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

May 2, 2008

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

SUBJECT: SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION - NRC INTEGRATED INSPECTION REPORT 05000498/2008002 AND 05000499/2008002

Dear Mr. Sheppard:

On April 6, 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 April 8, 2008, with Mr. K. Coates 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) was identified. 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, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011-4005; 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 (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).

Sincerely,

TRFarnholtz for /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 05000498/2008002 and 05000499/2008002
w/Attachment: Supplemental Information

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SUNSI Review Completed: _TRF__ ADAMS: √ Yes No Initials: __TRF____
√ Publicly Available Non-Publicly Available Sensitive √ Non-Sensitive

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RIV:RI:DRP/A	RIV:SRI:DRP/A	SPE:DRP/A	C:DRS/PSB	C:DRS/EB
BKTharakan	JLDixon	TRFarnholtz	MPShannon	RLBywater
E-TRFarnholtz	E-TRFarnholtz	/RA/	/RA/	/RA/
05/01/08	04/30/08	04/30/08	05/02/08	05/02/08

C:DRS/OB	BC:DRS/EB2	C:DRP/A		
RELantz	LJSmith	CEJohnson		
/RA/	DLProulx for	TRFarnholtz for		
05/01/08	05/02/08	05/02/08		

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U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Dockets:	05000498, 05000499
Licenses:	NPF-76, NPF-80
Report:	05000498/2008002 and 05000499/2008002
Licensee:	STP Nuclear Operating Company
Facility:	South Texas Project Electric Generating Station, Units 1 and 2
Location:	FM 521 - 8 miles west of Wadsworth Wadsworth, Texas 77483
Dates:	January 1 through April 6, 2008
Inspectors:	B. Baca, Health Physicist J. Dixon, Senior Resident Inspector P. Elkmann, Senior Emergency Preparedness Inspector T. Farnholtz, Senior Project Engineer M. Hayes, Reactor Engineer (NSPDP) D. Stearns, Health Physicist B. Tharakan, Resident Inspector
Approved By:	Claude E. Johnson, Chief, Project Branch A Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000498/2008002, 05000499/2008002; 01/01/08 - 04/06/08; South Texas Project Electric Generating Station, Units 1 and 2; Integrated Resident and Regional Report; Followup of Events and Notices of Enforcement Discretion.

This report covered a 3-month period of inspection by resident and regional 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 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Barrier Integrity

- Green. The inspectors reviewed a self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criteria III, for an inadequate design control package that resulted in incorrect instantaneous over current breaker trip point settings. On September 11, 2006, control room envelope heating, ventilation, and air conditioning make up Fan 11B failed to start due to an incorrect instantaneous over current breaker setting, set as part of Design Change Package 98-687-4. When the package was prepared the Class 1E design criteria that was in effect led the licensee to set the instantaneous over current breaker settings based on locked rotor nameplate data "G" motors. Because the locked rotor nameplate data of the motor control fed motors were not documented the licensee failed to identify that some of the motors were locked rotor nameplate data "J" motors. As a result, the breaker trip point setting was set too low leaving some motors susceptible to spurious tripping since the implementation of the change in 2000. Further investigation revealed several missed opportunities in previous years to identify the incorrect settings, resulted from human performance and program and process issues. There are no crosscutting aspects since the issue is greater than 2 years old and the licensee's processes have changed considerably between 1998 and 2006.

  This finding was more than minor because it affected the Barrier Integrity attribute of structure, system, and component and barrier performance under maintaining the radiological barrier function of the control room and it affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events by maintaining the operational capability of the control room envelope heating, ventilation, and air conditioning boundary. Using the Significance Determination Process Phase 1 worksheets the finding was determined to have very low safety significance because the finding only represented a degradation of the radiological barrier function of the control room (Section 40A3).

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 until March 3, 2008,when they started coastdown operations for Refueling Outage 1RE14.

