



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION IV  
612 EAST LAMAR BLVD, SUITE 400  
ARLINGTON, TEXAS 76011-4125

October 28, 2010

Mr. Edward D. Halpin  
President and Chief Executive Officer  
STP Nuclear Operating Company  
South Texas Project  
P.O. Box 289  
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION –  
NRC IDENTIFICATION AND RESOLUTION OF PROBLEMS  
INSPECTION REPORT 05000498/2010006 AND 05000499/2010006

Dear Mr. Halpin:

On September 16, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed the onsite portion of a team inspection at your South Texas Project Electric Generating Station. The enclosed inspection report documents the inspection findings, which were discussed on September 16, 2010, with Mr. D. Rencurrel and members of your staff.

This inspection reviewed activities conducted under your license as they relate to the identification and resolution of problems, compliance with the Commission's rules and regulations and the conditions of your operating license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel. The team also interviewed a representative sample of personnel regarding the condition of your safety conscious work environment at the South Texas Project.

On the basis of the samples selected for review, there were no findings of significance identified during this inspection. The team concluded that the South Texas Project has a comprehensive and effective corrective action program. Problems are being identified at an appropriately low threshold, assessed, and ultimately corrected. The team determined that the procedures and program controls that implement the various aspects of the corrective action program were well established. However, the team identified weaknesses in the implementation of operability determinations and samples of corrective actions that were limited in scope and not always documented properly.

A licensee-identified violation which was determined to be of very low safety significance is listed in this report. NRC is treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2.a of the NRC Enforcement Policy because of the very low safety significance of the violation and because it is entered into your corrective action program. If you contest this

non-cited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region IV; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the South Texas Project, Units 1 and 2, Station.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be 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/**

Michael C. Hay, Chief  
Technical Support Branch  
Division of Reactor Safety

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

Enclosure:  
NRC Inspection Report 05000498/201006;  
05000499/2010006 w/attachments:  
1. Supplemental Information  
2. Information Request

cc w/Enclosure:  
Kevin Richards, Senior Vice President and  
Assistant to CEO  
STP Nuclear Operating Company  
South Texas Project  
P.O. Box 289  
Wadsworth, TX 77483

David W. Rencurrel  
Senior Vice President Units 1 and 2  
STP Nuclear Operating Company  
South Texas Project  
P.O. Box 289  
Wadsworth, TX 77483

Louis Peter, Plant General Manager  
STP Nuclear Operating Company  
South Texas Project  
P.O. Box 289  
Wadsworth, TX 77483

Tim Powell, Vice President, Engineering  
STP Nuclear Operating Company  
South Texas Project  
P.O. Box 289  
Wadsworth, TX 77483

A. W. Harrison, Manager, Licensing  
STP Nuclear Operating Company  
South Texas Project  
P.O. Box 289  
Wadsworth, TX 77483

Charles T. Bowman, General Manager, Oversight  
STP Nuclear Operating Company  
South Texas Project  
P.O. Box 289  
Wadsworth, TX 77483  
Marilyn Kistler

Senior Staff Specialist, Licensing  
STP Nuclear Operating Company  
South Texas Project  
P.O. Box 289  
Wadsworth, TX 77483

Cheryl Mele  
City of Austin  
Electric Utility Department  
721 Barton Springs Road  
Austin, TX 78704

J. J. Nesrsta/R. K. Temple/  
Ed Alercon/Kevin Pollo  
City Public Service  
P.O. Box 1771  
San Antonio, TX 78296  
Jon C. Wood

STP Nuclear Operating Company

- 4 -

Cox, Smith, & Matthews  
112 East Pecan, Suite 1800  
San Antonio, TX 78205

A. H. Gutterman/Steve Frantz.  
Morgan, Lewis & Bockius LLP  
1111 Pennsylvania Avenue, NW  
Washington, DC 20004

Richard A. Ratliff, P.E., L.M.P.  
Radiation Safety Licensing Branch Manager  
Division for Regulatory Services  
Texas Department of State Health  
Mail Code 2385  
P.O. Box 149347  
Austin, TX 78714-9347

Brian Almon  
Public Utility Commission of Texas  
P.O. Box 13326  
Austin, TX 78711-3326

Environmental and Natural Resources  
Policy Director, Office of the Governor  
P.O. Box 12428  
Austin, TX 78711-3189

Mr. Nate McDonald  
Judge, Matagorda County  
Matagorda County Courthouse  
1700 Seventh Street  
Bay City, TX 77414

Anthony P. Jones, Chief Boiler Inspector  
Texas Department of Licensing and Regulation  
Boiler Division  
E.O. Thompson State Office Building  
P.O. Box 12157  
Austin, TX 78711

Susan M. Jablonski  
Office of Permitting, Remediation and Registration  
Texas Commission on Environmental Quality  
MC-122  
P.O. Box 13087  
Austin, TX 78711-3087

STP Nuclear Operating Company

- 5 -

Ted Enos  
4200 South Hulen, Suite 422  
Fort Worth, TX 76109

Kevin Howell/Catherine Callaway/Jim von Suskil  
NRG Energy, Inc.  
1301 McKinney, Suite 2300  
Houston, TX 77010

Chief, Technological Hazards  
Branch  
FEMA Region VI  
800 North Loop 288  
Federal Regional Center  
Denton, TX 76209

