration of an Alert. Subsequently a loss of offsite power occurred, which resulted in a reactor trip which had complications and resulted in a faulted steam generator. Due to the faulted steam generator, the existing steam generator tube leak and an unmonitored leak path, a Site Area Emergency was declared. A General Emergency was reached, but was not recognized before the drill was terminated - the licensee captured the deficiency during the critique following the scenario.

These activities constitute one quarterly licensed-operator requalification program sample as defined in Inspection Procedure 71111.11.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed the two below listed maintenance activities to: (1) verify the appropriate handling of structure, system, and component performance or condition problems; (2) verify the appropriate handling of degraded structures, systems, and components functional performance; (3) evaluate the role of work practices and common cause problems; and (4) evaluate the handling of structures, systems, and components issues reviewed under the requirements of the Maintenance Rule, 10 CFR Part 50, Appendix B, and Technical Specifications.

- July 24, 2008, Units 1 and 2, main steam system
- September 24, 2008, Units 1 and 2, safety-related 480 volt alternating current motor control centers

Documents reviewed by the inspectors are listed in the attachment.

These activities constitute completion of two quarterly maintenance effectiveness samples as defined in Inspection Procedure 71111.12-05.

b. Findings

No findings of significance were identified.

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

.1 Planned Risk

a. Inspection Scope

The inspectors reviewed the below listed assessment activities to verify:

(1) performance of risk assessments when required by 10 CFR 50.65 (a)(4) and licensee procedures prior to changes in plant configuration for maintenance activities and plant operations; (2) the accuracy, adequacy, and completeness of the information considered in the risk assessment; (3) that the licensee recognizes, and/or enters as applicable, the appropriate licensee-established risk category according to the risk assessment results and licensee procedures; and (4) that the licensee identified and corrected problems related to maintenance risk assessments.

- Week of July 7, 2008, planned maintenance activities on Unit 1 Train B and Unit 2 Train A including isolating the fire sprinkler deluge system to the Unit 2 auxiliary engineered safety feature transformers

These activities constitute completion of one maintenance risk assessment sample as defined by Inspection Procedure 71111.13-05.

b. Findings

No findings of significance were identified.

.2 Emergent Work Control

a. Inspection Scope

The inspectors: (1) verified that the licensee performed actions to minimize the probability of initiating events and maintained the functional capability of mitigating systems and barrier integrity systems; (2) verified that emergency work-related activities such as troubleshooting, work planning/scheduling, establishing plant conditions, aligning equipment, tagging, temporary modifications, and equipment restoration did not place the plant in an unacceptable configuration; and (3) reviewed the corrective action program to determine if the licensee identified and corrected risk assessment and emergency work control problems.

- Week of July 14, 2008, planned maintenance activities on Unit 1 Train C and Unit 2 Train B including emergent work on Unit 2 due to a rod control urgent alarm indicating a failure in a rod control power cabinet

- Week of September 15, 2008, Unit 1, planned maintenance on Unit 1 Train D with emergent conditions on Unit 1 essential chilled water Pump 12A failing to start

Documents reviewed by the inspectors included:

- Condition Report 08-11004
- Work activity risk plan of action evaluation Number 1815, Revisions 0 and 1
- Unit 2 control room temporary modification index
- Projected and actual risk profiles for Unit 1 Week of September 15, 2008
- Condition Reports 08-13702 and 08-13708

These activities constitute completion of two emergent work control samples as defined by Inspection Procedure 71111.13-05.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors: (1) reviewed plants status documents, such as operator shift logs, emergent work documentation, deferred modifications, and standing orders, to determine if an operability evaluation was warranted for degraded components; (2) referred to the Updated Final Safety Analysis Report and design basis documents to review the technical adequacy of licensee operability evaluations; (3) evaluated compensatory measures associated with operability evaluations; (4) determined degraded component impact on any Technical Specifications; (5) used the significance determination process to evaluate the risk significance of degraded or inoperable equipment; and (6) verified that the licensee has identified and implemented appropriate corrective actions associated with degraded components.

- May 14, 2008, Unit 1, Standby Diesel Generator 12 engine-driven fuel oil pump leakage and evaluation of other standby diesel generators fuel oil pumps per CR 08-8589
- September 5, 2008, Unit 2, essential chilled water Pump 21A supply breaker tripped in Motor Control Center E2A1 cubicle when attempting to start for testing per CR 08-13152
- September 9, 2008, Units 1 and 2, high head safety injection system rubber hose coupling the lower bearing oil reservoir and site glass not environmentally qualified per CR 08-12437
- September 23, 2008, Unit 1, integrated computer system control rod deviation monitor was not updating the position of Control Rod H-6 in the integrated computer system per CR 08-11510

- September 24, 2008, Unit 1, Class 1E 125 volts direct current Switchboard E2A11 voltage spiked above its maximum design voltage of 140 volts direct current per CR 08-12812

Documents reviewed by the inspectors are listed in the attachment.

These activities constitute completion of five operability evaluation inspection samples as defined in Inspection Procedure 71111.15-05.

b. Findings

No findings of significance were identified.

