

ENCLOSURE

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REGION IV

Inspection Report: 50-498/96-11
50-499/96-11

Licenses: NPF-76
NPF-80

Licensee: Houston Lighting & Power Company
P.O. Box 1700
Houston, Texas

Facility Name: South Texas Project Electric Generating Station (STPEGS)
Units 1 and 2

Inspection At: Matagorda County, Texas

Inspection Conducted: January 29 through February 15, 1996

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EXECUTIVE SUMMARY

A team of NRC inspectors reviewed the South Texas Project Electric Generating Station corrective action program and its implementation from January 29 through February 15, 1996. The NRC team used the guidance contained in NRC Inspection Procedure 40500, "Effectiveness of Licensee Controls in Identifying, Resolving, and Preventing Problems." The team focused on the licensee's implementation of the corrective action program in the areas of operations and engineering. The overall approach of the inspection was to evaluate the effectiveness of the licensee's corrective action program through review of activities in their normal sequence from identification and processing of a problem to correction and closeout.

During the first week of onsite inspection, the team reviewed the licensee's process for identifying and resolving problems. Through interviews with personnel and the review of records, the team noted that the corrective action program was being consistently used for identifying problems. The team also noted that the licensee's system for processing and tracking problems was well structured and functioning properly. Although the team noted some conditions adverse to quality, the inspection confirmed that these conditions had already been identified by the licensee and were being appropriately dispositioned through the corrective action program. During the second week of the onsite inspection, the team focused on licensee activities associated with the evaluation and correction of identified problems.

Overall, the team concluded that the South Texas Project Electric Generating Station had a strong, well-run corrective action program, capable of identifying, resolving, and preventing issues that degrade the quality of plant operations or safety. The team concluded that the corrective action program was comprehensive and effective; that management was involved in the process as demonstrated through their participation in the activities of the Nuclear Safety Review Board, the Plant Operations Review Committee, and the Condition Review Group; and, that licensee personnel had accepted and used the established corrective action program.

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- ATTACHMENT 1 - PERSONS CONTACTED AND EXIT MEETING
- ATTACHMENT 2 - INSPECTION FINDING INDEX
- ATTACHMENT 3 - LIST OF DOCUMENTS REVIEWED

DETAILS

1 INTRODUCTION

A team of NRC inspectors conducted an inspection using the guidance of NRC Inspection Procedure 40500, "Effectiveness of Licensee Controls in Identifying, Resolving, and Preventing Problems." The team focused on the implementation of the corrective action program in the areas of operations and engineering. The overall approach of the inspection was to evaluate the effectiveness of the licensee's corrective action program through review of activities in their normal sequence from identification and processing of a problem to correction and closeout. The team assessed the effectiveness of the licensee's corrective action program by review of procedures and corrective action program documents, interviews of licensee personnel, observation of work, and plant walkthrough inspections.

2 CORRECTIVE ACTION PROGRAM (40500)

2.1 Review of Procedures

The team reviewed the procedures listed in Attachment 3, Procedure OPGP03-ZX-0002, "Condition Reporting Process," Revision 11, described and established a method for identifying, classifying, trending, reporting, and correcting conditions that could impact the safe and reliable operation of the plants. The procedure defined a process which ensured that significant conditions adverse to quality were identified and corrected, that a root cause of the significant conditions was determined, and that actions were taken to prevent recurrence. The procedure defined a "condition" as the existence, occurrence, or observation of a situation that requires further review, evaluation, and/or action for resolution. The procedure also defined subcategories of conditions in order to properly prioritize them and focus attention on the most important issues. The team concluded from the review of the procedures and the observation of their implementation that they were well organized and capable of accomplishing their stated function.

2.2 Personnel Interviews and Work Observation

The team interviewed licensee operations, maintenance and engineering personnel and observed ongoing control room and engineering review activities. The team determined through these interviews and observations that the licensee's staff had confidence in the corrective action program. Personnel understood the need to identify deficient conditions and to process them through the corrective action program. The licensee's staff expressed no concern for adverse repercussions for using the corrective action program.

During one control room observation period, a team member noted that four problems occurred that warranted the initiation of a condition report. The team subsequently verified that a condition report for each problem was properly entered into the corrective action program tracking system and was appropriately prioritized and processed.

2.3 Plant Walkthrough Inspection

The team toured the mechanical-electrical auxiliary buildings, the turbine buildings, and the fuel handling building (Unit 2 only) and observed that the overall plant housekeeping and material condition of equipment was very good. The team noted a few minor equipment deficiencies; however, the licensee's staff had already discovered and documented these deficiencies.

3 CORRECTIVE ACTION ACTIVITIES IN THE OPERATIONS AREA (40500)

3.1 Review of Conditions Reports

The team reviewed 31 of the condition reports listed in Attachment 3 to determine the effectiveness of the implementation of the corrective action program by the operations department. The condition reports included operations personnel observations, conditions identified by quality assurance audits and surveillances, results of operations department self-assessments, and Plant Operations Review Committee issues. The team also reviewed the condition reports to verify that the corrective actions specified were appropriate and precluded repetition. The team also selected three condition reports to verify implementation of the specified corrective actions.

The team determined that condition reports were properly prioritized and tracked, that the corrective actions specified were appropriate and were capable of preventing recurrence, and that the corrective actions were adequately implemented.

3.2 Review of Field Performance Observations

The licensee implemented the field performance program in 1995 to provide direct licensee management observation of personnel and equipment performance. The program's goals were to: (1) continually improve individual and crew performance in operations, chemistry, health physics, and metrology through performance observations by management, supervision, and staff personnel, (2) continually improve plant conditions through periodic observations and inspections, and (3) continually measure training program effectiveness and the quality of on-the-job training through critical self-evaluation. These observations were intended to identify individual and crew strengths and weaknesses, and obstacles to performance.