Unit 2 began the inspection period at 100 percent rated thermal power and essentially remained there throughout the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R04 Equipment Alignment (71111.04)

Partial Walkdown

a. Inspection Scope

The inspectors: (1) walked down portions of the three 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 deficiences identified during the walk down to the licensee's Updated Final Safety Analysis Report (UFSAR) and corrective action program to ensure problems were being identified and corrected.

- January 31, 2008, Unit 1, component cooling water (CCW) Train A due to scheduled maintenance on Train C per Procedure 0POP02-CC-0001, "CCW Train A Valve Lineup," Revision 32

- February 14, 2008, Unit 1, spent fuel pool cooling Train B in preparation for upcoming refueling outage per Procedure 0POP02-FC-0001, "Spent Fuel Pool Cooling and Cleanup System," Revision 49

- March 27, 2008, Unit 1, high head safety injection Train A, per Procedure 0POP02-SI-0002, "Safety Injection System Initial Lineup," Revision 20

The inspectors completed three samples.

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 UFSAR to determine if the licensee identified and corrected fire protection problems.

- January 29, 2008, Unit 1, Standby Diesel Generator (SDG) 11 areas (Fire Zones Z502 and Z508)

- February 13, 2008, Unit 2, essential cooling water (ECW) intake structure (Fire Zones Z603 – Z605)

- March 11, 2008, Unit 2, isolation valve cubicle Train D areas, including the common stairwell and pump room (Fire Zones Z400, Z404, Z405, and Z409)

- March 12, 2008, Unit 1, safety injection and containment spray pump Trains A, B, and C rooms (Fire Zones Z305 – Z307)

Documents reviewed by the inspectors included:

- Applicable fire preplans

- Procedure 0PGP03-ZF-0001, “Fire Protection Program,” Revision 18

- Procedure 0PGP03-ZF-0018, “Fire Protection System Operability Requirements,” Revision 13

- Procedure 0PGP03-ZF-0019, “Control of Transient Fire Loads and Use of Combustible and Flammable Liquids and Gases,” Revision 5

The inspectors completed four samples.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

a. Inspection Scope

On February 12, 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 operator response to a loss of main feedwater level control on Steam Generator B while reducing power to roughly 20 percent. Additionally, the training included transitioning the plant from the main feedwater pumps to the startup feedwater pump and from the main feedwater regulating valves to the low power feedwater regulating valves and responding to a failed open steam dump valve. Finally,

a loss of the unit auxiliary transformer which results in a loss of power to the safety-related Train A and B busses, as well as, the reactor coolant pumps which results in a reactor trip and turbine trip, and cooling down the plant via natural circulation.

The inspectors completed one sample.

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 (SSC) performance or condition problems; (2) verify the appropriate handling of degraded SSC functional performance; (3) evaluate the role of work practices and common cause problems; and (4) evaluate the handling of SSC issues reviewed under the requirements of the Maintenance Rule, 10 CFR Part 50, Appendix B, and Technical Specifications (TSs).

- January 29, 2008, Units 1 and 2, CCW including recent failures of the supplemental cooler to start automatically on Unit 2 Train B

- April 3, 2008, Units 1 and 2, fire detection and fire protection system failures, computer upgrades, and fire watch implementations

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed two samples.

b. Findings

No findings of significance were identified.

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

Planned Risk

a. Inspection Scope

The inspectors reviewed the five below listed assessment activities to verify: (1) performance of risk assessments when required by 10 CFR Part 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 January 7, 2008, Units 1 and 2, planned maintenance activities on Unit 1 Train D and Unit 2 Train C (large train work week)

- Week of January 14, 2008, Units 1 and 2, planned maintenance activities on Unit 1 Train A (large train work week) and Unit 2 Train D

- Week of January 28, 2008, Units 1 and 2, planned maintenance activities on Unit 1 Train C (including overhaul of ECW Pump 1C) and Unit 2 Train B

- Week of March 17, 2008, Units 1 and 2, planned maintenance activities on Unit 1 Train B (including use of risk managed TSs to perform maintenance on Inverter 1203 beyond the front stop completion time) and Unit 2 Train A

- Preparations for and commencement of Unit 1 Refueling Outage 1RE14

The inspectors completed five samples.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors: (1) reviewed plant 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 UFSAR 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 TSs; (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.