1R18 Plant Modifications (71111.18)

a. Inspection Scope

The inspectors reviewed the Updated Final Safety Analysis Report, plant drawings, procedure requirements, and Technical Specifications to ensure that the one below listed modification was properly implemented. The inspectors: (1) verified that the modification did not have an affect on system operability/availability, (2) verified that the installation was consistent with the modification documents, (3) ensured that the postinstallation test results were satisfactory and that the impact of the temporary modification on permanently installed structures, systems, and components were supported by the test, (4) verified that the modifications were identified on control room drawings and that appropriate identification tags were placed on the affected drawings, and (5) verified that appropriate safety evaluations were completed. The inspectors verified that licensee identified and implemented any needed corrective actions associated with temporary modifications.

- July 15, 2008, Unit 2, temporary modification, on the digital rod position indication system, T2-08-11004-3, "Removal of RHCS Sequence Logic Card for the 1AC Power Cabinet," Supplement 0

Documents reviewed by the inspectors are listed in the attachment.

These activities constitute completion of one sample for temporary/permanent plant modifications as defined by Inspection Procedure 71111.18-05.

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors selected the four below listed postmaintenance test activities of risk significant systems or components. For each item, the inspectors: (1) reviewed the applicable licensing basis and/or design-basis documents to determine the safety functions; (2) evaluated the safety functions that may have been affected by the

maintenance activity; and (3) reviewed the test procedure to ensure it adequately tested the safety function that may have been affected. The inspectors either witnessed or reviewed test data to verify that acceptance criteria were met, plant impacts were evaluated, test equipment was calibrated, procedures were followed, jumpers/leads were properly controlled, the test data results were complete and accurate, the test equipment was removed, the system was properly realigned, and deficiencies during testing were documented. The inspectors also reviewed the corrective action program to determine if the licensee identified and corrected problems related to postmaintenance testing.

- May 14, 2008, Unit 1, Standby Diesel Generator 12 engine-driven fuel oil pump replacement due to leakage in excess of allowable
- August 27, 2008, Unit 1, essential chilled water system chiller Unit 12A trip due to low oil pressure, maintenance replaced the oil regulator, filter, and oil
- September 5, 2008, Unit 2, essential chilled water Pump 21A supply breaker tripped in Motor Control Center E2A1 cubicle when attempting to start for testing; maintenance replaced the breaker and contactor
- September 9, 2008, Unit 2, auxiliary feedwater Pump 24 downstream casing vent valve bushing broken, maintenance replaced all broken parts

Documents reviewed by the inspectors are listed in the attachment.

These activities constitute completion of four postmaintenance testing inspection samples as defined in Inspection Procedure 71111.19-05.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed the Updated Final Safety Analysis Report, procedure requirements, and Technical Specifications to ensure that the four below listed surveillance activities demonstrated that the structures, systems, and components tested were capable of performing their intended safety functions. The inspectors either witnessed or reviewed test data to verify that the following significant surveillance test attributes were adequate: (1) preconditioning; (2) evaluation of testing impact on the plant; (3) acceptance criteria; (4) test equipment; (5) procedures; (6) jumper/lifted lead controls; (7) test data; (8) testing frequency and method demonstrated Technical Specification operability; (9) test equipment removal; (10) restoration of plant systems; (11) fulfillment of American Society of Mechanical Engineers Code requirements; (12) updating of performance indicator data; (13) engineering evaluations, root causes, and bases for returning tested structures, systems, and components not meeting the test acceptance criteria were correct; (14) reference setting data; and (15) annunciators and alarms setpoints. The inspectors also verified that the licensee identified and implemented any needed corrective actions associated with the surveillance testing.

- July 10, 2008, Unit 2, auxiliary feedwater Pump 21 inservice test
- August 13, 2008, Unit 2, component cooling water Train 2B motor-operated valve surveillance test
- September 24, 2008, Unit 1, Standby Diesel Generator 11 surveillance test
- September 25, 2008, Unit 1, low head safety injection Pump 1A inservice test

Documents reviewed by the inspectors are listed in the attachment.

These activities constitute completion of four samples as defined in Inspection Procedure 71111.22-05.

b. Findings

No findings of significance were identified.

1EP1 Exercise Evaluation (71114.01)

a. Inspection Scope

The inspectors reviewed the objectives and scenario for the 2008 biennial emergency plan exercise to determine if the exercise would acceptably test major elements of the emergency plan. The scenario simulated a small reactor coolant system leak that escalated to a large break loss of coolant accident, a reactor coolant pump break resulting in mechanical damage to fuel assemblies, a failure on a vital electrical bus, safety injection pump failures, fission product barrier failures, and a radiological release to the environment via a failed containment purge isolation valve and unit vent piping to demonstrate the licensee's capabilities to implement their emergency plan.

The inspectors evaluated exercise performance by focusing on the risk-significant activities of event classification, offsite notification, recognition of offsite dose consequences, and development of protective action recommendations in the simulator control room and the following dedicated emergency response facilities:

- Technical Support Center
- Operations Support Center
- Emergency Operations Facility

The inspectors also assessed recognition of and response to abnormal and emergency plant conditions, the transfer of decision making authority and emergency function responsibilities between facilities, onsite and offsite communications, protection of emergency workers, emergency repair evaluation and capability, and the overall implementation of the emergency plan to protect public health and safety and the environment. The inspectors reviewed the current revision of the facility emergency plan, and emergency plan implementing procedures associated with operation of the above facilities and performance of the associated emergency functions as listed in the attachment to this report.

The inspectors compared the observed exercise performance with the requirements in the facility emergency plan, 10 CFR 50.47(b), 10 CFR Part 50, Appendix E, and with the guidance in the emergency plan implementing procedures and other federal guidance.