The licensee summarized the results of this program in a report titled, "Results of Plant Operation Field Performance Observations," dated September 1995. The report contained an evaluation of field performance observations from March through September 1995. This report included positive and negative comments, observed strengths, areas needing improvement, and observed good practices.

The team determined that the field performance observation program would be an excellent addition to the corrective action program, depending on how the supervisory and peer observations were performed and how licensee management used the results. The program provided information that was not normally included in the corrective action process.

3.3 Review of Operator Work-Arounds

The team reviewed the licensee's controls for operator work-arounds. The licensee termed operator work-arounds as "total impact assessment" items. Total impact assessment items were equipment problems that required operator actions to compensate for the problem. The licensee's controls for total impact assessment items was highlighted as an area needing improvement by a station performance self-assessment that was performed in November 1995. The team noted that the licensee did not specify a numerical goal for these items. Instead, the licensee established a goal of having less than 1 hour of total impact per watchstation (i.e., one additional hour of operator actions, at every watch station, would be allowed for identified equipment problems that were not being immediately corrected). The control room staff maintained a list of the total impact assessment items in the control room. The list included both the estimated and actual time needed to perform additional actions due to equipment problems.

The team determined through interviews that the operators were familiar with the total impact assessment items list and were able to explain the meaning of each item. The team also observed that equipment problems were appropriately tagged on the control room panels. The team reviewed the list of total impact assessment items for significance of the equipment problems. None of the problems were a safety concern. Most of the problems were of recent origin. The oldest Unit 1 total impact assessment item was 9-months old. Similarly, the oldest Unit 2 item was 3-months old.

The team discussed the total impact assessment items list with selected shift supervisors. The shift supervisors stated that engineering and maintenance provided timely corrective action for operator total impact assessment items. The shift supervisors also stated that significant control room deficiencies were repaired in a timely manner. The team noted that work orders had been initiated for all of the total impact assessment items and that timely completion dates had been specified for the work orders.

Midway through the inspection there were 23 operator total impact assessment items on the Unit 1 list and 18 on Unit 2. The lists were included weekly in the daily communication and teamwork meeting package. Inclusion in the teamwork meeting package resulted in plant-wide visibility of total impact assessment items.

The team concluded that the licensee had effective controls for operator work-arounds.

3.4 Review of Licensee Effectiveness Reviews

Procedure OPGP03-ZX-0002 required the performance of effectiveness reviews for condition reports that identified significant conditions adverse to quality. The effectiveness review determined if the condition report corrective actions had been implemented effectively and if they were capable of preventing recurrence of similar events. The team reviewed five effectiveness reviews that were completed on closed condition reports to assess the quality of the reviews.

The team determined that effectiveness reviews were generally well performed. The effectiveness reviews strengthened the corrective action program.

4 CORRECTIVE ACTION ACTIVITIES IN THE ENGINEERING AREA (40500)

4.1 Review of Corrective Maintenance Condition Reports

The team reviewed the implementation of the corrective action program by the engineering department. This review included nine of the corrective maintenance condition reports listed in Attachment 3. The team reviewed the condition reports to determine engineering involvement in the process and the adequacy of engineering evaluations and instructions. The team also reviewed the root cause analysis for those cases for which an analysis was performed. The team determined that there was appropriate engineering involvement in most of the condition reports. Engineering had provided thorough/detailed engineering evaluations for significant conditions adverse to quality and conditions adverse to quality - (station level), except for two condition reports discussed below:

- During performance of preventive maintenance on Unit 2 turbine-driven auxiliary feedwater Pump 24, the licensee noted that a lockwasher was missing from the governor valve stem to the cam block connection. The discrepancy was documented on Condition Report 95-10084 and was categorized at a level below the significant condition adverse to quality - station level. As a followup, the team questioned licensee engineering staff as to how the lockwasher had been omitted and determined that the generic concerns associated with the Unit 1 installation had not been addressed.

The team determined that a flat washer had also been omitted on a similar valve in Unit 1. Maintenance personnel informed the team that the omission of the lockwasher in Unit 2 and the flat washer in Unit 1 was probably due to an insufficient drawing and incorrect installation practices by maintenance personnel. As a result, the licensee staff issued Procedure OPMPO4-AF-0002, "Auxiliary Feedwater Pump Turbine Maintenance," Revision 8, to include the vendor drawing which provided details of the lockwasher and flat washer. Licensee personnel also stated that, since the drawing did not indicate clearly the part designation, they planned to add a parts list to the drawing.

On February 15, 1996, the licensee initiated Condition Report 96-1704 to address the questions raised by the team and to implement further corrective actions to avoid recurrence of this problem. The team verified that the required corrective actions were documented in the corrective action program data base for tracking and closure. The team reviewed the licensee's additional corrective actions and considered them to be adequate.

- While performing preventive maintenance on the essential cooling water system Train C lube water strainer, craftsmen noted that a gasket was missing and that the hold down nut was severely corroded. Condition Report 95-13754 documented the noted condition. The operations work control group performed a walkdown of the system and recommended, on November 26, 1995, that the design engineering department review the identified condition. After requesting the design engineering evaluation of the condition report, the team determined that design engineering never received the condition report because planning had not forwarded the document. The team determined that this condition report had not been lost or overlooked, because the planner had scheduled work on this strainer for April 1996 and that this information had been placed in the computer data base. Although this was not timely action on the planner's part, the team concluded that this oversight eventually would have been discovered when the condition report was reviewed for closure. Maintenance initiated Condition Report 96-1661 to address this issue. The team concluded that the licensee staff's corrective actions were adequate.