- January 31, 2008, Unit 1, SDG 11 fuel rack rod bearing outer race rotating in support (condition report (CR) 06-7334)

- February 4, 2008, Unit 1, SDG 12 engine driven lube oil pump suction check valve leakage (CR 07-18257)

- March 13, 2008, Unit 2, Steam Generator 2C power operated relief valve hydraulic pump cycling every 13 minutes (CR 08-2327)

- March 25, 2007, Unit 1, auxiliary feedwater (AFW) Pump 12 long path recirculation valve would not fully close during surveillance testing (CR 08-1466)

- March 26, 2008, Units 1 and 2, SDGs 12, 13, 21, and 22 thermography results of field voltage lead Connection F- greater than 20^{o} Celsius over the field voltage lead Connection F+ (CR 08-3494)

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed five samples.

b. Findings

No findings of significance were identified.

1R18 Plant Modifications (71111.18)

a. Inspection Scope

The inspectors reviewed the UFSAR, plant drawings, procedure requirements, and TSs 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 SSC's 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.

- February 28, 2008, Units 1 and 2, AFW turbine-driven pump alternate design change package (DCP) to dimple the trip lever shaft for better setscrew engagement (permanent change)

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed one sample.

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 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 UFSAR to determine if the licensee identified and corrected problems related to postmaintenance testing.

- February 1, 2008, Unit 1, ECW Pump 1C overhaul to replace bearing sleeves

- February 28, 2008, Unit 1, partial triax connectors replacement on source range nuclear instrument Channel N32

- March 13, 2008, Units 1 and 2, AFW Pumps 14 and 24 trip shaft dimpling and set screw replacement

- March 18, 2008, Unit 1, Inverter 1203 capacitor replacement and scheduled preventative maintenance

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed four samples.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed the UFSAR, procedure requirements, and TSs to ensure that the four below listed surveillance activities demonstrated that the SSC's 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 TS 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 SSCs 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.

- January 29, 2008, Unit 1, CCW heat exchanger 1C bypass motor operated valve diagnostic test and inservice test per Procedure 0PMP05-ZE-0312, "Limitorque MOV Actuator Lubrication," Revision 20, and Work Authorization Numbers (WANs) 315819 and 311434

- February 14, 2008, Unit 1, AFW Pump 11 inservice test per Procedure 0PSP03-AF-0001, "Auxiliary Feedwater Pump 11(21) Inservice Test," Revision 27

- February 28, 2008, Unit 2, high head safety injection Pump 2B inservice test per Procedure 0PSP03-SI-0005, "High Head Safety Injection Pump 1B(2B) Inservice Test," Revision 15, WANs 319309 and 330432, and CRs 06-16481 and 08-3590

- March 18, 2008, Unit 2, SDG 21 surveillance testing per Procedure 0PSP03-DG-0001, "Standby Diesel 11(21) Operability Test," Revision 34, WAN 346381, and CR 08-4651

The inspectors completed four samples.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

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

a. Inspection Scope

The inspector performed an in-office review of Emergency Plan Implementing Procedure 0ERP01-ZV-IN01, "Emergency Classification," Revision 8, received January 15, 2008. This revision added "Uncontrolled RCS cooldown due to Secondary Depressurization" as an indicator of Emergency Action Level HU5, "Miscellaneous Events Affecting Plant Operations," clarified the term "uncontrolled" as used in the emergency action levels, eliminated two duplicate emergency action levels, made minor formatting changes in emergency action level indicators, and made minor editorial corrections.

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, to the criteria of Nuclear Energy Institute report 99-01, "Methodology for Development of Emergency Action Levels," Revision 2, 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 constitute approval of the licensee's changes, therefore these revisions are subject to future inspection.