C. M. Canady  
City of Austin  
Electric Utility Department  
721 Barton Springs Road  
Austin, TX 78704

Electronic distribution by RIV:  
 Regional Administrator (Elmo.Collins@nrc.gov)  
 DRP Director (Kris.Kennedy@nrc.gov)  
 DRP Deputy Director (Anton.Vegel@nrc.gov)  
 DRS Director (Roy.Caniano@nrc.gov)  
 DRS Deputy Director ([Troy.Pruett@nrc.gov](mailto:Troy.Pruett@nrc.gov))  
 Senior Resident Inspector ([John.Dixon@nrc.gov](mailto:John.Dixon@nrc.gov))  
 Resident Inspector (Binesh.Tharakan@nrc.gov)  
 Branch Chief, DRP/A ([Wayne.Walker@nrc.gov](mailto:Wayne.Walker@nrc.gov))  
 Senior Project Engineer, DRP/A (David.Proulx@nrc.gov)  
 STP Site Secretary (Lynn.Wright@nrc.gov)  
 Public Affairs Officer ([Victor.Dricks@nrc.gov](mailto:Victor.Dricks@nrc.gov))  
 Public Affairs Officer (Lara.Uselding@nrc.gov)  
 Branch Chief, DRS/TSB (Michael.Hay@nrc.gov)  
 RITS Coordinator (Marisa.Herrera@nrc.gov)  
 DRS STA ([Dale.Powers@nrc.gov](mailto:Dale.Powers@nrc.gov))  
 OEDO RIV Coordinator (Geoffrey.Miller@nrc.gov)  
 ROPreports

SUNSI Review Completed:   Y   ADAMS:  Yes  No Initials: BOB    
 Publicly Available  Non-Publicly Available  Sensitive  Non-Sensitive

SPE:PBA	RI:PBA	RI/PSB2	PE:PBD	RI:PSB2	C:PBA	C:TSB
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**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION IV**

Dockets: 05000498, 05000499

Licenses: NPF-76, NPF-80

Report: 05000498/2010006 and 05000499/2010006

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: August 30 through September 16, 2010

Inspectors: D. Proulx, Senior Project Engineer, Projects Branch A (Team Leader)  
B. Tharakan, Resident Inspector, Projects Branch A  
P. Jayroe, Project Engineer, Projects Branch D  
I. Anchondo, Reactor Inspector, Plant Support Branch 2  
M. Williams, Reactor Inspector, Plant Support Branch 2

Approved By: Michael Hay, Chief  
Technical Support Branch  
Division of Reactor Safety

## SUMMARY OF FINDINGS

IR 05000498/2010006; 05000499/2010006; 08/30/10 - 09/16/10; South Texas Project Units 1 and 2: Identification and Resolution of Problems.

This report covered a 2-week period of inspection performed by a resident inspector and four region-based inspectors. 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.

### Identification and Resolution of Problems

Overall, the team concluded that the licensee was effective in identifying, evaluating, and correcting problems. The team also determined that the procedures and program controls associated with the corrective action program were well established. However, these implementing processes were not consistently followed and corrective actions were not always completed in a timely manner.

The team noted that the bases for some operability evaluations were not clear and adequately supported. Additionally, the team noted that the licensee's process for correcting deficient conditions allowed a 22-month time limit. This process resulted in a number of degraded conditions not being addressed in a timely manner such as during the next available outage.

Overall, the team determined that the licensee had appropriately evaluated industry operating experience for relevance to the facility, and had entered applicable items in the corrective action program. However, once this information was disseminated, the reviews and other actions associated with or generated as part of the condition report actions were not being completed in a timely manner. Quality assurance audits and other self-assessment activities have been effective in identifying issues and areas for improvement.

Overall, the team concluded that there was a safety conscious work environment in place at South Texas Project. The team determined that the many of the individuals questioned lacked familiarity with the Employee Concerns Program coordinators because of a lack of visibility in the facility.

#### A. NRC-Identified and Self-Revealing Findings

No findings were identified.



**B. Licensee-Identified Violations**

A violation of very low significance, which was identified by the licensee, has been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. The violation and corrective actions are listed in Section 4OA7 of this report.

## REPORT DETAILS

### 4 OTHER ACTIVITIES (OA)

#### 4OA2 Problem Identification and Resolution (71152B)

The team based the following conclusions, in part, on a review of issues that were identified in the assessment period, which ranged from August 14, 2008, (the last biennial problem identification and resolution inspection) to the end of the on-site portion of the inspection on September 16, 2010

#### a. Assessment of Corrective Action Program Effectiveness

##### (1) Inspection Scope

The team reviewed items selected across the seven cornerstones of safety to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution. Specifically, the team selected and reviewed approximately 235 condition reports from approximately 30,000 conditions that had been issued between August 2008 and September 16, 2010. The team also performed field walkdowns of selected systems and equipment. Additionally, the team reviewed a sample of self assessments, trending reports and metrics, system health reports, and various other documents related to the corrective action program.

The team evaluated condition reports, work orders, and operability evaluations to assess the licensee's threshold for identifying problems, entering them into the corrective action program, and the ability to evaluate the importance of adverse conditions. Also, the licensee's efforts in establishing the scope of problems were evaluated by reviewing selected logs, work requests, self-assessments results, audits, system health reports, action plans, and results from surveillance tests and preventive maintenance tasks. The team also reviewed work requests and attended the licensee's daily Condition Review Group meetings to assess the reporting threshold, prioritization efforts, and significance, as well as observing the interfaces with the operability assessment and work control processes.

The team reviewed a sample of condition reports, apparent cause evaluations, and root cause evaluations performed during this period to ascertain whether the licensee properly considered the extent of cause and extent of condition for problems, as well as, assessing generic implications and previous occurrences. The team assessed the timeliness and effectiveness of corrective actions, completed or planned, and looked for additional examples of similar problems.

The team also conducted interviews with plant personnel to identify other processes that existed where problems may be identified and addressed outside the corrective action program.

A review of the essential cooling water system was performed for a 3-year period to determine whether problems were being effectively addressed. The team also conducted a walkdown of this system to assess the physical condition of equipment and to determine if problems were identified and entered into the corrective action process.