The team concluded from this review of condition reports and interviews with engineering personnel that the engineering department staff was usually effective in identifying and correcting problems. Engineering generally conducted thorough detailed root cause/apparent cause analyses when required. The engineering staff was thorough and consistent in their operability/reportability determinations of condition reports.

4.2 Review of Trending/Repetitive Equipment Problems

The team identified through discussions with licensee engineering personnel and review of past NRC inspection reports, that problems had been previously identified with the licensee's ability to effectively identify and resolve repetitive equipment problems. The licensee established a reliability engineering organization, whose assigned function was to trend and evaluate system and component performance, to address this issue.

The team selected six examples of repetitive problems with plant equipment to determine if equipment problems were being appropriately tracked and trended by reliability engineering. The team also reviewed reliability engineering actions resulting from the trending of equipment problems to determine if appropriate corrective actions were initiated or proposed. The team determined that repetitive safety significant equipment problems were being trended and were being resolved.

The team noted that all critical systems had dedicated system engineers. The system engineers also trended the performance and took actions to maintain the performance of critical systems. The team interviewed system engineers for two high risk systems and determined that they tracked their system functions and availability. The system engineers maintained system health books which documented any open condition reports and deficiencies, and monitored system parameters. The team concluded that system engineers were knowledgeable of their systems.

The team concluded that the licensee's equipment problem trending program was well managed, effective, and capable of identifying and resolving repetitive equipment problems. The team considered that the establishment of the reliability engineering organization significantly improved the trending and resolution of equipment problems.

4.3 Review of Design Change Packages

The team selected three conditions reports which resulted in design change packages. The team noted that design engineering evaluated the condition reports and developed modifications/design change packages as a result of proposed corrective actions. The team reviewed the condition reports and modifications for:

- Scope of engineering involvement
- Adequacy of engineering review
- Adequacy of root cause or apparent cause determinations
- Adequacy of 10 CFR 50.59 safety review screening/evaluation
- As-built configuration after the design change, and
- Confirmation that the licensee revised or updated documents (e.g., drawings, vendor manual) as a result of the design change.

The documents reviewed are discussed below:

- Design Change Package 93-3409-5

This design change package installed K-Line circuit breakers in Unit 2 Load Center 2W. Supplement 1 to this design change revised test values for the electrical setpoint index for the K-Line circuit breakers being installed. The design change package contained the appropriate documentation (i.e., drawings, 50.59 screening/evaluation form, and vendor manual instructions).

The team verified in the field that the correct breaker was installed as required by the design change.

- Modification 92042

This modification involved the replacement of the auxiliary feedwater flow control valve trim with a new trim, which would allow for throttling of auxiliary feedwater flow rates to less than 50 gallons per minute without inducing downstream piping vibration. The 10 CFR 50.59 review indicated that the new trim did not change the requirements of the Updated Final Safety Analysis Report.

The team reviewed this modification and found that engineering did a thorough evaluation of this modification before implementation. The team verified that applicable drawings, material list, and procedures were updated to indicate the design change. The team did not identify any discrepancies with the 10 CFR 50.59 review conducted by design engineering.

- Modification 91042

This modification provided a way to simplify the removal of Unit 2 Reactor Coolant Pump Motor 2D and reduce the associated maintenance and repair effort. This included cutting associated piping and adding pipe flanges.

The team verified that documents were revised to show the design change by randomly selecting piping and instrumentation drawings. The team also noted that design engineering reviewed the seismic analyses for this modification. No discrepancies were identified.

The team also verified in the field that four other design change packages had been installed as designed.

The team reviewed the licensee staff's process for updating and maintaining drawings current in accordance with Procedure OPGP04-ZA-0328, "Design Drawing Control and Revision Requirements for Design Drawings, Documents and Vendor Technical Information," Revision 4, dated March 9, 1995. The procedure stated that key drawings were ". . . controlled design drawings which are used by plant operators in evaluating plant status in both normal and off-normal conditions . . ." and were required to be updated within 15 working days of an amendment to the drawing. The team reviewed 24 key drawings in Unit 1 and 18 key drawings in Unit 2 and verified that each drawing was properly annotated with the correct amendment number and that the design change document describing the amendment was available to the operators for their use. The team verified that the operators were cognizant of the design change documents available in the control room and that they understood how to access that information. The team also confirmed that the licensee staff was updating drawings within 15 working days.

Overall, the team concluded that the licensee properly reviewed the design change packages for any unreviewed safety concerns. The team confirmed that the licensee updated design basis documents in a timely manner. The licensee performed and documented detailed and thorough engineering evaluations in the design change packages. The team concluded that the licensee effectively implemented the design change program.

4.4 Condition Reports

The team reviewed approximately 25 condition reports issued since June 1995, to determine the adequacy of engineering involvement and the adequacy of engineering evaluations and corrective actions. The team also reviewed the corrective actions performed by the licensee staff associated with these condition reports to determine if they had been properly implemented.

The team determined that the licensee was appropriately identifying significant issues and correcting them in a timely fashion. Engineering evaluations that were performed and documented in the condition reports were thorough. Good root/apparent cause analyses were performed.

4.5 Engineering Personnel Interviews

The team interviewed various engineers regarding their roles and responsibilities to assess their knowledge on assigned and back up systems, to determine if they were identifying problems and how they were documenting these problems, and to assess their understanding of the corrective action program.

The engineers interviewed were aware of their roles and responsibilities in the plant organization and seemed knowledgeable of their assigned system and any assigned backup system(s). All of the engineers interviewed were knowledgeable of the corrective action program and were aware of when and how to document an identified problem.