The inspector completed one sample.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

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 (work orders, condition reports, operations logs, etc.,) and attending corrective action review and work control meetings. 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 Review of Operator Workarounds and the Cumulative Effects

a. Inspection Scope

The inspectors reviewed the below listed operator workarounds, as well as, the cumulative effects of the workarounds to: (1) determine if the functional capability of the system is affected; (2) determine if multiple mitigating systems could be affected; (3) evaluate the effect of the operator workaround on the operator's ability to implement, respond correctly and timely, abnormal or emergency operating procedures;

and (4) verify that the licensee has identified and implemented appropriate corrective actions associated with operator workarounds.

- March 13, 2008, Units 1 and 2, Unit 1 items included: (1) reactor coolant Pump 1A seal leakoff lower than normal, (2) error in digital rod position data for Control Rod E-3, (3) depressurization of safety injection header due to pressure greater than 350 psig, and (4) main generator loop seal oil vapor extractor not maintaining vacuum; Unit 2 items included: (1) startup feed pump high vibrations, (2) communication issues between radiation monitors and the control room, and (3) Accumulator 2C level lowering

Documents reviewed by the inspectors included:

- CRs 06-15125, 06-15884, 07-4519, 07-7752, 07-12341, 08-1718, 08-3031, 08-4249, and 08-4265

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

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

.1 (Closed) Licensee Event Report (LER) 05000498/2006-003-00, "Control Room Envelope Heating, Ventilation, and Air Conditioning Makeup Fan 11B Failure to Start"

a. Inspection Scope

On September 11, 2006, during Unit 1 control room envelope (CRE) maintenance activities, makeup Fan 11B failed to start after being manually actuated from the control room. The failure was due to the circuit breaker tripping on instantaneous over current protection. The Train B CRE heating, ventilation, and air conditioning (HVAC) system was declared inoperable. The licensee's root cause determined that the over current trip setpoint was set too low during a previous breaker modification. Corrective actions included reviewing all other breakers that had been modified and ensuring they had the proper instantaneous over current setpoints. Further details and the enforcement aspects of this event are discussed below. This licensee event report is closed.

b. Findings

Introduction. The inspectors reviewed a Green self-revealing noncited violation (NCV) of 10 CFR Part 50, Appendix B, Criteria III, for an inadequate DCP that resulted in incorrect instantaneous over current breaker trip point settings.

Description. On September 11, 2006, CRE HVAC make up Fan 11B was manually actuated from the control room to support maintenance activities and failed to start. The failure was due to an incorrect instantaneous over current breaker setting. The breaker setting was set per DCP 98-687-4, which was implemented in 2000. When the DCP was prepared the Class 1E design criteria that was in effect led the licensee to set the instantaneous over current breaker settings based on locked rotor nameplate data "G" motors. Because the locked rotor nameplate data of the motor control fed motors were not documented the licensee failed to identify that some of the motors were locked rotor nameplate data "J" motors. The "J" setting designates an energy efficient, high torque motor which inherently has a higher locked rotor current than older "G" motors.

As a result, the breaker setting was too low and left some motors susceptible to spurious tripping since the implementation of the change in 2000. Further investigation revealed several missed opportunities in previous years to identify the incorrect settings. These missed opportunities resulted from human performance and program and process issues. Since these events occurred, corrective actions that the licensee has taken include changing the design package preparation procedure, the condition reporting process procedure, the design criteria electrical setpoint index, and conducting various training sessions for responsible individuals. As a result of these corrective actions there are no crosscutting aspects since the issue is greater than 2 years old and the processes have changed considerably from 2000 to 2006.

Analysis. The inspectors determined that the inadequate DCP that implemented the incorrect breaker settings which resulted in the Train B CRE HVAC fan being inoperable for longer than the TS allowed outage time was a performance deficiency. This finding was more than minor because it affected the Barrier Integrity attribute of SSC and barrier performance under maintaining the radiological barrier function of the control room and it affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events by maintaining the operational capability of the CRE HVAC boundary. Using the Significance Determination Process Phase 1 worksheets the finding was determined to have very low safety significance (Green) because the finding only represented a degradation of the radiological barrier function of the control room.