(2) Assessment

Assessment - Effectiveness of Problem Identification

The team concluded that problems were identified and documented in accordance with the requirements of the licensee's corrective action program. The team also determined that the licensee was identifying problems at an appropriately low threshold, and that these conditions were assessed and ultimately corrected. The team determined that the procedures and program documents that implement the various aspects of the corrective action program were well established; however, the procedural requirements associated with this program were not always followed. Although the team did not identify any issues with problem identification, the team noted that three NRC-identified issues associated with problem identification were spread out over the 2-year assessment period.

The team concluded that these issues were not indicative of an adverse trend in problem identification.

Assessment - Effectiveness of Prioritization and Evaluation of Issues

The team reviewed a sample of condition reports that involved operability issues to assess the adequacy and timeliness of the licensee's operability determination process. The team noted that in 2008 the licensee had implemented changes to the operability determination process to help improve problems that had been identified through corrective action program documents, self-assessments, and quality assurance audits. Specifically, the licensee established procedure OPGP03-ZO-9900, "Operability Determinations and Functionality Assessments," and made modifications to procedure OPGP04-ZA-0002, Condition Report Engineering Evaluation, to implement the guidance provided in NRC Regulatory Issue Summary 2005-20. In addition, the licensee implemented requirements in procedure OPOP01-ZQ-0022, "Plant Operations Shift Routines" to ensure that an operations shift manager or supervisor would review condition reports to ensure operability.

Overall, during the review period the licensee adequately implemented these programs to address conditions which challenged the operability of plant safety systems. Although the licensee has made significant improvements to their operability review programs since 2008, the team identified that there were a few conditions where improvement was still needed to ensure that operability evaluations were thorough, accurate, and appropriately address the conditions. The licensee acknowledged this concern and wrote condition report 10-20052 to address this issue.

The team identified several examples where the licensee's evaluations were not thorough, accurate, or appropriately addressed conditions.

The licensee's "Condition Report Engineering Evaluation" procedure, OPGP04-ZA-0002, required that each operability review be performed for all modes of operation that could be affected by the condition. The team noted two examples of operability reviews that did not consider all applicable modes of operation. Condition report 08-12812 identified a trouble alarm associated with the Unit 2 A train 125-volt DC emergency battery system. Unit 2 was operating in mode 1 at the time of the alarm, but later entered mode 5 and 6 before troubleshooting was completed and the corrective actions were implemented. The licensee did not evaluate the condition for applicability to mode 5-6. The evaluation concluded that the system was operable in modes 1-4. When the team identified this issue to the licensee, the licensee reviewed the condition of the battery and determined that it was operable in modes 5-6, as well. The second example was identified in condition report 08-17803, which described a condition with the Unit 1 train A component cooling water isolation valve to the residual heat removal system heat exchanger that went open unexpectedly. The licensee did not list the mode 5-6 technical specification applicability of the component cooling water system requirements for the residual heat removal system. However, the operability determination addressed the potential impact to the residual heat removal system and the condition would not have prevented the systems from performing their safety functions, therefore the determination the systems were operable did not change. The licensee wrote condition report 10-20309 to address this issue.

Condition reports 06-7815 and 07-10159, identified boron deposits on the tubing of a Unit 1 reactor coolant system flow transmitter 1RCFT0419 indicative of an inactive leak. The licensee's "Condition Reporting Process" procedure required that the corrective action program supervisor promptly screen the condition for operability. It goes on further to state that conditions that have or may have an impact on the operability of technical specification related structure, system, or component (SSC), or may be or are, reportable; shall be screened as "yes" or "indeterminate". The condition was identified by radiation protection personnel and screened by a radiation protection corrective action program supervisor as operability review not required. The licensee corrected the condition by cleaning and tightening the fitting. No documented evidence that an operability evaluation was performed by operations personnel was found. The licensee wrote condition report 10-20098 to address this issue.

In 2008, the condition reappeared on flow transmitter 1RCFT0419; and is documented in condition report 08-12797. At this time, an immediate operability determination was performed by operations personnel followed by a prompt operability determination performed by engineering personnel that was reviewed and accepted by operations management. The potential leak was determined to be on the high pressure side of the flow transmitter and if the tubing failed it would impact all three flow channels in that loop and could result in a low reactor coolant flow trip of the unit. The condition was determined to be operable because any failure of the tubing would not result in a leak greater than the makeup capability of the charging pumps. When the team reviewed the engineering evaluation for determining operability, the team noted that the

justification for determining immediate operability relied upon a 2004 engineering evaluation for a condition that was not similar to and did not bound the flow transmitter 1RCFT0419 leak. Therefore, the team identified that the immediate operability determination did not adequately justify that the flow transmitter was operable. The licensee wrote condition report 10-20208 to address this issue.

The team also reviewed root cause investigations conducted for significant conditions adverse to quality and apparent cause evaluations that were completed for station level conditions adverse to quality. The team reviewed the procedures, the investigator and evaluator manuals, as well as recent examples of both types of activities. The team concluded that the licensee had acceptable root cause investigation and apparent cause evaluation processes that were adequately implemented. Appropriate corrective actions were identified to address the causes, and operating experience and offsite expertise were appropriately utilized during these evaluations. However, the team noted a significant number of apparent cause evaluations and some root cause investigations that were completed using a common cause process. The licensee's procedure for implementing the Corrective Action Program, OPGP03-ZX-0002, "Condition Reporting Process," did not include the use of a common cause analysis to resolve significant conditions adverse to quality or station level conditions adverse to quality. The team concluded that although the process to use common cause analyses was not adequately defined by procedures, the corrective actions to resolve the conditions identified were adequate for each apparent cause evaluation and root cause investigation that the team reviewed. The licensee wrote Condition Reports 10-19215 and 10-19678 to address this issue.

#### Assessment - Effectiveness of Corrective Actions

The team reviewed plant records, primarily condition reports and work orders, to verify that corrective actions were appropriately developed and implemented, including corrective actions to address common cause or generic concerns. Additionally, the team reviewed a sample of condition reports that addressed past NRC-identified violations for each cornerstone to ensure that the corrective actions adequately addressed the issues identified in the respective inspection reports. The team also reviewed a sample of corrective actions closed to other condition reports, work orders, or tracking programs to ensure that the defined corrective actions had been appropriately implemented.