5 OPERATING EXPERIENCE FEEDBACK (40500)

5.1 Operating Experience Information Reports

The team reviewed the licensee staff's utilization of operating experience feedback to evaluate and assess the timeliness and adequacy of licensee actions. The team focused on the licensee staff's effectiveness to assess and evaluate operating events, to inform appropriate personnel of the results, and to initiate corrective actions for information obtained both within and outside the licensee staff's organization.

The team reviewed Procedure OPGP03-ZX-0013, "Industry Events Analysis," Revision 2, which described and established a uniform method for screening, reviewing, and responding to industry operating experience information. The procedure stated that the purpose of the industry events analysis procedure was to reduce the risk of occurrence at South Texas Project Electric Generating Station of events or conditions experienced at other plants. The industry events analysis procedure required reviews and assessments of information regarding events. Where applicable, the licensee staff used the industry events procedure to improve licensee staff practices, procedures, and equipment. In addition, Procedure OPGP03-ZX-0013 required a screening to be conducted to determine if an industry event was applicable to South Texas Project Electric Generating Station, if a plant impact evaluation was required, and if a condition report was warranted.

The team noted that the licensee assigned a responsible individual to evaluate and identify all issues associated with an operating experience source document. The team reviewed operating experience reports listed in Attachment 3. The team's review of operating experience reports determined

that the responsible individual appropriately reviewed and identified applicable events for the South Texas Project Electric Generating Station, identified any lessons learned to prevent or mitigate the event, determined the impact of the issue on operability of plant equipment, and considered the need for immediate corrective actions.

The team noted that the responsible individual entered the approved corrective actions into the condition report data base and tracked the actions to completion. In addition, the team determined that the responsible individual updated the data base to reflect the review completion date, distributed operating experience reports to responsible persons for implementing required action, reviewed closeout information, and, if acceptable, authorized closure of the condition report action items. The team noted that experienced personnel who were knowledgeable in the subject area performed evaluations of operating experience reports.

The team determined that the scope of Procedure OPGP03-ZX-0013 included the review of operating experience reports obtained from the NRC. The procedure stated that NRC bulletins and generic letters were usually processed by the licensee's nuclear licensing group, with an information copy sent to the industry events analysis group. A recent quality assurance department audit determined that nuclear licensing was not following the administrative requirements of Procedure OPGP03-ZX-0013 for receiving and processing of NRC bulletins and generic letters. Condition Report 96-731 was issued on January 24, 1996, and the condition was being evaluated during the inspection period. The team reviewed four NRC bulletins and generic letters that were processed by the nuclear licensing group and determined that thorough technical reviews were performed.

5.2 Vendor Technical Information

The team reviewed Procedure OPGP04-ZA-0108, "Control of Vendor Technical Information," Revision 3, and the implementation of the procedure to determine if corrective actions had been established to resolve a concern identified in the diagnostic evaluation team report for South Texas Project Electric Generating Station dated June 10, 1993. The report noted that the licensee staff had problems with incorporating vendor information amendments. In 1995, the licensee developed the vendor manual consolidation pilot project to develop a better method for processing vendor manuals and industry experience information. This effort included updating all vendor manuals and associated design drawings. The licensee had initiated the program prior to this inspection, but the updating of vendor manuals and associated design drawings was not completed.

The team selected six condition reports and two 10 CFR Part 21 reports relating to vendor supplied information to determine if vendor technical information was being appropriately controlled. The team determined that vendor documents, site procedures, and drawings affected by this information were properly updated. The documents reviewed are listed in Attachment 3.

The team concluded that the licensee had established a process that provided for proper receipt, review, approval, and distribution of vendor supplied technical information applicable to South Texas Project Electric Generating Station.

6 SELF-ASSESSMENT ACTIVITIES (40500)

6.1 Review of Plant Operations Self-Assessment Activities

The team reviewed the self assessments listed in Attachment 3 to determine the effectiveness of the self assessments and to ascertain that the licensee followed appropriate corrective action program requirements.

Operations personnel had performed plant operations self-assessments on a routine basis. In addition, licensee senior management had requested that a special independent assessment be performed to assess several recent human performance errors. Subsequently, the quality assurance department had performed an assessment between September 20 and October 5, 1995, of the recent human performance errors. The quality assurance assessment concluded that the errors represented a decline in performance and raised concerns with respect to the implementation of previous corrective actions. The assessment resulted in recommendations for reducing human performance errors. The licensee had issued Condition Report 95-12695 to identify the condition and to assure completion of recommended actions, and had assigned a completion due date of May 15, 1996.

The team interviewed operations management to determine what actions had already been implemented to reduce human performance errors. The licensee staff stated that the primary action was to reconfirm management's expectations to the plant staff. An avenue for this was a scheduled human performance day. The human performance day consisted of a 2- to 3-hour stoppage of all nonessential activities to enable the licensee to present management's expectations to the plant staff and to allow the various work groups to discuss events and issues. Management's expectations presented at the human performance days included:

- Personal accountability for performance at all levels;
- Techniques to achieve a zero error environment, including STAR [stop, think, act, review], repeat-backs, self-checking, and questioning attitude;
- Procedural compliance;
- Use of feedback techniques, including the constructive discipline program;
- Documentation of errors and deficiencies; and,
- Application of expectations during training.

The team determined that human performance was being trended by the condition review group. The corrective action program data base provided the capability for monitoring of event codes to identify adverse trends determined by threshold limits established by each department. The team determined that human performance event code data trends and corrective actions for adverse trends were being evaluated by the various departments.

The team reviewed several operational self-assessments and determined that the self assessments were very self-critical. The team's review indicated that issues identified during these assessments were entered into the corrective action program.