Enforcement. 10 CFR Part 50, Appendix B, Criteria III, requires, in part, that measures shall be established to assure that the applicable regulatory requirements and the design bases for components, to which Appendix B applies, are translated into specifications. Contrary to this, the licensee failed to ensure that DCP 98-687-4 contained the correct breaker trip point settings to ensure the operability of the CRE HVAC fan under all possible design conditions. The licensee has since updated the DCP procedure to consider operability concerns for corrective type DCPs. Since this violation is of very low safety significance (Green) and it has been entered into the licensee's corrective action program as CR 06-11475, this violation is being treated as an NCV consistent with Section VI.A of the Enforcement Policy: NCV 05000498/2008002-01, "CRE HVAC Makeup Fan 11B Failure to Start."

.2 Fire in Unit 1 Vital Area

a. Inspection Scope

The inspectors reviewed the licensee's response to a fire in the Unit 1 electrical auxiliary building 10' elevation in the voltage regulating transformer for Distribution Panel (DP) 05. On February 7, 2008, at 0459 a fire was reported in the inverter that provides the primary power to DP 05. At 0505 power to the panel was secured and the fire was reported out. Since the fire lasted for less than 15 minutes and no safe shutdown or decay heat removal equipment were impacted no emergency action level declaration was necessary. Initial indications in the control room consisted of multiple alarms, indicating trouble with an inverter. Upon securing power to DP 05 the licensee was in a main turbine generator half-trip condition. The fire was later determined to be from the voltage regulating transformer to DP 05, originated in a choke assembly. Upon inspecting and finding no damage to the inverter, DP 05 was re-energized and all alarms were reset. The licensee inspected, via thermography, other susceptible transformers and found no unusual indications. The voltage regulating transformer was repaired and returned to service on February 8, 2008.

b. Findings

No findings of significance were identified.

4OA5 Other Activities

.1 Review of Outside Party Evaluation

a. Inspection Scope

The inspectors reviewed the results of the 2007 South Texas Project Culture Study conducted by The Duncan Company.

b. Findings

No findings of significance were identified.

.2 Licensee Strike Contingency Plans (Inspection Procedure 92709)

a. Inspection Scope

The inspectors evaluated the adequacy of the Regulated Security Solutions strike contingency plan. The inspectors verified that the plan could be implemented at any time after the original contract expiration, February 7, 2008.

b. Findings

No findings of significance were identified.

.3 Temporary Instruction (TI) 2515/170, "Risk Management Technical Specifications Initiative 4b Risk-Informed Completion Times"

a. Inspection Scope

The inspectors performed TI 2515/170 when the licensee voluntarily performed maintenance on Unit 1 which resulted in exceeding the front stop completion time. The objective of the TI was to verify that the licensee had: (1) effectively implemented an adequate process, (2) integrated a comprehensive configuration risk management program to support the accurate computation of risk-informed TS completion times taking all relevant factors into account, (3) performed appropriate training, (4) implemented adequate procedures, (5) followed those procedures, (6) addressed the open items from the NRC's Audit Report, and (7) documented any conditions that have been identified from the implementation of the license amendment.