The inspectors attended the post-exercise critiques in each of the above facilities to evaluate the initial licensee self-assessment of exercise performance. The inspectors also attended a subsequent formal presentation of critique items to plant management by teleconference, and reviewed the licensee's final written critique presentation.

Documents reviewed by the inspectors are listed in the attachment.

These activities constitute completion of one sample as defined in Inspection Procedure 71114.01-05.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

The inspectors performed an on-site review of Revision 20, Change 6, to the South Texas Project Electric Generating Station Emergency Plan. This revision revised the station's organizational structure and the responsibilities of senior management, changed the location of an emergency assembly area, revised drawings of the joint information center, revised references to a new severe accident management guideline procedure, added references to the licensee's severe weather procedures, and made other minor administrative and title changes.

The revision was compared to its previous revision; to the criteria of NUREG 0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1; and to the standards in 10 CFR 50.47(b) to determine if the revision adequately implemented the requirements of 10 CFR 50.54(q). This review was not documented in a safety evaluation report and did not approve changes made by the licensee, therefore, the revision is subject to future inspection.

These activities constitute completion of one sample as defined in Inspection Procedure 71114.04-05.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

For the one below listed drill and simulator-based training evolution contributing to drill/exercise performance, emergency response organization, and performance indicator, the inspectors: (1) observed the training evolution to identify any weaknesses

and deficiencies in classification, notification, and protective action requirements development activities; (2) compared the identified weaknesses and deficiencies against licensee identified findings to determine whether the licensee is properly identifying failures; and (3) determined whether licensee performance is in accordance with the guidance of the NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, acceptance criteria.

- August 13, 2008, Unit 1, simulator, technical support center, and emergency operations facility; the training scenario began with a fuel tanker truck backing into the essential cooling water intake structure causing damage to the structure resulting in the declaration of an Alert due to a vehicle crash affecting a plant vital area; this was followed by a loss of main condenser vacuum which initiated a turbine and reactor trip signal; however, the reactor did not trip; the crew initiated a manual trip which also failed; the crew entered procedures for Anticipated Transient Without Scram, which resulted in a Site Area Emergency due to the failure of the reactor protection system to complete an automatic reactor trip and a manual reactor trip that was not successful; the scenario progressed to the declaration of a General Emergency because of the loss of the reactor coolant system and containment barriers due to a steam generator tube rupture with a failed open power operated relief valve and the potential loss of the fuel cladding barrier due to failed fuel monitor indications of potential fuel cladding failure.

Documents reviewed by the inspectors included:

- Combined Functional Drill White Team Scenario Manual, August 13, 2008

These activities constitute completion of one sample as defined in Inspection Procedure 71114.06-05.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS2 As Low as is Reasonably Achievable (ALARA) Planning and Controls (71121.02)

a. Inspection Scope

The inspectors assessed licensee performance with respect to maintaining individual and collective radiation exposures ALARA. The inspector used the requirements in 10 CFR Part 20 and the licensee's procedures required by Technical Specifications as criteria for determining compliance. The inspectors interviewed licensee personnel and reviewed:

- Current 3-year rolling average collective exposure

- Five outage work activities scheduled during the inspection period and associated work activity exposure estimates which were likely to result in the highest personnel collective exposures
- Site-specific trends in collective exposures, plant historical data, and source-term measurements
- Site-specific ALARA procedures
- Three work activities of highest exposure significance completed during the last outage
- Intended versus actual work activity doses and the reasons for any inconsistencies
- Interfaces between operations, radiation protection, maintenance, maintenance planning, scheduling and engineering groups
- Integration of ALARA requirements into work procedure and radiation work permit documents
- Person-hour estimates provided by maintenance planning and other groups to the radiation protection group with the actual work activity time requirements
- Shielding requests and dose/benefit analyses
- Dose rate reduction activities in work planning
- Post-job (work activity) reviews
- Assumptions and basis for the current annual collective exposure estimate, the methodology for estimating work activity exposures, the intended dose outcome, and the accuracy of dose rate and man-hour estimates
- First-line job supervisors' contribution to ensuring work activities are conducted in a dose efficient manner
- Exposures of individuals from selected work groups
- Records detailing the historical trends and current status of tracked plant source terms and contingency plans for expected changes in the source term due to changes in plant fuel performance issues or changes in plant primary chemistry
- Declared pregnant workers during the current assessment period, monitoring controls, and the exposure results
- Self-assessments, audits, and special reports related to the ALARA program since the last inspection

- Resolution through the corrective action process of problems identified through post-job reviews and post-outage ALARA report critiques
- Corrective action documents related to the ALARA program and follow-up activities, such as initial problem identification, characterization, and tracking
- Effectiveness of self-assessment activities with respect to identifying and addressing repetitive deficiencies or significant individual deficiencies

Documents reviewed by the inspectors are listed in the attachment.

These activities constitute completion of 11 of the required samples and 10 of the optional samples as defined in Inspection Procedure 71121.02-05.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

.1 Cornerstone: Mitigating Systems

a. Inspection Scope

The inspectors sampled licensee submittals for the safety system functional failure performance indicator for the period from July 2007 through June 2008, for Units 1 and 2. The definitions and guidance of NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, were used to verify the licensee's basis for reporting each data element in order to verify the accuracy of performance indicator data reported during the assessment period. The inspectors reviewed licensee event reports, out-of-service logs, operating logs, and the maintenance rule database as part of the assessment. Licensee performance indicator data were also reviewed against the requirements of Procedure OPGP05-ZN-0007, "Preparation and Submittal of NRC Performance Indicators," Revision 4.