6.2 Review of Engineering Self-Assessment Activities

The team reviewed the quality assurance audits and surveillances and departmental self assessments listed in Attachment 3 to evaluate the adequacy of engineering conclusions and corrective actions. The team also performed an evaluation of the engineering department's followup of concerns identified by the safety committees.

The audits, surveillances, self assessments, and related condition reports reviewed by the team are identified in Attachment 3 of this report. The reviewed documents identified concerns, deficiencies, and recommendations. Condition reports were issued to identify noted conditions and to track the corrective actions for each identified concern and deficiency. The team noted that engineering conclusions and corrective actions were appropriate. The team reviewed some of the corrective actions specified in these condition reports and found both the specified and completed corrective actions to be adequate.

The team reviewed three corrective actions for engineering items identified by the nuclear safety review board and plant operations review committee. The team verified that condition reports had been issued to track each specific engineering followup item. The condition reports reviewed are identified in Attachment 3 of this report. The team determined that the licensee staff's followup activities for these engineering items were adequately performed.

7 ONSITE AND OFFSITE SAFETY REVIEW COMMITTEE ACTIVITIES (40530)

The team reviewed the activities of the plant operations review committee (or onsite review committee) and the nuclear safety review board (or offsite review committee) for the period June 1995 through January 1996. The team reviewed the minutes of meetings, observed three operations review committee meetings, and interviewed selected licensee personnel. The nuclear safety review board did not meet during the period when the inspection team was onsite.

The team observed that the operations review committee meetings were well attended and few alternates were required. Committee members were well prepared to discuss the agenda items. In attending two of the regularly scheduled committee meetings, the team noted that each meeting was well planned and followed the published agenda.

The team also had the opportunity to attend an unscheduled operations review committee meeting called to review a proposed submittal to the NRC requesting enforcement discretion from the limiting condition for operation action statement of Technical Specification 3.8.1.1.b regarding Standby Diesel Generator 11 operability. Although the meeting was held in the evening after regular working hours, the team noted that the committee did not rush the discussions and allowed itself the opportunity to review all questions thoroughly. Other personnel were present to provide support and answer questions in the areas of probabilistic safety analysis and licensing. The team noted that all questions raised were resolved and the submittal approved with comments. Since the root-cause analysis of the diesel failure was still ongoing at the time of the meeting, the committee chairman withheld final approval until he had the opportunity to review the changes proposed by the committee and verify that the root-cause determination was complete and described in the proposed submittal. Later that evening, the licensee staff completed repairs to the diesel and eliminated the need to request enforcement discretion.

From the minutes of the operations review committee, the team selected a sample of six condition reports reviewed by the committee in the areas of operations and engineering to verify that they received the appropriate focus on safety implications and that followup actions directed by the committee were performed. The team determined that, in all cases, this was done. In reviewing the minutes of the committee, the team noted that seven items had been disapproved and required resubmittal to the committee. The team determined that the committee had reviewed again and approved four of the issues and that a tracking mechanism was in place to ensure that issues were reintroduced to the committee for approval prior to closeout.

The team noted from the nuclear safety review board minutes (Committee Meeting 95-06) that the operations review committee minutes were criticized for not being uniform in content and not providing, at times, sufficient descriptive information to allow ". . . the reviewer to understand nonroutine PORC issues." The team determined through discussions with nuclear safety review board members and the operations review committee secretary that this issue had been resolved.

Although no nuclear safety review board meetings were conducted during the period that the inspection team was onsite, the team reviewed the meeting minutes from the full board, as well as those from the audit, unreviewed safety question, and corrective action program committees for the period June 1995 through December 1995. Overall, the team determined that the board conducted business in accordance with Technical Specification 6.5.2 and performed the reviews required by Section 6.5.2.7. The board demonstrated an awareness of the corrective action program and its impact on plant performance. In particular, the board requested and received additional briefings on the corrective action program from the manager of operating

experience and other department managers as well as reviewed audits and assessments of the corrective action program that had been performed. The team noted that the board made critical comments in the areas of self-assessment findings (tracking and resolution), human performance issues, and resolution of certain condition reports. Through interviews with cognizant licensee personnel and reviews of documentation, the team determined, in general, that the licensee staff took appropriate action in response to board recommendations and comments.

The team concluded that the safety review committees performed their Technical Specification assigned functions and were effective. The safety review committees' emphasis on the corrective action program was noteworthy and seemed to underscore management's commitment to the process.

8 FOLLOWUP OF PREVIOUSLY IDENTIFIED ITEMS (92903)

8.1 (Closed) Licensee Event Report 498/93-012, Revision 1: Technical Specification Violation Due to Incorrect Settings of Several Molded Case Circuit Breakers

Background

The licensee discovered, while both units were shut down, that several 480Vac circuit breakers could experience unexpected trips due to incorrect settings. The licensee declared five Unit 1 and seven Unit 2 safety-related motor-operated valves inoperable due to the reported condition. The licensee determined that the cause of the event was the lack of clarity of the instructions for setting circuit breaker magnetic adjustable elements.

The licensee staff's corrective action included testing the 12 breakers. The licensee determined that all the breakers were operable as tested.

Followup

The team verified that the engineering electrical setpoint index and Procedure OPMP05-NA-0004, "Molded Case Circuit Breaker Test," were revised to clarify setting of the breaker magnetic adjustable elements and were adequate to perform the circuit breaker testing. The team reviewed the applicable breaker test documentation that showed that the breakers were tested and set to the trip settings that were required. This event had minimal safety significance. The team determined that the licensee staff's corrective actions were proper.