The licensee implemented risk managed technical specifications (RMTS) for voluntary maintenance on Unit 1 Inverter 1203, which had a front stop completion time of 24 hours and an estimated time to complete the maintenance of 47 hours. The estimated core damage frequency (CDF) risk for the week was 3.83E-9 and the plant trip risk was 11.9 percent. The initial calculated risk managed numbers were as follows: (1) CDF, 1.0E-6 threshold completion date of June 28, 2008, 1.0E-5 threshold completion date of January 14, 2011; (2) large early release frequency, 1.0E-7 threshold completion date of August 30, 2008, 1.0E-6 threshold completion date of October 1, 2012; and (3) risk informed completion time, CDF limiting, of the backstop value of 30 days was April 16, 2008. Actual risk numbers for the maintenance for the week were a CDF of 3.55E-09 and a plant trip risk of 12.2 percent. The actual amount of time that the inverter

was out of service was approximately 28 hours. Additionally, the risk numbers would be smaller if the licensee's model used a more representative failure rate for the currently installed voltage regulating transformers. The current model uses the old design, one large core, while the plant actually has a newer four core design which is more reliable, hence the risk numbers would actually be slightly smaller.

During the maintenance activities the licensee implemented the following risk management actions: (1) replacement parts were tested and verified prior to starting the maintenance; (2) more than adequate spare parts on hand; (3) training for the activity on a spare inverter; (4) protected trains, channels, and equipment were designated and posted; (5) ensured that no controlling channels for pressurizer level or pressure, and steam generator level were selected to DP 1203; (6) ensured that no planned activities were started that would place the other channels not powered from DP 1203 in a tripped condition; (7) other maintenance activities for the week were scheduled to commence after completion of the inverter work; (8) the operations crew performed a review of applicable off normal procedures for loss of DP 1203; (9) ensured that a duty risk management person was available for the duration of the maintenance; (10) ensured daily updates of the duty team during the maintenance; and (11) obtained plant manager's approval prior to exceeding the front stop completion time.

The following are items that could not be inspected per the TI: (1) probabilistic risk assessment (PRA) functionality, the licensee did not declare an item PRA functional before declaring it operable; and (2) the accumulated annual risk above the zero maintenance baseline beyond the front stop completion time, this is the first implementation of exceeding the front stop completion time.

As part of the approval for RMTS, the NRC performed an audit of South Texas Project's proposed process for implementation of the program. As part of this audit the NRC identified several items that needed to be addressed before implementation of the program. These follow-up actions from the audit were addressed as follows: (1) fire PRA is contemplated for the future but not on a schedule that would support implementation of Initiative 4B, the licensee responded by providing CR 07-14714 which documents that a comprehensive fire PRA is planned for completion in 2011; (2) the licensee's self-assessment should also include specific discussion of the resolution to staff comments generated during the audit and the industry peer review, the licensee addressed this concern by updating Attachment 1 in their response to an NRC request for additional information dated February 28, 2007 (NOC-AE-07002112); (3) Surveillance Requirement IF-C1 references a spatial interaction database update as ongoing and is to be included in Revision 5 of the PRA, the licensee concluded that the spatial interaction database update was not required to support the RMTS application as has scheduled completion of this database to be consistent with the fire PRA update; (4) Surveillance Requirement IF-D5 is met with an update of the internal flooding frequencies from EPRI TR-11880 piping failure rates which is ongoing and is to be included in Revision 5 of the PRA, the licensee concluded that the American Society of Mechanical Engineers supporting requirement has been met as documented in Attachment 1 of Response NOC-AE-07002112 and that the original flooding analysis remains valid; (5) Revision 5 to the PRA should be evaluated as a commitment prior to license amendment request implementation, per licensee Response NOC-AE-07002112 Revision 5 of the PRA was identified as an implementation requirement and was completed prior to RMTS implementation; (6) the licensee should provide justification that fire scenarios screened from its baseline model would not impact RMTS calculations, the licensee evaluated 57 previously screened fire scenarios and verified that they do not significantly impact a risk informed completion time; (7) the licensee should evaluate the data used to support its fire PRA as a key source of uncertainty, Attachment 3 to Response NOC-AE-07002112 describes the uncertainty analysis

performed to support Revision 5 of the PRA, additionally the licensee is scheduled to complete the comprehensive fire PRA in 2011; (8) the licensee should update its assessment against Regulatory Guide 1.200, Revision 0, and conformance with capability Category 2 of the American Society of Mechanical Engineers standard, this was performed and is documented in Attachment 1 to Response NOC-AE-07002112; (9) the licensee should provide justification that each TS to which the RMTS apply can be assessed using its configuration risk management program tool, the licensee performed and documented this in Attachment 1 to Response NOC-AE-06002036.