- Safety system functional failures

These activities constitute completion of one safety system function failures sample as defined by Inspection Procedure 71151-05.

b. Findings

No findings of significance were identified.

.2 Cornerstone: Barrier Integrity

a. Inspection Scope

The inspectors sampled licensee submittals for the two performance indicators listed

below for the period from July 2007 through June 2008 for Units 1 and 2. The definitions and guidance of NEI 99-02, Revision 5, were used to verify the licensee's basis for report each data element in order to verify the accuracy of performance indicator data reported during the assessment period. The inspectors: (1) reviewed reactor coolant system chemistry sample analyses for dose equivalent Iodine-131 and compared the results to the Technical Specification limit, (2) observed a chemistry technician obtain and analyze a reactor coolant system sample, (3) reviewed operating logs and surveillance results for measurements of reactor coolant system identified leakage, and (4) observed a surveillance test that determined reactor coolant system identified leakage. Licensee performance indicator data were also reviewed against the requirements of Procedure OPGP05-ZN-0007, "Preparation and Submittal of NRC Performance Indicators," Revision 4.

- Reactor coolant system specific activity
- Reactor coolant system leak rate

These activities constitute completion of one reactor coolant system specific activity sample and one reactor coolant system leakage sample per unit as defined by Inspection Procedure 71151-05.

b. Findings

No findings of significance were identified.

.3 Cornerstone: Emergency Preparedness

a. Inspection Scope

The inspectors reviewed licensee evaluations for the three emergency preparedness cornerstone performance indicators of drill and exercise performance, emergency response organization participation, and alert and notification system reliability for the period October 2007 through June 2008. The definitions and guidance of NEI 99-02, Revisions 4 and 5, and licensee Procedures OPG05-ZV-0013, "Performance Indicator Tracking Guide," Revision 5; OPG05-ZN-0007, "Preparation and Submittal of NRC Performance Indicators," Revision 5; and OPG05-ZV-0007, "Prompt Notification System," Revision 7, were used to verify the accuracy of the licensee's evaluations for each performance indicator reported during the assessment period. The inspectors also performed Temporary Instruction 2515/175, "Emergency Response Organization, Drill/Exercise Performance Indicator, Program Review."

The inspectors reviewed a 100 percent sample of drill and exercise scenarios and licensed operator simulator training sessions, notification forms, and attendance and critique records associated with training sessions, drills, and exercises conducted during the verification period. The inspectors reviewed 23 selected emergency responder qualification, training, and drill participation records. The inspectors reviewed alert and notification system testing procedures, maintenance records, and a 100 percent sample of siren test records. The inspectors also reviewed other documents as listed in the attachment to this report.

- Drill/Exercise performance
- Emergency response organization participation

- Alert and notification system reliability

These activities constitute completion of one drill/exercise performance sample, one emergency response organization participation sample, and one alert and notification system reliability sample as defined by Inspection Procedure 71151-05.

b. Findings

No findings of significance were identified.

.4 Cornerstone: Occupational Radiation Safety

a. Inspection Scope

The inspector reviewed licensee documents from April 1 through June 30, 2008. The review included corrective action documentation that identified occurrences in locked high radiation areas (as defined in the licensee's Technical Specifications), very high radiation areas (as defined in 10 CFR 20.1003), and unplanned personnel exposures (as defined in NEI 99-02, Revision 5). Additional records reviewed included ALARA records and whole body counts of selected individual exposures. The inspector interviewed licensee personnel that were accountable for collecting and evaluating the performance indicator data. In addition, the inspector toured plant areas to verify that high radiation, locked high radiation, and very high radiation areas were properly controlled. Performance indicator definitions and guidance contained in NEI 99-02, Revision 5, were used to verify the basis in reporting for each data element.

- Occupational exposure control effectiveness

These activities constitute completion of the one occupational exposure control effectiveness sample as defined by Inspection Procedure 71151-05.

b. Findings

No findings of significance were identified.

.5 Cornerstone: Public Radiation Safety

a. Inspection Scope

The inspector reviewed licensee documents from April 1 through June 30, 2008. Licensee records reviewed included corrective action documentation that identified occurrences for liquid or gaseous effluent releases that exceeded performance indicator thresholds and those reported to the NRC. The inspector interviewed licensee personnel that were accountable for collecting and evaluating the performance indicator data. Performance indicator definitions and guidance contained in NEI 99-02, Revision 5, were used to verify the basis in reporting for each data element.

- Radiological Effluent Technical Specification/Offsite Dose Calculation Manual
Radiological Effluent Occurrences

These activities constitute completion of the one radiological effluent technical specifications/offsite dose calculation manual radiological effluent occurrences sample as defined by Inspection Procedure 71151-05.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Routine Review of Identification and Resolution of Problems

The inspectors performed a daily screening of items entered into the licensee's corrective action program. This assessment was accomplished by reviewing CRs, procedures, attending corrective action review and work control meetings, etc. The inspectors: (1) verified that equipment, human performance, and program issues were being identified by the licensee at an appropriate threshold and that the issues were entered into the corrective action program; (2) verified that corrective actions were commensurate with the significance of the issue; and (3) identified conditions that might warrant additional followup through other baseline inspection procedures.