8.2 (Closed) Licensee Event Report 498/92-019, Revision 0: Calculation Errors in the Setpoint Curves for the Cold Overpressure Mitigation System

Background

The licensee discovered a calculation error that affected the power-operated relief valves' setpoint curves for the cold overpressure mitigation system. The error was discovered during a review of information received from another plant. The error was due to the vendor neglecting to allow for the pressure

loss through the reactor core. This resulted in a higher pressure at the reactor core midplane elevation than at the sensing point in the reactor coolant system hot-leg piping. This would result in the power-operated relief valves opening at a higher pressure. The licensee staff's immediate corrective action was to issue a justification for continued operation for both units and lower the setpoint to a conservative level.

Followup

The team reviewed the justification for continued operation and the licensee's Technical Specification amendment request dated March 6, 1994. The request modified Technical Specification Figure 3.4-4, "Nominal Maximum Allowable PORV Setpoint for the Cold Overpressure System," to incorporate the revised setpoint. The change request was approved by the NRC on August 3, 1994. The team determined that the licensee staff has properly resolved the design error. The licensee staff demonstrated good use of operating experience data from other plants.

8.3 (Closed) Inspection Followup Item 498:499/9344-03: Absorbent Material Found in Standby Diesel Generator 23 Cam Gallery

Background

During a preventive maintenance inspection of Standby Diesel Generator 23, absorbent material was found on the right side of the cam gallery in two different locations.

Followup

The team determined through discussions with licensee personnel who had last performed the preventative maintenance activity on Standby Diesel Generator 23 that no absorbent material was present when the cam covers were closed. In addition, the team reviewed the revised Preventive Maintenance Work Instruction, "Model 47448," and verified that a quality control maintenance verification point had been added to the procedure to perform a cleanliness inspection of the camshaft gallery prior to closure. The team considered the actions taken by the licensee staff to ensure cleanliness of the camshaft gallery to be appropriate.

8.4 (Closed) Inspection Followup Item 498:499/9344-04: Tracking and Disposition of All Open Items Identified in the Licensee Staff's Closure Package

Background

During inspection of standby diesel generator open items, in preparation for restart, the licensee staff stated that any additional items that were identified would be classified and entered into their tracking system. This inspection followup item was opened to track the licensee staff's disposition of those additional items.

Followup

The team was informed by the licensee that Condition Report 94-57 was issued on January 27, 1994, to track "deferred standby diesel generator items". A total of 53 action activities were identified in the condition report. The team determined that 52 of the 53 items identified in the condition report have been completed. The last remaining activity depended on implementation of the maintenance rule for diesels and was not scheduled for completion until July 1996. The team determined that the corrective action condition report system was the appropriate mechanism to account for these additional diesel generator items and was satisfied that they were being tracked to completion.

8.5 (Closed) Inspection Followup Item 498,499/9425-01: Revised Corrective Action Program

Background

During the last review of the corrective action program by the NRC, the inspection team noted that the licensee staff was making extensive revisions to the program and recommended that an evaluation of the effectiveness of these revisions be done.

Followup

During this inspection, the team extensively reviewed the revised corrective action program as implemented by Procedure OPGP03-ZX-0002, "Condition Reporting Process," Revision 11. The team determined that the revised program was effective.

9 REVIEW OF UPDATED FINAL SAFETY ANALYSIS REPORT (UFSAR) COMMITMENTS

A recent discovery of a licensee staff operating their facility in a manner contrary to the UFSAR description highlighted the need for a special focused review that compares plant practices, procedures, and/or parameters to the UFSAR descriptions. While performing the inspections discussed in this report, the team reviewed the applicable portions of the UFSAR that related to the areas inspected. The team verified that the UFSAR wording was consistent with the observed plant practices, procedures, and/or parameters.

The team reviewed the licensee staff's process for maintaining the UFSAR current by selecting five action items resulting from plant operations review committee decisions and verifying that they were appropriately processed as UFSAR approved change packages that were distributed internally to UFSAR holders for use in accordance with Step 5.2.4.2 of Procedure OPGP05-ZN-0004, Revision 3, dated November 6, 1995.

The licensee staff informed the team of an ongoing program by South Texas Project Electric Generating Station to review and verify the accuracy of the UFSAR. The licensee initiated the effort as a result of Condition Reports 95-10910, dated September 20, 1995, and 94-1009. Condition Report 94-1009 noted "out-of-date" statements in the Final Safety Analysis Report, Chapter 12. The team reviewed a matrix prepared by the licensee staff that assigned review responsibility for each UFSAR section by department. The team noted that the licensee staff is scheduled to complete this effort in time for the next UFSAR update (Revision 5).