Overall, the team concluded that the licensee developed appropriate corrective actions to address specific problems, with some exceptions. The team had the following concerns with the thoroughness or timeliness of corrective actions that the team determined were indicative that the licensee's program required improvement:

- The team identified that the licensee closed out Condition Report 09-0771 without documenting that the corrective actions were completed. This condition report was initiated to address NCV 2009-402-01. The team received additional information during this inspection indicating that remedial actions had been taken but not documented.

- The team identified that the licensee closed out Condition Report 08-16599 without adequately addressing corrective actions. This condition report was initiated to address NCV 2009003-02. The licensee did not adequately document remedial actions taken to address the failure to survey as identified in the condition report. The team received additional information during this inspection indicating that remedial actions had been taken but not documented.
- The licensee had failed to promptly identify and correct two degraded or nonconforming conditions in that the licensee deferred correction of a leaking emergency diesel generator air start receiver check valve for over six years, and the licensee deferred correction of loose or sheared emergency diesel generator turbocharger support bolts for over three years. This issue is considered a licensee-identified non-cited violation 10 CFR 50, Appendix B, Criterion XVI, with two examples.

#### Standby Diesel Generator 11 Air Start Receiver Check Valve

On June 18, 2004, maintenance personnel identified that starting air receiver 11 check valve SD-0003A was leaking past its seat. This air receiver and check valve was a support system for starting Unit 1 standby diesel generator 11. The licensee entered this into the corrective action program as Condition Report 04-8770. Subsequent to the identification of this issue, the licensee did not perform either an immediate operability assessment or followed up with a prompt operability determination, and considered it a low priority item.

The licensee reprioritized Condition Report 04-8770 following changes to their processes. As a result of operational experience review, the licensee implemented the guidance of RIS 2005-20 in August 2008. The licensee revised Procedure 0PGP03-ZO-9900 "Operability Determinations and Functionality Assessments," Revision 1, to recognize that structures, systems and components that were degraded or nonconforming items had a higher priority and must be corrected at the first available opportunity. The licensee inappropriately interpreted the NRC guidance in RIS 2005-20 as providing a blanket 22-month time frame (one cycle, plus outage preparation time) to correct degraded or nonconforming conditions, and documented this in Procedure 0PGP03-ZX-0002, "Condition Reporting Process," Revision 38.

After revision of these procedures, the licensee reviewed open condition reports to determine if they had missed any degraded/nonconforming conditions. Condition Report 04-8770 was identified as one such issue. In October 2008, the licensee determined that the leak of check valve SD-0003A was a degraded or nonconforming condition, and requested a functionality assessment, which was completed on February 17, 2009. This functionality assessment concluded that, although the condition was

over four years old already, that additional delay was acceptable. The team noted several deficiencies with the licensee's assessment of condition report 04-8770: (1), the licensee stated that check valve SD-0003A and its associated air receiver were not Technical Specifications items and were thus not significant. However, pressure in the air start receivers was a required support system to support operability of standby diesel generator 11. (2), Final Safety Analysis Report (FSAR) Section 9.6 stated that each of the two diesel air start receivers could each support 5 starts of the diesel without makeup (the air compressors were powered from a nonsafety-related bus). The functionality assessment did not discuss the ability to meet the FSAR five-start criterion, and (3) the functionality assessment was also deficient in that it stated that the condition was not significant because there was a 100 percent redundant air receiver (air receiver 12) and check valve (valve SD-0004A). However, the licensee had identified that check valve SD-0004A was also leaking past its seat, rendering both air start receivers degraded, and invalidating the assumptions of the functionality assessment for Condition Report 04-8770.

The licensee continued to defer correcting the leak on check valve SD-0003A because of its low priority, planning, scheduling, parts, vacations, and the desire to work the component in conjunction with welding in a new isolation valve in the air start system. This condition was deferred several times past several refueling outages system maintenance outage windows. The condition had yet to be corrected by the end of the onsite inspection (September 16, 2010).

The failure to promptly identify and correct a known degraded nonconforming condition (i.e. leaking emergency diesel generator air start receiver check valve) at the first available opportunity was the first example of a licensee identified violation of 10 CFR 50, Appendix B, Criterion XVI.

#### Standby Diesel Generator 13 Turbocharger Support Bolts

On February 1, 2007, maintenance craft initiated condition report 07-1696 to document that four of the six support bolts in the vertical axis for the standby diesel generator 13 Turbocharger were loose or not fully screwed in. The system engineer performed an inspection of the condition and identified that in actuality, two of the six support bolts in the vertical axis were loose and two additional bolts had sheared into two pieces. Although engineering evaluated the condition from a seismic perspective, the licensee considered this initially to be a minor material condition, and categorized Condition Report 07-1696 as "no operability concerns," and thus, did not consider the loose and sheared support bolts to be a degraded or nonconforming condition, and was a low priority item.

On August 20, 2008, (17 months following identification) after implementing the guidance of RIS 2005-20, the licensee recharacterized Condition Report 07-1696 as a degraded condition. The team identified that maintenance personnel deferred working this item immediately because of “vacation, manpower and ownership issues.” Licensee management took no action to expedite or reprioritize correcting this adverse condition. The licensee completed the operability determination on February 17, 2009, (over two years after the condition had been identified), and stated that the degraded standby diesel generator 13 turbocharger support bolts would be worked at the “next convenient opportunity.”