.2 Selected Issue Followup Inspection

a. Inspection Scope

In addition to the routine review, the inspectors selected the two below listed issues for a more in-depth review. The inspectors considered the following during the review of the licensee's actions: (1) complete and accurate identification of the problem in a timely manner; (2) evaluation and disposition of operability/reportability issues; (3) consideration of extent of condition, generic implications, common cause, and previous occurrences; (4) classification and prioritization of the resolution of the problem; (5) identification of root and contributing causes of the problem; (6) identification of corrective actions; and (7) completion of corrective actions in a timely manner.

- April, 12, 2008, Units 1 and 2, closure of the reactor containment building equipment hatch during reactor coolant system short time-to-boil configurations
- July 8, 2008, Units 1 and 2, isolation of the fire protection water main ring header for the Unit 1 isolation valve cubicles, standby diesel generator building, and turbine generator building, as well as all Unit 2 fire protection water

Documents reviewed by the inspectors are listed in the attachment.

These activities constitute completion of two in-depth problem identification and resolution samples as defined by Inspection Procedure 71152-05.

b. Findings

Introduction: The inspectors reviewed a self-revealing Green noncited violation (NCV) of Technical Specification 6.8.1.d for the failure to follow Procedure OPGP03-ZF-0018,

“Fire Protection System Operability Requirements,” Revision 14, as a result the licensee unintentionally isolated fire water to all of Unit 2 and a majority of Unit 1.

Description: On July 7, 2008, the Unit 1 and Unit 2 control rooms received fire detection alarms on the fire detection computer. The alarms were associated with the fire protection system supervisory alarms, due to lowering pressure in the fire water main header, caused by 2 equipment clearance orders that were implemented to perform planned maintenance. The first equipment clearance order isolated fire protection post indicator valves on the west side of the fire protection main ring header. This equipment clearance order was approved by the Unit 2 unit supervisor on July 6, 2008. On July 7, 2008, the Unit 1 unit supervisor approved a separate equipment clearance order that isolated additional fire protection post indicator valves on the east side of the fire protection main ring header. The Unit 1 unit supervisor did not verify the extent of the already hanging equipment clearance order to the one that he had approved. The combination of the two equipment clearance orders resulted in all of Unit 2, and the majority of Unit 1, not having fire water available. This was contrary to the requirements of the procedure, which stated, “A flow path SHALL be maintained from the discharge of the fire water pumps to the isolation valves for each sprinkler/spray system.” Additionally, the licensee failed to follow the compensatory measures that were put in place to prevent inadvertent isolation of major sections of fire water system from multiple equipment clearance orders (see Inspection Report 05000498/2007004 and 05000499/2007004 Section 4OA7). To recover from the isolation, the Unit 1 unit supervisor then approved the equipment clearance order revision to clear the tags and on July 8, 2008, the alarms cleared. The duration of the event was estimated to be no longer than three hours and 10 minutes. Factors that contributed to this event included: (1) a work control process that is not setup to evaluate the aggregate effect of multiple fire protection activities, (2) maintenance personnel do not always clearly communicate schedule changes to the work control coordinators, (3) the duty fire protection coordinator was not familiar with the physical arrangement of the system, (4) the unit supervisor believed fire protection equipment out-of-service entries were only administrative, and (5) compensatory measures in place from a previous fire protection system equipment clearance order were not followed.

Analysis: Failure to follow the fire protection system operability requirements procedure was considered a performance deficiency. As a result the licensee unintentionally isolated fire water to all Unit 2 and a majority of Unit 1. The inspectors determined the finding was more than minor because it affected the Mitigating Systems cornerstone objective of ensuring the availability of systems that respond to initiating events to prevent undesirable consequences. The inspectors evaluated the finding using the Phase 1 worksheet in Inspection Manual Chapter 0609, “Significance Determination Process,” and determined that the finding needed to be evaluated using Appendix F, “Fire Protection Significance Determination Process.” Per Appendix F, the finding screened from Phase 1 to Phase 2 based on a high degradation rating and the number of areas impacted. The Phase 2 screening resulted in a high degradation rating based on the number of areas impacted. The regional senior reactor analyst evaluated the significance of the event. The consequence of the performance deficiency was that all firewater suppression, automatic and manual, was isolated from Unit 2 for a period of 3 hours 10 minutes. A staff review performed in 1998 of the South Texas Project individual plant examination of external events submittal concluded that the removal of credit for the fire suppression and detection systems could result in an increase of 2E-5 per reactor-year in the overall core damage frequency. Using this result, the incremental

conditional core damage probability for the 3 hour 10 minute exposure is 7.2E-9. The licensee performed a risk assessment using their fire probabilistic risk assessment model. In the analysis, the fire ignition frequencies for the modeled fire areas were raised by a factor of 7.14 (the reciprocal of the assumed suppression failure probability [0.14]). This resulted in an incremental conditional core damage probability of 3.04E-8 and an incremental conditional large early release probability of 1.46E-9 for the exposure period. The annualized delta-core damage frequency and delta-large early release frequency values were identical to these results. The inspectors noted that some fire areas were screened out because they did not meet a threshold risk level, but also concluded that the exclusion of these fire areas did not appreciably lower the overall result. Also, the licensee's method removed fire suppression credit for control room fires, the dominant risk contributor, despite the fact that the preferred mitigation in this location is portable fire extinguishers, which were not affected by the performance deficiency. This feature produced a conservative risk estimate. Based on these results, the senior reactor analyst concluded that that risk significance of the event was very low (Green). Additionally, the inspector determined that the issue had crosscutting aspects associated with the work control component of human performance, in that, the licensee did not incorporate the impact of work on different job activities, the need for work groups to stay apprised of work status, operational impact of work activities, and other plant conditions that may affect the work activity [H.3(b)].