ATTACHMENT 1

PERSONS CONTACTED AND EXIT MEETING

1 PERSONS CONTACTED

1.1 Licensee Personnel

W. Cottle, Group Vice President, Nuclear
J. Groth, Vice President, Nuclear Generation
T. Cloninger, Vice President, Nuclear Engineering
H. Butterworth, Manager, Unit 2 Operations
J. Calloway, Owner's Liaison
J. Carlin, Manager, Nuclear Training Department
J. Cottam, Engineering Supervisor
D. Daniels, Manager, Operating Experience Group
W. Dowdy, Continuous Improvement Team Member
J. Fast, Manager, Refueling
M. Forsyth, Supervisor, Reliability Engineering
R. Gangluff, Manager, Chemistry
M. Gattis, Chemistry Specialist
R. Gibbs, Unit Supervisor
A. Granger, Administrator, Quality
M. Hardt, Director, Nuclear Division, City Public Service
S. Head, Supervisor, Compliance
M. Johnson, Licensing Specialist
T. Jordan, Manager, Systems Engineering
M. Kanavos, Manager, Mechanical Fluid Systems
J. Lanier, Director Joint Project, City of Austin
J. Lovell, Unit 1 Operations Manager
C. Lunsford, Maintenance Supervisor
B. MacKenzie, Supervisor, In-house Events
F. Mangan, General Manager, Plant Services
L. Martin, General Manager, Nuclear Assurance & Licensing
R. Masse, Unit 2 Plant Manager
M. McBurnett, Manager, Licensing
S. Melton, Supervising Engineer
P. Morales, Coordinator
L. Myers, Unit 1 Plant Manager
G. Parkey, General Manager, Generation Support
R. Rehkugler, Director, Quality
S. Rosen, Manager, Industrial Relations
G. Sandolin, Supervisor
C. Sayko, Manager, Plant Project
D. Schulker, Compliance Engineer
J. Sheppard, Assistant to Executive Vice President
M. Smith, Administrator, Audits and Assessments
A. Spencer, Operations Support Manager
D. Stark, Manager, Technical Support
D. Towler, Quality Assurance Surveillance Supervisor
G. Weldon, Manager, Staff Training Division

1.2 NRC Personnel

D. Loveless, Senior Resident Inspector
J. Keeton, Resident Inspector
W. Sifre, Resident Inspector

2 EXIT MEETING

An exit meeting was conducted on February 15, 1996. During this meeting, the team summarized the scope and findings of the inspection. The licensee did not express a position on the inspection findings documented in this report. The licensee staff acknowledged the findings presented at the exit meeting. The licensee did not identify as proprietary any information provided to, or reviewed by, the team.

ATTACHMENT 2

INSPECTION FINDING INDEX

The following inspection followup items were closed:

- Inspection Followup Item 498/93-109;499/93-109 (LER 93-012)
- Inspection Followup Item 498/93-10;499/93-10 (LER 92-019)
- Inspection Followup Item 498/9344-03;499/9344-03
- Inspection Followup Item 498/9344-04;499/9344-04
- Inspection Followup Item 498/9425-01;499/9425-01

ATTACHMENT 3

LIST OF DOCUMENTS REVIEWED

1 PROCEDURES

- Procedure OPGP03-ZX-0013. "Industry Events Analysis." Revision 2
- Procedure OPGP03-ZX-0002. "Condition Reporting Process." Revision 11
- Procedure OPGP03-ZA-0090. "Work Process Program." Revision 14
- Procedure OPQP01-ZA-0015. "Overview Scheduling Process." Revision 0
- Procedure OPOP01-ZQ-0032. "Plant Operations Department Self-Assessment Program." Revision 3
- Procedure NGP-112. "Self- Assessments." Revision 0
- Procedure NGP-131. "Corrective Action Program." Revision 0
- Procedure OPGP03-ZQ-0003. "Temporary Modifications." Revision 17
- Procedure OPGP04-ZA-0002. "Condition Report Engineering Evaluation Program." Revision 2
- Procedure OPGP04-ZE-0309. "Design Change Package." Revision 2
- Procedure OPQP01-ZA-0015. "Overview Scheduling Process." Revision 0
- Procedure QAP-2.8. "Plant and Vendor Audits." Revision 6. Interim Change Notice QAP-2.8-4
- Procedure QAP-2.9. "Plant and Vendor Surveillances." Revision 9. Interim Change Notice QAP-2.9-2
- Procedure OPGP05-ZA-0002. "10CFR50.59 Evaluations." Revision 3
- Procedure OP003-ZG-0008. "Power Operations." Revision 9
- Procedure OPGP04-ZE-0310. "Plant Modifications." Revision 3
- Procedure OPGP04-ZA-0108. "Control of Vendor Technical Information." Revision 3
- Procedure GPMP04-AF-0002. "Auxiliary Feedwater Pump Turbine Maintenance." Revision 10 (used to verify that corrective actions were complete)
- "System Engineering Guidelines." Revision 4

2 AUDITS

- Quality Audit Report 95-05 (DE) - "Design Engineering," dated August 8, 1995.
- Audit Report 94-15, "September 27 through October 25, 1994

3 QUALITY SURVEILLANCES

- Surveillance No. 95-045, "1RE05 Refueling Outage.", March 1 through April 25, 1995
- Surveillance No. 95-083, "Plant Operations - Shift Operations, Staffing Levels, Work Practices, Support Organizations, Communications, and Industrial Safety," July 30 and 31, August 1 and 2, and September 14, 1995
- Surveillance No. 96-001, "Operator Aids," December 27 and 28, 1995 and January 2 and 11, 1996
- Surveillance No. 95-066, "Unit 2, Plant Operator's Routine Activities, Housekeeping, Industrial safety, Shift Operations, Work Practices, Communications," June 24, 25, 28, and 29, and July 5 and 11, 1995
- Surveillance No. 95-073, "Licensed Operator Requalification Training," July 17, 18, 20, 25, 26, 27 and August 2 and 3, 1995
- Surveillance No. 95-098, "2RE04 Refueling Outage," October 2 through November 30, 1995
- Surveillance No. 95-089, "Unit 1 Startup Activities, Shift Operations, Major Evolution, Work Practices, Communications, Management Oversight, Chemistry Laboratory Activities, Qualifications, Chemistry Instrument Control, Radiation Work Practices, Condition Reporting, and Procedure Adequacy," August 30 and 31, and September 4, 5 and 12, 1995
- Surveillance No. 95-087, "Plant Operations, Licensed Operator, Fire Brigade and Respirator Physicals," August 15, 16, 21, 23, 24, and 29, and September 5-7, 1995
- Surveillance No. 95-064, "Reliability Engineering Vibration Monitoring Program, dated July 17, 1995.
- Surveillance No. 95-081 "Temporary Modification Program Implementation," dated August 21, 1995.
- Surveillance No. 95-101, "Freeze Protection," dated January 8, 1996.