Additional items that the licensee is tracking for future changes to the RMTS program include: (1) ensuring that the PRA model is at least Capability Category 2 with Revision 2 of Regulatory Guide 1.200; (2) performing a comprehensive fire PRA, including the spatial interaction database; (3) updating the external events PRA to meet the latest Revision to ANSI/ANS-58.21-2007; (4) RMTS for the CRE HVAC, essential chill water, and ECW systems has been determined, by the licensee, to be inaccurate, due to dose concerns, and the licensee will be preparing a revised TS amendment to correct the concern; (5) during implementation of the RMTS, the licensee identified procedure and program deficiencies that resulted in quality records not being maintained, records were maintained but they do not meet the requirement to be quality records; and (6) as part of the review of questions raised during the audit the inspectors identified that the licensee had not incorporated the HEATUP code documentation into Revision 5 of the PRA as was stated in Attachment 1 to Response NOC-AE-0702112, the licensee has documented the condition in CR 02-6457.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

On January 23, 2008, the inspector conducted a telephonic exit meeting to present the results of the in-office inspection of changes to the licensee's emergency classification procedure to Mr. L. Meier, Supervisor, Emergency Preparedness, who acknowledged the findings. The inspector confirmed that proprietary information was not provided or examined during the inspection.

On April 8, 2008, the inspectors presented the inspection results of the integrated inspection report to Mr. K. Coates, Plant General Manager, 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
K. Coates, Plant General Manager
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, Site Vice President
W. Harrison, Senior Engineer, Licensing Staff Specialist
S. Head, Manager, Licensing
G. Hildebrant, Manager, Operations, Unit 2
K. House, Manager, Design Engineering
G. Janak, Manager, Operations, Unit 1
B. Jenewein, Manager, Testing and Programs Engineering
A. McGalliard, Manager, Performance Improvement
L. Meier, Supervisor, Emergency Preparedness
J. Mertink, Manager, Operations
H. Murray, Manager, Maintenance
M. Murray, Manager, Systems Engineering
G. Powell, Manager, Site Engineering
M. Reddix, Manager, Security
D. Rencurrel, Vice President, Engineering
J. Rocha, Engineer, Systems Engineering
M. Ruvalcaba, Supervisor, Systems Engineering
R. Savage, Engineer, Licensing Staff Specialist
J. Sheppard, President and CEO
K. Taplett, Senior Engineer, Licensing Staff Specialist
D. Turkasz, Manager, NSSS Work Window
T. Walker, Manager, Quality
D. Wiegand, Engineer, Test Engineering
C. Younger, Test Engineering Supervisor
D. Zink, Acting Supervisor, Plant Engineering

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000498/2008002-01 NCV CRE HVAC Makeup Fan 11B Failure to Start

Closed

05000498/2006-003-00 LER CRE HVAC Makeup Fan 11B Failure to Start

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 1R12: Maintenance Effectiveness

CRs

00-16506	06-16250	07-15101	08-2388
04-913	07-212	07-15949	08-2915
05-2503	07-1038	07-17286	08-2916
05-9010	07-2426	07-17956	08-3803
06-2759	07-7760	07-18264	08-4280
06-8963	07-9514	07-18706	08-4750
06-11900	07-9847	08-589	08-5048
06-16225	07-11275	08-827	08-5474

Drawings

9E0CC01#2, "Elementary Diagram Component Cooling Water PA201A, PA201B, & PA201C," Sheet 1, Revision 15

9E0HM08#2, "Elementary Diagram MAB HVAC CCW Pump RM Cooler AHU AH001, AH002, & AH003," Sheet 1, Revision 11

System Health Reports

Component Cooling Water (CC), first quarter 2006 through fourth quarter 2007
Fire Detection System (FA), first quarter 2006 through fourth quarter 2007