The team noted that the licensee conducted a major teardown of standby diesel generator 13 that lasted several days during the week of November 30, 2009, but because of inadequate planning and decision-making, did not correct the loose and sheared bolts on the standby diesel generator 13 turbocharger. After missing this opportunity to correct the condition, the licensee did not schedule its repair for the next train maintenance outage window or refueling outage (spring 2010). The licensee deferred repairing the loose and sheared bolts of the standby diesel generator 13 turbocharger until the next major overhaul of diesel generator 13, scheduled for 2014, over 7 years after this degraded condition was identified. The team noted that licensee had not determined the cause of the loose or sheared bolts, and had not examined the intact bolts, but made the decision that the condition could exist for an extended period of time.

The failure to promptly identify and correct a known degraded or nonconforming condition (i.e., loose and sheared standby diesel generator turbocharger bolts) at the first available opportunity was the second example of a violation of 10 CFR 50, Appendix B, Criterion XVI.

A licensee self-assessment performed in July 2010 identified that the licensee’s programs were inadequately implementing RIS 2005-20, in that a number of degraded or nonconforming conditions were not corrected at the first available opportunity, as documented in Condition Report 10-15962. This self-assessment also noted that licensee procedures inappropriately granted all nonconforming conditions a blanket 22-month time frame for correction. Condition Reports 04-8770 and 07-1696 were listed in condition report 10-15962 as inappropriately deferred. Thus, the two examples of failure to promptly identify and correct conditions adverse to quality was considered a licensee-identified non-cited violation of 10 CFR 50, Appendix B, Criterion XVI. The team evaluated the two examples of a finding using the Phase 1 worksheet in Inspection Manual Chapter 0609, "Significance Determination Process," and determined the finding to have very low safety significance because



the two examples were design or qualification deficiencies confirmed not to result in loss of operability or functionality.

b. Assessment of the Use of Operating Experience

(1) Inspection Scope

The team examined the licensee's program for reviewing industry operating experience. The team reviewed a sample of 18 operating experience notification documents that had been issued during the assessment period to determine whether the licensee had appropriately evaluated the notification for relevance to the facility. The team also examined whether the licensee had entered those items into their corrective action program and assigned actions to address the issues. The team reviewed a sample of root cause evaluations and significant condition reports to verify that the licensee had appropriately included industry operating experience.

(2) Assessment

Overall, the team determined that the licensee had appropriately evaluated industry operating experience for relevance to the facility, and had entered applicable items in the corrective action program. The team noted however that there is a lack of prioritizing of the condition reports for operating experience that led to untimely corrective actions. All condition reports documenting operating experience were initially assigned as conditions not adverse to quality, the lowest level of classification in the corrective action program. Condition reports were then screened for applicability, but there was no reprioritization or upgrading of the condition reports describing operating experience that was applicable to the plant.

Operating experience condition reports were left as conditions not adverse to quality regardless of their relevance. This resulted in delays in implementing actions in cases where operating experience led to recommendations. An example of this practice can be found in Condition Report 09-3902, which delineated necessary changes to emergency/abnormal procedures for manually resetting safety injections subsequent to a card failure. Another example was that the licensee was slow to implement NRC RIS 2005-20 "Operability Determinations and Functionality Assessments for Resolution of Degraded or Non-Conforming Conditions Adverse to Quality or Safety" in that the licensee took three years to implement the recommendations of RIS 2005-20, and then subsequently identified in July 2010, that their implementing procedures did not reflect industry practice as delineated in RIS 2005-20.

The lack of prioritization of operating experience condition reports was also identified by the previous NRC problem identification and resolution team inspection in August of 2008. The team did not identify safety issues associated with these delays. Once evaluated, assessments of the issues were appropriate. The team also determined that the licensee evaluated industry operating experience when performing root cause and apparent cause evaluations, as appropriate.

c. Assessment of Self-Assessments and Audits

(1) Inspection Scope

The team reviewed a sample of 29 licensee self assessments and audits to assess whether the licensee was regularly identifying performance trends and effectively addressing them. The team also reviewed audit reports to assess the effectiveness of assessments in specific areas.

(2) Assessment

The team concluded that the licensee's self assessments, though limited in scope and breadth, were generally effective in recommending corrective actions for licensee processes and programs.

d. Assessment of Safety Conscious Work Environment

(1) Inspection Scope

The team conducted three focus group sessions, each of a different department, with a total of 28 employees, representing a cross section of functional organizations, including supervisory and non-supervisory personnel. The interviews assessed whether conditions existed that would challenge an effective safety conscious work environment. The team requested that attendees complete a Focus Group Feedback Form, either including their name or anonymous, for recommendations on how to improve the interview process. The team also interviewed two individuals from the quality assessment program, and reviewed several self-assessment documents supporting their quality program.

In addition, the team reviewed the licensee's safety culture program. The team noted that South Texas Project was a pilot plant for the industry's initiative to self-assess the safety culture at nuclear facilities. The team interviewed licensee personnel and reviewed the results of the most recent safety culture meetings and documentation.

(2) Assessment

Overall, the team concluded that a safety conscious work environment exists at the South Texas Project. Employees showed familiarity with various programs to raise safety concerns, and appeared comfortable with submitting any issues. There was some unfamiliarity, however, with individuals in the Employee Concerns Program, and their location on site. Some individuals stated that they did not write condition reports, but rather passed the comments along to supervisors who then write the condition reports.

The team concluded that the licensee's safety culture pilot program was generally effective in identifying and correcting issues associated with a safety conscious work environment.

4OA6 Management Meetings

Exit Meeting

On September 16, 2010, an onsite exit was conducted on the last day of the onsite inspection. The preliminary results of the inspection were discussed with Mr. D. Rencurrel, Senior Vice President, Units 1 and 2, and other members of the staff. The licensee confirmed that no proprietary information was handled during this inspection.