Enforcement: Technical Specification 6.8.1.d requires, in part, that procedures shall be established, implemented, and maintained covering the fire protection program. Procedure OPGP03-ZF-0018, "Fire Protection System Operability Requirements," Revision 14, implements the fire protection program and requires, in part, "A flow path SHALL be maintained from the discharge of the fire water pumps to the isolation valves for each sprinkler/spray system..." Contrary to this, on July 7, 2008, the licensee failed to ensure that a flow path was maintained, or that appropriate compensatory measures were in place before isolating all of the Unit 2 fire water system and a majority of the Unit 1 fire water system. Since this violation is of very low significance (Green) and it has been entered in to the licensee's corrective action program as Condition Report 08-10784, this violation is being treated as a NCV consistent with Section VI.A of the Enforcement Policy: NCV 05000498/2008004-01, 05000499/2008004-01, "Failure to Follow Procedures Resulted in Isolation of Majority of Fire Water."

.3 Emergency Preparedness Annual Sample Review

a. Inspection Scope

The inspectors reviewed drill and exercise reports and a summary of condition reports regarding emergency response organization performance for the period July 2006 through June 2008. The drill evaluations and condition report summaries were reviewed to identify emergency response organization performance issues and emergency response facility problems that impacted the licensee's ability to implement the major elements of its emergency plan. The inspectors observed emergency response organization performance during the July 23, 2008, biennial emergency preparedness exercise to verify that previous performance problems had been corrected. The inspectors also reviewed five condition reports created by the licensee following the July 23, 2008, biennial emergency preparedness exercise to verify the condition reports were clear and fully identified the scope of the identified performance issues.

b. Findings

No findings of significance were identified.

.4 Occupational Radiation Safety Review

a. Inspection Scope

The inspector evaluated the effectiveness of the licensee's problem identification and resolution process with respect to the following inspection area:

- ALARA Planning and Controls (Section 2OS2)

b. Findings

No findings of significance were identified.

4OA3 Followup of Events and Notices of Enforcement Discretion (71153)

a. Inspection Scope

The inspectors: (1) reviewed operator logs, plant computer data, and/or strip charts for the below listed evolutions to evaluate operator performance in coping with nonroutine events and transients; (2) verified that operator actions were in accordance with the response required by plant procedures and training; and (3) verified that the licensee has identified and implemented appropriate corrective actions associated with personnel performance problems that occurred during the nonroutine evolutions sampled.

- September 11-14, Units 1 and 2, response to Hurricane Ike and implementation of appropriate emergency response plans and procedures for natural and destructive phenomenon

These activities constitute completion of one followup of events and notices of enforcement discretion sample as defined by Inspection Procedure 71153-05.

b. Findings

No findings of significance were identified.

4OA5 Other Activities

Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors conducted observations of security force personnel and activities to ensure that the activities were consistent with licensee security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours.

These quarterly resident inspector observations of security force personnel and activities

did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspectors' normal plant status reviews and inspection activities.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

On July 24, 2008, the inspectors discussed the results of the on-site inspection of the on-site emergency preparedness exercise with Mr. L. Meier, Supervisor, Emergency Preparedness, and other members of his staff, who acknowledged the results. The inspectors confirmed that proprietary, sensitive, or personal information examined during the inspection had been returned to the identified custodian.

On August 21, 2008, the inspector presented the occupational radiation safety inspection results to Mr. D. Rencurrel, Site Vice President, and other members of his staff who acknowledged the findings. The inspector confirmed that proprietary information was not provided or examined during this inspection.

On August 22, 2008, the inspectors attended by teleconference the licensee's report to management concerning emergency response organization performance during the biennial exercise conducted July 23, 2008.

On September 2, 2008, the inspectors conducted a telephonic exit meeting to present the results of the on-site inspection of the conduct and evaluation of the licensee's biennial emergency preparedness exercise to Mr. K. Coates, Plant General Manager, and other members of his staff, who acknowledged the findings.

On September 29, 2008, the inspectors presented the inspection results of the integrated inspection report to Mr. E. Halpin, Chief Nuclear Officer, and other members of the licensee's management staff. The licensee acknowledged the findings presented. The inspectors noted that while proprietary information was reviewed, none would be included in this report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