WOs

429472
466452
467449
471695
479760

Section 1R15: Operability Evaluations

CRs

01-19641	07-9831	08-1888	08-4651
05-16152	07-16530	08-2327	08-4776
06-7334	07-18257	08-3494	08-5067
06-8293	08-1838	08-3897	08-5068

07-8765	08-1040	08-4358	08-5070

Drawings

KSV-32, “Control Linkage – Fuel Injection Pump,” Revision 15

Procedures

0PMP04-DG-0019, “Standby Diesel Generator Fuel Injection Pump and Nozzle Assembly Maintenance,” Revision 19

WOs

329772
329776
460528
478848
483472
484800

Section 1R18: Plant Modifications

CRs

06-17091	07-11567	07-18470

WOs

464478
467417

Section 1R19: Postmaintenance Testing

CRs

07-10523	07-18557	08-1901	08-4584
07-12288	08-1873	08-2275	

WANs

322847
330506
330507
330510
331739
331740
331747
351026
351150

WOs

464119
478986

Section 40A5: Other Activities

Temporary Instruction 2515/170

Calculations

MC-6504, "Determination of Relative Humidity at the Inlet of the CRE Cleanup Filter without Makeup Filter Heaters in Operation. Also, evaluate %RH when only one train of chilled water is available for dehumidification," Revision 1

CRs

00-9977	07-8117	07-10864	08-3655
02-6457	07-8808	07-11104	08-4813
03-1740	07-8921	07-11528	08-4978
03-9973	07-9694	07-14714	08-4979
04-5914	06-10799	07-15172	08-6087
04-8425	07-2873	07-15616	
06-6838	07-10679	08-816	

Miscellaneous

Actual Risk Profile for Unit 1 Week of 03/17/2008

Projected Risk Profile for Unit 1 Week of 03/17/2008

NRC Memorandum, "Audit Report Regarding South Texas Project, Units 1 and 2, Risk-Managed Technical Specifications Application," dated October 5, 2006

NEI 06-09, "Risk-Informed Technical Specifications Initiative 4b Risk-Managed Technical Specification (RMTS) Guidelines," Revision 0

NOC-AE-07002112, "Response to NRC Requests for Additional Information on STPNOC Proposed Risk Managed Technical Specifications (TAC Nos. MD2341 & MD 2342)," Dated February 28, 2007

Training Material, "Risk Managed Technical Specification (RMTS) Training for Managers and Supervisors SCT-073," Second Quarter 2007

Training Material, "Risk Managed Technical Specifications," cycle LOR 65 late 2006

Training Material, "Risk Managed Technical Specifications," cycle LOR 71 early 2007

Training Material, "Risk Managed Technical Specifications," cycle LOR 72 early 2007

Work Activity Risk Plan of Action Evaluation 1082

Work Activity Risk Plan of Action Evaluation 1632

Procedures

0PGP03-ZA-0090, “Work Process Program,” Revision 32
0PGP03-ZA-0091, “Configuration Risk Management Program,” Revision 8
0PGP03-ZG-RMTS, “Risk-Managed Technical Specifications Program,” Revision 0
0POP01-ZO-0006, “Risk Management Actions (RMAs),” Revision 14
0POP04-VA-0001, “Loss of 120 VAC Class Vital Distribution,” Revision 22

LIST OF ACRONYMS

AFW	auxiliary feedwater
CCW	component cooling water
CDF	core damage frequency
CFR	Code of Federal Regulations
CR	condition report
CRE	control room envelope
DCP	design change package
DP	Distribution Panel
ECW	essential cooling water
HVAC	heating, ventilation, and air conditioning
NCV	noncited violation
NRC	Nuclear Regulatory Commission
PRA	probabilistic risk assessment
RMTS	risk managed technical specifications
SDG	standby diesel generator
SSC	structure, system, and component
TI	temporary instruction
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
WAN	work authorization number