#### 4OA7 Licensee-Identified Violations

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

Title 10 of the Code of Federal Regulations Part 50, Appendix B, Criterion XVI, states, in part, that conditions adverse to quality shall be promptly identified and corrected. Contrary to this, the licensee failed to promptly identify and correct two examples of conditions adverse to quality. Specifically, (1) between June 18, 2004, and August 20, 2010, the licensee identified that check valve SD-003A was degraded and leaking past its seat, and (2) between February 1, 2007, and August 20, 2010, four of six hold-down bolts for the standby diesel generator 13 turbocharger were degraded in that two were loose and two were sheared, but the licensee failed to promptly correct these conditions. These issues were entered into the licensee's corrective action program as Condition Report 10-15962. These two examples of a finding were evaluated using the Phase 1 worksheet in Inspection Manual Chapter 0609, "Significance Determination Process," and determined the finding to have very low safety significance because the two examples were design or qualification deficiencies confirmed not to result in loss of operability or functionality.

#### Attachments:

1. Supplemental Information
2. Information request

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee

C. Bowman, General Manager, Oversight  
J. Calvert, Manager, Training  
D. Cobb, Manager, Employee Concerns Program  
J. Cook, Supervisor, Engineering Projects  
R. Engen, Site Director, Engineering  
W. Harrison, Manager, Licensing  
B. Jenewein, Manager, Systems Engineering  
G. Janak, Manager Operations Division – Unit 1  
A. McGalliard, Manager, Performance Improvement  
J. Mertink, Manager, Maintenance  
L. Peter, Plant General Manager  
J. Pierce, Manager, Operations Training  
G. Powell, Vice President Engineering  
D. Rencurrel, Senior Vice President, Units 1 and 2  
M. Ruvalcaba, Manager, Testing and Programs  
R. Savage, Engineering Licensing Staff  
K. Taplett, Engineering Licensing Staff

#### NRC

M. Hay, Chief, Technical Support Branch, Division of Reactor Safety  
J. Dixon, Senior Resident Inspector  
D. Proulx, Senior Project Engineer  
B. Tharakan, Resident Inspector  
P. Jayroe, Project Engineer  
I. Anchondo, Reactor Inspector  
M. Williams, Reactor Inspector.

## LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened and Closed

None

## LIST OF DOCUMENTS REVIEWED

### PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
0PGP04-ZA-0002	Condition Report Engineering Evaluation	13
0PGP04-ZA-0101	Vendor Document Control Program	8
0PGP04-ZA-0328	Engineering Document Processing	10
0PGP03-ZO-0048	Operability Determination for Components Removed from the IST Program	1
0POP01-ZA-0049	Condition Report Operations Evaluation Program	5
0PGP03-ZE-0015	Inservice Testing Program	14
0PAP01-ZA-0101	Plant Procedure Writer's Guide	2
0PAP01-ZA-0102	Plant Procedures	10
0PGP03-ZA-0090	Work Process Program	34
0PGP03-ZA-0091	Configuration Risk Management Program	10
0PGP03-ZA-0504	Employee Concerns Program	12
0PGP03-ZX-0002	Condition Reporting Process	38
0PGP03-ZX-0013	Industry Event Analysis	7
0PGP03-ZO-9900	Operability Determinations and Functionality Assessments	1
0PGP01-ZO-011	Operability, Functionality, and Reportability Guidance	4
STP-707	Corrective Action Programs	1

PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
ACE-0001	Apparent Cause Evaluators Manual	1
RCA-0001	Root Cause Investigators Manual	11
WCG-001	Work Screening and Processing	21
WCG-002	Work Management Scheduling	21
MG-006	Work Execution and Closeout Program	8
WCG-0008	Preventing Recurring Equipment Problems	3
CAP-0001	CR Classification Guideline	4
OPSP02-RA-8022	Steamline, Blowdown, and High Range Radiation Monitor Channel Check	11

DRAWINGS

Drawing Number 4041-00245CE

AUDITS AND SURVEILLANCES

<u>NUMBERr</u>	<u>TITLE</u>
MN-09-0-51883	6 month CAP review Operations
MN-10-0-64032	CAP review for IOR 10-01
MN-08-0-40537	6 month CAP review Emergency Preparedness
MN-08-0-44323	6 month CAP review Access Authorization
MN-09-0-46595	6 month CAP review Radiological Protection
MN-09-0-47383	6 month CAP review Security/FFD
MN-09-9-53640	6 month CAP review Testing Engineering
MN-09-0-57643	6 month CAP review Chemistry
MN-10-0-58958	6 month CAP review Maintenance/Work Control
MN-10-0-60386	6 month CAP review Design Engineering
MN-10-9-60984	6 month CAP review Administrative Controls
MN-10-0-66134	6 month CAP review Fire Protection
MN-09-0-48912	6 month CAP review Nuclear Fuels
MN-10-0-58913	6 month CAP review Supply Chain
10-03 (TE)	Testing and Programs Quality Audit Report

## AUDITS AND SURVEILLANCES

RIS 2005-20 Quality Audit  
Independent Oversight Report (IOR) 08-02, STI #: 32424777  
Independent Plant Assessment 09-01, STI #: 32452933

## SELF-ASSESSMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
08-11880-9,	Engineering Support Personnel Training Program,	July 16, 2009
09-7473-8	Personal Safety Program	August 6, 2009
09-8548-3	Projects Program	August 20, 2009
09-16887-3	Nuclear Safety Culture Program	January 15, 2010
09-10165-6	Training Program Corrective Action Effectiveness	January 28, 2010
09-16953-7	Fatigue Rule Program	February 25, 2010
10-3030-10	Fire Watch Program	March 4, 2010
10-8165-6	Nuclear Industry Evaluation Program (NIEP)	May 20, 2010
10-7122	Corrective Action Program	June 10, 2010
08-12011-6	First Line Supervisor Effectiveness	June 17, 2010
10-14965-1	USA-STARS Outage Performance	August 12, 2010

## OPERATING EXPERIENCE REVIEWS

RIS 2005-20, "Revision to NRC Inspection Manual Part 9900 Technical Guidance, "Operability Determinations & Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety," Revision 1