C. Bowman, General Manager, Oversight
W. Bullard, Manager, Health Physics
J. Calvert, Manager, Training
K. Coates, Plant General Manager
D. Cobb, STP Employee Concerns Program (EAP) Manager
J. Cook, Process Improvement Leadership Team
K. Danielski, ALARA Planner, Health Physics
R. Dunn Jr., Supervisor, Configuration Control and Analysis
R. Engen, Manager, Maintenance Engineering
T. Frawley, Manager, Plant Protection
R. Gangluff, Manager, Chemistry, Environmental and Health Physics
C. Grantom, Manager, PRA
E. Halpin, Chief Nuclear Officer
W. Harrison, Manager, Licensing
G. Hildebrant, Manager, Operations, Unit 2
K. House, Manager, Design Engineering
D. Hubenak, Supervisor, Radiation Protection
G. Janak, Manager, Operations, Unit 1
J. Lovejoy, Manager, I&C Maintenance
N. Mayer, Manager, Outage & Projects
A. McGalliard, Manager, Performance Improvement
L. Meier, Supervisor, Emergency Preparedness
J. Mertink, Manager, Operations
H. Murray, Manager, Maintenance
M. Murray, Manager, Systems Engineering
J. Paul, Engineer, Licensing Staff Specialist
J. Pierce, Manager, Operations Training
T. Powell, Vice President, Engineering
M. Reddix, Manager, Security
D. Rencurrel, Site Vice President
M. Ruvalcaba, Supervisor, Systems Engineering
R. Savage, Engineer, Licensing Staff Specialist
W. Schulz, Design Engineering
J. Sepulveda, Supervisor, Radiation Protection
J. Sheppard, President and CEO
J. Stauber, Testing/Program
C. Stone, Unit 1 Supervisor, Health Physics
D. Swett, Supervisor, Radiation Protection
K. Taplett, Senior Engineer, Licensing Staff Specialist
S. Thomas, Process Improvement Leadership Team
T. Walker, Manager, Quality
C. Younger, Test Engineering Supervisor
D. Zink, Supervising Engineer

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000498/2008004-01 NCV Failure to Follow Procedures Resulted in Isolation of Majority
05000499/2008004-01 of Fire Water (Section 4OA2)

Closed

None

Discussed

None

LIST OF DOCUMENTS REVIEWED

In addition to the documents referred to 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 1R04: Equipment Alignment

Drawings

5R179F05008 #1, "Piping & Instrumentation Diagram - Chemical Volume and Control System Boron Thermal Regeneration System Sub-System," Revision 14

5R179F05008 #2, "Piping & Instrumentation Diagram - Chemical Volume and Control System Boron Thermal Regeneration System Sub-System," Revision 15

Procedures

0POP02-CV-0002, "Boron Thermal Regeneration System," Revision 27

0POP02-SI-0002, "Safety Injection System Initial Lineup," Revision 20

Section 1R12: Maintenance Effectiveness

Condition Reports

98-687	07-4794	07-18706	08-9382
06-11475	07-9847	08-8338	08-9595
07-1038	07-10282	08-8498	08-11041
07-2426	07-11533	08-8530	

Miscellaneous

Performance Criteria, Goals and Monitoring List, effective date June 25, 2008

Maintenance Rule System Scoping Basis Report, MS System, effective date March 29, 2006

Maintenance Rule Basis Document Guideline (Section 14 Major Deviations from NUMARC 93-01) Revision 11

System Health Reports

Main Steam (MS) Health Report, Third Quarter 2007 through Second Quarter 2008
480 VAC Motor Control Centers (PF-PM), Third Quarter 2006 through Second Quarter 2008

Work Authorization Numbers

359216 359438 360514 362545

Section 1R15: Operability Evaluations

Condition Reports

08-11510 08-12437 08-12812 08-14005
08-13152

Procedures

OPGP04-ZA-0002, "Condition Report Engineering Evaluation," Revision 10

Section 1R18: Plant Modifications

Condition Reports

08-11004

Drawings

0340-0200181WM, "Rod Holdout Sequence Control Circuit," Revision B
0340-0200172WM, "Power Cabinet Cards Stationary, Detector & Sequencing," Revision B

Manuals

VTD-W351-0107, "Technical Manual Rod Control System Volume 5 Chapter 7-Rod Holdout Control System," Revision 0

Miscellaneous

Temporary Modification No. T2-08-11004-3, "Removal of RHCS Sequence Logic Card for the 1AC Power Cabinet," Supplement 0, dated July 15, 2008

Electric Power Research Institute Technical Report, TR-108152, "Rod Control System Maintenance-Westinghouse PWRs," Revision 2

NPRDS Failure Report on failed control rod holdout card causing rods to drop, dated January 14, 1991

Procedures

OPSP03-RS-001, "Monthly Control Rod Operability," Revision 22, performed January 14, 2008

Work Orders

490270

Section 1R19: Postmaintenance Testing

Condition Reports

08-8589	08-12932	08-12944	08-13152
08-8530	07-11533		

Procedures

0PMP05-CH-0001, "York Chiller Inspection & Maintenance 300 to 550 Tons," Revision 33
0PSP03-AF-0007, "Auxiliary Feedwater Pump 14(24) Inservice Test," Revision 32
0PSP03-DG-0002, "Standby Diesel 12(22) Operability Test," Revision 34
0PSP03-CH-0001, "Essential Chilled Water Pump 11A(21A) Inservice Test," Revision 15

Work Authorization Numbers

311040	359915	364969	365339
334400	364938	365133	

Work Orders

467059	474523	487969	491961
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Section 1R22: Surveillance Testing

Condition Reports

07-66	07-16530	08-8589	08-10913
07-9831	08-6012	08-10445	

Procedures

0PEP07-ZE-0008, "Non-Intrusive Check Valve Testing," Revision 6
0POP02-DG-0001, "Emergency Diesel Generator 11(21)," Revision 42
0PSP03-AF-0001, "Auxiliary Feedwater Pump 11(21) Inservice Test," Revision 27
0PSP03-DG-0001, "Standby Diesel 11(21) Operability Test," Revision 34
0PSP03-SI-0001, "Low Head Safety Injection Pump 1A(2A) Inservice Test," Revision 15
0PSP11-ZE-0001, "Check Valve Inspection," Revision 10
IST Basis Document – Valves, System: Standby Diesel Starting Air, Revision 4
0PSP03-CC-0008, "Component Cooling Water System Train 1B(2B) Valve Operability Test,"
Revision 13