4 LICENSEE SELF ASSESSMENTS

- Station performance Self Assessment Covering period August 1994 - October 1995," dated November 1995
- Special Independent Assessment, "Human Performance Errors," performed from September 20 nd October 5, 1995, dated October 10, 1995
- Plant Operations Self-Assessment performed from May 9-17, 1995 dated June 6, 1995.
- Plant Operations Self-Assessment performed from February 20-22, 1995, dated March 10, 1995.
- Technical Support Engineering "1RE05 Outage Assessment Report," performed March 1, 1995 to April 16, 1995.
- Design Engineering Department report, "Self Assessment 10 CFR 50.59," of screening forms, dated April, 1995.
- "First Quarter 1995 Nuclear Engineering Condition Report Summary."
- A contractor letter, "Submittal of Task 3 of STP Setpoint Assessment (Identification of Setpoints with and without calculations)," dated June 2, 1995.
- Nuclear Fuel and Analysis Department report, "Boraflex self-assessment," dated June 5, 1995.
- A contractor report on an independent design review of design change package No 95-6642-44, "South Texas Project Standby Diesel Generator Test Mode Start Switch Modification," dated August 28, 1995.
- Nuclear Safety Evaluation Report (NSE) 95-06, "Corrective Action Program Assessment," dated September 14, 1995.
- Technical Support Engineering "2RE04 Outage Assessment Report," performed October 2, 1995 to November 5, 1995.
- Nuclear Engineering organization "Nuclear Engineering Self-Assessment," dated January 15, 1996.
- Maintenance Self Assessment 95013, Repeat Maintenance Program, September 14, 1995

5 CONDITIONS REPORTS

- CR 94-1769
- CR 94-1806
- CR 94-1921
- CR 94-1922
- CR 94-1923
- CR 94-2010
- CR 94-2726
- CR 94-2732
- CR 94-2740
- CR 94-2742
- CR 94-2745
- CR 94-3694
- CR 94-3698
- CR 94-3772
- CR 95-5354
- CR 95-7179
- CR 95-8584
- CR 95-9390
- CR 95-9588
- CR 95-10015
- CR 95-10560
- CR 95-10612
- CR 95-11718
- CR 95-12252
- CR 95-14162
- CR 95-14536
- CR 96-104
- CR 96-156
- CR 96-157
- CR 96-187
- CR 96-304
- CR 94-1583
- CR 95-8571
- CR 95-8586
- CR 95-8649
- CR 95-8860
- CR 95-9099
- CR 95-9100
- CR 95-9101
- CR 95-9102
- CR 95-9485
- CR 95-10233
- CR 95-10234
- CR 95-10236
- CR 95-10416
- CR 95-10561
- CR 95-10936
- CR 95-13307
- CR 94-1872
- CR 94-3617
- CR 95-547
- CR 95-644
- CR 95-943
- CR 95-984
- CR 95-1084
- CR 95-1103
- CR 95-1110
- CR 95-5986
- CR 95-6697
- CR 95-7228
- CR 95-7414
- CR 95-7820
- CR 95-11756
- CR 95-8663
- CR 96-1144
- CR 95-5826
- CR 95-7375
- CR 95-8611
- CR 95-10084
- CR 95-12020
- CR 95-11944
- CR 95-8094
- CR 95-13754
- CR 95-12431
- CR 95-10456
- CR 95-11585

6 OPERATING EXPERIENCE REVIEW DOCUMENTS

- Plant Impact Evaluation (PIE) 95-014. "Control Rod not fully inserted after scram"
- PIE 94-015. "Loss of Offsite power"
- PIE 95-017. "Problems with latching mechanism in Potter and Brumfield"
- PIE 95-029. "Problems with General Electric CR2940 contact blocks"

- PIE 94-038, "Removal of RV head with a control rod at 210 steps"
- PIE 95-044, "Vibration caused by increased recirculation flow in a BWR"
- PIE 95-054, "STP AFW stem problem, EDG thermocouple"
- PIE 95-79, "Main Generator Bus Duct Events Resulting from Inadequate Maintenance Work"
- PIE 95-096, "Turbine Failure results in Hydrogen Fire and Subsequent Station Blackout"
- PIE 95-097, "Brachytherapy incidents involving treatment planning errors"
- CR 95-7404, "Response to Generic Letter 92-01," Revision 1, Supplement 1, "Reactor Vessel Integrity"
- CR 93-1, "Generic Letter 92-08, "Thermo-Lag 330-1 Fire Barriers"
- CR 95-10150, "Response to Generic Letter 95-07: Pressure Locking and Thermal Binding of Safety-Related Power-Operated Gate Valves"
- CR 95-10565, "Response to Generic Letter 95-03: Circumferential Cracking of Steam Generator tubes"

7 DESIGN CHANGE PACKAGES

- 95-11585-3, Supplement 0
- 93-3409-5
- Mod. 92042
- Mod. 91042

8 VENDOR EQUIPMENT TECHNICAL INFORMATION

- CR95-1087
- CR95-1101
- CR95-11317
- CR95-1736
- CR95-342
- CR95-704
- CR95-1850 (Part 21)
- CR95-9330 (Part 21)

9 LICENSEE EVENT REPORTS

UNIT 1

- 94-016
- 94-017
- 94-020
- 95-001
- 95-002
- 95-003
- 95-004
- 95-005
- 95-006
- 95-007
- 95-008
- 95-009
- 95-010

UNIT 2

- 95-001
- 95-002
- 95-002, Revision 1
- 95-003
- 95-004
- 95-005
- 95-006
- 95-007