RIS 2007-21, "Adherence to Licensed Power Limits," Revision 1

RIS 2008-26, "Clarified Requirements of Title 10 of the Code of Federal Regulations (10 CFR) Section 50.54(y) when Implementing 10 CFR Section 50.54(y) to Depart from a License Condition or Technical Specification"

RIS 2010-07, "Regulatory Requirements for Application of Weld Overlays and Other Migration Techniques in Piping Systems Approved for Leak-Before-Break"

Information Notice (IN) 2008-18, "Loss of a Safety-Related Motor Control Center Caused by a Bus Fault"

IN 2008-21, "Impact Of Non-Safety Electrical Support System Vulnerabilities On Safety Systems"

IN 2009-03, "Solid State Production System Card Failure Results in Spurious Safety Injection and Reactor Trip"



## OPERATING EXPERIENCE REVIEWS

IN 2009-09, "Improper Flow Controller Settings Renders Injection Systems Inoperable and Surveillance Did Not Identify"

IN 2009-11, "Configuration Control Errors"

IN 2009-16, "Spurious Relay Actuations Result In Loss of Power to Safeguards Buses"

IN 2009-22, "Recent Human Performance Issues at Nuclear Power Plants"

IN 2009-26, "Degradation of Neutron-Absorbing Materials in the Spent Fuel Pool"

IN 2010-01, "Pipe Support Anchors Installed Improperly"

IN 2010-05, "Management of Steam Generator Loose Parts and Automated Eddy Current Data Analysis"

IN 2010-08, "Welding and Nondestructive Examination Issues"

IN 2010-11, "Potential for Steam Voiding Causing Residual Heat Removal System Inoperability"

IN 2010-12, "Containment Liner Corrosion"

## MISCELLANEOUS

South Texas Project, Unit 1 and 2, Enclosure 2 – Safety Evaluation for Examinations from Special Treatment Requirements of 10 CFR Part 21, 50, and 100 (TAC MA6057, MA6058)

Letter from NRC Chairman Klein to Congressman Markey, Regarding South Texas Project Nuclear Power Plant and Force-on-Force Exercises at NRC-Licensed Facilities, dated December 22, 2006

Design Change Package DCP #08-62-403, "Valve Assembly Drawing for Anchor Darling 4-inch 900-lb Carbon Steel Gate Valve"

Safety Conscious Work Environment Review Employee Concerns Program (ECP) June Monthly Report (July, 10, 2008)

Conduct of Operations for Radiation Protection Chapter 9 Radiation Protection Condition Reporting Guideline, Revision 12

12

CONDITION REPORTS AND ASSOCIATED ROOT/APPEARANT CAUSE DETERMINATIONS

04-2431	08-13324	09-1197	09-11570	10-1442	10-13496
04-8770	08-13702	09-1508	09-12641	10-1800	10-14028
04-15971	08-13725	09-1532	09-12868	10-1954	10-14201
05-12633	08-14486	09-1562	09-12911	10-1973	10-14599
06-7814	08-14757	09-2091	09-13122	10-1993	10-14728
06-7815	08-14879	09-2511	09-13141	10-2123	10-14969
06-12195	08-15239	09-2535	09-13931	10-2264	10-15325
07-1198	08-15384	09-2592	09-14028	10-2294	10-15332
07-1696	08-15541	09-2622	09-14076	10-2353	10-15703
07-7030	08-15943	09-2891	09-14248	10-2404	10-15962
07-8374	08-16129	09-2900	09-14333	10-2453	10-16080
07-9621	08-16186	09-2976	09-14483	10-2569	10-16498
07-10159	08-16187	09-3031	09-14489	10-2579	10-16543
07-12991	08-16279	09-3427	09-14961	10-3103	10-16612
07-17965	08-16598	09-3435	09-14979	10-3630	10-17038
08-0897	08-16599	09-3902	09-15246	10-3698	10-17171
08-0936	08-16667	09-4914	09-15885	10-3702	10-17476
08-2697	08-16800	09-5469	09-16379	10-4150	10-17644
08-5399	08-16847	09-5554	09-16552	10-4408	10-17694
08-5486	08-17205	09-6149	09-16888	10-4417	10-17944
08-5642	08-17667	09-6451	09-17802	10-4527	10-17945
08-6127	08-17803	09-6502	09-17949	10-4891	10-17984
08-7991	08-17941	09-6503	09-18603	10-5720	10-18045
08-8059	08-18135	09-6753	09-18893	10-7048	10-18438
08-8427	08-18265	09-8146	09-19283	10-7789	10-19215
08-9591	08-18603	09-8326	09-19778	10-8234	10-19364
08-10584	08-18611	09-8327	09-19886	10-8275	10-19474
08-10784	08-18646	09-8593	09-20106	10-8281	10-19678
08-10998	08-18724	09-8980	09-20125	10-8827	10-19919
08-12117	08-18799	09-9477	09-20129	10-9048	10-20025
08-12145	08-18887	09-9492	09-20251	10-9154	10-20052
08-12573	08-18903	09-9563	09-20312	10-9179	10-20098
08-12749	08-19091	09-9933	09-20681	10-9354	10-20147
08-12791	08-19177	09-10131	09-20835	10-9361	10-20208
08-12797	08-19420	09-10502	09-20944	10-10570	10-20309
08-12812	08-19622	09-10616	10-0259	10-11259	10-20332
08-12868	09-0319	09-10660	10-0402	10-11520	
08-12944	09-771	09-10866	10-0419	10-12025	
08-13152	09-873	09-11188	10-0428	10-12338	
08-13243	09-1172	09-11301	10-1378	10-13201	