Work Authorization Numbers

324259	346819	351678
342786	351133	360912

Section 1EP1: Exercise Evaluation

Procedures

EPIP IN-01, "Emergency Classification," Revision 8
EPIP IN-02, "Notification to Offsite Agencies," Revision 22
EPIP IN-03, "Emergency Response Organization Notification," Revision 13
EPIP IN-05, "Site Evacuation," Revision 10
EPIP IN-07, "Offsite Protective Action Recommendations," Revision 10
EPIP EF-01, "EOF Director," Revision 13
EPIP OSC-06, "Emergency Teams," Revision 7
EPIP SH-01, "Shift Supervisor," Revision 20
EPIP TSC-1, "TSC Manager," Revision 12
EPIP TP-03, "Severe Accident Management," Revision 3
OPOP05-ED-E010, "Loss of Reactor or Secondary Coolant," Revision 10

Miscellaneous

Emergency Management Plan, Matagorda County, City of Bay City, and City of Palacios,
August 2005

Section 2OS2: ALARA Planning and Controls

ALARA Reviews

08-1913-2	1RE14 Rapid Refueling
08-1913-3	Temporary Shielding
08-1913-4	Full Structural Weld Overlay
08-1913-6	Steam Generator: Primary and Secondary Side
08-1913-7	Pressurizer Heater Replacement

Audits and Self Assessments

Quality Monitoring Report (MN-08-1-35846)
Quality Monitoring Report (MN-08-1-35895)
Quality Monitoring Report (MN-08-1-35972)
Quality Monitoring Report (MN-08-1-36191)
Quality Monitoring Report (MN-08-1-36224)
Quality Monitoring Report (MN-08-1-36385)
Quality Monitoring Report (MN-08-1-36905)
Quality Monitoring Report (MN-08-1-38328)
ALARA 5-Year Plan 2007–2011
1RE14 ALARA Outage Report

Condition Reports

08-7223	08-11233	08-12638	08-12644
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Procedures

0PGP03-ZE-0309, "Design Change Package," Revision 30
0PGP03-ZR-0050, "Radiation Protection Program," Revision 8
0PGP03-ZR-0051, "Radiological Access and Work Controls," Revision 23
0PGP03-ZR-0053, "Radioactive Material Control Program," Revision 13
0PGP03-ZX-0002, "Condition Reporting Process," Revision 35
0PGP03-ZX-0003, "Station Self Assessment Program," Revision 0
0PMP04-ZM-0002, "Cobalt Reduction," Revision 1
0PRP04-ZR-0004, "Release of Materials from Radiologically Controlled Areas," Revision 13
0PRP04-ZR-0010, "Radiation Work Permits/Radiological Work ALARA Reviews," Revision 22
0PRP04-ZR-0015, "Radiological Posting and Warning Devices," Revision 22
0PRP07-ZR-0001, "ALARA Engineering and Procedure Review"

Radiation Work Permits

2008-1-0104	2008-1-0118	2008-1-0160	2008-1-0168
2008-1-0105	2008-1-0140	2008-1-0164	2008-1-0196
2008-1-0106	2008-1-0141	2008-1-0165	2008-1-0192
2008-1-0116	2008-1-0158	2008-1-0167	2008-1-0201
2008-1-0117	2008-1-0159		

Section 40A2: Identification and Resolution of Problems

Condition Reports

96-15966	07-9154	08-10784	08-13097
05-8052	08-6367	08-12117	

Miscellaneous

NRC Generic Letter 88-17, "Loss of Decay Heat Removal"

NUMARC 91-06, "Guideline for Industry Actions to Assess Shutdown Management"

Shutdown Risk Assessment Group Report, 1RE14

South Texas Project Emergency Plan, Revision 20, Change 5

ST-HL-AE-2877, Preliminary Response to NRC Generic Letter 88-017: "Loss of Decay Heat Removal," dated December 9, 1988

ST-HL-AE-2936, Response to NRC Generic Letter 88-017: "Loss of Decay Heat Removal," dated January 17, 1989

ST-HL-AE-3097, Revised Response to NRC Generic Letter 88-017: "Loss of Decay Heat Removal," dated August 3, 1989

ST-HL-AE-3398, Revised Response to NRC Generic Letter 88-017: "Loss of Decay Heat Removal," dated March 9, 1990

Procedures

0PGP03-ZA-0101, "Shutdown Risk Assessment," Revision 18
0PGP03-ZA-0514, "Controlled System or Barrier Impairment," Revisions 2, 3, and 4
0PGP03-ZF-0001, "Fire Protection Program," Revisions 18 and 19
0PGP03-ZF-0018, "Fire Protection System Operability Requirements," Revisions 13 and 14
0PGP03-ZO-0052, "Containment Evacuation and Closure Plan," Revision 2
EPIP IN-01, "Emergency Classification," Revision 8
EPIP IN-02, "Notification to Offsite Agencies," Revision 22
EPIP IN-07, "Offsite Protective Action Recommendations," Revision 10
ZV-0016, "Prompt Notification System Implementing Procedure," Revision 4

Work Authorization Numbers

63111