## NCV EFFECTIVENESS REVIEWS

NCV 2008003-01 (CRs 08-5486, -5399, -5486, -10584, -8059, & 06-12633, -12194, -7781, -12195)  
NCV 2008003-02 (CRs 08-10584, 08-8059, 06-10715, 05-12633, 06-12194, 06-7781, -12195)  
NCV 2008003-4OA7 (CR 08-5642)  
NCV 2008004-01 (CR 08-10784)  
NCV 2008005-01 (CRs 08-18903, 08-19296, 09-0184, 09-0195)  
NCV 2008005-4OA7 (CRs 07-8374, 04-17776)  
NCV 2008007-4OA7 (CR 08-18611)  
FIN 2008009-01 (CRs 08-10998, 08-12573)  
NCV 2008402-01 (CRs 08-18075, 08-6694, 08-17941)  
NCV 2009002-01 (CR 08-16598)  
NCV 2009002-02 (CRs 08-15541, 08-19420)  
NCV 2009002-03 (CR 08-15541)  
NCV 2009003-01 (CR 09-2891)  
NCV 2009003-02 (CR 08-16599)  
NCV 2009003-03 (CR 08-9589)  
NCV 2009003-04 (CRs 08-10023, 09-1562, 09-1508, 09-2976)  
NCV 2009004-01 (CRs 09-2876, 09-8980)  
NCV 2009005-01 (CRs 09-14961, 09-14248)  
NCV 2009301-01 (CR 09-20312)  
NCV 2009402-4OA7 (CR 0-0771)  
NCV 2009403-01 (CRs 09-13074, 09-11988, 08-14533)  
NOV 2009404-01 (CR 08-8066)  
NOV 2009404-02 (CR 08-8066)  
NCV 2010002-001 (CR 09-12241)  
NCV 2010002-002 (CR 09-10502)  
NOV 2010003-01 (CR 09-20106)  
NOV 2010003-02 (CR 09-14248)  
NCV 2010003-01 (CR 10-3630)

## INFORMATION REQUEST

**Information Request**  
**July 8, 2010**  
**Biennial Problem Identification and Resolution Inspection**  
**South Texas Project (STP) Electric Generating Station**  
**Inspection Report Number 2010006**

This inspection will cover the period from August 16, 2008 to August 20, 2010. All requested information should be limited to this period unless otherwise specified. To the extent possible, the requested information should be provided electronically in Adobe PDF or Microsoft Office format. Lists of documents should be provided in Microsoft Excel or a similar sortable format.

A supplemental information request will likely be sent during the week of August 27, 2010.

Please provide the following no later than August 20, 2010:

1. Document Lists

- a. Summary list of all corrective action documents related to significant conditions adverse to quality that were opened, closed, or evaluated during the period
- b. Summary list of all corrective action documents related to conditions adverse to quality that were opened or closed during the period
- c. Summary lists of all corrective action documents which were upgraded or downgraded in priority/significance during the period
- d. Summary list of all corrective action documents that subsume or "roll up" one or more smaller issues for the period
- e. Summary lists of operator workarounds, engineering review requests and/or operability evaluations, temporary modifications, and control room and safety system deficiencies opened, closed, or evaluated during the period
- f. Summary list of plant safety issues raised or addressed by the Employee Concerns Program (or equivalent)
- g. Summary list of all Apparent Cause Evaluations completed during the period
- h. Summary list of all Root Cause Evaluations planned or in progress but not complete at the end of the period

2. Full Documents, With Attachments

- a. Root Cause Evaluations completed during the period
- b. Quality assurance audits performed during the period
- c. All audits/surveillances performed during the period of the Corrective Action Program, of individual corrective actions, and of cause evaluations
- d. Corrective action activity reports, functional area self-assessments, and non-NRC third party assessments completed during the period (do not include INPO assessments)
- e. Corrective action documents generated during the period for the following:
  - i. NCV's and Violations issued
  - ii. LER's submitted
- f. Corrective action documents generated for the following (for those that were evaluated but determined not to be applicable, provide a summary list):
  - i. NRC Information Notices, Bulletins, and Generic Letters issued or evaluated during the period
  - ii. Part 21 reports issued or evaluated during the period
  - iii. Vendor safety information letters (or equivalent) issued or evaluated during the period
  - iv. Other external events and/or Operating Experience evaluated for applicability during the period
- g. Corrective action documents generated for the following:
  - i. Emergency planning drills and tabletop exercises performed during the period
  - ii. Maintenance preventable functional failures which occurred or were evaluated during the period
  - iii. Adverse trends in equipment, processes, procedures, or programs which were evaluated during the period
  - iv. Action items generated or addressed by plant safety review committees during the period

3. Logs And Reports

- a. Corrective action performance trending/tracking information generated during the period and broken down by functional organization
- b. Corrective action effectiveness review reports generated during the period
- c. Current system health reports or similar information
- d. Radiation protection event logs during the period
- e. Security event logs and security incidents during the period (sensitive information can be provided by hard copy during first week on site)
- f. Employee Concern Program (or equivalent) logs (sensitive information can be provided by hard copy during first week on site)
- g. List of Training deficiencies, requests for training improvements, and simulator deficiencies for the period

4. Procedures

- a. Corrective action program procedures, to include initiation and evaluation procedures, operability determination procedures, apparent and root cause evaluation/determination procedures, and any other procedures which implement the corrective action program.
- b. Quality Assurance program procedures
- c. Employee Concerns Program (or equivalent) procedures
- d. Procedures which implement/maintain a Safety Conscious Work Environment

5. Other

- a. List of risk significant components and systems
- b. Organization charts for plant staff and long-term/permanent contractors

Note: "Corrective action documents" refers to condition reports, notifications, action requests, cause evaluations, and/or other similar documents, as applicable.

This information should be uploaded on the Certrec IMS website no later than August 20, 2010. In addition, all electronic documents should be loaded onto a CD or DVD and sent via overnight carrier to:

U.S. NRC Region IV  
612 E. Lamar Blvd.  
Suite 400  
Arlington, TX 76011

Attn: Harry Freeman

Please note that the NRC is not currently able to accept electronic documents on thumb drives or other similar digital media.